Mindy Mill

Preliminary Assessment, Site Investigation, and Remediation

CENE 486C

Draft 4 Version 1

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List of Abbreviations

ALM	Adult Lead Model
ASTM	American Society for Testing and Materials
AZ	Arizona
AZSRS	Arizona Soil Remediation Standards
BS	Background Sample(s)
BLM	Bureau of Land Management
CoC	Contaminant of Concern
DQI	Data Quality Indicators
DU	Decision Unit(s)
ECO	Ecological
EPA	Environmental Protection Agency
EPC	Exposure Point Concentrations
EHS/EH&S	Environmental Health and Safety
GPS	Global Positioning System
HASP	Health and Safety Plan
HH	Human Health
HS	Hot Spot(s)
ICP	Inductively Coupled Plasma
ID	Identification
IEUBK	Integrated Exposure Uptake Biokinetic
LOD	Level of Detection
MDL	Method Detection Limits
NAU	Northern Arizona University
OSHA	Occupation Safety and Health Administration
PA/SI	Preliminary Assessment/Site Investigation
PPE	Personal Protective Equipment
PPM	Parts Per Million
PRG	Preliminary Remediation Goal
QA	Quality Assurance
QC	Quality Control
QA/QC	Quality Assurance and Quality Control
RAO	Remedial Action Objectives
RPD	Relative Percent Difference
RS	Random Sample(s)
RSL	Regional Screening Level
SAP	Sample and Analysis Plan
SESD	Science and Ecosystem Support Division
XRF	X-Ray Fluorescence

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1.0 Project Introduction

1.1 Project Purpose

A Preliminary Assessment and Site Investigation (PA/SI) is being conducted for the abandoned milling site of Mindy with the purpose of identifying contaminants of concern (COCs) to complete an Ecological and Human Health (HH) Risk Assessment with the found COCs. This will then be used to identify remedial action options to proceed with the goal of the Bureau of Land Management, which is to sustain land resources and diversity, so that it can be used for future generations. Additionally, an assessment will be performed to evaluate the potential for economic recovery of minerals from mine tailings and the ore pile at the site.

1.2 Project Location

The abandoned Mill is located ten minutes southeast of a town named Yucca, Arizona which is south of Kingman, Arizona, with the following coordinates:

Latitude : 34°49’15” N	Longitude : 114°7’6” W

Figure 1.1 below is a display of where this mill is located in respect to the cities of Arizona.

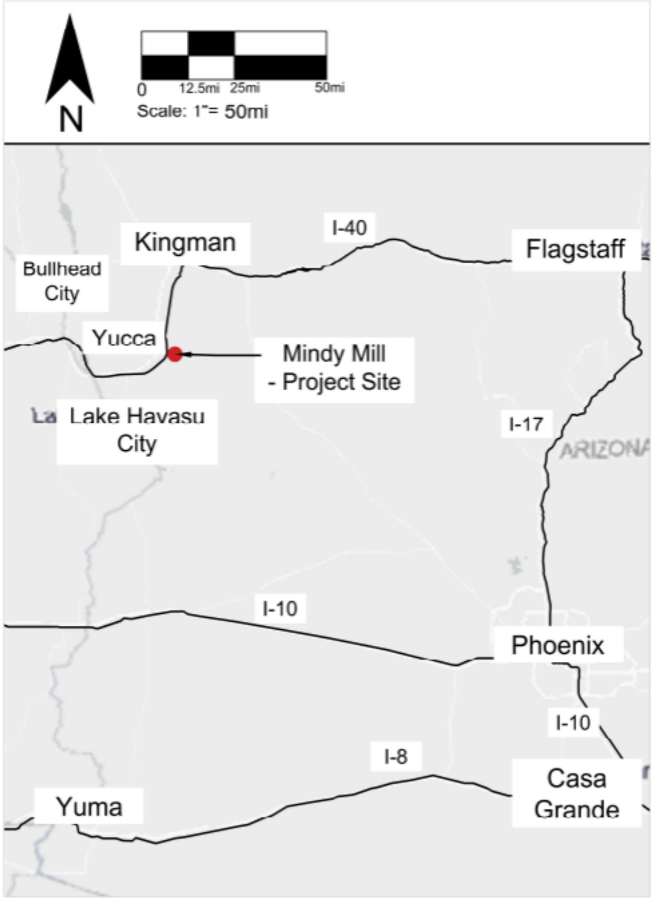

Figure 1.1 Site Location Map

The site plan map is shown below within Figure 1.2. From this, the approximate acreage of the site is 30 acres. This map is a display of the site boundaries, along with the selected decision units followed for sampling analysis.

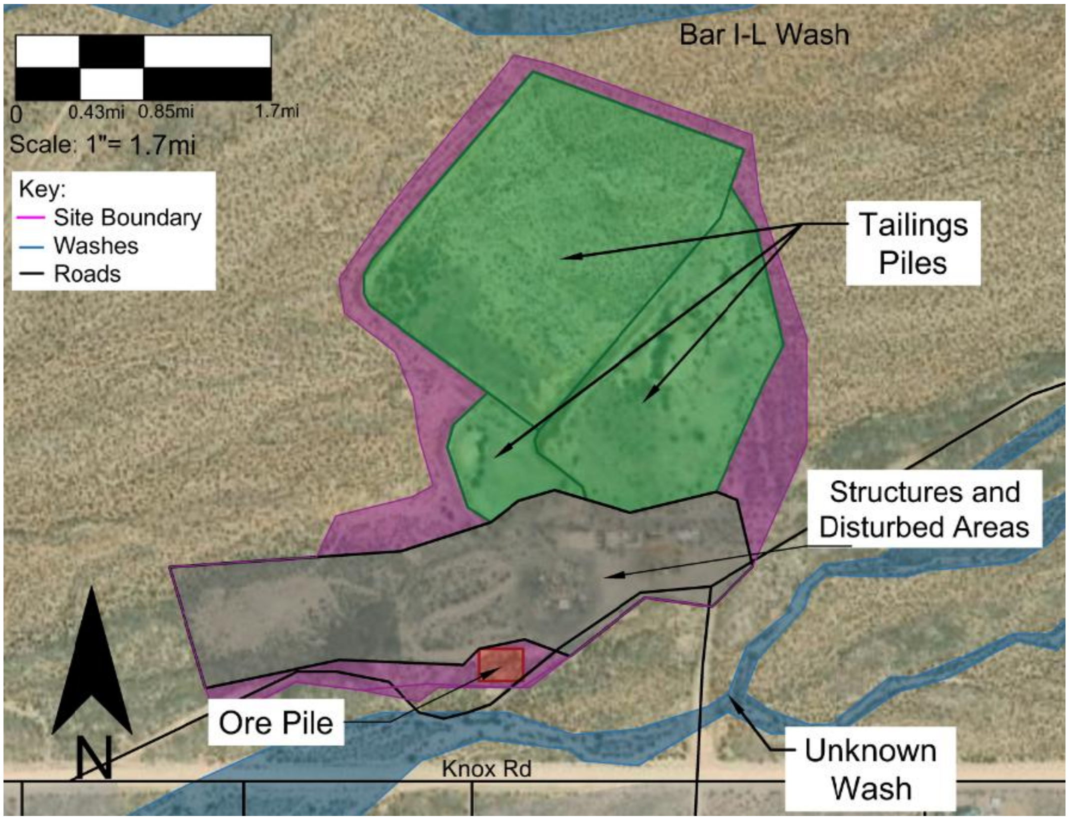

Figure 1.2 Site Boundaries

1.3 Project History

The Yucca Flotation Mill, Boriana II Mill, or Mindy Mill, is an abandoned silver-lead processing facility. There are records that indicate it functioned in the 1970s prior to its reopening in 1984, with one document describing it as a mill that processed 500 tons of ore per day. It was allegedly placed on standby due to the cost of silver not being favorable for production. The prior milling activities do not have available records, however, with the previous site name of Boriana II, the team gained information that this site also processed tungsten ores sourced from the Boriana Mine.

The mill reopened its services on October 1st, 1984, processing primarily silver ore sourced from McCracken Mine, and some of the other surrounding mines. Mindy processed an average of 500 tons of ore daily. For every 12 ounces of silver ore, there was 1.5% lead. The

1.5% lead indicates that the ore handled through this mill was also rich in sulfide. This process continued until August 16, 1985, when the mines supplying the mill ceased.

The processing conditions consisted of conventional milling methods used for hard rock. The ore went through jaw and cone crushers. That was then followed by a ball mill to grind the ore into a fine particle size of about 100 mesh. Documents note that the owners of the mill were considering the construction of a cyanide leaching circuit, but all available documents cannot confirm if it was implemented.

2.0 Work Plan

Team Revive and Restore has created a Work Plan that is comprised of the project's Sampling and Analysis Plan (SAP) and Health and Safety Plan (HASP).

2.1 Sampling and Analysis Plan (SAP)

The SAP is comprised of the sampling plan and the quality assurance and quality control (QA/QC) that was followed when the site investigation was completed. Within the SAP, there is also the sample analysis plan for laboratory analysis including the methods used and the disposal methods used. QA/QC included calibration of equipment, sample labeling, storage and chain of custody seals, documentation, and procedure for sample collection which are detailed and found in Appendix C.

The total amount of decision units (DUs) was 9 to cover the project site. The overall sampling map can be found in Appendix A. These DUs were determined by using satellite images from Google Earth and identifying any distinct boundaries on the site, distinctly different areas, such as color or elevation, on the site or visible structures. Along with the satellite images, the information provided by the client about the site, such as the existence of tailings piles and ore piles, and their specific request to sample these areas, the team created the DUs to best represent the site.

The sampling method chosen for DUs 1-6, the three tailings' piles, buildings and disturbed areas and both ore piles, was grid sampling. Maps of each DU and grid sampling location can be seen in Appendix C. This sampling method was chosen based on the large and relatively flat terrain that made grid sampling suitable. Grid sampling also provides an average for the DU, since the team agreed that from Google Earth the DUs looked homogenous overall. The sampling method for the roads and the rest of the project boundary, DU 7, was random sampling. This was chosen to identify if any containments had left the main site area and traveled beyond, which would be useful for mapping the containments. Both washes, north and south of the site, were to be sampled using the transect method as this was the traditional method to get the average concentrations along the wash and to identify any potential transportation off site through the washes, maps can be seen in Appendix C. Hot spots and background samples were reserved for when the site investigation was completed and were determined on site with approval of the team's technical advisor.

Within the SAP are also the analysis methods used in the NAU laboratory. The summarized procedures used for sample drying, sieving, X-Ray Fluorescence (XRF) analysis for in the field and in lab, and Inductively Coupled Plasma (ICP) verification that is to be done by a subcontractor can be found in the SAP in Appendix C.

The site investigation proved that the site differed significantly from the Google Earth images the team had used therefore deviations were made to the SAP through the approval of the technical advisor in accordance with the new information observed at the site. The deviations can be found in Section 3.3.

2.2 Health and Safety Plan (HASP)

The HASP is the document that was followed to ensure the safety of every member of the team while in the field and in the lab. The HASP identified the potential hazards in the field and lab, along with the mitigation approaches to each potential hazard. Tables can be found in the HASP in Appendix D. The training requirements section details the required training that the team completed for lab access. This included NAU's Chemical Hygiene and Lab Safety, and XRF training. Methods for decontamination in the field are also detailed to reduce risk of transporting potential containments of site and to reduce the team's exposure. The decontamination methods for the lab are listed to reduce cross contamination and reduce potential exposure for others who use the lab after the team completes their activities. A waste disposal plan was created for handling any waste generated while in the fields and in the lab, along with the appropriate actions and labeling all which was overseen by NAU Environmental Health and Safety. Emergency response procedures include the location of the nearest medical services and a map showing a route in relation to the site in Yucca and the lab at NAU. A table of emergency contacts for all members of the team and technical advisors is also included. Maps and tables can be seen in Appendix D.

3.0 Site Investigation

The site investigation was conducted on January 23rd and 24th of 2026. The first date of sampling had a high of 77 degrees Fahrenheit, with little wind. On this date, the samples for decision units (DUs) 1, 2, and 6 were completed along with hot spots (HS) 1 through 8. For the second date of sampling, DU4 and DU 9 samples were collected. The weather for this date was cooler, with cloudy skies, low precipitation, and wind.

3.1 Flora and Fauna Surveying

As a part of the site investigation, flora and fauna evidence was collected for the purpose of use in the ecological risk assessment to be completed for the site.

3.1.1 Flora

Table 3.1 below displays the flora found on the site with images of flora being found within Appendix E.

Table 3.1 List of Identified Flora Species

Common Name	Scientific Name	Native Status
Devils Spineflower	Chorizanthe Rigida	Native
Buckthorn Cholla	Cylindropuntia Acanthocarpa	Native
Teddybear Cholla	Cylindropuntia Bigelovii	Native
Western Joshua Tree	Yucca Brevifolia	Native
Blue Palo Verde	Parkinsonia Florida	Native
Engleman’s Hedgehog Cactus	Echinocereus Engelmannii	Native
Brittlebush	Encelia Farinose	Native
Ocotillo	Fouquiera Splendens	Native
Fiddle Mustard	Streptanthus Longirostris	Native
Cheesebush	Ambrosia Salsola	Native
Anderson Thornbush	Lyceum Andersonii	Native
Greasewood	Larrea Tridentata	Native
Saharan Mustard	Brassica Tournefortii	Invasive

3.1.2 Fauna

Evidence of cows being on the site was found through tracks and feces.

Evidence of a dog being on the site was found through animal tracks.

Jackrabbits were also observed on site, but no photos were able to be collected.

Photo evidence is located within Appendix E.

3.2 Site Features

The following figure, Figure 3.1, is a satellite image with labels for the important features identified on site.

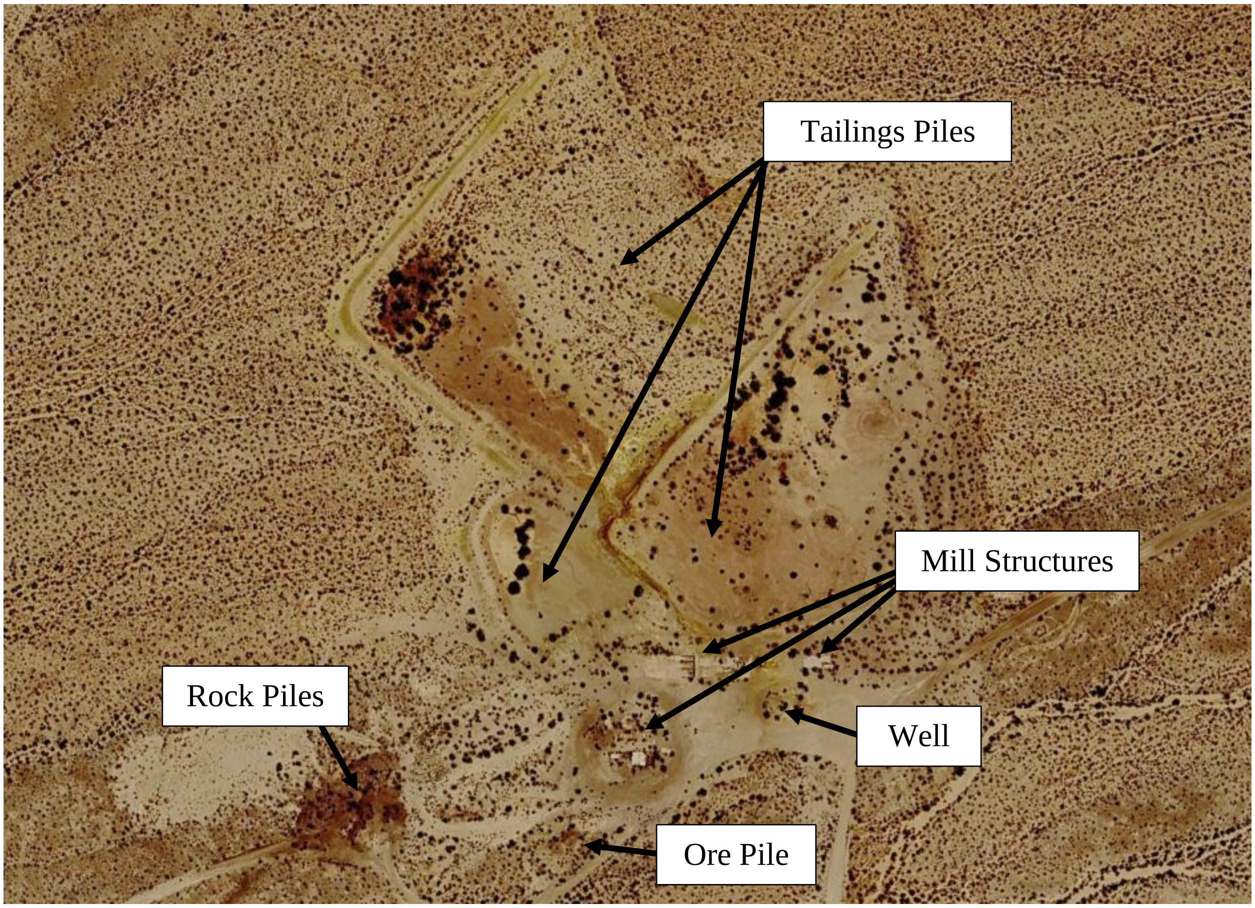

Figure 3.1 Satellite Imagery of Site Features

In the southwest portion of the site were some concrete structures and buildings. Many of the structures were either never finished or were deteriorating. The specific purposes for the structures are not known. Below is a picture taken from the southwest to show an overview of the concrete structures present at the site.

Figure 3.2 Various Mill Structures (credit: Rashel DeLeon)

Four major structures can be seen in Figure 3.2 two walls of concrete with their steel reinforcements sticking out on the left. In the center is red concrete basin, surrounded by other concrete structures as seen in Figure 3.3. Near the basin is a concrete pad. In the back is an orange building with two openings, looking more like a hall. Figure 3.2 also shows concrete litter on the ground as well as relatively flat terrain with small to medium shrubs.

Figure 3.3: Red Concrete Basin (credit: Rashel DeLeon)

Figure 3.3 is a closer look at the basin with two concrete boxes next to it. The boxes shield holes in the ground for pipes. It is unknown where these pipes lead to or from. Also seen in Figure 3.3 there are more concrete litter and steel rods covering the ground. It's unclear if this litter is due to some destruction of the structures or natural deterioration over time. Figure 3.4, below, shows the concrete box with the pipe sticking out below. It should be noted that the basin is not very deep, it's a very shallow concaved structure with the sides being around half a meter tall or less due to dirt piling up as seen in Figure 3.3.

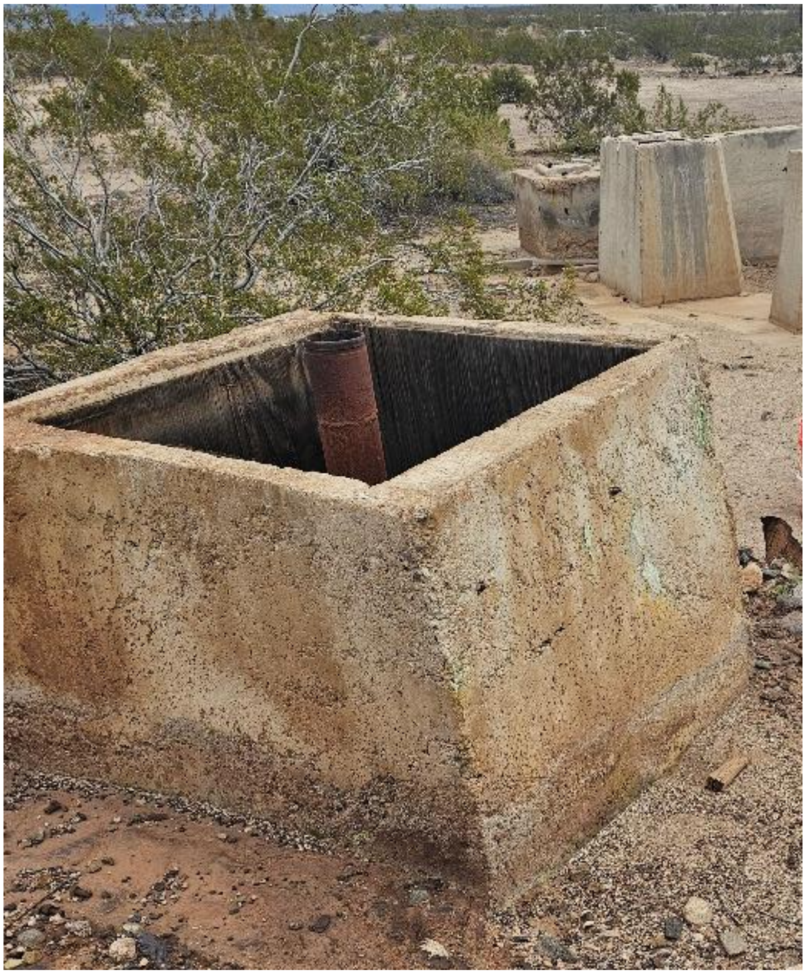

Figure 3.4: Concrete Box and Concrete Pad (credit: Rashel DeLeon)

The concrete box is shown more clearly in Figure 3.4 and inside a pipe and wood lining can be seen. This wood lining along with some wood framing is present inside the holes and goes down about 2 meters. The concrete pad can also be seen along with thin sheet metal between the concrete box and the concrete pad. In the background of Figure 3.4 there are concrete barriers on top of the concrete pad.

Figure 3.5: Close-Up of Concrete Basin (credit: Rashel DeLeon)

Figure 3.5 shows the inside of the basin where sediment has piled in the middle of the basin. It is not known if this is sediment from whatever process the basin was used for or if it was transported in another way such as by wind. The basin also has signs of cracking and discoloration. Concrete litter was found in the basin as well.

Figure 3.6: Concrete Pad (credit: Rashel DeLeon)

The concrete pad seen in Figure 3.6 is a large pad with a few smaller blocks of concrete on it but no evidence to point to what its purpose was. The concrete pad had an area of approximately 5,000 square feet.

Figure 3.7: Concrete Wall Close Up (credit: Rashel DeLeon)

Figure 3.7 is a close look at the wall that is on the left side of Figure 3.2, the wall with the rebar sticking out. This closer look shows the discoloration of the wall and what looks like streaks potentially made by water when it rains. The streaks being orange and brown to a dark brown in color. There are also cracks along the wall and major chips of concrete towards the ground.

Figure 3.8: Orange Building Opening (credit: Rashel DeLeon)

The orange building that was seen in the background of Figure 3.2 is shown in more detail in Figure 3.8. The structure is seen to have major cracks and breakage of the opening. There's a chunk of the opening seen laying on the ground under where it originally fell from. Inside the structure there is sediment build-up and other litter. All over the structure and even inside is discolored with a yellow orange color and some darker brown in some areas. The inside of the structure is also sunken about 5 centimeters.

Figure 3.9: Side View of the Orange Building (credit: Rashel DeLeon)

The side view of the orange building is seen in Figure 3.9, and it shows more the discoloration of the building. It also has the same streaks seen on the wall in Figure 3.7, that could have been caused by the rain falling down the sides of the structures, but it is not known for sure. The side view also shows the cracks more clearly and can be seen how long they are along the side.

3.3 Sampling Analysis Plan Deviations and Methodology

Many deviations from the sampling plan occurred upon the arrival to site. Ideally, a team would have a site visit, return to draft the sampling plan, and then return to sample the site. However, with the team's site visit and sampling trip taking place within the same trip, our Technical Advisors and Client assisted in the change of decision units and sample locations based on new information found on arrival that could not be ascertained from satellite imagery. These changes are described below Figure 3.10, the original map of decision units sourced from the project work plan.

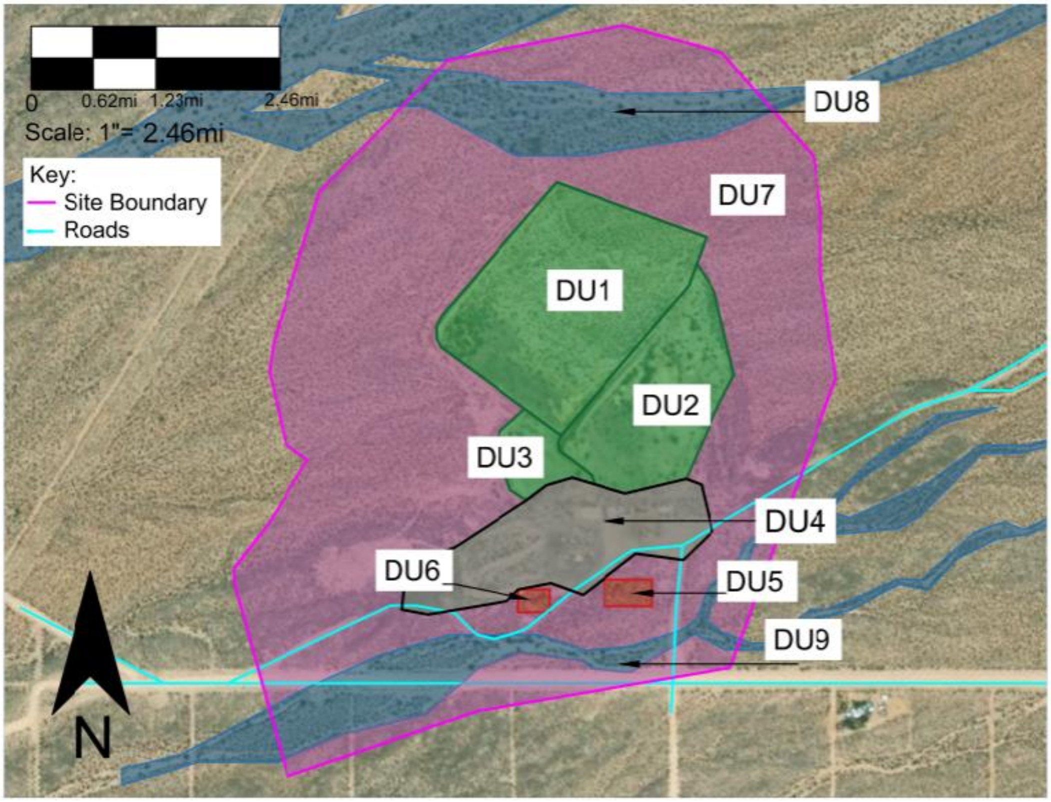

Figure 3.10 Original SAP Map with Decision Units (DUs)

3.3.1 Decision Unit 1

Decision Unit 1 (DU1) remained as the northernmost tailing pile of the site; however, the sample locations were shifted to the south half of the outlined DU as the northern half of the DU did not display signs of disturbance. The grided samples were distanced 150 feet from due north to south and 120 feet from due west to east. Due to the large shift in sample locations, sample DU1-6 was absolved, and samples DU1-12 and DU1-13 were added to adequately sample the remainder of the affected space.

3.3.2 Decision Unit 2 and 3

Decision Unit 3 (DU3) was consolidated to become a second sector of decision unit 2 (DU2). This decision was made upon seeing that the two DUs appeared mostly homogenous to one another and should be sampled accordingly.

3.3.3 Decision Unit 4

As requested by the client, the method of sampling for DU4 was altered from grid to hot spots. These hotspots (HS) were selected and focused on the building structures of the site and selected portions of the roads around the buildings.

3.3.4 Decision Unit 5 and 6

On arrival at the site, DU5 was unable to be in comparison to the map previously utilized by the team. From this, DU6 was altered to contain 3 random samples of the present homogeneous piles rather than the planned grid sampling of four.

3.3.5 Decision Unit 7

Decision Unit 7 (DU7) was also absolved because of the clear indication of the area, on the outskirts of most of the other previous decision units, showing no disturbance. It was requested by the client to add three hot spot samples to West of Decision Unit 2.

3.3.6 Decision Unit 8 and 9

On arrival at the site, DU8 was absolved as it did not appear to be a disturbed area of the site. However, DU9 remained and 3 separate transects were taken from the stream. One transects upstream and two downstream.

3.3.7 Background Samples

Three background samples that were taken approximately 987 feet away from the site going East. With prevailing winds of this region coming from the northeast in January, the background sample location was chosen to be upwind as well as upgradient in elevation from where the site is located. This was decided to ensure that the samples were taken well outside of a deposition region.

Figure 3.11 below is a display of the updated map after the changes made.

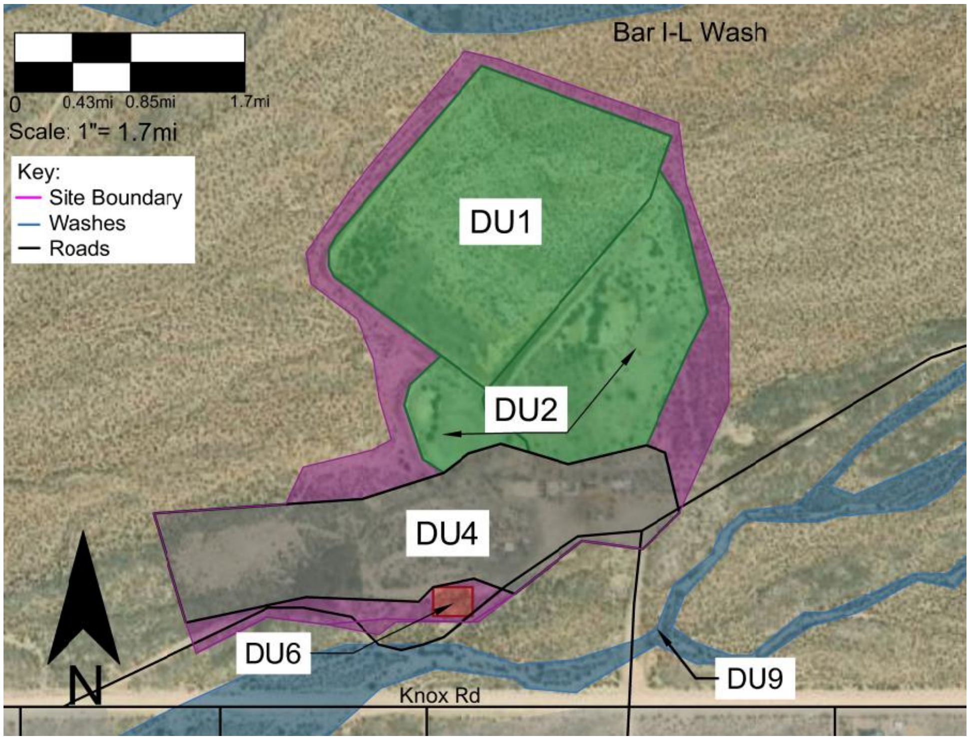

Figure 3.11 Updated SAP Map with DUs

3.4 In-Situ X-Ray Fluorescence (XRF) Results

In-Situ elemental reading results were found with the use of an XRF machine. This machine utilizes X-rays to determine the soil's composition of certain elements. These elements are a wide range, but the machine works most efficiently for mid-to-high atomic numbered elements. This device works by radiating X-rays containing a large amount of energy into the soil. These rays interact with the atoms within the elements to displace the electrons in the inner orbital shell. Electrons from the outer shell then replace these electrons. This interaction creates an emission of fluorescent X-rays. Each element has a specific reading of energy from this. The device then captures the emission from the soil and quantifies the concentration of these elements from the magnitude of the fluorescing X-Rays.

Sample locations were chosen either by the team's technical advisor, Dr. Bero, or by methods explained in the team's Sampling Analysis Plan (SAP). For easy identification, the team marked the sample locations with a flag. The team began their sampling by scraping an area away about two inches deep with a trowel in spots marked by flags. The purpose of this is to remove the top layer of soil, which allows for the soil underneath to be exposed. It is critical to remove this layer before sample gathering or XRF analysis as this layer has been impacted by weather events blowing the soil over the area. Once the layer was cleared, a team member inserted their trowel and began excavation of soil into a gallon sized Ziploc bag. At this same time, another team member would record the in-field conditions and utilize a handheld GPS to mark the sample locations. The team member collects a quarter to half a gallon of soil for XRF analysis. A quarter to half gallon was chosen so that the team would have enough soil to sieve for an appropriate number of fines to fill the sampling cups for ex-situ XRF analysis. The figure below shows a team member post collection of the sample.

Figure 3.12 Annika D. Bagging Soil Sample

To avoid cross-contamination between samples protocols included consistent changing of gloves, a clean bucket for items that were not contaminated yet, an isolated bucket for contaminated items, and trowels were cleaned between samplings. The team also collected duplicate samples, about one for each DU that had more than 10 samples in the location. These were taken by collecting the first sample with the method mentioned above, and the duplicate was taken at the same location as the original sample. Duplicate samples were not measured with the XRF for in-situ as their purpose is to show quality assurance and quality control (QA/QC) of handling and laboratory use for ex-situ analysis.

Before completing in-situ XRF analysis, about half of the samples had to be excavated to conserve the energy of the XRF machine's battery. The first day of the site investigation was dedicated to mapping samples out and collection, with some XRF analysis done for in-situ. In-Situ XRF analysis was completed by placing a clean Ziploc bag over the XRF machine to prevent cross-contamination from sample to sample. Once the Ziploc bag was on the machine, it was placed into the hole that was excavated, as flush to the area as possible to avoid stray rays harming the user and nearby members. The machine button was held to perform a 90-second scan of the area, and results were reported in parts per million (ppm). This process is shown in Figure 3.13 below.

Figure 3.13 Jazmin O. Completing In-Situ XRF Analysis

The team's technical advisor assisted with the first few XRF samples to advise on what elements they should note down in their field log notebook and their concentrations. Elements that were noted were noticeably higher than what students learned in previous classes and research of RSLs (Regional Screening Levels). These elements consisted of lead, arsenic, with one uranium sample noted along the wash in DU9-6.

Results from XRF analysis were compared to the Arizona Soil Remediation Standards (AZSRS) to determine severity of contamination immediately. Residential limits and nonresidential limits based on the AZSRS for AZ RSLs (Arizona Regional Screening Levels) can be found below in Table 3.2.

Table 3.2 AZ RSLs for Lead, Arsenic, and Uranium

AZ RSLs	Pb, ppm	As, ppm	U, ppm
Residential	400	10	16
Nonresidential	800	10	200

The in-situ XRF raw data is available in Appendix F. Figure 3.12 below is a map distribution of the results of lead concentrations for the in-situ XRF analysis.

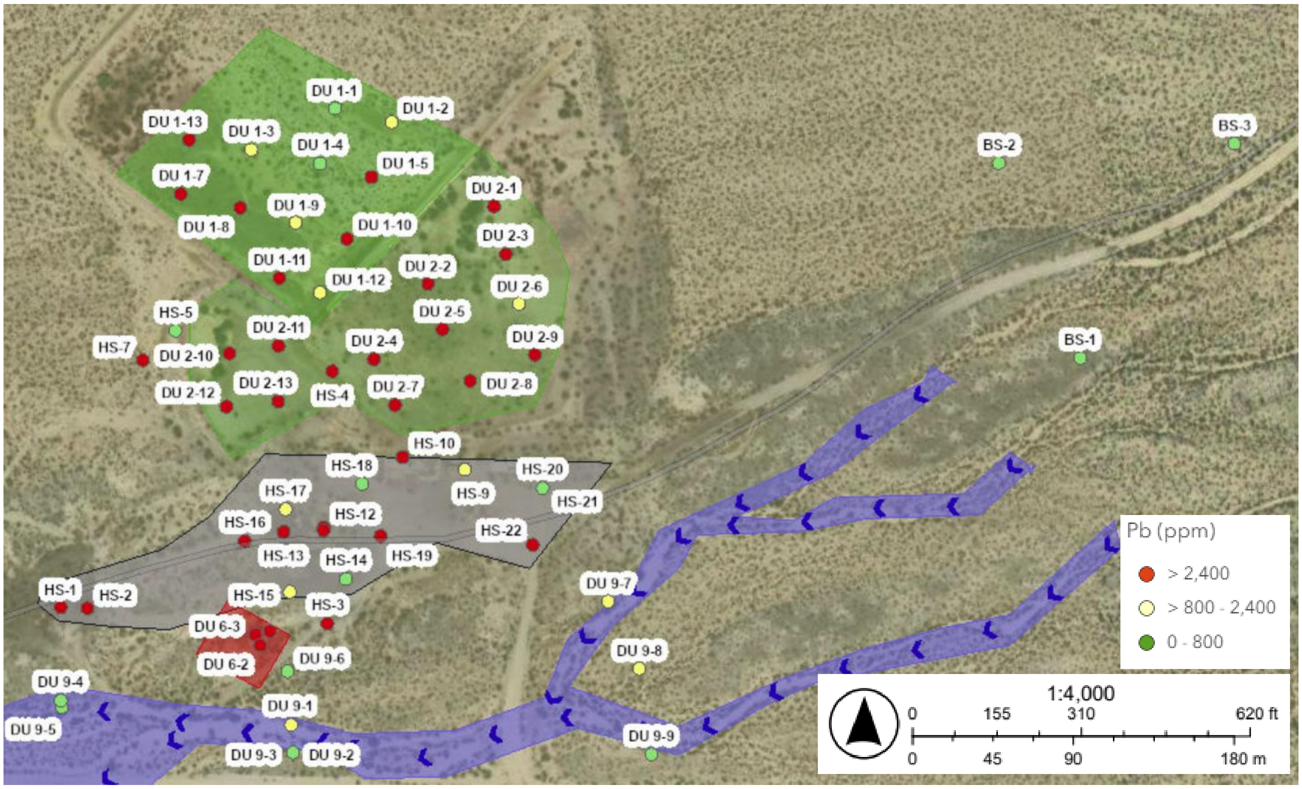

Figure 3.14: In-Situ XRF Lead Screenings

The lowest detectable reading of lead occurred at 19 ppm located at Background Sample 1, with the highest reading being 289,800 ppm located at Hot Spot 12.

Additionally, Figure 3.13 below is the in-situ XRF analysis completed for the arsenic results.

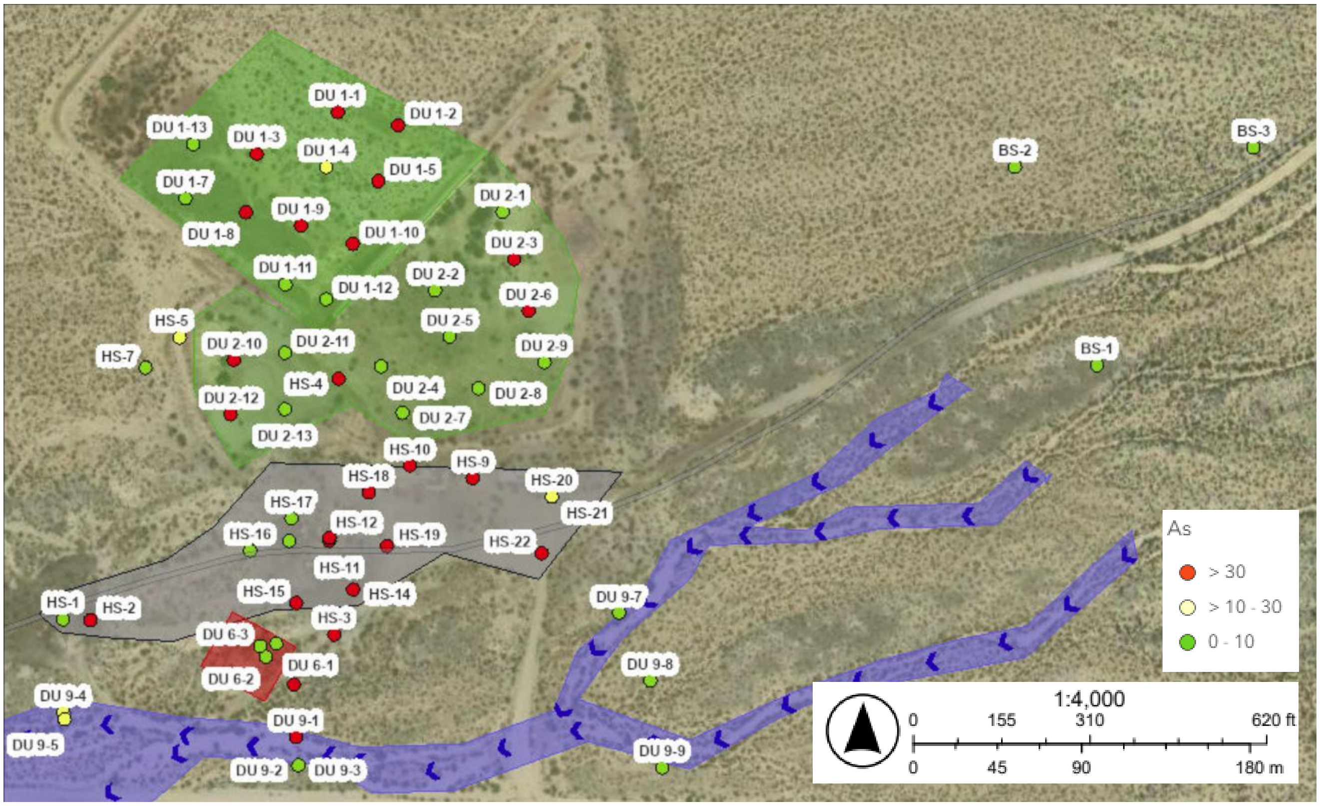

Figure 3.15: In-Situ XRF Arsenic Screenings

The lowest detectable reading of arsenic of the samples was located at Background Sample (BS)1 reading at 4 ppm, with the highest reading occurring at 6,174 ppm located at Hot Spot (HS)11.

Table 3.3 through 3.8, are complete lists of the in-situ data collected for lead (Pb), arsenic (As), and uranium (U) after performing a moisture content correction as described in section 4.1 from laboratory analysis based on samples that were collected and returned to the laboratory. These corrected values are what the team used for the rest of the analysis when in reference to “in-situ” data. In-situ raw data reading comparisons to AZSRS RSLs can be found in Appendix H.

The XRF device has a level of detection limit (LOD) when performing a reading for each element. If a measured concentration for a sample is below LOD, then the device signals “<LOD”. These values were adjusted by the team so they would have a concentration of half of the limit, and are indicated with an asterisk. The detection limit for lead is 13 ppm, arsenic is 11 ppm, and uranium is 10 ppm. Values highlighted in red are above the nonresidential limit. If highlighted in yellow, then they are above the residential limit only.

The exception to this is arsenic as it is a carcinogen, so the residential limit and nonresidential limit are the same.

Table 3.3 below is a complete list of the moisture-corrected values for lead (Pb), arsenic (As), and uranium (U) values in part per million (ppm) for all background samples (BS) for in-situ XRF analysis. Due to human error and weather events, BS-2 was not measured in-situ with the XRF.

Table 3.3 BS In-Situ XRF Data

Sample ID	Pb (ppm)	As (ppm)	U (ppm)
BS-1	19.7	4.1	*5.2
BS-2	-	-	-
BS-3	49.0	5.1	*5.1

Table 3.4 below is a complete list of the moisture-corrected values for lead (Pb), arsenic (As), and uranium (U) values in part per million (ppm) for all decision unit 1 for in-situ XRF analysis.

Table 3.4 DU1 In-Situ XRF Data

Sample ID	Pb (ppm)	As (ppm)	U (ppm)
DU 1-1	620.6	49.2	*5.1
DU 1-2	2,315.5	64.0	*5.5
DU 1-3	1,412.5	64.0	*5.2
DU 1-4	125.5	12.6	*5.2
DU 1-5	2,464.5	77.9	*5.1
DU 1-7	5,386.1	*6.0	*5.5
DU 1-8	8,073.2	156.0	*5.1
DU 1-9	1,395.8	71.9	*5.2
DU 1-10	4,644.6	67.2	*5.3
DU 1-11	8,381.3	*5.6	6.1
DU 1-12	2,446.1	*6.0	*5.4
DU 1-13	7,581.3	*5.7	*5.2

Table 3.5 below is a complete list of the moisture-corrected values for lead (Pb), arsenic (As), and uranium (U) values in part per million (ppm) for all decision unit 2 for in-situ XRF analysis.

Table 3.5 DU2 In-Situ XRF Data

Sample ID	Pb (ppm)	As (ppm)	U (ppm)
DU 2-1	3,125.9	*5.7	6.2
DU 2-2	5,298.7	*6.0	6.5
DU 2-3	3,490.0	49.1	6.1
DU 2-4	6,081.2	*6.2	7.9
DU 2-5	6,643.8	*6.2	*5.7
DU 2-6	1,091.3	32.5	*5.2
DU 2-7	6,727.6	*5.8	7.4
DU 2-8	14,121.8	*6.0	11.9
DU 2-9	5,268.1	*5.7	8.3
DU 2-10	7,844.1	105.0	11.4
DU 2-11	3,948.5	*5.7	*5.2
DU 2-12	11,908.3	197.0	14.1
DU 2-13	4,337.7	*5.7	13.4

Table 3.6 below is a complete list of the moisture-corrected values lead (Pb), arsenic (As), and uranium (U) values in part per million (ppm) for the decision unit 6 for in-situ XRF analysis.

Table 3.6 DU6 In-Situ XRF Data

Sample ID	Pb (ppm)	As (ppm)	U (ppm)
DU 6-1	20886.7	*5.6	*5.1
DU 6-2	7105.2	*5.7	*5.2
DU 6-3	16817.8	*5.8	*5.3

Table 3.7 below is a complete list of the moisture corrected values for lead (Pb), arsenic (As), and uranium (U) values in part per million (ppm) for all decision unit 9 for in-situ XRF analysis.

Table 3.7 DU9 In-Situ XRF Data

Sample ID	Pb (ppm)	As (ppm)	U (ppm)
DU 9-1	1,285.8	33.5	5.1
DU 9-2	1,962.7	5.6	5.1
DU 9-3	198.1	5.7	5.2
DU 9-4	232.0	18.4	5.1
DU 9-5	259.0	13.3	5.1
DU 9-6	448.6	265.7	829.8
DU 9-7	2,276.2	5.6	5.1
DU 9-8	2,128.2	5.6	6.1
DU 9-9	221.9	5.8	5.2

Table 3.8 below is a complete list of the moisture-corrected values for lead (Pb), arsenic (As), and uranium (U) values in part per million (ppm) for all hotspots for in-situ XRF analysis. Due to human error and weather events, HS-8 was not measured in-situ with the XRF.

Table 3.8 HS In-Situ XRF Data

Sample ID	Pb (ppm)	As (ppm)	U (ppm)
HS-1	14542.4	5.6	5.1
HS-2	16624.0	235.6	5.1
HS-3	90940.4	1140.1	5.1
HS-4	3436.9	116.8	5.6
HS-5	128.5	14.4	5.1
HS-6	2399.7	44.6	5.3
HS-7	2624.2	6.3	5.3
HS-8	-	-	-
HS-9	2224.3	125.5	5.3
HS-10	8604.4	269.7	5.4
HS-11	252636.0	6520.8	5.3
HS-12	315145.9	6022.4	5.4
HS-13	10205.7	5.7	5.2
HS-14	421.5	68.5	5.3
HS-15	1971.2	141.2	5.0
HS-16	10424.0	5.6	5.1
HS-17	2379.2	5.6	5.1
HS-18	729.7	56.6	5.2
HS-19	19281.2	187.5	5.3
HS-20	441.2	24.6	5.4
HS-21	1676.9	25.9	5.2
HS-22	11141.5	338.5	5.3

4.0 Sample Ex-Situ Analysis

4.1 Sample Moisture Content

Water attenuates the rays from an X-Ray Fluorescence machine. Therefore, according to EPA Method 6200, the moisture content is required to be less than 10% for accurate X-Ray Fluorescence analysis. Samples were dried according to the ASTM 2216-98 method, “Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass”. The samples were carefully poured from Ziploc bags from collection on-site to their dedicated metal troughs for the drying oven. The transfer of soil to the troughs was performed under a chemical fume hood to prevent the contaminated soil from becoming airborne in the lab. Troughs were labeled to display the same labeling from the Ziploc bag they came from. The labels indicate their location of collection from the site. The samples were then weighed prior to being placed in the oven at 105-110 degrees Celsius for a minimum of 24 hours. The dried samples were then cooled and reweighed, and this was utilized to calculate the moisture content from the mass difference between the wet and dry samples. Once samples were reweighed, they were placed into clean Ziploc gallon sized freezer bags into dry 14-gallon totes until they were ready for the next step.

Figure 4.1 below displays a batch of samples in troughs that were placed in the oven to dry. The labels seen are from previous years of capstones that the team could not remove fully. Troughs were labeled on their length side with a pencil specific for high oven temperature usage.

Figure 4.1 Soil Troughs with Soil in Drying Oven

The moisture content that was obtained was then used for the correction of the in-situ XRF analysis, and they were reported on dry weight as well. The in-situ data reported in Section 3 was corrected with the use of Equation 4.1 below. The moisture content fractions that were utilized for each sample can be found in Appendix I.

$$C_{dry} = \frac{C_{wet}}{1 - \theta}$$

Equation 4.2 Moisture Content Correction

Where:

C_{dry} = Concentration of element after correction, ppm

C_{wet} = Concentration of element in-situ, ppm

θ = Moisture Fraction

4.2 Sample Sieving

The preparation of sample sieving did not follow a particular technical standard; the goal of this task was to separate debris and soil particles that are larger than 75 micrometers to obtain particle sizes less than that for an optimized homogeneity. Particle sizes less than 75 micrometers are required by EPA Method 6200 for X-Ray Fluorescence because the Contaminants of Concern (CoCs) sorb to the finer particles. The sieving consisted of 4 sieves and a bottom pan. The sieves consist of #4 (425 millimeters), #10 (2.0 millimeters), #20 (841 micrometers), #50 (297 micrometers), and #60 (250 micrometers). These sieves will be used in this order from top to bottom. These sieves were chosen to prevent clogging and the need to manually grind and remove debris throughout the sieving process. Originally the team had included a #200 sieve so that only particle sizes less than 75 micrometers as required by the EPA Method 6200. However, the team encountered an issue with the first samples that were sieved because the amount of material that passed the #200 sieved was an inadequate amount to create subsamples. The team consulted their technical advisor, Dr. Bridget Bero, who recommended removing the #200 sieve and collecting what passed the #60. This would still allow the team to create subsamples with finer particles. Other issues arose with the original set of sieves outlined in the team's SAP, where the soil distribution of the soil was between fine sand and silt. The team decided to implement the #50 sieve to help distribute the soil and prevent clogging. Samples were sieved for 10 minutes instead of the 6 minutes outlined in the team's SAP to help with the clogging problem. The material that passed through the #60 sieve was then transferred into a clean Ziploc gallon sized freezer bag with the appropriate sample labelling, now with "S" in the front to show the sample has been sieved. These bags were then transferred back into dry 14-gallon totes until the next step was ready.

The sieve shaker is shown in Figure 4.2 below. A stack of sieves is also pictured.

Figure 4.3 Sieving Shaker with Sieve Stack

4.3 Laboratory X-Ray Fluorescence Analysis

Analysis with the use of a Niton XL3t GOLDD model XRF was performed according to EPA Method 6200, “Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment”. The process was completed under a chemical fume hood to contain soil contamination and prevent soil from becoming airborne in the lab. The fines collected from the sieving process were divided into nine clean polyethylene XRF sample cups with X-Ray Window Film. Sampling cups received the addition of a number 1-9 at the end of its original sample name to indicate what number subsample it was. Each subsample underwent a 90-second XRF scan. All raw measurements from scanning were then downloaded into a spreadsheet. The raw data can be found in Appendix G. A picture of the XRF equipment set-up is in Figure 4.3.

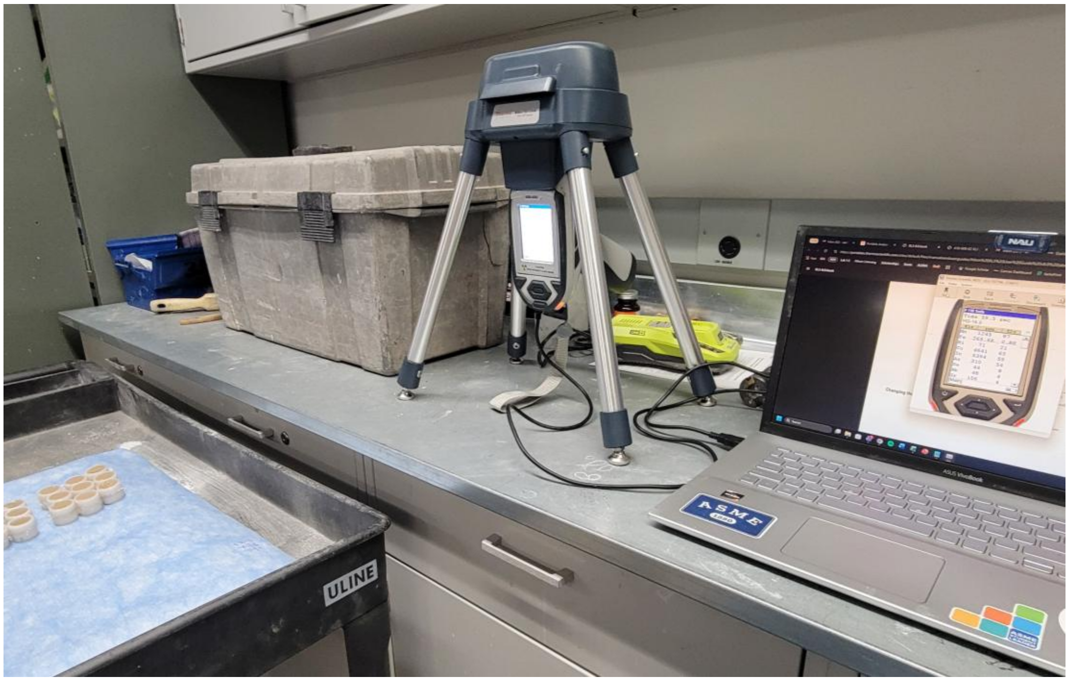

Figure 4.4 XRF Screening Set-up

An image of the team working in the lab under the fume hood is shown below in Figure 4.4.

Figure 4.5 Gloria M. (Left) and Jazmin M. (Right) Preparing Sample Cells Under Fume Hood

For each sample, the minimum and maximum values for each element were removed, and the remaining seven values were then averaged to create a representative concentration. The maximum average lead reading was 229,534 ppm, and the minimum average lead reading was 58.65 ppm. In the situation of lead level readings being high, the readings of arsenic overlap with the XRF frequency detection and can be inaccurate.

According to EPA Method 6200, confirmation of arsenic level analysis is needed if the level of lead to arsenic is greater than 10:1. The ratio of the highest lead to arsenic ratio that was present for the site was 4564:1. Due to this, it was determined that the levels of arsenic were inaccurate and confirmatory analysis was needed. For any non-detects, they were assigned a value that is equal to half of the instrument's level of detection (LOD) value.

4.4 Laboratory X-Ray Quality Assurance and Quality Control

Any laboratory procedures that produced fine particulates were completed under a chemical fume hood when applicable. Otherwise, procedures were done outside. For all procedures, clean nitrile gloves were used between all samples and procedures and masks at a minimum of N95 were used. Equipment cleaning was completed using pressurized air under the chemical fume hood and then again outside with a higher pressure. Contaminated waste was stored in 15-gallon drums provided by Environmental Health & Safety (EH&S) from Northern Arizona University.

To evaluate the precision of analytical methods, duplicate samples were collected in the field and analyzed using XRF with the same method of drying, sieving, and creating and scanning 9 subsamples from the soil. A relative percent difference (RPD) was calculated for lead (Pb), corrected arsenic (As), and Uranium (U) between the original and duplicate pair of samples. The corrected arsenic concentrations method will be evaluated in later sections. Relative percent difference was calculated following the method described in the team's SAP, Equation 2-1. A copy of the equation can be found below, Equation 4.2.

Equation 4.1 Relative Percent Difference Equation

$$RPD = \frac{|X_1 - X_2|}{\left(\frac{X_1 + X_2}{2}\right)} * 100$$

Where:

RPD = Relative Percent Difference for Compound

X_1 = Value of compound in original sample

X_2 = Value of compound in duplicate sample

No numerical threshold was specified in the team's SAP. Lower RPDs indicate that the duplicates agree better and therefore have a higher precision, whereas higher RPDs are vice versa. The EPA states that a 20% RPD is the acceptable result for duplicate aqueous samples, which is the result of assuming an aqueous sample is homogenous. For this project, mining soil presents a larger heterogeneity than an aqueous solution if the measurements are 5-10 times the LOD. A good range is generally lower than 35%, and an acceptable range is below 50%. Any value above is indicative of heterogeneity and measurements near detection levels.

Relative percent difference values can be seen in Table 4.1 below. The RPDs for lead varied for the sample pairs with a range of 14.7-50% for the respective DU 1-3 and HS-11 pairs. This reflects the heterogeneous nature of the soil and hotspot effects. The RPDs for the raw arsenic data were within the range of 0-15.21%. The uranium duplicates showed very low RPDs with a range of 0-10.9%, which reflects a more uniform distribution. Values above 50% are highlighted in red and bold.

Table 4.1 RPDs for Lead, Arsenic, and Uranium

QA/QC									
Sample Pair	Pb Original (mg/kg)	Pb Duplicate (mg/kg)	Pb RPD (%)	Corrected As Original (mg/kg)	Corrected As Duplicate (mg/kg)	As RPD (%)	U Original (mg/kg)	U Duplicate (mg/kg)	U RPD (%)
DU1-3 / DU 1-3A	2020.43	2341.85	14.74%	716.59	615.28	15.21%	9.23	10.30	10.90%
DU2-7 / DU2-7A	6013.69	8039.70	28.83%	615.28	615.28	0.00%	7.00	6.49	7.60%
DU9-3 / DU9-3A	147.77	160.19	8.06%	629.17	656.22	4.21%	7.49	7.72	2.99%
HS-11 / HS-11A	445326.30	267096.53	**50.03%**	1598.24	1471.20	8.28%	5.00	5.00	0.00%

4.5 Acid Digestion and Inductively Coupled Plasma

The team subcontracted Northern Arizona University’s chemistry department for acid digestion and Inductively Couple Plasma (ICP) with the help of Dr. Calvo, Dr. Ingram, and a chemistry research student, Anna Shimkus. Anna Shimkus was the head of this operation. Anna Shimkus performed acid digestion accordingly with EPA Method 3050B Acid Digestion Sediments, Sludges, and Soils, and then conducted ICP following EPA Method 6010B Inductively Coupled Plasma-Atomic Emission Spectrometry. This was done primarily with the goal of finding true arsenic values to then create a calibration curve to correct the rest of the team’s arsenic values. As stated previously, according to EPA Method 6200 that the team followed for XRF analysis, a ratio of arsenic 10:1 requires further verification of concentration because lead is known to bias arsenic values.

The team sent 10 samples to be verified. The samples sent for verification were chosen with the help of the team’s technical advisor. Samples were chosen to give a good reading based on the varying lead levels. These were the samples chosen DU 1-3, DU 1-12, DU 2-2, DU 2-5, DU 6-2, DU 6-3, DU 9-2, DU 9-8, HS 2, and HS 11. Arsenic correction process can be found in Section 5.2.

5.0 Data Analysis

5.1 In-Situ vs. Ex-Situ X-Ray Fluorescence

Outliers were initially identified as values that exceed a ±2 standard deviation from the mean for in-situ or ex-situ values. This was completed twice. Once with the original set of in-situ and ex-situ values, and again by removing extreme outliers. After the recalculation, the values exceeding +/- 2 standard deviations were again removed to reduce the influence of these concentrations on the data set. The outliers that did not allow an accurate representation of the rest of the data when initially graphed were the values marked as extreme. In summary, analysis was performed once for extreme outliers, then iterated again to removal the remaining. For arsenic and lead, the same three samples were removed from the data set which consisted of HS-3, HS-11, and HS 12. For the uranium dataset, samples from DU 9-5 and 9-6 were removed from the data set.

As discussed before, ex-situ values are expected to be higher than in-situ values as the removal of moisture content of the samples allows more accurate XRF readings. The team mathematically removed the moisture content from the in-situ values so that this did not contribute to an error factor and cause higher in-situ rather than higher ex-situ values. The primary causes of this could be higher ratios of lead to arsenic and soil heterogeneity in the field.

As previously mentioned, according to the EPA Method 6200, once the ratio of lead to arsenic exceeds 10:1, arsenic concentrations may be unreliable because of spectral interference between the lead and arsenic peaks. This threshold is repeatedly exceeded by all values with exception of the background samples. As the moisture of the samples was removed, this could have enhanced both concentrations, leading to a further discrepancy between the two values because of alteration of elemental signal detections.

The soil heterogeneity of the soil in the field is likely another factor. The in-situ XRF measurements are taken directly on an undisturbed plot of soil and may capture a localized hot spot concentration of the CoCs. Whereas the ex-situ XRF measurements have been dried, sieved, and therefore homogenized. This results in an average concentration that is more representative of the soil. Due to this, it may reduce the influence of a localized hotspot and produce an overall lower value for a sample. A great example of this was DU 9-6, in the field the XRF measurements showed 812 ppm, whereas the ex-situ subsample had the maximum value of 15 ppm.

Figure 5.1 below displays the high correlation ($R^2 > 0.50$) between the in-situ and ex-situ data for lead as indicated by the coefficient of determination, 0.8. As seen below, the slope of the best line of fit shows that the ex-situ lab readings were approximately 1.15 times higher than the in-situ data.

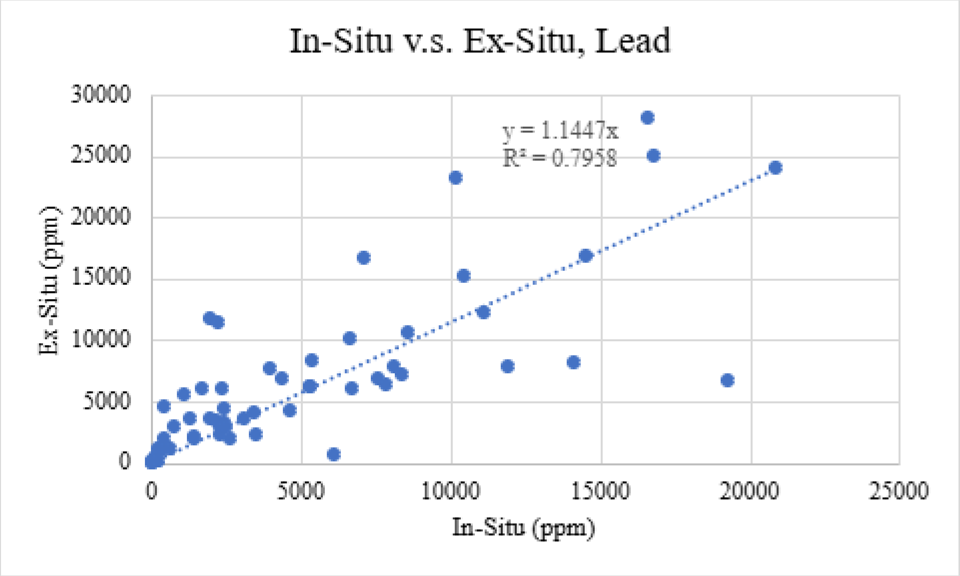

Figure 5.1 In-Situ vs. Ex-Situ Lead Concentrations

Figure 5.2 below displays the high correlation between the in-situ and ex-situ data for arsenic as indicated by the coefficient of determination, 0.54. As seen below, the slope of the best line of fit shows that the ex-situ lab readings were approximately 0.82 times that of the in-situ data.

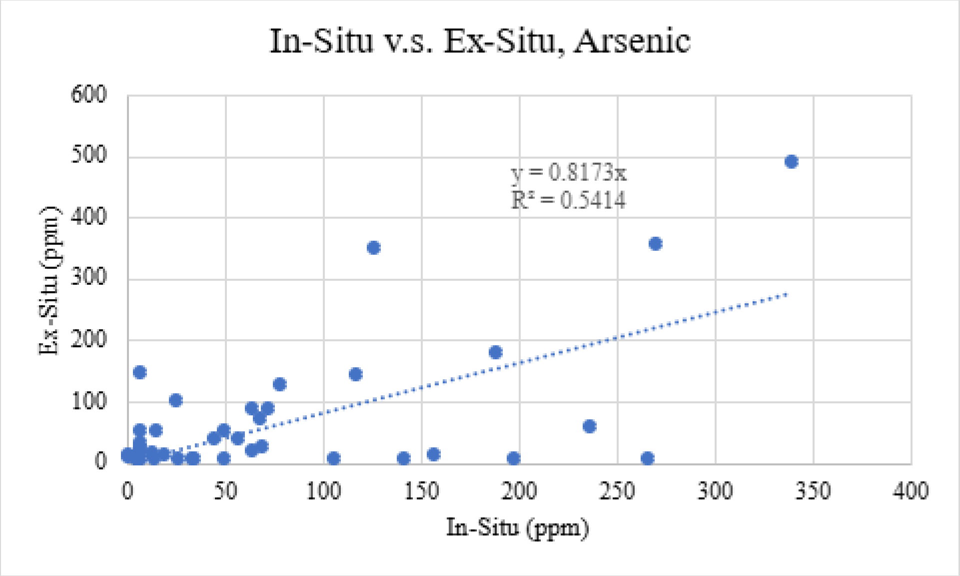

Figure 5.2 In-Situ vs. Ex-Situ Arsenic Concentrations

Figure 5.3 below displays the high correlation between the in-situ and ex-situ data for uranium as indicated by the coefficient of determination, 0.81. As seen below, the slope of the best line of fit shows that the ex-situ lab readings were approximately 1.15 times higher than the in-situ data. Despite not being a contaminant of concern, this data comparison was included for uranium to demonstrate the consistency of the collected data. Additionally, as per the TA recommendation, the intercept has been forced to 0 for the data.

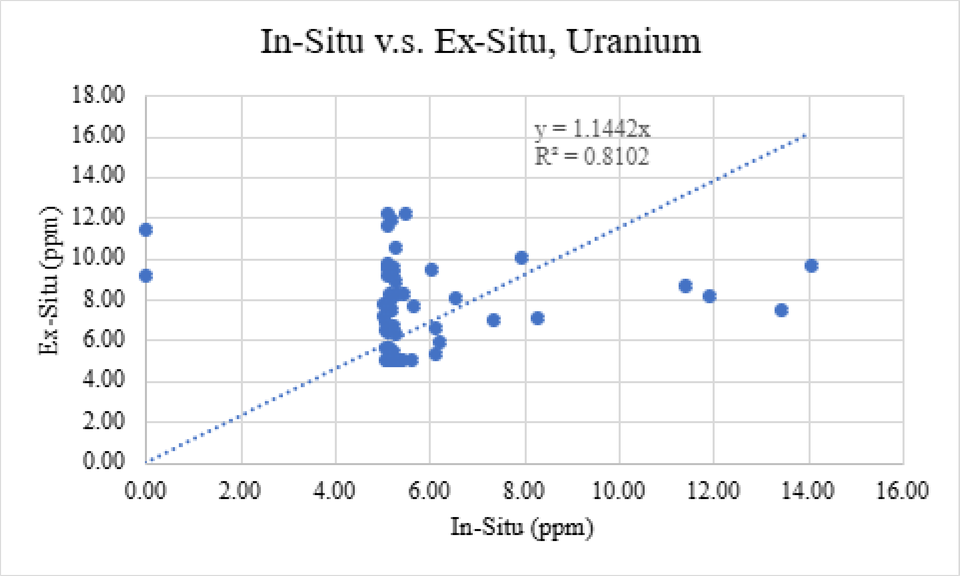

Figure 5.3 In-Situ vs. Ex-Situ Uranium Concentrations

5.2 Corrected Arsenic Concentrations

During the team’s laboratory XRF analysis, it was determined that the lead levels of Mindy Mill were high and surpassed the 10:1 ratio of lead to arsenic mentioned in the EPA 6200 method that the team used for XRF analysis. When the ratio of lead to arsenic is higher than this, the arsenic cannot be efficiently observed because the lead creates a bias for arsenic. The team’s highest arsenic reading was about 4500:1, meaning the arsenic concentrations need to be corrected.

Of the team’s 66 samples, only 3 of them did not exceed the 10:1 ratio; these 3 being the background samples. The team only corrected the ex-situ XRF reading because the amount of lead becomes higher after the sieving process. The team utilized the samples that NAU’s chemistry department verified through ICP testing.

The team supplied the department with 10 samples with varying lead levels and then created a correlation curve based on the arsenic to correct the remainder of their data. Equation 5.2 below was derived for encompassing use for all samples, with exclusion of the background samples because they did not exceed the 10:1 ratio mentioned and are considered accurate. Corrected arsenic values can be found in Appendix K and ICP verification Raw Data can be found in Appendix J.

The process of creating an equation required conversion of values provided by the chemistry department into comparable units of ppm. HS 11 was still comparably high to the rest of the values; this was adjusted by log transforming both the XRF and ICP values for the ten samples. These values were plotted against the values found by the team through XRF analysis matching the sample verified by ICP, as seen in Figure 5.4. Once the graph was created, a linear equation was applied, and then the log transformation was reversed onto the equation resulting in the equation seen below.

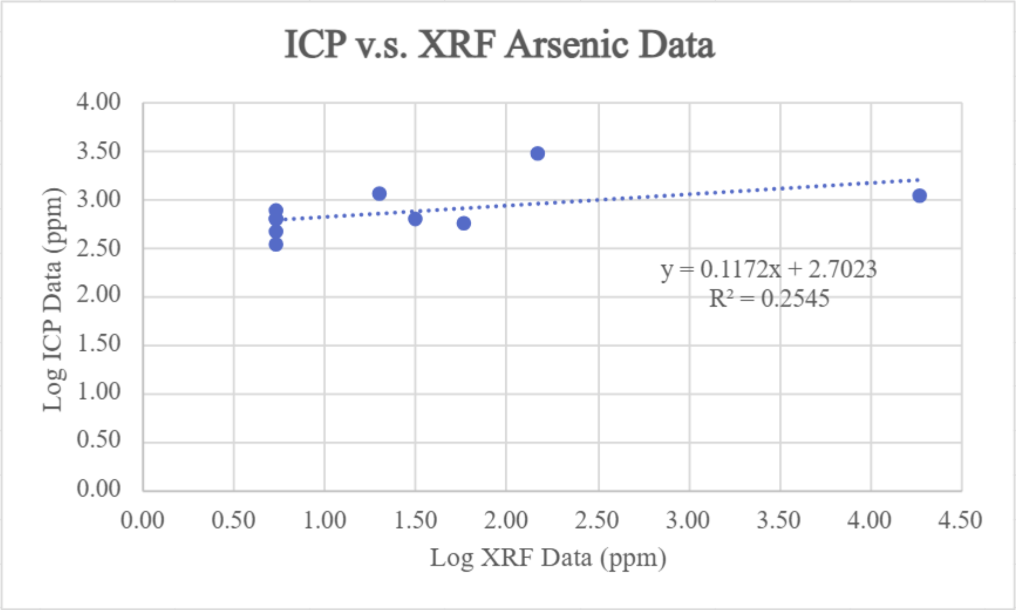

Figure 5.4 In-Situ vs. Ex-Situ Arsenic Concentrations

Equation 5.1 Corrected Arsenic Correlation

$$y = 10^{(0.1172 \times \log(x) + 2.7023)}$$

Where:

y = Corrected Arsenic Concentration, ppm

x = XRF Arsenic Uncorrected Concentration, ppm

5.3 Ex-Situ Data Distributions

A set of histograms were created for each DU and for each element with that presented major concerns; Pb and Corrected As. Distributions were not created for uranium as the levels from the ex-situ analysis were low and below the AZSRS RSL. These were created to perform a skewness analysis for each DU and evaluate the characteristics of the distributions. The number of bins for the histograms was chosen based on the result of the square root of the number of data points, and then adjusted based on team judgement. This was also done based on engineering judgment and iterations of different numbers of bins. decision units with. The x-axis is the range of values for the bin width in units of part per million. The y-axis is the frequency of a value within the bin range. The histograms can be found further down in Figures 5.4-5.11.

Data were analyzed for skewness where a negative number represents the data being left-skewed, 0 is symmetrical, and a positive number represents the data being right-skewed. Left skew is defined as the left tail being longer, meaning there are an unusual number of small values to pull the mean to the left, and vice versa for a right skew.

Table 5.1 below defines what values in the table above constitutes which severity of being skewed.

Table 5.1 Skew Value Meanings

Skew value	Interpretation
-0.5 → 0.5	Approximately symmetric
0.5 → 1 or -0.5 → -1	Moderate skew
>1 or <-1	Highly skewed

Table 5.2 indicates that distribution skewness varies by both elements and DU. Grey is approximately symmetric, blue is moderately skewed, and orange is highly skewed.

Table 5.2 Interpreted Skew Values

	Pb	As
DU 1	0.342	-0.055
DU 2	-0.718	2.190
DU 4	3.359	1.913
DU 9	0.093	2.800

Figure 5.5 below is a histogram distribution of the decision unit 1 for lead. The data displays a slight right skew, leaning more towards being symmetrical.

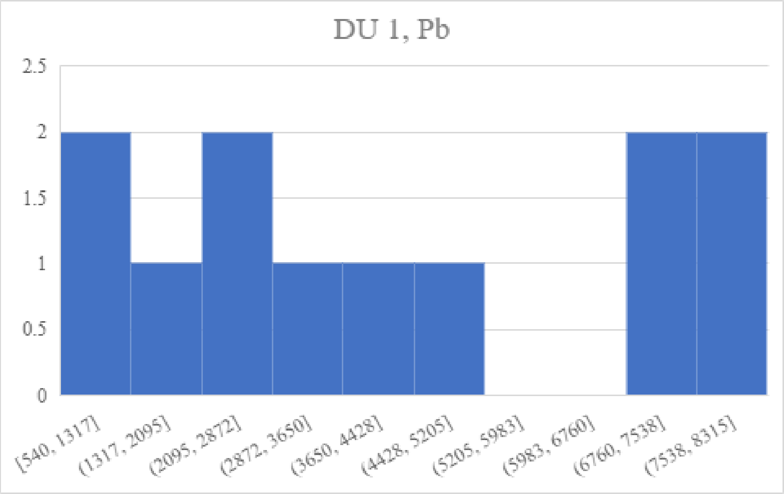

Figure 5.5 DU1 Lead Distribution

Figure 5.6 below is a histogram distribution of the decision unit 1 for corrected arsenic values. The data displays essentially a symmetric data set.

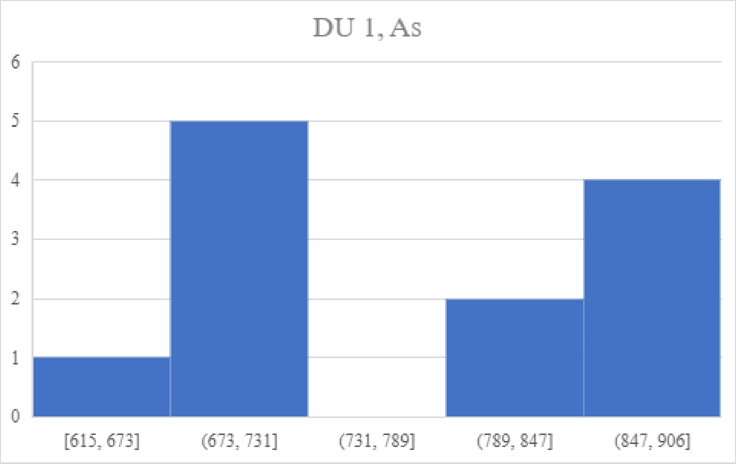

Figure 5.6 DU1 Arsenic Distribution

Figure 5.7 below is a histogram distribution of the decision unit 2 for lead. The data displays a moderate left skew.

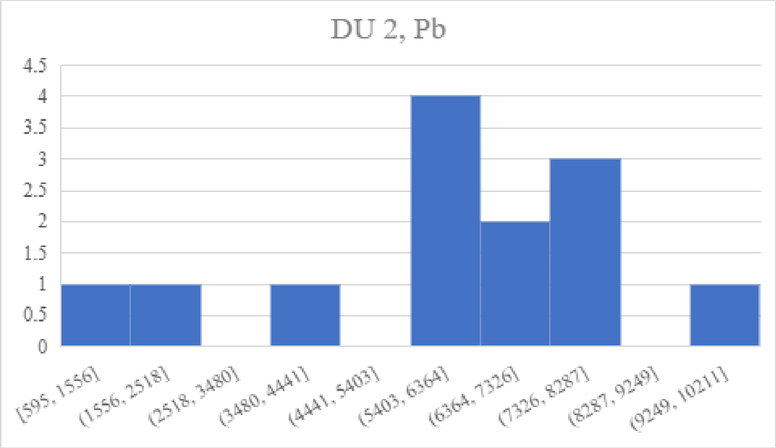

Figure 5.7 DU2 Lead Distribution

Figure 5.8 below is a histogram distribution of the decision unit 2 for corrected arsenic values. The data displays a strong right skew.

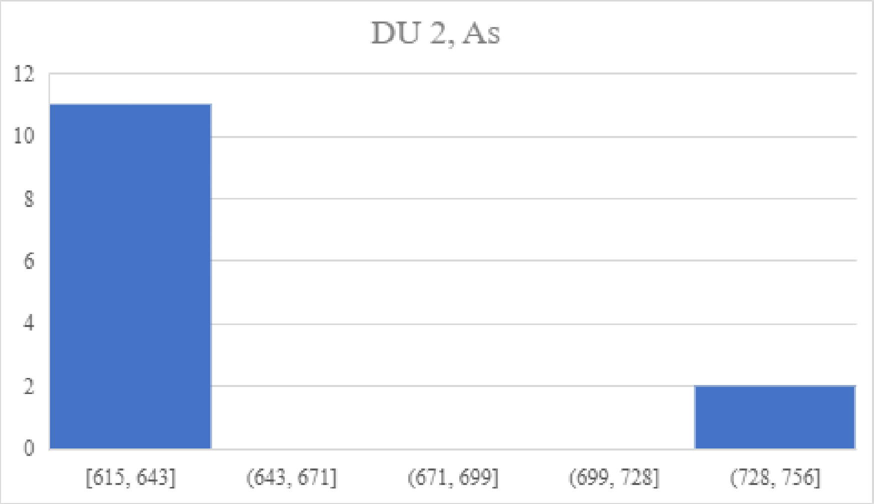

Figure 5.8 DU2 Arsenic Distribution

For purposes of analysis seen for Figures 5.9 & 5.10, as noted earlier, it is important to see that 4 is not a proper decision unit as samples were taken as hotspots upon investigation. Decision unit 6 was also not a proper decision unit as its size is not adequate to create a data distribution. With the advice given by the team's technical advisor, for analysis DU 6 was absolved into being a part of DU 4 as they are in approximate area to each other. Data distributions are typically done for transects, grid, random, etc. It was determined even though DU 4 did not follow this pattern, because of the locations of samples being in close proximity to each other, it could be used for data analysis. It is acknowledged by the team that by doing this, the results for this DU are highly biased. This is how DU 4 will be defined for the rest of the report unless specified with separation of original samples names.

Figure 5.9 below is a histogram distribution of the decision unit 4 for lead. The data displays a strong right skew.

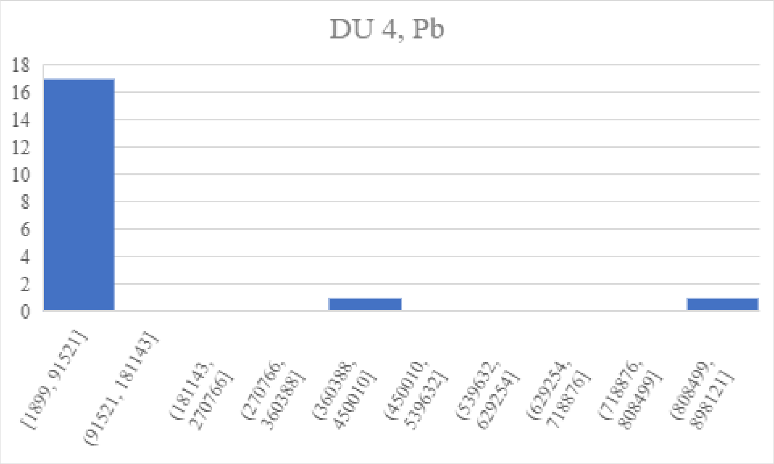

Figure 5.9 DU4 Lead Distribution

Figure 5.10 below is a histogram distribution of the decision unit 4 for corrected arsenic values. The data is moderately right skewed.

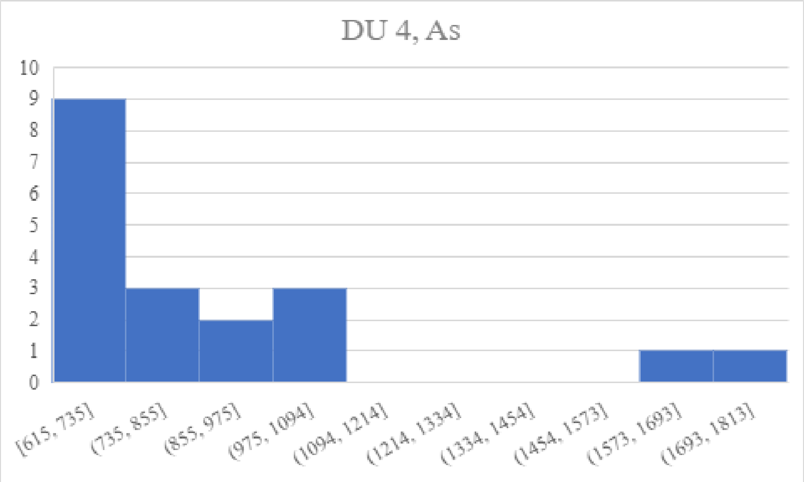

Figure 5.10 DU4 Arsenic Distribution

Figure 5.11 below is a histogram distribution of the decision unit 9 for lead. The data displayed is symmetrical.

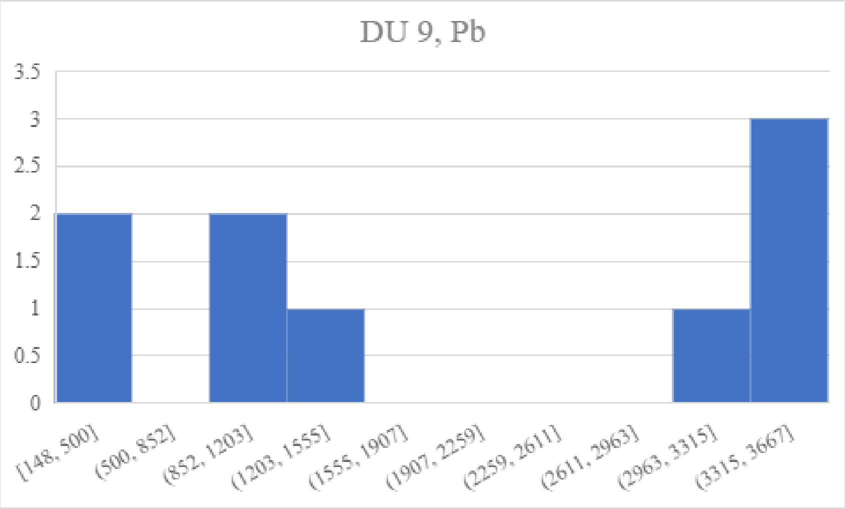

Figure 5.11 DU9 Lead Distribution

Figure 5.12 below is a histogram distribution of the decision unit 9 for corrected arsenic values. The data displays a strong right skew.

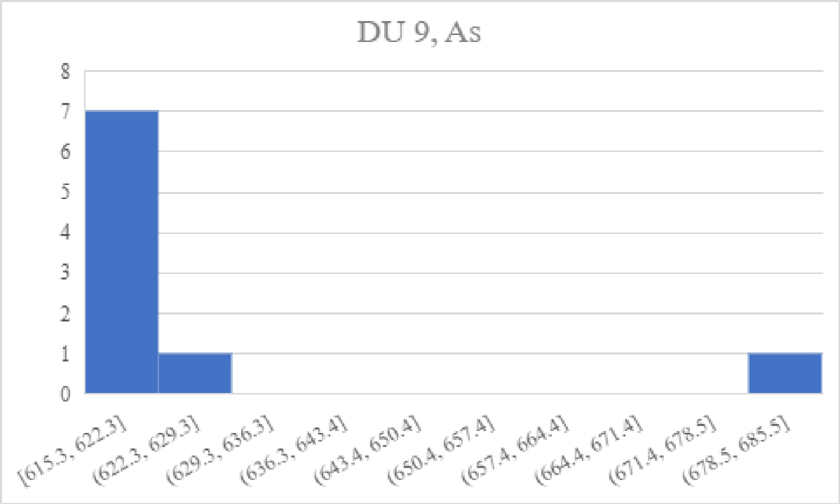

Figure 5.12 DU9 Arsenic Distribution

These results show that the datasets are not consistently normal, nor log normally distributed. This is due to the heterogeneous soil conditions. Although all the soil samples were dried and sieved prior to XRF analysis, the data has spatial variation across the site for contamination that is heterogenous. The localized hotspots and difference between the decision units then resulted in a wide variation in lead and arsenic concentrations while uranium proved to be more uniform. This range of differences is likely due to areas being tailings piles, localized hotspots, and any of the different previous milling activities.

The raw ex-situ XRF data is available in Appendix G.

5.4 Human Health and Ecological Identification of COCs

Results of XRF laboratory ex-situ analysis were also compared to the AZSRS to determine the human health (HH) COCs. The HH COCs that were determined initially were Pb, As, and U. After performing the necessary data analysis and organization, uranium was removed from being a HH contaminant as the ex-situ data results were not above the nonresidential nor the residential values from the RSLs. It was determined by the team that the uranium reading of DU 9-6 of 812 from the in-situ data was a random hotspot within the area. This was further supported by a member of EHS who brought a device that reads beta or alpha particles. The team was informed that the values of the alpha and beta particles were equal to background levels. The conclusive HH COCs were then determined to only be lead and arsenic. The HH RSLs can be found in Table 5.4 below, which is a copy of the previous Table 3.2 for accessibility.

Table 5.4 AZ RSLs for Lead, Arsenic, and Uranium

AZ RSLs	Pb, ppm	As, ppm	U, ppm
Residential	400	10	16
Nonresidential	800	10	200

To identify the ecological (ECO) CoCs, contaminant limits set by the Environmental Protection Agency were compared to the Ex-Situ XRF readings collected from ex-situ. The assessed contaminants are available in Table 5.5 below which lists specific contaminant limits for different subgroups of ecological life. All elements that are below the average reading from the XRF analysis are highlighted in pink.

Table 5.1 EPA ECO Screening Levels

Contaminant	Plants ppm	Soil Invertebrates ppm	Avian Wildlife ppm	Mammals ppm	Average Reading	Max Reading
Arsenic (As)	18	-	43	46	728	1813
Cobalt (Co)	13	-	120	230	271	507
Chromium (III) (Cr)	-	-	26	34	41	67
Copper (Cu)	70	80	28	49	1015	10853
Manganese (Mn)	220	450	4,300	4,000	3650	21788
Nickel (Ni)	38	280	210	130	74	177
Lead (Pb)	120	1700	11	56	33570	898121
Selenium (Se)	0.52	4.1	1.2	0.63	27	99
Vanadium (V)	-	-	7.8	280	82	146
Zinc (Zn)	160	120	46	79	7026	37163

The data used to complete this assessment is available in Appendix E, Ecological CoC Identification Data. In Appendix E is an in-depth comparison of these limits for each contaminant and for each subgroup of ecological life.

5.5 Exposure Point Concentrations

An Exposure Point Concentration (EPC) is the estimated amount of contaminant that a person may encounter at a location and time. These are calculated to help represent the concentration of the contaminants that a person is exposed to at a time. A 50% EPC is the mean for these calculations where 95% is the Upper Confidence Limit (UCL). A 95% EPC is calculated for the analysis of more long-term risks while the 50% EPC is utilized for analyzing more specific scenarios. In the equations below, arithmetic calculation is best used for long-term exposure risks, this is why it is selected for lead exposure calculations. Whereas a geometric calculation is best suited for the log models that arsenic follows.

The EPCs were calculated for each DU based on the average data for each sample from their set of subsamples. No log transformations were applied to the lead data for the purpose of providing more accurate estimations and outliers were retained to represent the entirety of the site conditions.

The 50% EPC was calculated according to the arithmetic mean of each DU for lead seen in Equation 5.2 below.

Equation 5.2 Arithmetic Mean Equation

$$50\%EPC = \frac{X_1 + X_2 + \ldots + X_n}{n}$$

Where:

EPC = Exposure Point Concentration

X = Lead or arsenic readings (ppm)

n = Number of readings

The 50% EPC was calculated according to the geometric mean of each DU for arsenic seen in Equation 5.3 below.

$$50\%EPC = \sqrt[n]{(X_1 * X_2 * \ldots * X_n)}$$

Equation 5.3 Geometric Mean Equation

Where:

EPC = Exposure Point Concentration

X = Lead or arsenic readings (ppm)

n = Number of readings

The 95% EPC for each DU for arsenic was calculated using Equation 5.4 below, the cox equation. The 95% EPC for each DU for lead was calculated by taking the 50% EPC, found with the arithmetic mean, and adding 2 standard deviations because the lead values were normally distributed.

Equation 5.4 Cox Equation

$$95\%EPC = 50\%EPC + \frac{S^2}{2} + 1.645\sqrt{\frac{S^2}{n} + \frac{S^4}{2(n-1)}}$$

Where:

EPC = Exposure Point Concentration

S = Standard deviation

n = Number of readings

Table 5.6 below is a representation of all aspects and variables needed to fulfill the equations above. The goal of this table is to provide and identify the 50% and 95% EPC for DU 1, 2, 6, and 9 for lead. There is a high variability in the lead and arsenic numbers, and the uranium concentrations are more consistent throughout the DU's. This matches the earlier analysis through histogram distributions. The variability is most prominent in DU 1 and DU 6, which also reflects that there are localized hotspots and heterogeneity within a single DU.

Table 5.2 50% and 95% EPCs for Lead

DU	Contaminant	n	Mean (50% EPC) (mg/kg)	Standard Deviation	t-value	95% EPC (mg/kg)
1	Pb	12	4,188.85	2,741.62	2.20	5,930.79
2	Pb	13	6,000.27	2,559.28	2.18	7,546.83
4	Pb	19	82,492.21	221,066.69	2.10	189,042.94
9	Pb	9	1,958.29	1,474.15	2.31	3,091.42

Table 5.3 50% and 95% EPCs for Arsenic

DU	Contaminant	n	Geomean (50% EPC) (mg/kg)	Mean Ln	Standard Deviation Ln	z-value	95% EPC (Cox) (mg/kg)
1	As	12	766.07	6.64	95.32	1.645	811.33
2	As	13	634.25	6.45	50.48	1.645	657.28
4	As	19	799.43	6.68	340.94	1.645	928.10
9	As	9	624.25	6.44	23.28	1.645	637.02

5.6 Contaminants of Concern Mapping

After calculating the exposure point concentrations, ex-situ concentrations of lead (Pb) and arsenic (As) were mapped. Uranium was determined to remain below the standard for human health and ecological risk, so it was not mapped.

Figure 5.13 displays locations where lead was found as a contaminant of concern on the site. Within EPA guidelines, the industrial regulation for lead is 800 mg/kg. Additionally, 2,400 mg/kg of lead present indicates the location requires remediation.

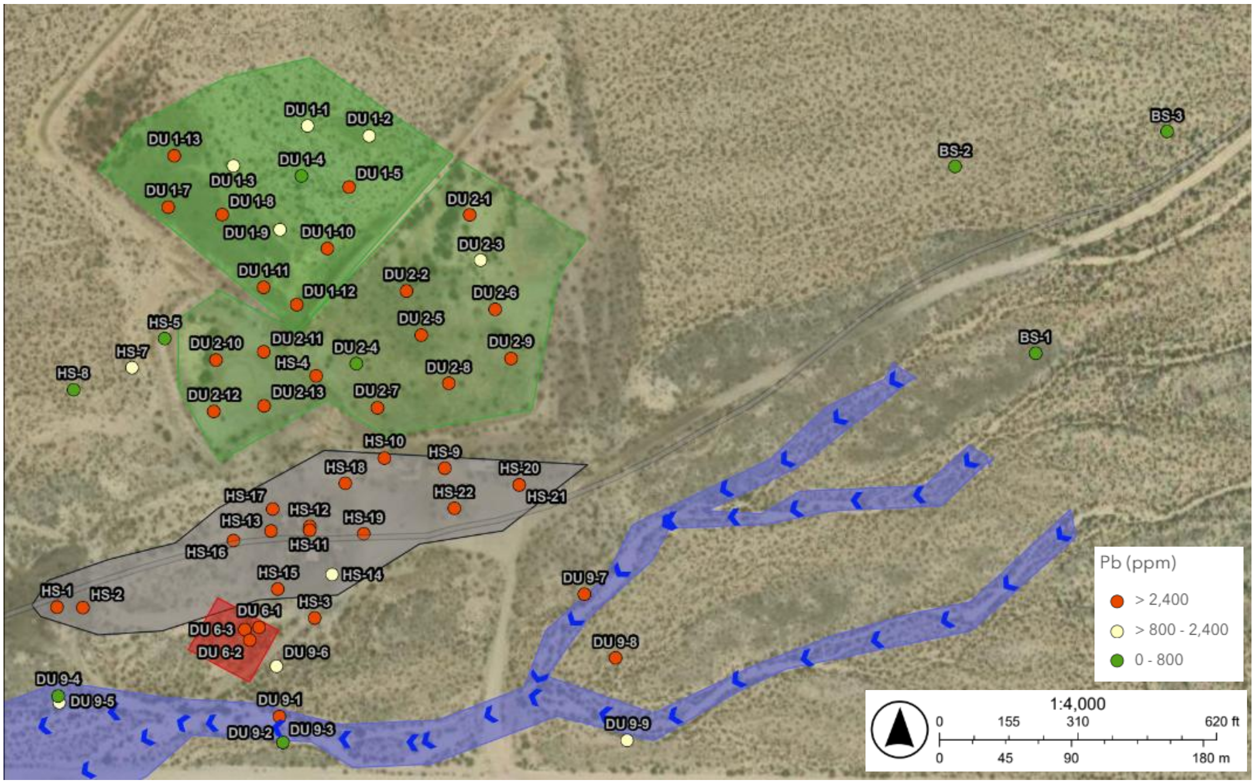

Figure 5.5 Lead Contaminant Concentration Map

Figure 5.14 displays of the locations where arsenic was found as a contaminant of concern on the site. Within EPA guidelines, the industrial regulation for arsenic is 10 mg/kg. Additionally, 30 mg/kg of arsenic present indicates the location requires remediation.

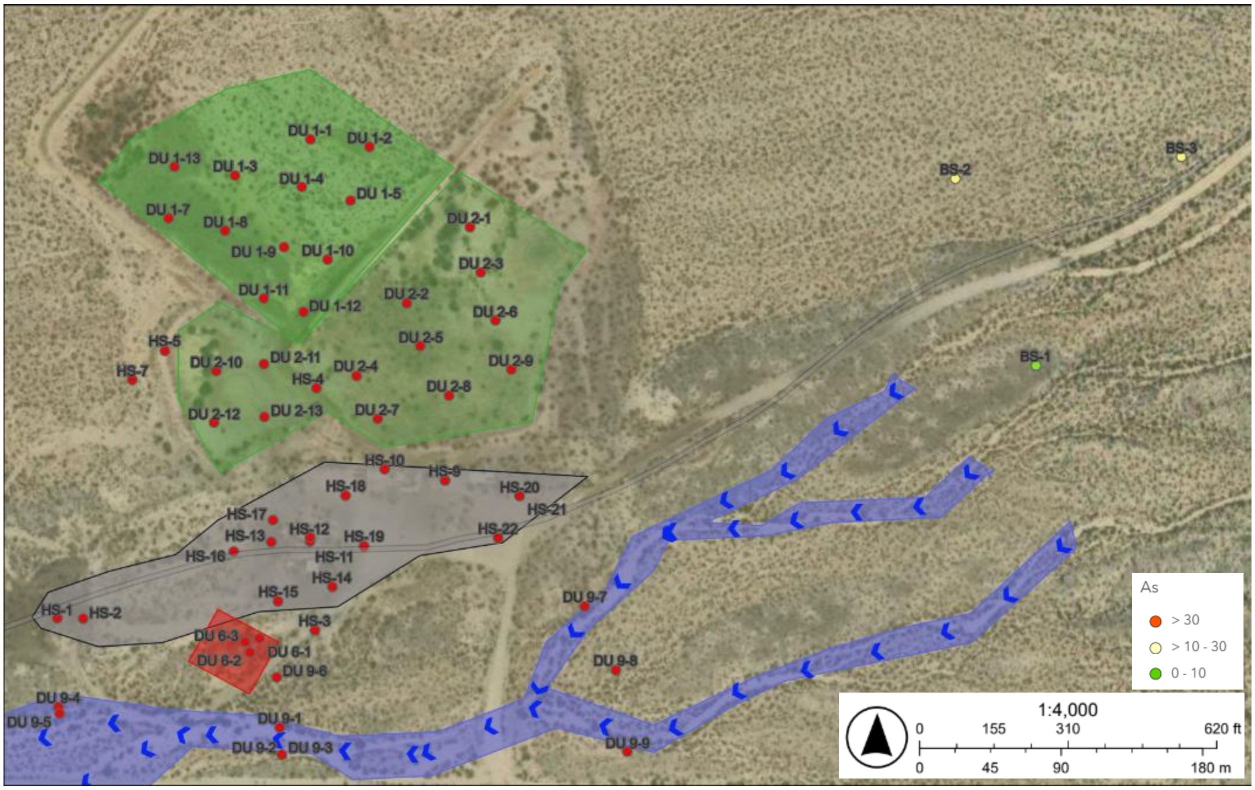

Figure 5.6 Arsenic Contaminant Concentration Map

6.0 Contamination Migration Pathways

Figure 6.1 below shows the conceptual site model created for the Mindy Mill site. A conceptual site model is utilized to display the various sources of contamination and the pathways that CoCs can take to reach either humans, plants, or wildlife.

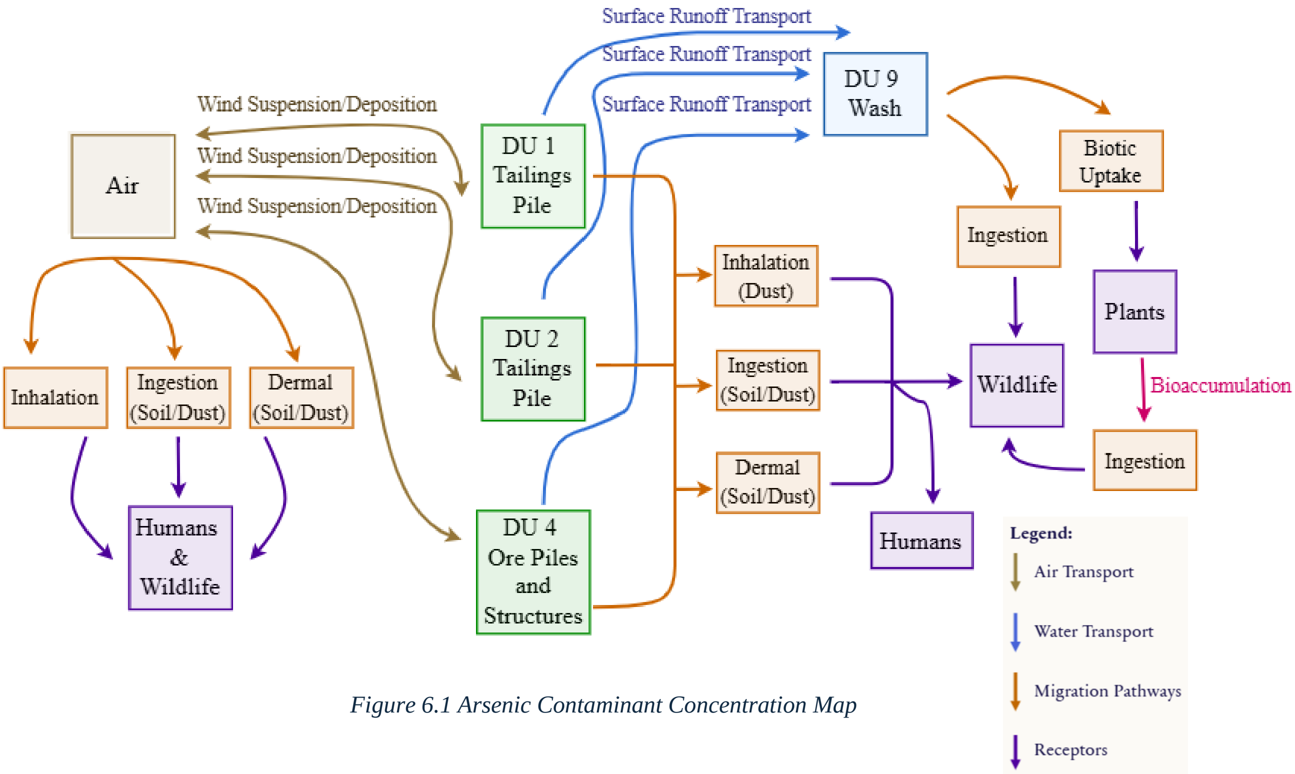

Figure 6.1 Arsenic Contaminant Concentration Map

Figure 6.2 below is a Windrose located by the team based on historical data to quantify the wind speed and direction for Kingman, Arizona. Long-term viable data was not available for Yucca, Arizona, so the team utilized the data from Kingman Arizona as it is located about 30 minutes north of Yucca, Arizona, and the geography is similar to where the site is located. The prevailing winds are seen coming in primarily from South to Southeast direction. Wind coming from this direction over the site would move contaminants from the structure and tailings to the North and Northwest Direction.

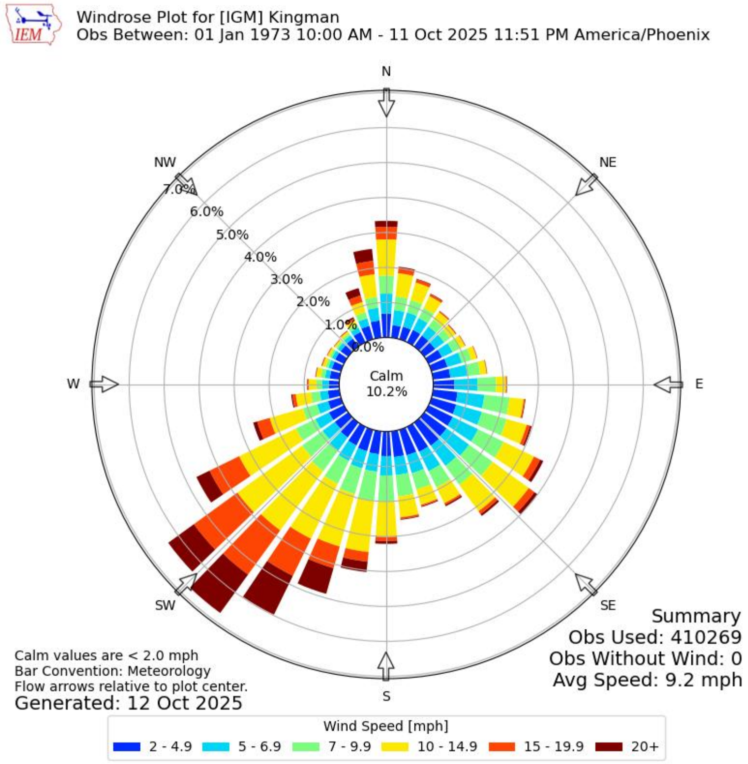

Figure 6.2 Kingman Windrose [1]

7.0 Risk Assessment-Human Health

7.1 Human Health Exposure Assessment

A human health risk assessment was conducted on the site which included ingestion, inhalation and dermal exposure to the contaminated soil.

The 50% and 95% EPCs were used as the average and worst-case exposure scenarios, respectively. These scenarios provide the intake dose of lead and arsenic for each scenario with the units of milligrams of containment per kilogram of body day per day.

Both carcinogenic and non-carcinogenic intakes were calculated for arsenic as arsenic has carcinogenic and non-carcinogenic effects on human health. Lead intakes were calculated using the Adult Lead Model (ALM) and Integrated Exposure Uptake Biokinetic Model for Lead in Children model (IEUBK), discussed in Section 7.3.2.

Two exposure scenarios were identified, a worker scenario, and a recreational scenario. A residential scenario was not identified as there were no residents living near the site.

7.1.1 Worker Exposure Scenario

The worker exposure scenario assumes that the worker is on site for the cleanup. The estimated time for the clean up is 1 year with an 8-hour working day for 5 days per week and 52 weeks per year. The ingestion contact rate, or the amount of soil ingested per day, is 100 milligram per day for adults [2]. The average body weight of an adult is 80 kilograms [3]. For non-carcinogenic intakes that averaging time is equal to the exposure duration, in this case 1 year. For carcinogenic intakes the averaging time is always 70 years. It is assumed that that the workers will spend the majority of their time working on the tailing piles, DU 1 and DU 2. DU 4 will also be considered as it has the highest values of contamination and will also be a part of the clean up work. Table 7.1 below shows the parameters used for the worker scenario for the ingestion pathway.

Table 7.1 Parameters for Worker Scenario Ingestion

Parameters for Worker Scenario - Ingestion	
Contact Rate (mg soil/day)	100
Exposure Frequency (hours/day)	8
Exposure Duration (days) (1yrs*5day/week*52 week/yr)	260
Average Body Weight (kg)	80
Non-Carcinogenic Averaging Time (yrs)	1
Carcinogenic Averaging Time (yrs)	70

Equation 7.1 below is the equation used to determine the chronic daily intake of arsenic through ingestion.

Equation 7.1 Chronic Daily Intake Equation for Ingestion

$$CDI = \frac{C \times CF \times CR \times EF \times ED}{BW \times AT}$$

Where:

CDI = Chronic Daily Intake (mg COC/kg of body weight-day)

C = Concentration at Exposure Point (mg COC/kg soil)

CF = Conversion Factor of 10^{-6}, mg to kg conversion

CR = Contact Rate (mg soil/day)

EF = Exposure Frequency (hours/day)

ED = Exposure Duration (days)

BW = Body Weight (kg)

AT = Averaging Time (days)

Table 7.2 shows the intake dose for ingestion exposure for the work scenario at each EPC.

Table 7.2 Arsenic Ingestion Intake Doses for Workers

Worker Scenario - Ingestion				
	50% EPC Carcinogenic Intake Dose (mg/kg-day)	50% EPC Non-Carcinogenic Intake Dose (mg/kg-day)	95% EPC Carcinogenic Intake Dose (mg/kg-day)	95% EPC Non-Carcinogenic Intake Dose (mg/kg-day)
DU 1	3.24E-06	2.27E-05	3.44E-06	2.41E-04
DU 2	2.68E-06	1.88E-05	2.79E-06	1.95E-04
DU 4	3.38E-06	2.37E-05	3.94E-06	2.75E-04

For the dermal exposure of workers, there were additional parameters that needed considered. For both the carcinogenic and non-carcinogenic intakes the area of exposed skin, soil to skin adherence, and the absorption factors were defined.

According to the EPA's *Risk Assessment: Guidance for Superfund: Human Health Evaluation Manual* (RAGS), Part E Supplemental Guidance for Dermal Risk Assessment, the area of skin exposed for an adult in commercial/industrial is 3300 cm^2. This assumes that the adults are wearing sort sleeved shirts, long pants and shoes leaving the head, hands and forearms exposed [4]. The EPA RAGS document also recommends that the skin to soil adherence value of 0.2 mg/cm^2 be used for dermal exposure. The absorption factor of arsenic in adults is 0.03. The exposure frequency is measured in events per day, with each event being when the person gets "dirty" from the soil. It is assumed that there will be three breaks per day, a morning break, lunch break and afternoon break, meaning the workers are exposed 4 times a day.

Table 7.3 below shows the parameters used for the worker scenario for the inhalation exposure.

Table 7.3 Parameters for Worker Scenario Dermal

Parameters for Worker Scenario - Dermal	
Skin Exposed (cm^2)	3300
Dust Adherence (mg dust/cm^2)	0.2
Absorption Factor (unitless)	0.03
Exposure Frequency (events/day)	4
Exposure Duration (days)	260
Average Body Weight (kg)	80
Non-Carcinogenic Averaging Time (years)	1
Carcinogenic Averaging Time (years)	70

Equation 7.2 is the equation used for calculating the chronic daily intake for inhalation exposure.

Equation 7.2 Chronic Daily Intake Equation for Inhalation

$$CDI = \frac{C \times CF \times S \times DA \times AF \times EF \times ED}{BW \times AT}$$

Where:

CDI = Chronic Daily Intake (mg COC/kg of body weight-day)

C = Concentration at Exposure Point (mg COC/kg soil)

CF = Conversion Factor of 10^{-6}, mg to kg conversion

S = Skin Exposed (cm^2)

DA = Dust Adherence (mg dust/cm^2)

AF = Absorption Factor (unitless)

EF = Exposure Frequency (events/day)

ED = Exposure Duration (days)

BW = Body Weight (kg)

AT = Averaging Time (days)

Table 7.4 shows the intake dose for the dermal exposure for the work scenario at each EPC.

Table 7.4 Dermal Daily Lead and Arsenic Intakes for Workers

Worker Scenario - Dermal				
	50% EPC Carcinogenic Intake Dose (mg/kg-day)	50% EPC Non-Carcinogenic Intake Dose (mg/kg-day)	95% EPC Carcinogenic Intake Dose (mg/kg-day)	95% EPC Non-Carcinogenic Intake Dose (mg/kg-day)
DU 1	7.71E-06	5.40E-04	8.17E-06	5.72E-04
DU 2	6.38E-06	4.47E-04	6.62E-06	4.64E-04
DU 4	8.05E-06	5.64E-04	9.35E-06	6.55E-05

7.1.2 Recreational Camper Scenario

The camper scenario will be considered for both adults and children aged 6-11 years. The contact rate for children is 200 milligrams of soil per day [2]. The exposure frequency will be 14 days as this is the limit of how long any camper may stay on BLM property. The average body weight for children aged 6-11 years is 31.8 kilograms [3]. For this scenario the EPCs for DU 4 will be used as there was evidence of shot glass bottles in this area, suggesting that people have recreated in the area before.

Table 7.5 shows the parameters for children and adults used to calculate the chronic daily intake of arsenic through ingestion. The team did not complete a scenario for ATV/UTV users as there was not significant evidence that there were any on site.

Table 7.5 Parameters for Camper Scenario Ingestion

Parameters for Camper Scenario - Ingestion		
	Adult	Child
Contact Rate (mg soil/day)	100	200
Exposure Frequency (days/year)	14	14
Exposure Duration (years)	30	5
Average Body Weight (kg)	80	31.8
Non-Carcinogenic Averaging Time (yrs)	30	5
Carcinogenic Averaging Time (yrs)	70	70

Table 7.6 shows the calculated chronic daily intake through ingestion for each EPC for children and adult campers.

Table 7.6 Ingestion Lead and Arsenic Intake Doses for Campers

Camper Scenario - Ingestion				
	50% EPC Carcinogenic Intake Dose (mg/kg-day)	50% EPC Non-Carcinogenic Intake Dose (mg/kg-day)	95% EPC Carcinogenic Intake Dose (mg/kg-day)	95% EPC Non-Carcinogenic Intake Dose (mg/kg-day)
DU 4 Adult	1.82E-07	4.25E-07	2.11E-07	4.94E-07
DU 4 Child (6-11)	9.18E-07	1.28E-05	1.06E-06	1.49E-05

According to EPA’s RAGS the skin exposed for adult residents is 5700 cm^2, which assumes that the adult is wearing a short sleave shirt, shorts and shoes leaving the head, hands, forearms and lower legs exposed [4]. This was used as it is assumed that adults recreating would be more lax with clothing. For children the area of skin exposed is 2800 cm^2 [4]. The exposure frequency was assumed to be 4 events per day, assuming the same amount of breaks as the worker dermal exposure scenario. The exposure duration was assumed to be 5 years for children, the age range of children used, and for adults 30 years was assumed for repetition of camping over a long period of time.

Table 7.7 shows the parameters used for children and adults to calculate the chronic daily intake for dermal exposure.

Table 7.7 Parameters for Camper Scenario Dermal

Parameters for Camper Scenario - Dermal		
	Adult	Child
Skin Exposed (cm^2)	5700	2800
Dust Adherence (mg dust/cm^2)	0.2	0.2
Absorption Factor	0.03	0.3
Exposure Frequency (events/day)	4	4
Exposure Duration (days/year)	14	14
Exposure Duration (years)	30	5
Average Body Weight (kg)	80	31.8
Non-Carcinogenic Averaging Time (yrs)	30	5
Carcinogenic Averaging Time (yrs)	70	70

Table 7.8 shows the calculated chronic daily intake for children and adults for dermal exposure at each EPC.

Table 7.8 Dermal Intake Doses for Campers

Camper Scenario - Dermal				
	50% EPC Carcinogenic Intake Dose (mg/kg-day)	50% EPC Non-Carcinogenic Intake Dose (mg/kg-day)	95% EPC Carcinogenic Intake Dose (mg/kg-day)	95% EPC Non-Carcinogenic Intake Dose (mg/kg-day)
DU 4 Adult	7.49E-07	1.74E-06	8.69E-07	1.77E-06
DU 4 Child (6-11)	9.25E-06	1.30E-04	1.07E-05	1.50E-04

7.2 Toxicity Assessment

Using the EPA's Integrated Risk Information System (IRIS) the toxicity data for arsenic was obtained to perform the risk calculations for arsenic. The slope factor (SF) is the risk of developing cancer per unit intake dose through ingestion and is the value used for calculating carcinogenic risk. The reference dose (RfD) is lowest dose that can be ingested before toxic effects are observed. This value is used for calculating non-carcinogenic risk.

The possible carcinogenic effects of arsenic are lung, bladder, and cancer with other potential links to kidney, liver, and prostate cancer [5]. The possible non-carcinogenic effects of arsenic are abdominal pain, vomiting, diarrhea, muscle cramps, numbness and tingling in the extremities and extreme cases can lead to death [6].

Table 7.9 shows the slope factor and reference dose values used to calculate the carcinogenic and non-carcinogenic risks of arsenic respectively.

Table 7.9 Toxicity Data for Arsenic

	Slope Factor (mg/(kg-day))$^{-1}$	Reference Dose (mg/kg-day)
Arsenic	32	6.00 E-05

7.3 Risk Characterization

7.3.1 Arsenic Risk

Using the data from the exposure scenarios and toxicity database, risk can be calculated using the flowing equations.

Equation 7.3 is the equation used to calculate carcinogenic risk.

Equation 7.3 Carcinogenic Risk Equation

$$Risk = I_c \times SF$$

Where:

I_C = Carcinogenic Intake Dose (mg CoC/kg of body weight-day)

SF = Slope Factor (mg/(kg-day))$^{-1}$

Equation 7.4 is the equation used to calculate the non-carcinogenic risk.

Equation 7.4 Non-Carcinogenic Risk Equation

$$HI = \frac{I_N}{RfD}$$

Where:

HI = Hazard Index (unitless)

I_N = Non-carcinogenic intake dose (mg/kg of body weight-day)

RfD = Reference Dose (mg/kg-day)

Table 7.10 shows the calculated non-carcinogenic and carcinogenic risk for arsenic ingestion at the 50% and 95% EPCs. The values highlighted in red show that there is elevated carcinogenic risk, which means there is a greater than a one in million, 10^{-6}, chance of cancer developing. For non-carcinogenic risk, if the hazard index is greater than 1 then there is elevated risk and are highlighted in red.

Table 7.10 Calculated Ingestion Risk

Ingestion Risk				
	Carcinogenic Risk		Non-Carcinogenic	
	50%	95%	50%	95%
Worker (DU 1)	1.04E-04	1.10E-04	3.79	4.01
Worker (DU 2)	8.60E-05	8.91E-05	3.13	3.25
Worker (DU 4)	1.08E-04	1.26E-04	3.95	4.59
Camper Adult (DU 4)	5.84E-06	6.78E-06	0.007	0.008
Camper Child (DU 4)	2.93E-05	3.41E-05	0.21	0.24

Table 7.11 shows the calculated non-carcinogenic and carcinogenic risk for dermal exposure to arsenic at the 50% and 95% EPCs. The values highlighted in red show that there is elevated carcinogenic risk, which means there is a greater than a one in million, 10^{-6}, chance of cancer developing. For non-carcinogenic risk, if the hazard index is greater than 1 then there is elevated risk and are highlighted in red.

Table 7.11 Calculated Dermal Risk

Dermal Risk				
	Carcinogenic Risk		Non-Carcinogenic	
	50%	95%	50%	95%
Worker (DU 1)	2.47E-04	2.62E-04	9.00	9.53
Worker (DU 2)	2.04E-04	2.21E-04	7.45	7.72
Worker (DU 4)	2.58E-04	2.99E-04	9.39	10.90
Camper Adult (DU 4)	2.40E-05	2.79E-05	0.02	0.02
Camper Child (DU 4)	2.96E-04	3.44E-04	2.19	2.50

There is significant risk for both workers and campers in both exposure scenarios. The non carcinogenic dermal risk for workers only has an elevated risk for DU4 for the max EPC, DU1 and DU1 do not pose elevated risks at both EPCs for workers.

7.3.2 Lead Risk

The Adult Lead Model (ALM) and Integrated Exposure Uptake Biokinetic Model (IEUBK) were used to calculate the lead risk in adults and children. The ALM calculates the blood lead levels in adults and calculates the probability of fetal blood lead levels exceedance in adults who are pregnant [7]. The IEUBK model calculates the blood lead levels in children and the probability that they’ll exceed the concern threshold of 5 micrograms of lead per deciliter of blood [7].

The ALM utilizes equations that can be used to estimate the probability of blood level concentrations of lead in the fetuses of pregnant adults exceeding predetermined limits. One such equation, Equation 7.5, depicts how the blood lead concentration in women of child-bearing age is calculated [7].

Equation 7.5 Blood Lead of Child-Bearing Age Women [8]

$$PbB_{adult,central} = PbB_{adult,0} + \frac{PbS * BKSF * IR_S * AF_S * EF_S}{AT}$$

Where:

$PbB_{adult,central}$ = Central estimate of blood level concentrations in adults with site exposure to soil lead at PbS (µg/dL)

$PbB_{adult,0}$ = Typical blood lead concentration of adults in the absence of site lead exposures (µg/dL)

PbS = Approximate average soil lead concentration (µg/g)

BKSF = Biokinetic slope factor relating increase in average adult blood level concentration to the average daily lead uptake (µg/dL blood lead increase per µg/d lead uptake)

IR_S = Intake rate of soil (g/day)

AF_S = Absolute gastrointestinal absorption fraction for ingested lead (dimensionless)

EF_S = Exposure frequency (days of exposure)

AT = Averaging time (days/year)

Equation 7.6 describes the anticipated relationship between the blood lead concentration in adult women and the corresponding 95th percentile fetal blood lead concentration.

Equation 7.6 Blood Lead Concentration of Fetuses [8]

$$PbB_{fetal,0.95} = PbB_{adult,central} * GSD_{i,adult}^{1.645} * R_{fetal/maternal}$$

Where:

$PbB_{adult,central}$ = PbB_t = Central estimate of blood lead concentration (µg/dL)

$PbB_{fetal,0.95}$ = 95th percentile blood lead concentration in fetuses born from adults with exposure to site soils (µg/dL)

$GSD_{i,adult}$ = Estimated value of the individual geometric standard deviation (dimensionless)

$R_{fetal/maternal}$ = Constant of proportionality between fetal blood lead concentration at birth and maternal blood lead concentration (dimensionless)

After the model completes its calculations, it generates the probability for how likely the unborn child's blood lead concentrations exceed a given target lead concentration [7]. The following table, Table 7.12, displays the data inputs and outputs from the ALM based on two exposure scenarios. A PbS value of 898,120.8 µg/g was used to be conservative and account for the worst case scenario of lead exposure since it was the highest averaged lead concentration from the ex-situ analysis. This concentration was the averaged ex-situ lead concentration from HS-12.

Table 7.12 ALM Inputs and Outputs

Variable with Units	**Worker Scenario**	**2-Week Camping Scenario**
PbS (µg/g)	898,120.8	898,120.8
$R_{fetal/maternal}$	0.9	0.9
BKSF (µg/dL per µg/day)	0.4	0.4
GSD_i	1.8	1.8
PbB_0 (µg/dL)	2.0	2.0
IR_S (g/day)	0.050	0.050
$AF_{S, D}$	0.12	0.12
$EF_{S, D}$ (days/year)	219	14
$AT_{S, D}$ (days/year)	365	365
PbB_{adult} (µg/dL)	1,295.3	84.7
$PbB_{fetal, 0.95}$ (µg/dL)	3,065.7	200.4
PbB_t (µg/dL)	800.0	800.0
IR_S (g/day)	0.050	0.050
Probability $PbB_{fetal} > PbB_t$ (%)	**73.9%**	**0.0%**

Based on the completed calculations, the ALM indicates that pregnant workers have a 73.9% chance of producing children who have blood lead concentrations exceeding the goal lead concentration of 800 µg/dL. This is of concern for the health of the child bearer and the produced children.

The IEUBK model was used to find the probability that the blood lead levels in children that will exceed the 5 micrograms of lead per deciliter of blood concentration. The model is set up to evaluate residential scenarios, since no residential scenarios are being considered the 50% and 95% EPCs will need to be adjusted. They will be adjusted to take in account the exposure frequency and exposure duration, by multiplying the EPCs by the exposure frequency and exposure duration. Equation 7.7 shows that equation used to adjust the EPCs.

Equation 7.7 EPC Adjustion Equation

$$Adjusted\ EPC = EPC \times EF \times ED$$

Where:

EPC = Original EPC (mg/kg)

EF = Exposure Frequency (hours/day)

ED = Exposure Duration (days/year)

Table 7.13 below shows the original EPCs and the adjusted EPCs used in the model. All other inputs and parameters such as diet, water, and air concentration were left as the default values as this data was unknown for the site.

Table 7.13 Original and Adjusted EPCs

	Original Value	Adjusted Value
50% EPC (mg/kg)	82492.21	1055
95% EPC (mg/kg)	189042.9	2417

Tables 7.14 show the blood lead levels are children aged 6 to 7 years old at each EPC.

Table 7.14 Blood Levels at Each EPC

	50% EPC Blood Lead Level (µg/dL)	95% EPC Blood Lead Level (µg/dL)
72-84 months (6-7 years)	4.7	8.9

Figures 7.1 and 7.2 show the distribution curves that were created from the IEUBK model at each EPC.

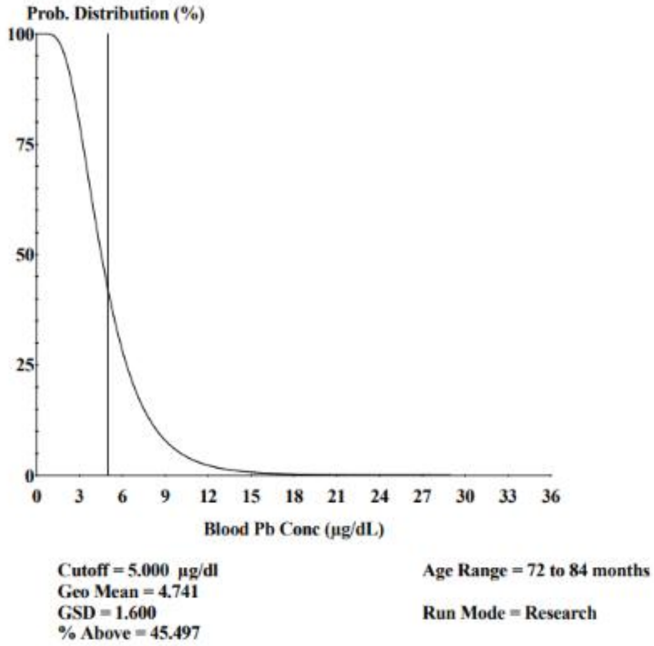

Figure 7.1 Distibuttion Curve for 50% EPC

The graph in Figure 7.1 shows that 45% of children will exceed the limit of 5 µg/dL. This means that at the average exposure point there is elevated risk for lead in children.

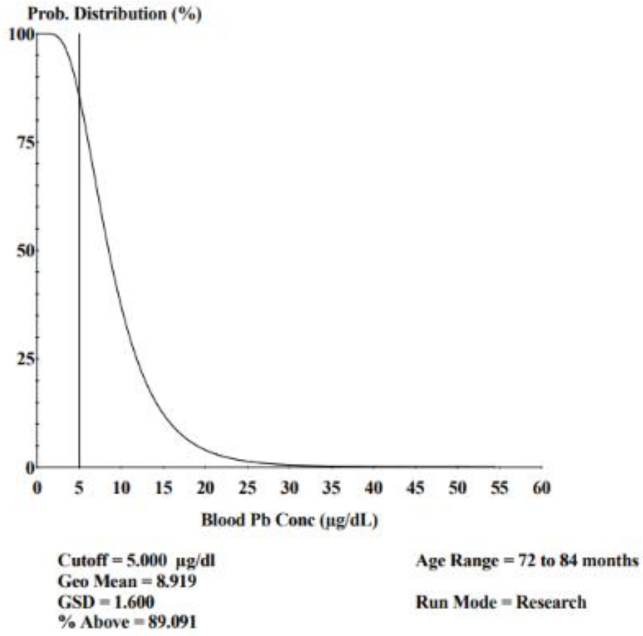

Figure 7.2 Distribution Curve for 95% EPC

The graph in Figure 7.2 shows that 89% of children will exceed the limit of 5 µg/dL. This means that at the maximum exposure point there is elevated risk for lead in children.

8.0 Risk Assessment- Ecological

8.1 ECO Risk Levels

An ecological risk assessment was done on the site to determine the risks that the contamination posed to wildlife and vegetation present at the site.

Table 8.1 shows the risks of each contamination of concern for each group assessed which includes plants, invertebrates, avian, and mammals. Cells that have no value are due to not having available data, or the value is below the LOD. This table is similar to Table 5.2 seen previously but serves as a reminder of the ecological risk levels for easy comparison in this section.

Table 8.1 Ecological CoC Risk Levels

Contaminant	Plants (ppm)	Soil Invertebrates (ppm)	Avian (ppm)	Mammals (ppm)
Arsenic	18	-	43	46
Cobalt	13	-	120	230
Chromium (III)	-	-	26	34
Copper	70	80	28	49
Manganese	220	450	4300	4000
Nickel	38	280	210	130
Lead	120	1700	11	56
Selenium	1	4	1	1
Vanadium	-	-	8	280
Zinc	160	120	46	70

8.2 Assessment of ECO Risk

Table 8.2 below shows the effects of the CoCs on plants. The tables that follow it, Table 8.3, 8.4, 8.5, 8.6, 8.7, and 8.8 show the samples and their values for each CoC. Values that exceed the ECO risk levels are highlighted in red.

Table 8.2 Effects of CoCs on Plants

Arsenic	Reduction in growth attributes, reduction in gas exchange attributes, and causes reduction in chlorophyll content [9]
Cobalt	Essential in nitrogen fixation, high concertation can result in pale or loss of leaves, vein discoloration, and iron deficiency [10]
Copper	Essential for growth and development, used in biochemical pathways [11], at high levels production of free radicals cause cellar damage, reduction in nutrient concentrations [12]
Manganese	Essential micronutrient used for plant metabolism mechanisms [13], at high levels it can cause phytotoxicity which disrupts photosynthesis and enzyme activity [14]
Nickel	Necessary to regulate metabolism, immune system and can act as a catalyst for enzyme activity, high concentrations can cause reductions in growth, disruptions in development, hinder germination, chlorosis and necrosis [15]
Lead	Reduction in seed germination, reduced growth, disruptions in enzyme activity, reduction in chlorophyll pigments and reduction in carbon metabolism [16]
Selenium	Low concentrations can protect plants from stress, in high concentrations cause oxidative stress and distorts protein structure and its functions [17]
Zinc	Essential for many enzyme activity, high concentrations can reduce growth, cause chlorosis and may lead to cell death [18]

Table 8.3 Levels of Each CoC Collected for Plants, BS

Plants, Contaminants of Concern								
Sample Name	**As**	**Co**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**Zn**
B-1	8	106	62	595	52	83	4	151
B-2	11	83	48	694	47	59	4	136
B-3	14	347	53	870	51	81	4	153

Table 8.4 Levels of Each CoC Collected for Plants, DU 1

Plants, Contaminants of Concern								
Sample Name	**As**	**Co**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**Zn**
DU1-1	799	30	863	788	60	1164	7	706
DU1-2	852	30	3800	584	51	2385	18	1968
DU1-3	717	30	549	1928	78	2020	4	3556
DU1-3A	615	30	447	2061	77	2342	4	3311
DU1-4	698	160	77	1028	61	540	4	541
DU1-5	891	30	588	1141	73	3037	20	1694
DU1-7	728	30	161	8417	131	8315	4	3530
DU1-8	691	30	162	8922	135	7792	4	2672
DU1-9	852	30	377	919	73	2200	16	1076
DU1-10	833	30	740	1279	75	4188	7	1833
DU1-11	615	30	72	4811	86	7234	4	4155
DU1-12	906	30	653	982	89	4442	24	2075
DU1-13	677	30	117	5822	116	6950	4	3121

Table 8.5 Levels of Each CoC Collected for Plant, DU 2

Plants, Contaminants of Concern								
Sample Name	**As**	**Co**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**Zn**
DU2-1	615	30	36	2762	68	3639	4	7794
DU2-2	756	30	121	5569	100	6286	4	3897
DU2-3	615	30	33	1602	52	2341	4	6452
DU2-4	744	180	72	1067	65	595	4	565
DU2-5	615	30	99	5613	97	10211	4	7514
DU2-6	615	30	34	2619	65	5540	4	6699
DU2-7	615	30	30	3001	62	6014	4	4070
DU2-7A	615	30	37	3590	68	8040	4	4727
DU2-8	615	30	30	3483	67	8210	4	7863
DU2-9	615	30	31	2367	55	6255	4	6464
DU2-10	615	30	113	4860	78	6423	4	11327
DU2-11	615	30	91	6275	88	7698	4	11086
DU2-12	615	30	88	5943	72	7891	4	13621
DU2-13	615	30	164	6093	100	6900	4	12422

Table 8.6 Levels of Each CoC Collected for Plants, DU 6

Plants, Contaminants of Concern								
Sample Name	**As**	**Co**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**Zn**
DU6-1	615	30	149	7142	89	24093	4	9130
DU6-2	615	30	87	5262	74	16671	4	11331
DU6-3	615	30	125	7155	91	25102	4	11678

Table 8.7 Levels of Each CoC Collected for Plants, DU 9

Plants, Contaminants of Concern								
Sample Name	**As**	**Co**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**Zn**
DU9-1	615	30	188	2978	66	3634	4	7161
DU9-2	615	30	315	2583	70	3667	4	4580
DU9-3	629	30	39	467	48	148	3	179
DU9-3-A	656	38	46	477	41	160	4	168
DU9-4	685	156	65	697	34	241	4	313
DU9-6	615	507	115	1522	51	1108	4	1485
DU9-5	615	30	71	925	47	1127	4	1439
DU9-7	615	30	37	2135	59	2996	4	5734
DU9-8	615	92	78	2386	61	3499	4	5420
DU9-9	615	81	102	945	55	1205	4	1255

Table 0.8 Levels of Each CoC Collected for Plants, HS

Plants, Contaminants of Concern								
Sample Name	**As**	**Co**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**Zn**
HS-1	615	30	112	10886	104	16869	4	19665
HS-2	813	30	135	21788	177	28090	4	37163
HS-3	1419	30	2590	10307	35	229535	4	15332
HS-4	902	30	1875	1608	96	4034	19	5348
HS-5	800	50	589	753	58	516	5	2245
HS-6	773	30	2005	1973	71	3331	5	8692
HS-7	799	61	1853	1141	58	1927	4	4356
HS-8	682	301	46	747	51	177	4	232
HS-9	1001	30	4977	1432	80	11440	42	5814
HS-10	1004	30	1310	548	50	10691	99	4432
HS-11	1598	30	5525	9959	35	445326	4	24313
HS-11-A	1471	30	2403	8126	35	267097	4	19539
HS-12	1813	30	3362	9631	35	898121	4	18994
HS-13	615	30	208	11688	149	23280	4	10328
HS-14	736	30	1411	915	50	1899	8	6539
HS-15	615	30	508	4482	62	11860	4	10237
HS-16	615	30	49	3237	62	15273	4	9830
HS-17	615	30	645	3672	71	6053	4	14090
HS-18	773	30	772	2015	47	2936	11	7586
HS-19	927	30	10853	1387	39	6799	37	9274
HS-20	866	30	6626	1025	73	4513	20	13472
HS-21	615	30	152	2808	66	6023	4	6549
HS-22	1042	30	7521	1289	62	12312	50	15889

Table 8.9 below shows the effects of the CoCs on soil invertebrates. The table that follows it, Tables 8.10, 8.11, 8.12, 8.13 8.14, 8.15, show the samples and their values for each CoC. Values that exceed the ECO risk levels are highlighted in red.

Table 8.9 Effects of CoCs on Soil Invertebrates

Copper	Reduces growth, development and reproduction [19]
Manganese	Reduces development, survival and cardiac function in larva and reduce survivability in adults [20]
Nickel	Reduces growth and survivability [21]
Lead	Reduces survivability and reproduction [22]
Selenium	Reduces growth and reproduction
Zinc	Reduces growth and reproduction

Table 8.10 Levels of Each CoC Collected for Soil Invertebrates, BS

Invertebrates, Contaminants of Concern						
Sample Name	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**Zn**
B-1	62	595	52	83	4	151
B-2	48	694	47	59	4	136
B-3	53	870	51	81	4	153

Table 8.11 Levels of Each CoC Collected for Soil Invertebrates, DU 1

Invertebrates, Contaminants of Concern						
Sample Name	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**Zn**
DU1-1	863	788	60	1164	7	706
DU1-2	3800	584	51	2385	18	1968
DU1-3	549	1928	78	2020	4	3556
DU1-3A	447	2061	77	2342	4	3311
DU1-4	77	1028	61	540	4	541
DU1-5	588	1141	73	3037	20	1694
DU1-7	161	8417	131	8315	4	3530
DU1-8	162	8922	135	7792	4	2672
DU1-9	377	919	73	2200	16	1076
DU1-10	740	1279	75	4188	7	1833
DU1-11	72	4811	86	7234	4	4155
DU1-12	653	982	89	4442	24	2075
DU1-13	117	5822	116	6950	4	3121

Table 8.12 Levels of Each CoC Collected for Soil Invertebrates, DU 2

Invertebrates, Contaminants of Concern						
Sample Name	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**Zn**
DU2-1	36	2762	68	3639	4	7794
DU2-2	121	5569	100	6286	4	3897
DU2-3	33	1602	52	2341	4	6452
DU2-4	72	1067	65	595	4	565
DU2-5	99	5613	97	10211	4	7514
DU2-6	34	2619	65	5540	4	6699
DU2-7	30	3001	62	6014	4	4070
DU2-7A	37	3590	68	8040	4	4727
DU2-8	30	3483	67	8210	4	7863
DU2-9	31	2367	55	6255	4	6464
DU2-10	113	4860	78	6423	4	11327
DU2-11	91	6275	88	7698	4	11086
DU2-12	88	5943	72	7891	4	13621
DU2-13	164	6093	100	6900	4	12422

Table 8.13 Levels of Each CoC Collected for Soil Invertebrates, DU 6

Invertebrates, Contaminants of Concern						
Sample Name	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**Zn**
DU6-1	149	7142	89	24093	4	9130
DU6-2	87	5262	74	16671	4	11331
DU6-3	125	7155	91	25102	4	11678

Table 8.14 Levels of Each CoC Collected for Soil Invertebrates, DU 9

Invertebrates, Contaminants of Concern						
Sample Name	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**Zn**
DU9-1	188	2978	66	3634	4	7161
DU9-2	315	2583	70	3667	4	4580
DU9-3	39	467	48	148	3	179
DU9-3-A	46	477	41	160	4	168
DU9-4	65	697	34	241	4	313
DU9-6	115	1522	51	1108	4	1485
DU9-5	71	925	47	1127	4	1439
DU9-7	37	2135	59	2996	4	5734
DU9-8	78	2386	61	3499	4	5420
DU9-9	102	945	55	1205	4	1255

Table 8.15 Levels of Each CoC Collected for Soil Invertebrates, HS

Invertebrates, Contaminants of Concern						
Sample Name	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**Zn**
HS-1	112	10886	104	16869	4	19665
HS-2	135	21788	177	28090	4	37163
HS-3	2590	10307	35	229535	4	15332
HS-4	1875	1608	96	4034	19	5348
HS-5	589	753	58	516	5	2245
HS-6	2005	1973	71	3331	5	8692
HS-7	1853	1141	58	1927	4	4356
HS-8	46	747	51	177	4	232
HS-9	4977	1432	80	11440	42	5814
HS-10	1310	548	50	10691	99	4432
HS-11	5525	9959	35	445326	4	24313
HS-11-A	2403	8126	35	267097	4	19539
HS-12	3362	9631	35	898121	4	18994
HS-13	208	11688	149	23280	4	10328
HS-14	1411	915	50	1899	8	6539
HS-15	508	4482	62	11860	4	10237
HS-16	49	3237	62	15273	4	9830
HS-17	645	3672	71	6053	4	14090
HS-18	772	2015	47	2936	11	7586
HS-19	10853	1387	39	6799	37	9274
HS-20	6626	1025	73	4513	20	13472
HS-21	152	2808	66	6023	4	6549
HS-22	7521	1289	62	12312	50	15889

Table 8.16 below shows the effects of the CoCs on avian species. The tables that follow it, Table 8.17, 8.18, 8.19, 8.20, 8.21, 8.22, shows the samples and their values for each CoC. Values that exceed the ECO risk levels are highlighted in red.

Table 8.16 Effects of CoCs on Avian Species

Arsenic	Reduces egg production, can cause thin eggshells, reduces growth rate, reduces alertness and food consumption [23]
Cobalt	Reduces food consumption, reduces body weight, may develop lesions in skeletal, cardiac and smooth muscles, may also cause pancreatic fibrosis [24]
Chromium (III)	May cause defects in development in chicks, increase chick mortality, reduces growth [25]
Copper	Reduced body weight, may cause diarrhea and anorexia [26]
Manganese	May cause behavioral effects, hemorrhage and micromelia in eggs [27]
Nickel	Reduces body weight, impairs immune system and may bioaccumulate [28]
Lead	Increases mortality, decreases weight, negative behavioral effects [22]
Selenium	An antioxidant in low doses, high doses cause reproduction disorders such as low fertility [29]
Vanadium	May cause intestinal hemorrhage, changes in blood chemistry, and oxidative stress, also found to accumulate in liver and kidneys [30]
Zinc	May cause weight loss, anemia, diarrhea, neurologic effects, and cyanosis [31]

Table 8.17 Levels of Each CoC Collected for Avian Species, BS

Avian, Contaminants of Concern										
Sample Name	**As**	**Co**	**Cr**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**V**	**Zn**
B-1	8	106	56	62	595	52	83	4	110	151
B-2	11	83	51	48	694	47	59	4	114	136
B-3	14	347	67	53	870	51	81	4	146	153

Table 8.18 Levels of Each CoC Collected for Avian Species, DU 1

Avian, Contaminants of Concern										
Sample Name	**As**	**Co**	**Cr**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**V**	**Zn**
DU1-1	799	30	55	863	788	60	1164	7	118	706
DU1-2	852	30	32	3800	584	51	2385	18	47	1968
DU1-3	717	30	55	549	1928	78	2020	4	110	3556
DU1-3A	615	30	49	447	2061	77	2342	4	104	3311
DU1-4	698	160	50	77	1028	61	540	4	130	541
DU1-5	891	30	35	588	1141	73	3037	20	25	1694
DU1-7	728	30	45	161	8417	131	8315	4	46	3530
DU1-8	691	30	41	162	8922	135	7792	4	25	2672
DU1-9	852	30	35	377	919	73	2200	16	51	1076
DU1-10	833	30	33	740	1279	75	4188	7	27	1833
DU1-11	615	30	33	72	4811	86	7234	4	25	4155
DU1-12	906	30	35	653	982	89	4442	24	30	2075
DU1-13	677	30	41	117	5822	116	6950	4	71	3121

Table 8.19 Levels of Each CoC Collected for Avian Species, DU 2

Avian, Contaminants of Concern										
Sample Name	**As**	**Co**	**Cr**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**V**	**Zn**
DU2-1	615	30	24	36	2762	68	3639	4	27	7794
DU2-2	756	30	41	121	5569	100	6286	4	47	3897
DU2-3	615	30	35	33	1602	52	2341	4	27	6452
DU2-4	744	180	47	72	1067	65	595	4	126	565
DU2-5	615	30	47	99	5613	97	10211	4	25	7514
DU2-6	615	30	28	34	2619	65	5540	4	35	6699
DU2-7	615	30	31	30	3001	62	6014	4	30	4070
DU2-7A	615	30	33	37	3590	68	8040	4	27	4727
DU2-8	615	30	27	30	3483	67	8210	4	25	7863
DU2-9	615	30	31	31	2367	55	6255	4	25	6464
DU2-10	615	30	33	113	4860	78	6423	4	28	11327
DU2-11	615	30	31	91	6275	88	7698	4	25	11086
DU2-12	615	30	37	88	5943	72	7891	4	25	13621
DU2-13	615	30	31	164	6093	100	6900	4	50	12422

Table 8.20 Levels of Each CoC Collected for Avian Species, DU 6

Avian, Contaminants of Concern										
Sample Name	**As**	**Co**	**Cr**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**V**	**Zn**
DU6-1	615	30	32	149	7142	89	24093	4	39	9130
DU6-2	615	30	31	87	5262	74	16671	4	54	11331
DU6-3	615	30	29	125	7155	91	25102	4	25	11678

Table 8.21 Levels of Each CoC Collected for Avian Species, DU 9

Avian, Contaminants of Concern										
Sample Name	**As**	**Co**	**Cr**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**V**	**Zn**
DU9-1	615	30	26	188	2978	66	3634	4	39	7161
DU9-2	615	30	25	315	2583	70	3667	4	45	4580
DU9-3	629	30	31	39	467	48	148	3	66	179
DU9-3-A	656	38	26	46	477	41	160	4	65	168
DU9-4	685	156	59	65	697	34	241	4	103	313
DU9-6	615	507	61	115	1522	51	1108	4	145	1485
DU9-5	615	30	32	71	925	47	1127	4	50	1439
DU9-7	615	30	35	37	2135	59	2996	4	29	5734
DU9-8	615	92	33	78	2386	61	3499	4	62	5420
DU9-9	615	81	37	102	945	55	1205	4	78	1255

Table 8.22 Levels of Each CoC Collected for Avian Species, HS

Avian, Contaminants of Concern										
Sample Name	**As**	**Co**	**Cr**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**V**	**Zn**
HS-1	615	30	39	112	10886	104	16869	4	53	19665
HS-2	813	30	41	135	21788	177	28090	4	73	37163
HS-3	1419	30	58	2590	10307	35	229535	4	25	15332
HS-4	902	30	35	1875	1608	96	4034	19	25	5348
HS-5	800	50	48	589	753	58	516	5	93	2245
HS-6	773	30	46	2005	1973	71	3331	5	84	8692
HS-7	799	61	44	1853	1141	58	1927	4	99	4356
HS-8	682	301	59	46	747	51	177	4	115	232
HS-9	1001	30	35	4977	1432	80	11440	42	25	5814
HS-10	1004	30	35	1310	548	50	10691	99	25	4432
HS-11	1598	30	57	5525	9959	35	445326	4	25	24313
HS-11-A	1471	30	42	2403	8126	35	267097	4	25	19539
HS-12	1813	30	44	3362	9631	35	898121	4	25	18994
HS-13	615	30	36	208	11688	149	23280	4	53	10328
HS-14	736	30	36	1411	915	50	1899	8	47	6539
HS-15	615	30	40	508	4482	62	11860	4	44	10237
HS-16	615	30	30	49	3237	62	15273	4	25	9830
HS-17	615	30	61	645	3672	71	6053	4	63	14090
HS-18	773	30	44	772	2015	47	2936	11	57	7586
HS-19	927	30	35	10853	1387	39	6799	37	25	9274
HS-20	866	30	38	6626	1025	73	4513	20	67	13472
HS-21	615	30	28	152	2808	66	6023	4	50	6549
HS-22	1042	30	35	7521	1289	62	12312	50	25	15889

Table 8.23 below shows the effects of the CoCs on mammals. The tables that follow it, Tables 8.24, 8.25, 8.26, 8.27, 8.28, 8.29, show the samples and their values for each CoC. Values that exceed the ECO risk levels are highlighted in red.

Table 8.23 Effects of CoCs on Mammals

Arsenic	May cause depression, anorexia, diarrhea, partial paralysis, trembling, and coldness of limbs [32]
Cobalt	May cause cytotoxic, apoptosis and even necrosis with inflammatory [33]
Chromium	May cause abdominal pain, hemorrhage, vomiting [34]
Copper	May cause vomiting, diarrhea, stomach cramps, liver damage, decrease in growth, decrease in survival [19]
Manganese	May cause hypocalcemia, weakness, and cardiac arrhythmia [35]
Nickel	May reduce growth, disrupts food intake, disrupts thyroids, and cause pneumonia [21]
Lead	May cause depression, anorexia, diarrhea, anemia and blindness [22]
Selenium	May cause vomiting, tetanic spasms, congestion of the liver, and death form respiratory failure [36]
Vanadium	Potentially a neurotoxin, with hepatoxic and leukoctotoxic components [37]
Zinc	Vomiting, diarrhea, anorexia, kidney injury, reproductive issues [38]

Table 8.24 Levels of Each CoC Collected for Mammals, BS

Mammals, Contaminants of Concern										
Sample Name	**As**	**Co**	**Cr**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**V**	**Zn**
B-1	8	106	56	62	595	52	83	4	110	151
B-2	11	83	51	48	694	47	59	4	114	136
B-3	14	347	67	53	870	51	81	4	146	153

Table 8.25 Levels of Each CoC Collected for Mammals, DU 1

Mammals, Contaminants of Concern										
Sample Name	**As**	**Co**	**Cr**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**V**	**Zn**
DU1-1	799	30	55	863	788	60	1164	7	118	706
DU1-2	852	30	32	3800	584	51	2385	18	47	1968
DU1-3	717	30	55	549	1928	78	2020	4	110	3556
DU1-3A	615	30	49	447	2061	77	2342	4	104	3311
DU1-4	698	160	50	77	1028	61	540	4	130	541
DU1-5	891	30	35	588	1141	73	3037	20	25	1694
DU1-7	728	30	45	161	8417	131	8315	4	46	3530
DU1-8	691	30	41	162	8922	135	7792	4	25	2672
DU1-9	852	30	35	377	919	73	2200	16	51	1076
DU1-10	833	30	33	740	1279	75	4188	7	27	1833
DU1-11	615	30	33	72	4811	86	7234	4	25	4155
DU1-12	906	30	35	653	982	89	4442	24	30	2075
DU1-13	677	30	41	117	5822	116	6950	4	71	3121

Table 8.26 Levels of Each CoC Collected for Mammals, DU 2

Mammals, Contaminants of Concern										
Sample Name	**As**	**Co**	**Cr**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**V**	**Zn**
DU2-1	615	30	24	36	2762	68	3639	4	27	7794
DU2-2	756	30	41	121	5569	100	6286	4	47	3897
DU2-3	615	30	35	33	1602	52	2341	4	27	6452
DU2-4	744	180	47	72	1067	65	595	4	126	565
DU2-5	615	30	47	99	5613	97	10211	4	25	7514
DU2-6	615	30	28	34	2619	65	5540	4	35	6699
DU2-7	615	30	31	30	3001	62	6014	4	30	4070
DU2-7A	615	30	33	37	3590	68	8040	4	27	4727
DU2-8	615	30	27	30	3483	67	8210	4	25	7863
DU2-9	615	30	31	31	2367	55	6255	4	25	6464
DU2-10	615	30	33	113	4860	78	6423	4	28	11327
DU2-11	615	30	31	91	6275	88	7698	4	25	11086
DU2-12	615	30	37	88	5943	72	7891	4	25	13621
DU2-13	615	30	31	164	6093	100	6900	4	50	12422

Table 8.27 Levels of Each CoC Collected for Mammals, DU 6

Mammals, Contaminants of Concern										
Sample Name	**As**	**Co**	**Cr**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**V**	**Zn**
DU6-1	615	30	32	149	7142	89	24093	4	39	9130
DU6-2	615	30	31	87	5262	74	16671	4	54	11331
DU6-3	615	30	29	125	7155	91	25102	4	25	11678

Table 8.28 Levels of Each CoC Collected for Mammals, DU 9

Mammals, Contaminants of Concern										
Sample Name	**As**	**Co**	**Cr**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**V**	**Zn**
DU9-1	615	30	26	188	2978	66	3634	4	39	7161
DU9-2	615	30	25	315	2583	70	3667	4	45	4580
DU9-3	629	30	31	39	467	48	148	3	66	179
DU9-3-A	656	38	26	46	477	41	160	4	65	168
DU9-4	685	156	59	65	697	34	241	4	103	313
DU9-6	615	507	61	115	1522	51	1108	4	145	1485
DU9-5	615	30	32	71	925	47	1127	4	50	1439
DU9-7	615	30	35	37	2135	59	2996	4	29	5734
DU9-8	615	92	33	78	2386	61	3499	4	62	5420
DU9-9	615	81	37	102	945	55	1205	4	78	1255

Table 8.29 Levels of Each CoC Collected for Mammals, HS

Mammals, Contaminants of Concern										
Sample Name	**As**	**Co**	**Cr**	**Cu**	**Mn**	**Ni**	**Pb**	**Se**	**V**	**Zn**
HS-1	615	30	39	112	10886	104	16869	4	53	19665
HS-2	813	30	41	135	21788	177	28090	4	73	37163
HS-3	1419	30	58	2590	10307	35	229535	4	25	15332
HS-4	902	30	35	1875	1608	96	4034	19	25	5348
HS-5	800	50	48	589	753	58	516	5	93	2245
HS-6	773	30	46	2005	1973	71	3331	5	84	8692
HS-7	799	61	44	1853	1141	58	1927	4	99	4356
HS-8	682	301	59	46	747	51	177	4	115	232
HS-9	1001	30	35	4977	1432	80	11440	42	25	5814
HS-10	1004	30	35	1310	548	50	10691	99	25	4432
HS-11	1598	30	57	5525	9959	35	445326	4	25	24313
HS-11-A	1471	30	42	2403	8126	35	267097	4	25	19539
HS-12	1813	30	44	3362	9631	35	898121	4	25	18994
HS-13	615	30	36	208	11688	149	23280	4	53	10328
HS-14	736	30	36	1411	915	50	1899	8	47	6539
HS-15	615	30	40	508	4482	62	11860	4	44	10237
HS-16	615	30	30	49	3237	62	15273	4	25	9830
HS-17	615	30	61	645	3672	71	6053	4	63	14090
HS-18	773	30	44	772	2015	47	2936	11	57	7586
HS-19	927	30	35	10853	1387	39	6799	37	25	9274
HS-20	866	30	38	6626	1025	73	4513	20	67	13472
HS-21	615	30	28	152	2808	66	6023	4	50	6549
HS-22	1042	30	35	7521	1289	62	12312	50	25	15889

The site poses a risk to any plants, mammals, avian species and soil invertebrates that may come into contact with the site. Understanding the ecological risk that the site poses will help the team to design remediation methods for the site.

9.0 Remedial Action Development

Based on contaminant distribution maps and human health and ecological risk assessments, areas that exceeded regulatory thresholds were identified across several decision units and hotspot locations. Elevated concentrations of lead and arsenic in surface soils present potential risks to both human and ecological receptors. Remediation efforts will be focused on areas with the highest concentrations and highest potential for exposure. This is particular to DU 4 (DU 4&6 combined), as well as localized hotspots that were identified. While DU 1 and 2 contain contamination, they have relatively stable conditions due to existing berms, and they may be efficiently managed through containment strategies rather than extensive excavation. These remediation strategies will have a focus on remediating for lead and arsenic, however, the alternatives formed will also have the capacity to remediate for the other contaminants affecting the ecology of the area as needed.

The following sections will outline the remedial action objectives (RAOs) and the development of remedial alternatives to address the risks on site.

9.1 Development of RAOs

Remedial action objectives are developed to define the goals of remediation based on the specific contamination of the site, the exposure pathways, and the risk that were identified for human and ecological receptors. For this site, the primary CoCs for human health are As and Pb, which are also great contributors to ecological risk. The ecological contaminants of concern consist also of Co, Cr, Cu, Mn, Ni, Se, V, and Zn. The RAOs are created with the intent to reduce risk, limit contaminant transport, and protect human and ecological receptors.

The RAOs for Mindy Mill are as follows:

1. Reduce exposure to lead and arsenic concentrations in impacted soils below the AZSRS RSLs or background levels, particularly hotspot areas and DU 4.

2. Prevent migration of contaminated soil via wind and surface runoff, particularly in nearby washes (DU 9).

3. Reduce exposure to areas of elevated contamination (hotspots) to reduce localized risk and improve stability for long-term.

4. Reduce ecological risk by lowering additional contaminant concentrations and limiting exposure pathways for wildlife and vegetation.

9.2 Development of Alternatives

For the development of feasible alternatives capable of meeting the remedial action objectives, several remedial technologies were evaluated. These technologies include excavation, soil capping, and soil washing. These alternatives were considered to address contaminated soils across the decision units, while also providing different approaches to managing contaminant concentrations, exposure, and migration.

Decision Unit 9, the wash immediately to the south of the site is not targeted for direct remediation under the alternatives. Instead, potential contaminant migration in DU 9 is mitigated through source control measurements for the site. If migration is controlled at the source, DU 9 is expected to remain a transport pathway, rather than a primary area of concern.

Human health risk considerations are based on the exposure scenarios defined in Section 7, which include short-term recreational users and on-site remediation workers.

9.2.1 Remedial Technologies Considered

The following remedial technologies were considered in the development of alternatives for the Mindy Mill Site.

- Excavation: The physical removal of contaminated soil from targeted areas. Excavation allows for a reduction of localized contamination and may involve relocation or off-site management of the excavated material. Excavation is supplementary to containment, not the primary strategy for Mindy Mill.
- Soil Capping: This consists of the placement of clean soil or engineered material over contaminated areas to reduce direct contact, limit infiltration, and minimize erosion and wind dispersion of contamination.
- Soil Washing: This is an ex-situ treatment process where excavated soil is processed to remove contaminants, like lead and arsenic. The treated soil may then be returned to the site if it meets the applicable criteria of AZSRS RSLs and the EPA’s Screening levels for ecological receptors. Residual waste streams require appropriate disposal.

These technologies were used individually and in combination to develop the remedial alternative described below.

9.2.2 Development of Alternatives

Alternative 0: No Action

Under the no-action alternative, no remediation actions would be implemented at the site. Contaminated soils within the site would remain in place under the current site conditions observed by the team's site investigation. No capping, excavation, or treatment. The existing site's condition of berms that act as partial containment would remain in place and unchanged. No efforts would be made to reduce contaminant concentrations or to control migration pathways.

This alternative serves as a baseline for the comparison with active remedial alternatives. Under this scenario, contaminated soils would continue to pose potential risks to human and ecological receptors, and the migration of contaminated soils through wind and surface runoff could continue. Alternative 0 provides no resource recovery potential as no materials are excavated, treated, or reused.

Alternative 1: Capping-Based Containment

This alternative focuses on leaving contaminated soils in place and reducing exposure through containment. Engineered caps will be installed over DU 1, 2, and DU 4, where contamination is present. The cap would consist of multiple layers that are designed to reduce infiltration and limit direct contact with contaminated soils. The layers will include a vegetative layer, drainage layer, and a low-permeability layer. This alternative also involves small-scale, minimal excavation of localized hotspot areas if needed to support the installation of caps.

No soil washing or large-scale excavation would be performed. The primary objective of this capping-based containment alternative is to isolate contamination and prevent migration through erosion or surface runoff. This alternative provides negligible resource recovery potential.

Alternative 2: Targeted Excavation with Capping and Soil Washing

This alternative combines selective excavation with treatment and containment. Hotspot areas within DU 4 and other identified locations would be excavated and removed for treatment. The excavated soil will undergo soil washing to reduce the concentration of contaminants such as lead and arsenic. Once the soil is treated, the cleaned soil will be returned to the excavation area as a backfill where appropriate. Once excavation and treatment are complete, engineered caps will be installed over DU 1, DU 2, and the remaining impacted areas for DU 4. These engineered caps are the same as described in Alternative 1. This will reduce exposure and limit migration of these areas.

This alternative aims to reduce contamination in areas where risk is the highest, while using capping to manage the remaining contamination. This alternative provides moderate sources of recovery potential through soil washing to extract the contaminants as well as resources.

Alternative 3: Enhanced Excavation and Consolidation with Capping

This alternative involves a more extensive excavation but is still targeted. In addition to hotspot removal, additional impacted soils within the DU may be excavated. The excavated materials would be relocated to a controlled area on site or centralized into a designated containment zone. The excavated materials are placed in the containment zone and covered by an engineered cap. The engineered cap will have the same design as the one mentioned in Alternative 1. Engineered caps will also be installed over remaining contaminated soils in DU 1 and 2.

This alternative's main objective is to prioritize the physical removal and consolidation of contaminated soils to a controlled area to reduce exposure in active site areas while relying on containment for long-term risk management. This alternative provides limited resource recovery due to consolidation and capping of excavated soil with no rinsing.

9.3 Selection of Alternative

Each alternative was evaluated based on its effectiveness of achieving outline RAOs, implementability under the site conditions, cost, and long-term performance. Effectiveness combines both human health and ecological risk reduction, as defined in the conceptual site model. Table 9.1 below is the decision matrix utilized to select a design alternative.

Table 9.1 Alternative Decision Matrix

Alternative #	Criterion				Total
	Effectiveness	Implementability	Cost	Long-term Effectiveness	
0	0.4	1.5	0.5	0.2	2.6
1	1.2	0.9	0.35	0.6	3.05
2	1.7	0.9	0.275	0.85	3.725
3	1.7	0.6	0.175	0.9	3.375

For the criterion, a 1 represents not effective, hard to implement, expensive, and not effective. This means a 5 represents very effective, easy to implement, cheap, and very effective. Additionally, the criteria were weighed in the following order from heaviest weighting to lowest: Effectiveness (0.4), Implement-ability (0.3), Long-term Effectiveness (0.2), and Cost (0.1).

Each member of the team scored all alternatives, scoring each alternative in relation to each other. After the team completed their individual decision matrix, the scores were averaged. It is important to note that cost was assigned scores by ranking the alternatives based on their estimated costs. With this information followed, the alternative scoring the highest, and therefore selected, is Alternative 2: Targeted Excavation with Capping and Soil Washing.

10.0 Resource Recovery

The site of Mindy Mill presents opportunities for resource recovery through the treatment and reuse of excavated soils from remedial activities. Under Alternative 2, soil washing is incorporated as a treatment method; this allows for the separation of contaminates and reusable materials. Other means of resource recovery could include phytoremediation or the establishment of a new mill on site. Alternatives for resource recovery implementation were not explored in this report though. This section evaluates the types of materials that may be recovered and the feasibility of implementing recovery strategies within the proposed remediation approach outlined in Alternative 2.

10.1 Determination of Resources

Resource recovery at Mindy Mill is primarily associated with the excavation and treatment of contaminated soils within hotspot areas and DU 4. Excavated soils are expected to consist of a variability of coarse and fine particles. Contaminants such as lead and arsenic are preferential to sorbing to finer soil fractions. These materials can be separated into distinct streams through soil washing. Other minerals are also available in the soil and potentially recoverable.

Coarse-Grain Fraction:

Coarser grained material is expected to contain lower contaminant concentration after treatment and may be suitable for reuse but as on-site backfill material. This is if the materials meet AZSRS RSLs and ecological screening criteria. Minerals contained in larger soil particles and the tailings piles are also recoverable through further milling.

Fine-Grained Fraction:

Finer particles are more likely to retain higher concentrations of contaminants and will require management as a residual waste stream. This material is recoverable via soil washing.

10.2 Assessment of Valuable Constituents

The value of minerals on site for recovery was assessed by determining the volume of soil at high-risk areas and calculating the market value of the constituents in the soil by their estimated mass. Table 10.1 below shows the estimated market price of the constituents with the most value as determined by the team. Gold, scandium, and lead are provided in the table. All other constituents and their calculated values can also be observed in Appendix M.

Table 10.1 Value of Minerals of Most Interest

Location	Description	Value of Gold ($)	Value of Lead ($)	Value of Scandium ($)
HS-1	Waste rock	65,800,210	31,354,336	42,611,569
HS-2	Waste rock	0	36,346,947	29,664,751
DU6	Ore pile	128,333,314	31,258,037	32,639,658
DU1	Large tailings	397,196,955	42,902,995	275,913,779
DU2 (1)	Western small tailings	48,261,721	23,400,465	74,220,009
DU2 (2)	Eastern small tailings	388,937,602	109,911,037	441,058,263

11.0 Project Impacts

After all analysis was completed, both the short- and long-term impacts on public, social, environmental, and economic factors were evaluated regarding Mindy Mill with considerations for scenarios with and without adequate remediation.

11.1 Public Health, Safety, and Welfare

Mindy Mill has high lead and arsenic concentrations across the whole site, which pose significant risks to populations living near the site and anyone who enters the site for recreational purposes. The public currently knows very little or nothing about Mindy Mill due to its lack of assessments and unclear information about the site's history in general. This and the poor fencing around the site lead people to believe that nothing bad will happen if they access it. However, prolonged exposure to Mindy Mill will negatively impact public health, causing disease. Physical hazards are also present on site from the abandoned mill structures and the steep berms present.

To mitigate risks to public health and welfare, it is necessary to remediate this site. This is further encouraged by the nearest hospital to Yucca being 30 minutes away. Poor access to appropriate health care and the poor conditions around Mindy Mill make reducing contamination at the mill necessary. Completing remedial action will improve public health and safety, reduce health risks to recreational users of this BLM land and will promote welfare by providing land for future development when the site is deemed safe.

11.2 Social Factors

The continued ignorance of Mindy Mill and its contamination levels would not have an immediate impact on the surrounding communities since the activities and constituents on site have not been effectively analyzed before this project. Information regarding the site has also never been fully disclosed to the public. In the future, if the site is not remediated and the community in the area grows, then more adverse human and environmental health effects will likely be observed. This will negatively impact the community's health, causing them to likely blame the BLM for not remediating the site.

If remediation is to occur on site and the BLM was to effectively release statements regarding site construction, then their reliability will be improved. Following the completion of remediation and additional analysis after the removal of contaminants from Mindy Mill, there could also be potential for development projects on the site. If remediation is successful enough for that, then the community could see benefits from the continued growth of Yucca, AZ.

Through the remediation projects, jobs will be created in Kingman and the surrounding areas. This will benefit the local economy of Kingman and the surrounding areas through workers spending money on things such as living expenses.

11.3 Environmental Factors

Due to the high concentrations of arsenic, cobalt, copper, manganese, nickel, lead, selenium, and zinc, many threats to the environment exist on site. These concentrations each inhibit and block different aspects of plant and invertebrate growth. The remediation of this site is not only important to human health, but it is important to ecological health as well. With the remediation of the site, it will largely benefit the ecological and environmental health of the site.

During the process of treatment, the overall process will largely disrupt the existing life on site. With the disturbance of the land for the excavation process, it will disturb the habitats of any animals currently inhabiting the site. However, after the remediation is complete the site will be safer environmentally, and the surrounding areas will not be at risk of contaminants migrating. Furthermore, the recovery of minerals from this site would decrease the need to mine resources in the near future. Following the remediation and collection of recovered minerals from this site, flora and fauna populations may also increase due to less disturbance and fewer inhibitions from contaminants.

11.4 Economic Factors

With the knowledge of budget cuts to the BLM and numerous contaminated sites existing in the United States, it is unlikely that enough funding will exist to remediate Mindy Mill in the near future. While the selected alternative is not the most expensive option, it is by no means cheap. Yucca also has little development currently or planned. However, if the resource recovery is deemed worth completing, the money made from the collected minerals could be put towards the remediation of this site. Resource recovery could also be cheaper and less harmful to nearby areas than completing mining for the available minerals elsewhere. Additionally, the improvement of conditions in the communities around Mindy Mill could open potential for future developments that would improve the economy in Yucca and other nearby cities. With the completed remedial work, resource recovery, and future developments, more jobs would open in the area, further improving the local economy.

12.0 Summary of Engineering Work

The initial project scope of tasks is outlined within tables in Appendix N. This work remained the same with the exception of the subcontracted ICP verification. Due to time constraints, the ICP verification was not completed by Western Technologies. Instead, it was subcontracted to the Northern Arizona Chemistry Department.

Engineering work for this project began on October 24th, 2025 and concluded May 4th, 2026. The Gantt charts below display the initial time estimates for major tasks, and the actual time taken throughout the project for the project. The critical path is highlighted in red, all other tasks will be in blue. Any major project milestones are indicated with a blue diamond and date.

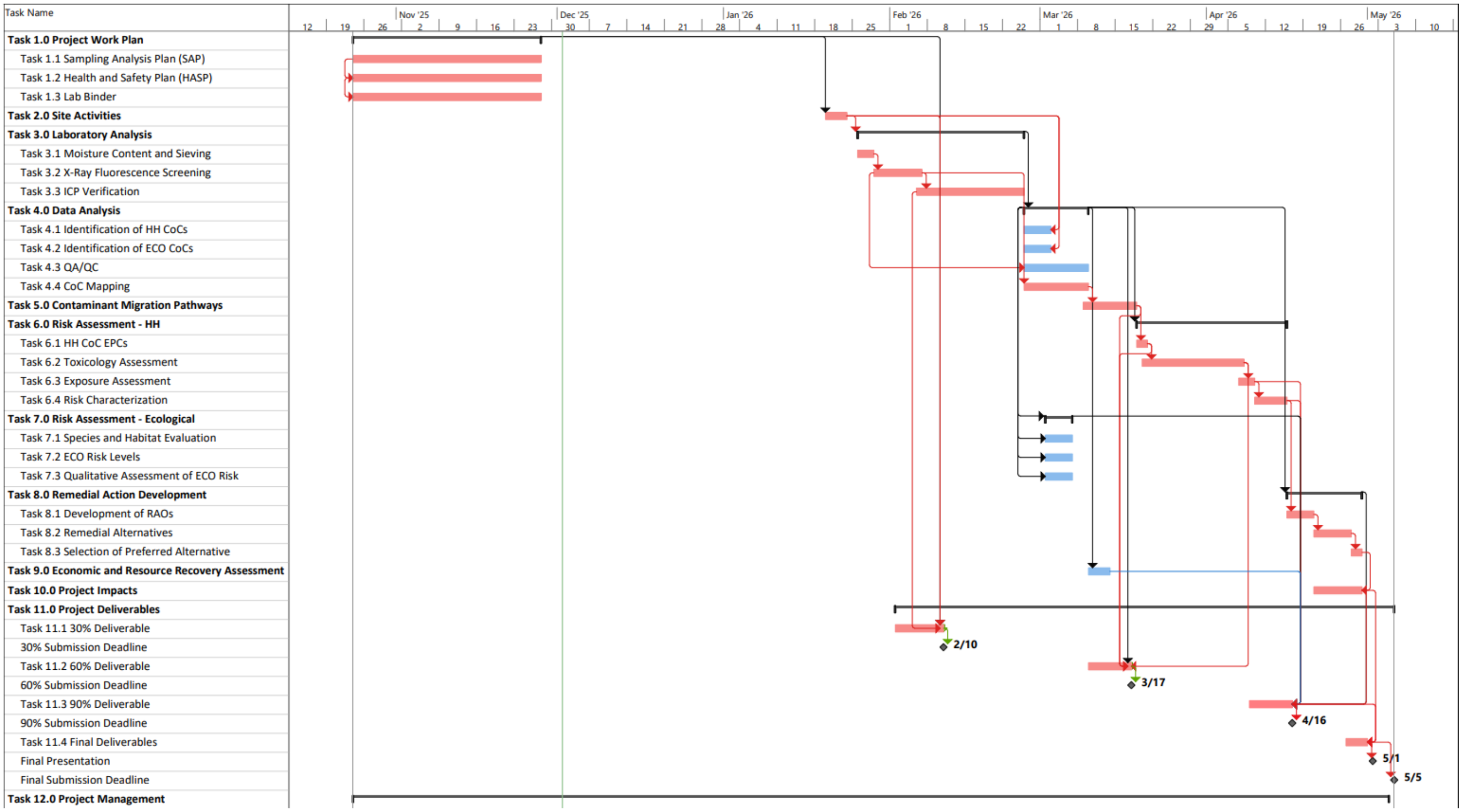

Figure 12.1 Initial Gantt Chart

The differences between these two schedules are due to the extended time of lab binder approval due to contaminant levels as well as the following delay in ICP verification.

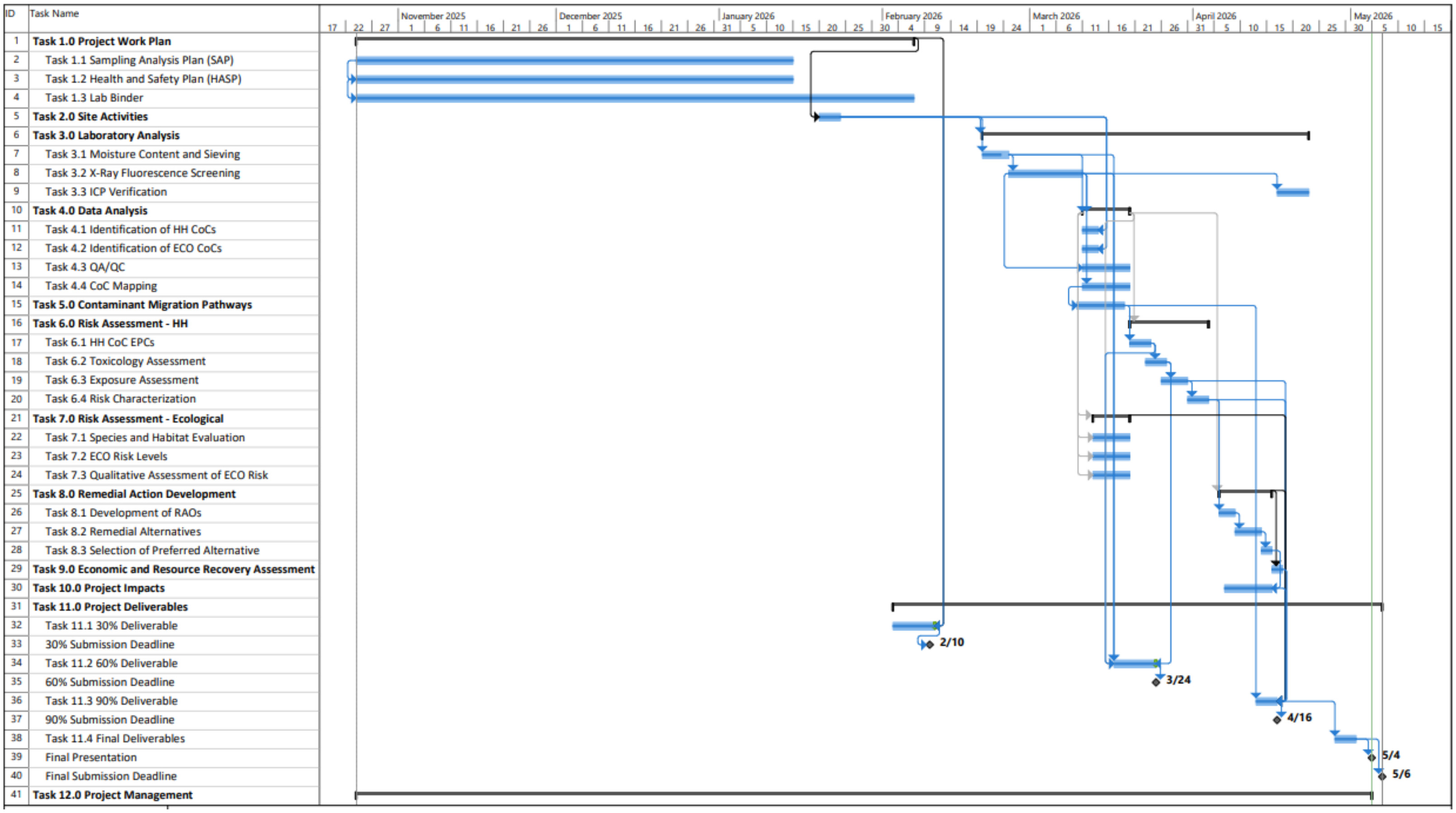

Figure 12.2 End of Project Schedule

13.0 Summary of Engineering Costs

The following table, Table 13.1, displays the expected and actual values for the hours completed in this project.

Table 13.1 Summary of Engineering Hours

	Senior Engineer	Engineer	Lab Technician	Intern	Total
Expected	95	247	124	192	658
Actual	101	359	245	N/A	705

Overall, the completed hours were greater than the anticipated hours needed to complete this project. The additional hours reflect the extra time required in risk assessment due to the

EH&S and lab managers to ensure the team properly handled and disposed of the soil. It is important to note that an intern role was planned in the project proposal. However, when the work on this project began, the intern role was terminated in anticipation of the investigation of Mindy Mill being unfit for an intern. Therefore, the hours that were originally planned for the intern were instead divided into the Engineer and Lab Technician roles since the tasks an intern would do can also be done by these two roles.

13.1 Estimated Cost

In the proposal for the work on Mindy Mill, it was anticipated that $98,033 would be needed. This estimate included costs for personnel, travel, supplies, and subcontracting ICP analysis through Western Technologies. This cost breakdown also accounted for using lab spaces and equipment rentals from NAU's labs. Tables 13.1 and 13.2, below, detail the full cost breakdown for this project. Expanded tasks for personnel costs are displayed within Appendix N.

Table 13.4: Estimated Cost of Engineering Services Summary

Summary Cost of Engineering Services					
Subsection	Classification	Hours	Rate	Unit	Cost ($)
Personnel	Senior Engineer	95	325	$/hr	30,875
	Engineer	247	182	$/hr	44,954
	Lab Technician	124	65	$/hr	8,060
	Intern	192	33	$/hr	6,336
	Total Personnel				90,225
Travel	Classification	Quantity	Rate	Unit	Cost ($)
	NAU Mileage Rate (1 round trip)	391	0.67	$/mile	262
	Rental: NAU Large 4WD SUV	2	56	$/day	112
	Hotel 1 Night; 4 rooms	4	100	$/night	400
	PerDiem; 5 Persons, 2 days	10	30	$/day-person	300
	Total Travel				1,074
Supplies	Classification	Quantity	Rate	Unit	Cost ($)
	Ziploc Gallon Freezer Bags, 200ct	1	17	$/pack	17
	Trowel	12	5	$/trowel	60
	Dish Soap	1	5	$/Dish Soap	5
	Marking Flags, 50ct	2	8	$/pack	16
	5-gallon Buckets with Lids	4	8	$/bucket	32
	Large Bins	4	12	$/bin	48
	Water, Gallon	10	2	$/gallon	20
	Paper Towels, 2 pack	1	5	$/pack	5
	Sharpie Pens, 5 pack	2	5	$/pack	10
	Field Logbooks	4	8	$/notebook	32
	Gloves, 1000ct	1	45	$/pack	45
	Trash Bags, 30 Gallon, 50ct	1	11	$/pack	11
	Clip Board, 2ct	2	8	$/pack	16
	Scrub Brushes, 4ct	1	17	$/pack	17
	Total Supplies				334

Table 13.5: Continued

Summary Cost of Project					
	Classification	Quantity	Rate	Unit	Cost ($)
Analysis	Rental: NAU XRF Device	10	300	$/day	3,000
	Rental: NAU Soils Lab	20	100	$/day	2,000
	Rental: NAU Survey GPS	2	100	$/day	200
	Total Analysis				5,000
Subcontract	Western Technologies Inc.	10	140	$/sample	1,400
Total Cost					98,033

13.2 Actual Cost

The cost of engineering services changed as the project progressed. Changes were made based on the hours completed by each expert on the project, the supplies available to the team before they completed the project, and a change in subcontractor for ICP analysis. Since Western Technologies Inc. as a subcontractor would have taken more time than the team had available, Dr. Ingram and Anna Shimkus with NAU's Chemistry Department were contacted to complete the confirmation analysis desired through ICP.

The actual cost for this project was $121,925, which was $23,892 more expensive than the estimated price. Increased prices can be mainly attributed to the extra time needed by personnel to address the high levels of contamination in the soil, which required additional precautions to work with. The updated costs of the work and supplies needed in this project are detailed in Tables 13.3 and 13.4 below.

Table 13.3: Actual Cost of Engineering Services Summary

Summary Cost of Engineering Services					
Subsection	Classification	Hours	Rate	Unit	Cost ($)
Personnel	Senior Engineer	101	325	$/hr	32,825
	Engineer	359	182	$/hr	65,338
	Lab Technician	245	65	$/hr	15,925
	Total Personnel				114,088
Travel	Classification	Quantity	Rate	Unit	Cost ($)
	NAU Mileage Rate (1 round trip)	391	0.67	$/mile	262
	Rental: NAU Large 4WD SUV	2	56	$/day	112
	Hotel 1 Night; 4 rooms	4	100	$/night	400
	PerDiem; 5 Persons, 2 days	10	30	$/day-person	300
	Total Travel				1,074

Table 13.4: Continued

Summary Cost of Project					
Supplies	Classification	Quantity	Rate	Unit	Cost ($)
	Ziploc Gallon Freezer Bags, 100ct	2	8	$/pack	16
	Trowel	12	5	$/trowel	60
	Dish Soap	1	3	$/Dish Soap	3
	5-gallon Buckets with Lids	4	6	$/bucket	24
	Large Bins	4	9	$/bin	36
	Water, Gallon	3	2	$/gallon	6
	Paper Towels, 2 pack	1	3	$/pack	3
	Sharpie Pens, 5 pack	2	5	$/pack	10
	Field Logbooks	4	8	$/notebook	32
	Gloves, 1000ct	1	45	$/pack	45
	Clip Board, 4ct	1	10	$/pack	16
	Scrub Brush	4	3	$/brush	12
	Total Supplies				263
Analysis	Classification	Quantity	Rate	Unit	Cost ($)
	Rental: NAU XRF Device	10	300	$/day	3,000
	Rental: NAU Soils Lab	20	100	$/day	2,000
	Rental: NAU Survey GPS	2	100	$/day	200
	Total Analysis				5,000
Subcontract	NAU Chemistry Lab	10	150	$/sample	1,500
Total Cost					121,925

14.0 Conclusion

This project consisted of a preliminary analysis and site investigation of Mindy Mill. The preliminary analysis, containing all background information and preparation, served as an outline and project proposal for the scope of work completed within the project. The site investigation of Mindy Mill consisted of sampling, in-situ analysis, and ex-situ analysis for the identification and assessment of risk from contaminants of concern.

This team found that the primary contaminants of concern of the site for Human Health are lead and arsenic where the contaminants of concern for Ecological Health are arsenic, cobalt, chromium, copper, manganese, nickel, lead, selenium, vanadium, and zinc. Due to the levels for these contaminants exceeding the recommended level by the EPA, the team recommends that remedial action is taken for this site. Remedial action will consist of reducing the contaminant levels to return the site to a low human and ecological health risk, returning it to being safe for all who may inhabit or utilize the land and surrounding areas.

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Appendix A: Sampling Map

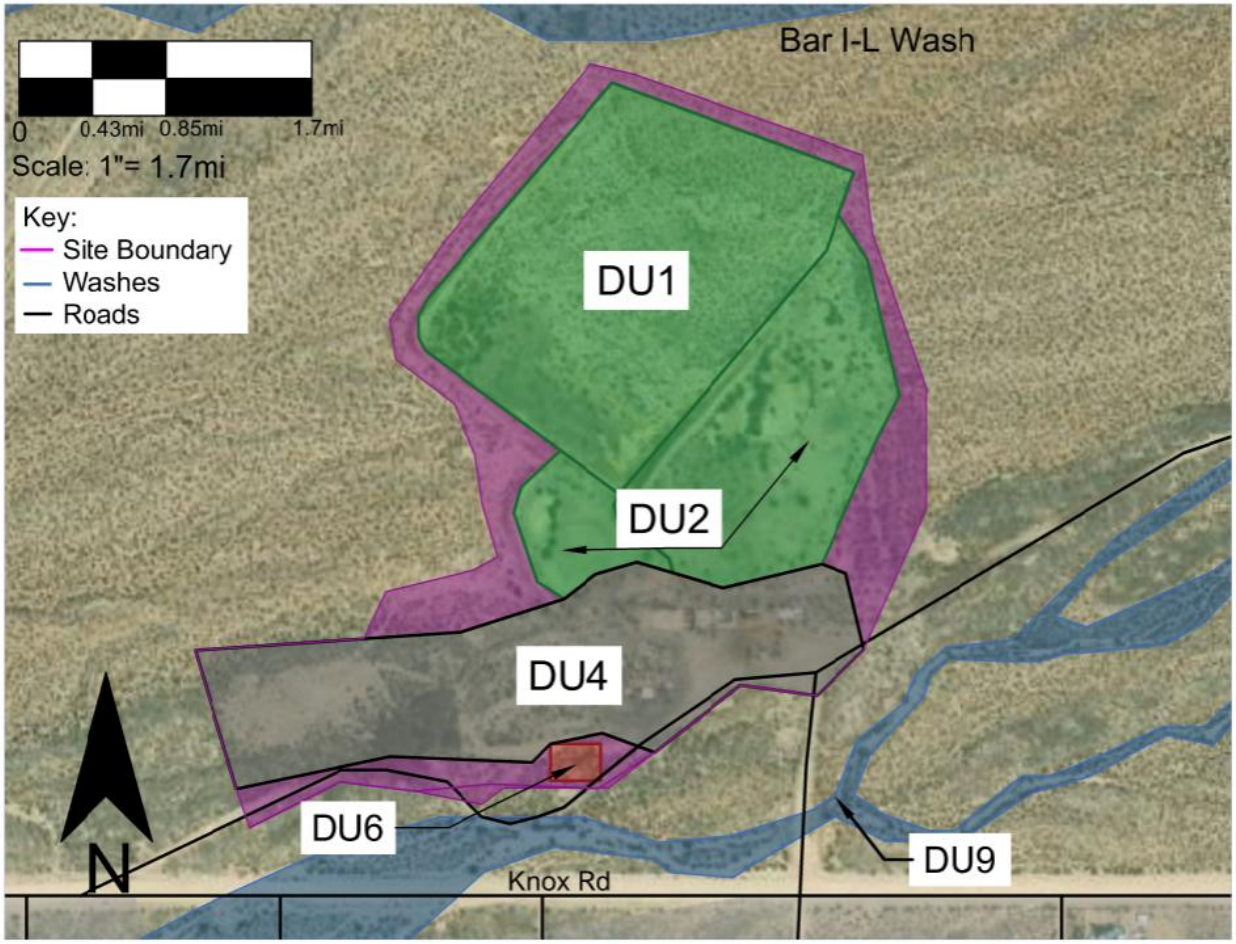


Figure A.1.1 Site Map with Labeled Decision Units

Appendix B: Original Decision Unit Maps

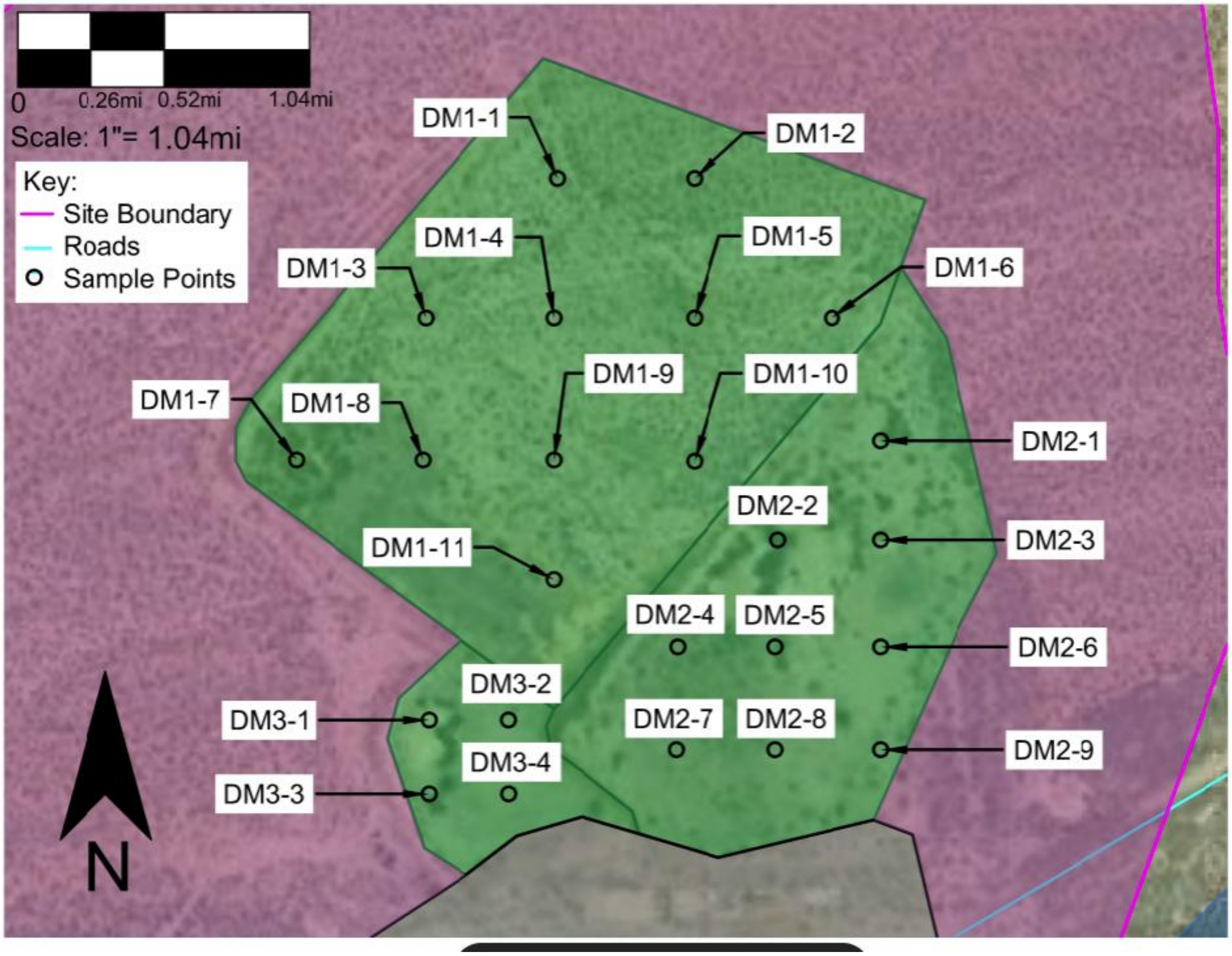


Figure B.1.1 DUs 1, 2, and 3 with Labeled Samples

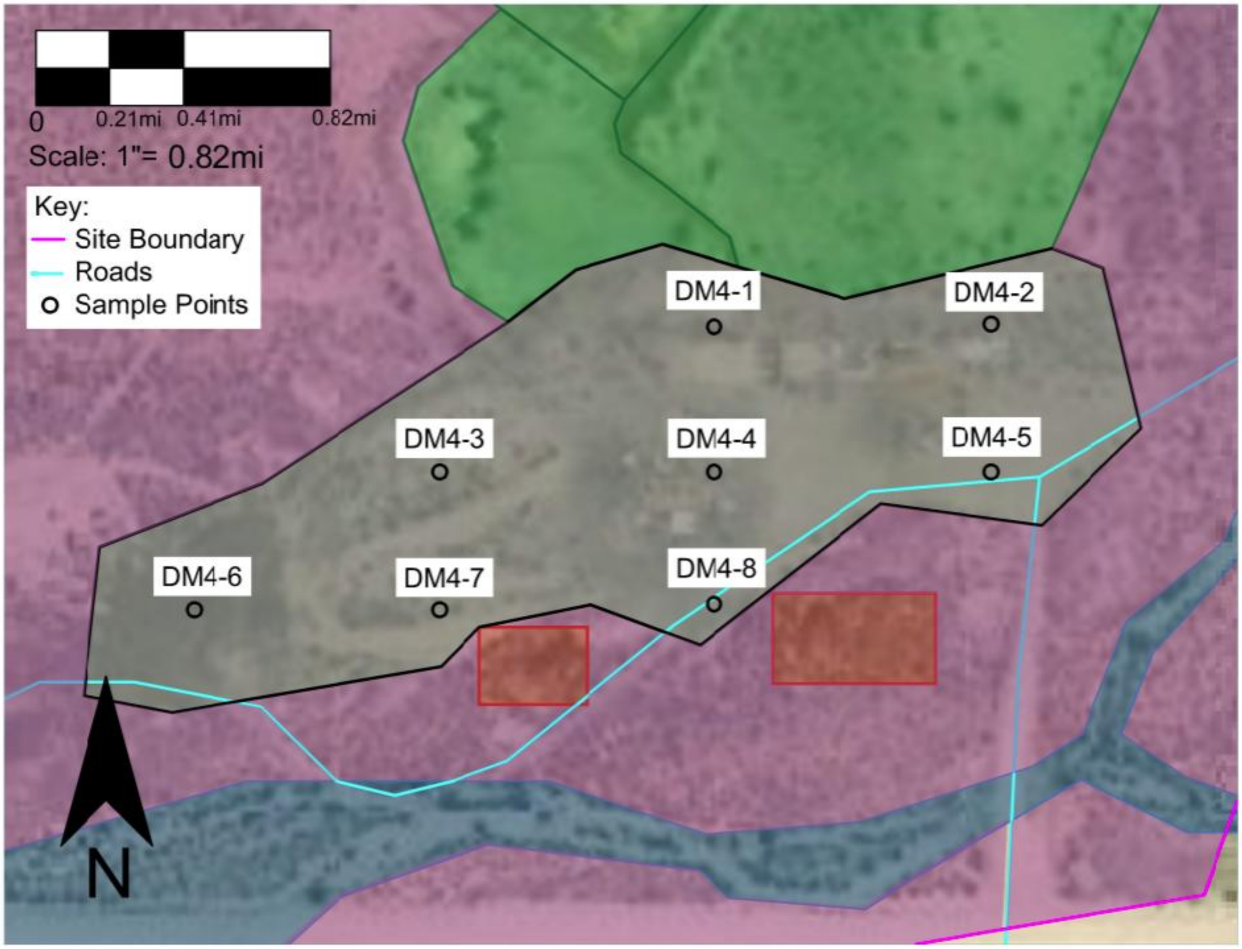


Figure B.1.2 DU 4 with Labeled Samples

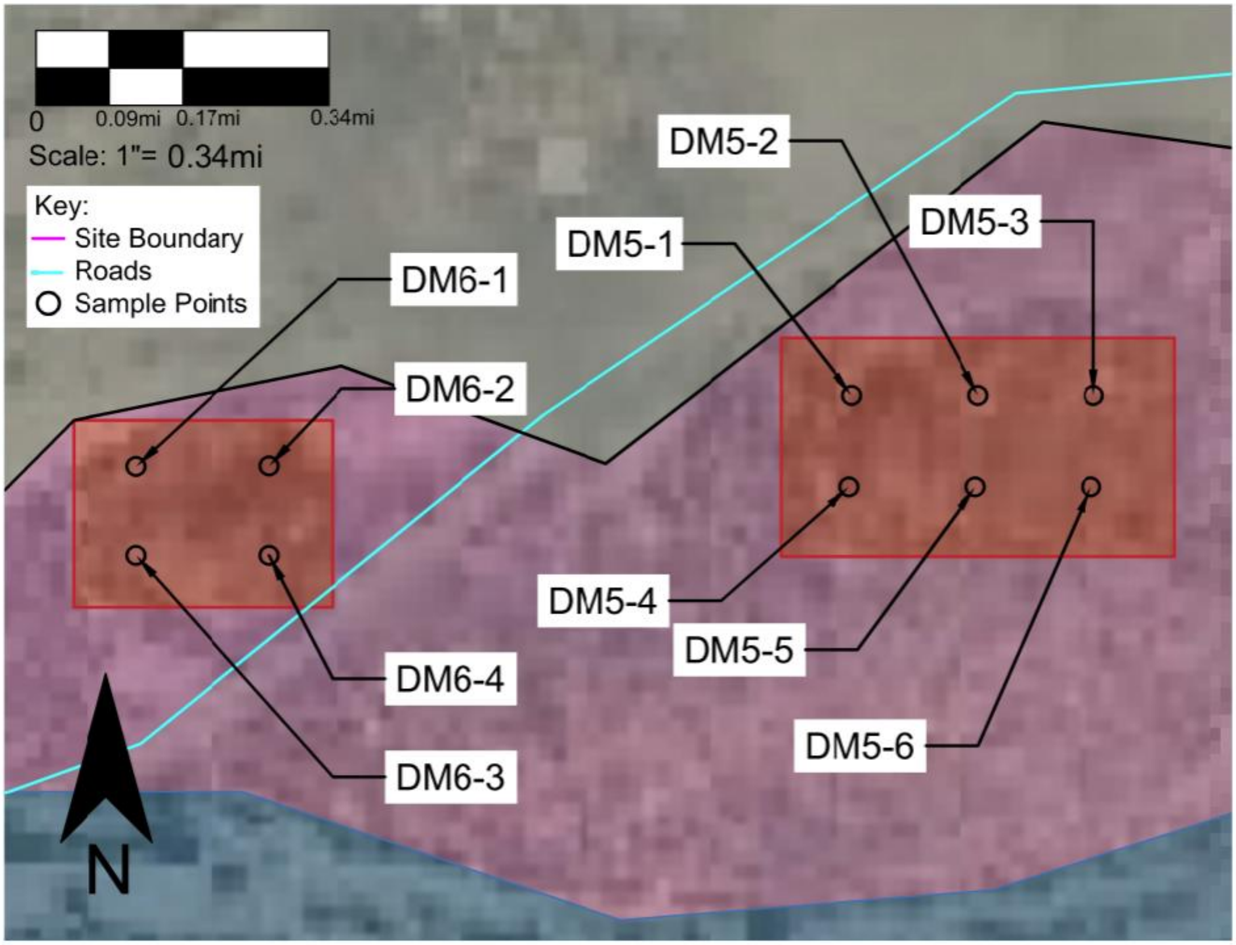
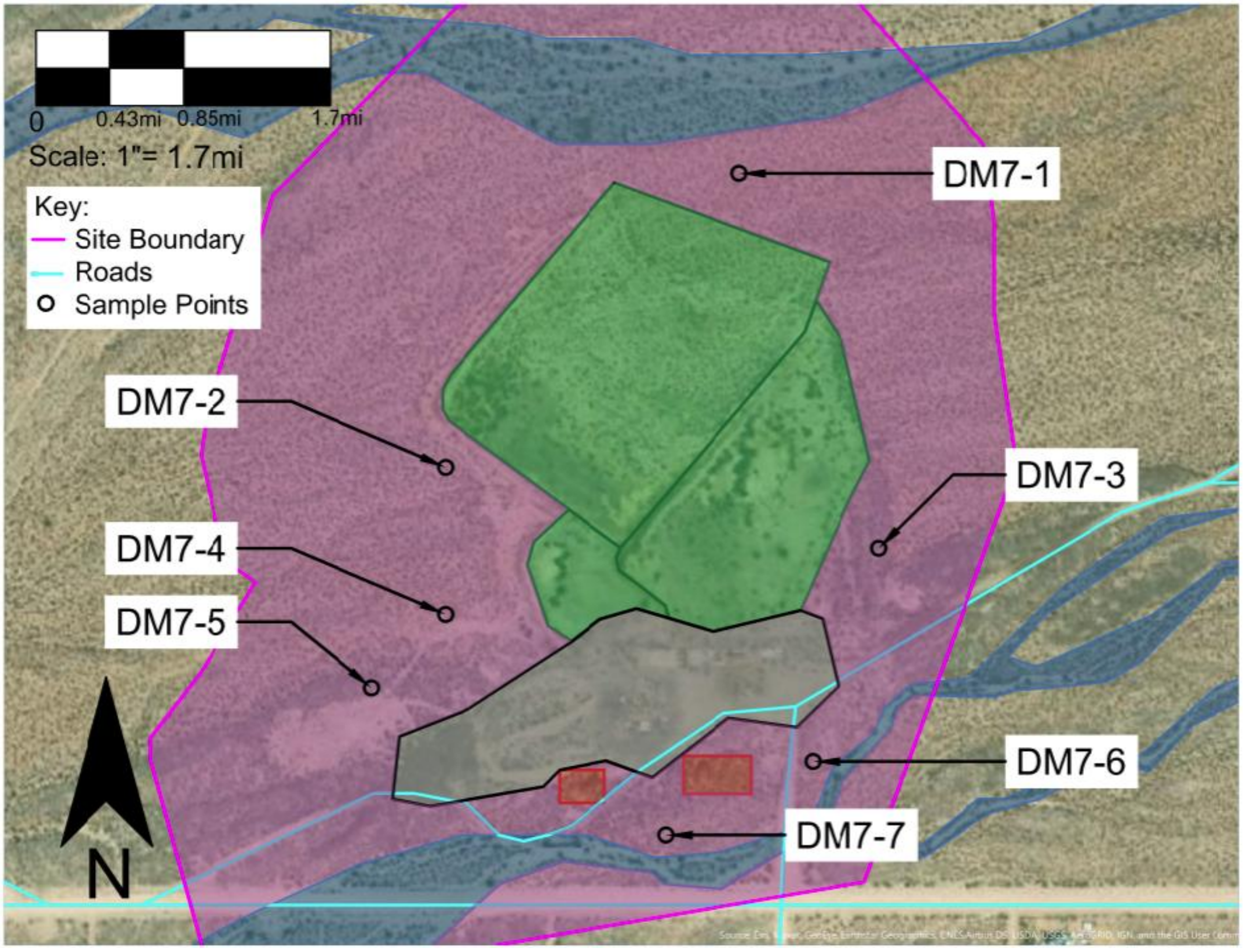
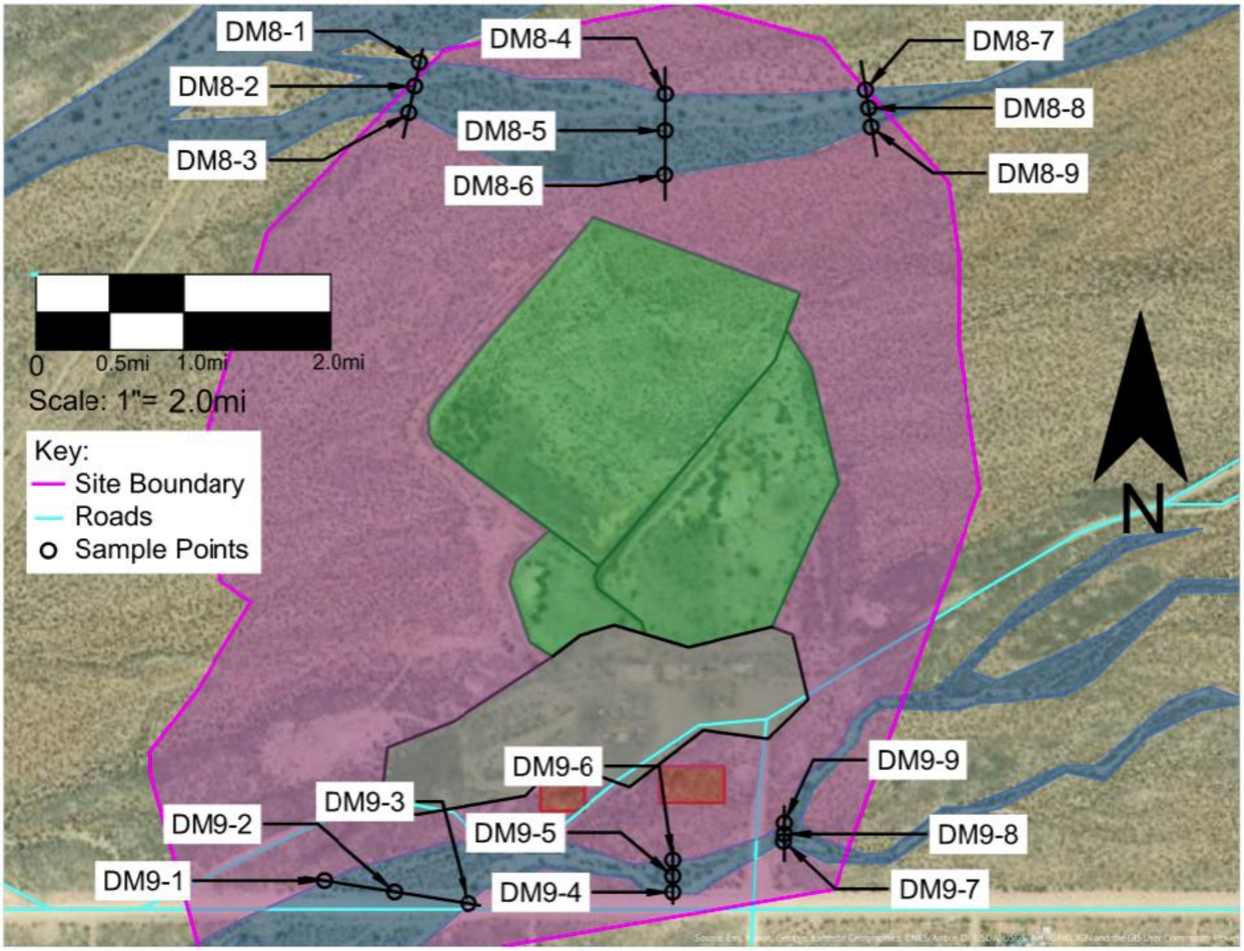


Figure B.1.3 DUs 5 and 6 with Labeled Samples



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Comm

Figure B.1. 4 DU 7 with Labeled Samples



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN and the GIS User Community

Figure B.1.5 DUs 8 and 9 with Labeled Samples

Appendix C: Sampling Analysis Plan

1.0 Introduction

1.1 Responsible Agency

The agency responsible for the Mindy Mill PA/SI project is the Bureau of Land Management, represented by Eric Zielske.

1.2 Project Organization

Table A.1.1 below shows the roles and responsibilities of each personnel on the project.

Table C.1.1 Personnel Titles and Emails

Personnel Title	Name	Email
Client	Eric Zielske	ezielske@blm.gov
Professional Engineer, Technical Advisor	Bridget Bero	bridget.bero@nau.edu
Engineer	Annika Dillemuth	aed369@nau.edu
Engineer, QA/QC Officer	Rashel Deleon	rdd88@nau.edu
Engineer	Gloria Millanez	em2673@nau.edu
Engineer, HS Officer	Jazmin Montes De Oca	jgm294@nau.edu

1.3 Sampling Overview

Approximately 66 samples will be collected, 62 unique with 4 duplicates. Each area of interest was separated into numbered decision units (DU) to best allocate samples. 12 samples will be taken at the largest tailings pile (DU1) and 13 will be taken at the other two tailings piles (DU2). The two smallest piles were combined into one DU because they were found to be homogeneous. 12 hot spot samples will be taken around the buildings and disturbed areas on site (DU4). 3 random samples will be taken at the ore pile identified on site (DU6). Finally, 9 transect samples will be collected at the unnamed wash that is south of the site (DU9). DU 3 was combined with DU 2 and DUs 5, 7, and 8 were removed from the sampling plan following the site visit. There were 10 additional hot spots, and 3 background samples set aside to decide on site. Duplicates were also taken during the sample collection process. One duplicate sample will be collected from each DU for a total of 4 duplicate samples. There was no duplicate sample taken at DU 6.

2.0 Project Data Quality Objectives & QA/QC Methods

2.1 Project Objectives

A site investigation is being conducted at the Mindy Mill site to identify any CoCs. The distribution of any CoCs and their migration pathways will be identified through soil sampling. The sampling data collected from the site investigation will be utilized to assess risks to human and ecological health. Qualitative observations will also be made to further identify any risks.

2.2 Data Quality Objectives (DQO)

As per the most recent Guidance on Systematic Planning Using the Data Quality Objectives Process by the Environmental Protection Agency (EPA), there is a list of recommendations in the planning process when alternatives are being selected, or contamination is being estimated [4]. The data obtained will be sufficient for screening level decision making.

2.3 Quality Assurance and Control

To ensure quality and accurate data, quality assurance (QA) and quality control (QC) will be needed within this project to apply to the procedures completed in the lab and on site. Quality assurance entails items such as proper documentation of sampling and lab analysis procedures. The quality control portion entails procedures to ensure that the data is both precise and accurate. These procedures are outlined in sections 2.3.1 and 2.3.2 below.

2.3.1 Field QC Procedures

While on site for sampling, the team will collect 4 duplicate samples, for a total of approximately 66 samples. The duplicate samples will be taken from the same location and under the same conditions as the original sample.
Sample duplicates are taken to assess variability in concentration or sampling techniques.

Sample locations will be confirmed by GPS location to mark the initial sampling location, then marked with a flag. The rest of the sample locations will be measured with measuring tape and a compass, and then their GPS locations will be logged.

The QA/QC officer will be provided with a sample checklist to ensure that all sample locations are collected and documented.

Sample bag labeling will be checked and confirmed with the QA/QC officer according to the sampling name scheme outlined in Section 3.3.

The methods for storing, securing, and tracking of the samples will be followed as outlined in Section 3.4.

2.3.2 XRF QC Procedures

The XRF Niton XL3t GOLDD will be used to determine the CoC and their concentrations in the samples. The XRF will be used at the site for in-situ analyses and in the lab after proper sample preparation, drying, and sieving. To maintain the quality of the data the team will follow the procedures in the XRF manufacture's manual, the EPA method 6200, and the Science and Ecosystem Support Division (SESD) Operating Procedure for Equipment Inventory and Management for the XRF (SESDPROC-108-R5).

2.3.2.1 Calibration check

Each time the XFR is turned on, the team will perform the internal system check on the device. The XRF has an internal calibration check that is accessed from the main menu; the device will indicate if it passes the calibration or not. If not, Thermo Scientific Services will be contacted.

2.3.2.2 Operational Use

To ensure QA, the XRF must be used in the proper operation mode; in this case, the "soils" mode will be used. The temperature of the surrounding area will be recorded and measured every 30 minutes while the XRF is in use. According to the SESDPROC-108-R5, if the temperature changes more than 10°F while the XRF is in use, then the device will need to be recalibrated.

2.3.2.3 XRF Analysis

Each sample will be sub-sampled 9 times within lab analysis, and 9 XRF readings will be taken in ex-situ procedures. For each metal, the highest and lowest readings will be discarded, and the other 7 readings will be averaged to give the concentration of each metal.

The standard deviation value is also given by the XRF; any readings with a value outside of the standard deviation will be flagged by the team. Samples that are flagged due to being outside the standard deviation indicate that these samples have abnormal readings that do not fall under the standard for the element being tested for, therefore needing to be reverified as they are considered low-quality.

Any metal that has "none detected" returned will be given a value half of the lower detection limit for that metal.

2.3.3 Data Analysis

Data quality indicators (DQIs) are the means to evaluate the quality of the results based on the following terms: precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) [6] . The PARCCS are described below.

2.3.3.1 Precision

Precision is the degree of mutual agreement between independent measurements of similar properties using a standard deviation (SD) or a relative percent difference (RPD) [6] . This project will use the RDP as measurement of precision of the data. The equation is listed below in Equation 2.1.

Equation C.2.1 Relative Percent Difference Equation

$$RPD = \frac{|X_1 - X_2|}{\left(\frac{X_1 + X_2}{2}\right)} * 100$$

Where:

RPD = Relative Percent Difference for Compound

X_1 = Value of compound in original sample

X_2 = Value of compound in duplicate sample

2.3.3.2 Accuracy

Accuracy is the degree of agreement of a measurement with a known true value [6]. To ensure accuracy, the team will send 10 samples to Northern Arizona University's Chemistry Department for ICP results that will be used to verify XRF data. Each individual sample will be analyzed for the following element contents: Arsenic, Antimony, Cadmium, Chromium III, Copper, Cobalt, Lead, Mercury, Nickle, Silver, Zinc.

2.3.3.3 Representativeness

Representativeness is the degree of which the data accurately and precisely represents the environmental conditions or population. While on site, the QA/QC officer will ensure the samples collected are a representation of the site and its conditions. If any changes are necessary, the sampling plan will be confirmed by the Technical Advisors Dr. Bridget Bero and Dr. Wilbert Odem.

2.3.3.4 Completeness

Completeness is the percentage of usable data obtained compared to the amount of data expected [6] . Non usable data may be a result of not collecting every sample, loss of sample, equipment errors or mistakes made by the team. The goal range is 75-90% and for this project the goal will be 90%.

2.3.3.5 Comparability

Comparability is the confidence of one data set to another data set [6] . This does not apply to the project as there is no other data set available.

2.3.3.6 Sensitivity

Sensitivity is the method detection limits (MDL). The MDLs for each element will be identified for the XRF and ICP methods. As mentioned in Section 2.3.2.3, any values returned as “none detect” will be assigned a value of half of the MDL.

2.3.3.6 Cross Contamination in the Field

To minimize cross contamination in the field, the team will follow the procedures listed below.

- Wear a new pair of nitrile gloves when collecting each sample
- Discard the pair of gloves after the equipment has been decontaminated
- The inside of the sampling bag will not be touched
- All sampling equipment will be decontaminated before each use
- Each sample will be sealed, labeled, and documented correctly. Any sample bags that have holes or tears will be double bagged.
- All notes will be recorded in the logbook.

2.3.3.7 Cross Contamination in the Lab

To minimize cross contamination in the laboratory, all sieves, drying containers, and XRF sample cups will be decontaminated after each use. All equipment and surfaces in the lab will be thoroughly cleaned between each sample analysis. All XRF sample containers will be sealed. Gloves will be used for the duration of the analysis.

2.3.4 Data Review and Validation

The data review and validation will be an assessment of the laboratory performance and sample specific criteria. The QA/QC officer will review the data to determine if the DQOs were met. All usable data will adhere to the EPA’s “National Functional Guidelines for Inorganic Superfund Methods Data Review” [7]. The results of the quality review will be reported in the project report, and any unacceptable values will be noted.

2.3.5 Data Management

All data files will be uploaded to Microsoft Teams for ease of access for each team member. To ensure data security, data files will also be uploaded to a team member to drive between each draft submittal. All data will be reviewed by the QA/QC officer and one other team member. All raw XRF Analysis Data will be provided to the client prior to extra ICP verification Data.

3.0 Field Sampling Methods

3.1 Soil Sampling

66 surface soil samples will be collected during the site investigation. These samples are broken into decision units of Tailings, Structures, Ore Pile, and Wash. Figure C.3.1 below displays the overall site and the general sampling map showing the final 5 decision units.

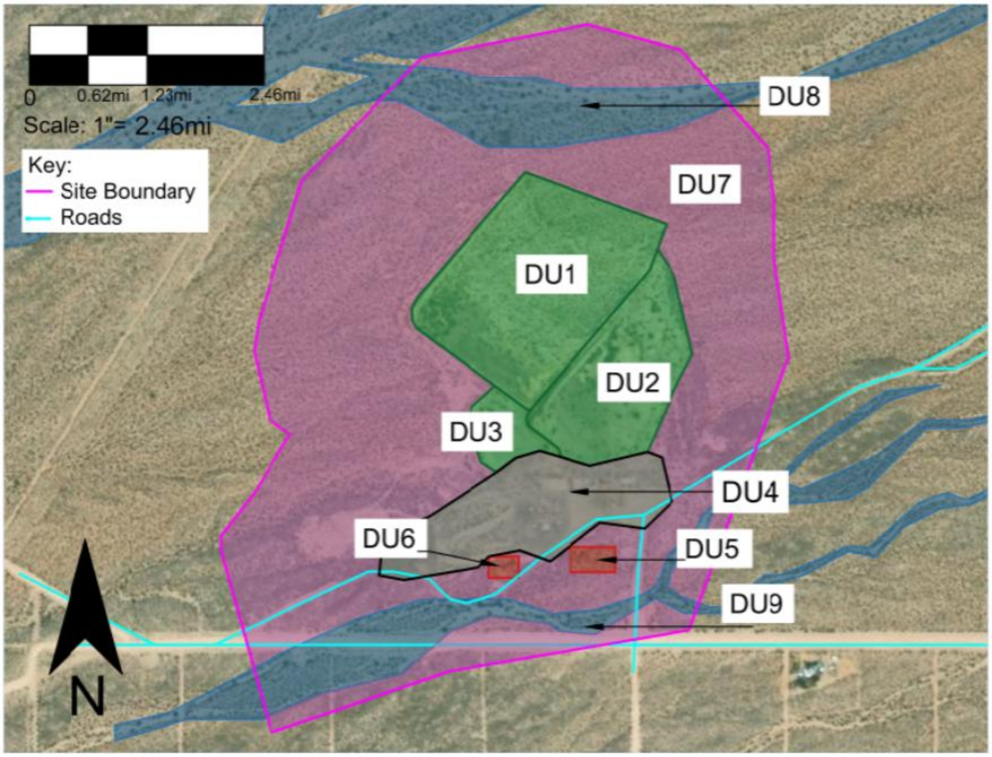


Figure C.3.1 Site Map with Labeled Decision Units

The sample breakdown is as follows in Table C.3.1 below. For the column of # of samples, the first number is the number of samples that will be collected for the respective decision unit, and the (#) is representative of the number of duplicate samples taken for each decision unit.

Table C.3.1 Sample Summary

Sampling Summary			
DU #	Area	Sampling Type	# of Samples
1	Tailings	Grid	12(1)
2	Tailings	Grid	13(1)
4	Buildings and disturbed areas	Grid	12(1)
6	Ore pile	Random	3
9	Wash	Transect	9(1)
		Background	3
		Hot Spots	10
		Total Unique	62
		Total with Duplicates	66

9 surface samples will be taken in a transect along the south wash from the site. Transects will be taken further downstream so to ensure that if any contaminants have flowed off site they will be recorded.

Figure C.3.2 below is a display of the soil samples to be taken during the site visit.

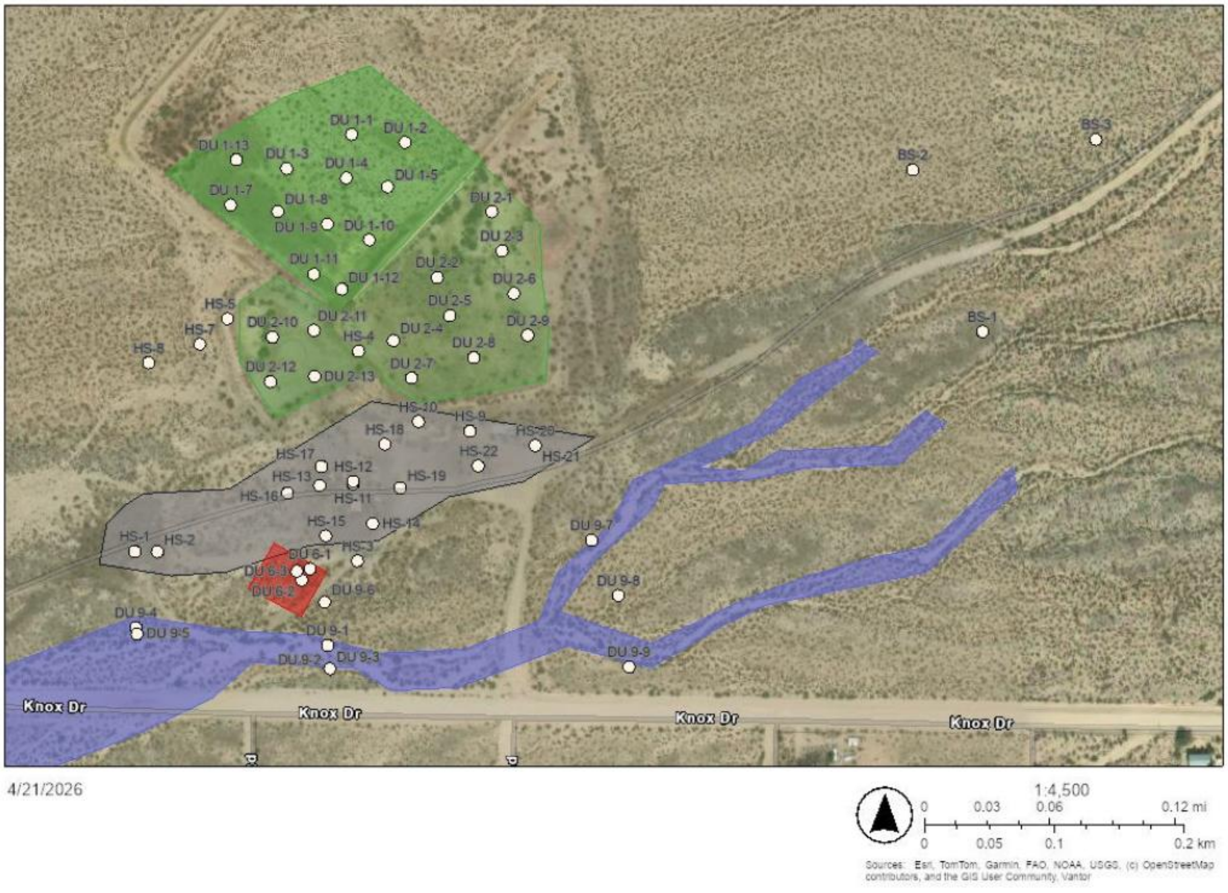


Figure C.3.2 Transect Sample Locations

3.1.1 Soil Collection

Each surface sample will be collected through utilizing a trowel to take off the first inch of surface soil so to remove any debris. From here, an in-situ XRF reading will be taken. After the XRF reading, the trowel will be used to place a ½ of a gallon into a gallon-sized freezer bag. This bag will be labeled in accordance with Section 3.3 of this report.

3.1.2 Background Samples

A total of 4 background samples will be collected following the same methods in the previous section of this report. These samples' locations will be selected when the site investigation occurs.

3.1.3 Hot Spot Samples

Up to 5 samples have been allocated for Hot Spot samples. . These sample locations will be determined when the site investigation occurs and selected based on areas of suspected contamination.

3.2 Equipment and Calibration

The equipment that will be used in the collection of samples is as follows; Ziploc gallon freezer bags, trowels, dish soap, marking flags, 5-gallon buckets with lids, large bins, paper towels, sharpie pens, gloves, scrub brushes, field logbooks, long measuring tape, X-Ray Fluorescence (XRF) machine, GPS units, cellphones for photos, and tape for sealing bins. The bags and trowels will be utilized in the sample collection. The field logbooks, flags, and sharpies will be used in the documentation of all work completed. Scrub brushes, soap, water, and buckets will be used in the decontamination of supplies between each sample collection. Long measuring tape will be used for establishing a sampling location relative to a fixed reference and GPS units for producing coordinates for each sample's exact location.

The calibration of the XRF equipment is to occur prior to the site investigation. After this, when conducting the site investigation, the XRF device will go through a system check and have an internal calibration completed for when the device is started up.

3.3 Sample Containers and Labeling

Each individual sample will be placed into different gallon heavy duty bags to ensure each sample is separate, and cross contamination cannot occur. From here, all the bags will be labelled and placed in a bin for ease of storage and transport.

The labelling of the samples will include the decision unit (DU) of the sample location, and the number of the sample. Following this notation, samples for tailings will be labelled as DU1-# and DU2-#. Samples for ore piles will be labelled DU6-#, RS to indicate that they were random samples. Samples for the washes will be labelled DU9-# for the south wash. Background samples for the site will be labelled as BS-#. All hot spot samples for the site will be labelled as HS-#, including the ones taken at the buildings and disturbed sites in DU 4. If a duplicate is taken for a sample, it will be labelled with the same DU as the original sample, with the sample number adding an "A" to notate that it is a duplicate. The individual locations will be recorded using GPS equipment and then shared within an online application amongst the team following the return from the site visit.

3.4 Sample Storage and Shipping

For storage of samples, each sample will be placed into separate gallon bags and placed into bins. Bins will be sealed once filled with a custody seal. They will be documented on the Chain of Custody Form, sealed, and transported back to the CECMEE laboratory on the NAU campus. No method of preservation will be needed for these samples.

After NAU laboratory procedures are completed, the 10 samples that are selected for sub-contracted ICP verification will be dried, sieved, and put into new gallon sized bags. These bags are to be labeled in accordance with the naming convention in Section

3.3 then shared with NAU's Chemistry Department with the Chain of Custody document enclosed.

3.5 Equipment Decontamination

In between each use, to ensure contamination does not occur between samples, equipment such as the trowels will be disinfected and cleaned utilizing the 5-gallon buckets, dish soap, and water.

3.6 Documentation

3.6.1 Field Notes and Lab Binder

All team members are to have a separate field logbook each outlining the project name and location. These logbooks will include maps, changes from the Work Plan, field observations, proper numbering of the pages, and a log of the samples each member has collected with the label of each sample along with the coordinates set within the GPS application.

As a part of the CECMEE lab binder, NAU Laboratory Project Activity sheets will be completed for each task done by the team within the laboratory. These sheets will contain who has completed the task, the date, what the task is, and the project name. Additionally, these sheets will have laboratory analysis recorded onto them. This will include equipment used, calibrations, materials used, results, and disposal.

3.6.2 Photographs

Each team member is to use their cellular devices to collect photographs of the site. This will be for the documentation of site conditions upon arrival, as well as photos of the sample locations and shared within the team Microsoft drive along with a thumb drive for backup storage.

3.6.3 Chain of Custody Form

All collected samples will be monitored throughout the entire process, including collection, handling, transportation, analysis, and final disposal. A Chain of Custody Form will be used to document the movement of each sample. This form records who has the sample, its current location, condition of the sample, and every transfer of custody. Refer to Figure C.6.1 below for the specific form that will be used

Chain of Custody Record

Revive & Restore Remediation

Mindy Mill Preliminary Assessment and Site Investigation

Sample Information

Sample ID	Date Collected	Time Collected	Collected/Placed By (Print)

Chain of Custody Transfer Log

Date	Time	Relinquished By (Print)	Signature	Received By (Print)	Signature

Figure C.6.1 Chain of Custody Record

3.6.4 Custody Seals

A Chain of Custody seal will be used to secure all containers holding samples. Anytime a container is opened in the laboratory, the date of access will be documented, and the removed seal will be kept with the project logbook. When samples are placed back into storage, a new seal will be applied, and the Chain of Custody record will be updated as necessary. All updates to custody documentation will include the date and initials of the person making the change. The Chain of Custody seal is shown in Figure A.6.2 below.

Chain of Custody Seal

Revive & Restore Remediation

Sample ID: ____________________

Storage Conditions:
____

Site Name: _______________

Bucket #:
____

Sample Type: ____________

Sample Range:
____

Date Sealed: _____________

Sealed By:
____

Time Sealed: _____________

The seal must be intact upon receipt; a broken seal invalidates custody.

Figure C.6.2 Chain of Custody Seal

4.0 Laboratory Analyses

4.1 Sample Drying

All samples must be dried to remove moisture and homogenize the soil. The samples will be dried according to the ASTM D2216-98 Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass. The soil will then be prepared for the following sieving process. Any clusters will be ground in a pestle for proper sieving. The whole sample will be placed into its own new Ziploc bag with its original sample identification being written on the bag following this drying process and the sieving process detailed below.

4.2 Sample Sieving

To improve the accuracy of the results of the XRF machine, each sample will undergo a sieving process. This assists in the concentration of the potential CoCs within the samples since they will be sorb to the finer particulates. Therefore, the samples will be sieved to achieve a finer and homogeneous soil before the use of the XRF machine. The collection of sieves will be used, with the smallest being a #60 sieve that has a pore size of less than 75 micrometers. The full stack of sieves that will be used from top to bottom will be #4, #10, #20, #40-50, and #60. A #40-50 sieve indicates a size of sieve in the range based on equipment availability. Once a sample has been sieved, the sieves will be cleaned outdoors with compressed air to reduce any contamination of the lab space. The material that passes through the #60 sieve will be placed in its respective Ziploc bag. The soil that is oversized will be disposed of as solid waste. Table A.4.1 below shows the summarization of detection limits and screening levels for the potential CoCs.

Table C.4.1 CoC Detection Limits

Contaminant of Concern	Detection Limit (mg/kg)	AZSRS - Residential (mg/kg)		AZSRS - Non-Residential (mg/kg)
		Non-Carcinogenic	Carcinogenic (10-5)	
Arsenic (As)	11	10	10	10
Antimony (Sb)	-	-	31	410
Cadmium (Cd)	-	-	39	510
Chromium III (Cr)	-	-	120,000	1,000,000
Copper (Cu)	-	-	3,100	41,000
Cobalt (Co)	-	9,000	1,400	41,000
Lead (Pb)	13	-	400	800
Mercury (Hg)	-	-	23	310
Nickel (Ni)	-	-	1,600	20,000
Silver (Ag)	-	-	390	5,100
Zinc (Zn)	-	-	23,000	310,000

4.3 XRF

X-Ray Fluorescence (XRF) analysis will be conducted in accordance with EPA Method 6200, SW-846 Test Method 6200: Field Portable X-Ray Fluorescence Spectrometry for the Determination of Elemental Concentrations in Soil and Sediment. Each sample will be divided into nine polyethylene XRF sample cups, and each subsample will sustain a 90-second XRF scan. The XRF device that will be utilized is the model NITON XL3t Goldd Model in NAU’s Civil and Environmental Engineering Soils Laboratory. All raw measurements will be downloaded into a spreadsheet, where all the minimum and maximum values for each element will be removed. The remaining seven values will be averaged to create a representative concentration of a CoC for that sample. If there are any non-detects, they will be assigned a value that is equal to half of the instrument's detection value.

4.4 Acid Digestion and ICP Confirmation

NAU's Chemistry Department will be enlisted to confirm the concentration of CoCs measured from the XRF device through soil acid digestion and Inductively Coupled Plasma (ICP). This is done primarily because it is known that there is arsenic and lead present at the site, and lead is known to bias arsenic in XRF results. They will perform acid digestion accordingly with EPA Method 3050B Acid Digestion of Sediments, Sludges, and Soils and then conduct ICP following EPA Method 6010B Inductively Coupled Plasma-Atomic Emission Spectrometry.

5.0 Disposal of Residual Materials

5.1 Field Disposal

Wash and rinse water used for equipment cleaning will be poured directly onto the site's soil. This water is diluted; therefore, it is not expected to pose a risk to human health or the environment. All disposable materials such as gloves, wipes, paper towels, and flags will be collected in a trash bag and disposed of as solid waste at NAU.

5.2 Laboratory Waste Disposal

All generated waste in the laboratory will be handled in accordance with Environmental Health and Safety (EHS) procedures. Liquid and solid water will be managed separately. Soil waste that is considered nonhazardous, such as the "overs" from the sieving process, will be disposed of as solid waste. Any liquid waste from the decontamination processes that is determined to be hazardous will be placed in a labeled hazardous waste container of EHS collection.

Appendix D: Health and Safety Plan

1.0 Job Name & Location

A Preliminary Assessment and Site Investigation will be conducted at the Mindy Mill site, located just southeast of Yucca Arizona.

2.0 Safety & Health Administration

The project's Health and Safety Officer, Jazmin Montes De Oca, is responsible for ensuring that all field and laboratory work is conducted safely and in compliance with NAU EH&S Standards and established safety protocols.

3.0 Hazard Assessment

3.1 Field Hazards and Personal Protective Equipment

Table B.3.1 below displays all the potential field hazards that may be encountered, and the teams plan for mitigation for each hazard.

Table D.3 1 Field Hazard Assessment

Field Hazards	Mitigation Approach
Physical	
Prolonged Sun Exposure	Use sunscreen and appropriate clothing, drink water, take breaks, and find shade if needed.
Temperature Exposure	Pack extra clothing for temperature variability.
Inclement Weather	Monitor weather forecasts; bring extra clothing to accommodate weather changes.
Falls and Slips	Be mindful of where you tread, particularly on inclines, and wear sturdy boots.
Chemical	
CoCs Exposure: Inhalation	Wear a face mask over your lower face if it's windy.
CoCs Exposure: Dermal	Wear gloves, tie or cover long hair, wear protective clothing, and remove clothing into secure bag after use.
CoCs Exposure: Ingestion	Wear mask if windy and wash hands after field work.
Biological	
Contact with dangerous flora and fauna	Be aware of your surroundings and potential hazards. Avoid contact with unknown flora and fauna.
Radiological	
Exposure: X-Ray	Use XRF leaning forward to keep the device away from torso and at arm's length.

3.2 Lab Hazards and Personal Protective Equipment

Table B.3.2 below displays all the potential laboratory hazards that may be encountered and the teams plan for mitigation for each hazard.

Table D.3.2 Lab Hazards and Mitigation

Lab Hazards	Mitigation Approach
Physical	
Burns	Use thermal gloves when using drying ovens.
Cuts	Be cautious when handling glassware and disposing of broken glass properly.
Fire	Call 911 and use a fire extinguisher or fire blanket.
Falls and Slips	Be aware of surroundings and possible tripping hazards in the lab.
Chemical	
CoCs Exposure: Inhalation	Work under a fume hood when testing or handling dust or working outdoors.
CoCs Exposure: Dermal	Wear proper lab PPE, particularly gloves, when handling soil and washing hands.
CoCs Exposure: Ingestion	Wear proper lab PPE, such as gloves, lab coats, closed-toed shoes, pants, and long sleeves.
Biological	
N/A	N/A
Radiological	
Exposure: X-Ray	Operate only using proper apparatus.

4.0 Training Requirements

4.1 NAU Lab Safety

All Revive and Restore personnel participating in laboratory activities are required to complete NAU's Chemical Hygiene and Lab Safety Training as well as NAU's X-Ray Safety Training before conducting any sample analysis. The copies of each member's training completion proof will be kept in the lab binder.

4.2 XRF

All Revive and Restore will be trained to use the XRF device by a qualified XRF operator that will provide hands-on guidance. The team will also be required to review the XRF training and operating manual to ensure proficiency and compliance with safety protocols during sample analysis.

5.0 Site Control & Operating Procedures

Site control and operating procedures for Mindy Mill site will follow the Occupational Safety and Health Administration (OSHA), 1910 General Industry Subpart H: Guidelines for Hazardous Waste Operations. These guidelines require the inclusion of a site map, designation of work zones, buddy system, site communications, and emergency response procedures to ensure safe work practices.

All field and laboratory activities will be performed in compliance with these standards. Working alone in the lab is strictly prohibited and to reiterate there must be a minimum of two personnel during all field and laboratory work.

6.0 Decontamination Procedures

Decontamination for field and laboratory work will follow OSHA standards for hazardous waste decontamination. Procedures will address the layout and number of decontamination stations, the equipment required, methods for minimizing work contamination during the removal of PPE, and appropriate disposal methods of contaminated materials.

6.1 Field

Potential contamination in the field will be minimized by avoiding direct contact with hazardous materials and by using proper PPE and disposable outer clothing when possible.

The following preventative measures will be implemented:

- Avoid walking through or touching potentially hazardous areas.

- Protect sampling instruments with bags and leave openings for any sensors and ports.
- Use disposable equipment and protective coverings when practical.
    - Protective coverings include eyewear, dust masks, and gloves.
- Remove and combine contaminated outer garments and equipment coverings into plastic bags before entering transport vehicles.
- Contaminated clothing will be placed in sealed bags until it can be cleaned properly by the user
- Handwashing is required prior to eating or leaving the site.
- Wash liquid will be disposed of onsite following the proper safety protocols.

6.2 Lab

All laboratory activities will follow the Chemical Hygiene Plan of NAU. Working with potentially hazardous materials will only occur in designated lab areas.

The following decontamination practices will be followed:

- Store breakable containers in trays to prevent spills or breakage.
- Remove and store PPE in consistently labeled containers before leaving the designated area.
- Wash hands and forearms thoroughly after removing any PPE.
- Decontaminate all equipment before it leaves the designated area.
- Clean surfaces with a wet mop or equivalent method. Dry sweeping is not permitted.
- Any accidents or chemical exposures that occur must be reported to NAU's "Standard Operating Procedures for Chemical Processes" under their "Responding to Accidents and Emergencies".

6.3 Field Waste Disposal

NAU's Environmental Health and Safety department will oversee the disposal of all hazardous materials in the laboratory. Containers holding hazardous materials must be triple rinsed and made unusable. It must have a completed "EMPTY" label if the container cannot be made unusable. Any non-hazardous field materials, like paper towels or empty bottles, will be placed into trash bags and held until proper disposal is made available. No hazardous waste is anticipated to result from this project.

7.0 Emergency Response Procedures

7.1 Medical Facilities

The closest medical facility to the site is the Kingman Regional Medical Center, located at 3269 Stockton Hill Rd, Kingman, AZ. The medical center's phone number is 928-757-2101. The medical center is located 37 minutes away from the site; the route can be seen in Figure D.7.1 below.

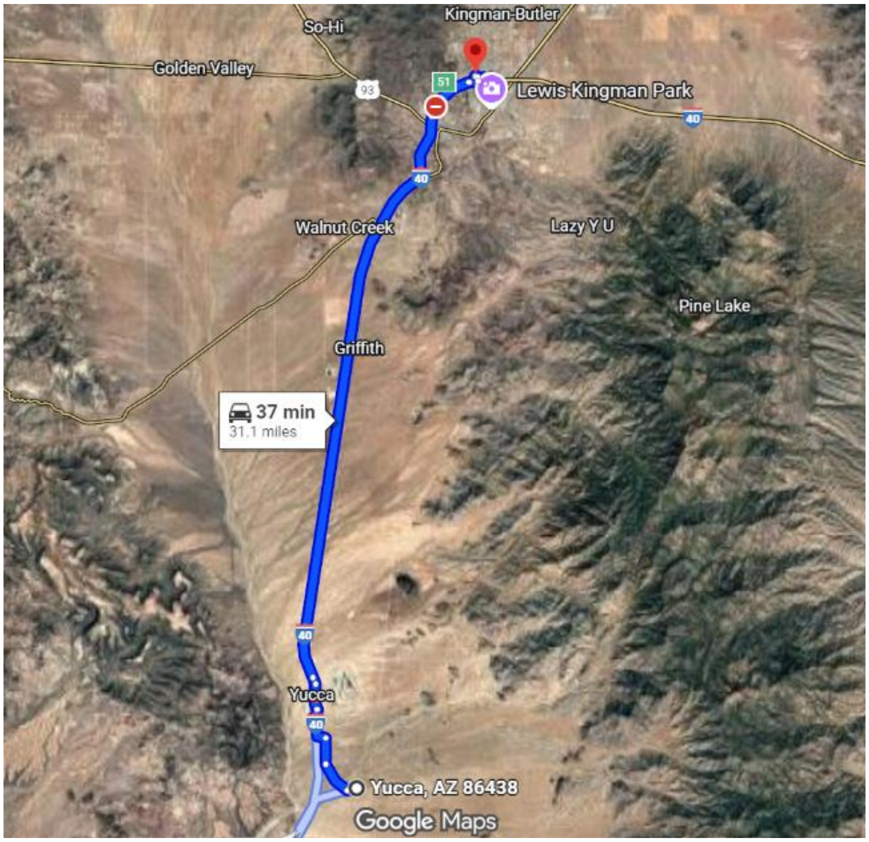


Figure D.7.1 Medical Center

In case of any accident in the NAU Soils Lab, the NAU Clinic is located at 824 S San Francisco St, Flagstaff, AZ. The clinic's phone number is 928-523-2131. The clinic is 6 minutes away from the Engineering Building; the route can be seen in Figure B.7.2 below.

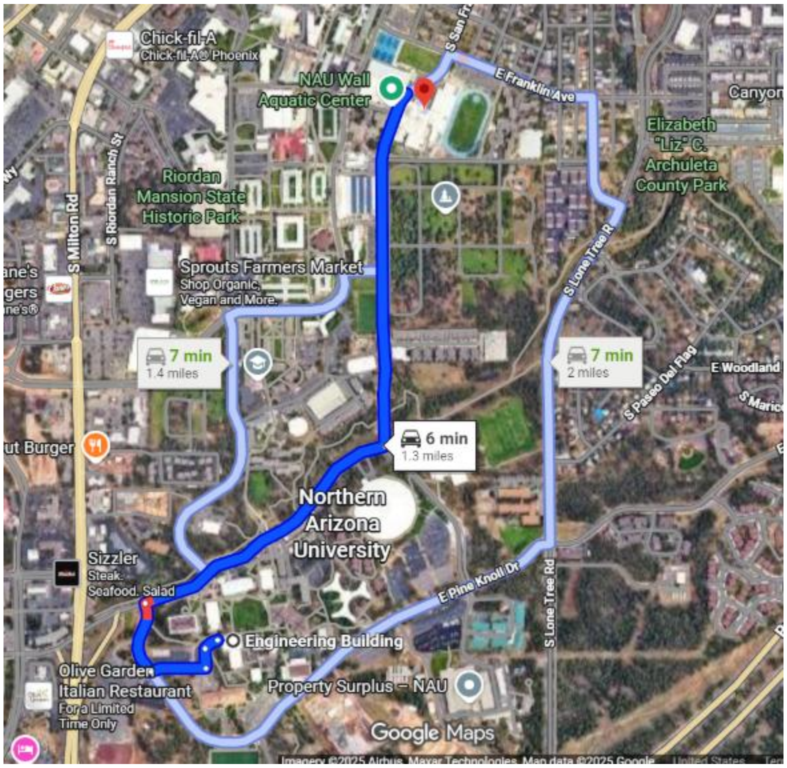


Figure D.7.2 Northern Arizona Clinic

7.2 Emergency Contacts

Table B.3.3 below outlines an emergency contact list relevant to this project.

Table D.7.1 Emergency Contacts

Name	Phone Number	Emergency Contact	Relationship	Contact Phone Number
Dr. Bridget Bero	(928) 607-2516	Charles Beadles	Spouse	(928) 607-8688
Dr. Wilbert Odem	(928) 863-8114	John Odem	Son	(928) 863 4340
Gloria Millanez	(480) 205-4476	David Millanez	Father	(602) 524-8905
Rashel Deleon	(928) 965-3738	Elena Deleon	Mother	(928) 965-2217
Annika Dillemuth	(520) 904-2805	Amy Dillemuth	Mother	(520) 904-8801
Jazmin Montes De Oca	(602) 503-5828	Carter Park	Friend	(480) 600-2015

Appendix E: Flora and Fauna

Figure E.1.1 Devils Spineflower – Chorizanthe rigida – Native

Figure E.1.2 Buckthorn Cholla – Cylindropuntia acanthocarpa – Native

Figure E.1.3 Teddybear Cholla – Cylindropuntia bigelovii – Native

Figure E.1.4 Western Joshua Tree – Yucca brevifolia – Native

Figure E.1.5 Blue Palo Verde – Parkinsonia florida – Native

Figure E.1.6 Engleman's Hedgehog Cactus – Echinocereus engelmannii - Native

Figure E.1.7 Brittlebush – Encelia farinose – Native

Figure E.1.8 Ocotillo – Fouquiera splendens - Native

Figure E.1.9 Fiddle Mustard – Streptanthus longirostris – Native

Figure E.1.10 Cheesebush – Ambrosia Salsola - Native

Figure E.1.11 Anderson Thornbush – Lyceum andersonii – Native

Figure E.1.12 Greasewood – Larrea tridentata – Native

Figure E.1.13 Saharan Mustard – Brassica tournefortii – Invasive

Figure E.1.14 Dog prints

Figure E.1.15 Cow prints

Figure E.1.16 Cow Feces

Appendix F: XRF In-Situ Raw Data

Sample ID	In-Situ Pb (ppm)	In-Situ As (ppm)	In-Situ U (ppm)
DU 6-1	20400.0	<LOD	<LOD
DU 6-2	6880.0	<LOD	<LOD
DU 6-3	15900.0	<LOD	<LOD
HS-1	14200.0	<LOD	<LOD
HS-2	16300.0	231.0	<LOD
HS-3	89500.0	1122.0	<LOD
HS-4	3061.0	104.0	<LOD
HS-5	125.0	14.0	<LOD
HS-6	2262.0	42.0	<LOD
HS-7	2486.0	6.0	<LOD
HS-8			
HS-9	2091.0	118.0	<LOD
HS-10	7977.0	250.0	<LOD
HS-11	239200.0	6174.0	<LOD
HS-12	289800.0	5538.0	<LOD
HS-13	9903.0	<LOD	<LOD
HS-14	394.0	64.0	<LOD
HS-15	1954.0	140.0	<LOD
HS-16	10300.0	<LOD	<LOD
HS-17	2319.0	<LOD	<LOD
HS-18	696.0	54.0	<LOD
HS-19	18200.0	177.0	<LOD
HS-20	412.0	23.0	5.0
HS-21	1618.0	25.0	<LOD
HS-22	10500.0	319.0	<LOD
BS-1	19.0	4.0	<LOD
BS-2			
BS-3	48.0	5.0	<LOD
DU 2-1	3014.0	<LOD	6.0
DU 2-2	4857.0	<LOD	6.0
DU 2-3	3413.0	48.0	6.0
DU 2-4	5355.0	<LOD	7.0
DU 2-5	5862.0	<LOD	<LOD
DU 2-6	1042.0	31.0	<LOD
DU 2-7	6402.0	<LOD	7.0
DU 2-8	13000.0	<LOD	11.0
DU 2-9	5072.0	<LOD	8.0
DU 2-10	7546.0	101.0	11.0
DU 2-11	3832.0	<LOD	<LOD
DU 2-12	11000.0	182.0	13.0
DU 2-13	4199.0	<LOD	13.0
DU 1-1	606.0	48.0	<LOD
DU 1-2	2100.0	58.0	<LOD
DU 1-3	1346.0	61.0	<LOD
DU 1-4	120.0	12.0	<LOD
DU 1-5	2405.0	76.0	<LOD
DU 1-7	4923.0	<LOD	<LOD
DU 1-8	7864.0	152.0	<LOD
DU 1-9	1340.0	69.0	<LOD
DU 1-10	4421.0	64.0	<LOD
DU 1-11	8190.0	<LOD	6.0
DU 1-12	2248.0	<LOD	<LOD
DU 1-13	7311.0	<LOD	<LOD
DU 9-1	1268.0	33.0	<LOD
DU 9-2	1920.0	<LOD	<LOD
DU 9-3	190.0	<LOD	<LOD
DU 9-4	227.0	18.0	<LOD
DU 9-5	254.0	13.0	5.0
DU 9-6	439.0	260.0	812.0
DU 9-7	2233.0	<LOD	<LOD
DU 9-8	2107.0	<LOD	6.0
DU 9-9	212.0	<LOD	<LOD

Appendix G: XRF Ex-Situ Raw Data with Adjusted LOD Values, Full Excel Worksheet

	Area (DU)	Pb (mg/kg)	Pb (mg/kg) "Clean"	As (mg/kg)	As (mg/kg) "Clean"	U (mg/kg)	U (mg/kg) "Clean"	Mo (mg/kg)	Mo (mg/kg) "Clean"	Zr (mg/kg)	Zr (mg/kg) "Clean"	Sr (mg/kg)	Sr (mg/kg) "Clean"	Rb (mg/kg)	Rb (mg/kg) "Clean"	Th (mg/kg)	Th (mg/kg) "Clean"	Au (mg/kg)	Au (mg/kg) "Clean"	Se (mg/kg)	Se (mg/kg) "Clean"	Hg (mg/kg)	Hg (mg/kg) "Clean"	Zn (mg/kg)	Zn (mg/kg) "Clean"	W (mg/kg)	W (mg/kg) "Clean"	Cu (mg/kg)	Cu (mg/kg) "Clean"	Ni (mg/kg)	Ni (mg/kg) "Clean"	Co (mg/kg)	Co (mg/kg) "Clean"	Fe (mg/kg)	Fe (mg/kg) "Clean"	Mn (mg/kg)	Mn (mg/kg) "Clean"	Cr (mg/kg)	Cr (mg/kg) "Clean"	V (mg/kg)	V (mg/kg) "Clean"	Ti (mg/kg)	Ti (mg/kg) "Clean"	Sc (mg/kg)	Sc (mg/kg) "Clean"	Ca (mg/kg)	Ca (mg/kg) "Clean"	K (mg/kg)	K (mg/kg) "Clean"	S (mg/kg)	S (mg/kg) "Clean"
DU 6-1.1, RS-1	6	29019.3	29019.3	<LOD	5.5	<LOD	5.0	14.6	14.6	111.7	111.7	320.9	320.9	59.8	59.8	165.9	165.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	9436.9	9436.9	<LOD	0.0	155.7	155.7	101.7	101.7	<LOD	30.0	77786.8	77786.8	7516.7	7516.7	38.9	38.9	53.1	53.1	820.8	820.8	<LOD	3.5	54676.3	54676.3	11331.2	11331.2	12554.2	12554.2
DU 6-1.2, RS-1	6	17699.5	17699.5	<LOD	5.5	<LOD	5.0	10.6	10.6	107.0	107.0	219.2	219.2	51.9	51.9	94.1	94.1	20.0	20.0	<LOD	3.5	<LOD	5.0	7328.8	7328.8	<LOD	0.0	113.8	113.8	78.5	78.5	<LOD	30.0	59230.2	59230.2	5769.6	5769.6	28.2	28.2	53.2	53.2	949.8	949.8	<LOD	3.5	48916.7	48916.7	10652.2	10652.2	10847.8	10847.8
DU 6-1.3, RS-1	6	19788.4	19788.4	<LOD	5.5	<LOD	5.0	8.8	8.8	102.0	102.0	226.0	226.0	55.4	55.4	96.7	96.7	18.7	18.7	<LOD	3.5	<LOD	5.0	8842.9	8842.9	<LOD	0.0	115.9	115.9	71.8	71.8	<LOD	30.0	66193.4	66193.4	5955.1	5955.1	32.4	32.4	<LOD	25.0	889.4	889.4	<LOD	3.5	54107.9	54107.9	11969.8	11969.8	12514.2	12514.2
DU 6-1.4, RS-1	6	22363.8	22363.8	<LOD	5.5	<LOD	5.0	12.9	12.9	69.2	69.2	253.8	253.8	55.8	55.8	121.4	121.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	9744.8	9744.8	<LOD	0.0	156.3	156.3	86.2	86.2	<LOD	30.0	71267.8	71267.8	7389.3	7389.3	32.3	32.3	<LOD	25.0	989.5	989.5	<LOD	3.5	60416.0	60416.0	11666.4	11666.4	15114.6	15114.6
DU 6-1.5, RS-1	6	28252.8	28252.8	<LOD	5.5	<LOD	5.0	15.5	15.5	157.9	157.9	302.6	302.6	60.2	60.2	155.9	155.9	26.7	26.7	<LOD	3.5	<LOD	5.0	9472.0	9472.0	<LOD	0.0	128.2	128.2	121.1	121.1	<LOD	30.0	81547.6	81547.6	7971.2	7971.2	25.9	25.9	<LOD	25.0	1147.4	1147.4	<LOD	3.5	61603.1	61603.1	12636.2	12636.2	14856.8	14856.8
DU 6-1.6, RS-1	6	28386.5	28386.5	<LOD	5.5	<LOD	5.0	13.0	13.0	100.3	100.3	288.1	288.1	56.5	56.5	136.7	136.7	22.6	22.6	<LOD	3.5	<LOD	5.0	9664.6	9664.6	<LOD	0.0	233.7	233.7	100.7	100.7	<LOD	30.0	81981.9	81981.9	8503.7	8503.7	39.0	39.0	81.2	81.2	1293.9	1293.9	<LOD	3.5	58115.7	58115.7	11264.8	11264.8	17253.6	17253.6
DU 6-1.7, RS-1	6	19774.2	19774.2	<LOD	5.5	<LOD	5.0	8.8	8.8	85.9	85.9	232.9	232.9	57.9	57.9	105.3	105.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	8103.9	8103.9	<LOD	0.0	124.6	124.6	85.7	85.7	<LOD	30.0	64289.7	64289.7	6044.1	6044.1	27.8	27.8	<LOD	25.0	965.3	965.3	<LOD	3.5	55342.2	55342.2	10782.7	10782.7	13142.4	13142.4
DU 6-1.8, RS-1	6	25949.3	25949.3	<LOD	5.5	<LOD	5.0	11.4	11.4	100.6	100.6	288.7	288.7	61.8	61.8	146.7	146.7	22.3	22.3	<LOD	3.5	<LOD	5.0	9416.1	9416.1	<LOD	0.0	131.9	131.9	98.6	98.6	<LOD	30.0	78071.7	78071.7	8035.6	8035.6	23.6	23.6	65.9	65.9	915.3	915.3	<LOD	3.5	58016.8	58016.8	12096.6	12096.6	14638.8	14638.8
DU 6-1.9, RS-1	6	24133.0	24133.0	<LOD	5.5	<LOD	5.0	12.6	12.6	89.6	89.6	270.1	270.1	71.7	71.7	126.0	126.0	17.2	17.2	<LOD	3.5	<LOD	5.0	8976.0	8976.0	<LOD	0.0	335.8	335.8	41.1	41.1	<LOD	30.0	71824.6	71824.6	7083.3	7083.3	50.1	50.1	<LOD	25.0	609.1	609.1	<LOD	3.5	40840.8	40840.8	9151.7	9151.7	10465.4	10465.4
DU 6-2.1, RS-2	6	16610.7	16610.7	<LOD	5.5	<LOD	5.0	4.1	4.1	130.7	130.7	216.6	216.6	67.6	67.6	101.5	101.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	11587.2	11587.2	<LOD	0.0	94.7	94.7	79.9	79.9	<LOD	30.0	68578.4	68578.4	5493.3	5493.3	25.5	25.5	56.6	56.6	1118.8	1118.8	<LOD	3.5	79830.8	79830.8	12492.0	12492.0	8917.9	8917.9
DU 6-2.2, RS-2	6	17179.8	17179.8	<LOD	5.5	<LOD	5.0	3.8	3.8	141.5	141.5	216.8	216.8	66.1	66.1	130.8	130.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	11556.5	11556.5	<LOD	0.0	90.4	90.4	64.7	64.7	<LOD	30.0	70913.6	70913.6	5342.2	5342.2	30.6	30.6	52.3	52.3	1034.2	1034.2	<LOD	3.5	76392.7	76392.7	12876.0	12876.0	9152.8	9152.8
DU 6-2.3, RS-2	6	17229.0	17229.0	<LOD	5.5	10.5	10.5	6.4	6.4	187.0	187.0	238.2	238.2	63.8	63.8	104.2	104.2	14.3	14.3	<LOD	3.5	<LOD	5.0	11052.4	11052.4	<LOD	0.0	85.5	85.5	69.1	69.1	<LOD	30.0	69008.1	69008.1	5330.7	5330.7	<LOD	35.0	67.6	67.6	1153.1	1153.1	<LOD	3.5	87935.3	87935.3	13525.9	13525.9	10450.3	10450.3
DU 6-2.4, RS-2	6	16300.0	16300.0	<LOD	5.5	7.6	7.6	5.0	5.0	164.7	164.7	218.3	218.3	66.0	66.0	106.0	106.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	11171.5	11171.5	<LOD	0.0	84.7	84.7	81.3	81.3	<LOD	30.0	66615.9	66615.9	5291.9	5291.9	41.3	41.3	57.8	57.8	1086.3	1086.3	<LOD	3.5	82216.1	82216.1	13620.7	13620.7	9395.6	9395.6
DU 6-2.5, RS-2	6	16397.4	16397.4	<LOD	5.5	<LOD	5.0	8.0	8.0	151.6	151.6	213.9	213.9	71.7	71.7	108.1	108.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	11342.8	11342.8	<LOD	0.0	88.6	88.6	91.2	91.2	<LOD	30.0	67877.3	67877.3	4624.1	4624.1	36.8	36.8	60.1	60.1	1228.6	1228.6	<LOD	3.5	80152.8	80152.8	13663.9	13663.9	9741.7	9741.7
DU 6-2.6, RS-2	6	16815.6	16815.6	<LOD	5.5	<LOD	5.0	7.8	7.8	231.1	231.1	219.2	219.2	70.2	70.2	96.8	96.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	11503.1	11503.1	<LOD	0.0	74.2	74.2	55.4	55.4	<LOD	30.0	67238.8	67238.8	5285.3	5285.3	26.5	26.5	<LOD	25.0	1019.2	1019.2	<LOD	3.5	78865.2	78865.2	12244.0	12244.0	8649.3	8649.3
DU 6-2.7, RS-2	6	16724.0	16724.0	<LOD	5.5	9.1	9.1	4.7	4.7	139.4	139.4	222.0	222.0	65.0	65.0	108.0	108.0	12.7	12.7	<LOD	3.5	<LOD	5.0	11579.5	11579.5	<LOD	0.0	106.8	106.8	77.6	77.6	<LOD	30.0	70449.6	70449.6	5256.2	5256.2	32.9	32.9	80.0	80.0	1267.7	1267.7	<LOD	3.5	82213.1	82213.1	13219.2	13219.2	9710.8	9710.8
DU 6-2.8, RS-2	6	15347.9	15347.9	<LOD	5.5	10.3	10.3	3.9	3.9	182.3	182.3	208.0	208.0	65.9	65.9	91.0	91.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	10806.2	10806.2	<LOD	0.0	69.2	69.2	31.3	31.3	<LOD	30.0	63595.9	63595.9	4831.0	4831.0	24.0	24.0	<LOD	25.0	942.0	942.0	<LOD	3.5	70053.6	70053.6	11190.3	11190.3	8458.4	8458.4
DU 6-2.9, RS-2	6	16671.9	16671.9	<LOD	5.5	10.0	10.0	<LOD	5.0	161.7	161.7	220.2	220.2	61.0	61.0	110.5	110.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	11109.4	11109.4	<LOD	0.0	89.8	89.8	88.8	88.8	<LOD	30.0	69650.0	69650.0	5526.8	5526.8	32.7	32.7	56.1	56.1	1200.8	1200.8	<LOD	3.5	83782.5	83782.5	13845.4	13845.4	9802.7	9802.7
DU 6-3.1, RS-3	6	23051.6	23051.6	<LOD	5.5	<LOD	5.0	11.6	11.6	65.9	65.9	197.3	197.3	49.6	49.6	121.1	121.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	10985.8	10985.8	<LOD	0.0	108.3	108.3	94.2	94.2	<LOD	30.0	71033.3	71033.3	7249.0	7249.0	36.5	36.5	<LOD	25.0	713.1	713.1	<LOD	3.5	59742.1	59742.1	10822.8	10822.8	15019.9	15019.9
DU 6-3.2, RS-3	6	25653.2	25653.2	<LOD	5.5	<LOD	5.0	13.0	13.0	79.3	79.3	202.5	202.5	49.7	49.7	139.2	139.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	11669.4	11669.4	<LOD	0.0	136.3	136.3	79.0	79.0	<LOD	30.0	72633.6	72633.6	7034.2	7034.2	42.3	42.3	<LOD	25.0	697.2	697.2	<LOD	3.5	61782.3	61782.3	9696.2	9696.2	14654.5	14654.5
DU 6-3.3, RS-3	6	28946.3	28946.3	<LOD	5.5	<LOD	5.0	7.4	7.4	155.0	155.0	220.5	220.5	49.1	49.1	160.5	160.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	14709.1	14709.1	<LOD	0.0	270.9	270.9	108.3	108.3	<LOD	30.0	82354.6	82354.6	7470.8	7470.8	22.5	22.5	<LOD	25.0	925.0	925.0	<LOD	3.5	64745.5	64745.5	9957.4	9957.4	17284.4	17284.4
DU 6-3.4, RS-3	6	18453.2	18453.2	<LOD	5.5	<LOD	5.0	5.3	5.3	73.5	73.5	166.4	166.4	43.4	43.4	92.0	92.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	11295.7	11295.7	<LOD	0.0	113.9	113.9	98.2	98.2	<LOD	30.0	59150.5	59150.5	5040.6	5040.6	33.2	33.2	<LOD	25.0	716.5	716.5	<LOD	3.5	56898.7	56898.7	10525.1	10525.1	12496.8	12496.8
DU 6-3.5, RS-3	6	26147.3	26147.3	<LOD	5.5	9.8	9.8	6.7	6.7	128.6	128.6	222.6	222.6	50.5	50.5	155.9	155.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	11936.7	11936.7	<LOD	0.0	121.1	121.1	91.0	91.0	<LOD	30.0	75194.8	75194.8	8015.6	8015.6	26.3	26.3	<LOD	25.0	1133.2	1133.2	<LOD	3.5	54804.1	54804.1	10634.1	10634.1	17819.9	17819.9
DU 6-3.6, RS-3	6	29338.6	29338.6	<LOD	5.5	11.4	11.4	9.2	9.2	72.9	72.9	242.5	242.5	48.6	48.6	161.7	161.7	20.4	20.4	<LOD	3.5	<LOD	5.0	13053.0	13053.0	<LOD	0.0	168.6	168.6	91.0	91.0	<LOD	30.0	78638.0	78638.0	7246.6	7246.6	26.9	26.9	<LOD	25.0	854.9	854.9	<LOD	3.5	54688.5	54688.5	10383.0	10383.0	14773.9	14773.9
DU 6-3.7, RS-3	6	29954.8	29954.8	<LOD	5.5	<LOD	5.0	10.1	10.1	111.9	111.9	215.6	215.6	47.4	47.4	157.6	157.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	12032.0	12032.0	<LOD	0.0	114.8	114.8	94.0	94.0	<LOD	30.0	79003.0	79003.0	8241.2	8241.2	24.9	24.9	<LOD	25.0	1199.1	1199.1	<LOD	3.5	56651.0	56651.0	10245.1	10245.1	16084.6	16084.6
DU 6-3.8, RS-3	6	22592.9	22592.9	<LOD	5.5	9.1	9.1	10.7	10.7	70.0	70.0	176.9	176.9	51.3	51.3	103.9	103.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	10771.7	10771.7	<LOD	0.0	109.2	109.2	87.1	87.1	<LOD	30.0	72500.5	72500.5	6907.7	6907.7	27.4	27.4	<LOD	25.0	727.9	727.9	<LOD	3.5	58538.3	58538.3	10561.0	10561.0	16102.7	16102.7
DU 6-3.9, RS-3	6	19984.7	19984.7	<LOD	5.5	<LOD	5.0	7.6	7.6	106.8	106.8	172.4	172.4	55.8	55.8	108.6	108.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	10276.9	10276.9	<LOD	0.0	96.6	96.6	74.3	74.3	<LOD	30.0	65903.4	65903.4	6161.9	6161.9	25.8	25.8	50.4	50.4	790.5	790.5	<LOD	3.5	57807.0	57807.0	10333.8	10333.8	13301.6	13301.6
HS-1.1	HS	16908.0	16908.0	<LOD	5.5	10.6	10.6	5.7	5.7	208.4	208.4	226.4	226.4	66.6	66.6	102.3	102.3	15.5	15.5	<LOD	3.5	<LOD	5.0	19893.4	19893.4	<LOD	0.0	97.3	97.3	122.5	122.5	<LOD	30.0	127198.8	127198.8	11280.4	11280.4	<LOD	35.0	78.6	78.6	1564.2	1564.2	<LOD	3.5	68964.7	68964.7	13339.6	13339.6	10820.3	10820.3
HS-1.2	HS	16400.2	16400.2	96.6	96.6	<LOD	5.0	4.5	4.5	141.5	141.5	216.3	216.3	66.5	66.5	99.9	99.9	14.9	14.9	<LOD	3.5	<LOD	5.0	19420.2	19420.2	<LOD	0.0	114.9	114.9	84.2	84.2	<LOD	30.0	121681.6	121681.6	11120.1	11120.1	21.6	21.6	<LOD	25.0	1200.1	1200.1	<LOD	3.5	56971.7	56971.7	11770.3	11770.3	9148.5	9148.5
HS-1.3	HS	19483.9	19483.9	<LOD	5.5	<LOD	5.0	5.7	5.7	144.1	144.1	234.2	234.2	70.6	70.6	116.4	116.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	20770.3	20770.3	<LOD	0.0	130.4	130.4	114.5	114.5	<LOD	30.0	131622.1	131622.1	11139.2	11139.2	37.8	37.8	63.7	63.7	1586.7	1586.7	<LOD	3.5	63287.7	63287.7	13666.0	13666.0	9441.6	9441.6
HS-1.4	HS	17150.0	17150.0	<LOD	5.5	9.5	9.5	6.3	6.3	157.4	157.4	222.5	222.5	67.5	67.5	106.2	106.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	19854.8	19854.8	<LOD	0.0	119.1	119.1	118.1	118.1	<LOD	30.0	129165.1	129165.1	11252.1	11252.1	60.7	60.7	60.7	60.7	1393.5	1393.5	<LOD	3.5	68900.3	68900.3	14106.0	14106.0	10282.0	10282.0
HS-1.5	HS	17578.4	17578.4	<LOD	5.5	<LOD	5.0	4.7	4.7	143.2	143.2	206.0	206.0	65.8	65.8	97.4	97.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	19304.5	19304.5	<LOD	0.0	111.5	111.5	115.0	115.0	<LOD	30.0	126137.9	126137.9	11101.5	11101.5	<LOD	35.0	<LOD	25.0	1361.9	1361.9	<LOD	3.5	68460.5	68460.5	13378.4	13378.4	9924.9	9924.9
HS-1.6	HS	16073.8	16073.8	<LOD	5.5	10.0	10.0	4.3	4.3	150.4	150.4	214.9	214.9	66.0	66.0	103.4	103.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	19669.0	19669.0	<LOD	0.0	108.9	108.9	96.1	96.1	<LOD	30.0	123065.1	123065.1	10058.9	10058.9	25.1	25.1	<LOD	25.0	1163.9	1163.9	<LOD	3.5	58751.3	58751.3	11449.2	11449.2	8912.7	8912.7
HS-1.7	HS	16792.2	16792.2	<LOD	5.5	<LOD	5.0	5.5	5.5	162.9	162.9	207.4	207.4	62.7	62.7	113.9	113.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	18782.6	18782.6	<LOD	0.0	97.2	97.2	100.4	100.4	<LOD	30.0	121262.6	121262.6	10582.2	10582.2	55.9	55.9	54.8	54.8	1262.9	1262.9	<LOD	3.5	59317.8	59317.8	12202.6	12202.6	8240.9	8240.9
HS-1.8	HS	17130.1	17130.1	<LOD	5.5	<LOD	5.0	6.0	6.0	145.5	145.5	221.8	221.8	66.7	66.7	99.9	99.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	20190.3	20190.3	<LOD	0.0	110.0	110.0	96.4	96.4	<LOD	30.0	125256.6	125256.6	10943.1	10943.1	36.5	36.5	71.4	71.4	1328.1	1328.1	<LOD	3.5	60878.7	60878.7	12080.3	12080.3	8818.8	8818.8
HS-1.9	HS	16125.4	16125.4	<LOD	5.5	<LOD	5.0	6.4	6.4	144.7	144.7	213.3	213.3	64.7	64.7	78.8	78.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	19325.1	19325.1	<LOD	0.0	122.3	122.3	75.9	75.9	<LOD	30.0	126060.4	126060.4	10066.0	10066.0	45.8	45.8	68.4	68.4	1293.4	1293.4	<LOD	3.5	57264.5	57264.5	11735.6	11735.6	9409.9	9409.9
HS-2.1	HS	25911.4	25911.4	<LOD	5.5	17.5	17.5	<LOD	5.0	163.7	163.7	229.0	229.0	62.4	62.4	175.6	175.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	35819.9	35819.9	<LOD	0.0	131.1	131.1	181.8	181.8	<LOD	30.0	202225.6	202225.6	20332.6	20332.6	29.2	29.2	112.9	112.9	1264.1	1264.1	<LOD	3.5	64577.3	64577.3	11448.9	11448.9	13996.2	13996.2
HS-2.2	HS	25416.8	25416.8	<LOD	5.5	<LOD	5.0	<LOD	5.0	125.5	125.5	224.8	224.8	56.6	56.6	169.0	169.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	35536.8	35536.8	<LOD	0.0	124.4	124.4	169.2	169.2	<LOD	30.0	197736.9	197736.9	19074.2	19074.2	37.3	37.3	<LOD	25.0	1014.6	1014.6	<LOD	3.5	58816.1	58816.1	10805.2	10805.2	13034.2	13034.2
HS-2.3	HS	27987.5	27987.5	<LOD	5.5	12.0	12.0	8.1	8.1	63.6	63.6	251.6	251.6	60.1	60.1	155.3	155.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	36656.1	36656.1	<LOD	0.0	131.9	131.9	153.0	153.0	<LOD	30.0	204753.3	204753.3	20614.6	20614.6	47.5	47.5	<LOD	25.0	1693.7	1693.7	<LOD	3.5	62418.4	62418.4	11040.7	11040.7	13825.0	13825.0
HS-2.4	HS	31172.0	31172.0	<LOD	5.5	<LOD	5.0	8.3	8.3	119.4	119.4	260.5	260.5	69.0	69.0	197.1	197.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	37844.1	37844.1	<LOD	0.0	146.2	146.2	186.0	186.0	<LOD	30.0	214816.2	214816.2	23504.4	23504.4	32.2	32.2	86.7	86.7	1209.5	1209.5	<LOD	3.5	64373.4	64373.4	11707.9	11707.9	15689.7	15689.7
HS-2.5	HS	26963.7	26963.7	145.7	145.7	<LOD	5.0	7.4	7.4	94.9	94.9	240.8	240.8	64.8	64.8	175.2	175.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	37220.6	37220.6	<LOD	0.0	150.3	150.3	190.1	190.1	<LOD	30.0	209235.6	209235.6	21914.2	21914.2	61.7	61.7	82.9	82.9	1284.7	1284.7	<LOD	3.5	66027.3	66027.3	10773.6	10773.6	14571.4	14571.4
HS-2.6	HS	26134.4	26134.4	385.8	385.8	<LOD	5.0	6.9	6.9	59.6	59.6	234.4	234.4	64.8	64.8	178.2	178.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	36047.8	36047.8	<LOD	0.0	127.9	127.9	172.8	172.8	<LOD	30.0	197850.3	197850.3	21229.2	21229.2	44.0	44.0	<LOD	25.0	1243.4	1243.4	<LOD	3.5	64128.8	64128.8	10950.1	10950.1	14261.7	14261.7
HS-2.7	HS	29454.0	29454.0	241.1	241.1	11.5	11.5	10.0	10.0	123.9	123.9	255.5	255.5	59.6	59.6	211.3	211.3	<LOD	0.0	<LOD	3.5	32.9	32.9	39802.4	39802.4	<LOD	0.0	134.5	134.5	186.4	186.4	<LOD	30.0	209971.8	209971.8	22268.2	22268.2	42.3	42.3	103.8	103.8	1454.9	1454.9	<LOD	3.5	61874.6	61874.6	10992.7	10992.7	16179.8	16179.8
HS-2.8	HS	29810.3	29810.3	<LOD	5.5	<LOD	5.0	27.8	27.8	152.3	152.3	243.0	243.0	62.2	62.2	175.0	175.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	39597.1	39597.1	<LOD	0.0	140.3	140.3	187.1	187.1	<LOD	30.0	212939.2	212939.2	23012.3	23012.3	44.3	44.3	102.1	102.1	1538.4	1538.4	<LOD	3.5	66996.5	66996.5	11247.9	11247.9	15604.0	15604.0
HS-2.9	HS	30368.3	30368.3	<LOD	5.5	<LOD	5.0	6.2	6.2	89.3	89.3	251.3	251.3	59.2	59.2	172.5	172.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	36954.4	36954.4	<LOD	0.0	134.1	134.1	144.8	144.8	<LOD	30.0	219459.9	219459.9	23141.8	23141.8	37.2	37.2	85.7	85.7	1304.7	1304.7	<LOD	3.5	67135.0	67135.0	10791.1	10791.1	14344.6	14344.6
HS-3.1	HS	151675.1	151675.1	1139.6	1139.6	<LOD	5.0	20.6	20.6	<LOD	4.5	353.2	353.2	266.9	266.9	221.7	221.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	10884.1	10884.1	<LOD	0.0	1707.1	1707.1	<LOD	35.0	<LOD	30.0	122669.5	122669.5	7009.0	7009.0	44.1	44.1	<LOD	25.0	1119.3	1119.3	<LOD	3.5	46285.0	46285.0	11764.5	11764.5	64313.3	64313.3
HS-3.2	HS	196889.2	196889.2	4237.0	4237.0	<LOD	5.0	19.2	19.2	<LOD	4.5	411.7	411.7	240.5	240.5	244.4	244.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	14319.3	14319.3	<LOD	0.0	2217.5	2217.5	<LOD	35.0	<LOD	30.0	145997.6	145997.6	9440.7	9440.7	67.1	67.1	<LOD	25.0	632.3	632.3	<LOD	3.5	44870.0	44870.0	10557.9	10557.9	68629.3	68629.3
HS-3.3	HS	238845.0	238845.0	6845.2	6845.2	<LOD	5.0	27.7	27.7	<LOD	4.5	508.1	508.1	306.4	306.4	492.2	492.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	16063.3	16063.3	<LOD	0.0	3835.3	3835.3	<LOD	35.0	<LOD	30.0	176034.4	176034.4	10788.6	10788.6	51.5	51.5	<LOD	25.0	1379.6	1379.6	<LOD	3.5	41888.4	41888.4	10874.4	10874.4	73987.5	73987.5
HS-3.4	HS	234986.3	234986.3	7485.3	7485.3	<LOD	5.0	30.1	30.1	<LOD	4.5	497.2	497.2	219.8	219.8	742.7	742.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	16156.0	16156.0	<LOD	0.0	2594.3	2594.3	<LOD	35.0	<LOD	30.0	166559.2	166559.2	12313.5	12313.5	47.4	47.4	<LOD	25.0	806.2	806.2	<LOD	3.5	43250.8	43250.8	10845.9	10845.9	81485.2	81485.2
HS-3.5	HS	241827.2	241827.2	9201.2	9201.2	<LOD	5.0	73.1	73.1	<LOD	4.5	463.0	463.0	224.5	224.5	441.1	441.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	14683.1	14683.1	<LOD	0.0	2770.0	2770.0	<LOD	35.0	<LOD	30.0	167822.1	167822.1	10203.5	10203.5	82.2	82.2	<LOD	25.0	800.2	800.2	<LOD	3.5	42943.8	42943.8	10351.4	10351.4	89591.1	89591.1
HS-3.6	HS	205018.8	205018.8	6558.4	6558.4	<LOD	5.0	19.5	19.5	<LOD	4.5	418.3	418.3	249.6	249.6	446.6	446.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	15549.0	15549.0	<LOD	0.0	2489.3	2489.3	<LOD	35.0	<LOD	30.0	152056.1	152056.1	9154.4	9154.4	71.5	71.5	<LOD	25.0	791.7	791.7	<LOD	3.5	45470.3	45470.3	11251.8	11251.8	75256.6	75256.6
HS-3.7	HS	249977.1	249977.1	8056.7	8056.7	<LOD	5.0	23.6	23.6	<LOD	4.5	482.2	482.2	208.5	208.5	488.1	488.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	17651.4	17651.4	<LOD	0.0	2687.4	2687.4	<LOD	35.0	<LOD	30.0	175968.3	175968.3	11460.3	11460.3	48.9	48.9	<LOD	25.0	830.7	830.7	<LOD	3.5	44508.9	44508.9	10949.3	10949.3	81439.6	81439.6
HS-3.8	HS	239201.0	239201.0	6016.4	6016.4	<LOD	5.0	23.4	23.4	<LOD	4.5	458.7	458.7	209.4	209.4	387.5	387.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	15717.2	15717.2	<LOD	0.0	2745.2	2745.2	<LOD	35.0	<LOD	30.0	176626.6	176626.6	9686.8	9686.8	47.4	47.4	<LOD	25.0	1088.8	1088.8	<LOD	3.5	46161.6	46161.6	12210.7	12210.7	77130.1	77130.1
HS-3.9	HS	252553.0	252553.0	9019.0	9019.0	<LOD	5.0	27.9	27.9	<LOD	4.5	505.8	505.8	199.5	199.5	460.0	460.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	14835.2	14835.2	<LOD	0.0	2625.2	2625.2	<LOD	35.0	<LOD	30.0	174620.8	174620.8	11415.9	11415.9	74.5	74.5	<LOD	25.0	920.3	920.3	<LOD	3.5	44040.8	44040.8	10425.3	10425.3	92854.5	92854.5
HS-4.1	HS	4049.2	4049.2	124.2	124.2	<LOD	5.0	<LOD	5.0	40.5	40.5	40.0	40.0	47.7	47.7	107.8	107.8	<LOD	0.0	17.9	17.9	<LOD	5.0	5345.3	5345.3	<LOD	0.0	1864.8	1864.8	108.6	108.6	<LOD	30.0	492284.9	492284.9	1564.5	1564.5	<LOD	35.0	<LOD	25.0	562.7	562.7	<LOD	3.5	19204.7	19204.7	7562.0	7562.0	133208.1	133208.1
HS-4.2	HS	4057.8	4057.8	133.2	133.2	<LOD	5.0	<LOD	5.0	34.5	34.5	29.7	29.7	46.4	46.4	101.2	101.2	<LOD	0.0	20.3	20.3	<LOD	5.0	5373.0	5373.0	<LOD	0.0	1897.7	1897.7	76.2	76.2	<LOD	30.0	515339.9	515339.9	1669.1	1669.1	<LOD	35.0	<LOD	25.0	428.0	428.0	<LOD	3.5	14276.5	14276.5	7620.9	7620.9	127105.5	127105.5
HS-4.3	HS	4038.4	4038.4	154.9	154.9	<LOD	5.0	7.7	7.7	43.0	43.0	30.4	30.4	47.1	47.1	109.1	109.1	<LOD	0.0	18.9	18.9	13.9	13.9	5367.2	5367.2	<LOD	0.0	1848.6	1848.6	101.0	101.0	<LOD	30.0	506019.3	506019.3	1575.2	1575.2	<LOD	35.0	<LOD	25.0	461.2	461.2	<LOD	3.5	17303.6	17303.6	7602.2	7602.2	131626.2	131626.2
HS-4.4	HS	3980.3	3980.3	166.6	166.6	<LOD	5.0	6.7	6.7	42.1	42.1	29.1	29.1	47.9	47.9	105.0	105.0	<LOD	0.0	24.7	24.7	<LOD	5.0	5281.7	5281.7	<LOD	0.0	1880.1	1880.1	108.0	108.0	<LOD	30.0	505579.0	505579.0	1571.9	1571.9	<LOD	35.0	<LOD	25.0	471.7	471.7	<LOD	3.5	17536.1	17536.1	7458.1	7458.1	128098.0	128098.0
HS-4.5	HS	4029.3	4029.3	125.0	125.0	11.7	11.7	<LOD	5.0	49.7	49.7	29.6	29.6	52.2	52.2	111.6	111.6	<LOD	0.0	20.5	20.5	<LOD	5.0	5338.8	5338.8	<LOD	0.0	1854.4	1854.4	111.3	111.3	<LOD	30.0	512440.3	512440.3	1515.7	1515.7	<LOD	35.0	<LOD	25.0	526.0	526.0	<LOD	3.5	17005.8	17005.8	7798.8	7798.8	133782.7	133782.7
HS-4.6	HS	3945.6	3945.6	200.5	200.5	<LOD	5.0	4.5	4.5	52.3	52.3	30.6	30.6	47.3	47.3	115.4	115.4	<LOD	0.0	18.9	18.9	<LOD	5.0	5333.6	5333.6	<LOD	0.0	1875.0	1875.0	91.7	91.7	<LOD	30.0	517488.8	517488.8	1642.4	1642.4	<LOD	35.0	<LOD	25.0	598.3	598.3	<LOD	3.5	15936.3	15936.3	7815.2	7815.2	134606.6	134606.6
HS-4.7	HS	4058.9	4058.9	164.9	164.9	<LOD	5.0	11.2	11.2	47.2	47.2	31.7	31.7	48.4	48.4	117.9	117.9	<LOD	0.0	16.9	16.9	<LOD	5.0	5345.3	5345.3	<LOD	0.0	1906.0	1906.0	87.1	87.1	<LOD	30.0	516765.6	516765.6	1639.1	1639.1	<LOD	35.0	<LOD	25.0	494.5	494.5	<LOD	3.5	16576.3	16576.3	7831.9	7831.9	129156.5	129156.5
HS-4.8	HS	4073.7	4073.7	114.9	114.9	<LOD	5.0	<LOD	5.0	34.2	34.2	28.9	28.9	49.3	49.3	110.5	110.5	<LOD	0.0	15.2	15.2	<LOD	5.0	5407.1	5407.1	<LOD	0.0	1869.2	1869.2	94.4	94.4	<LOD	30.0	514023.3	514023.3	1596.8	1596.8	<LOD	35.0	<LOD	25.0	555.9	555.9	<LOD	3.5	16215.7	16215.7	7203.7	7203.7	132261.9	132261.9
HS-4.9	HS	4020.6	4020.6	141.2	141.2	<LOD	5.0	7.2	7.2	42.2	42.2	29.6	29.6	48.2	48.2	101.8	101.8	<LOD	0.0	20.5	20.5	<LOD	5.0	5334.4	5334.4	<LOD	0.0	1884.1	1884.1	81.9	81.9	<LOD	30.0	520266.2	520266.2	1715.6	1715.6	<LOD	35.0	<LOD	25.0	558.3	558.3	<LOD	3.5	17145.5	17145.5	7954.6	7954.6	138972.6	138972.6
HS-5.1	HS	520.9	520.9	53.8	53.8	9.6	9.6	5.3	5.3	698.4	698.4	242.7	242.7	110.5	110.5	35.9	35.9	<LOD	0.0	4.8	4.8	<LOD	5.0	2428.0	2428.0	<LOD	0.0	621.6	621.6	50.6	50.6	169.3	169.3	70823.6	70823.6	728.2	728.2	47.0	47.0	86.7	86.7	3810.9	3810.9	<LOD	3.5	53991.3	53991.3	20275.1	20275.1	66053.9	66053.9
HS-5.2	HS	530.1	530.1	48.5	48.5	6.4	6.4	10.6	10.6	769.5	769.5	232.5	232.5	105.0	105.0	38.8	38.8	<LOD	0.0	4.3	4.3	<LOD	5.0	2172.8	2172.8	<LOD	0.0	596.3	596.3	32.0	32.0	<LOD	30.0	71454.5	71454.5	783.1	783.1	33.6	33.6	84.6	84.6	2754.9	2754.9	<LOD	3.5	35895.4	35895.4	16303.9	16303.9	40580.9	40580.9
HS-5.3	HS	483.3	483.3	47.9	47.9	13.4	13.4	7.8	7.8	862.1	862.1	237.5	237.5	109.5	109.5	46.2	46.2	<LOD	0.0	3.4	3.4	<LOD	5.0	2190.4	2190.4	<LOD	0.0	588.4	588.4	65.6	65.6	<LOD	30.0	74208.8	74208.8	722.5	722.5	52.7	52.7	98.9	98.9	3554.8	3554.8	<LOD	3.5	47706.1	47706.1	18607.1	18607.1	60237.9	60237.9
HS-5.4	HS	501.8	501.8	45.2	45.2	9.2	9.2	8.1	8.1	930.7	930.7	245.1	245.1	109.7	109.7	39.5	39.5	<LOD	0.0	4.5	4.5	<LOD	5.0	2114.0	2114.0	<LOD	0.0	550.2	550.2	62.7	62.7	<LOD	30.0	78315.0	78315.0	756.1	756.1	54.9	54.9	112.5	112.5	4300.8	4300.8	<LOD	3.5	42432.5	42432.5	22205.8	22205.8	47591.9	47591.9
HS-5.5	HS	497.4	497.4	51.9	51.9	7.8	7.8	5.7	5.7	699.0	699.0	243.1	243.1	110.8	110.8	34.8	34.8	<LOD	0.0	6.9	6.9	10.6	10.6	2175.6	2175.6	<LOD	0.0	584.5	584.5	69.3	69.3	<LOD	30.0	71689.5	71689.5	754.0	754.0	40.1	40.1	82.1	82.1	3899.6	3899.6	<LOD	3.5	46909.3	46909.3	22223.4	22223.4	56549.3	56549.3
HS-5.6	HS	549.7	549.7	54.7	54.7	8.3	8.3	6.6	6.6	823.0	823.0	237.0	237.0	107.9	107.9	40.1	40.1	<LOD	0.0	6.0	6.0	8.5	8.5	2367.6	2367.6	<LOD	0.0	599.2	599.2	60.0	60.0	<LOD	30.0	74123.5	74123.5	731.3	731.3	49.0	49.0	89.9	89.9	3890.1	3890.1	<LOD	3.5	50237.6	50237.6	20529.3	20529.3	61436.6	61436.6
HS-5.7	HS	542.0	542.0	60.7	60.7	11.4	11.4	8.2	8.2	901.9	901.9	246.5	246.5	109.9	109.9	43.8	43.8	<LOD	0.0	5.2	5.2	<LOD	5.0	2388.3	2388.3	40.2	40.2	630.6	630.6	57.1	57.1	223.1	223.1	73770.9	73770.9	725.5	725.5	63.0	63.0	108.7	108.7	3724.3	3724.3	<LOD	3.5	49824.1	49824.1	21121.4	21121.4	58154.9	58154.9
HS-5.8	HS	466.1	466.1	47.2	47.2	7.8	7.8	10.1	10.1	808.7	808.7	239.7	239.7	106.8	106.8	45.0	45.0	<LOD	0.0	5.0	5.0	<LOD	5.0	2098.6	2098.6	<LOD	0.0	550.0	550.0	54.4	54.4	<LOD	30.0	71748.8	71748.8	793.6	793.6	54.5	54.5	92.0	92.0	3538.7	3538.7	<LOD	3.5	46976.2	46976.2	20003.5	20003.5	57549.2	57549.2
HS-5.9	HS	539.8	539.8	58.9	58.9	12.8	12.8	7.9	7.9	871.9	871.9	236.8	236.8	110.6	110.6	52.9	52.9	<LOD	0.0	5.6	5.6	<LOD	5.0	2304.1	2304.1	47.7	47.7	586.0	586.0	59.0	59.0	<LOD	30.0	76329.5	76329.5	1008.3	1008.3	37.2	37.2	91.3	91.3	4343.0	4343.0	<LOD	3.5	50203.1	50203.1	20882.3	20882.3	61167.0	61167.0
HS-6.1	HS	3257.0	3257.0	39.1	39.1	7.8	7.8	<LOD	5.0	246.1	246.1	190.1	190.1	93.0	93.0	48.8	48.8	<LOD	0.0	6.8	6.8	9.2	9.2	8906.8	8906.8	<LOD	0.0	2109.6	2109.6	60.1	60.1	<LOD	30.0	82519.2	82519.2	1851.1	1851.1	56.3	56.3	73.2	73.2	2578.1	2578.1	87.4	87.4	35318.9	35318.9	19933.2	19933.2	18914.2	18914.2
HS-6.2	HS	3281.4	3281.4	77.9	77.9	7.3	7.3	<LOD	5.0	159.6	159.6	187.6	187.6	93.7	93.7	54.2	54.2	<LOD	0.0	7.0	7.0	<LOD	5.0	8746.3	8746.3	<LOD	0.0	2095.0	2095.0	65.8	65.8	<LOD	30.0	83120.8	83120.8	2044.1	2044.1	41.5	41.5	78.9	78.9	2667.5	2667.5	<LOD	3.5	34922.8	34922.8	19862.0	19862.0	18449.1	18449.1
HS-6.3	HS	3308.5	3308.5	60.2	60.2	9.9	9.9	<LOD	5.0	158.9	158.9	187.8	187.8	93.2	93.2	54.7	54.7	<LOD	0.0	6.7	6.7	8.7	8.7	8567.4	8567.4	<LOD	0.0	2053.2	2053.2	80.6	80.6	<LOD	30.0	82757.6	82757.6	2004.3	2004.3	52.7	52.7	93.6	93.6	3005.8	3005.8	<LOD	3.5	42491.3	42491.3	19809.4	19809.4	24976.0	24976.0
HS-6.4	HS	3309.8	3309.8	57.7	57.7	9.9	9.9	4.1	4.1	221.2	221.2	186.0	186.0	92.3	92.3	52.4	52.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	8450.2	8450.2	<LOD	0.0	2030.5	2030.5	72.2	72.2	<LOD	30.0	79895.2	79895.2	1960.6	1960.6	47.0	47.0	76.7	76.7	2719.6	2719.6	<LOD	3.5	37251.6	37251.6	19179.3	19179.3	20019.3	20019.3
HS-6.5	HS	3486.4	3486.4	<LOD	5.5	11.9	11.9	4.1	4.1	195.6	195.6	187.5	187.5	92.7	92.7	53.5	53.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	8795.0	8795.0	<LOD	0.0	1986.8	1986.8	72.2	72.2	<LOD	30.0	82007.1	82007.1	1983.0	1983.0	35.4	35.4	87.5	87.5	2502.8	2502.8	<LOD	3.5	34495.2	34495.2	20367.5	20367.5	18215.5	18215.5
HS-6.6	HS	3245.0	3245.0	<LOD	5.5	<LOD	5.0	10.4	10.4	204.4	204.4	188.1	188.1	95.6	95.6	51.3	51.3	<LOD	0.0	<LOD	3.5	10.1	10.1	8353.7	8353.7	<LOD	0.0	1881.2	1881.2	75.7	75.7	<LOD	30.0	78722.3	78722.3	2047.9	2047.9	39.8	39.8	74.8	74.8	2536.2	2536.2	<LOD	3.5	36180.7	36180.7	19726.9	19726.9	18425.0	18425.0
HS-6.7	HS	3422.6	3422.6	60.8	60.8	9.5	9.5	<LOD	5.0	193.9	193.9	189.3	189.3	87.8	87.8	57.9	57.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	8895.9	8895.9	<LOD	0.0	1967.0	1967.0	66.1	66.1	<LOD	30.0	78921.5	78921.5	2122.5	2122.5	39.3	39.3	95.8	95.8	2511.3	2511.3	<LOD	3.5	35846.3	35846.3	20090.4	20090.4	17834.7	17834.7
HS-6.8	HS	3430.9	3430.9	<LOD	5.5	8.8	8.8	3.7	3.7	203.9	203.9	188.5	188.5	93.6	93.6	52.2	52.2	<LOD	0.0	<LOD	3.5	14.9	14.9	8930.7	8930.7	<LOD	0.0	2021.2	2021.2	78.7	78.7	<LOD	30.0	83226.8	83226.8	1888.3	1888.3	47.0	47.0	111.5	111.5	2569.4	2569.4	86.9	86.9	37813.9	37813.9	19346.2	19346.2	18338.4	18338.4
HS-6.9	HS	3307.7	3307.7	40.5	40.5	8.6	8.6	<LOD	5.0	210.6	210.6	178.0	178.0	90.7	90.7	59.7	59.7	<LOD	0.0	6.7	6.7	9.4	9.4	8483.6	8483.6	<LOD	0.0	1884.4	1884.4	65.5	65.5	<LOD	30.0	80578.8	80578.8	1882.3	1882.3	55.3	55.3	80.2	80.2	2649.2	2649.2	<LOD	3.5	34482.5	34482.5	19574.8	19574.8	16741.1	16741.1
HS-7.1	HS	1953.8	1953.8	53.7	53.7	11.2	11.2	5.8	5.8	438.7	438.7	243.6	243.6	107.5	107.5	35.0	35.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	4572.1	4572.1	<LOD	0.0	1964.7	1964.7	58.9	58.9	<LOD	30.0	58754.1	58754.1	1193.5	1193.5	32.8	32.8	110.3	110.3	3302.1	3302.1	118.2	118.2	43660.7	43660.7	21111.3	21111.3	14761.4	14761.4
HS-7.2	HS	1924.5	1924.5	47.0	47.0	8.3	8.3	7.3	7.3	554.1	554.1	237.7	237.7	105.1	105.1	37.6	37.6	<LOD	0.0	4.6	4.6	10.5	10.5	4231.6	4231.6	35.3	35.3	1786.4	1786.4	65.0	65.0	<LOD	30.0	58333.3	58333.3	1043.2	1043.2	37.2	37.2	99.6	99.6	3529.4	3529.4	<LOD	3.5	53328.0	53328.0	21747.9	21747.9	26336.0	26336.0
HS-7.3	HS	1673.3	1673.3	32.4	32.4	13.2	13.2	<LOD	5.0	816.8	816.8	234.0	234.0	103.2	103.2	34.5	34.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	3646.8	3646.8	<LOD	0.0	1547.2	1547.2	61.0	61.0	<LOD	30.0	72413.7	72413.7	1231.3	1231.3	46.3	46.3	106.7	106.7	3658.8	3658.8	<LOD	3.5	43292.6	43292.6	20972.6	20972.6	16952.2	16952.2
HS-7.4	HS	1882.1	1882.1	43.2	43.2	9.1	9.1	<LOD	5.0	654.0	654.0	245.5	245.5	103.5	103.5	38.7	38.7	<LOD	0.0	6.1	6.1	10.3	10.3	4216.0	4216.0	<LOD	0.0	1779.2	1779.2	60.5	60.5	287.2	287.2	64207.5	64207.5	1138.9	1138.9	44.9	44.9	110.5	110.5	3478.4	3478.4	<LOD	3.5	53154.8	53154.8	22580.1	22580.1	23753.0	23753.0
HS-7.5	HS	1925.0	1925.0	58.9	58.9	10.6	10.6	4.9	4.9	677.6	677.6	247.0	247.0	105.4	105.4	101.2	101.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	4223.1	4223.1	62.5	62.5	1854.4	1854.4	59.6	59.6	244.9	244.9	63028.0	63028.0	1151.1	1151.1	29.4	29.4	115.1	115.1	3287.1	3287.1	<LOD	3.5	53936.1	53936.1	21428.5	21428.5	28738.0	28738.0
HS-7.6	HS	1986.5	1986.5	76.9	76.9	12.4	12.4	5.3	5.3	527.4	527.4	243.0	243.0	103.9	103.9	45.6	45.6	4.8	4.8	<LOD	3.5	<LOD	5.0	4557.2	4557.2	<LOD	0.0	1936.1	1936.1	46.8	46.8	<LOD	30.0	58477.9	58477.9	1132.5	1132.5	45.9	45.9	83.7	83.7	3192.3	3192.3	<LOD	3.5	53962.4	53962.4	21029.8	21029.8	27012.3	27012.3
HS-7.7	HS	1897.4	1897.4	41.1	41.1	10.2	10.2	5.1	5.1	543.9	543.9	242.7	242.7	103.3	103.3	53.6	53.6	<LOD	0.0	<LOD	3.5	8.5	8.5	4273.6	4273.6	40.2	40.2	1923.1	1923.1	53.8	53.8	<LOD	30.0	52737.7	52737.7	1003.1	1003.1	56.8	56.8	74.1	74.1	3069.3	3069.3	<LOD	3.5	50549.5	50549.5	19583.9	19583.9	23619.4	23619.4
HS-7.8	HS	1952.9	1952.9	58.2	58.2	10.1	10.1	4.8	4.8	631.2	631.2	248.1	248.1	105.4	105.4	45.8	45.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	4665.7	4665.7	<LOD	0.0	1843.9	1843.9	50.5	50.5	<LOD	30.0	58453.2	58453.2	1124.8	1124.8	53.7	53.7	93.6	93.6	3148.7	3148.7	<LOD	3.5	52902.3	52902.3	21116.5	21116.5	25773.0	25773.0
HS-7.9	HS	1952.9	1952.9	55.6	55.6	9.9	9.9	6.3	6.3	682.9	682.9	240.6	240.6	99.1	99.1	50.5	50.5	<LOD	0.0	4.6	4.6	<LOD	5.0	4419.0	4419.0	<LOD	0.0	1849.2	1849.2	58.8	58.8	<LOD	30.0	57854.6	57854.6	1206.3	1206.3	47.5	47.5	91.0	91.0	3253.5	3253.5	<LOD	3.5	55058.6	55058.6	19312.9	19312.9	30951.7	30951.7
HS-8.1	HS	158.0	158.0	12.4	12.4	11.1	11.1	4.1	4.1	713.4	713.4	221.8	221.8	100.6	100.6	24.7	24.7	<LOD	0.0	<LOD	3.5	7.6	7.6	283.5	283.5	27.9	27.9	45.5	45.5	52.2	52.2	361.1	361.1	45592.1	45592.1	704.7	704.7	67.6	67.6	110.4	110.4	4293.2	4293.2	<LOD	3.5	40384.2	40384.2	23727.3	23727.3	814.8	814.8
HS-8.2	HS	157.4	157.4	16.8	16.8	11.6	11.6	8.0	8.0	762.9	762.9	242.4	242.4	107.6	107.6	27.7	27.7	2.9	2.9	<LOD	3.5	<LOD	5.0	205.1	205.1	30.1	30.1	45.7	45.7	61.8	61.8	214.2	214.2	40036.5	40036.5	727.3	727.3	43.1	43.1	113.1	113.1	4479.7	4479.7	<LOD	3.5	44292.3	44292.3	26191.1	26191.1	845.8	845.8
HS-8.3	HS	178.2	178.2	12.5	12.5	12.5	12.5	5.9	5.9	815.6	815.6	239.5	239.5	106.9	106.9	99.7	99.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	242.7	242.7	37.0	37.0	42.2	42.2	50.2	50.2	192.2	192.2	38930.1	38930.1	690.0	690.0	42.6	42.6	99.9	99.9	4133.8	4133.8	<LOD	3.5	41287.2	41287.2	25373.1	25373.1	909.9	909.9
HS-8.4	HS	170.6	170.6	18.1	18.1	8.5	8.5	<LOD	5.0	1093.8	1093.8	222.9	222.9	104.2	104.2	24.9	24.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	227.5	227.5	34.3	34.3	62.4	62.4	49.2	49.2	467.2	467.2	62394.5	62394.5	832.1	832.1	70.8	70.8	127.6	127.6	5249.9	5249.9	<LOD	3.5	41501.2	41501.2	26285.2	26285.2	834.2	834.2
HS-8.5	HS	203.5	203.5	15.3	15.3	11.4	11.4	6.6	6.6	1140.4	1140.4	227.3	227.3	98.9	98.9	34.6	34.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	219.2	219.2	31.1	31.1	42.0	42.0	36.3	36.3	430.9	430.9	62144.7	62144.7	834.1	834.1	71.2	71.2	143.2	143.2	4709.9	4709.9	<LOD	3.5	35821.6	35821.6	21566.2	21566.2	488.3	488.3
HS-8.6	HS	182.4	182.4	11.0	11.0	10.9	10.9	8.5	8.5	764.7	764.7	227.0	227.0	98.8	98.8	22.3	22.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	220.3	220.3	<LOD	0.0	49.6	49.6	54.4	54.4	270.6	270.6	45565.3	45565.3	771.6	771.6	58.8	58.8	121.3	121.3	4283.0	4283.0	<LOD	3.5	41433.4	41433.4	24304.8	24304.8	<LOD	500.0
HS-8.7	HS	186.8	186.8	8.4	8.4	10.5	10.5	7.0	7.0	769.6	769.6	227.9	227.9	107.6	107.6	24.0	24.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	235.2	235.2	47.9	47.9	49.1	49.1	47.4	47.4	226.2	226.2	42672.7	42672.7	778.1	778.1	49.4	49.4	113.9	113.9	4076.5	4076.5	<LOD	3.5	44166.7	44166.7	25415.4	25415.4	904.8	904.8
HS-8.8	HS	175.1	175.1	12.9	12.9	11.8	11.8	5.2	5.2	859.0	859.0	235.6	235.6	107.8	107.8	23.1	23.1	<LOD	0.0	3.4	3.4	<LOD	5.0	215.5	215.5	40.3	40.3	40.5	40.5	48.6	48.6	332.2	332.2	42031.6	42031.6	711.1	711.1	58.2	58.2	112.1	112.1	4248.9	4248.9	<LOD	3.5	45317.2	45317.2	25960.5	25960.5	819.8	819.8
HS-8.9	HS	190.3	190.3	12.0	12.0	12.5	12.5	4.3	4.3	1007.6	1007.6	238.2	238.2	106.5	106.5	22.6	22.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	262.9	262.9	40.1	40.1	50.4	50.4	55.9	55.9	270.5	270.5	41208.9	41208.9	704.2	704.2	62.8	62.8	108.1	108.1	4372.8	4372.8	<LOD	3.5	42929.6	42929.6	24840.4	24840.4	505.3	505.3
HS-9.1	HS	11429.7	11429.7	282.9	282.9	<LOD	5.0	8.4	8.4	117.5	117.5	115.1	115.1	54.2	54.2	155.6	155.6	<LOD	0.0	40.2	40.2	<LOD	5.0	5186.0	5186.0	<LOD	0.0	5189.0	5189.0	77.7	77.7	<LOD	30.0	274970.6	274970.6	1473.3	1473.3	<LOD	35.0	<LOD	25.0	852.8	852.8	<LOD	3.5	23943.0	23943.0	8081.0	8081.0	76216.1	76216.1
HS-9.2	HS	10950.7	10950.7	350.1	350.1	<LOD	5.0	9.0	9.0	120.2	120.2	117.1	117.1	49.9	49.9	140.7	140.7	<LOD	0.0	41.6	41.6	<LOD	5.0	5129.3	5129.3	<LOD	0.0	4764.9	4764.9	88.8	88.8	<LOD	30.0	271574.0	271574.0	1821.7	1821.7	<LOD	35.0	<LOD	25.0	971.6	971.6	<LOD	3.5	24938.9	24938.9	7620.3	7620.3	73074.3	73074.3
HS-9.3	HS	11387.5	11387.5	342.1	342.1	<LOD	5.0	4.4	4.4	214.0	214.0	122.3	122.3	54.1	54.1	174.6	174.6	<LOD	0.0	44.4	44.4	<LOD	5.0	5747.8	5747.8	<LOD	0.0	4559.4	4559.4	95.5	95.5	<LOD	30.0	274388.2	274388.2	1410.8	1410.8	<LOD	35.0	<LOD	25.0	781.0	781.0	<LOD	3.5	26825.9	26825.9	8267.7	8267.7	83231.0	83231.0
HS-9.4	HS	11029.9	11029.9	359.1	359.1	<LOD	5.0	11.8	11.8	78.8	78.8	120.6	120.6	53.3	53.3	142.9	142.9	<LOD	0.0	42.5	42.5	<LOD	5.0	5675.7	5675.7	<LOD	0.0	4947.9	4947.9	72.4	72.4	<LOD	30.0	268965.4	268965.4	1316.1	1316.1	31.6	31.6	<LOD	25.0	990.8	990.8	<LOD	3.5	24018.3	24018.3	8122.5	8122.5	77408.7	77408.7
HS-9.5	HS	11785.0	11785.0	352.7	352.7	<LOD	5.0	7.0	7.0	191.6	191.6	122.4	122.4	50.6	50.6	181.6	181.6	<LOD	0.0	42.9	42.9	<LOD	5.0	6408.8	6408.8	<LOD	0.0	5170.5	5170.5	82.8	82.8	<LOD	30.0	293350.8	293350.8	1463.6	1463.6	<LOD	35.0	<LOD	25.0	977.2	977.2	<LOD	3.5	23286.0	23286.0	8123.2	8123.2	80624.6	80624.6
HS-9.6	HS	11149.8	11149.8	309.8	309.8	<LOD	5.0	9.3	9.3	87.3	87.3	106.2	106.2	48.2	48.2	146.0	146.0	<LOD	0.0	44.1	44.1	<LOD	5.0	5395.4	5395.4	<LOD	0.0	4638.5	4638.5	72.6	72.6	<LOD	30.0	265527.0	265527.0	1239.8	1239.8	<LOD	35.0	<LOD	25.0	777.3	777.3	<LOD	3.5	22562.3	22562.3	7183.1	7183.1	68319.7	68319.7
HS-9.7	HS	11551.6	11551.6	387.5	387.5	<LOD	5.0	<LOD	5.0	185.2	185.2	115.9	115.9	49.8	49.8	143.3	143.3	<LOD	0.0	39.2	39.2	<LOD	5.0	5941.8	5941.8	<LOD	0.0	4924.4	4924.4	76.9	76.9	<LOD	30.0	279145.0	279145.0	1469.2	1469.2	<LOD	35.0	<LOD	25.0	811.2	811.2	<LOD	3.5	25945.1	25945.1	7893.2	7893.2	78649.4	78649.4
HS-9.8	HS	11747.2	11747.2	385.9	385.9	<LOD	5.0	10.3	10.3	124.1	124.1	126.2	126.2	53.6	53.6	143.2	143.2	<LOD	0.0	44.2	44.2	<LOD	5.0	6340.1	6340.1	<LOD	0.0	5204.3	5204.3	73.4	73.4	<LOD	30.0	288975.9	288975.9	1520.0	1520.0	<LOD	35.0	<LOD	25.0	853.9	853.9	<LOD	3.5	24258.9	24258.9	8377.0	8377.0	78598.5	78598.5
HS-9.9	HS	11988.6	11988.6	341.4	341.4	<LOD	5.0	9.4	9.4	116.4	116.4	117.4	117.4	56.4	56.4	176.1	176.1	<LOD	0.0	38.3	38.3	<LOD	5.0	6459.8	6459.8	<LOD	0.0	5647.4	5647.4	87.8	87.8	<LOD	30.0	291811.2	291811.2	1374.2	1374.2	<LOD	35.0	<LOD	25.0	1175.0	1175.0	<LOD	3.5	25361.0	25361.0	8706.5	8706.5	82020.2	82020.2
HS-10.1	HS	10340.8	10340.8	363.1	363.1	<LOD	5.0	7.1	7.1	<LOD	4.5	16.9	16.9	21.0	21.0	158.2	158.2	<LOD	0.0	101.3	101.3	<LOD	5.0	4277.8	4277.8	<LOD	0.0	1362.2	1362.2	<LOD	35.0	<LOD	30.0	954095.9	954095.9	599.0	599.0	<LOD	35.0	<LOD	25.0	<LOD	35.0	<LOD	3.5	3190.2	3190.2	651.1	651.1	253661.9	253661.9
HS-10.2	HS	10984.6	10984.6	441.0	441.0	<LOD	5.0	10.7	10.7	<LOD	4.5	17.7	17.7	24.5	24.5	157.2	157.2	<LOD	0.0	107.2	107.2	<LOD	5.0	4604.0	4604.0	<LOD	0.0	1345.2	1345.2	87.5	87.5	<LOD	30.0	992279.4	992279.4	488.5	488.5	<LOD	35.0	<LOD	25.0	<LOD	35.0	<LOD	3.5	3573.4	3573.4	584.6	584.6	303487.5	303487.5
HS-10.3	HS	10883.6	10883.6	360.9	360.9	<LOD	5.0	9.9	9.9	<LOD	4.5	18.1	18.1	22.1	22.1	202.1	202.1	<LOD	0.0	98.4	98.4	<LOD	5.0	4508.4	4508.4	<LOD	0.0	1308.2	1308.2	61.9	61.9	<LOD	30.0	998041.6	998041.6	488.3	488.3	<LOD	35.0	<LOD	25.0	<LOD	35.0	<LOD	3.5	4773.5	4773.5	578.6	578.6	301739.7	301739.7
HS-10.4	HS	10554.6	10554.6	339.7	339.7	<LOD	5.0	6.5	6.5	<LOD	4.5	16.7	16.7	13.9	13.9	179.0	179.0	<LOD	0.0	98.4	98.4	<LOD	5.0	4369.0	4369.0	<LOD	0.0	1322.5	1322.5	<LOD	35.0	<LOD	30.0	960124.5	960124.5	529.6	529.6	<LOD	35.0	<LOD	25.0	<LOD	35.0	<LOD	3.5	3935.2	3935.2	416.8	416.8	287560.1	287560.1
HS-10.5	HS	10114.6	10114.6	301.8	301.8	<LOD	5.0	8.5	8.5	<LOD	4.5	19.7	19.7	23.3	23.3	151.1	151.1	<LOD	0.0	91.5	91.5	<LOD	5.0	4002.3	4002.3	<LOD	0.0	1242.1	1242.1	<LOD	35.0	<LOD	30.0	880206.8	880206.8	606.3	606.3	<LOD	35.0	<LOD	25.0	<LOD	35.0	<LOD	3.5	3203.6	3203.6	722.2	722.2	208192.1	208192.1
HS-10.6	HS	10689.9	10689.9	340.1	340.1	<LOD	5.0	6.2	6.2	<LOD	4.5	14.8	14.8	18.9	18.9	182.9	182.9	<LOD	0.0	95.5	95.5	<LOD	5.0	4417.0	4417.0	<LOD	0.0	1313.9	1313.9	<LOD	35.0	<LOD	30.0	952206.3	952206.3	787.4	787.4	<LOD	35.0	<LOD	25.0	<LOD	35.0	<LOD	3.5	3925.3	3925.3	501.0	501.0	290655.3	290655.3
HS-10.7	HS	10941.3	10941.3	405.9	405.9	<LOD	5.0	15.5	15.5	<LOD	4.5	17.4	17.4	21.7	21.7	182.2	182.2	<LOD	0.0	103.3	103.3	<LOD	5.0	4605.6	4605.6	<LOD	0.0	1320.1	1320.1	78.2	78.2	<LOD	30.0	919792.4	919792.4	662.9	662.9	<LOD	35.0	<LOD	25.0	<LOD	35.0	<LOD	3.5	5414.8	5414.8	519.4	519.4	305263.8	305263.8
HS-10.8	HS	10715.6	10715.6	315.7	315.7	<LOD	5.0	8.3	8.3	<LOD	4.5	17.6	17.6	17.3	17.3	162.8	162.8	<LOD	0.0	93.6	93.6	<LOD	5.0	4495.9	4495.9	<LOD	0.0	1279.2	1279.2	<LOD	35.0	<LOD	30.0	938006.3	938006.3	444.3	444.3	<LOD	35.0	<LOD	25.0	<LOD	35.0	<LOD	3.5	5135.4	5135.4	500.8	500.8	294120.4	294120.4
HS-10.9	HS	10712.7	10712.7	383.3	383.3	<LOD	5.0	8.0	8.0	<LOD	4.5	17.9	17.9	23.4	23.4	190.7	190.7	<LOD	0.0	103.5	103.5	<LOD	5.0	4351.5	4351.5	<LOD	0.0	1280.9	1280.9	66.9	66.9	<LOD	30.0	967878.8	967878.8	464.8	464.8	<LOD	35.0	<LOD	25.0	<LOD	35.0	<LOD	3.5	3246.7	3246.7	386.3	386.3	272707.5	272707.5
HS-11.1	HS	434160.0	434160.0	18901.6	18901.6	<LOD	5.0	31.3	31.3	<LOD	4.5	582.9	582.9	<LOD	3.0	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	23681.4	23681.4	<LOD	0.0	5613.6	5613.6	<LOD	35.0	<LOD	30.0	195601.6	195601.6	9577.3	9577.3	56.3	56.3	<LOD	25.0	428.7	428.7	<LOD	3.5	23293.4	23293.4	7571.2	7571.2	86773.5	86773.5
HS-11.2	HS	451846.3	451846.3	19160.1	19160.1	<LOD	5.0	28.1	28.1	<LOD	4.5	639.3	639.3	<LOD	3.0	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	24637.1	24637.1	<LOD	0.0	6043.2	6043.2	<LOD	35.0	<LOD	30.0	203412.6	203412.6	10236.1	10236.1	66.9	66.9	<LOD	25.0	605.3	605.3	<LOD	3.5	28246.0	28246.0	9293.7	9293.7	99806.0	99806.0
HS-11.3	HS	485107.1	485107.1	19900.1	19900.1	<LOD	5.0	31.4	31.4	<LOD	4.5	642.5	642.5	<LOD	3.0	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	26275.7	26275.7	<LOD	0.0	6608.5	6608.5	<LOD	35.0	<LOD	30.0	216913.3	216913.3	10449.2	10449.2	59.3	59.3	<LOD	25.0	580.0	580.0	<LOD	3.5	28183.1	28183.1	9236.3	9236.3	105623.2	105623.2
HS-11.4	HS	462626.9	462626.9	19684.7	19684.7	<LOD	5.0	34.8	34.8	<LOD	4.5	666.9	666.9	<LOD	3.0	544.1	544.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	25887.6	25887.6	<LOD	0.0	5682.9	5682.9	<LOD	35.0	<LOD	30.0	209471.0	209471.0	10830.0	10830.0	52.9	52.9	<LOD	25.0	554.9	554.9	<LOD	3.5	28048.3	28048.3	9546.5	9546.5	102377.9	102377.9
HS-11.5	HS	423464.8	423464.8	17370.9	17370.9	<LOD	5.0	31.7	31.7	<LOD	4.5	592.9	592.9	<LOD	3.0	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	22567.0	22567.0	<LOD	0.0	5053.6	5053.6	<LOD	35.0	<LOD	30.0	186971.5	186971.5	9084.7	9084.7	58.5	58.5	<LOD	25.0	411.5	411.5	<LOD	3.5	21478.1	21478.1	7721.1	7721.1	75553.5	75553.5
HS-11.6	HS	435189.4	435189.4	20525.1	20525.1	<LOD	5.0	27.8	27.8	<LOD	4.5	579.5	579.5	<LOD	3.0	462.4	462.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	23649.3	23649.3	<LOD	0.0	5171.5	5171.5	<LOD	35.0	<LOD	30.0	196342.6	196342.6	10378.9	10378.9	56.5	56.5	<LOD	25.0	546.3	546.3	<LOD	3.5	24411.1	24411.1	9338.1	9338.1	98805.1	98805.1
HS-11.7	HS	451097.6	451097.6	18542.8	18542.8	<LOD	5.0	25.7	25.7	<LOD	4.5	611.4	611.4	<LOD	3.0	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	24994.0	24994.0	<LOD	0.0	5243.0	5243.0	<LOD	35.0	<LOD	30.0	200260.7	200260.7	9456.2	9456.2	63.2	63.2	<LOD	25.0	536.1	536.1	<LOD	3.5	26168.7	26168.7	9362.8	9362.8	94806.3	94806.3
HS-11.8	HS	438319.3	438319.3	18657.3	18657.3	<LOD	5.0	33.0	33.0	<LOD	4.5	618.6	618.6	<LOD	3.0	596.3	596.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	24613.5	24613.5	<LOD	0.0	5601.4	5601.4	<LOD	35.0	<LOD	30.0	196141.1	196141.1	10426.2	10426.2	35.3	35.3	<LOD	25.0	392.0	392.0	<LOD	3.5	23927.4	23927.4	8231.1	8231.1	85310.6	85310.6
HS-11.9	HS	444044.7	444044.7	17818.3	17818.3	<LOD	5.0	38.8	38.8	<LOD	4.5	639.7	639.7	<LOD	3.0	791.5	791.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	22728.1	22728.1	<LOD	0.0	5320.5	5320.5	<LOD	35.0	<LOD	30.0	197226.9	197226.9	9186.0	9186.0	53.4	53.4	<LOD	25.0	528.8	528.8	<LOD	3.5	29983.6	29983.6	8861.8	8861.8	100671.3	100671.3
HS-11A.1	HS	252348.6	252348.6	8169.8	8169.8	<LOD	5.0	193.8	193.8	<LOD	4.5	429.1	429.1	<LOD	3.0	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	18418.2	18418.2	<LOD	0.0	2287.0	2287.0	<LOD	35.0	<LOD	30.0	144512.7	144512.7	7749.6	7749.6	48.2	48.2	<LOD	25.0	589.9	589.9	<LOD	3.5	30670.5	30670.5	10326.3	10326.3	72486.8	72486.8
HS-11A.2	HS	256419.1	256419.1	9202.6	9202.6	<LOD	5.0	23.5	23.5	<LOD	4.5	435.9	435.9	<LOD	3.0	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	18446.1	18446.1	<LOD	0.0	2193.3	2193.3	<LOD	35.0	<LOD	30.0	146493.0	146493.0	8450.9	8450.9	44.2	44.2	<LOD	25.0	766.2	766.2	<LOD	3.5	31581.4	31581.4	11411.0	11411.0	75385.8	75385.8
HS-11A.3	HS	282561.4	282561.4	11148.1	11148.1	<LOD	5.0	18.2	18.2	<LOD	4.5	497.2	497.2	45.6	45.6	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	20372.5	20372.5	<LOD	0.0	2466.3	2466.3	<LOD	35.0	<LOD	30.0	158395.3	158395.3	7285.8	7285.8	29.7	29.7	<LOD	25.0	801.5	801.5	<LOD	3.5	32400.2	32400.2	11996.3	11996.3	85474.1	85474.1
HS-11A.4	HS	251128.7	251128.7	8522.4	8522.4	<LOD	5.0	<LOD	5.0	<LOD	4.5	428.8	428.8	<LOD	3.0	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	20321.1	20321.1	<LOD	0.0	2444.9	2444.9	<LOD	35.0	<LOD	30.0	152375.6	152375.6	8191.6	8191.6	39.8	39.8	<LOD	25.0	851.0	851.0	<LOD	3.5	29643.4	29643.4	10947.1	10947.1	73510.8	73510.8
HS-11A.5	HS	258990.3	258990.3	7760.0	7760.0	<LOD	5.0	28.0	28.0	<LOD	4.5	430.8	430.8	34.4	34.4	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	18909.3	18909.3	<LOD	0.0	2352.5	2352.5	<LOD	35.0	<LOD	30.0	156757.7	156757.7	7506.2	7506.2	35.7	35.7	<LOD	25.0	777.3	777.3	<LOD	3.5	33407.1	33407.1	12457.3	12457.3	84376.0	84376.0
HS-11A.6	HS	286239.2	286239.2	10035.0	10035.0	<LOD	5.0	19.7	19.7	<LOD	4.5	447.3	447.3	<LOD	3.0	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	20768.2	20768.2	<LOD	0.0	2652.4	2652.4	<LOD	35.0	<LOD	30.0	186056.2	186056.2	8490.8	8490.8	46.2	46.2	<LOD	25.0	642.9	642.9	<LOD	3.5	30175.4	30175.4	10880.3	10880.3	87260.0	87260.0
HS-11A.7	HS	283550.3	283550.3	9526.3	9526.3	<LOD	5.0	33.9	33.9	<LOD	4.5	466.4	466.4	<LOD	3.0	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	19262.6	19262.6	<LOD	0.0	2525.3	2525.3	<LOD	35.0	<LOD	30.0	161218.5	161218.5	8724.6	8724.6	42.4	42.4	<LOD	25.0	956.7	956.7	<LOD	3.5	30547.8	30547.8	12112.6	12112.6	69871.4	69871.4
HS-11A.8	HS	259649.2	259649.2	8994.7	8994.7	<LOD	5.0	18.7	18.7	<LOD	4.5	442.3	442.3	<LOD	3.0	286.5	286.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	19692.0	19692.0	<LOD	0.0	2121.9	2121.9	<LOD	35.0	<LOD	30.0	159571.5	159571.5	8185.1	8185.1	39.6	39.6	<LOD	25.0	576.5	576.5	<LOD	3.5	31846.7	31846.7	9550.6	9550.6	69318.8	69318.8
HS-11A.9	HS	276156.8	276156.8	10988.8	10988.8	<LOD	5.0	14.2	14.2	<LOD	4.5	463.7	463.7	36.6	36.6	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	19769.3	19769.3	<LOD	0.0	2550.7	2550.7	<LOD	35.0	<LOD	30.0	155213.7	155213.7	8305.9	8305.9	46.8	46.8	<LOD	25.0	728.0	728.0	<LOD	3.5	36618.1	36618.1	11773.6	11773.6	80300.0	80300.0

HS-12.1	HS	930127.8	930127.8	58538.4	58538.4	<LOD	5.0	<LOD	5.0	<LOD	4.5	113.4	113.4	<LOD	3.0	1355.9	1355.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	18315.0	18315.0	<LOD	0.0	3005.1	3005.1	<LOD	35.0	<LOD	30.0	287175.6	287175.6	9790.5	9790.5	39.2	39.2	<LOD	25.0	397.1	397.1	<LOD	3.5	11106.0	11106.0	4968.6	4968.6	174812.0	174812.0
HS-12.2	HS	853369.7	853369.7	50491.5	50491.5	<LOD	5.0	<LOD	5.0	<LOD	4.5	<LOD	4.5	<LOD	3.0	1898.2	1898.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	18428.0	18428.0	<LOD	0.0	3244.2	3244.2	<LOD	35.0	<LOD	30.0	294550.5	294550.5	8726.7	8726.7	67.0	67.0	<LOD	25.0	322.6	322.6	<LOD	3.5	14506.0	14506.0	6226.8	6226.8	181867.8	181867.8
HS-12.3	HS	849926.1	849926.1	51169.3	51169.3	<LOD	5.0	<LOD	5.0	<LOD	4.5	104.5	104.5	<LOD	3.0	1619.0	1619.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	18354.6	18354.6	<LOD	0.0	3570.1	3570.1	<LOD	35.0	<LOD	30.0	274281.3	274281.3	9731.5	9731.5	31.8	31.8	<LOD	25.0	453.4	453.4	<LOD	3.5	13207.4	13207.4	4922.7	4922.7	158010.1	158010.1
HS-12.4	HS	875030.7	875030.7	55375.4	55375.4	<LOD	5.0	<LOD	5.0	<LOD	4.5	84.1	84.1	<LOD	3.0	1705.3	1705.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	17442.0	17442.0	<LOD	0.0	3200.7	3200.7	<LOD	35.0	<LOD	30.0	285906.8	285906.8	9657.0	9657.0	32.4	32.4	<LOD	25.0	271.6	271.6	<LOD	3.5	9573.6	9573.6	4408.8	4408.8	126126.5	126126.5
HS-12.5	HS	905542.8	905542.8	54345.9	54345.9	<LOD	5.0	<LOD	5.0	<LOD	4.5	140.6	140.6	<LOD	3.0	1811.1	1811.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	19799.6	19799.6	<LOD	0.0	3451.6	3451.6	<LOD	35.0	<LOD	30.0	299354.4	299354.4	9530.5	9530.5	44.6	44.6	<LOD	25.0	385.2	385.2	<LOD	3.5	12829.5	12829.5	5582.2	5582.2	176084.5	176084.5
HS-12.6	HS	969525.3	969525.3	60748.3	60748.3	<LOD	5.0	<LOD	5.0	<LOD	4.5	<LOD	4.5	<LOD	3.0	1825.1	1825.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	19618.6	19618.6	<LOD	0.0	3377.2	3377.2	<LOD	35.0	<LOD	30.0	297478.1	297478.1	9476.8	9476.8	33.9	33.9	<LOD	25.0	323.9	323.9	<LOD	3.5	12666.9	12666.9	5572.7	5572.7	190838.0	190838.0
HS-12.7	HS	957936.6	957936.6	60178.9	60178.9	<LOD	5.0	<LOD	5.0	<LOD	4.5	83.1	83.1	<LOD	3.0	2004.4	2004.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	20022.5	20022.5	<LOD	0.0	3878.8	3878.8	<LOD	35.0	<LOD	30.0	315679.9	315679.9	10275.7	10275.7	56.5	56.5	<LOD	25.0	597.6	597.6	<LOD	3.5	12349.1	12349.1	5376.2	5376.2	186379.8	186379.8
HS-12.8	HS	860857.3	860857.3	51270.5	51270.5	<LOD	5.0	<LOD	5.0	<LOD	4.5	97.0	97.0	<LOD	3.0	1999.9	1999.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	18854.6	18854.6	<LOD	0.0	3187.8	3187.8	<LOD	35.0	<LOD	30.0	297242.7	297242.7	9539.4	9539.4	52.4	52.4	<LOD	25.0	351.8	351.8	<LOD	3.5	12995.0	12995.0	5496.3	5496.3	165698.2	165698.2
HS-12.9	HS	903980.8	903980.8	57692.2	57692.2	<LOD	5.0	<LOD	5.0	<LOD	4.5	134.6	134.6	<LOD	3.0	2349.9	2349.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	19589.8	19589.8	<LOD	0.0	3505.6	3505.6	<LOD	35.0	<LOD	30.0	292745.1	292745.1	9692.5	9692.5	47.1	47.1	<LOD	25.0	268.9	268.9	<LOD	3.5	12032.1	12032.1	5386.2	5386.2	186939.0	186939.0
HS-13.1	HS	15972.0	15972.0	<LOD	5.5	<LOD	5.0	10.5	10.5	77.1	77.1	343.4	343.4	64.7	64.7	97.6	97.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	8782.9	8782.9	<LOD	0.0	181.9	181.9	138.9	138.9	<LOD	30.0	97394.2	97394.2	9312.5	9312.5	31.7	31.7	<LOD	25.0	1148.8	1148.8	<LOD	3.5	71960.3	71960.3	12639.9	12639.9	11076.4	11076.4
HS-13.2	HS	24493.7	24493.7	<LOD	5.5	<LOD	5.0	11.9	11.9	90.3	90.3	449.1	449.1	59.4	59.4	110.8	110.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	10169.4	10169.4	<LOD	0.0	210.2	210.2	146.2	146.2	<LOD	30.0	114695.4	114695.4	12235.3	12235.3	31.0	31.0	102.7	102.7	699.4	699.4	<LOD	3.5	71295.6	71295.6	10910.3	10910.3	13321.2	13321.2
HS-13.3	HS	25264.8	25264.8	<LOD	5.5	10.9	10.9	17.8	17.8	105.6	105.6	469.3	469.3	64.2	64.2	140.9	140.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	10660.9	10660.9	<LOD	0.0	213.6	213.6	156.6	156.6	<LOD	30.0	120395.1	120395.1	13114.8	13114.8	77.6	77.6	<LOD	25.0	781.3	781.3	<LOD	3.5	69200.6	69200.6	10897.1	10897.1	14449.9	14449.9
HS-13.4	HS	23116.5	23116.5	<LOD	5.5	<LOD	5.0	8.1	8.1	80.8	80.8	469.8	469.8	66.9	66.9	125.5	125.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	10289.9	10289.9	<LOD	0.0	201.7	201.7	172.4	172.4	<LOD	30.0	114154.0	114154.0	11768.2	11768.2	32.8	32.8	94.7	94.7	901.4	901.4	<LOD	3.5	72576.0	72576.0	11638.9	11638.9	12203.1	12203.1
HS-13.5	HS	25416.8	25416.8	<LOD	5.5	<LOD	5.0	10.3	10.3	108.7	108.7	500.9	500.9	65.5	65.5	164.7	164.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	11032.6	11032.6	<LOD	0.0	225.8	225.8	154.9	154.9	<LOD	30.0	118880.4	118880.4	12237.2	12237.2	<LOD	35.0	119.6	119.6	669.1	669.1	<LOD	3.5	71629.8	71629.8	10907.6	10907.6	13216.5	13216.5
HS-13.6	HS	19532.8	19532.8	<LOD	5.5	9.1	9.1	7.3	7.3	95.2	95.2	401.9	401.9	60.1	60.1	132.6	132.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	10197.7	10197.7	<LOD	0.0	202.8	202.8	137.7	137.7	<LOD	30.0	104484.9	104484.9	10558.6	10558.6	<LOD	35.0	70.9	70.9	722.7	722.7	<LOD	3.5	66223.4	66223.4	11819.7	11819.7	12165.1	12165.1
HS-13.7	HS	20842.5	20842.5	<LOD	5.5	<LOD	5.0	12.0	12.0	88.7	88.7	408.2	408.2	63.4	63.4	110.6	110.6	15.2	15.2	<LOD	3.5	<LOD	5.0	10002.2	10002.2	<LOD	0.0	180.2	180.2	139.6	139.6	<LOD	30.0	102623.1	102623.1	10224.5	10224.5	40.9	40.9	<LOD	25.0	609.5	609.5	<LOD	3.5	65146.4	65146.4	11233.3	11233.3	10738.2	10738.2
HS-13.8	HS	27441.1	27441.1	<LOD	5.5	<LOD	5.0	19.2	19.2	79.0	79.0	521.3	521.3	63.0	63.0	143.3	143.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	10715.3	10715.3	<LOD	0.0	233.9	233.9	166.8	166.8	<LOD	30.0	111445.3	111445.3	13019.8	13019.8	26.3	26.3	<LOD	25.0	930.6	930.6	<LOD	3.5	69542.8	69542.8	10709.6	10709.6	13194.2	13194.2
HS-13.9	HS	24293.9	24293.9	<LOD	5.5	<LOD	5.0	17.8	17.8	83.4	83.4	466.4	466.4	64.3	64.3	136.5	136.5	21.5	21.5	<LOD	3.5	<LOD	5.0	10263.1	10263.1	<LOD	0.0	216.8	216.8	100.3	100.3	<LOD	30.0	108418.3	108418.3	11772.5	11772.5	43.4	43.4	<LOD	25.0	568.0	568.0	<LOD	3.5	64771.9	64771.9	10101.3	10101.3	12247.0	12247.0
HS-14.1	HS	1894.8	1894.8	<LOD	5.5	7.8	7.8	40.5	40.5	256.9	256.9	149.3	149.3	126.3	126.3	62.5	62.5	<LOD	0.0	9.6	9.6	12.2	12.2	6754.7	6754.7	201.1	201.1	1424.4	1424.4	59.1	59.1	<LOD	30.0	83752.1	83752.1	928.4	928.4	39.2	39.2	58.1	58.1	2328.5	2328.5	<LOD	3.5	71935.3	71935.3	18696.7	18696.7	45768.6	45768.6
HS-14.2	HS	1765.4	1765.4	26.2	26.2	<LOD	5.0	46.2	46.2	240.2	240.2	142.9	142.9	114.7	114.7	54.2	54.2	<LOD	0.0	5.5	5.5	14.8	14.8	6254.5	6254.5	177.4	177.4	1403.1	1403.1	55.2	55.2	<LOD	30.0	77187.9	77187.9	868.9	868.9	26.4	26.4	46.0	46.0	1564.2	1564.2	<LOD	3.5	66436.3	66436.3	15545.6	15545.6	46133.9	46133.9
HS-14.3	HS	1944.4	1944.4	50.2	50.2	<LOD	5.0	51.9	51.9	339.4	339.4	155.1	155.1	127.4	127.4	69.8	69.8	<LOD	0.0	11.6	11.6	13.2	13.2	6607.2	6607.2	244.2	244.2	1423.5	1423.5	58.2	58.2	<LOD	30.0	88264.0	88264.0	1012.9	1012.9	32.9	32.9	45.5	45.5	2050.0	2050.0	<LOD	3.5	84706.4	84706.4	19943.3	19943.3	64142.3	64142.3
HS-14.4	HS	1865.2	1865.2	<LOD	5.5	9.3	9.3	61.9	61.9	339.5	339.5	144.7	144.7	116.7	116.7	52.8	52.8	<LOD	0.0	10.0	10.0	<LOD	5.0	6554.3	6554.3	225.8	225.8	1342.0	1342.0	36.6	36.6	<LOD	30.0	78987.8	78987.8	955.8	955.8	41.8	41.8	<LOD	25.0	1574.0	1574.0	<LOD	3.5	66337.5	66337.5	15984.6	15984.6	42707.6	42707.6
HS-14.5	HS	1990.2	1990.2	30.2	30.2	8.6	8.6	33.9	33.9	372.5	372.5	148.3	148.3	121.7	121.7	63.4	63.4	<LOD	0.0	7.4	7.4	10.5	10.5	6509.6	6509.6	160.2	160.2	1384.1	1384.1	53.5	53.5	<LOD	30.0	82930.4	82930.4	932.9	932.9	33.1	33.1	42.5	42.5	1817.2	1817.2	<LOD	3.5	76372.7	76372.7	16756.5	16756.5	56426.5	56426.5
HS-14.6	HS	1822.9	1822.9	<LOD	5.5	8.8	8.8	55.3	55.3	290.7	290.7	146.3	146.3	117.8	117.8	56.3	56.3	<LOD	0.0	7.4	7.4	16.4	16.4	6463.8	6463.8	206.3	206.3	1368.3	1368.3	41.0	41.0	<LOD	30.0	80117.9	80117.9	885.1	885.1	21.7	21.7	48.2	48.2	1905.0	1905.0	<LOD	3.5	72671.6	72671.6	16650.4	16650.4	50718.7	50718.7
HS-14.7	HS	1918.0	1918.0	27.1	27.1	11.7	11.7	42.0	42.0	314.2	314.2	149.9	149.9	131.2	131.2	60.8	60.8	5.4	5.4	8.2	8.2	<LOD	5.0	6619.0	6619.0	266.7	266.7	1491.0	1491.0	60.7	60.7	<LOD	30.0	83608.7	83608.7	915.7	915.7	42.4	42.4	54.8	54.8	1964.2	1964.2	<LOD	3.5	83529.6	83529.6	20463.2	20463.2	59158.7	59158.7
HS-14.8	HS	1858.2	1858.2	32.8	32.8	6.4	6.4	51.7	51.7	285.1	285.1	149.8	149.8	120.2	120.2	58.7	58.7	7.5	7.5	7.3	7.3	<LOD	5.0	6532.6	6532.6	201.0	201.0	1572.6	1572.6	46.3	46.3	<LOD	30.0	80112.4	80112.4	921.1	921.1	45.1	45.1	46.1	46.1	1820.8	1820.8	<LOD	3.5	70494.4	70494.4	16734.3	16734.3	49526.3	49526.3
HS-14.9	HS	2048.2	2048.2	56.4	56.4	12.7	12.7	37.3	37.3	269.7	269.7	157.2	157.2	124.9	124.9	81.2	81.2	5.3	5.3	6.5	6.5	10.4	10.4	6486.8	6486.8	179.2	179.2	1385.7	1385.7	19.5	19.5	<LOD	30.0	84298.0	84298.0	780.0	780.0	37.5	37.5	44.5	44.5	1726.5	1726.5	<LOD	3.5	66475.3	66475.3	16603.9	16603.9	44269.2	44269.2
HS-15.1	HS	11490.6	11490.6	<LOD	5.5	7.1	7.1	8.8	8.8	261.0	261.0	192.2	192.2	79.1	79.1	43.7	43.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	10172.3	10172.3	72.4	72.4	568.9	568.9	83.8	83.8	<LOD	30.0	68981.4	68981.4	4357.2	4357.2	50.7	50.7	<LOD	25.0	1465.2	1465.2	<LOD	3.5	52251.8	52251.8	13495.8	13495.8	7671.6	7671.6
HS-15.2	HS	11343.5	11343.5	<LOD	5.5	<LOD	5.0	8.1	8.1	450.9	450.9	185.8	185.8	77.4	77.4	49.5	49.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	9821.0	9821.0	65.3	65.3	481.5	481.5	40.2	40.2	<LOD	30.0	68134.7	68134.7	4149.9	4149.9	41.2	41.2	<LOD	25.0	1312.2	1312.2	<LOD	3.5	48145.8	48145.8	13229.1	13229.1	6875.4	6875.4
HS-15.3	HS	12005.5	12005.5	<LOD	5.5	7.2	7.2	8.5	8.5	326.2	326.2	197.7	197.7	82.4	82.4	57.9	57.9	10.2	10.2	<LOD	3.5	<LOD	5.0	10186.3	10186.3	86.5	86.5	527.7	527.7	78.2	78.2	<LOD	30.0	72816.0	72816.0	4614.6	4614.6	29.3	29.3	73.9	73.9	1687.5	1687.5	<LOD	3.5	59248.6	59248.6	16699.1	16699.1	8769.5	8769.5
HS-15.4	HS	13171.9	13171.9	<LOD	5.5	<LOD	5.0	9.1	9.1	399.2	399.2	196.2	196.2	82.0	82.0	57.3	57.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	10852.3	10852.3	60.3	60.3	492.6	492.6	49.9	49.9	<LOD	30.0	73958.7	73958.7	4906.7	4906.7	46.4	46.4	57.5	57.5	1762.8	1762.8	<LOD	3.5	55304.4	55304.4	14478.9	14478.9	8425.6	8425.6
HS-15.5	HS	12484.1	12484.1	<LOD	5.5	14.3	14.3	6.8	6.8	576.7	576.7	201.6	201.6	79.6	79.6	42.8	42.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	11863.0	11863.0	73.5	73.5	484.1	484.1	89.1	89.1	<LOD	30.0	71339.5	71339.5	4556.3	4556.3	37.9	37.9	<LOD	25.0	1967.7	1967.7	<LOD	3.5	58082.4	58082.4	15241.5	15241.5	8410.3	8410.3
HS-15.6	HS	11658.4	11658.4	<LOD	5.5	10.4	10.4	13.0	13.0	287.7	287.7	190.1	190.1	74.6	74.6	64.0	64.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	9929.6	9929.6	54.9	54.9	494.6	494.6	27.3	27.3	<LOD	30.0	69166.1	69166.1	4328.1	4328.1	36.8	36.8	64.5	64.5	1711.4	1711.4	<LOD	3.5	47030.9	47030.9	12317.4	12317.4	6895.2	6895.2
HS-15.7	HS	11091.9	11091.9	<LOD	5.5	7.0	7.0	11.6	11.6	240.1	240.1	197.7	197.7	85.1	85.1	63.5	63.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	10629.4	10629.4	60.2	60.2	501.0	501.0	62.2	62.2	<LOD	30.0	67253.5	67253.5	4461.1	4461.1	41.6	41.6	<LOD	25.0	1569.5	1569.5	<LOD	3.5	54700.5	54700.5	15407.7	15407.7	7170.1	7170.1
HS-15.8	HS	12387.3	12387.3	<LOD	5.5	<LOD	5.0	19.7	19.7	256.2	256.2	201.7	201.7	86.1	86.1	54.4	54.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	10068.0	10068.0	67.8	67.8	529.0	529.0	101.9	101.9	<LOD	30.0	75808.7	75808.7	5027.5	5027.5	42.3	42.3	55.8	55.8	1862.2	1862.2	<LOD	3.5	61284.8	61284.8	15297.0	15297.0	9401.1	9401.1
HS-15.9	HS	11653.1	11653.1	<LOD	5.5	8.6	8.6	7.4	7.4	327.2	327.2	189.6	189.6	78.2	78.2	51.9	51.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	9784.7	9784.7	76.2	76.2	526.7	526.7	28.6	28.6	<LOD	30.0	67674.7	67674.7	4139.2	4139.2	35.4	35.4	56.7	56.7	1416.1	1416.1	<LOD	3.5	45174.0	45174.0	11824.6	11824.6	6499.9	6499.9
HS-16.1	HS	15568.5	15568.5	<LOD	5.5	<LOD	5.0	<LOD	5.0	64.2	64.2	119.9	119.9	43.2	43.2	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	10028.2	10028.2	<LOD	0.0	43.6	43.6	64.2	64.2	<LOD	30.0	43216.3	43216.3	3331.8	3331.8	29.0	29.0	<LOD	25.0	479.8	479.8	<LOD	3.5	64752.2	64752.2	9183.7	9183.7	8902.9	8902.9
HS-16.2	HS	15126.0	15126.0	<LOD	5.5	8.2	8.2	4.0	4.0	59.6	59.6	120.1	120.1	41.0	41.0	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	9689.8	9689.8	52.6	52.6	49.1	49.1	62.2	62.2	<LOD	30.0	43204.7	43204.7	3263.4	3263.4	30.5	30.5	<LOD	25.0	493.3	493.3	<LOD	3.5	64698.7	64698.7	9920.9	9920.9	8859.0	8859.0
HS-16.3	HS	15057.2	15057.2	<LOD	5.5	7.9	7.9	<LOD	5.0	68.1	68.1	112.7	112.7	41.5	41.5	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	9944.1	9944.1	55.8	55.8	51.8	51.8	62.7	62.7	<LOD	30.0	42548.6	42548.6	3207.4	3207.4	22.1	22.1	<LOD	25.0	550.0	550.0	<LOD	3.5	61936.6	61936.6	9641.2	9641.2	7982.5	7982.5
HS-16.4	HS	15325.0	15325.0	<LOD	5.5	<LOD	5.0	<LOD	5.0	97.1	97.1	115.4	115.4	46.4	46.4	34.9	34.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	10031.0	10031.0	<LOD	0.0	60.0	60.0	75.2	75.2	<LOD	30.0	43724.2	43724.2	3346.2	3346.2	17.9	17.9	<LOD	25.0	744.5	744.5	<LOD	3.5	66581.5	66581.5	9828.4	9828.4	10423.2	10423.2
HS-16.5	HS	14574.7	14574.7	<LOD	5.5	7.9	7.9	3.2	3.2	52.7	52.7	109.6	109.6	42.0	42.0	32.9	32.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	9257.9	9257.9	55.6	55.6	48.0	48.0	31.3	31.3	<LOD	30.0	41800.8	41800.8	3259.2	3259.2	39.9	39.9	<LOD	25.0	444.4	444.4	<LOD	3.5	56777.6	56777.6	9165.6	9165.6	8814.8	8814.8
HS-16.6	HS	15250.8	15250.8	<LOD	5.5	6.9	6.9	<LOD	5.0	67.3	67.3	116.8	116.8	42.0	42.0	33.8	33.8	12.1	12.1	<LOD	3.5	<LOD	5.0	9935.8	9935.8	61.1	61.1	48.1	48.1	54.6	54.6	<LOD	30.0	41518.8	41518.8	3144.0	3144.0	32.6	32.6	<LOD	25.0	472.0	472.0	<LOD	3.5	53919.5	53919.5	8594.4	8594.4	8042.3	8042.3
HS-16.7	HS	15579.8	15579.8	<LOD	5.5	11.9	11.9	<LOD	5.0	56.4	56.4	115.2	115.2	40.5	40.5	44.9	44.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	10273.1	10273.1	54.1	54.1	45.4	45.4	54.7	54.7	<LOD	30.0	43254.9	43254.9	3199.9	3199.9	<LOD	35.0	<LOD	25.0	532.3	532.3	<LOD	3.5	63657.2	63657.2	10395.8	10395.8	8587.9	8587.9
HS-16.8	HS	15001.2	15001.2	<LOD	5.5	11.2	11.2	<LOD	5.0	74.5	74.5	115.0	115.0	41.9	41.9	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	9709.3	9709.3	<LOD	0.0	63.6	63.6	58.2	58.2	<LOD	30.0	42810.9	42810.9	3207.2	3207.2	26.8	26.8	<LOD	25.0	451.6	451.6	<LOD	3.5	61922.1	61922.1	9354.3	9354.3	9035.7	9035.7
HS-16.9	HS	15622.3	15622.3	<LOD	5.5	7.3	7.3	<LOD	5.0	75.6	75.6	121.8	121.8	43.8	43.8	50.1	50.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	9475.0	9475.0	<LOD	0.0	38.9	38.9	74.5	74.5	<LOD	30.0	42329.2	42329.2	3187.8	3187.8	<LOD	35.0	<LOD	25.0	648.5	648.5	<LOD	3.5	64361.6	64361.6	10321.9	10321.9	9332.0	9332.0
HS-17.1	HS	6574.5	6574.5	<LOD	5.5	8.8	8.8	9.6	9.6	386.8	386.8	148.8	148.8	108.5	108.5	47.5	47.5	7.9	7.9	<LOD	3.5	<LOD	5.0	14298.4	14298.4	95.6	95.6	676.8	676.8	71.3	71.3	<LOD	30.0	80221.2	80221.2	3619.4	3619.4	66.5	66.5	88.8	88.8	1917.7	1917.7	<LOD	3.5	65032.3	65032.3	20834.5	20834.5	20284.1	20284.1
HS-17.2	HS	6069.1	6069.1	<LOD	5.5	10.0	10.0	7.0	7.0	283.9	283.9	141.1	141.1	104.0	104.0	30.9	30.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	13738.0	13738.0	97.4	97.4	617.7	617.7	64.8	64.8	<LOD	30.0	78167.0	78167.0	3381.0	3381.0	60.7	60.7	65.3	65.3	1800.3	1800.3	<LOD	3.5	60568.2	60568.2	19600.5	19600.5	17482.4	17482.4
HS-17.3	HS	5832.0	5832.0	<LOD	5.5	12.2	12.2	11.7	11.7	271.7	271.7	143.6	143.6	104.6	104.6	43.1	43.1	<LOD	0.0	<LOD	3.5	11.2	11.2	13540.0	13540.0	67.5	67.5	652.0	652.0	80.7	80.7	<LOD	30.0	77802.2	77802.2	3965.3	3965.3	63.8	63.8	57.5	57.5	1917.5	1917.5	<LOD	3.5	59518.3	59518.3	20123.8	20123.8	15976.8	15976.8
HS-17.4	HS	5788.0	5788.0	<LOD	5.5	9.6	9.6	8.1	8.1	223.5	223.5	145.6	145.6	105.3	105.3	40.6	40.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	13764.8	13764.8	86.8	86.8	613.2	613.2	71.7	71.7	<LOD	30.0	79368.0	79368.0	3467.9	3467.9	68.9	68.9	67.0	67.0	1988.9	1988.9	<LOD	3.5	62803.5	62803.5	19644.9	19644.9	17614.8	17614.8
HS-17.5	HS	5951.6	5951.6	<LOD	5.5	9.2	9.2	15.9	15.9	262.5	262.5	140.4	140.4	105.5	105.5	50.5	50.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	14289.3	14289.3	<LOD	0.0	596.9	596.9	62.3	62.3	<LOD	30.0	78609.9	78609.9	3855.4	3855.4	57.0	57.0	59.6	59.6	1811.7	1811.7	<LOD	3.5	59835.6	59835.6	19637.6	19637.6	15952.1	15952.1
HS-17.6	HS	6423.2	6423.2	<LOD	5.5	8.1	8.1	11.1	11.1	314.0	314.0	151.7	151.7	112.0	112.0	47.4	47.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	14391.8	14391.8	90.5	90.5	649.1	649.1	70.5	70.5	<LOD	30.0	81026.0	81026.0	4006.1	4006.1	49.3	49.3	58.4	58.4	1901.4	1901.4	<LOD	3.5	62141.7	62141.7	19627.9	19627.9	16987.8	16987.8
HS-17.7	HS	6048.7	6048.7	<LOD	5.5	11.7	11.7	9.3	9.3	241.6	241.6	145.0	145.0	111.0	111.0	41.2	41.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	14565.1	14565.1	<LOD	0.0	645.9	645.9	66.6	66.6	<LOD	30.0	80378.9	80378.9	3797.1	3797.1	67.5	67.5	63.0	63.0	1917.2	1917.2	<LOD	3.5	62453.9	62453.9	20332.1	20332.1	17311.5	17311.5
HS-17.8	HS	6146.4	6146.4	<LOD	5.5	9.0	9.0	7.5	7.5	280.9	280.9	149.9	149.9	108.0	108.0	51.1	51.1	<LOD	0.0	<LOD	3.5	11.6	11.6	14143.5	14143.5	60.1	60.1	710.4	710.4	80.2	80.2	<LOD	30.0	79469.8	79469.8	3608.1	3608.1	57.8	57.8	73.8	73.8	2003.3	2003.3	<LOD	3.5	62589.9	62589.9	20437.7	20437.7	18499.3	18499.3
HS-17.9	HS	5901.2	5901.2	<LOD	5.5	8.1	8.1	7.8	7.8	263.7	263.7	143.9	143.9	109.4	109.4	39.7	39.7	7.7	7.7	<LOD	3.5	<LOD	5.0	14003.0	14003.0	70.7	70.7	661.9	661.9	74.1	74.1	<LOD	30.0	77206.9	77206.9	3388.6	3388.6	54.8	54.8	57.1	57.1	1800.4	1800.4	<LOD	3.5	62834.3	62834.3	20300.1	20300.1	17188.6	17188.6
HS-18.1	HS	2752.4	2752.4	<LOD	5.5	8.5	8.5	13.1	13.1	236.8	236.8	243.0	243.0	160.0	160.0	45.9	45.9	5.5	5.5	8.2	8.2	<LOD	5.0	7156.8	7156.8	136.6	136.6	623.1	623.1	46.2	46.2	<LOD	30.0	55190.6	55190.6	2045.1	2045.1	38.9	38.9	52.4	52.4	2056.3	2056.3	<LOD	3.5	49620.0	49620.0	23052.6	23052.6	12556.8	12556.8
HS-18.2	HS	2880.8	2880.8	33.0	33.0	10.4	10.4	16.3	16.3	232.4	232.4	231.2	231.2	166.6	166.6	56.2	56.2	<LOD	0.0	12.8	12.8	<LOD	5.0	7443.1	7443.1	140.9	140.9	676.6	676.6	37.2	37.2	<LOD	30.0	56640.4	56640.4	2004.9	2004.9	28.6	28.6	58.5	58.5	1853.7	1853.7	<LOD	3.5	53662.9	53662.9	22110.0	22110.0	14358.1	14358.1
HS-18.3	HS	3049.6	3049.6	61.2	61.2	10.0	10.0	10.4	10.4	250.8	250.8	242.8	242.8	175.5	175.5	48.7	48.7	<LOD	0.0	10.0	10.0	<LOD	5.0	7789.9	7789.9	173.5	173.5	782.9	782.9	60.1	60.1	<LOD	30.0	62277.2	62277.2	2149.4	2149.4	50.3	50.3	52.1	52.1	2160.0	2160.0	<LOD	3.5	54609.5	54609.5	24803.2	24803.2	15437.7	15437.7
HS-18.4	HS	2665.9	2665.9	<LOD	5.5	9.6	9.6	9.9	9.9	256.0	256.0	229.4	229.4	156.6	156.6	42.4	42.4	<LOD	0.0	8.3	8.3	<LOD	5.0	7141.1	7141.1	154.2	154.2	796.1	796.1	33.7	33.7	<LOD	30.0	56542.2	56542.2	1867.9	1867.9	46.0	46.0	55.9	55.9	1896.0	1896.0	<LOD	3.5	46408.8	46408.8	20796.1	20796.1	11627.2	11627.2
HS-18.5	HS	2876.4	2876.4	50.0	50.0	12.8	12.8	10.9	10.9	240.5	240.5	229.7	229.7	169.1	169.1	41.2	41.2	<LOD	0.0	12.2	12.2	<LOD	5.0	7571.2	7571.2	169.0	169.0	746.4	746.4	39.1	39.1	<LOD	30.0	57487.0	57487.0	2053.3	2053.3	44.3	44.3	74.7	74.7	1856.6	1856.6	<LOD	3.5	48162.3	48162.3	22270.7	22270.7	13316.6	13316.6
HS-18.6	HS	3129.2	3129.2	54.0	54.0	11.1	11.1	17.2	17.2	282.2	282.2	246.9	246.9	188.2	188.2	71.7	71.7	6.4	6.4	8.4	8.4	<LOD	5.0	7831.3	7831.3	230.8	230.8	842.6	842.6	46.2	46.2	<LOD	30.0	59750.8	59750.8	1957.2	1957.2	48.4	48.4	48.8	48.8	2158.2	2158.2	<LOD	3.5	51911.0	51911.0	25625.5	25625.5	13930.1	13930.1
HS-18.7	HS	3435.9	3435.9	39.5	39.5	<LOD	5.0	43.0	43.0	264.3	264.3	246.5	246.5	184.4	184.4	57.0	57.0	8.1	8.1	13.3	13.3	12.5	12.5	8297.1	8297.1	262.3	262.3	863.5	863.5	73.8	73.8	<LOD	30.0	65828.3	65828.3	2146.9	2146.9	50.2	50.2	69.0	69.0	2490.3	2490.3	<LOD	3.5	60240.4	60240.4	28453.6	28453.6	23286.8	23286.8
HS-18.8	HS	3198.9	3198.9	53.4	53.4	9.3	9.3	11.9	11.9	268.2	268.2	245.3	245.3	185.2	185.2	45.3	45.3	<LOD	0.0	10.1	10.1	<LOD	5.0	7924.8	7924.8	173.2	173.2	849.5	849.4	58.9	58.9	<LOD	30.0	61691.2	61691.2	2032.2	2032.2	55.9	55.9	52.2	52.2	2346.1	2346.1	<LOD	3.5	58139.0	58139.0	29123.4	29123.4	15054.3	15054.3
HS-18.9	HS	2546.3	2546.3	33.0	33.0	7.6	7.6	11.6	11.6	204.4	204.4	231.9	231.9	165.9	165.9	42.1	42.1	<LOD	0.0	12.4	12.4	10.0	10.0	7384.2	7384.2	150.4	150.4	710.6	710.6	38.7	38.7	<LOD	30.0	56653.9	56653.9	1861.2	1861.2	28.4	28.4	59.0	59.0	1962.2	1962.2	<LOD	3.5	46872.4	46872.4	21848.2	21848.2	11823.6	11823.6
HS-19.1	HS	6763.6	6763.6	155.5	155.5	<LOD	5.0	11.1	11.1	134.1	134.1	94.7	94.7	64.6	64.6	87.8	87.8	<LOD	0.0	38.6	38.6	<LOD	5.0	8929.2	8929.2	<LOD	0.0	10621.4	10621.4	40.0	40.0	<LOD	30.0	307785.5	307785.5	1462.5	1462.5	<LOD	35.0	<LOD	25.0	1155.7	1155.7	<LOD	3.5	28601.1	28601.1	8881.5	8881.5	83125.6	83125.6
HS-19.2	HS	6658.6	6658.6	115.8	115.8	<LOD	5.0	7.0	7.0	179.5	179.5	97.4	97.4	63.2	63.2	73.3	73.3	<LOD	0.0	35.6	35.6	<LOD	5.0	8313.1	8313.1	<LOD	0.0	10618.5	10618.5	42.5	42.5	<LOD	30.0	290561.1	290561.1	1356.0	1356.0	<LOD	35.0	<LOD	25.0	1096.0	1096.0	<LOD	3.5	29074.4	29074.4	8903.7	8903.7	80847.2	80847.2
HS-19.3	HS	6611.5	6611.5	176.8	176.8	<LOD	5.0	8.7	8.7	157.9	157.9	97.2	97.2	65.3	65.3	85.8	85.8	<LOD	0.0	33.8	33.8	<LOD	5.0	8894.6	8894.6	<LOD	0.0	10528.5	10528.5	<LOD	35.0	<LOD	30.0	304728.2	304728.2	1356.8	1356.8	<LOD	35.0	<LOD	25.0	1019.4	1019.4	<LOD	3.5	27191.7	27191.7	8810.4	8810.4	78103.4	78103.4
HS-19.4	HS	6523.2	6523.2	179.8	179.8	<LOD	5.0	11.4	11.4	159.1	159.1	96.8	96.8	65.1	65.1	108.3	108.3	<LOD	0.0	37.7	37.7	<LOD	5.0	8958.3	8958.3	<LOD	0.0	10592.6	10592.6	<LOD	35.0	<LOD	30.0	296956.4	296956.4	1242.6	1242.6	<LOD	35.0	<LOD	25.0	1195.2	1195.2	<LOD	3.5	28098.4	28098.4	8837.9	8837.9	83349.8	83349.8
HS-19.5	HS	6998.7	6998.7	171.0	171.0	<LOD	5.0	10.8	10.8	156.0	156.0	102.7	102.7	66.5	66.5	97.9	97.9	<LOD	0.0	39.3	39.3	<LOD	5.0	9290.0	9290.0	<LOD	0.0	11280.6	11280.6	<LOD	35.0	<LOD	30.0	321723.3	321723.3	1380.4	1380.4	<LOD	35.0	<LOD	25.0	1470.2	1470.2	<LOD	3.5	33047.2	33047.2	10137.9	10137.9	98178.9	98178.9
HS-19.6	HS	6821.4	6821.4	220.4	220.4	<LOD	5.0	6.4	6.4	134.8	134.8	99.5	99.5	65.8	65.8	88.8	88.8	<LOD	0.0	38.1	38.1	<LOD	5.0	9546.6	9546.6	<LOD	0.0	11233.3	11233.3	<LOD	35.0	<LOD	30.0	315314.5	315314.5	1492.9	1492.9	<LOD	35.0	<LOD	25.0	1060.6	1060.6	<LOD	3.5	27832.6	27832.6	9252.6	9252.6	85820.7	85820.7
HS-19.7	HS	6962.8	6962.8	225.0	225.0	<LOD	5.0	8.9	8.9	162.3	162.3	98.0	98.0	66.6	66.6	105.1	105.1	12.6	12.6	37.9	37.9	<LOD	5.0	9958.4	9958.4	<LOD	0.0	10916.1	10916.1	33.8	33.8	<LOD	30.0	320227.2	320227.2	1319.3	1319.3	33.9	33.9	<LOD	25.0	1487.2	1487.2	<LOD	3.5	34183.4	34183.4	10473.7	10473.7	104007.9	104007.9
HS-19.8	HS	6866.8	6866.8	185.9	185.9	<LOD	5.0	6.2	6.2	139.3	139.3	98.4	98.4	67.4	67.4	110.5	110.5	<LOD	0.0	34.7	34.7	<LOD	5.0	9596.1	9596.1	<LOD	0.0	11236.9	11236.9	73.5	73.5	<LOD	30.0	317662.8	317662.8	1356.7	1356.7	<LOD	35.0	<LOD	25.0	1304.6	1304.6	<LOD	3.5	34311.2	34311.2	11092.9	11092.9	103077.6	103077.6
HS-19.9	HS	6909.3	6909.3	182.4	182.4	<LOD	5.0	4.6	4.6	136.3	136.3	98.4	98.4	63.8	63.8	108.5	108.5	<LOD	0.0	34.2	34.2	<LOD	5.0	9701.1	9701.1	<LOD	0.0	10748.8	10748.8	51.7	51.7	<LOD	30.0	317571.4	317571.4	1479.5	1479.5	29.7	29.7	<LOD	25.0	1116.4	1116.4	<LOD	3.5	32775.0	32775.0	9686.8	9686.8	95710.1	95710.1
HS-20.1	HS	5193.3	5193.3	103.1	103.1	<LOD	5.0	7.2	7.2	298.7	298.7	129.4	129.4	82.2	82.2	95.4	95.4	<LOD	0.0	18.6	18.6	13.1	13.1	14013.5	14013.5	<LOD	0.0	7294.5	7294.5	78.1	78.1	<LOD	30.0	214780.5	214780.5	1145.5	1145.5	70.7	70.7	53.4	53.4	2468.9	2468.9	<LOD	3.5	37585.0	37585.0	15522.7	15522.7	59219.7	59219.7
HS-20.2	HS	4250.7	4250.7	95.6	95.6	<LOD	5.0	16.6	16.6	245.9	245.9	120.2	120.2	75.4	75.4	81.8	81.8	<LOD	0.0	19.8	19.8	<LOD	5.0	13187.0	13187.0	<LOD	0.0	6279.3	6279.3	51.3	51.3	<LOD	30.0	186651.1	186651.1	986.0	986.0	33.0	33.0	53.4	53.4	2160.9	2160.9	<LOD	3.5	29576.4	29576.4	12752.0	12752.0	45235.5	45235.5
HS-20.3	HS	4345.6	4345.6	125.6	125.6	<LOD	5.0	4.8	4.8	215.0	215.0	126.7	126.7	78.7	78.7	82.0	82.0	<LOD	0.0	20.7	20.7	<LOD	5.0	13580.8	13580.8	<LOD	0.0	6488.1	6488.1	75.4	75.4	<LOD	30.0	185104.3	185104.3	955.2	955.2	36.1	36.1	51.0	51.0	2345.4	2345.4	<LOD	3.5	32900.4	32900.4	14878.1	14878.1	52922.6	52922.6
HS-20.4	HS	3949.7	3949.7	91.7	91.7	<LOD	5.0	6.3	6.3	264.9	264.9	118.8	118.8	75.2	75.2	75.8	75.8	<LOD	0.0	17.8	17.8	14.9	14.9	12210.8	12210.8	<LOD	0.0	5839.4	5839.4	68.4	68.4	<LOD	30.0	181975.8	181975.8	990.9	990.9	27.6	27.6	65.7	65.7	1849.8	1849.8	<LOD	3.5	28611.4	28611.4	13138.0	13138.0	43394.2	43394.2
HS-20.5	HS	3971.5	3971.5	88.4	88.4	<LOD	5.0	5.6	5.6	253.7	253.7	123.8	123.8	78.5	78.5	74.1	74.1	<LOD	0.0	23.0	23.0	13.7	13.7	12903.1	12903.1	<LOD	0.0	5903.5	5903.5	63.3	63.3	<LOD	30.0	174409.9	174409.9	1005.3	1005.3	30.6	30.6	59.5	59.5	2116.1	2116.1	<LOD	3.5	31102.8	31102.8	16363.6	16363.6	49606.7	49606.7
HS-20.6	HS	5189.9	5189.9	107.3	107.3	<LOD	5.0	8.5	8.5	413.0	413.0	130.6	130.6	78.3	78.3	95.7	95.7	<LOD	0.0	20.6	20.6	<LOD	5.0	13715.5	13715.5	<LOD	0.0	7161.3	7161.3	93.6	93.6	<LOD	30.0	231417.6	231417.6	1100.5	1100.5	38.1	38.1	87.4	87.4	2706.4	2706.4	<LOD	3.5	33079.5	33079.5	16032.8	16032.8	54697.5	54697.5
HS-20.7	HS	4925.3	4925.3	103.0	103.0	7.4	7.4	<LOD	5.0	374.3	374.3	131.5	131.5	82.1	82.1	98.3	98.3	<LOD	0.0	22.1	22.1	<LOD	5.0	14980.5	14980.5	<LOD	0.0	6907.3	6907.3	82.4	82.4	<LOD	30.0	216617.8	216617.8	1050.7	1050.7	42.4	42.4	95.0	95.0	2589.5	2589.5	<LOD	3.5	31117.0	31117.0	15568.0	15568.0	50951.1	50951.1
HS-20.8	HS	4471.7	4471.7	123.5	123.5	<LOD	5.0	4.4	4.4	369.1	369.1	124.8	124.8	77.8	77.8	85.3	85.3	<LOD	0.0	18.1	18.1	<LOD	5.0	13165.7	13165.7	<LOD	0.0	6840.0	6840.0	82.2	82.2	<LOD	30.0	205564.4	205564.4	1023.2	1023.2	38.9	38.9	94.7	94.7	2401.9	2401.9	<LOD	3.5	31257.6	31257.6	14712.7	14712.7	49300.1	49300.1
HS-20.9	HS	4434.5	4434.5	81.7	81.7	<LOD	5.0	15.5	15.5	229.7	229.7	122.8	122.8	79.0	79.0	87.7	87.7	<LOD	0.0	19.1	19.1	<LOD	5.0	13737.0	13737.0	<LOD	0.0	6802.9	6802.9	59.4	59.4	<LOD	30.0	197497.1	197497.1	1018.3	1018.3	50.3	50.3	56.4	56.4	2515.0	2515.0	<LOD	3.5	32895.5	32895.5	14588.5	14588.5	49891.3	49891.3
HS-21.1	HS	6032.1	6032.1	<LOD	5.5	8.2	8.2	8.8	8.8	368.4	368.4	175.3	175.3	58.3	58.3	31.6	31.6	<LOD	0.0	<LOD	3.5	10.2	10.2	7085.7	7085.7	57.4	57.4	222.8	222.8	62.5	62.5	<LOD	30.0	46397.7	46397.7	2558.8	2558.8	31.6	31.6	44.5	44.5	1711.7	1711.7	<LOD	3.5	71638.8	71638.8	12348.4	12348.4	3559.1	3559.1
HS-21.2	HS	7755.1	7755.1	<LOD	5.5	7.8	7.8	5.9	5.9	412.8	412.8	189.2	189.2	58.1	58.1	39.6	39.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	6917.0	6917.0	67.1	67.1	117.4	117.4	70.1	70.1	<LOD	30.0	58048.3	58048.3	3391.4	3391.4	46.8	46.8	43.2	43.2	1990.4	1990.4	<LOD	3.5	76797.5	76797.5	13514.3	13514.3	5068.5	5068.5
HS-21.3	HS	4965.4	4965.4	<LOD	5.5	9.7	9.7	4.6	4.6	497.8	497.8	170.2	170.2	59.3	59.3	36.1	36.1	<LOD	0.0	<LOD	3.5	8.9	8.9	6376.0	6376.0	53.0	53.0	116.3	116.3	70.5	70.5	<LOD	30.0	46505.4	46505.4	2926.9	2926.9	24.7	24.7	51.1	51.1	1995.9	1995.9	<LOD	3.5	86272.6	86272.6	14786.5	14786.5	4516.9	4516.9
HS-21.4	HS	5903.8	5903.8	<LOD	5.5	8.3	8.3	5.9	5.9	589.1	589.1	169.3	169.3	56.6	56.6	37.1	37.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	6367.7	6367.7	57.3	57.3	109.3	109.3	51.7	51.7	<LOD	30.0	46369.6	46369.6	2571.9	2571.9	39.7	39.7	38.4	38.4	1496.7	1496.7	<LOD	3.5	70230.7	70230.7	12424.8	12424.8	3189.4	3189.4
HS-21.5	HS	6130.5	6130.5	<LOD	5.5	6.3	6.3	9.9	9.9	491.6	491.6	180.4	180.4	62.1	62.1	43.7	43.7	9.4	9.4	<LOD	3.5	<LOD	5.0	6680.4	6680.4	50.3	50.3	116.7	116.7	62.8	62.8	<LOD	30.0	43082.6	43082.6	2834.7	2834.7	21.9	21.9	65.1	65.1	1897.2	1897.2	<LOD	3.5	81424.0	81424.0	14376.7	14376.7	3754.0	3754.0
HS-21.6	HS	4749.3	4749.3	<LOD	5.5	8.2	8.2	5.5	5.5	367.8	367.8	163.6	163.6	62.8	62.8	38.0	38.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	5659.0	5659.0	<LOD	0.0	142.6	142.6	66.9	66.9	<LOD	30.0	37209.4	37209.4	1876.1	1876.1	17.6	17.6	47.6	47.6	1785.6	1785.6	<LOD	3.5	75575.6	75575.6	15454.7	15454.7	3390.9	3390.9
HS-21.7	HS	6740.6	6740.6	<LOD	5.5	9.4	9.4	6.6	6.6	369.7	369.7	182.9	182.9	62.3	62.3	39.3	39.3	7.3	7.3	<LOD	3.5	<LOD	5.0	6977.2	6977.2	44.8	44.8	205.5	205.5	63.6	63.6	<LOD	30.0	50253.0	50253.0	3039.8	3039.8	36.0	36.0	46.0	46.0	2104.7	2104.7	<LOD	3.5	73300.4	73300.4	14788.4	14788.4	4058.4	4058.4
HS-21.8	HS	7638.6	7638.6	<LOD	5.5	7.4	7.4	5.4	5.4	439.2	439.2	196.9	196.9	59.8	59.8	37.0	37.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	6732.6	6732.6	58.2	58.2	174.9	174.9	101.6	101.6	<LOD	30.0	56456.9	56456.9	4030.0	4030.0	19.2	19.2	54.6	54.6	2192.2	2192.2	<LOD	3.5	86676.0	86676.0	14739.1	14739.1	5558.4	5558.4
HS-21.9	HS	4706.9	4706.9	<LOD	5.5	<LOD	5.0	5.3	5.3	255.6	255.6	162.1	162.1	59.4	59.4	28.8	28.8	<LOD	0.0	<LOD	3.5	13.0	13.0	5795.5	5795.5	<LOD	0.0	189.9	189.9	66.2	66.2	<LOD	30.0	44812.5	44812.5	2335.5	2335.5	22.0	22.0	63.2	63.2	1481.6	1481.6	<LOD	3.5	70615.6	70615.6	13637.8	13637.8	4131.0	4131.0
HS-22.1	HS	12024.6	12024.6	451.9	451.9	<LOD	5.0	<LOD	5.0	127.1	127.1	43.7	43.7	52.3	52.3	223.1	223.1	<LOD	0.0	48.6	48.6	<LOD	5.0	16618.5	16618.5	<LOD	0.0	7142.7	7142.7	53.2	53.2	<LOD	30.0	744129.9	744129.9	1259.8	1259.8	<LOD	35.0	<LOD	25.0	703.9	703.9	<LOD	3.5	13471.0	13471.0	7044.6	7044.6	157828.1	157828.1
HS-22.2	HS	12162.2	12162.2	479.6	479.6	<LOD	5.0	<LOD	5.0	130.2	130.2	49.9	49.9	48.1	48.1	246.2	246.2	<LOD	0.0	45.8	45.8	<LOD	5.0	16565.3	16565.3	<LOD	0.0	7598.7	7598.7	68.3	68.3	<LOD	30.0	729332.1	729332.1	1269.4	1269.4	<LOD	35.0	<LOD	25.0	753.1	753.1	<LOD	3.5	15238.3	15238.3	6871.6	6871.6	154687.9	154687.9
HS-22.3	HS	12605.9	12605.9	470.6	470.6	<LOD	5.0	<LOD	5.0	92.2	92.2	45.1	45.1	49.9	49.9	247.9	247.9	<LOD	0.0	49.4	49.4	<LOD	5.0	14373.0	14373.0	<LOD	0.0	7706.8	7706.8	63.9	63.9	<LOD	30.0	752093.3	752093.3	1275.1	1275.1	<LOD	35.0	<LOD	25.0	655.7	655.7	<LOD	3.5	13565.8	13565.8	6919.5	6919.5	161660.6	161660.6
HS-22.4	HS	12302.4	12302.4	490.3	490.3	<LOD	5.0	<LOD	5.0	60.1	60.1	41.2	41.2	44.3	44.3	222.9	222.9	<LOD	0.0	47.3	47.3	<LOD	5.0	14606.2	14606.2	<LOD	0.0	7616.1	7616.1	81.4	81.4	<LOD	30.0	723506.4	723506.4	1277.4	1277.4	<LOD	35.0	<LOD	25.0	691.7	691.7	<LOD	3.5	11710.9	11710.9	6082.7	6082.7	152906.3	152906.3
HS-22.5	HS	12974.9	12974.9	563.9	563.9	<LOD	5.0	<LOD	5.0	96.7	96.7	41.9	41.9	50.1	50.1	258.7	258.7	<LOD	0.0	49.3	49.3	<LOD	5.0	15859.1	15859.1	<LOD	0.0	7279.4	7279.4	57.9	57.9	<LOD	30.0	757216.6	757216.6	1454.3	1454.3	<LOD	35.0	<LOD	25.0	717.1	717.1	<LOD	3.5	12144.5	12144.5	6744.4	6744.4	151753.3	151753.3
HS-22.6	HS	12091.1	12091.1	448.5	448.5	<LOD	5.0	9.9	9.9	125.2	125.2	41.4	41.4	46.3	46.3	222.6	222.6	<LOD	0.0	52.5	52.5	<LOD	5.0	15562.2	15562.2	<LOD	0.0	6995.3	6995.3	<LOD	35.0	<LOD	30.0	705810.3	705810.3	1236.4	1236.4	<LOD	35.0	<LOD	25.0	642.5	642.5	<LOD	3.5	11890.0	11890.0	5882.0	5882.0	135038.7	135038.7
HS-22.7	HS	12122.2	12122.2	525.5	525.5	<LOD	5.0	7.6	7.6	108.3	108.3	41.3	41.3	49.8	49.8	213.6	213.6	<LOD	0.0	51.2	51.2	<LOD	5.0	17453.4	17453.4	<LOD	0.0	8521.8	8521.8	55.9	55.9	<LOD	30.0	736573.4	736573.4	1286.5	1286.5	<LOD	35.0	<LOD	25.0	545.5	545.5	<LOD	3.5	11392.1	11392.1	5810.9	5810.9	141869.2	141869.2
HS-22.8	HS	12443.1	12443.1	510.1	510.1	<LOD	5.0	<LOD	5.0	53.0	53.0	41.6	41.6	48.1	48.1	239.0	239.0	<LOD	0.0	51.9	51.9	<LOD	5.0	17563.6	17563.6	<LOD	0.0	7218.1	7218.1	77.1	77.1	<LOD	30.0	761399.9	761399.9	1421.7	1421.7	<LOD	35.0	<LOD	25.0	788.1	788.1	<LOD	3.5	13647.6	13647.6	6700.6	6700.6	158761.6	158761.6
HS-22.9	HS	12458.6	12458.6	519.1	519.1	<LOD	5.0	<LOD	5.0	34.3	34.3	45.5	45.5	42.7	42.7	269.6	269.6	<LOD	0.0	55.4	55.4	<LOD	5.0	14557.9	14557.9	<LOD	0.0	8087.1	8087.1	58.6	58.6	<LOD	30.0	777757.8	777757.8	1101.1	1101.1	<LOD	35.0	<LOD	25.0	607.1	607.1	<LOD	3.5	13159.7	13159.7	6250.1	6250.1	170060.2	170060.2
BS-1.1	BS	77.6	77.6	6.7	6.7	9.2	9.2	4.4	4.4	646.6	646.6	214.2	214.2	97.2	97.2	23.6	23.6	2.9	2.9	<LOD	3.5	<LOD	5.0	152.1	152.1	40.3	40.3	99.2	99.2	52.6	52.6	106.5	106.5	32400.6	32400.6	594.2	594.2	62.8	62.8	113.2	113.2	4333.2	4333.2	<LOD	3.5	35385.3	35385.3	23598.9	23598.9	705.0	705.0
BS-1.2	BS	95.0	95.0	11.5	11.5	6.7	6.7	7.0	7.0	774.0	774.0	208.4	208.4	98.1	98.1	31.7	31.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	153.9	153.9	33.7	33.7	80.9	80.9	49.0	49.0	148.2	148.2	35407.6	35407.6	625.3	625.3	49.6	49.6	116.6	116.6	4325.3	4325.3	58.5	58.5	34736.9	34736.9	23053.0	23053.0	563.4	563.4
BS-1.3	BS	84.4	84.4	8.4	8.4	7.4	7.4	4.5	4.5	685.8	685.8	221.0	221.0	101.1	101.1	20.8	20.8	<LOD	0.0	<LOD	3.5	6.8	6.8	161.8	161.8	25.2	25.2	47.7	47.7	55.9	55.9	<LOD	30.0	34526.6	34526.6	617.2	617.2	61.0	61.0	111.7	111.7	4998.0	4998.0	<LOD	3.5	38335.5	38335.5	25704.3	25704.3	<LOD	500.0
BS-1.4	BS	84.1	84.1	7.8	7.8	9.7	9.7	3.8	3.8	856.2	856.2	217.0	217.0	99.1	99.1	20.6	20.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	151.6	151.6	34.0	34.0	58.8	58.8	50.3	50.3	<LOD	30.0	33270.3	33270.3	535.6	535.6	58.1	58.1	99.6	99.6	4440.0	4440.0	<LOD	3.5	33784.1	33784.1	23355.0	23355.0	<LOD	500.0
BS-1.5	BS	82.1	82.1	10.4	10.4	8.2	8.2	5.8	5.8	803.1	803.1	222.7	222.7	101.1	101.1	25.5	25.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	144.9	144.9	<LOD	0.0	58.3	58.3	56.8	56.8	145.1	145.1	35642.5	35642.5	594.4	594.4	61.1	61.1	103.5	103.5	4280.5	4280.5	72.5	72.5	34311.8	34311.8	24400.2	24400.2	523.5	523.5
BS-1.6	BS	85.8	85.8	<LOD	5.5	9.3	9.3	6.3	6.3	754.8	754.8	221.0	221.0	99.4	99.4	30.1	30.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	143.5	143.5	45.9	45.9	58.9	58.9	48.7	48.7	105.6	105.6	34253.0	34253.0	620.6	620.6	51.0	51.0	107.7	107.7	4611.4	4611.4	<LOD	3.5	34713.0	34713.0	23901.7	23901.7	<LOD	500.0
BS-1.7	BS	76.4	76.4	11.3	11.3	8.9	8.9	5.3	5.3	776.0	776.0	214.2	214.2	99.0	99.0	19.5	19.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	146.7	146.7	37.6	37.6	48.5	48.5	55.6	55.6	113.9	113.9	34537.4	34537.4	563.1	563.1	57.3	57.3	106.1	106.1	4157.8	4157.8	<LOD	3.5	33396.6	33396.6	22995.4	22995.4	372.9	372.9
BS-1.8	BS	83.5	83.5	5.6	5.6	7.9	7.9	5.9	5.9	686.8	686.8	210.1	210.1	100.0	100.0	18.2	18.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	162.1	162.1	31.3	31.3	69.0	69.0	51.7	51.7	137.1	137.1	34684.5	34684.5	570.2	570.2	41.9	41.9	113.2	113.2	4595.0	4595.0	<LOD	3.5	35859.1	35859.1	24780.9	24780.9	521.1	521.1
BS-1.9	BS	82.7	82.7	8.2	8.2	5.6	5.6	<LOD	5.0	804.4	804.4	220.1	220.1	102.5	102.5	20.9	20.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	141.4	141.4	34.9	34.9	58.6	58.6	47.0	47.0	103.9	103.9	36972.0	36972.0	603.0	603.0	54.6	54.6	124.4	124.4	4781.7	4781.7	<LOD	3.5	35984.2	35984.2	25527.7	25527.7	<LOD	500.0
BS-2.1	BS	85.9	85.9	11.6	11.6	8.3	8.3	8.2	8.2	858.6	858.6	246.7	246.7	116.4	116.4	27.6	27.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	153.8	153.8	<LOD	0.0	37.5	37.5	29.6	29.6	<LOD	30.0	37754.4	37754.4	632.6	632.6	47.3	47.3	85.5	85.5	4102.1	4102.1	38.6	38.6	15627.2	15627.2	20857.3	20857.3	1839.0	1839.0
BS-2.2	BS	67.2	67.2	9.3	9.3	8.0	8.0	8.2	8.2	913.5	913.5	254.8	254.8	120.2	120.2	22.1	22.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	123.1	123.1	<LOD	0.0	55.6	55.6	45.6	45.6	153.1	153.1	37579.1	37579.1	680.7	680.7	43.8	43.8	122.3	122.3	5366.2	5366.2	57.5	57.5	20282.2	20282.2	26293.6	26293.6	1114.0	1114.0
BS-2.3	BS	51.3	51.3	10.2	10.2	9.7	9.7	6.8	6.8	1077.5	1077.5	267.0	267.0	121.2	121.2	21.4	21.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	130.8	130.8	27.0	27.0	54.0	54.0	56.1	56.1	<LOD	30.0	41736.4	41736.4	751.7	751.7	54.2	54.2	110.9	110.9	5099.7	5099.7	53.8	53.8	19628.3	19628.3	24908.9	24908.9	487.0	487.0
BS-2.4	BS	54.3	54.3	8.4	8.4	9.7	9.7	3.8	3.8	1101.6	1101.6	262.6	262.6	118.9	118.9	24.2	24.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	174.1	174.1	35.6	35.6	54.5	54.5	59.8	59.8	<LOD	30.0	39375.0	39375.0	718.8	718.8	66.7	66.7	150.1	150.1	6075.8	6075.8	<LOD	3.5	20715.8	20715.8	27405.4	27405.4	578.6	578.6
BS-2.5	BS	53.0	53.0	12.4	12.4	8.9	8.9	8.7	8.7	829.5	829.5	245.5	245.5	111.4	111.4	19.8	19.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	130.6	130.6	<LOD	0.0	36.2	36.2	29.0	29.0	<LOD	30.0	35466.2	35466.2	674.4	674.4	42.8	42.8	95.6	95.6	3738.5	3738.5	<LOD	3.5	14521.3	14521.3	17852.9	17852.9	589.4	589.4
BS-2.6	BS	48.6	48.6	12.3	12.3	10.5	10.5	5.4	5.4	1198.3	1198.3	277.6	277.6	118.7	118.7	22.0	22.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	122.3	122.3	38.7	38.7	52.2	52.2	44.8	44.8	105.3	105.3	38905.0	38905.0	733.4	733.4	46.9	46.9	107.5	107.5	5330.3	5330.3	<LOD	3.5	20216.4	20216.4	25917.9	25917.9	<LOD	500.0
BS-2.7	BS	71.5	71.5	13.3	13.3	9.1	9.1	9.1	9.1	823.6	823.6	260.4	260.4	118.5	118.5	59.2	59.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	113.7	113.7	35.2	35.2	40.8	40.8	56.9	56.9	114.9	114.9	38944.8	38944.8	690.9	690.9	66.9	66.9	140.7	140.7	5320.2	5320.2	<LOD	3.5	21146.3	21146.3	26786.7	26786.7	510.1	510.1
BS-2.8	BS	49.2	49.2	9.6	9.6	7.9	7.9	7.9	7.9	1106.0	1106.0	260.5	260.5	118.8	118.8	22.8	22.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	118.2	118.2	<LOD	0.0	44.5	44.5	47.3	47.3	125.1	125.1	37342.4	37342.4	645.9	645.9	45.5	45.5	108.5	108.5	5538.4	5538.4	<LOD	3.5	18955.5	18955.5	24712.6	24712.6	572.6	572.6
BS-2.9	BS	64.0	64.0	14.5	14.5	10.3	10.3	6.2	6.2	989.9	989.9	265.2	265.2	117.7	117.7	27.3	27.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	219.1	219.1	27.8	27.8	56.1	56.1	48.7	48.7	148.8	148.8	38010.9	38010.9	711.6	711.6	49.9	49.9	111.4	111.4	4976.6	4976.6	<LOD	3.5	19896.7	19896.7	25578.9	25578.9	1515.4	1515.4
BS-3.1	BS	69.6	69.6	10.8	10.8	10.2	10.2	9.6	9.6	1140.6	1140.6	268.9	268.9	118.4	118.4	29.8	29.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	172.0	172.0	34.7	34.7	52.7	52.7	69.9	69.9	313.9	313.9	64137.7	64137.7	888.5	888.5	86.6	86.6	170.2	170.2	6515.3	6515.3	<LOD	3.5	19377.4	19377.4	26128.4	26128.4	562.4	562.4
BS-3.2	BS	82.0	82.0	17.5	17.5	11.3	11.3	11.0	11.0	1151.8	1151.8	264.6	264.6	113.7	113.7	25.6	25.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	163.4	163.4	39.1	39.1	50.0	50.0	47.8	47.8	426.9	426.9	69190.9	69190.9	831.9	831.9	68.6	68.6	150.8	150.8	6185.6	6185.6	<LOD	3.5	18161.9	18161.9	25375.2	25375.2	748.7	748.7
BS-3.3	BS	75.5	75.5	10.3	10.3	12.1	12.1	11.6	11.6	1292.8	1292.8	273.3	273.3	118.3	118.3	24.7	24.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	137.4	137.4	41.7	41.7	53.0	53.0	49.5	49.5	239.3	239.3	71828.1	71828.1	930.2	930.2	75.2	75.2	148.4	148.4	6273.9	6273.9	<LOD	3.5	18554.8	18554.8	27195.5	27195.5	439.5	439.5
BS-3.4	BS	70.8	70.8	18.0	18.0	12.7	12.7	10.0	10.0	1483.3	1483.3	271.8	271.8	116.6	116.6	41.5	41.5	<LOD	0.0	4.4	4.4	<LOD	5.0	141.6	141.6	41.9	41.9	56.7	56.7	68.7	68.7	336.5	336.5	57953.3	57953.3	901.7	901.7	68.6	68.6	142.9	142.9	7015.7	7015.7	<LOD	3.5	19327.3	19327.3	26295.5	26295.5	711.6	711.6
BS-3.5	BS	74.3	74.3	12.8	12.8	9.5	9.5	8.3	8.3	1474.9	1474.9	254.1	254.1	118.0	118.0	30.8	30.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	152.9	152.9	28.3	28.3	54.5	54.5	31.8	31.8	289.1	289.1	55602.3	55602.3	835.1	835.1	51.1	51.1	141.9	141.9	5370.5	5370.5	<LOD	3.5	17883.0	17883.0	25018.1	25018.1	595.3	595.3
BS-3.6	BS	107.6	107.6	19.8	19.8	11.1	11.1	10.4	10.4	1677.6	1677.6	262.1	262.1	118.1	118.1	53.2	53.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	159.1	159.1	57.5	57.5	53.9	53.9	42.1	42.1	472.4	472.4	62095.5	62095.5	941.8	941.8	60.3	60.3	128.5	128.5	5001.6	5001.6	<LOD	3.5	16801.9	16801.9	24116.2	24116.2	484.5	484.5
BS-3.7	BS	101.5	101.5	13.8	13.8	11.9	11.9	12.0	12.0	1626.1	1626.1	263.8	263.8	116.5	116.5	27.7	27.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	179.9	179.9	35.0	35.0	45.1	45.1	42.0	42.0	295.0	295.0	58482.1	58482.1	826.5	826.5	57.2	57.2	109.7	109.7	5285.0	5285.0	42.9	42.9	16675.6	16675.6	23111.3	23111.3	498.0	498.0
BS-3.8	BS	79.2	79.2	9.8	9.8	14.0	14.0	8.3	8.3	1501.2	1501.2	266.8	266.8	119.2	119.2	42.1	42.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	135.9	135.9	49.3	49.3	58.3	58.3	59.1	59.1	365.3	365.3	59690.4	59690.4	862.6	862.6	73.1	73.1	172.5	172.5	5870.9	5870.9	57.9	57.9	18666.4	18666.4	26951.5	26951.5	664.9	664.9
BS-3.9	BS	82.1	82.1	15.0	15.0	11.7	11.7	8.3	8.3	1968.0	1968.0	260.1	260.1	114.4	114.4	27.0	27.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	146.4	146.4	<LOD	0.0	47.6	47.6	50.0	50.0	404.6	404.6	64749.5	64749.5	839.9	839.9	63.3	63.3	137.9	137.9	4848.7	4848.7	55.6	55.6	16738.3	16738.3	23402.2	23402.2	717.4	717.4
DU 2-1.1	2	3575.1	3575.1	<LOD	5.5	<LOD	5.0	<LOD	5.0	86.9	86.9	68.1	68.1	42.0	42.0	29.3	29.3	6.0	6.0	<LOD	3.5	9.9	9.9	7361.0	7361.0	<LOD	0.0	37.7	37.7	70.6	70.6	<LOD	30.0	35081.4	35081.4	2503.4	2503.4	17.2	17.2	<LOD	25.0	618.0	618.0	<LOD	3.5	51239.5	51239.5	11344.9	11344.9	4279.5	4279.5
DU 2-1.2	2	3812.3	3812.3	36.2	36.2	6.9	6.9	<LOD	5.0	81.8	81.8	75.4	75.4	40.0	40.0	27.7	27.7	<LOD	0.0	<LOD	3.5	8.8	8.8	8374.6	8374.6	<LOD	0.0	35.3	35.3	69.4	69.4	<LOD	30.0	40471.0	40471.0	3106.2	3106.2	<LOD	35.0	<LOD	25.0	720.2	720.2	<LOD	3.5	71153.8	71153.8	10538.3	10538.3	3952.1	3952.1
DU 2-1.3	2	3576.5	3576.5	<LOD	5.5	7.1	7.1	<LOD	5.0	95.2	95.2	73.1	73.1	43.3	43.3	27.8	27.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	7676.7	7676.7	<LOD	0.0	34.3	34.3	72.2	72.2	<LOD	30.0	35412.9	35412.9	2558.3	2558.3	32.6	32.6	36.2	36.2	871.7	871.7	<LOD	3.5	75183.7	75183.7	10011.3	10011.3	3592.8	3592.8
DU 2-1.4	2	3467.1	3467.1	<LOD	5.5	5.0	5.0	<LOD	5.0	64.7	64.7	68.8	68.8	41.0	41.0	26.1	26.1	<LOD	0.0	<LOD	3.5	10.8	10.8	7502.5	7502.5	<LOD	0.0	38.6	38.6	58.4	58.4	<LOD	30.0	36414.5	36414.5	2714.1	2714.1	28.4	28.4	<LOD	25.0	630.5	630.5	<LOD	3.5	50588.9	50588.9	9778.7	9778.7	3637.3	3637.3
DU 2-1.5	2	3525.9	3525.9	<LOD	5.5	<LOD	5.0	<LOD	5.0	57.0	57.0	70.9	70.9	44.2	44.2	25.8	25.8	5.4	5.4	<LOD	3.5	12.1	12.1	7732.6	7732.6	<LOD	0.0	39.8	39.8	68.4	68.4	<LOD	30.0	33773.7	33773.7	2517.5	2517.5	23.9	23.9	<LOD	25.0	715.8	715.8	<LOD	3.5	60529.1	60529.1	11671.9	11671.9	3198.9	3198.9
DU 2-1.6	2	3661.4	3661.4	<LOD	5.5	6.1	6.1	<LOD	5.0	68.0	68.0	71.5	71.5	43.1	43.1	25.4	25.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	7861.8	7861.8	<LOD	0.0	29.2	29.2	55.5	55.5	<LOD	30.0	36288.0	36288.0	2878.0	2878.0	21.0	21.0	<LOD	25.0	826.5	826.5	<LOD	3.5	60759.3	60759.3	10799.5	10799.5	4095.5	4095.5
DU 2-1.7	2	3688.8	3688.8	<LOD	5.5	6.4	6.4	<LOD	5.0	75.7	75.7	72.1	72.1	42.6	42.6	29.5	29.5	8.3	8.3	<LOD	3.5	<LOD	5.0	8226.8	8226.8	<LOD	0.0	37.1	37.1	68.9	68.9	<LOD	30.0	39116.1	39116.1	3096.3	3096.3	22.7	22.7	<LOD	25.0	1012.4	1012.4	<LOD	3.5	73725.2	73725.2	10995.7	10995.7	3922.7	3922.7
DU 2-1.8	2	3779.9	3779.9	<LOD	5.5	5.3	5.3	<LOD	5.0	83.3	83.3	72.0	72.0	43.8	43.8	32.9	32.9	<LOD	0.0	<LOD	3.5	11.2	11.2	7760.0	7760.0	<LOD	0.0	32.2	32.2	80.1	80.1	<LOD	30.0	38478.1	38478.1	2805.8	2805.8	17.4	17.4	<LOD	25.0	939.2	939.2	<LOD	3.5	63091.4	63091.4	11570.0	11570.0	4250.7	4250.7
DU 2-1.9	2	3666.2	3666.2	<LOD	5.5	6.7	6.7	<LOD	5.0	70.1	70.1	71.6	71.6	42.9	42.9	19.9	19.9	<LOD	0.0	<LOD	3.5	10.9	10.9	7799.8	7799.8	<LOD	0.0	37.9	37.9	65.6	65.6	<LOD	30.0	35138.0	35138.0	2767.5	2767.5	21.0	21.0	35.8	35.8	716.1	716.1	<LOD	3.5	63755.2	63755.2	11048.2	11048.2	3617.1	3617.1
DU 2-2.1	2	5785.4	5785.4	<LOD	5.5	6.7	6.7	4.6	4.6	66.1	66.1	297.3	297.3	53.8	53.8	41.3	41.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	3736.3	3736.3	<LOD	0.0	102.4	102.4	55.7	55.7	<LOD	30.0	40287.1	40287.1	5060.0	5060.0	47.8	47.8	<LOD	25.0	503.5	503.5	<LOD	3.5	46108.7	46108.7	10578.6	10578.6	4293.6	4293.6
DU 2-2.2	2	5985.5	5985.5	<LOD	5.5	8.0	8.0	4.4	4.4	61.8	61.8	302.2	302.2	56.6	56.6	39.9	39.9	<LOD	0.0	<LOD	3.5	12.5	12.5	3856.3	3856.3	<LOD	0.0	110.0	110.0	93.5	93.5	<LOD	30.0	43644.7	43644.7	5280.4	5280.4	42.0	42.0	69.5	69.5	563.0	563.0	<LOD	3.5	56557.5	56557.5	13349.8	13349.8	6411.7	6411.7
DU 2-2.3	2	6175.6	6175.6	<LOD	5.5	7.4	7.4	4.8	4.8	67.3	67.3	311.9	311.9	55.7	55.7	30.3	30.3	7.6	7.6	<LOD	3.5	<LOD	5.0	3990.2	3990.2	<LOD	0.0	124.6	124.6	86.0	86.0	<LOD	30.0	43044.1	43044.1	5634.8	5634.8	42.4	42.4	<LOD	25.0	627.1	627.1	<LOD	3.5	59180.0	59180.0	13215.1	13215.1	6489.4	6489.4
DU 2-2.4	2	6549.7	6549.7	79.0	79.0	8.0	8.0	3.5	3.5	78.2	78.2	334.8	334.8	59.0	59.0	47.5	47.5	9.4	9.4	<LOD	3.5	12.4	12.4	3847.3	3847.3	<LOD	0.0	130.8	130.8	113.4	113.4	<LOD	30.0	46974.0	46974.0	6036.7	6036.7	53.5	53.5	<LOD	25.0	772.8	772.8	<LOD	3.5	72078.5	72078.5	15214.7	15214.7	7957.7	7957.7

DU 2-2.5	2	6151.5	6151.5	<LOD	5.5	7.4	7.4	<LOD	5.0	59.5	59.5	322.0	322.0	57.6	57.6	49.1	49.1	7.5	7.5	<LOD	3.5	9.7	9.7	3938.7	3938.7	44.4	44.4	115.4	115.4	98.2	98.2	<LOD	30.0	42147.7	42147.7	5111.6	5111.6	43.8	43.8	78.8	78.8	777.7	777.7	<LOD	3.5	60765.9	60765.9	14706.6	14706.6	6264.0	6264.0
DU 2-2.6	2	6518.5	6518.5	60.4	60.4	8.0	8.0	3.5	3.5	68.2	68.2	340.1	340.1	57.1	57.1	52.5	52.5	<LOD	0.0	<LOD	3.5	16.1	16.1	3878.8	3878.8	<LOD	0.0	123.9	123.9	109.7	109.7	<LOD	30.0	45725.5	45725.5	5908.7	5908.7	35.9	35.9	80.9	80.9	625.8	625.8	<LOD	3.5	71326.3	71326.3	14205.8	14205.8	7764.3	7764.3
DU 2-2.7	2	6488.6	6488.6	78.8	78.8	8.4	8.4	3.3	3.3	74.0	74.0	341.1	341.1	59.2	59.2	44.9	44.9	<LOD	0.0	<LOD	3.5	12.6	12.6	4030.3	4030.3	<LOD	0.0	126.5	126.5	102.2	102.2	<LOD	30.0	47292.3	47292.3	6002.7	6002.7	32.3	32.3	96.8	96.8	734.5	734.5	<LOD	3.5	70822.8	70822.8	14840.4	14840.4	7728.9	7728.9
DU 2-2.8	2	6320.5	6320.5	61.0	61.0	10.0	10.0	<LOD	5.0	68.5	68.5	324.0	324.0	57.8	57.8	39.5	39.5	9.3	9.3	<LOD	3.5	9.8	9.8	4251.6	4251.6	41.7	41.7	116.8	116.8	99.1	99.1	<LOD	30.0	42636.3	42636.3	5657.8	5657.8	37.8	37.8	<LOD	25.0	712.6	712.6	<LOD	3.5	65775.9	65775.9	14132.6	14132.6	7223.2	7223.2
DU 2-2.9	2	6358.9	6358.9	<LOD	5.5	9.5	9.5	<LOD	5.0	70.9	70.9	322.2	322.2	56.2	56.2	38.4	38.4	9.8	9.8	<LOD	3.5	14.7	14.7	3686.7	3686.7	<LOD	0.0	137.1	137.1	112.0	112.0	<LOD	30.0	43686.6	43686.6	5388.7	5388.7	36.3	36.3	<LOD	25.0	690.8	690.8	<LOD	3.5	67528.0	67528.0	15439.9	15439.9	6352.4	6352.4
DU 2-3.1	2	2566.0	2566.0	<LOD	5.5	4.9	4.9	<LOD	5.0	61.9	61.9	54.7	54.7	33.2	33.2	15.4	15.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	6021.6	6021.6	39.7	39.7	32.1	32.1	52.3	52.3	<LOD	30.0	26484.5	26484.5	1581.2	1581.2	<LOD	35.0	<LOD	25.0	526.2	526.2	<LOD	3.5	43629.5	43629.5	8596.6	8596.6	2370.4	2370.4
DU 2-3.2	2	2026.2	2026.2	<LOD	5.5	5.3	5.3	2.5	2.5	40.7	40.7	47.2	47.2	35.9	35.9	11.2	11.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	5983.6	5983.6	53.0	53.0	27.9	27.9	50.5	50.5	<LOD	30.0	25349.2	25349.2	1437.7	1437.7	<LOD	35.0	25.6	25.6	443.5	443.5	<LOD	3.5	44452.4	44452.4	9883.3	9883.3	2168.9	2168.9
DU 2-3.3	2	2098.1	2098.1	<LOD	5.5	6.3	6.3	<LOD	5.0	43.6	43.6	48.0	48.0	38.2	38.2	9.8	9.8	<LOD	0.0	<LOD	3.5	8.1	8.1	4911.5	4911.5	32.8	32.8	34.8	34.8	49.7	49.7	<LOD	30.0	25237.4	25237.4	1452.9	1452.9	<LOD	35.0	<LOD	25.0	425.8	425.8	<LOD	3.5	41823.8	41823.8	10568.9	10568.9	2254.8	2254.8
DU 2-3.4	2	2276.5	2276.5	<LOD	5.5	5.1	5.1	<LOD	5.0	45.3	45.3	50.1	50.1	34.4	34.4	16.2	16.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	7418.6	7418.6	46.3	46.3	32.1	32.1	52.1	52.1	<LOD	30.0	25147.6	25147.6	1625.9	1625.9	<LOD	35.0	<LOD	25.0	584.9	584.9	<LOD	3.5	46767.1	46767.1	9899.3	9899.3	2353.1	2353.1
DU 2-3.5	2	2628.8	2628.8	<LOD	5.5	4.2	4.2	<LOD	5.0	60.6	60.6	53.9	53.9	33.4	33.4	15.4	15.4	<LOD	0.0	<LOD	3.5	10.3	10.3	7113.8	7113.8	<LOD	0.0	24.4	24.4	58.5	58.5	<LOD	30.0	29305.4	29305.4	1903.1	1903.1	17.3	17.3	<LOD	25.0	493.4	493.4	<LOD	3.5	60192.2	60192.2	8780.3	8780.3	2808.1	2808.1
DU 2-3.6	2	2311.1	2311.1	<LOD	5.5	6.6	6.6	<LOD	5.0	57.3	57.3	49.5	49.5	33.5	33.5	13.9	13.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	6559.0	6559.0	52.7	52.7	35.9	35.9	41.2	41.2	<LOD	30.0	25466.2	25466.2	1477.2	1477.2	<LOD	35.0	<LOD	25.0	507.3	507.3	<LOD	3.5	47377.7	47377.7	9038.4	9038.4	1995.4	1995.4
DU 2-3.7	2	2716.4	2716.4	<LOD	5.5	5.3	5.3	2.6	2.6	64.1	64.1	55.7	55.7	34.4	34.4	14.9	14.9	<LOD	0.0	<LOD	3.5	7.4	7.4	6951.6	6951.6	<LOD	0.0	34.1	34.1	53.5	53.5	<LOD	30.0	31515.3	31515.3	1873.3	1873.3	<LOD	35.0	40.3	40.3	666.0	666.0	<LOD	3.5	63137.0	63137.0	8552.9	8552.9	2786.6	2786.6
DU 2-3.8	2	2363.5	2363.5	<LOD	5.5	5.3	5.3	<LOD	5.0	51.7	51.7	55.4	55.4	36.3	36.3	11.4	11.4	<LOD	0.0	<LOD	3.5	9.2	9.2	6806.8	6806.8	41.0	41.0	35.9	35.9	49.2	49.2	<LOD	30.0	29545.5	29545.5	1616.2	1616.2	<LOD	35.0	38.2	38.2	634.3	634.3	<LOD	3.5	56895.2	56895.2	11075.0	11075.0	2663.4	2663.4
DU 2-3.9	2	2144.5	2144.5	<LOD	5.5	<LOD	5.0	2.6	2.6	46.5	46.5	48.1	48.1	39.6	39.6	14.5	14.5	<LOD	0.0	<LOD	3.5	8.1	8.1	5724.8	5724.8	<LOD	0.0	34.8	34.8	58.9	58.9	<LOD	30.0	26860.9	26860.9	1588.5	1588.5	<LOD	35.0	26.1	26.1	523.5	523.5	<LOD	3.5	41429.1	41429.1	11021.1	11021.1	2280.3	2280.3
DU 2-4.1	2	626.9	626.9	37.2	37.2	9.5	9.5	7.2	7.2	947.1	947.1	350.8	350.8	122.1	122.1	29.8	29.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	470.3	470.3	33.4	33.4	70.7	70.7	63.3	63.3	223.1	223.1	45719.8	45719.8	1101.6	1101.6	47.2	47.2	132.3	132.3	5266.4	5266.4	<LOD	3.5	39779.2	39779.2	25479.0	25479.0	1479.0	1479.0
DU 2-4.2	2	729.5	729.5	42.9	42.9	8.2	8.2	11.3	11.3	987.2	987.2	359.3	359.3	118.9	118.9	25.5	25.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	557.6	557.6	45.6	45.6	77.7	77.7	67.7	67.7	149.1	149.1	46547.2	46547.2	1147.8	1147.8	42.5	42.5	133.3	133.3	5186.8	5186.8	<LOD	3.5	40746.0	40746.0	25869.9	25869.9	1924.6	1924.6
DU 2-4.3	2	581.6	581.6	21.3	21.3	8.5	8.5	8.8	8.8	992.3	992.3	358.6	358.6	120.3	120.3	23.0	23.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	567.6	567.6	37.6	37.6	65.6	65.6	66.7	66.7	215.8	215.8	53087.7	53087.7	1011.7	1011.7	50.0	50.0	133.0	133.0	4580.3	4580.3	<LOD	3.5	40384.4	40384.4	25992.5	25992.5	967.1	967.1
DU 2-4.4	2	583.8	583.8	33.3	33.3	9.4	9.4	9.3	9.3	941.1	941.1	358.6	358.6	121.8	121.8	24.7	24.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	616.0	616.0	31.9	31.9	66.5	66.5	64.2	64.2	130.2	130.2	47352.1	47352.1	1014.5	1014.5	69.0	69.0	104.6	104.6	4453.2	4453.2	<LOD	3.5	39764.2	39764.2	25076.6	25076.6	1184.6	1184.6
DU 2-4.5	2	590.3	590.3	25.1	25.1	10.1	10.1	8.8	8.8	766.7	766.7	354.1	354.1	118.1	118.1	24.1	24.1	3.7	3.7	<LOD	3.5	<LOD	5.0	568.6	568.6	<LOD	0.0	76.8	76.8	74.1	74.1	<LOD	30.0	44838.9	44838.9	1057.7	1057.7	40.6	40.6	121.4	121.4	4933.6	4933.6	<LOD	3.5	39450.7	39450.7	26728.1	26728.1	1270.7	1270.7
DU 2-4.6	2	576.7	576.7	26.9	26.9	7.8	7.8	7.7	7.7	867.8	867.8	361.1	361.1	120.9	120.9	26.7	26.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	619.9	619.9	28.2	28.2	101.4	101.4	60.4	60.4	179.8	179.8	47915.7	47915.7	1084.4	1084.4	44.8	44.8	139.4	139.4	5183.5	5183.5	<LOD	3.5	39450.8	39450.8	25857.9	25857.9	1277.3	1277.3
DU 2-4.7	2	649.9	649.9	22.7	22.7	11.3	11.3	10.4	10.4	1300.5	1300.5	366.8	366.8	117.2	117.2	45.1	45.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	602.4	602.4	55.1	55.1	73.5	73.5	67.4	67.4	260.9	260.9	47021.6	47021.6	1083.9	1083.9	60.7	60.7	121.1	121.1	5285.0	5285.0	<LOD	3.5	41036.4	41036.4	26426.2	26426.2	1063.1	1063.1
DU 2-4.8	2	554.7	554.7	27.2	27.2	13.0	13.0	<LOD	5.0	1021.2	1021.2	349.7	349.7	114.8	114.8	34.4	34.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	574.4	574.4	30.0	30.0	66.7	66.7	56.6	56.6	189.3	189.3	48503.1	48503.1	1107.3	1107.3	40.4	40.4	134.3	134.3	5255.5	5255.5	75.4	75.4	38067.8	38067.8	25204.4	25204.4	812.8	812.8
DU 2-4.9	2	549.7	549.7	19.7	19.7	13.2	13.2	6.8	6.8	794.3	794.3	344.8	344.8	120.9	120.9	38.4	38.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	471.9	471.9	32.6	32.6	71.7	71.7	65.9	65.9	172.2	172.2	49806.3	49806.3	1019.1	1019.1	45.1	45.1	110.1	110.1	5269.6	5269.6	<LOD	3.5	39978.7	39978.7	25710.4	25710.4	1145.2	1145.2
DU 2-5.1	2	10825.5	10825.5	<LOD	5.5	9.8	9.8	3.6	3.6	56.9	56.9	264.3	264.3	46.8	46.8	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	7849.1	7849.1	80.8	80.8	98.9	98.9	105.6	105.6	<LOD	30.0	51613.5	51613.5	6222.4	6222.4	42.3	42.3	<LOD	25.0	589.0	589.0	<LOD	3.5	70315.7	70315.7	11132.5	11132.5	8916.9	8916.9
DU 2-5.2	2	10482.2	10482.2	<LOD	5.5	7.9	7.9	3.7	3.7	51.2	51.2	264.5	264.5	47.2	47.2	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	7683.6	7683.6	74.4	74.4	98.2	98.2	100.8	100.8	<LOD	30.0	50426.6	50426.6	5923.2	5923.2	55.4	55.4	<LOD	25.0	531.2	531.2	<LOD	3.5	68036.7	68036.7	11374.8	11374.8	8055.9	8055.9
DU 2-5.3	2	10197.2	10197.2	<LOD	5.5	6.7	6.7	<LOD	5.0	56.6	56.6	260.6	260.6	48.0	48.0	29.0	29.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	7250.5	7250.5	52.9	52.9	99.9	99.9	101.0	101.0	<LOD	30.0	48834.2	48834.2	5554.1	5554.1	43.8	43.8	<LOD	25.0	537.1	537.1	<LOD	3.5	68806.0	68806.0	11798.9	11798.9	8308.7	8308.7
DU 2-5.4	2	10242.2	10242.2	<LOD	5.5	6.6	6.6	4.8	4.8	56.5	56.5	252.0	252.0	47.1	47.1	27.9	27.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	7865.7	7865.7	57.4	57.4	100.3	100.3	95.8	95.8	<LOD	30.0	48677.5	48677.5	5557.9	5557.9	50.1	50.1	<LOD	25.0	566.0	566.0	<LOD	3.5	62470.9	62470.9	10770.8	10770.8	7474.0	7474.0
DU 2-5.5	2	9552.6	9552.6	<LOD	5.5	<LOD	5.0	3.8	3.8	67.0	67.0	238.5	238.5	47.5	47.5	35.8	35.8	9.0	9.0	<LOD	3.5	17.0	17.0	7309.6	7309.6	<LOD	0.0	101.1	101.1	92.5	92.5	<LOD	30.0	47211.1	47211.1	5213.5	5213.5	49.4	49.4	<LOD	25.0	456.5	456.5	<LOD	3.5	65888.9	65888.9	11324.0	11324.0	7471.5	7471.5
DU 2-5.6	2	9914.1	9914.1	<LOD	5.5	9.0	9.0	5.6	5.6	53.9	53.9	247.5	247.5	47.1	47.1	39.5	39.5	9.7	9.7	<LOD	3.5	<LOD	5.0	7216.2	7216.2	<LOD	0.0	94.1	94.1	96.5	96.5	<LOD	30.0	48695.0	48695.0	5399.6	5399.6	47.3	47.3	<LOD	25.0	350.2	350.2	<LOD	3.5	63732.1	63732.1	10059.5	10059.5	7795.3	7795.3
DU 2-5.7	2	10389.7	10389.7	<LOD	5.5	9.7	9.7	5.6	5.6	47.5	47.5	256.7	256.7	46.2	46.2	37.9	37.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	7227.0	7227.0	<LOD	0.0	101.4	101.4	84.5	84.5	<LOD	30.0	48561.1	48561.1	5703.7	5703.7	47.0	47.0	<LOD	25.0	695.9	695.9	<LOD	3.5	67353.9	67353.9	11119.5	11119.5	7871.1	7871.1
DU 2-5.8	2	10234.7	10234.7	<LOD	5.5	6.9	6.9	3.8	3.8	59.7	59.7	256.5	256.5	46.1	46.1	57.0	57.0	9.8	9.8	<LOD	3.5	<LOD	5.0	7671.8	7671.8	<LOD	0.0	98.7	98.7	95.8	95.8	<LOD	30.0	48733.3	48733.3	5510.1	5510.1	46.8	46.8	<LOD	25.0	472.4	472.4	<LOD	3.5	66452.8	66452.8	11211.1	11211.1	8356.2	8356.2
DU 2-5.9	2	10014.3	10014.3	<LOD	5.5	6.7	6.7	3.5	3.5	51.0	51.0	255.7	255.7	50.4	50.4	37.5	37.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	7605.1	7605.1	<LOD	0.0	85.1	85.1	94.0	94.0	<LOD	30.0	49285.2	49285.2	5643.8	5643.8	40.0	40.0	<LOD	25.0	514.7	514.7	<LOD	3.5	69417.7	69417.7	12061.1	12061.1	7764.7	7764.7
DU 2-6.1	2	9660.7	9660.7	<LOD	5.5	10.0	10.0	<LOD	5.0	251.3	251.3	127.5	127.5	47.8	47.8	63.0	63.0	11.6	11.6	<LOD	3.5	<LOD	5.0	8499.3	8499.3	<LOD	0.0	45.9	45.9	87.5	87.5	<LOD	30.0	47855.3	47855.3	4019.1	4019.1	29.6	29.6	56.7	56.7	1316.8	1316.8	<LOD	3.5	57231.5	57231.5	13188.1	13188.1	7436.9	7436.9
DU 2-6.2	2	3457.8	3457.8	<LOD	5.5	7.3	7.3	<LOD	5.0	74.7	74.7	83.4	83.4	53.0	53.0	29.4	29.4	<LOD	0.0	<LOD	3.5	8.3	8.3	4672.8	4672.8	<LOD	0.0	21.9	21.9	49.6	49.6	<LOD	30.0	25174.6	25174.6	1645.7	1645.7	<LOD	35.0	34.3	34.3	1057.3	1057.3	<LOD	3.5	46101.0	46101.0	13696.1	13696.1	4043.9	4043.9
DU 2-6.3	2	5051.1	5051.1	<LOD	5.5	6.7	6.7	<LOD	5.0	133.2	133.2	95.2	95.2	49.1	49.1	50.4	50.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	5969.4	5969.4	<LOD	0.0	34.2	34.2	58.6	58.6	<LOD	30.0	29356.4	29356.4	2179.8	2179.8	<LOD	35.0	51.4	51.4	1277.5	1277.5	<LOD	3.5	47034.6	47034.6	14166.7	14166.7	5153.2	5153.2
DU 2-6.4	2	4268.6	4268.6	<LOD	5.5	7.5	7.5	<LOD	5.0	75.0	75.0	89.3	89.3	47.5	47.5	38.6	38.6	<LOD	0.0	<LOD	3.5	7.8	7.8	6338.0	6338.0	<LOD	0.0	30.9	30.9	58.6	58.6	<LOD	30.0	29430.1	29430.1	2202.6	2202.6	18.2	18.2	<LOD	25.0	804.8	804.8	<LOD	3.5	47172.2	47172.2	13084.5	13084.5	4596.5	4596.5
DU 2-6.5	2	5982.1	5982.1	<LOD	5.5	8.2	8.2	<LOD	5.0	171.5	171.5	111.4	111.4	51.3	51.3	40.4	40.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	6903.5	6903.5	<LOD	0.0	42.6	42.6	67.0	67.0	<LOD	30.0	34370.2	34370.2	2759.0	2759.0	19.6	19.6	<LOD	25.0	801.5	801.5	<LOD	3.5	49516.8	49516.8	14202.3	14202.3	5406.8	5406.8
DU 2-6.6	2	5433.6	5433.6	<LOD	5.5	10.1	10.1	3.3	3.3	121.6	121.6	92.9	92.9	43.2	43.2	43.3	43.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	6580.7	6580.7	<LOD	0.0	24.2	24.2	28.5	28.5	<LOD	30.0	30702.9	30702.9	2178.6	2178.6	27.3	27.3	<LOD	25.0	507.8	507.8	<LOD	3.5	32301.0	32301.0	8578.1	8578.1	3611.7	3611.7
DU 2-6.7	2	6873.8	6873.8	122.0	122.0	7.0	7.0	<LOD	5.0	153.0	153.0	103.7	103.7	49.0	49.0	47.8	47.8	<LOD	0.0	<LOD	3.5	13.1	13.1	7930.9	7930.9	<LOD	0.0	34.2	34.2	83.0	83.0	<LOD	30.0	41666.6	41666.6	3539.2	3539.2	<LOD	35.0	58.0	58.0	1203.0	1203.0	<LOD	3.5	54703.5	54703.5	11838.0	11838.0	7761.9	7761.9
DU 2-6.8	2	3938.8	3938.8	<LOD	5.5	10.2	10.2	<LOD	5.0	80.0	80.0	82.0	82.0	48.6	48.6	29.2	29.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	5516.6	5516.6	<LOD	0.0	24.0	24.0	57.0	57.0	<LOD	30.0	29036.5	29036.5	1924.3	1924.3	25.4	25.4	<LOD	25.0	907.1	907.1	<LOD	3.5	43318.4	43318.4	12767.0	12767.0	3687.0	3687.0
DU 2-6.9	2	7234.3	7234.3	<LOD	5.5	7.0	7.0	<LOD	5.0	138.7	138.7	118.7	118.7	53.2	53.2	51.1	51.1	7.7	7.7	<LOD	3.5	<LOD	5.0	7657.0	7657.0	<LOD	0.0	45.6	45.6	82.9	82.9	<LOD	30.0	44829.5	44829.5	3551.4	3551.4	26.0	26.0	<LOD	25.0	1426.1	1426.1	<LOD	3.5	59566.8	59566.8	13318.3	13318.3	6824.6	6824.6
DU 2-7.1	2	6661.4	6661.4	<LOD	5.5	6.1	6.1	3.0	3.0	76.6	76.6	99.2	99.2	36.9	36.9	41.9	41.9	<LOD	0.0	<LOD	3.5	10.1	10.1	4441.1	4441.1	<LOD	0.0	35.6	35.6	65.9	65.9	<LOD	30.0	40551.8	40551.8	3485.5	3485.5	17.9	17.9	<LOD	25.0	532.4	532.4	<LOD	3.5	47304.5	47304.5	9204.1	9204.1	6148.3	6148.3
DU 2-7.2	2	4703.0	4703.0	<LOD	5.5	6.9	6.9	5.1	5.1	58.1	58.1	82.3	82.3	42.1	42.1	41.2	41.2	5.7	5.7	<LOD	3.5	<LOD	5.0	3575.6	3575.6	39.2	39.2	26.1	26.1	47.0	47.0	<LOD	30.0	26811.5	26811.5	1906.8	1906.8	25.0	25.0	<LOD	25.0	461.4	461.4	<LOD	3.5	34843.2	34843.2	9755.3	9755.3	3770.5	3770.5
DU 2-7.3	2	8722.0	8722.0	63.1	63.1	7.7	7.7	3.8	3.8	73.7	73.7	121.6	121.6	41.2	41.2	63.6	63.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	5274.5	5274.5	<LOD	0.0	45.1	45.1	81.9	81.9	<LOD	30.0	50446.5	50446.5	4468.5	4468.5	<LOD	35.0	45.7	45.7	756.0	756.0	<LOD	3.5	52798.4	52798.4	11044.8	11044.8	7861.7	7861.7
DU 2-7.4	2	5502.4	5502.4	<LOD	5.5	8.2	8.2	3.1	3.1	65.7	65.7	94.2	94.2	40.2	40.2	37.8	37.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	3851.0	3851.0	<LOD	0.0	23.6	23.6	56.4	56.4	<LOD	30.0	34685.0	34685.0	2799.7	2799.7	<LOD	35.0	36.3	36.3	522.3	522.3	<LOD	3.5	43336.6	43336.6	10694.0	10694.0	5193.2	5193.2
DU 2-7.5	2	4841.5	4841.5	<LOD	5.5	6.8	6.8	2.9	2.9	58.2	58.2	91.1	91.1	43.0	43.0	29.3	29.3	8.7	8.7	<LOD	3.5	<LOD	5.0	3640.4	3640.4	<LOD	0.0	27.5	27.5	58.1	58.1	<LOD	30.0	31647.6	31647.6	2534.6	2534.6	<LOD	35.0	<LOD	25.0	1004.1	1004.1	<LOD	3.5	52985.5	52985.5	10383.3	10383.3	5761.1	5761.1
DU 2-7.6	2	4837.4	4837.4	<LOD	5.5	7.1	7.1	<LOD	5.0	50.9	50.9	86.9	86.9	42.2	42.2	33.2	33.2	<LOD	0.0	<LOD	3.5	7.5	7.5	3471.5	3471.5	<LOD	0.0	35.6	35.6	53.5	53.5	<LOD	30.0	29818.2	29818.2	2182.7	2182.7	<LOD	35.0	<LOD	25.0	527.4	527.4	<LOD	3.5	46414.0	46414.0	10788.0	10788.0	4928.6	4928.6
DU 2-7.7	2	6430.8	6430.8	<LOD	5.5	7.4	7.4	<LOD	5.0	75.1	75.1	113.4	113.4	43.9	43.9	55.8	55.8	7.5	7.5	<LOD	3.5	<LOD	5.0	4370.3	4370.3	<LOD	0.0	27.3	27.3	65.1	65.1	<LOD	30.0	37318.7	37318.7	3287.3	3287.3	<LOD	35.0	<LOD	25.0	585.5	585.5	<LOD	3.5	49109.5	49109.5	9642.8	9642.8	6589.3	6589.3
DU 2-7.8	2	7000.7	7000.7	<LOD	5.5	7.0	7.0	4.8	4.8	61.8	61.8	110.3	110.3	40.4	40.4	57.8	57.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	4375.0	4375.0	<LOD	0.0	36.1	36.1	66.9	66.9	<LOD	30.0	38734.4	38734.4	3261.5	3261.5	17.1	17.1	<LOD	25.0	635.7	635.7	<LOD	3.5	50590.4	50590.4	9443.1	9443.1	6214.2	6214.2
DU 2-7.9	2	6821.7	6821.7	<LOD	5.5	5.7	5.7	<LOD	5.0	59.2	59.2	105.9	105.9	40.8	40.8	45.7	45.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	4236.3	4236.3	<LOD	0.0	22.4	22.4	67.7	67.7	<LOD	30.0	40580.4	40580.4	3456.9	3456.9	<LOD	35.0	47.4	47.4	671.7	671.7	<LOD	3.5	52166.3	52166.3	10250.5	10250.5	6723.6	6723.6
DU 2-7-A.1	2	9843.1	9843.1	<LOD	5.5	7.2	7.2	6.5	6.5	83.9	83.9	129.9	129.9	43.4	43.4	25.6	25.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	5436.5	5436.5	<LOD	0.0	47.1	47.1	74.5	74.5	<LOD	30.0	47259.3	47259.3	3842.0	3842.0	23.1	23.1	<LOD	25.0	594.3	594.3	<LOD	3.5	48993.7	48993.7	9643.4	9643.4	7514.4	7514.4
DU 2-7-A.2	2	8706.0	8706.0	<LOD	5.5	7.2	7.2	3.8	3.8	69.3	69.3	121.4	121.4	44.7	44.7	23.5	23.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	4689.4	4689.4	<LOD	0.0	46.0	46.0	76.1	76.1	<LOD	30.0	44521.8	44521.8	3912.6	3912.6	<LOD	35.0	41.0	41.0	489.2	489.2	<LOD	3.5	52444.0	52444.0	9890.2	9890.2	7467.0	7467.0
DU 2-7-A.3	2	9058.7	9058.7	<LOD	5.5	7.8	7.8	5.4	5.4	71.2	71.2	123.8	123.8	43.3	43.3	30.7	30.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	4814.0	4814.0	47.6	47.6	38.4	38.4	63.3	63.3	<LOD	30.0	43741.1	43741.1	3744.0	3744.0	<LOD	35.0	<LOD	25.0	597.3	597.3	<LOD	3.5	51768.9	51768.9	11140.1	11140.1	6643.2	6643.2
DU 2-7-A.4	2	8502.5	8502.5	<LOD	5.5	6.3	6.3	7.0	7.0	77.3	77.3	119.9	119.9	43.2	43.2	28.4	28.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	4810.5	4810.5	<LOD	0.0	33.2	33.2	49.3	49.3	<LOD	30.0	44234.5	44234.5	3522.6	3522.6	31.4	31.4	<LOD	25.0	516.6	516.6	<LOD	3.5	38999.0	38999.0	9171.9	9171.9	5335.1	5335.1
DU 2-7-A.5	2	6755.1	6755.1	<LOD	5.5	5.9	5.9	4.3	4.3	54.5	54.5	108.0	108.0	44.7	44.7	23.8	23.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	4559.9	4559.9	<LOD	0.0	40.0	40.0	60.3	60.3	<LOD	30.0	39621.7	39621.7	3359.3	3359.3	<LOD	35.0	<LOD	25.0	645.2	645.2	<LOD	3.5	48634.4	48634.4	10915.1	10915.1	6443.3	6443.3
DU 2-7-A.6	2	6019.4	6019.4	<LOD	5.5	7.2	7.2	4.2	4.2	52.0	52.0	100.3	100.3	43.9	43.9	31.9	31.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	3830.2	3830.2	<LOD	0.0	27.8	27.8	60.2	60.2	<LOD	30.0	33528.2	33528.2	2751.1	2751.1	<LOD	35.0	<LOD	25.0	554.0	554.0	<LOD	3.5	49765.1	49765.1	11198.2	11198.2	5972.1	5972.1
DU 2-7-A.7	2	8002.0	8002.0	<LOD	5.5	<LOD	5.0	<LOD	5.0	74.0	74.0	117.3	117.3	45.0	45.0	30.9	30.9	9.1	9.1	<LOD	3.5	<LOD	5.0	4798.9	4798.9	51.2	51.2	39.0	39.0	74.3	74.3	<LOD	30.0	41564.4	41564.4	3499.5	3499.5	<LOD	35.0	<LOD	25.0	542.8	542.8	<LOD	3.5	50829.8	50829.8	11577.7	11577.7	7360.5	7360.5
DU 2-7-A.8	2	7132.2	7132.2	<LOD	5.5	6.6	6.6	4.0	4.0	63.8	63.8	107.3	107.3	44.0	44.0	29.6	29.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	4717.3	4717.3	<LOD	0.0	33.9	33.9	78.3	78.3	<LOD	30.0	39943.6	39943.6	3247.9	3247.9	<LOD	35.0	44.0	44.0	687.2	687.2	<LOD	3.5	50213.3	50213.3	10651.3	10651.3	6492.3	6492.3
DU 2-7-A.9	2	8121.4	8121.4	<LOD	5.5	<LOD	5.0	5.5	5.5	76.9	76.9	118.8	118.8	41.3	41.3	27.0	27.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	4696.3	4696.3	<LOD	0.0	30.8	30.8	67.7	67.7	<LOD	30.0	46324.5	46324.5	3994.0	3994.0	20.2	20.2	<LOD	25.0	571.9	571.9	<LOD	3.5	48654.5	48654.5	10380.2	10380.2	7618.8	7618.8
DU 2-8.1	2	6081.3	6081.3	<LOD	5.5	9.6	9.6	3.0	3.0	61.4	61.4	104.4	104.4	46.7	46.7	28.2	28.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	6775.8	6775.8	<LOD	0.0	28.6	28.6	49.3	49.3	<LOD	30.0	29418.1	29418.1	2505.9	2505.9	20.0	20.0	<LOD	25.0	574.3	574.3	<LOD	3.5	44484.6	44484.6	10405.7	10405.7	4574.5	4574.5
DU 2-8.2	2	8274.6	8274.6	<LOD	5.5	8.5	8.5	<LOD	5.0	93.2	93.2	115.2	115.2	44.4	44.4	44.4	44.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	7154.4	7154.4	<LOD	0.0	34.5	34.5	57.3	57.3	<LOD	30.0	38063.4	38063.4	2979.4	2979.4	<LOD	35.0	<LOD	25.0	557.1	557.1	<LOD	3.5	49581.3	49581.3	10565.8	10565.8	5698.4	5698.4
DU 2-8.3	2	12804.4	12804.4	289.3	289.3	11.4	11.4	<LOD	5.0	112.3	112.3	132.0	132.0	42.1	42.1	62.6	62.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	9503.7	9503.7	<LOD	0.0	28.8	28.8	87.3	87.3	<LOD	30.0	46197.7	46197.7	4394.2	4394.2	24.7	24.7	<LOD	25.0	950.0	950.0	<LOD	3.5	58178.7	58178.7	10519.1	10519.1	11224.4	11224.4
DU 2-8.4	2	7923.3	7923.3	<LOD	5.5	9.0	9.0	<LOD	5.0	69.6	69.6	111.5	111.5	46.1	46.1	42.3	42.3	<LOD	0.0	<LOD	3.5	9.1	9.1	7897.0	7897.0	<LOD	0.0	36.0	36.0	65.2	65.2	<LOD	30.0	38069.6	38069.6	3535.0	3535.0	<LOD	35.0	<LOD	25.0	799.5	799.5	<LOD	3.5	53091.1	53091.1	11001.1	11001.1	7140.2	7140.2
DU 2-8.5	2	7966.8	7966.8	<LOD	5.5	7.7	7.7	4.9	4.9	80.8	80.8	109.6	109.6	41.7	41.7	40.5	40.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	7855.8	7855.8	<LOD	0.0	29.8	29.8	71.3	71.3	<LOD	30.0	35269.6	35269.6	3341.6	3341.6	23.3	23.3	<LOD	25.0	696.3	696.3	<LOD	3.5	51326.2	51326.2	10056.6	10056.6	6469.7	6469.7
DU 2-8.6	2	8032.0	8032.0	<LOD	5.5	7.9	7.9	<LOD	5.0	82.7	82.7	107.6	107.6	44.3	44.3	55.8	55.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	7338.6	7338.6	<LOD	0.0	25.6	25.6	61.0	61.0	<LOD	30.0	37145.4	37145.4	3154.7	3154.7	24.8	24.8	<LOD	25.0	710.8	710.8	<LOD	3.5	52416.3	52416.3	10920.1	10920.1	6489.9	6489.9
DU 2-8.7	2	7942.8	7942.8	<LOD	5.5	7.0	7.0	<LOD	5.0	78.6	78.6	111.1	111.1	44.8	44.8	41.2	41.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	7692.1	7692.1	<LOD	0.0	31.4	31.4	71.4	71.4	<LOD	30.0	37114.6	37114.6	3485.6	3485.6	21.2	21.2	<LOD	25.0	671.3	671.3	<LOD	3.5	50360.4	50360.4	10551.8	10551.8	6868.0	6868.0
DU 2-8.8	2	8277.6	8277.6	<LOD	5.5	7.3	7.3	3.4	3.4	65.7	65.7	117.3	117.3	45.3	45.3	51.9	51.9	<LOD	0.0	<LOD	3.5	12.2	12.2	8532.2	8532.2	<LOD	0.0	29.6	29.6	79.1	79.1	<LOD	30.0	39901.3	39901.3	3857.7	3857.7	22.6	22.6	<LOD	25.0	691.9	691.9	<LOD	3.5	54413.5	54413.5	10635.3	10635.3	7390.5	7390.5
DU 2-8.9	2	9054.0	9054.0	<LOD	5.5	6.2	6.2	<LOD	5.0	83.1	83.1	115.4	115.4	40.4	40.4	34.3	34.3	<LOD	0.0	<LOD	3.5	12.8	12.8	8570.1	8570.1	<LOD	0.0	26.1	26.1	61.8	61.8	<LOD	30.0	40201.1	40201.1	4028.1	4028.1	<LOD	35.0	<LOD	25.0	602.6	602.6	<LOD	3.5	52709.7	52709.7	10035.9	10035.9	7766.1	7766.1
DU 2-9.1	2	6684.3	6684.3	<LOD	5.5	8.7	8.7	5.9	5.9	67.9	67.9	76.0	76.0	40.2	40.2	41.1	41.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	6953.4	6953.4	<LOD	0.0	30.3	30.3	49.7	49.7	<LOD	30.0	34194.7	34194.7	2535.6	2535.6	16.2	16.2	<LOD	25.0	620.3	620.3	<LOD	3.5	49186.5	49186.5	9090.2	9090.2	5743.9	5743.9
DU 2-9.2	2	5172.7	5172.7	<LOD	5.5	9.2	9.2	3.4	3.4	51.9	51.9	73.6	73.6	40.8	40.8	23.2	23.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	5183.6	5183.6	36.2	36.2	28.7	28.7	56.9	56.9	<LOD	30.0	27847.9	27847.9	1887.3	1887.3	<LOD	35.0	<LOD	25.0	362.0	362.0	<LOD	3.5	46207.1	46207.1	9953.7	9953.7	4829.4	4829.4
DU 2-9.3	2	6629.4	6629.4	<LOD	5.5	8.8	8.8	<LOD	5.0	58.0	58.0	81.3	81.3	39.3	39.3	37.9	37.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	7418.4	7418.4	<LOD	0.0	37.2	37.2	43.8	43.8	<LOD	30.0	34052.7	34052.7	2631.3	2631.3	35.4	35.4	<LOD	25.0	551.1	551.1	<LOD	3.5	50051.4	50051.4	8248.4	8248.4	5802.5	5802.5
DU 2-9.4	2	8119.9	8119.9	<LOD	5.5	6.9	6.9	3.2	3.2	64.1	64.1	92.1	92.1	41.8	41.8	48.7	48.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	6710.3	6710.3	<LOD	0.0	30.3	30.3	52.5	52.5	<LOD	30.0	36662.6	36662.6	3005.3	3005.3	22.0	22.0	<LOD	25.0	608.5	608.5	<LOD	3.5	57300.3	57300.3	8559.3	8559.3	6965.3	6965.3
DU 2-9.5	2	6307.4	6307.4	115.6	115.6	5.5	5.5	<LOD	5.0	56.0	56.0	74.3	74.3	36.8	36.8	37.9	37.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	6619.8	6619.8	39.5	39.5	33.1	33.1	54.1	54.1	<LOD	30.0	31993.1	31993.1	2532.0	2532.0	22.7	22.7	<LOD	25.0	470.4	470.4	<LOD	3.5	57777.9	57777.9	8436.2	8436.2	7259.0	7259.0
DU 2-9.6	2	5617.7	5617.7	<LOD	5.5	5.6	5.6	<LOD	5.0	53.4	53.4	72.0	72.0	42.6	42.6	27.1	27.1	7.6	7.6	<LOD	3.5	10.9	10.9	6363.9	6363.9	<LOD	0.0	27.3	27.3	60.2	60.2	<LOD	30.0	29998.2	29998.2	2284.0	2284.0	<LOD	35.0	<LOD	25.0	513.4	513.4	<LOD	3.5	59171.4	59171.4	10149.3	10149.3	6235.1	6235.1
DU 2-9.7	2	6012.3	6012.3	<LOD	5.5	5.4	5.4	<LOD	5.0	61.0	61.0	79.3	79.3	39.7	39.7	35.1	35.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	6307.3	6307.3	<LOD	0.0	36.5	36.5	47.9	47.9	<LOD	30.0	30520.1	30520.1	2398.3	2398.3	<LOD	35.0	<LOD	25.0	457.6	457.6	<LOD	3.5	56115.2	56115.2	9106.3	9106.3	5824.1	5824.1
DU 2-9.8	2	4700.0	4700.0	<LOD	5.5	5.7	5.7	<LOD	5.0	61.4	61.4	68.2	68.2	42.7	42.7	30.7	30.7	<LOD	0.0	<LOD	3.5	13.3	13.3	5283.4	5283.4	<LOD	0.0	26.2	26.2	61.0	61.0	<LOD	30.0	29599.4	29599.4	1991.3	1991.3	<LOD	35.0	<LOD	25.0	493.6	493.6	<LOD	3.5	44391.2	44391.2	10631.7	10631.7	5233.5	5233.5
DU 2-9.9	2	7364.3	7364.3	<LOD	5.5	8.6	8.6	3.8	3.8	52.0	52.0	84.9	84.9	40.5	40.5	51.0	51.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	7009.0	7009.0	<LOD	0.0	31.1	31.1	75.9	75.9	<LOD	30.0	31786.0	31786.0	2197.3	2197.3	<LOD	35.0	<LOD	25.0	618.2	618.2	<LOD	3.5	57273.1	57273.1	9612.0	9612.0	5531.2	5531.2
DU 2-10.1	2	6574.1	6574.1	72.4	72.4	10.5	10.5	<LOD	5.0	57.5	57.5	108.7	108.7	47.9	47.9	42.6	42.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	11408.1	11408.1	65.1	65.1	154.4	154.4	80.4	80.4	<LOD	30.0	54125.6	54125.6	4872.6	4872.6	33.7	33.7	<LOD	25.0	692.3	692.3	<LOD	3.5	72031.5	72031.5	10421.0	10421.0	5945.4	5945.4
DU 2-10.2	2	6491.5	6491.5	<LOD	5.5	761.9	761.9	79.1	79.1	275.8	275.8	292.9	292.9	349.6	349.6	777.1	777.1	249.6	249.6	239.9	239.9	357.3	357.3	11340.0	11340.0	762.0	762.0	1058.1	1058.1	500.7	500.7	1149.2	1149.2	48307.2	48307.2	5210.2	5210.2	36.1	36.1	57.9	57.9	661.7	661.7	<LOD	3.5	70971.8	70971.8	10588.4	10588.4	6096.0	6096.0
DU 2-10.3	2	6219.6	6219.6	<LOD	5.5	8.3	8.3	3.0	3.0	57.8	57.8	109.3	109.3	45.1	45.1	36.9	36.9	<LOD	0.0	<LOD	3.5	12.4	12.4	11032.4	11032.4	<LOD	0.0	114.3	114.3	66.5	66.5	<LOD	30.0	51970.9	51970.9	4405.6	4405.6	44.2	44.2	<LOD	25.0	639.0	639.0	<LOD	3.5	64930.6	64930.6	9521.8	9521.8	4656.3	4656.3
DU 2-10.4	2	6242.5	6242.5	<LOD	5.5	7.2	7.2	3.3	3.3	54.4	54.4	103.9	103.9	48.5	48.5	29.0	29.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	11103.8	11103.8	<LOD	0.0	83.4	83.4	86.7	86.7	<LOD	30.0	55528.7	55528.7	4845.0	4845.0	23.2	23.2	<LOD	25.0	722.0	722.0	<LOD	3.5	64986.1	64986.1	10593.8	10593.8	5480.3	5480.3
DU 2-10.5	2	6100.2	6100.2	<LOD	5.5	8.1	8.1	<LOD	5.0	44.9	44.9	103.4	103.4	41.8	41.8	33.8	33.8	7.5	7.5	<LOD	3.5	<LOD	5.0	11242.9	11242.9	49.9	49.9	112.3	112.3	66.2	66.2	<LOD	30.0	52076.9	52076.9	5060.5	5060.5	30.1	30.1	<LOD	25.0	556.4	556.4	<LOD	3.5	63848.6	63848.6	9628.8	9628.8	5114.7	5114.7
DU 2-10.6	2	6872.1	6872.1	<LOD	5.5	7.8	7.8	4.8	4.8	56.9	56.9	108.8	108.8	46.4	46.4	36.1	36.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	11284.3	11284.3	65.2	65.2	113.0	113.0	88.0	88.0	<LOD	30.0	55221.3	55221.3	5079.0	5079.0	19.4	19.4	<LOD	25.0	727.2	727.2	<LOD	3.5	72358.4	72358.4	10166.0	10166.0	5091.3	5091.3
DU 2-10.7	2	6427.9	6427.9	<LOD	5.5	10.0	10.0	<LOD	5.0	91.2	91.2	109.5	109.5	44.5	44.5	38.4	38.4	<LOD	0.0	<LOD	3.5	12.1	12.1	11417.7	11417.7	<LOD	0.0	104.4	104.4	70.6	70.6	<LOD	30.0	52881.1	52881.1	4960.6	4960.6	36.9	36.9	<LOD	25.0	708.1	708.1	<LOD	3.5	71281.5	71281.5	11080.8	11080.8	5550.3	5550.3
DU 2-10.8	2	6420.0	6420.0	<LOD	5.5	5.4	5.4	3.2	3.2	44.8	44.8	102.4	102.4	47.3	47.3	37.9	37.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	11491.3	11491.3	<LOD	0.0	97.9	97.9	81.0	81.0	<LOD	30.0	52188.6	52188.6	4429.5	4429.5	34.1	34.1	<LOD	25.0	530.2	530.2	<LOD	3.5	61385.4	61385.4	9498.1	9498.1	4732.4	4732.4
DU 2-10.9	2	6585.4	6585.4	<LOD	5.5	8.2	8.2	3.1	3.1	51.3	51.3	105.6	105.6	44.4	44.4	38.3	38.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	11592.9	11592.9	<LOD	0.0	96.3	96.3	75.4	75.4	<LOD	30.0	52854.3	52854.3	4775.1	4775.1	37.4	37.4	48.8	48.8	718.7	718.7	<LOD	3.5	65580.3	65580.3	9874.3	9874.3	5219.2	5219.2
DU 2-11.1	2	9036.5	9036.5	<LOD	5.5	7.6	7.6	8.2	8.2	142.4	142.4	123.5	123.5	43.6	43.6	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	13136.9	13136.9	91.7	91.7	108.3	108.3	122.3	122.3	<LOD	30.0	77239.5	77239.5	7956.4	7956.4	25.0	25.0	<LOD	25.0	974.1	974.1	<LOD	3.5	65093.0	65093.0	10288.4	10288.4	6993.5	6993.5
DU 2-11.2	2	6909.3	6909.3	<LOD	5.5	8.9	8.9	4.1	4.1	108.3	108.3	103.9	103.9	46.4	46.4	19.6	19.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	9282.4	9282.4	56.5	56.5	84.8	84.8	84.4	84.4	<LOD	30.0	57583.0	57583.0	5559.6	5559.6	<LOD	35.0	<LOD	25.0	997.7	997.7	<LOD	3.5	49937.5	49937.5	9464.5	9464.5	5245.2	5245.2
DU 2-11.3	2	7130.4	7130.4	<LOD	5.5	8.6	8.6	5.7	5.7	110.1	110.1	114.8	114.8	45.2	45.2	18.2	18.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	10808.0	10808.0	95.7	95.7	114.0	114.0	85.4	85.4	<LOD	30.0	65827.8	65827.8	6474.2	6474.2	26.4	26.4	<LOD	25.0	1044.4	1044.4	<LOD	3.5	62448.2	62448.2	9804.7	9804.7	6258.6	6258.6
DU 2-11.4	2	6691.5	6691.5	<LOD	5.5	5.6	5.6	4.1	4.1	86.6	86.6	106.5	106.5	42.5	42.5	30.1	30.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	10816.7	10816.7	56.2	56.2	91.6	91.6	84.4	84.4	<LOD	30.0	58391.4	58391.4	5665.6	5665.6	<LOD	35.0	49.5	49.5	1108.3	1108.3	<LOD	3.5	62762.9	62762.9	9769.2	9769.2	6758.8	6758.8
DU 2-11.5	2	9244.0	9244.0	<LOD	5.5	<LOD	5.0	5.3	5.3	144.2	144.2	124.7	124.7	42.2	42.2	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	11796.0	11796.0	73.0	73.0	92.3	92.3	95.9	95.9	<LOD	30.0	71370.1	71370.1	6628.5	6628.5	<LOD	35.0	<LOD	25.0	1053.6	1053.6	<LOD	3.5	69640.3	69640.3	9047.7	9047.7	7000.8	7000.8
DU 2-11.6	2	7467.5	7467.5	<LOD	5.5	9.1	9.1	5.7	5.7	102.9	102.9	116.9	116.9	42.5	42.5	23.2	23.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	10683.7	10683.7	78.5	78.5	85.7	85.7	97.0	97.0	<LOD	30.0	63605.8	63605.8	5437.3	5437.3	<LOD	35.0	<LOD	25.0	1648.0	1648.0	<LOD	3.5	59744.5	59744.5	9631.1	9631.1	6279.2	6279.2
DU 2-11.7	2	6954.3	6954.3	<LOD	5.5	<LOD	5.0	<LOD	5.0	91.2	91.2	101.6	101.6	42.2	42.2	16.7	16.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	9577.1	9577.1	<LOD	0.0	95.3	95.3	78.9	78.9	<LOD	30.0	60748.6	60748.6	6153.7	6153.7	22.8	22.8	<LOD	25.0	973.2	973.2	<LOD	3.5	66263.5	66263.5	9509.1	9509.1	7306.0	7306.0
DU 2-11.8	2	8049.4	8049.4	<LOD	5.5	10.0	10.0	6.8	6.8	131.2	131.2	118.2	118.2	41.8	41.8	28.3	28.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	11882.9	11882.9	60.7	60.7	78.7	78.7	87.9	87.9	<LOD	30.0	63145.0	63145.0	6209.6	6209.6	23.2	23.2	<LOD	25.0	1372.0	1372.0	<LOD	3.5	65138.4	65138.4	9571.0	9571.0	6206.6	6206.6
DU 2-11.9	2	8342.1	8342.1	<LOD	5.5	9.3	9.3	7.5	7.5	103.3	103.3	121.2	121.2	39.6	39.6	19.0	19.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	12036.2	12036.2	55.6	55.6	73.4	73.4	50.4	50.4	<LOD	30.0	72755.6	72755.6	7232.2	7232.2	44.6	44.6	<LOD	25.0	924.1	924.1	<LOD	3.5	50704.0	50704.0	7587.5	7587.5	5305.0	5305.0
DU 2-12.1	2	7954.0	7954.0	<LOD	5.5	11.4	11.4	<LOD	5.0	60.0	60.0	134.2	134.2	42.0	42.0	27.9	27.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	13954.4	13954.4	65.3	65.3	96.2	96.2	77.6	77.6	<LOD	30.0	60887.9	60887.9	6206.1	6206.1	29.6	29.6	<LOD	25.0	569.3	569.3	<LOD	3.5	69413.2	69413.2	10527.3	10527.3	6165.2	6165.2
DU 2-12.2	2	7796.9	7796.9	72.5	72.5	10.2	10.2	5.3	5.3	47.5	47.5	132.3	132.3	41.2	41.2	34.5	34.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	13400.6	13400.6	<LOD	0.0	70.7	70.7	48.9	48.9	<LOD	30.0	59113.1	59113.1	5988.3	5988.3	36.7	36.7	<LOD	25.0	451.1	451.1	<LOD	3.5	55909.0	55909.0	7903.7	7903.7	4630.3	4630.3
DU 2-12.3	2	7832.9	7832.9	<LOD	5.5	<LOD	5.0	5.2	5.2	45.2	45.2	135.7	135.7	43.2	43.2	30.8	30.8	10.4	10.4	<LOD	3.5	<LOD	5.0	13516.8	13516.8	<LOD	0.0	104.6	104.6	56.0	56.0	<LOD	30.0	59417.0	59417.0	5904.1	5904.1	36.4	36.4	<LOD	25.0	540.3	540.3	<LOD	3.5	60047.1	60047.1	8658.0	8658.0	4980.9	4980.9
DU 2-12.4	2	8181.7	8181.7	<LOD	5.5	10.2	10.2	<LOD	5.0	49.4	49.4	137.7	137.7	45.9	45.9	40.0	40.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	13950.3	13950.3	53.4	53.4	90.2	90.2	90.4	90.4	<LOD	30.0	61507.9	61507.9	6185.3	6185.3	33.0	33.0	<LOD	25.0	576.7	576.7	<LOD	3.5	73044.1	73044.1	10480.6	10480.6	6505.1	6505.1
DU 2-12.5	2	7976.0	7976.0	<LOD	5.5	8.3	8.3	<LOD	5.0	50.3	50.3	136.1	136.1	44.3	44.3	39.1	39.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	13772.5	13772.5	<LOD	0.0	90.0	90.0	70.3	70.3	<LOD	30.0	59415.2	59415.2	5855.7	5855.7	47.2	47.2	<LOD	25.0	615.6	615.6	104.4	104.4	63950.7	63950.7	10107.7	10107.7	5338.3	5338.3
DU 2-12.6	2	8110.8	8110.8	<LOD	5.5	11.5	11.5	3.9	3.9	50.3	50.3	133.7	133.7	43.9	43.9	49.4	49.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	13913.8	13913.8	61.4	61.4	89.6	89.6	80.8	80.8	<LOD	30.0	60099.3	60099.3	6013.7	6013.7	35.3	35.3	<LOD	25.0	692.7	692.7	<LOD	3.5	66438.6	66438.6	9760.2	9760.2	6102.7	6102.7
DU 2-12.7	2	7700.8	7700.8	<LOD	5.5	14.2	14.2	3.5	3.5	56.7	56.7	134.2	134.2	42.9	42.9	38.8	38.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	13398.5	13398.5	63.1	63.1	84.9	84.9	80.4	80.4	<LOD	30.0	58176.2	58176.2	5805.8	5805.8	41.8	41.8	<LOD	25.0	512.4	512.4	<LOD	3.5	60243.4	60243.4	9392.6	9392.6	5071.9	5071.9
DU 2-12.8	2	7802.0	7802.0	<LOD	5.5	8.7	8.7	5.0	5.0	49.6	49.6	130.6	130.6	44.3	44.3	42.5	42.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	13394.6	13394.6	<LOD	0.0	77.2	77.2	62.7	62.7	<LOD	30.0	58499.3	58499.3	5846.1	5846.1	42.9	42.9	<LOD	25.0	452.4	452.4	<LOD	3.5	60375.2	60375.2	8725.7	8725.7	5527.3	5527.3
DU 2-12.9	2	7766.8	7766.8	<LOD	5.5	7.5	7.5	<LOD	5.0	51.3	51.3	131.9	131.9	42.7	42.7	30.8	30.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	13270.7	13270.7	<LOD	0.0	86.5	86.5	77.7	77.7	<LOD	30.0	57851.0	57851.0	5654.4	5654.4	28.4	28.4	<LOD	25.0	534.6	534.6	<LOD	3.5	64858.5	64858.5	9439.8	9439.8	5855.4	5855.4
DU 2-13.1	2	6718.0	6718.0	<LOD	5.5	6.1	6.1	<LOD	5.0	51.7	51.7	114.4	114.4	43.3	43.3	53.8	53.8	<LOD	0.0	<LOD	3.5	15.0	15.0	12357.8	12357.8	<LOD	0.0	153.7	153.7	101.3	101.3	<LOD	30.0	58888.0	58888.0	6909.2	6909.2	20.6	20.6	75.5	75.5	1526.4	1526.4	<LOD	3.5	70820.3	70820.3	9940.0	9940.0	7119.4	7119.4
DU 2-13.2	2	6387.3	6387.3	<LOD	5.5	8.7	8.7	<LOD	5.0	87.2	87.2	113.2	113.2	44.8	44.8	48.2	48.2	<LOD	0.0	<LOD	3.5	10.5	10.5	11125.0	11125.0	<LOD	0.0	142.9	142.9	90.8	90.8	<LOD	30.0	55223.2	55223.2	5446.9	5446.9	32.1	32.1	75.2	75.2	1053.8	1053.8	<LOD	3.5	66861.3	66861.3	11235.7	11235.7	7274.7	7274.7
DU 2-13.3	2	6707.5	6707.5	<LOD	5.5	8.8	8.8	<LOD	5.0	98.0	98.0	121.9	121.9	43.0	43.0	40.9	40.9	<LOD	0.0	<LOD	3.5	14.1	14.1	11588.1	11588.1	66.4	66.4	134.9	134.9	93.8	93.8	<LOD	30.0	57110.2	57110.2	5570.9	5570.9	19.3	19.3	62.6	62.6	1400.1	1400.1	<LOD	3.5	65204.8	65204.8	10561.5	10561.5	6803.8	6803.8
DU 2-13.4	2	6650.2	6650.2	<LOD	5.5	10.0	10.0	3.2	3.2	73.4	73.4	120.3	120.3	43.9	43.9	40.3	40.3	<LOD	0.0	<LOD	3.5	13.3	13.3	11253.9	11253.9	<LOD	0.0	156.9	156.9	80.3	80.3	<LOD	30.0	57415.6	57415.6	5839.6	5839.6	41.9	41.9	<LOD	25.0	876.9	876.9	<LOD	3.5	58728.2	58728.2	9416.0	9416.0	6114.2	6114.2
DU 2-13.5	2	5852.1	5852.1	<LOD	5.5	6.1	6.1	3.6	3.6	61.1	61.1	108.9	108.9	46.1	46.1	43.0	43.0	9.6	9.6	<LOD	3.5	<LOD	5.0	12472.3	12472.3	<LOD	0.0	132.7	132.7	93.1	93.1	<LOD	30.0	54271.1	54271.1	4996.0	4996.0	21.5	21.5	<LOD	25.0	666.9	666.9	<LOD	3.5	62029.8	62029.8	9961.3	9961.3	5472.7	5472.7
DU 2-13.6	2	7009.7	7009.7	<LOD	5.5	8.1	8.1	3.8	3.8	79.9	79.9	123.6	123.6	47.6	47.6	49.2	49.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	12108.1	12108.1	50.5	50.5	209.5	209.5	106.7	106.7	<LOD	30.0	58476.9	58476.9	5850.4	5850.4	22.3	22.3	<LOD	25.0	977.1	977.1	<LOD	3.5	58595.0	58595.0	10390.0	10390.0	6567.1	6567.1
DU 2-13.7	2	7137.2	7137.2	<LOD	5.5	7.9	7.9	<LOD	5.0	104.1	104.1	114.4	114.4	46.8	46.8	40.1	40.1	9.2	9.2	<LOD	3.5	13.6	13.6	13188.8	13188.8	<LOD	0.0	170.5	170.5	103.2	103.2	<LOD	30.0	60155.3	60155.3	6098.4	6098.4	32.1	32.1	70.9	70.9	1136.2	1136.2	<LOD	3.5	69250.9	69250.9	10669.4	10669.4	6342.0	6342.0
DU 2-13.8	2	7688.7	7688.7	<LOD	5.5	<LOD	5.0	4.5	4.5	91.4	91.4	130.7	130.7	46.2	46.2	58.9	58.9	8.4	8.4	<LOD	3.5	20.4	20.4	13984.5	13984.5	<LOD	0.0	221.7	221.7	110.0	110.0	<LOD	30.0	65172.5	65172.5	6932.5	6932.5	48.9	48.9	68.1	68.1	1120.0	1120.0	<LOD	3.5	72314.2	72314.2	10345.2	10345.2	8066.5	8066.5
DU 2-13.9	2	7729.3	7729.3	61.3	61.3	6.4	6.4	3.8	3.8	97.4	97.4	135.9	135.9	44.7	44.7	42.9	42.9	<LOD	0.0	<LOD	3.5	15.2	15.2	14935.0	14935.0	<LOD	0.0	182.2	182.2	109.1	109.1	<LOD	30.0	67088.6	67088.6	7045.9	7045.9	50.4	50.4	<LOD	25.0	1168.8	1168.8	<LOD	3.5	72055.8	72055.8	10401.4	10401.4	7358.2	7358.2
DU 1-1.1	1	1193.7	1193.7	55.3	55.3	10.5	10.5	11.9	11.9	872.6	872.6	232.1	232.1	166.7	166.7	50.5	50.5	5.3	5.3	7.4	7.4	11.6	11.6	699.5	699.5	219.5	219.5	866.7	866.7	63.3	63.3	<LOD	30.0	58215.3	58215.3	857.8	857.8	52.9	52.9	118.4	118.4	4896.5	4896.5	<LOD	3.5	12338.6	12338.6	31565.4	31565.4	5151.2	5151.2
DU 1-1.2	1	1137.4	1137.4	45.6	45.6	12.9	12.9	12.6	12.6	993.8	993.8	229.4	229.4	166.7	166.7	64.6	64.6	<LOD	0.0	7.7	7.7	<LOD	5.0	705.3	705.3	181.4	181.4	865.8	865.8	64.3	64.3	<LOD	30.0	56548.9	56548.9	865.1	865.1	52.3	52.3	106.1	106.1	4904.7	4904.7	<LOD	3.5	12170.4	12170.4	29521.6	29521.6	5207.7	5207.7
DU 1-1.3	1	1237.4	1237.4	36.0	36.0	14.8	14.8	13.6	13.6	966.4	966.4	234.2	234.2	168.6	168.6	51.6	51.6	<LOD	0.0	8.7	8.7	<LOD	5.0	806.7	806.7	223.5	223.5	849.2	849.2	66.2	66.2	<LOD	30.0	59953.4	59953.4	888.8	888.8	50.0	50.0	107.8	107.8	5328.4	5328.4	<LOD	3.5	13525.9	13525.9	30685.0	30685.0	5645.2	5645.2
DU 1-1.4	1	1055.0	1055.0	40.3	40.3	10.8	10.8	20.3	20.3	1023.7	1023.7	223.0	223.0	158.0	158.0	52.4	52.4	4.1	4.1	6.2	6.2	13.0	13.0	586.7	586.7	146.9	146.9	757.4	757.4	55.7	55.7	<LOD	30.0	60600.5	60600.5	679.2	679.2	60.2	60.2	136.1	136.1	5548.9	5548.9	<LOD	3.5	14845.8	14845.8	28647.4	28647.4	4947.4	4947.4
DU 1-1.5	1	1180.2	1180.2	46.4	46.4	12.7	12.7	21.5	21.5	918.1	918.1	228.8	228.8	163.7	163.7	69.7	69.7	5.0	5.0	7.7	7.7	<LOD	5.0	676.9	676.9	207.7	207.7	861.5	861.5	51.3	51.3	146.2	146.2	60066.7	60066.7	781.9	781.9	58.5	58.5	102.5	102.5	5353.3	5353.3	<LOD	3.5	13739.9	13739.9	30048.9	30048.9	5487.4	5487.4
DU 1-1.6	1	1163.9	1163.9	74.0	74.0	13.3	13.3	23.5	23.5	841.9	841.9	224.2	224.2	175.8	175.8	58.7	58.7	4.3	4.3	6.4	6.4	11.4	11.4	701.0	701.0	191.2	191.2	908.7	908.7	69.5	69.5	<LOD	30.0	61449.2	61449.2	742.8	742.8	57.6	57.6	143.1	143.1	5240.4	5240.4	46.6	46.6	12487.0	12487.0	32862.9	32862.9	5591.1	5591.1
DU 1-1.7	1	1194.2	1194.2	62.9	62.9	10.2	10.2	11.3	11.3	980.2	980.2	231.9	231.9	173.4	173.4	49.3	49.3	5.4	5.4	5.8	5.8	<LOD	5.0	732.6	732.6	237.7	237.7	968.2	968.2	64.6	64.6	<LOD	30.0	61406.7	61406.7	735.8	735.8	46.0	46.0	127.7	127.7	5212.7	5212.7	<LOD	3.5	12615.6	12615.6	31478.3	31478.3	6641.1	6641.1
DU 1-1.8	1	1117.5	1117.5	45.6	45.6	15.3	15.3	10.3	10.3	752.8	752.8	223.6	223.6	167.2	167.2	62.6	62.6	5.8	5.8	4.7	4.7	<LOD	5.0	707.6	707.6	176.9	176.9	847.1	847.1	56.3	56.3	<LOD	30.0	57265.8	57265.8	723.6	723.6	56.0	56.0	114.6	114.6	5436.4	5436.4	<LOD	3.5	13908.0	13908.0	30271.8	30271.8	5150.5	5150.5
DU 1-1.9	1	1159.8	1159.8	62.2	62.2	10.5	10.5	9.9	9.9	786.8	786.8	238.2	238.2	170.4	170.4	75.2	75.2	<LOD	0.0	5.5	5.5	11.8	11.8	716.6	716.6	175.5	175.5	842.0	842.0	46.3	46.3	<LOD	30.0	58685.5	58685.5	807.6	807.6	59.7	59.7	114.6	114.6	5198.2	5198.2	59.0	59.0	13176.8	13176.8	31267.1	31267.1	4885.7	4885.7
DU 1-2.1	1	2406.8	2406.8	93.5	93.5	12.6	12.6	23.8	23.8	117.0	117.0	49.2	49.2	233.5	233.5	100.7	100.7	11.3	11.3	21.8	21.8	17.1	17.1	1763.1	1763.1	596.6	596.6	4027.8	4027.8	45.7	45.7	<LOD	30.0	113200.2	113200.2	617.0	617.0	<LOD	35.0	53.0	53.0	1995.7	1995.7	<LOD	3.5	29990.2	29990.2	26489.5	26489.5	82137.2	82137.2
DU 1-2.2	1	2460.5	2460.5	81.8	81.8	<LOD	5.0	44.9	44.9	125.0	125.0	49.0	49.0	240.2	240.2	104.8	104.8	10.9	10.9	18.9	18.9	22.7	22.7	2064.5	2064.5	531.7	531.7	3988.1	3988.1	57.9	57.9	<LOD	30.0	114865.7	114865.7	613.9	613.9	29.8	29.8	46.2	46.2	1994.2	1994.2	<LOD	3.5	29515.6	29515.6	27020.8	27020.8	84193.6	84193.6
DU 1-2.3	1	2361.6	2361.6	95.5	95.5	14.3	14.3	45.4	45.4	128.1	128.1	47.1	47.1	217.9	217.9	114.1	114.1	12.0	12.0	18.0	18.0	11.8	11.8	2069.1	2069.1	500.9	500.9	3633.7	3633.7	62.6	62.6	<LOD	30.0	110909.3	110909.3	599.1	599.1	<LOD	35.0	45.7	45.7	1999.5	1999.5	<LOD	3.5	30067.1	30067.1	25322.1	25322.1	82679.6	82679.6
DU 1-2.4	1	2308.4	2308.4	98.8	98.8	14.2	14.2	92.5	92.5	120.7	120.7	46.2	46.2	223.2	223.2	114.9	114.9	9.2	9.2	14.7	14.7	13.1	13.1	1911.1	1911.1	548.8	548.8	3692.3	3692.3	48.7	48.7	<LOD	30.0	108404.1	108404.1	585.0	585.0	35.6	35.6	<LOD	25.0	1868.7	1868.7	<LOD	3.5	26725.0	26725.0	24676.7	24676.7	78172.9	78172.9
DU 1-2.5	1	2302.1	2302.1	90.6	90.6	9.2	9.2	28.8	28.8	115.5	115.5	45.1	45.1	217.9	217.9	98.7	98.7	10.3	10.3	19.0	19.0	16.3	16.3	1851.2	1851.2	547.4	547.4	3638.6	3638.6	24.6	24.6	<LOD	30.0	102577.1	102577.1	585.2	585.2	31.0	31.0	<LOD	25.0	1559.3	1559.3	<LOD	3.5	22750.4	22750.4	20569.6	20569.6	57135.2	57135.2
DU 1-2.6	1	2400.9	2400.9	85.5	85.5	13.4	13.4	19.6	19.6	140.9	140.9	48.8	48.8	229.7	229.7	107.1	107.1	14.0	14.0	17.4	17.4	19.9	19.9	1925.6	1925.6	603.0	603.0	3644.0	3644.0	47.7	47.7	<LOD	30.0	111755.0	111755.0	565.1	565.1	24.9	24.9	65.3	65.3	2048.2	2048.2	<LOD	3.5	27623.1	27623.1	26486.7	26486.7	81192.2	81192.2
DU 1-2.7	1	2378.2	2378.2	67.9	67.9	12.9	12.9	32.7	32.7	116.9	116.9	46.6	46.6	222.0	222.0	119.2	119.2	11.0	11.0	18.2	18.2	22.7	22.7	1998.2	1998.2	459.5	459.5	3669.4	3669.4	50.4	50.4	<LOD	30.0	113729.0	113729.0	562.5	562.5	<LOD	35.0	66.0	66.0	1797.9	1797.9	<LOD	3.5	33936.1	33936.1	25427.5	25427.5	92580.7	92580.7
DU 1-2.8	1	2425.7	2425.7	84.4	84.4	10.4	10.4	32.4	32.4	135.7	135.7	48.5	48.5	226.3	226.3	106.5	106.5	12.0	12.0	18.0	18.0	12.8	12.8	2296.8	2296.8	548.3	548.3	3941.3	3941.3	58.2	58.2	<LOD	30.0	114335.3	114335.3	567.3	567.3	30.5	30.5	46.3	46.3	1931.9	1931.9	<LOD	3.5	29455.0	29455.0	26697.3	26697.3	80248.4	80248.4
DU 1-2.9	1	2410.1	2410.1	89.8	89.8	12.4	12.4	91.3	91.3	127.4	127.4	48.1	48.1	234.6	234.6	98.7	98.7	9.3	9.3	19.1	19.1	23.2	23.2	1956.2	1956.2	520.0	520.0	4212.7	4212.7	49.5	49.5	<LOD	30.0	113416.6	113416.6	570.6	570.6	22.3	22.3	48.4	48.4	1902.4	1902.4	<LOD	3.5	29992.4	29992.4	27595.7	27595.7	83270.0	83270.0
DU 1-3.1	1	2259.0	2259.0	<LOD	5.5	3911.0	3911.0	<LOD	5.0	345.6	345.6	596.0	596.0	<LOD	3.0	986.2	986.2	344.7	344.7	407.6	407.6	530.4	530.4	3441.6	3441.6	1789.5	1789.5	2119.3	2119.3	521.3	521.3	1876.0	1876.0	52727.8	52727.8	2199.3	2199.3	53.4	53.4	116.9	116.9	3847.2	3847.2	<LOD	3.5	26884.2	26884.2	22946.9	22946.9	9270.2	9270.2
DU 1-3.2	1	2047.2	2047.2	37.8	37.8	8.7	8.7	7.8	7.8	568.2	568.2	250.0	250.0	96.8	96.8	38.1	38.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	3444.7	3444.7	<LOD	0.0	539.9	539.9	72.9	72.9	<LOD	30.0	78863.8	78863.8	1873.5	1873.5	92.8	92.8	120.6	120.6	3592.6	3592.6	<LOD	3.5	25556.8	25556.8	21916.9	21916.9	7585.8	7585.8
DU 1-3.3	1	1941.8	1941.8	<LOD	5.5	11.0	11.0	<LOD	5.0	551.4	551.4	257.1	257.1	100.5	100.5	38.7	38.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	3586.9	3586.9	43.3	43.3	557.7	557.7	67.7	67.7	<LOD	30.0	77057.8	77057.8	1905.3	1905.3	60.0	60.0	81.7	81.7	3878.9	3878.9	<LOD	3.5	28178.8	28178.8	23716.5	23716.5	7721.4	7721.4
DU 1-3.4	1	1937.5	1937.5	30.5	30.5	9.8	9.8	3.7	3.7	396.6	396.6	246.9	246.9	102.0	102.0	44.3	44.3	<LOD	0.0	<LOD	3.5	8.9	8.9	3501.9	3501.9	<LOD	0.0	546.3	546.3	88.5	88.5	<LOD	30.0	76261.3	76261.3	1811.9	1811.9	65.3	65.3	100.0	100.0	3956.7	3956.7	<LOD	3.5	28144.6	28144.6	23947.2	23947.2	7748.7	7748.7
DU 1-3.5	1	1993.3	1993.3	<LOD	5.5	8.7	8.7	5.5	5.5	494.9	494.9	244.2	244.2	96.6	96.6	40.5	40.5	7.6	7.6	<LOD	3.5	<LOD	5.0	3575.9	3575.9	<LOD	0.0	537.5	537.5	64.4	64.4	<LOD	30.0	76849.8	76849.8	2053.7	2053.7	33.9	33.9	100.7	100.7	3202.5	3202.5	<LOD	3.5	23743.1	23743.1	18501.4	18501.4	6650.7	6650.7
DU 1-3.6	1	1988.1	1988.1	28.6	28.6	8.1	8.1	6.4	6.4	499.4	499.4	247.5	247.5	102.4	102.4	40.5	40.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	3569.1	3569.1	<LOD	0.0	565.6	565.6	76.2	76.2	<LOD	30.0	79307.3	79307.3	1883.1	1883.1	54.4	54.4	102.4	102.4	4078.8	4078.8	<LOD	3.5	26752.2	26752.2	23587.2	23587.2	8788.4	8788.4
DU 1-3.7	1	2070.4	2070.4	41.3	41.3	6.5	6.5	6.7	6.7	525.8	525.8	245.5	245.5	103.3	103.3	38.7	38.7	<LOD	0.0	4.7	4.7	<LOD	5.0	3677.6	3677.6	47.6	47.6	519.9	519.9	74.3	74.3	<LOD	30.0	80427.6	80427.6	2015.5	2015.5	57.2	57.2	140.4	140.4	4051.0	4051.0	<LOD	3.5	28427.7	28427.7	23897.9	23897.9	9015.4	9015.4
DU 1-3.8	1	2069.4	2069.4	27.9	27.9	8.4	8.4	5.3	5.3	574.0	574.0	250.3	250.3	103.5	103.5	46.5	46.5	<LOD	0.0	<LOD	3.5	8.8	8.8	3713.9	3713.9	36.7	36.7	532.4	532.4	75.3	75.3	<LOD	30.0	78736.6	78736.6	1840.1	1840.1	54.1	54.1	113.7	113.7	3854.5	3854.5	<LOD	3.5	25389.7	25389.7	24375.3	24375.3	8200.1	8200.1

DU 1-3.9	1	2032.8	2032.8	<LOD	5.5	10.1	10.1	4.4	4.4	622.0	622.0	251.4	251.4	99.8	99.8	39.8	39.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	3539.2	3539.2	<LOD	0.0	563.6	563.6	89.6	89.6	<LOD	30.0	78344.4	78344.4	1924.6	1924.6	43.6	43.6	112.5	112.5	3722.0	3722.0	<LOD	3.5	27690.6	27690.6	23803.4	23803.4	8515.3	8515.3
DU 1-3A.1	1	2325.6	2325.6	<LOD	5.5	9.1	9.1	<LOD	5.0	491.6	491.6	232.3	232.3	96.5	96.5	35.2	35.2	<LOD	0.0	<LOD	3.5	7.8	7.8	3401.9	3401.9	<LOD	0.0	468.2	468.2	75.9	75.9	<LOD	30.0	73036.3	73036.3	2138.8	2138.8	45.8	45.8	119.5	119.5	3456.7	3456.7	<LOD	3.5	26597.7	26597.7	22281.4	22281.4	10823.0	10823.0
DU 1-3A.2	1	2430.5	2430.5	<LOD	5.5	9.5	9.5	3.6	3.6	476.5	476.5	237.8	237.8	93.8	93.8	35.8	35.8	<LOD	0.0	<LOD	3.5	8.1	8.1	3289.9	3289.9	<LOD	0.0	465.9	465.9	75.8	75.8	<LOD	30.0	72561.8	72561.8	2076.9	2076.9	45.3	45.3	98.3	98.3	3242.4	3242.4	<LOD	3.5	29501.4	29501.4	22291.4	22291.4	9216.5	9216.5
DU 1-3A.3	1	2287.5	2287.5	<LOD	5.5	9.3	9.3	<LOD	5.0	431.4	431.4	235.1	235.1	97.1	97.1	36.2	36.2	<LOD	0.0	<LOD	3.5	9.0	9.0	3291.4	3291.4	<LOD	0.0	455.6	455.6	76.2	76.2	<LOD	30.0	72003.8	72003.8	1941.1	1941.1	50.8	50.8	106.6	106.6	3551.9	3551.9	<LOD	3.5	28394.9	28394.9	23431.3	23431.3	9641.2	9641.2
DU 1-3A.4	1	2394.0	2394.0	<LOD	5.5	9.5	9.5	<LOD	5.0	425.0	425.0	236.3	236.3	96.2	96.2	40.0	40.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	3246.9	3246.9	<LOD	0.0	442.6	442.6	73.8	73.8	<LOD	30.0	70419.4	70419.4	2211.5	2211.5	51.5	51.5	114.2	114.2	3884.5	3884.5	<LOD	3.5	26897.8	26897.8	22270.6	22270.6	10114.0	10114.0
DU 1-3A.5	1	2332.9	2332.9	<LOD	5.5	11.8	11.8	<LOD	5.0	475.8	475.8	230.4	230.4	94.6	94.6	32.8	32.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	3133.2	3133.2	<LOD	0.0	444.8	444.8	75.7	75.7	<LOD	30.0	73275.6	73275.6	1993.2	1993.2	51.1	51.1	109.4	109.4	3426.3	3426.3	<LOD	3.5	25704.5	25704.5	21730.1	21730.1	9324.5	9324.5
DU 1-3A.6	1	2275.3	2275.3	<LOD	5.5	11.4	11.4	<LOD	5.0	452.0	452.0	233.2	233.2	92.6	92.6	47.6	47.6	5.2	5.2	<LOD	3.5	<LOD	5.0	3298.2	3298.2	<LOD	0.0	461.4	461.4	84.3	84.3	<LOD	30.0	71005.8	71005.8	2120.8	2120.8	56.6	56.6	96.0	96.0	3342.1	3342.1	<LOD	3.5	29229.0	29229.0	20849.4	20849.4	9473.4	9473.4
DU 1-3A.7	1	2347.2	2347.2	28.8	28.8	11.3	11.3	<LOD	5.0	421.4	421.4	242.5	242.5	94.5	94.5	54.8	54.8	5.3	5.3	<LOD	3.5	11.6	11.6	3404.9	3404.9	<LOD	0.0	431.6	431.6	82.6	82.6	<LOD	30.0	72404.1	72404.1	1945.9	1945.9	71.9	71.9	90.3	90.3	3468.7	3468.7	73.5	73.5	28622.8	28622.8	21850.5	21850.5	9981.5	9981.5
DU 1-3A.8	1	2448.1	2448.1	<LOD	5.5	9.3	9.3	<LOD	5.0	491.7	491.7	239.1	239.0	95.4	95.4	47.9	47.9	5.8	5.8	<LOD	3.5	<LOD	5.0	3336.2	3336.2	<LOD	0.0	424.9	424.9	78.5	78.5	<LOD	30.0	70019.3	70019.3	2474.0	2474.0	43.7	43.7	99.7	99.7	3652.7	3652.7	<LOD	3.5	30651.8	30651.8	20933.8	20933.8	9847.8	9847.8
DU 1-3A.9	1	2190.1	2190.1	<LOD	5.5	15.0	15.0	3.7	3.7	418.5	418.5	229.1	229.1	94.3	94.3	58.4	58.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	3312.9	3312.9	<LOD	0.0	385.8	385.8	59.3	59.3	<LOD	30.0	69350.4	69350.4	1871.8	1871.8	41.9	41.9	103.3	103.3	3304.1	3304.1	<LOD	3.5	24887.9	24887.9	20006.1	20006.1	10312.1	10312.1
DU 1-4.1	1	564.1	564.1	18.3	18.3	12.5	12.5	<LOD	5.0	1094.7	1094.7	349.1	349.1	116.7	116.7	26.4	26.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	602.7	602.7	34.3	34.3	65.9	65.9	63.6	63.6	177.1	177.1	54272.7	54272.7	1125.3	1125.3	73.1	73.1	144.8	144.8	5568.3	5568.3	<LOD	3.5	39866.2	39866.2	25292.5	25292.5	1285.9	1285.9
DU 1-4.2	1	562.1	562.1	16.1	16.1	10.3	10.3	6.4	6.4	1023.1	1023.1	352.1	352.1	115.1	115.1	22.3	22.3	3.6	3.6	<LOD	3.5	<LOD	5.0	584.4	584.4	44.3	44.3	81.8	81.8	72.5	72.5	186.7	186.7	51039.7	51039.7	1095.7	1095.7	46.5	46.5	132.4	132.4	4411.0	4411.0	<LOD	3.5	37375.2	37375.2	24923.7	24923.7	1302.5	1302.5
DU 1-4.3	1	566.5	566.5	16.4	16.4	12.3	12.3	<LOD	5.0	1090.8	1090.8	344.5	344.5	108.7	108.7	28.6	28.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	526.6	526.6	<LOD	0.0	101.1	101.1	55.9	55.9	257.2	257.2	52252.1	52252.1	1046.6	1046.6	46.0	46.0	117.5	117.5	4388.4	4388.4	<LOD	3.5	33002.4	33002.4	21481.6	21481.6	1410.3	1410.3
DU 1-4.4	1	506.8	506.8	<LOD	5.5	7.4	7.4	5.1	5.1	762.6	762.6	348.1	348.1	118.5	118.5	23.4	23.4	<LOD	0.0	<LOD	3.5	8.0	8.0	486.9	486.9	<LOD	0.0	61.5	61.5	62.1	62.1	<LOD	30.0	42609.2	42609.2	904.3	904.3	38.4	38.4	110.0	110.0	4429.0	4429.0	<LOD	3.5	38309.2	38309.2	25857.9	25857.9	1137.5	1137.5
DU 1-4.5	1	514.0	514.0	21.1	21.1	13.6	13.6	7.2	7.2	961.7	961.7	357.8	357.8	120.7	120.7	23.8	23.8	<LOD	0.0	3.7	3.7	<LOD	5.0	548.0	548.0	31.0	31.0	70.0	70.0	61.1	61.1	192.0	192.0	59232.9	59232.9	1093.6	1093.6	38.6	38.6	146.5	146.5	5341.4	5341.4	<LOD	3.5	40519.1	40519.1	26103.9	26103.9	743.8	743.8
DU 1-4.6	1	524.9	524.9	<LOD	5.5	9.9	9.9	4.0	4.0	969.1	969.1	361.0	361.0	120.0	120.0	32.0	32.0	<LOD	0.0	<LOD	3.5	8.8	8.8	474.8	474.8	<LOD	0.0	68.6	68.6	63.8	63.8	139.9	139.9	45308.7	45308.7	979.9	979.9	50.8	50.8	120.6	120.6	4664.3	4664.3	<LOD	3.5	39320.6	39320.6	26424.6	26424.6	923.8	923.8
DU 1-4.7	1	540.4	540.4	24.9	24.9	13.9	13.9	4.4	4.4	982.2	982.2	350.9	350.9	116.2	116.2	24.6	24.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	567.4	567.4	<LOD	0.0	66.5	66.5	56.1	56.1	154.5	154.5	50131.2	50131.2	995.1	995.1	51.7	51.7	142.8	142.8	4547.6	4547.6	<LOD	3.5	36879.2	36879.2	24451.8	24451.8	1331.1	1331.1
DU 1-4.8	1	572.6	572.6	16.5	16.5	14.2	14.2	<LOD	5.0	906.3	906.3	338.1	338.1	112.9	112.9	23.3	23.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	564.9	564.9	<LOD	0.0	84.0	84.0	47.8	47.8	145.3	145.3	43443.6	43443.6	919.3	919.3	56.7	56.7	101.9	101.9	4321.0	4321.0	<LOD	3.5	34655.1	34655.1	22750.9	22750.9	1081.3	1081.3
DU 1-4.9	1	504.2	504.2	19.7	19.7	11.0	11.0	4.7	4.7	967.6	967.6	362.1	362.1	118.2	118.2	27.9	27.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	508.4	508.4	46.0	46.0	117.2	117.2	61.1	61.1	123.3	123.3	50270.8	50270.8	1069.0	1069.0	59.8	59.8	138.5	138.5	5179.7	5179.7	<LOD	3.5	39174.5	39174.5	25132.9	25132.9	926.1	926.1
DU 1-5.1	1	3129.6	3129.6	129.6	129.6	<LOD	5.0	7.5	7.5	387.7	387.7	102.8	102.8	73.2	73.2	91.3	91.3	<LOD	0.0	15.7	15.7	<LOD	5.0	1769.3	1769.3	<LOD	0.0	600.4	600.4	66.5	66.5	<LOD	30.0	337653.5	337653.5	1145.8	1145.8	<LOD	35.0	<LOD	25.0	2917.3	2917.3	<LOD	3.5	15735.7	15735.7	13900.5	13900.5	83346.1	83346.1
DU 1-5.2	1	3012.6	3012.6	165.7	165.7	<LOD	5.0	6.3	6.3	330.8	330.8	108.4	108.4	72.0	72.0	79.6	79.6	<LOD	0.0	22.6	22.6	13.1	13.1	1683.8	1683.8	<LOD	0.0	629.9	629.9	75.3	75.3	<LOD	30.0	338285.4	338285.4	1123.3	1123.3	<LOD	35.0	<LOD	25.0	2514.6	2514.6	<LOD	3.5	17100.2	17100.2	13324.2	13324.2	84053.8	84053.8
DU 1-5.3	1	3029.6	3029.6	118.6	118.6	<LOD	5.0	4.4	4.4	223.6	223.6	98.3	98.3	76.0	76.0	83.7	83.7	<LOD	0.0	16.5	16.5	<LOD	5.0	1703.5	1703.5	<LOD	0.0	574.4	574.4	85.1	85.1	<LOD	30.0	338791.8	338791.8	1183.5	1183.5	<LOD	35.0	62.5	62.5	2744.8	2744.8	<LOD	3.5	15943.7	15943.7	12986.9	12986.9	84386.1	84386.1
DU 1-5.4	1	3035.2	3035.2	116.5	116.5	<LOD	5.0	5.3	5.3	412.7	412.7	107.7	107.7	70.0	70.0	77.5	77.5	<LOD	0.0	20.8	20.8	<LOD	5.0	1623.0	1623.0	<LOD	0.0	630.1	630.1	57.9	57.9	<LOD	30.0	332047.0	332047.0	1157.5	1157.5	<LOD	35.0	<LOD	25.0	2922.1	2922.1	<LOD	3.5	16404.0	16404.0	13498.6	13498.6	80929.7	80929.7
DU 1-5.5	1	2951.9	2951.9	127.7	127.7	<LOD	5.0	7.8	7.8	387.2	387.2	104.8	104.8	75.3	75.3	88.8	88.8	<LOD	0.0	17.7	17.7	<LOD	5.0	1664.7	1664.7	<LOD	0.0	541.2	541.2	69.2	69.2	<LOD	30.0	323056.2	323056.2	1177.5	1177.5	<LOD	35.0	<LOD	25.0	2437.7	2437.7	<LOD	3.5	14215.9	14215.9	13212.8	13212.8	75756.4	75756.4
DU 1-5.6	1	3101.0	3101.0	123.6	123.6	<LOD	5.0	8.0	8.0	516.1	516.1	105.0	105.0	78.8	78.8	90.8	90.8	<LOD	0.0	21.0	21.0	<LOD	5.0	1652.3	1652.3	<LOD	0.0	545.4	545.4	84.8	84.8	<LOD	30.0	339193.5	339193.5	1075.7	1075.7	<LOD	35.0	<LOD	25.0	3269.4	3269.4	<LOD	3.5	17723.6	17723.6	13010.8	13010.8	84633.5	84633.5
DU 1-5.7	1	2940.6	2940.6	132.6	132.6	<LOD	5.0	7.0	7.0	528.7	528.7	104.8	104.8	72.1	72.1	83.6	83.6	<LOD	0.0	19.3	19.3	<LOD	5.0	1690.4	1690.4	<LOD	0.0	497.9	497.9	58.4	58.4	<LOD	30.0	326160.8	326160.8	1207.3	1207.3	<LOD	35.0	<LOD	25.0	2755.6	2755.6	<LOD	3.5	15796.6	15796.6	13011.0	13011.0	80816.1	80816.1
DU 1-5.8	1	3029.0	3029.0	135.8	135.8	<LOD	5.0	5.7	5.7	304.1	304.1	100.3	100.3	72.0	72.0	94.1	94.1	<LOD	0.0	20.7	20.7	<LOD	5.0	1722.0	1722.0	<LOD	0.0	603.0	603.0	82.9	82.9	<LOD	30.0	333694.5	333694.5	1120.8	1120.8	<LOD	35.0	<LOD	25.0	2529.2	2529.2	<LOD	3.5	17092.9	17092.9	12645.0	12645.0	84950.8	84950.8
DU 1-5.9	1	3097.4	3097.4	135.2	135.2	<LOD	5.0	<LOD	5.0	371.8	371.8	105.5	105.5	74.0	74.0	85.8	85.8	<LOD	0.0	21.0	21.0	11.0	11.0	1743.2	1743.2	<LOD	0.0	621.6	621.6	76.3	76.3	<LOD	30.0	338429.2	338429.2	1082.1	1082.1	<LOD	35.0	<LOD	25.0	2727.7	2727.7	<LOD	3.5	18125.7	18125.7	13818.3	13818.3	90069.0	90069.0
DU 1-7.1	1	8630.2	8630.2	<LOD	5.5	7.5	7.5	7.5	7.5	56.6	56.6	439.1	439.1	45.1	45.1	60.9	60.9	14.5	14.5	<LOD	3.5	<LOD	5.0	3608.0	3608.0	58.0	58.0	167.3	167.3	147.7	147.7	<LOD	30.0	60306.8	60306.8	8871.0	8871.0	60.4	60.4	<LOD	25.0	451.7	451.7	<LOD	3.5	78647.6	78647.6	9581.2	9581.2	9218.6	9218.6
DU 1-7.2	1	8814.4	8814.4	95.7	95.7	9.3	9.3	6.5	6.5	58.7	58.7	437.4	437.4	39.3	39.3	50.7	50.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	3831.7	3831.7	<LOD	0.0	178.7	178.7	149.3	149.3	<LOD	30.0	62807.7	62807.7	9199.5	9199.5	37.2	37.2	<LOD	25.0	382.4	382.4	<LOD	3.5	76505.5	76505.5	8710.9	8710.9	8901.9	8901.9
DU 1-7.3	1	8273.8	8273.8	<LOD	5.5	7.6	7.6	5.9	5.9	81.5	81.5	424.8	424.8	41.0	41.0	45.8	45.8	9.9	9.9	<LOD	3.5	<LOD	5.0	3663.9	3663.9	61.7	61.7	157.1	157.1	125.4	125.4	<LOD	30.0	56885.2	56885.2	8507.9	8507.9	59.4	59.4	<LOD	25.0	518.7	518.7	<LOD	3.5	81643.1	81643.1	8944.3	8944.3	9030.7	9030.7
DU 1-7.4	1	7943.5	7943.5	<LOD	5.5	7.2	7.2	6.6	6.6	72.1	72.1	413.6	413.6	40.2	40.2	49.7	49.7	11.4	11.4	<LOD	3.5	<LOD	5.0	3479.3	3479.3	67.5	67.5	165.3	165.3	141.1	141.1	<LOD	30.0	56538.9	56538.9	8076.1	8076.1	31.8	31.8	<LOD	25.0	474.2	474.2	<LOD	3.5	81103.3	81103.3	10114.2	10114.2	10111.0	10111.0
DU 1-7.5	1	8158.1	8158.1	<LOD	5.5	10.7	10.7	5.3	5.3	57.3	57.3	413.0	413.0	39.9	39.9	55.5	55.5	8.8	8.8	<LOD	3.5	13.1	13.1	3427.7	3427.7	<LOD	0.0	152.7	152.7	128.6	128.6	<LOD	30.0	57663.2	57663.2	8393.3	8393.3	46.7	46.7	112.8	112.8	504.9	504.9	<LOD	3.5	80364.9	80364.9	9410.5	9410.5	9085.6	9085.6
DU 1-7.6	1	7799.3	7799.3	66.9	66.9	<LOD	5.0	4.2	4.2	75.0	75.0	409.7	409.7	40.0	40.0	49.8	49.8	<LOD	0.0	<LOD	3.5	13.8	13.8	3549.3	3549.3	<LOD	0.0	157.0	157.0	115.2	115.2	<LOD	30.0	55219.5	55219.5	8071.0	8071.0	39.5	39.5	<LOD	25.0	397.3	397.3	<LOD	3.5	76108.3	76108.3	8795.4	8795.4	8748.4	8748.4
DU 1-7.7	1	8380.6	8380.6	66.5	66.5	10.9	10.9	7.6	7.6	70.6	70.6	437.3	437.3	38.7	38.7	63.2	63.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	3440.8	3440.8	65.9	65.9	172.8	172.8	111.1	111.1	<LOD	30.0	57557.7	57557.7	8238.6	8238.6	52.7	52.7	<LOD	25.0	388.6	388.6	<LOD	3.5	76698.9	76698.9	8417.7	8417.7	8701.3	8701.3
DU 1-7.8	1	8718.0	8718.0	<LOD	5.5	10.2	10.2	6.8	6.8	69.4	69.4	446.6	446.6	41.9	41.9	55.9	55.9	<LOD	0.0	<LOD	3.5	12.2	12.2	3524.6	3524.6	<LOD	0.0	150.2	150.2	146.1	146.1	<LOD	30.0	59400.0	59400.0	8739.9	8739.9	37.3	37.3	107.5	107.5	354.3	354.3	<LOD	3.5	80618.6	80618.6	9401.4	9401.4	8915.9	8915.9
DU 1-7.9	1	8103.3	8103.3	<LOD	5.5	<LOD	5.0	5.8	5.8	72.0	72.0	412.8	412.8	41.2	41.2	53.4	53.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	3445.3	3445.3	<LOD	0.0	158.1	158.1	112.7	112.7	<LOD	30.0	55094.4	55094.4	8093.2	8093.2	40.0	40.0	87.0	87.0	301.6	301.6	<LOD	3.5	75651.1	75651.1	8761.0	8761.0	8398.1	8398.1
DU 1-8.1	1	7607.8	7607.8	<LOD	5.5	9.0	9.0	7.0	7.0	55.4	55.4	415.7	415.7	35.3	35.3	46.4	46.4	13.7	13.7	<LOD	3.5	11.2	11.2	2618.4	2618.4	<LOD	0.0	149.9	149.9	134.3	134.3	<LOD	30.0	55968.0	55968.0	8538.1	8538.1	36.6	36.6	<LOD	25.0	441.8	441.8	<LOD	3.5	68932.2	68932.2	8551.3	8551.3	7905.8	7905.8
DU 1-8.2	1	8012.7	8012.7	<LOD	5.5	7.3	7.3	6.3	6.3	58.4	58.4	433.6	433.6	38.1	38.1	25.6	25.6	<LOD	0.0	<LOD	3.5	12.0	12.0	2652.1	2652.1	<LOD	0.0	141.1	141.1	136.0	136.0	<LOD	30.0	58645.3	58645.3	8802.9	8802.9	49.0	49.0	<LOD	25.0	390.3	390.3	<LOD	3.5	73816.6	73816.6	8199.5	8199.5	8423.6	8423.6
DU 1-8.3	1	7919.2	7919.2	<LOD	5.5	10.1	10.1	5.2	5.2	58.1	58.1	422.8	422.8	38.1	38.1	22.3	22.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	2761.5	2761.5	54.5	54.5	170.6	170.6	129.2	129.2	<LOD	30.0	59494.7	59494.7	9089.1	9089.1	39.8	39.8	<LOD	25.0	511.0	511.0	<LOD	3.5	78606.7	78606.7	8807.0	8807.0	8596.8	8596.8
DU 1-8.4	1	7716.8	7716.8	70.8	70.8	7.4	7.4	5.4	5.4	54.5	54.5	430.3	430.3	37.3	37.3	26.4	26.4	<LOD	0.0	<LOD	3.5	12.9	12.9	2645.0	2645.0	63.2	63.2	157.4	157.4	135.0	135.0	<LOD	30.0	59498.1	59498.1	9003.8	9003.8	50.4	50.4	<LOD	25.0	434.6	434.6	<LOD	3.5	81529.4	81529.4	8167.6	8167.6	9308.7	9308.7
DU 1-8.5	1	7840.1	7840.1	<LOD	5.5	8.3	8.3	6.2	6.2	64.8	64.8	440.5	440.5	36.2	36.2	30.5	30.5	8.8	8.8	<LOD	3.5	11.0	11.0	2786.3	2786.3	69.3	69.3	163.3	163.3	144.8	144.8	<LOD	30.0	59165.5	59165.5	9143.8	9143.8	24.2	24.2	<LOD	25.0	304.6	304.6	<LOD	3.5	79948.8	79948.8	8644.4	8644.4	8506.3	8506.3
DU 1-8.6	1	7861.7	7861.7	<LOD	5.5	8.6	8.6	<LOD	5.0	81.4	81.4	433.0	433.0	37.0	37.0	32.0	32.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	2567.4	2567.4	43.8	43.8	169.7	169.7	122.5	122.5	<LOD	30.0	57886.5	57886.5	8872.9	8872.9	47.5	47.5	<LOD	25.0	432.7	432.7	<LOD	3.5	76573.9	76573.9	7933.1	7933.1	8328.9	8328.9
DU 1-8.7	1	7587.8	7587.8	<LOD	5.5	6.8	6.8	4.9	4.9	57.1	57.1	410.5	410.5	36.9	36.9	28.0	28.0	<LOD	0.0	<LOD	3.5	12.3	12.3	2649.5	2649.5	<LOD	0.0	160.9	160.9	127.5	127.5	<LOD	30.0	54184.7	54184.7	8511.4	8511.4	27.7	27.7	<LOD	25.0	515.6	515.6	<LOD	3.5	77381.4	77381.4	8046.9	8046.9	8773.5	8773.5
DU 1-8.8	1	8079.0	8079.0	100.6	100.6	<LOD	5.0	5.7	5.7	56.3	56.3	443.9	443.9	38.3	38.3	38.4	38.4	<LOD	0.0	<LOD	3.5	11.3	11.3	2776.4	2776.4	<LOD	0.0	183.2	183.2	139.0	139.0	<LOD	30.0	61941.7	61941.7	9911.0	9911.0	37.7	37.7	95.5	95.5	372.5	372.5	<LOD	3.5	83134.1	83134.1	8909.8	8909.8	10039.9	10039.9
DU 1-8.9	1	7381.8	7381.8	<LOD	5.5	<LOD	5.0	5.3	5.3	63.9	63.9	398.7	398.7	34.8	34.8	37.1	37.1	<LOD	0.0	<LOD	3.5	12.3	12.3	2603.8	2603.8	<LOD	0.0	161.6	161.6	147.3	147.3	<LOD	30.0	56787.2	56787.2	9003.4	9003.4	46.4	46.4	<LOD	25.0	568.6	568.6	<LOD	3.5	76931.2	76931.2	8401.2	8401.2	9876.4	9876.4
DU 1-9.1	1	2332.1	2332.1	98.5	98.5	<LOD	5.0	7.1	7.1	429.8	429.8	170.1	170.1	90.8	90.8	64.9	64.9	<LOD	0.0	17.5	17.5	<LOD	5.0	1336.3	1336.3	<LOD	0.0	405.2	405.2	72.3	72.3	<LOD	30.0	233043.8	233043.8	944.7	944.7	<LOD	35.0	93.5	93.5	3952.5	3952.5	<LOD	3.5	22988.3	22988.3	17398.4	17398.4	52416.4	52416.4
DU 1-9.2	1	2148.1	2148.1	81.5	81.5	<LOD	5.0	8.4	8.4	516.6	516.6	171.9	171.9	89.1	89.1	73.0	73.0	<LOD	0.0	10.4	10.4	<LOD	5.0	1122.9	1122.9	<LOD	0.0	383.0	383.0	70.2	70.2	<LOD	30.0	221392.1	221392.1	890.9	890.9	<LOD	35.0	<LOD	25.0	4067.3	4067.3	<LOD	3.5	22996.8	22996.8	18689.8	18689.8	51625.1	51625.1
DU 1-9.3	1	2151.8	2151.8	111.4	111.4	<LOD	5.0	4.6	4.6	704.8	704.8	170.0	170.0	92.6	92.6	64.2	64.2	<LOD	0.0	16.2	16.2	<LOD	5.0	1050.1	1050.1	<LOD	0.0	367.9	367.9	64.9	64.9	<LOD	30.0	218993.6	218993.6	841.9	841.9	<LOD	35.0	100.0	100.0	4107.9	4107.9	<LOD	3.5	21640.5	21640.5	18082.7	18082.7	54036.8	54036.8
DU 1-9.4	1	2261.4	2261.4	67.3	67.3	<LOD	5.0	7.8	7.8	527.1	527.1	166.8	166.8	94.8	94.8	60.7	60.7	<LOD	0.0	16.8	16.8	<LOD	5.0	1067.1	1067.1	46.2	46.2	398.9	398.9	65.6	65.6	<LOD	30.0	232035.5	232035.5	914.3	914.3	31.3	31.3	63.1	63.1	4314.8	4314.8	<LOD	3.5	21958.4	21958.4	18249.0	18249.0	53884.4	53884.4
DU 1-9.5	1	2146.8	2146.8	83.8	83.8	7.4	7.4	6.1	6.1	413.2	413.2	173.2	173.2	89.8	89.8	72.9	72.9	<LOD	0.0	16.6	16.6	<LOD	5.0	1003.3	1003.3	<LOD	0.0	364.4	364.4	84.2	84.2	<LOD	30.0	219188.0	219188.0	822.5	822.5	<LOD	35.0	61.4	61.4	3723.8	3723.8	<LOD	3.5	21405.2	21405.2	17838.1	17838.1	52093.4	52093.4
DU 1-9.6	1	2177.1	2177.1	69.8	69.8	<LOD	5.0	6.3	6.3	443.8	443.8	171.3	171.3	87.9	87.9	56.6	56.6	<LOD	0.0	15.5	15.5	<LOD	5.0	1000.9	1000.9	<LOD	0.0	361.5	361.5	75.3	75.3	<LOD	30.0	223501.1	223501.1	812.3	812.3	<LOD	35.0	62.8	62.8	4522.0	4522.0	<LOD	3.5	20401.3	20401.3	17957.7	17957.7	52873.1	52873.1
DU 1-9.7	1	2200.1	2200.1	89.2	89.2	<LOD	5.0	6.2	6.2	490.3	490.3	170.8	170.8	92.7	92.7	59.3	59.3	<LOD	0.0	20.3	20.3	9.5	9.5	1094.0	1094.0	<LOD	0.0	372.7	372.7	76.2	76.2	<LOD	30.0	221403.5	221403.5	1189.2	1189.2	35.3	35.3	<LOD	25.0	4210.2	4210.2	<LOD	3.5	21285.0	21285.0	18432.0	18432.0	50787.2	50787.2
DU 1-9.8	1	2046.1	2046.1	97.9	97.9	<LOD	5.0	9.8	9.8	429.6	429.6	162.3	162.3	86.8	86.8	64.3	64.3	<LOD	0.0	11.8	11.8	<LOD	5.0	990.7	990.7	<LOD	0.0	321.8	321.8	48.5	48.5	<LOD	30.0	210408.6	210408.6	1079.3	1079.3	39.6	39.6	<LOD	25.0	3890.1	3890.1	<LOD	3.5	17750.5	17750.5	15377.7	15377.7	41639.3	41639.3
DU 1-9.9	1	2314.1	2314.1	100.4	100.4	<LOD	5.0	9.4	9.4	480.5	480.5	169.8	169.8	87.7	87.7	72.0	72.0	<LOD	0.0	18.0	18.0	<LOD	5.0	1192.5	1192.5	<LOD	0.0	388.3	388.3	84.4	84.4	<LOD	30.0	241065.4	241065.4	939.3	939.3	<LOD	35.0	<LOD	25.0	4063.0	4063.0	<LOD	3.5	22684.2	22684.2	17557.1	17557.1	56209.9	56209.9
DU 1-10.1	1	4173.2	4173.2	105.0	105.0	<LOD	5.0	3.3	3.3	111.0	111.0	116.5	116.5	55.0	55.0	51.8	51.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	1908.9	1908.9	<LOD	0.0	790.3	790.3	96.9	96.9	<LOD	30.0	128937.6	128937.6	1354.7	1354.7	24.9	24.9	<LOD	25.0	985.9	985.9	<LOD	3.5	22405.8	22405.8	11981.3	11981.3	52256.8	52256.8
DU 1-10.2	1	4279.0	4279.0	74.5	74.5	<LOD	5.0	<LOD	5.0	102.5	102.5	112.5	112.5	55.4	55.4	58.4	58.4	6.4	6.4	<LOD	3.5	<LOD	5.0	1809.3	1809.3	57.5	57.5	760.3	760.3	74.8	74.8	<LOD	30.0	121300.0	121300.0	1452.4	1452.4	<LOD	35.0	<LOD	25.0	1198.7	1198.7	<LOD	3.5	20389.4	20389.4	13236.4	13236.4	48792.7	48792.7
DU 1-10.3	1	3994.3	3994.3	56.7	56.7	<LOD	5.0	3.9	3.9	97.0	97.0	102.6	102.6	50.6	50.6	44.0	44.0	<LOD	0.0	6.9	6.9	11.5	11.5	1737.4	1737.4	<LOD	0.0	728.6	728.6	47.3	47.3	<LOD	30.0	117133.0	117133.0	1177.7	1177.7	37.7	37.7	<LOD	25.0	713.6	713.6	<LOD	3.5	15790.3	15790.3	9085.8	9085.8	34092.0	34092.0
DU 1-10.4	1	4259.8	4259.8	86.7	86.7	8.8	8.8	<LOD	5.0	95.2	95.2	118.6	118.6	52.5	52.5	51.3	51.3	7.5	7.5	8.8	8.8	<LOD	5.0	1867.0	1867.0	<LOD	0.0	707.6	707.6	78.5	78.5	<LOD	30.0	117744.2	117744.2	1231.3	1231.3	24.6	24.6	<LOD	25.0	918.3	918.3	<LOD	3.5	19040.4	19040.4	11731.1	11731.1	44580.0	44580.0
DU 1-10.5	1	4225.0	4225.0	44.3	44.3	<LOD	5.0	<LOD	5.0	84.4	84.4	111.5	111.5	56.2	56.2	52.9	52.9	<LOD	0.0	6.3	6.3	<LOD	5.0	1925.9	1925.9	<LOD	0.0	751.8	751.8	84.7	84.7	<LOD	30.0	125574.3	125574.3	1241.8	1241.8	<LOD	35.0	<LOD	25.0	1211.8	1211.8	<LOD	3.5	21158.8	21158.8	13444.8	13444.8	50772.5	50772.5
DU 1-10.6	1	4415.2	4415.2	108.9	108.9	<LOD	5.0	<LOD	5.0	97.2	97.2	116.9	116.9	54.8	54.8	55.5	55.5	<LOD	0.0	11.0	11.0	<LOD	5.0	1914.5	1914.5	<LOD	0.0	785.1	785.1	63.2	63.2	<LOD	30.0	130540.7	130540.7	1307.5	1307.5	<LOD	35.0	56.6	56.6	1215.5	1215.5	<LOD	3.5	21887.0	21887.0	11928.2	11928.2	53462.1	53462.1
DU 1-10.7	1	4156.3	4156.3	79.3	79.3	6.5	6.5	4.9	4.9	86.7	86.7	112.5	112.5	57.1	57.1	60.3	60.3	6.5	6.5	6.1	6.1	<LOD	5.0	1760.9	1760.9	<LOD	0.0	708.2	708.2	72.8	72.8	<LOD	30.0	117505.7	117505.7	1225.0	1225.0	<LOD	35.0	<LOD	25.0	1063.2	1063.2	<LOD	3.5	22404.6	22404.6	12578.7	12578.7	48430.3	48430.3
DU 1-10.8	1	4153.2	4153.2	62.2	62.2	6.3	6.3	<LOD	5.0	72.8	72.8	116.0	116.0	54.2	54.2	56.6	56.6	<LOD	0.0	8.4	8.4	<LOD	5.0	1824.6	1824.6	<LOD	0.0	723.4	723.4	81.6	81.6	<LOD	30.0	122735.1	122735.1	1293.1	1293.1	<LOD	35.0	<LOD	25.0	888.6	888.6	<LOD	3.5	24187.4	24187.4	12052.5	12052.5	55284.5	55284.5
DU 1-10.9	1	4066.8	4066.8	46.9	46.9	<LOD	5.0	<LOD	5.0	83.9	83.9	106.4	106.4	52.1	52.1	52.9	52.9	<LOD	0.0	7.8	7.8	10.4	10.4	1742.8	1742.8	<LOD	0.0	724.3	724.3	72.1	72.1	<LOD	30.0	118335.5	118335.5	1296.9	1296.9	28.6	28.6	41.5	41.5	956.3	956.3	<LOD	3.5	18367.3	18367.3	11653.5	11653.5	42743.6	42743.6
DU 1-11.1	1	8201.8	8201.8	<LOD	5.5	7.8	7.8	4.9	4.9	76.0	76.0	248.7	248.7	39.4	39.4	17.8	17.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	5049.9	5049.9	78.5	78.5	77.1	77.1	79.9	79.9	<LOD	30.0	44153.9	44153.9	5588.9	5588.9	<LOD	35.0	<LOD	25.0	689.0	689.0	<LOD	3.5	62962.8	62962.8	9195.8	9195.8	7724.0	7724.0
DU 1-11.2	1	5485.9	5485.9	<LOD	5.5	5.4	5.4	4.1	4.1	53.5	53.5	175.0	175.0	34.5	34.5	16.7	16.7	<LOD	0.0	<LOD	3.5	8.4	8.4	3393.2	3393.2	<LOD	0.0	55.6	55.6	82.1	82.1	<LOD	30.0	33608.2	33608.2	3646.6	3646.6	<LOD	35.0	<LOD	25.0	387.6	387.6	<LOD	3.5	55941.5	55941.5	8579.7	8579.7	5110.3	5110.3
DU 1-11.3	1	5904.4	5904.4	<LOD	5.5	6.1	6.1	3.7	3.7	54.6	54.6	190.8	190.8	37.6	37.6	13.3	13.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	3547.7	3547.7	36.9	36.9	55.7	55.7	70.0	70.0	<LOD	30.0	33210.4	33210.4	3142.0	3142.0	<LOD	35.0	<LOD	25.0	426.3	426.3	<LOD	3.5	53456.5	53456.5	9697.0	9697.0	4680.5	4680.5
DU 1-11.4	1	9717.8	9717.8	<LOD	5.5	7.9	7.9	4.6	4.6	78.5	78.5	274.2	274.2	36.1	36.1	32.9	32.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	5302.5	5302.5	44.2	44.2	89.4	89.4	99.3	99.3	<LOD	30.0	49402.5	49402.5	6368.1	6368.1	<LOD	35.0	<LOD	25.0	630.8	630.8	<LOD	3.5	59483.6	59483.6	8685.7	8685.7	9071.7	9071.7
DU 1-11.5	1	8282.2	8282.2	<LOD	5.5	<LOD	5.0	3.1	3.1	73.3	73.3	247.0	247.0	35.2	35.2	<LOD	5.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	3993.4	3993.4	40.0	40.0	79.1	79.1	96.6	96.6	<LOD	30.0	44132.5	44132.5	5768.4	5768.4	<LOD	35.0	<LOD	25.0	405.7	405.7	<LOD	3.5	63463.0	63463.0	7441.9	7441.9	8276.0	8276.0
DU 1-11.6	1	5768.6	5768.6	<LOD	5.5	6.0	6.0	<LOD	5.0	72.8	72.8	175.2	175.2	35.3	35.3	18.0	18.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	3513.4	3513.4	35.4	35.4	132.1	132.1	78.3	78.3	<LOD	30.0	33592.2	33592.2	3848.0	3848.0	<LOD	35.0	<LOD	25.0	401.1	401.1	<LOD	3.5	54995.9	54995.9	8776.7	8776.7	6430.5	6430.5
DU 1-11.7	1	6941.0	6941.0	<LOD	5.5	7.2	7.2	3.5	3.5	68.7	68.7	218.5	218.5	36.7	36.7	33.5	33.5	7.3	7.3	<LOD	3.5	<LOD	5.0	4219.2	4219.2	51.3	51.3	70.6	70.6	79.4	79.4	<LOD	30.0	38653.7	38653.7	4559.3	4559.3	18.0	18.0	<LOD	25.0	622.6	622.6	<LOD	3.5	66837.4	66837.4	9266.7	9266.7	7561.7	7561.7
DU 1-11.8	1	7373.0	7373.0	<LOD	5.5	6.0	6.0	3.2	3.2	61.1	61.1	213.7	213.7	35.1	35.1	33.8	33.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	4385.6	4385.6	<LOD	0.0	60.0	60.0	88.2	88.2	<LOD	30.0	42828.5	42828.5	5228.6	5228.6	18.6	18.6	<LOD	25.0	346.5	346.5	<LOD	3.5	54915.8	54915.8	7553.4	7553.4	8376.1	8376.1
DU 1-11.9	1	8168.6	8168.6	<LOD	5.5	8.0	8.0	5.1	5.1	64.3	64.3	248.0	248.0	36.6	36.6	31.7	31.7	<LOD	0.0	<LOD	3.5	11.5	11.5	4377.5	4377.5	<LOD	0.0	70.3	70.3	98.1	98.1	<LOD	30.0	44060.2	44060.2	5040.6	5040.6	<LOD	35.0	<LOD	25.0	590.8	590.8	<LOD	3.5	58376.5	58376.5	8993.8	8993.8	8295.4	8295.4
DU 1-12.1	1	4378.8	4378.8	171.0	171.0	9.2	9.2	6.0	6.0	196.3	196.3	136.1	136.1	70.3	70.3	109.7	109.7	<LOD	0.0	25.1	25.1	<LOD	5.0	2088.9	2088.9	<LOD	0.0	626.8	626.8	77.6	77.6	<LOD	30.0	367317.4	367317.4	1027.6	1027.6	<LOD	35.0	<LOD	25.0	2412.1	2412.1	<LOD	3.5	17758.5	17758.5	12340.2	12340.2	91640.8	91640.8
DU 1-12.2	1	4260.8	4260.8	145.2	145.2	<LOD	5.0	8.2	8.2	279.3	279.3	145.2	145.2	70.7	70.7	105.0	105.0	<LOD	0.0	19.9	19.9	<LOD	5.0	1987.7	1987.7	<LOD	0.0	610.0	610.0	78.3	78.3	<LOD	30.0	361269.3	361269.3	889.0	889.0	<LOD	35.0	<LOD	25.0	2782.2	2782.2	<LOD	3.5	16425.3	16425.3	12439.4	12439.4	92528.5	92528.5
DU 1-12.3	1	4394.3	4394.3	148.6	148.6	<LOD	5.0	6.0	6.0	408.4	408.4	140.0	140.0	70.4	70.4	110.4	110.4	<LOD	0.0	24.0	24.0	<LOD	5.0	2028.5	2028.5	<LOD	0.0	665.9	665.9	103.9	103.9	<LOD	30.0	376175.2	376175.2	875.8	875.8	<LOD	35.0	<LOD	25.0	2553.1	2553.1	<LOD	3.5	17719.7	17719.7	12295.3	12295.3	97229.8	97229.8
DU 1-12.4	1	4441.1	4441.1	133.5	133.5	<LOD	5.0	<LOD	5.0	259.9	259.9	135.2	135.2	70.0	70.0	110.2	110.2	<LOD	0.0	27.0	27.0	12.0	12.0	2094.2	2094.2	<LOD	0.0	627.0	627.0	87.3	87.3	<LOD	30.0	376616.1	376616.1	999.0	999.0	<LOD	35.0	<LOD	25.0	2730.1	2730.1	<LOD	3.5	18497.2	18497.2	11965.4	11965.4	97981.0	97981.0
DU 1-12.5	1	4423.6	4423.6	150.0	150.0	<LOD	5.0	11.1	11.1	219.6	219.6	138.1	138.1	71.2	71.2	110.8	110.8	<LOD	0.0	19.7	19.7	<LOD	5.0	2077.6	2077.6	<LOD	0.0	676.7	676.7	90.4	90.4	<LOD	30.0	375217.7	375217.7	937.6	937.6	<LOD	35.0	<LOD	25.0	2737.7	2737.7	<LOD	3.5	17562.1	17562.1	12362.6	12362.6	98154.8	98154.8
DU 1-12.6	1	4577.3	4577.3	116.4	116.4	<LOD	5.0	5.3	5.3	165.8	165.8	137.0	137.0	70.2	70.2	101.0	101.0	<LOD	0.0	26.5	26.5	14.2	14.2	2112.1	2112.1	<LOD	0.0	693.8	693.8	92.9	92.9	<LOD	30.0	386147.5	386147.5	1052.7	1052.7	<LOD	35.0	73.0	73.0	2628.5	2628.5	<LOD	3.5	16543.0	16543.0	12681.5	12681.5	94033.5	94033.5
DU 1-12.7	1	4390.8	4390.8	172.0	172.0	<LOD	5.0	4.8	4.8	292.1	292.1	136.2	136.2	71.0	71.0	120.5	120.5	<LOD	0.0	23.9	23.9	<LOD	5.0	2046.1	2046.1	<LOD	0.0	628.6	628.6	97.5	97.5	<LOD	30.0	373004.6	373004.6	1005.3	1005.3	<LOD	35.0	62.9	62.9	2731.3	2731.3	<LOD	3.5	15702.9	15702.9	12248.5	12248.5	89944.8	89944.8
DU 1-12.8	1	4662.0	4662.0	164.1	164.1	<LOD	5.0	10.9	10.9	259.5	259.5	136.8	136.8	69.0	69.0	120.9	120.9	<LOD	0.0	20.5	20.5	<LOD	5.0	2185.7	2185.7	<LOD	0.0	699.3	699.3	89.0	89.0	<LOD	30.0	398088.4	398088.4	1010.7	1010.7	<LOD	35.0	<LOD	25.0	2947.2	2947.2	79.0	79.0	16565.2	16565.2	13320.0	13320.0	100719.3	100719.3
DU 1-12.9	1	4486.6	4486.6	128.6	128.6	<LOD	5.0	10.0	10.0	342.4	342.4	136.1	136.1	72.7	72.7	121.0	121.0	<LOD	0.0	25.2	25.2	11.7	11.7	2074.8	2074.8	<LOD	0.0	653.2	653.2	91.1	91.1	<LOD	30.0	376028.3	376028.3	1007.9	1007.9	<LOD	35.0	<LOD	25.0	2578.5	2578.5	<LOD	3.5	16986.5	16986.5	12254.1	12254.1	96835.9	96835.9
DU 1-13.1	1	6838.8	6838.8	<LOD	5.5	11.1	11.1	3.4	3.4	83.6	83.6	349.0	349.0	56.1	56.1	45.0	45.0	9.6	9.6	<LOD	3.5	<LOD	5.0	3053.9	3053.9	<LOD	0.0	116.0	116.0	119.0	119.0	<LOD	30.0	46544.3	46544.3	5674.4	5674.4	48.3	48.3	<LOD	25.0	570.8	570.8	<LOD	3.5	69961.5	69961.5	13707.8	13707.8	7534.3	7534.3
DU 1-13.2	1	7078.6	7078.6	53.5	53.5	9.6	9.6	4.6	4.6	96.6	96.6	368.5	368.5	54.0	54.0	55.3	55.3	10.9	10.9	<LOD	3.5	<LOD	5.0	3143.2	3143.2	46.2	46.2	110.7	110.7	112.3	112.3	<LOD	30.0	48307.0	48307.0	6093.3	6093.3	30.8	30.8	103.1	103.1	807.9	807.9	<LOD	3.5	67936.0	67936.0	13724.1	13724.1	7469.0	7469.0
DU 1-13.3	1	6922.2	6922.2	<LOD	5.5	10.2	10.2	3.7	3.7	88.9	88.9	344.6	344.6	57.8	57.8	43.0	43.0	8.6	8.6	<LOD	3.5	<LOD	5.0	3053.1	3053.1	<LOD	0.0	99.7	99.7	119.2	119.2	<LOD	30.0	47921.2	47921.2	6022.0	6022.0	46.2	46.2	80.6	80.6	828.0	828.0	<LOD	3.5	68436.9	68436.9	14492.4	14492.4	7450.2	7450.2
DU 1-13.4	1	6934.3	6934.3	<LOD	5.5	6.2	6.2	3.3	3.3	92.8	92.8	352.6	352.6	54.5	54.5	44.0	44.0	7.7	7.7	<LOD	3.5	<LOD	5.0	3031.3	3031.3	<LOD	0.0	117.5	117.5	124.7	124.7	<LOD	30.0	46892.4	46892.4	5895.8	5895.8	45.2	45.2	91.3	91.3	785.9	785.9	<LOD	3.5	68989.9	68989.9	13765.1	13765.1	7593.1	7593.1
DU 1-13.5	1	7054.1	7054.1	67.1	67.1	9.0	9.0	4.1	4.1	103.9	103.9	357.0	357.0	55.5	55.5	42.6	42.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	3235.5	3235.5	<LOD	0.0	124.5	124.5	114.8	114.8	<LOD	30.0	50031.6	50031.6	6205.6	6205.6	45.0	45.0	89.4	89.4	836.9	836.9	<LOD	3.5	69518.1	69518.1	13964.3	13964.3	7650.6	7650.6
DU 1-13.6	1	6837.1	6837.1	<LOD	5.5	9.0	9.0	<LOD	5.0	94.1	94.1	351.5	351.5	55.3	55.3	52.4	52.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	3206.7	3206.7	<LOD	0.0	124.1	124.1	101.5	101.5	<LOD	30.0	45829.0	45829.0	5491.1	5491.1	27.8	27.8	<LOD	25.0	593.3	593.3	<LOD	3.5	66062.9	66062.9	14602.5	14602.5	6064.5	6064.5
DU 1-13.7	1	6417.4	6417.4	<LOD	5.5	9.1	9.1	3.3	3.3	95.3	95.3	337.6	337.6	55.0	55.0	46.6	46.6	<LOD	0.0	<LOD	3.5	18.6	18.6	3045.7	3045.7	<LOD	0.0	101.4	101.4	112.1	112.1	<LOD	30.0	42373.1	42373.1	5056.9	5056.9	40.8	40.8	<LOD	25.0	590.8	590.8	<LOD	3.5	63322.7	63322.7	14328.2	14328.2	5710.3	5710.3
DU 1-13.8	1	6983.0	6983.0	<LOD	5.5	10.4	10.4	3.8	3.8	96.0	96.0	352.9	352.9	56.8	56.8	39.3	39.3	<LOD	0.0	<LOD	3.5	12.2	12.2	3123.9	3123.9	55.0	55.0	132.3	132.3	121.9	121.9	<LOD	30.0	45836.7	45836.7	5614.6	5614.6	36.6	36.6	84.1	84.1	867.3	867.3	<LOD	3.5	67140.9	67140.9	14684.3	14684.3	6918.9	6918.9
DU 1-13.9	1	7302.8	7302.8	<LOD	5.5	8.5	8.5	3.9	3.9	92.7	92.7	364.8	364.8	54.4	54.4	51.7	51.7	7.8	7.8	<LOD	3.5	<LOD	5.0	3222.1	3222.1	<LOD	0.0	121.9	121.9	112.8	112.8	<LOD	30.0	48053.0	48053.0	5961.0	5961.0	39.3	39.3	101.9	101.9	729.4	729.4	<LOD	3.5	68145.3	68145.3	14078.4	14078.4	7667.0	7667.0
DU 9-1.1	9	3438.8	3438.8	<LOD	5.5	5.6	5.6	4.7	4.7	136.6	136.6	91.8	91.8	56.9	56.9	16.8	16.8	<LOD	0.0	<LOD	3.5	7.9	7.9	5914.4	5914.4	42.5	42.5	188.7	188.7	72.3	72.3	<LOD	30.0	40673.1	40673.1	2498.0	2498.0	33.7	33.7	42.9	42.9	1179.6	1179.6	<LOD	3.5	37806.3	37806.3	14727.3	14727.3	3071.2	3071.2
DU 9-1.2	9	4054.5	4054.5	<LOD	5.5	5.0	5.0	<LOD	5.0	81.1	81.1	103.5	103.5	55.6	55.6	23.9	23.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	7417.0	7417.0	72.9	72.9	196.4	196.4	62.9	62.9	<LOD	30.0	42437.7	42437.7	3267.5	3267.5	30.0	30.0	43.0	43.0	1513.3	1513.3	<LOD	3.5	50355.9	50355.9	14064.4	14064.4	4838.6	4838.6
DU 9-1.3	9	3718.2	3718.2	<LOD	5.5	6.5	6.5	3.4	3.4	190.9	190.9	97.8	97.8	57.2	57.2	19.4	19.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	6580.6	6580.6	68.4	68.4	178.7	178.7	65.2	65.2	<LOD	30.0	38174.3	38174.3	2916.5	2916.5	15.5	15.5	34.2	34.2	1189.3	1189.3	<LOD	3.5	41450.2	41450.2	13558.3	13558.3	3932.4	3932.4
DU 9-1.4	9	3358.8	3358.8	<LOD	5.5	<LOD	5.0	5.4	5.4	106.5	106.5	90.1	90.1	51.4	51.4	22.7	22.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	6684.3	6684.3	55.8	55.8	146.3	146.3	60.1	60.1	<LOD	30.0	36441.4	36441.4	3067.5	3067.5	20.6	20.6	41.0	41.0	1186.5	1186.5	<LOD	3.5	45960.0	45960.0	13590.1	13590.1	3077.3	3077.3
DU 9-1.5	9	3120.7	3120.7	<LOD	5.5	<LOD	5.0	5.2	5.2	135.7	135.7	91.8	91.8	55.3	55.3	29.3	29.3	<LOD	0.0	<LOD	3.5	10.2	10.2	6460.2	6460.2	47.1	47.1	280.2	280.2	61.8	61.8	<LOD	30.0	40115.7	40115.7	2427.5	2427.5	31.7	31.7	61.3	61.3	1578.1	1578.1	<LOD	3.5	48115.4	48115.4	14489.9	14489.9	4186.7	4186.7
DU 9-1.6	9	3686.0	3686.0	<LOD	5.5	<LOD	5.0	3.5	3.5	136.0	136.0	99.6	99.6	54.5	54.5	25.6	25.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	8902.1	8902.1	64.9	64.9	144.1	144.1	66.5	66.5	<LOD	30.0	40544.0	40544.0	3224.9	3224.9	22.0	22.0	42.6	42.6	1199.9	1199.9	<LOD	3.5	49803.5	49803.5	13739.7	13739.7	3504.9	3504.9
DU 9-1.7	9	4061.6	4061.6	<LOD	5.5	5.4	5.4	4.2	4.2	115.5	115.5	98.7	98.7	55.9	55.9	31.2	31.2	<LOD	0.0	<LOD	3.5	8.5	8.5	7962.5	7962.5	<LOD	0.0	211.5	211.5	76.6	76.6	<LOD	30.0	44404.5	44404.5	3447.4	3447.4	19.8	19.8	<LOD	25.0	1894.7	1894.7	<LOD	3.5	53782.1	53782.1	13168.7	13168.7	4640.2	4640.2
DU 9-1.8	9	2907.4	2907.4	<LOD	5.5	6.6	6.6	4.2	4.2	97.8	97.8	82.1	82.1	55.5	55.5	19.0	19.0	5.9	5.9	<LOD	3.5	<LOD	5.0	6173.2	6173.2	<LOD	0.0	142.3	142.3	48.2	48.2	<LOD	30.0	30360.0	30360.0	2101.1	2101.1	24.6	24.6	<LOD	25.0	970.8	970.8	<LOD	3.5	35051.8	35051.8	13929.2	13929.2	3223.3	3223.3
DU 9-1.9	9	4567.3	4567.3	<LOD	5.5	7.6	7.6	7.0	7.0	152.7	152.7	107.9	107.9	54.1	54.1	23.7	23.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	8851.6	8851.6	<LOD	0.0	251.4	251.4	76.7	76.7	<LOD	30.0	50531.7	50531.7	4006.1	4006.1	33.3	33.3	41.7	41.7	1636.8	1636.8	<LOD	3.5	55167.6	55167.6	12988.6	12988.6	5272.8	5272.8
DU 9-2.1	9	4076.7	4076.7	<LOD	5.5	9.5	9.5	8.0	8.0	206.5	206.5	190.5	190.5	58.3	58.3	69.0	69.0	<LOD	0.0	<LOD	3.5	12.4	12.4	5122.3	5122.3	<LOD	0.0	270.4	270.4	79.9	79.9	<LOD	30.0	39980.1	39980.1	2987.8	2987.8	18.9	18.9	58.0	58.0	1919.9	1919.9	<LOD	3.5	55306.3	55306.3	14037.9	14037.9	4550.9	4550.9
DU 9-2.2	9	3638.6	3638.6	<LOD	5.5	10.3	10.3	6.8	6.8	289.5	289.5	154.2	154.2	56.3	56.3	40.3	40.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	5188.3	5188.3	<LOD	0.0	310.2	310.2	71.2	71.2	<LOD	30.0	39002.2	39002.2	2762.2	2762.2	16.4	16.4	48.7	48.7	1371.3	1371.3	<LOD	3.5	40216.6	40216.6	14278.8	14278.8	3209.0	3209.0
DU 9-2.3	9	2795.3	2795.3	<LOD	5.5	7.0	7.0	6.8	6.8	264.3	264.3	123.9	123.9	56.4	56.4	32.1	32.1	<LOD	0.0	<LOD	3.5	8.0	8.0	3750.7	3750.7	39.1	39.1	262.0	262.0	69.5	69.5	<LOD	30.0	30150.3	30150.3	1951.9	1951.9	<LOD	35.0	38.9	38.9	1084.9	1084.9	<LOD	3.5	39460.5	39460.5	13562.4	13562.4	2992.3	2992.3
DU 9-2.4	9	3823.9	3823.9	<LOD	5.5	8.4	8.4	5.3	5.3	347.4	347.4	148.0	148.0	58.0	58.0	36.8	36.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	4706.7	4706.7	<LOD	0.0	401.9	401.9	73.6	73.6	<LOD	30.0	42019.2	42019.2	2996.7	2996.7	<LOD	35.0	59.2	59.2	1863.1	1863.1	<LOD	3.5	46245.0	46245.0	15904.3	15904.3	3651.3	3651.3
DU 9-2.5	9	3090.4	3090.4	<LOD	5.5	6.6	6.6	4.1	4.1	350.0	350.0	138.3	138.3	54.2	54.2	28.4	28.4	<LOD	0.0	<LOD	3.5	9.7	9.7	4337.4	4337.4	42.5	42.5	283.9	283.9	63.2	63.2	<LOD	30.0	34227.5	34227.5	2247.8	2247.8	15.9	15.9	45.6	45.6	1577.0	1577.0	<LOD	3.5	43338.7	43338.7	15062.0	15062.0	3106.3	3106.3
DU 9-2.6	9	4256.4	4256.4	<LOD	5.5	11.8	11.8	4.9	4.9	740.9	740.9	168.9	168.9	58.6	58.6	37.9	37.9	7.3	7.3	<LOD	3.5	<LOD	5.0	4379.9	4379.9	46.7	46.7	317.0	317.0	69.8	69.8	<LOD	30.0	44283.9	44283.9	2813.8	2813.8	19.7	19.7	52.5	52.5	1705.1	1705.1	<LOD	3.5	46306.9	46306.9	13926.8	13926.8	3533.4	3533.4
DU 9-2.7	9	3986.2	3986.2	<LOD	5.5	10.9	10.9	7.4	7.4	384.0	384.0	169.1	169.1	58.9	58.9	50.5	50.5	8.0	8.0	<LOD	3.5	<LOD	5.0	4575.4	4575.4	<LOD	0.0	352.4	352.4	72.8	72.8	<LOD	30.0	41550.5	41550.5	2306.8	2306.8	<LOD	35.0	<LOD	25.0	1629.8	1629.8	<LOD	3.5	46593.4	46593.4	15958.0	15958.0	3877.5	3877.5
DU 9-2.8	9	2654.1	2654.1	<LOD	5.5	8.3	8.3	4.8	4.8	220.1	220.1	125.5	125.5	57.7	57.7	23.3	23.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	3104.6	3104.6	<LOD	0.0	272.6	272.6	56.0	56.0	<LOD	30.0	27575.5	27575.5	2015.8	2015.8	<LOD	35.0	35.5	35.5	1616.6	1616.6	<LOD	3.5	38995.5	38995.5	14874.6	14874.6	2953.3	2953.3
DU 9-2.9	9	4270.4	4270.4	<LOD	5.5	9.7	9.7	6.1	6.1	362.5	362.5	169.6	169.6	62.3	62.3	44.3	44.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	5467.1	5467.1	48.9	48.9	396.7	396.7	68.9	68.9	<LOD	30.0	44661.0	44661.0	2945.9	2945.9	15.9	15.9	38.5	38.5	1842.8	1842.8	<LOD	3.5	45592.7	45592.7	16484.6	16484.6	3784.9	3784.9
DU 9-3.1	9	136.2	136.2	<LOD	5.5	6.5	6.5	6.9	6.9	459.6	459.6	260.7	260.7	92.2	92.2	14.6	14.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	406.8	406.8	<LOD	0.0	30.8	30.8	48.6	48.6	<LOD	30.0	19686.8	19686.8	495.4	495.4	<LOD	35.0	49.5	49.5	2362.9	2362.9	<LOD	3.5	77005.0	77005.0	20485.1	20485.1	628.6	628.6
DU 9-3.2	9	152.4	152.4	<LOD	5.5	8.9	8.9	6.0	6.0	723.5	723.5	259.4	259.4	92.4	92.4	24.4	24.4	<LOD	0.0	3.1	3.1	<LOD	5.0	159.0	159.0	<LOD	0.0	32.7	32.7	54.5	54.5	<LOD	30.0	21237.6	21237.6	507.6	507.6	18.1	18.1	69.1	69.1	2929.2	2929.2	<LOD	3.5	81413.8	81413.8	23036.3	23036.3	385.3	385.3
DU 9-3.3	9	129.4	129.4	<LOD	5.5	7.1	7.1	7.4	7.4	522.5	522.5	267.9	267.9	95.9	95.9	14.3	14.3	<LOD	0.0	<LOD	3.5	8.2	8.2	157.1	157.1	<LOD	0.0	43.0	43.0	43.0	43.0	<LOD	30.0	18353.4	18353.4	365.6	365.6	<LOD	35.0	59.8	59.8	2490.7	2490.7	<LOD	3.5	104989.9	104989.9	21891.9	21891.9	670.0	670.0
DU 9-3.4	9	117.4	117.4	8.8	8.8	6.5	6.5	5.1	5.1	432.4	432.4	260.2	260.2	94.9	94.9	21.8	21.8	<LOD	0.0	2.8	2.8	6.7	6.7	143.3	143.3	<LOD	0.0	33.6	33.6	52.5	52.5	<LOD	30.0	20015.5	20015.5	431.6	431.6	<LOD	35.0	64.6	64.6	2999.7	2999.7	<LOD	3.5	88470.1	88470.1	23439.5	23439.5	615.5	615.5
DU 9-3.5	9	162.2	162.2	8.3	8.3	7.8	7.8	4.7	4.7	832.9	832.9	266.2	266.2	89.5	89.5	26.2	26.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	171.8	171.8	29.3	29.3	47.3	47.3	52.8	52.8	<LOD	30.0	23484.1	23484.1	493.8	493.8	16.6	16.6	85.9	85.9	3734.6	3734.6	<LOD	3.5	76837.4	76837.4	21450.5	21450.5	<LOD	500.0
DU 9-3.6	9	175.3	175.3	8.2	8.2	8.9	8.9	5.2	5.2	610.3	610.3	262.9	262.9	93.7	93.7	18.5	18.5	<LOD	0.0	<LOD	3.5	8.7	8.7	221.3	221.3	<LOD	0.0	43.6	43.6	46.0	46.0	<LOD	30.0	22373.2	22373.2	541.0	541.0	<LOD	35.0	82.9	82.9	3118.7	3118.7	<LOD	3.5	74915.7	74915.7	22283.4	22283.4	452.9	452.9
DU 9-3.7	9	165.0	165.0	<LOD	5.5	9.0	9.0	7.2	7.2	659.8	659.8	256.4	256.4	89.7	89.7	20.9	20.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	238.9	238.9	<LOD	0.0	44.1	44.1	25.9	25.9	<LOD	30.0	20653.9	20653.9	436.2	436.2	22.2	22.2	58.3	58.3	2318.6	2318.6	<LOD	3.5	65613.2	65613.2	16972.1	16972.1	572.8	572.8
DU 9-3.8	9	129.4	129.4	8.1	8.1	6.9	6.9	6.0	6.0	429.1	429.1	257.1	257.1	91.7	91.7	16.9	16.9	<LOD	0.0	<LOD	3.5	6.9	6.9	139.0	139.0	<LOD	0.0	33.7	33.7	53.5	53.5	<LOD	30.0	19837.8	19837.8	465.4	465.4	<LOD	35.0	70.4	70.4	2776.2	2776.2	<LOD	3.5	82953.5	82953.5	20790.5	20790.5	581.4	581.4
DU 9-3.9	9	159.8	159.8	<LOD	5.5	6.2	6.2	7.5	7.5	631.2	631.2	263.4	263.4	90.3	90.3	19.8	19.8	<LOD	0.0	3.1	3.1	<LOD	5.0	163.0	163.0	36.2	36.2	39.5	39.5	41.3	41.3	<LOD	30.0	20373.9	20373.9	439.5	439.5	<LOD	35.0	55.0	55.0	2951.7	2951.7	<LOD	3.5	79485.0	79485.0	22227.8	22227.8	699.9	699.9
DU 9-3-A.1	9	136.8	136.8	7.4	7.4	8.3	8.3	4.7	4.7	594.5	594.5	258.0	258.0	94.7	94.7	15.4	15.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	214.6	214.6	26.8	26.8	58.1	58.1	36.1	36.1	<LOD	30.0	21753.9	21753.9	418.6	418.6	20.5	20.5	70.2	70.2	2713.3	2713.3	<LOD	3.5	71569.9	71569.9	20799.5	20799.5	368.9	368.9
DU 9-3-A.2	9	137.0	137.0	<LOD	5.5	7.7	7.7	7.2	7.2	409.2	409.2	253.6	253.6	94.4	94.4	17.0	17.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	158.4	158.4	<LOD	0.0	54.5	54.5	39.5	39.5	<LOD	30.0	21092.2	21092.2	507.6	507.6	<LOD	35.0	62.9	62.9	2601.1	2601.1	<LOD	3.5	72869.4	72869.4	19125.5	19125.5	573.1	573.1
DU 9-3-A.3	9	147.4	147.4	8.5	8.5	7.5	7.5	5.0	5.0	685.5	685.5	250.6	250.6	84.9	84.9	21.3	21.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	160.2	160.2	<LOD	0.0	50.9	50.9	17.7	17.7	93.8	93.8	21415.5	21415.5	474.5	474.5	24.4	24.4	51.5	51.5	2404.9	2404.9	<LOD	3.5	56566.8	56566.8	15832.6	15832.6	313.0	313.0
DU 9-3-A.4	9	184.5	184.5	14.7	14.7	6.5	6.5	5.5	5.5	701.3	701.3	262.7	262.7	86.5	86.5	20.8	20.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	188.0	188.0	<LOD	0.0	48.2	48.2	46.6	46.6	83.5	83.5	25026.6	25026.6	493.0	493.0	35.2	35.2	60.3	60.3	3187.6	3187.6	<LOD	3.5	72378.3	72378.3	18695.3	18695.3	666.3	666.3
DU 9-3-A.5	9	166.0	166.0	16.2	16.2	9.5	9.5	4.2	4.2	527.7	527.7	264.1	264.1	94.2	94.2	28.7	28.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	162.6	162.6	32.0	32.0	31.6	31.6	52.7	52.7	<LOD	30.0	21381.7	21381.7	478.8	478.8	21.5	21.5	72.7	72.7	3295.4	3295.4	<LOD	3.5	87160.2	87160.2	21593.9	21593.9	701.8	701.8
DU 9-3-A.6	9	183.5	183.5	9.0	9.0	8.5	8.5	5.4	5.4	592.0	592.0	269.3	269.3	91.2	91.2	21.3	21.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	176.4	176.4	31.3	31.3	48.0	48.0	48.0	48.0	<LOD	30.0	23365.8	23365.8	468.3	468.3	27.7	27.7	60.3	60.3	3185.4	3185.4	<LOD	3.5	84577.8	84577.8	21117.1	21117.1	687.7	687.7
DU 9-3-A.7	9	176.4	176.4	9.1	9.1	7.4	7.4	5.6	5.6	577.1	577.1	256.7	256.7	88.8	88.8	16.4	16.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	164.0	164.0	30.1	30.1	40.5	40.5	40.4	40.4	<LOD	30.0	23714.3	23714.3	506.3	506.3	37.3	37.3	74.7	74.7	3335.4	3335.4	<LOD	3.5	61586.6	61586.6	18316.4	18316.4	554.1	554.1
DU 9-3-A.8	9	126.8	126.8	7.5	7.5	7.6	7.6	4.0	4.0	387.6	387.6	246.0	246.0	92.2	92.2	13.2	13.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	145.3	145.3	<LOD	0.0	41.4	41.4	28.7	28.7	<LOD	30.0	19329.3	19329.3	404.3	404.3	14.2	14.2	47.5	47.5	2346.9	2346.9	<LOD	3.5	65796.0	65796.0	17331.6	17331.6	<LOD	500.0
DU 9-3-A.9	9	174.4	174.4	10.5	10.5	7.0	7.0	3.6	3.6	672.8	672.8	264.8	264.8	96.5	96.5	18.8	18.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	170.0	170.0	<LOD	0.0	41.4	41.4	48.7	48.7	<LOD	30.0	23704.8	23704.8	499.2	499.2	19.1	19.1	81.4	81.4	3645.3	3645.3	<LOD	3.5	74014.7	74014.7	21333.7	21333.7	787.2	787.2
DU 9-4.1	9	274.0	274.0	14.6	14.6	8.0	8.0	5.3	5.3	843.7	843.7	216.5	216.5	107.7	107.7	18.6	18.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	315.9	315.9	29.0	29.0	65.9	65.9	55.2	55.2	161.1	161.1	42032.6	42032.6	788.8	788.8	67.0	67.0	119.8	119.8	5251.6	5251.6	<LOD	3.5	23546.5	23546.5	26309.5	26309.5	595.4	595.4
DU 9-4.2	9	238.8	238.8	14.0	14.0	12.3	12.3	7.6	7.6	930.3	930.3	205.0	205.0	102.5	102.5	22.0	22.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	291.3	291.3	<LOD	0.0	63.3	63.3	17.2	17.2	112.7	112.7	36344.8	36344.8	640.8	640.8	52.6	52.6	74.1	74.1	3313.0	3313.0	48.6	48.6	17926.4	17926.4	19661.7	19661.7	1816.2	1816.2
DU 9-4.3	9	232.5	232.5	18.7	18.7	10.2	10.2	5.5	5.5	921.6	921.6	207.8	207.8	103.8	103.8	26.3	26.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	286.4	286.4	<LOD	0.0	74.3	74.3	38.4	38.4	215.5	215.5	42643.1	42643.1	756.8	756.8	61.2	61.2	102.3	102.3	4221.8	4221.8	79.5	79.5	21413.7	21413.7	23592.6	23592.6	573.0	573.0
DU 9-4.4	9	232.2	232.2	19.5	19.5	8.8	8.8	5.5	5.5	961.7	961.7	208.1	208.1	99.2	99.2	32.2	32.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	307.1	307.1	<LOD	0.0	72.9	72.9	27.9	27.9	173.2	173.2	43808.6	43808.6	659.1	659.1	62.9	62.9	98.6	98.6	3681.6	3681.6	<LOD	3.5	18669.5	18669.5	20054.7	20054.7	1054.5	1054.5
DU 9-4.5	9	249.6	249.6	21.1	21.1	8.8	8.8	8.3	8.3	699.5	699.5	210.8	210.8	103.2	103.2	20.3	20.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	364.9	364.9	26.8	26.8	66.9	66.9	36.8	36.8	139.5	139.5	42269.6	42269.6	703.1	703.1	62.5	62.5	101.5	101.5	4340.7	4340.7	48.5	48.5	19848.4	19848.4	22303.7	22303.7	774.3	774.3
DU 9-4.6	9	232.8	232.8	9.9	9.9	9.4	9.4	8.0	8.0	808.8	808.8	212.7	212.7	106.0	106.0	29.9	29.9	<LOD	0.0	<LOD	3.5	7.4	7.4	295.6	295.6	<LOD	0.0	64.1	64.1	28.4	28.4	172.4	172.4	40151.7	40151.7	682.6	682.6	59.0	59.0	109.4	109.4	4362.6	4362.6	56.5	56.5	21134.7	21134.7	24497.9	24497.9	415.3	415.3
DU 9-4.7	9	264.9	264.9	14.6	14.6	8.9	8.9	8.0	8.0	723.5	723.5	210.1	210.1	103.6	103.6	54.5	54.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	324.3	324.3	<LOD	0.0	52.5	52.5	37.6	37.6	136.8	136.8	47443.4	47443.4	709.6	709.6	50.8	50.8	95.1	95.1	4344.9	4344.9	<LOD	3.5	19469.5	19469.5	21830.0	21830.0	1493.5	1493.5
DU 9-4.8	9	235.9	235.9	<LOD	5.5	11.4	11.4	5.6	5.6	812.0	812.0	213.5	213.5	102.0	102.0	37.8	37.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	312.8	312.8	<LOD	0.0	62.2	62.2	51.0	51.0	162.4	162.4	43844.9	43844.9	705.5	705.5	64.9	64.9	123.2	123.2	4644.1	4644.1	<LOD	3.5	20336.8	20336.8	23109.3	23109.3	1786.4	1786.4
DU 9-4.9	9	229.6	229.6	<LOD	5.5	10.3	10.3	6.0	6.0	781.2	781.2	199.5	199.5	102.3	102.3	25.9	25.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	341.3	341.3	29.4	29.4	59.6	59.6	18.8	18.8	146.4	146.4	38025.3	38025.3	664.1	664.1	49.4	49.4	95.4	95.4	4157.0	4157.0	39.8	39.8	17710.8	17710.8	20729.8	20729.8	701.7	701.7
DU 9-5.1	9	1271.0	1271.0	<LOD	5.5	16.7	16.7	16.9	16.9	1826.2	1826.2	255.1	255.1	82.8	82.8	26.4	26.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	1892.5	1892.5	66.3	66.3	88.3	88.3	54.3	54.3	537.2	537.2	124661.8	124661.8	1439.7	1439.7	85.5	85.5	169.0	169.0	6406.5	6406.5	<LOD	3.5	39212.9	39212.9	18405.0	18405.0	1410.0	1410.0
DU 9-5.2	9	748.5	748.5	<LOD	5.5	11.0	11.0	14.2	14.2	941.7	941.7	249.8	249.8	91.3	91.3	30.5	30.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	807.5	807.5	49.1	49.1	316.7	316.7	47.5	47.5	297.3	297.3	48525.8	48525.8	1052.2	1052.2	38.6	38.6	98.8	98.8	3785.5	3785.5	<LOD	3.5	38203.3	38203.3	19403.0	19403.0	1349.0	1349.0
DU 9-5.3	9	809.4	809.4	<LOD	5.5	17.4	17.4	15.2	15.2	903.2	903.2	234.9	234.9	87.7	87.7	48.0	48.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	953.0	953.0	<LOD	0.0	42.1	42.1	30.1	30.1	328.2	328.2	39791.5	39791.5	1023.8	1023.8	27.6	27.6	54.1	54.1	1794.5	1794.5	<LOD	3.5	30962.4	30962.4	19644.9	19644.9	982.7	982.7

DU 9-5.4	9	1291.6	1291.6	<LOD	5.5	15.1	15.1	6.0	6.0	1527.2	1527.2	250.4	250.4	87.2	87.2	49.8	49.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	1556.1	1556.1	74.3	74.3	104.4	104.4	64.1	64.1	515.8	515.8	141278.3	141278.3	1459.9	1459.9	82.7	82.7	237.8	237.8	7540.9	7540.9	<LOD	3.5	46254.4	46254.4	21479.6	21479.6	1656.1	1656.1
DU 9-5.5	9	1011.1	1011.1	<LOD	5.5	17.1	17.1	9.6	9.6	1396.0	1396.0	253.0	253.0	82.0	82.0	33.8	33.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	1289.6	1289.6	79.0	79.0	80.6	80.6	65.3	65.3	557.5	557.5	95391.8	95391.8	1745.6	1745.6	47.8	47.8	148.0	148.0	6533.4	6533.4	<LOD	3.5	46460.9	46460.9	18631.5	18631.5	1264.5	1264.5
DU 9-5.6	9	1197.3	1197.3	<LOD	5.5	15.9	15.9	12.9	12.9	1050.3	1050.3	260.9	260.9	89.6	89.6	27.7	27.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	1464.6	1464.6	61.8	61.8	82.5	82.5	43.7	43.7	429.3	429.3	55171.3	55171.3	1811.1	1811.1	21.9	21.9	126.0	126.0	4607.2	4607.2	<LOD	3.5	42898.2	42898.2	19768.3	19768.3	1432.2	1432.2
DU 9-5.7	9	988.1	988.1	<LOD	5.5	15.2	15.2	12.7	12.7	657.6	657.6	232.1	232.1	87.0	87.0	22.9	22.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	1367.0	1367.0	44.4	44.4	54.8	54.8	57.8	57.8	480.5	480.5	84977.7	84977.7	1409.1	1409.1	49.7	49.7	121.9	121.9	4407.8	4407.8	<LOD	3.5	36344.6	36344.6	21258.1	21258.1	1026.1	1026.1
DU 9-5.8	9	1187.7	1187.7	<LOD	5.5	16.7	16.7	13.6	13.6	1801.3	1801.3	252.4	252.4	82.8	82.8	85.0	85.0	5.1	5.1	<LOD	3.5	<LOD	5.0	1967.2	1967.2	71.2	71.2	291.0	291.0	55.5	55.5	703.0	703.0	144165.3	144165.3	2033.2	2033.2	95.9	95.9	179.2	179.2	7838.0	7838.0	<LOD	3.5	39299.7	39299.7	19712.4	19712.4	1320.2	1320.2
DU 9-5.9	9	1381.5	1381.5	<LOD	5.5	14.0	14.0	15.1	15.1	1294.2	1294.2	252.4	252.4	87.2	87.2	34.0	34.0	<LOD	0.0	<LOD	3.5	9.5	9.5	1871.8	1871.8	66.2	66.2	101.6	101.6	37.6	37.6	1012.8	1012.8	130381.9	130381.9	1734.4	1734.4	93.3	93.3	172.0	172.0	8419.1	8419.1	<LOD	3.5	40455.8	40455.8	19532.8	19532.8	1393.2	1393.2
DU 9-6.1	9	1187.3	1187.3	<LOD	5.5	10.9	10.9	12.0	12.0	658.5	658.5	202.5	202.5	74.1	74.1	32.1	32.1	<LOD	0.0	<LOD	3.5	<LOD	5.0	1398.5	1398.5	29.6	29.6	77.6	77.6	32.0	32.0	<LOD	30.0	23698.2	23698.2	918.0	918.0	24.2	24.2	<LOD	25.0	1635.2	1635.2	<LOD	3.5	35170.5	35170.5	16376.0	16376.0	994.2	994.2
DU 9-6.2	9	1011.6	1011.6	<LOD	5.5	6.1	6.1	8.1	8.1	375.1	375.1	210.3	210.3	80.8	80.8	21.0	21.0	<LOD	0.0	<LOD	3.5	<LOD	5.0	1702.0	1702.0	33.9	33.9	54.6	54.6	60.3	60.3	<LOD	30.0	21057.6	21057.6	928.6	928.6	<LOD	35.0	53.9	53.9	2367.2	2367.2	<LOD	3.5	50523.3	50523.3	19149.8	19149.8	1227.3	1227.3
DU 9-6.3	9	1014.2	1014.2	<LOD	5.5	9.5	9.5	6.2	6.2	292.6	292.6	196.3	196.3	82.4	82.4	17.5	17.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	1211.7	1211.7	46.1	46.1	48.7	48.7	55.7	55.7	<LOD	30.0	17821.3	17821.3	833.9	833.9	<LOD	35.0	55.0	55.0	1913.7	1913.7	<LOD	3.5	48315.9	48315.9	20818.8	20818.8	1393.4	1393.4
DU 9-6.4	9	1220.6	1220.6	<LOD	5.5	8.5	8.5	10.4	10.4	455.3	455.3	210.3	210.3	83.7	83.7	15.7	15.7	3.6	3.6	<LOD	3.5	<LOD	5.0	1162.6	1162.6	43.4	43.4	63.1	63.1	50.2	50.2	<LOD	30.0	19893.3	19893.3	1026.0	1026.0	<LOD	35.0	56.3	56.3	2092.6	2092.6	<LOD	3.5	40046.6	40046.6	21142.4	21142.4	1660.3	1660.3
DU 9-6.5	9	795.3	795.3	<LOD	5.5	6.1	6.1	6.3	6.3	177.4	177.4	191.6	191.6	85.0	85.0	11.4	11.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	1112.7	1112.7	<LOD	0.0	41.2	41.2	41.6	41.6	<LOD	30.0	16471.6	16471.6	567.6	567.6	<LOD	35.0	53.7	53.7	1760.0	1760.0	<LOD	3.5	39325.3	39325.3	23045.6	23045.6	668.3	668.3
DU 9-6.6	9	1165.0	1165.0	<LOD	5.5	9.6	9.6	9.9	9.9	684.6	684.6	203.8	203.8	77.4	77.4	24.5	24.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	1676.8	1676.8	32.1	32.1	136.0	136.0	34.0	34.0	<LOD	30.0	23595.5	23595.5	932.1	932.1	<LOD	35.0	45.9	45.9	1810.2	1810.2	<LOD	3.5	38987.5	38987.5	18465.5	18465.5	1176.3	1176.3
DU 9-6.7	9	1185.0	1185.0	<LOD	5.5	8.0	8.0	10.9	10.9	579.0	579.0	205.9	205.9	81.8	81.8	19.7	19.7	<LOD	0.0	<LOD	3.5	<LOD	5.0	1955.0	1955.0	<LOD	0.0	80.1	80.1	32.4	32.4	<LOD	30.0	23522.7	23522.7	1048.2	1048.2	26.2	26.2	36.3	36.3	1791.5	1791.5	<LOD	3.5	34438.8	34438.8	18058.9	18058.9	1386.9	1386.9
DU 9-6.8	9	1354.5	1354.5	<LOD	5.5	8.2	8.2	10.9	10.9	722.0	722.0	217.5	217.5	85.1	85.1	22.4	22.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	1613.6	1613.6	36.9	36.9	107.1	107.1	59.3	59.3	<LOD	30.0	23758.5	23758.5	1015.8	1015.8	23.6	23.6	65.7	65.7	3032.4	3032.4	<LOD	3.5	46067.8	46067.8	20471.5	20471.5	1449.7	1449.7
DU 9-6.9	9	1106.1	1106.1	<LOD	5.5	7.1	7.1	11.0	11.0	565.1	565.1	196.8	196.8	81.7	81.7	18.3	18.3	3.8	3.8	<LOD	3.5	<LOD	5.0	1307.9	1307.9	28.5	28.5	65.8	65.8	58.7	58.7	74.4	74.4	18309.5	18309.5	821.5	821.5	<LOD	35.0	46.3	46.3	2181.8	2181.8	<LOD	3.5	38121.6	38121.6	21542.3	21542.3	1228.0	1228.0
DU 9-7.1	9	2961.3	2961.3	<LOD	5.5	6.1	6.1	<LOD	5.0	54.2	54.2	74.0	74.0	42.1	42.1	17.4	17.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	6168.4	6168.4	<LOD	0.0	36.1	36.1	68.2	68.2	<LOD	30.0	31876.6	31876.6	2269.2	2269.2	<LOD	35.0	<LOD	25.0	858.3	858.3	<LOD	3.5	55697.9	55697.9	11598.9	11598.9	3552.6	3552.6
DU 9-7.2	9	2649.9	2649.9	<LOD	5.5	4.9	4.9	<LOD	5.0	77.5	77.5	66.2	66.2	44.8	44.8	27.8	27.8	<LOD	0.0	<LOD	3.5	<LOD	5.0	4950.2	4950.2	<LOD	0.0	31.0	31.0	56.8	56.8	<LOD	30.0	27372.8	27372.8	1628.8	1628.8	<LOD	35.0	35.5	35.5	881.3	881.3	<LOD	3.5	39222.7	39222.7	11985.0	11985.0	2453.0	2453.0
DU 9-7.3	9	2774.0	2774.0	<LOD	5.5	5.6	5.6	2.9	2.9	58.1	58.1	67.1	67.1	43.8	43.8	21.0	21.0	<LOD	0.0	<LOD	3.5	8.7	8.7	5731.8	5731.8	<LOD	0.0	51.1	51.1	52.8	52.8	<LOD	30.0	29196.9	29196.9	2215.9	2215.9	<LOD	35.0	28.5	28.5	858.5	858.5	<LOD	3.5	35853.9	35853.9	13310.0	13310.0	2718.9	2718.9
DU 9-7.4	9	3487.3	3487.3	<LOD	5.5	6.9	6.9	<LOD	5.0	123.9	123.9	79.7	79.7	41.3	41.3	32.6	32.6	6.4	6.4	<LOD	3.5	7.9	7.9	6700.6	6700.6	<LOD	0.0	45.2	45.2	55.3	55.3	<LOD	30.0	32329.4	32329.4	2625.7	2625.7	<LOD	35.0	<LOD	25.0	904.1	904.1	<LOD	3.5	56434.4	56434.4	11836.0	11836.0	3821.1	3821.1
DU 9-7.5	9	4999.4	4999.4	56.6	56.6	7.7	7.7	<LOD	5.0	159.2	159.2	97.2	97.2	41.8	41.8	38.5	38.5	<LOD	0.0	<LOD	3.5	<LOD	5.0	8379.4	8379.4	<LOD	0.0	49.9	49.9	67.9	67.9	<LOD	30.0	38830.2	38830.2	3130.6	3130.6	<LOD	35.0	42.3	42.3	1218.2	1218.2	<LOD	3.5	54752.4	54752.4	11605.7	11605.7	5464.3	5464.3
DU 9-7.6	9	2236.2	2236.2	<LOD	5.5	6.3	6.3	2.9	2.9	58.3	58.3	63.6	63.6	43.7	43.7	17.2	17.2	4.2	4.2	<LOD	3.5	6.8	6.8	3974.7	3974.7	<LOD	0.0	32.3	32.3	59.3	59.3	<LOD	30.0	20215.8	20215.8	1346.6	1346.6	<LOD	35.0	29.9	29.9	339.5	339.5	<LOD	3.5	38822.0	38822.0	12110.3	12110.3	1897.5	1897.5
DU 9-7.7	9	2995.8	2995.8	<LOD	5.5	7.8	7.8	<LOD	5.0	68.9	68.9	68.2	68.2	41.7	41.7	27.0	27.0	<LOD	0.0	<LOD	3.5	9.3	9.3	5455.2	5455.2	<LOD	0.0	30.3	30.3	53.6	53.6	<LOD	30.0	25037.3	25037.3	2148.9	2148.9	<LOD	35.0	<LOD	25.0	444.6	444.6	<LOD	3.5	38708.8	38708.8	10421.1	10421.1	2573.8	2573.8
DU 9-7.8	9	3868.8	3868.8	<LOD	5.5	6.7	6.7	3.1	3.1	107.5	107.5	91.5	91.5	43.1	43.1	42.9	42.9	<LOD	0.0	<LOD	3.5	10.4	10.4	6289.6	6289.6	<LOD	0.0	35.4	35.4	68.1	68.1	<LOD	30.0	33767.3	33767.3	2625.7	2625.7	<LOD	35.0	37.5	37.5	1085.8	1085.8	<LOD	3.5	58653.9	58653.9	10840.4	10840.4	3897.8	3897.8
DU 9-7.9	9	2217.1	2217.1	<LOD	5.5	5.9	5.9	<LOD	5.0	49.6	49.6	62.3	62.3	42.2	42.2	20.4	20.4	4.2	4.2	<LOD	3.5	7.3	7.3	4844.5	4844.5	<LOD	0.0	25.7	25.7	44.2	44.2	<LOD	30.0	24445.5	24445.5	1429.1	1429.1	<LOD	35.0	<LOD	25.0	671.0	671.0	<LOD	3.5	48817.5	48817.5	10970.7	10970.7	2145.0	2145.0
DU 9-8.1	9	3502.5	3502.5	<LOD	5.5	9.5	9.5	5.3	5.3	420.1	420.1	135.9	135.9	60.3	60.3	35.6	35.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	5023.1	5023.1	44.1	44.1	74.6	74.6	67.8	67.8	<LOD	30.0	45653.2	45653.2	2644.9	2644.9	32.9	32.9	61.5	61.5	2368.2	2368.2	<LOD	3.5	57265.0	57265.0	14756.4	14756.4	4408.3	4408.3
DU 9-8.2	9	4195.1	4195.1	<LOD	5.5	10.6	10.6	7.4	7.4	525.0	525.0	139.4	139.4	58.1	58.1	38.8	38.8	7.8	7.8	<LOD	3.5	<LOD	5.0	6180.8	6180.8	<LOD	0.0	49.4	49.4	60.3	60.3	<LOD	30.0	40096.5	40096.5	2517.0	2517.0	26.7	26.7	64.0	64.0	1446.6	1446.6	<LOD	3.5	49698.7	49698.7	14115.4	14115.4	3136.1	3136.1
DU 9-8.3	9	4738.0	4738.0	67.5	67.5	8.6	8.6	4.2	4.2	463.0	463.0	141.7	141.7	54.2	54.2	44.8	44.8	6.3	6.3	<LOD	3.5	13.8	13.8	7326.0	7326.0	<LOD	0.0	104.7	104.7	66.2	66.2	<LOD	30.0	52730.7	52730.7	3617.2	3617.2	40.8	40.8	67.9	67.9	2118.0	2118.0	<LOD	3.5	60435.1	60435.1	13962.2	13962.2	5669.0	5669.0
DU 9-8.4	9	3974.5	3974.5	<LOD	5.5	8.3	8.3	5.2	5.2	402.1	402.1	136.2	136.2	56.1	56.1	47.0	47.0	<LOD	0.0	<LOD	3.5	9.4	9.4	5581.5	5581.5	44.1	44.1	95.4	95.4	57.8	57.8	125.9	125.9	45394.5	45394.5	2196.4	2196.4	28.1	28.1	56.1	56.1	1647.7	1647.7	<LOD	3.5	57333.0	57333.0	14127.3	14127.3	3647.9	3647.9
DU 9-8.5	9	3420.5	3420.5	<LOD	5.5	12.0	12.0	3.5	3.5	376.9	376.9	130.4	130.4	55.0	55.0	60.4	60.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	4837.3	4837.3	<LOD	0.0	67.8	67.8	62.8	62.8	186.7	186.7	48789.2	48789.2	2324.8	2324.8	33.7	33.7	53.0	53.0	1922.7	1922.7	<LOD	3.5	42131.5	42131.5	14614.9	14614.9	3132.7	3132.7
DU 9-8.6	9	3111.4	3111.4	<LOD	5.5	8.0	8.0	6.3	6.3	517.1	517.1	133.8	133.8	58.5	58.5	26.9	26.9	<LOD	0.0	<LOD	3.5	<LOD	5.0	5090.3	5090.3	61.2	61.2	86.2	86.2	61.9	61.9	213.5	213.5	51983.6	51983.6	2162.7	2162.7	31.3	31.3	81.4	81.4	3204.9	3204.9	<LOD	3.5	48229.5	48229.5	14217.5	14217.5	2716.8	2716.8
DU 9-8.7	9	2931.4	2931.4	<LOD	5.5	7.8	7.8	7.8	7.8	426.8	426.8	122.3	122.3	57.4	57.4	32.2	32.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	4753.9	4753.9	<LOD	0.0	61.7	61.7	33.3	33.3	<LOD	30.0	37433.7	37433.7	2000.8	2000.8	38.8	38.8	43.0	43.0	1733.1	1733.1	<LOD	3.5	40019.0	40019.0	12666.3	12666.3	2410.9	2410.9
DU 9-8.8	9	3354.6	3354.6	<LOD	5.5	19.6	19.6	<LOD	5.0	657.2	657.2	126.9	126.9	54.1	54.1	49.6	49.6	<LOD	0.0	<LOD	3.5	<LOD	5.0	6472.0	6472.0	46.3	46.3	82.1	82.1	64.2	64.2	328.8	328.8	76628.6	76628.6	2858.6	2858.6	36.1	36.1	68.3	68.3	2127.2	2127.2	<LOD	3.5	50947.4	50947.4	13170.6	13170.6	3817.3	3817.3
DU 9-8.9	9	2817.1	2817.1	<LOD	5.5	9.2	9.2	5.5	5.5	311.7	311.7	126.4	126.4	66.9	66.9	34.3	34.3	5.2	5.2	<LOD	3.5	<LOD	5.0	4028.9	4028.9	37.4	37.4	75.2	75.2	55.4	55.4	<LOD	30.0	36481.7	36481.7	1734.0	1734.0	21.8	21.8	62.5	62.5	2604.1	2604.1	<LOD	3.5	46289.5	46289.5	16453.4	16453.4	3280.9	3280.9
DU 9-9.1	9	1104.7	1104.7	<LOD	5.5	6.2	6.2	6.1	6.1	619.7	619.7	243.5	243.5	74.8	74.8	37.3	37.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	1110.8	1110.8	<LOD	0.0	96.3	96.3	66.1	66.1	102.2	102.2	30347.7	30347.7	835.5	835.5	55.7	55.7	102.1	102.1	3314.9	3314.9	<LOD	3.5	120341.0	120341.0	19502.4	19502.4	1641.8	1641.8
DU 9-9.2	9	1209.9	1209.9	<LOD	5.5	4.8	4.8	3.5	3.5	479.2	479.2	242.3	242.3	72.5	72.5	21.5	21.5	<LOD	0.0	<LOD	3.5	6.6	6.6	1235.4	1235.4	<LOD	0.0	102.1	102.1	63.0	63.0	<LOD	30.0	29902.0	29902.0	899.6	899.6	34.0	34.0	59.5	59.5	3111.0	3111.0	<LOD	3.5	116147.0	116147.0	18917.9	18917.9	2019.0	2019.0
DU 9-9.3	9	1317.6	1317.6	<LOD	5.5	5.8	5.8	4.9	4.9	674.3	674.3	237.1	237.1	71.3	71.3	20.2	20.2	<LOD	0.0	<LOD	3.5	7.6	7.6	1269.8	1269.8	<LOD	0.0	76.5	76.5	40.4	40.4	132.5	132.5	35101.8	35101.8	1028.0	1028.0	35.8	35.8	74.4	74.4	2950.7	2950.7	<LOD	3.5	107477.8	107477.8	18340.7	18340.7	1803.4	1803.4
DU 9-9.4	9	1228.6	1228.6	21.9	21.9	9.1	9.1	5.1	5.1	488.9	488.9	243.1	243.1	74.7	74.7	23.1	23.1	3.9	3.9	<LOD	3.5	8.5	8.5	1319.7	1319.7	<LOD	0.0	99.6	99.6	59.5	59.5	<LOD	30.0	31535.6	31535.6	1008.3	1008.3	33.0	33.0	69.4	69.4	2904.5	2904.5	<LOD	3.5	115342.3	115342.3	19181.3	19181.3	2149.4	2149.4
DU 9-9.5	9	1263.3	1263.3	<LOD	5.5	7.6	7.6	6.8	6.8	602.6	602.6	235.3	235.3	72.6	72.6	22.2	22.2	<LOD	0.0	<LOD	3.5	<LOD	5.0	1241.9	1241.9	32.3	32.3	142.0	142.0	55.1	55.1	<LOD	30.0	33424.2	33424.2	936.5	936.5	35.7	35.7	65.8	65.8	2868.6	2868.6	<LOD	3.5	106534.7	106534.7	17463.7	17463.7	1822.1	1822.1
DU 9-9.6	9	1283.4	1283.4	<LOD	5.5	8.1	8.1	3.7	3.7	557.7	557.7	238.3	238.3	72.2	72.2	37.7	37.7	4.6	4.6	<LOD	3.5	<LOD	5.0	1137.7	1137.7	<LOD	0.0	102.6	102.6	50.0	50.0	124.6	124.6	29400.2	29400.2	944.5	944.5	35.3	35.3	85.1	85.1	3191.2	3191.2	<LOD	3.5	113142.0	113142.0	19534.5	19534.5	1544.0	1544.0
DU 9-9.7	9	1209.7	1209.7	<LOD	5.5	5.7	5.7	5.0	5.0	640.9	640.9	243.6	243.6	73.3	73.3	29.7	29.7	<LOD	0.0	<LOD	3.5	6.9	6.9	1343.2	1343.2	<LOD	0.0	106.7	106.7	47.8	47.8	118.5	118.5	30734.7	30734.7	979.0	979.0	40.6	40.6	81.2	81.2	2749.6	2749.6	<LOD	3.5	116544.8	116544.8	19003.5	19003.5	1942.4	1942.4
DU 9-9.8	9	1136.3	1136.3	<LOD	5.5	6.5	6.5	5.0	5.0	674.3	674.3	231.7	231.7	72.6	72.6	29.4	29.4	<LOD	0.0	<LOD	3.5	<LOD	5.0	1468.2	1468.2	<LOD	0.0	129.3	129.3	56.1	56.1	226.2	226.2	33496.1	33496.1	1014.7	1014.7	43.2	43.2	87.1	87.1	3661.4	3661.4	<LOD	3.5	108657.9	108657.9	18386.4	18386.4	1903.7	1903.7
DU 9-9.9	9	1101.1	1101.1	<LOD	5.5	6.6	6.6	5.2	5.2	533.4	533.4	237.2	237.2	70.7	70.7	21.3	21.3	<LOD	0.0	<LOD	3.5	<LOD	5.0	1239.0	1239.0	33.5	33.5	73.1	73.1	51.2	51.2	<LOD	30.0	27973.7	27973.7	799.1	799.1	33.0	33.0	83.4	83.4	2672.3	2672.3	113.3	113.3	113502.9	113502.9	18660.8	18660.8	1465.8	1465.8

Appendix H: In-Situ Data with AZSRS RSL

Sample ID	Pb (ppm)	As (ppm)	U (ppm)
DU 6-1	20886.7	5.6	5.1
DU 6-2	7105.2	5.7	5.2
DU 6-3	16817.8	5.8	5.3
HS-1	14542.4	5.6	5.1
HS-2	16624.0	235.6	5.1
HS-3	90940.4	1140.1	5.1
HS-4	3436.9	116.8	5.6
HS-5	128.5	14.4	5.1
HS-6	2399.7	44.6	5.3
HS-7	2624.2	6.3	5.3
HS-8	0.0	0.0	0.0
HS-9	2224.3	125.5	5.3
HS-10	8604.4	269.7	5.4
HS-11	252636.0	6520.8	5.3
HS-12	315145.9	6022.4	5.4
HS-13	10205.7	5.7	5.2
HS-14	421.5	68.5	5.3
HS-15	1971.2	141.2	5.0
HS-16	10424.0	5.6	5.1
HS-17	2379.2	5.6	5.1
HS-18	729.7	56.6	5.2
HS-19	19281.2	187.5	5.3
HS-20	441.2	24.6	5.4
HS-21	1676.9	25.9	5.2
HS-22	11141.5	338.5	5.3
BS-1	19.7	4.1	5.2
BS-2	0.0	0.0	0.0
BS-3	49.0	5.1	5.1
DU 2-1	3125.9	5.7	6.2
DU 2-2	5298.7	6.0	6.5
DU 2-3	3490.0	49.1	6.1
DU 2-4	6081.2	6.2	7.9
DU 2-5	6643.8	6.2	5.7
DU 2-6	1091.3	32.5	5.2
DU 2-7	6727.6	5.8	7.4
DU 2-8	14121.8	6.0	11.9
DU 2-9	5268.1	5.7	8.3
DU 2-10	7844.1	105.0	11.4
DU 2-11	3948.5	5.7	5.2
DU 2-12	11908.3	197.0	14.1
DU 2-13	4337.7	5.7	13.4
DU 1-1	620.6	49.2	5.1
DU 1-2	2315.5	64.0	5.5
DU 1-3	1412.5	64.0	5.2
DU 1-4	125.5	12.6	5.2
DU 1-5	2464.5	77.9	5.1
DU 1-7	5386.1	6.0	5.5
DU 1-8	8073.2	156.0	5.1
DU 1-9	1395.8	71.9	5.2
DU 1-10	4644.6	67.2	5.3
DU 1-11	8381.3	5.6	6.1
DU 1-12	2446.1	6.0	5.4
DU 1-13	7581.3	5.7	5.2
DU 9-1	1285.8	33.5	5.1
DU 9-2	1962.7	5.6	5.1
DU 9-3	198.1	5.7	5.2
DU 9-4	232.0	18.4	5.1
DU 9-5	259.0	13.3	5.1
DU 9-6	448.6	265.7	829.8
DU 9-7	2276.2	5.6	5.1
DU 9-8	2128.2	5.6	6.1
DU 9-9	221.9	5.8	5.2

Appendix I: Moisture Content Data

Sample ID	Moisture Content Fraction
DU 6-1, RS	0.0233
DU 6-2, RS	0.0317
DU 6-3, RS	0.0546
HS-1	0.0235
HS-2	0.0195
HS-3	0.0158
HS-4	0.1094
HS-5	0.0270
HS-6	0.0574
HS-7	0.0526
HS-8	0.0196
HS-9	0.0599
HS-10	0.0729
HS-11	0.0532
HS-12	0.0804
HS-13	0.0297
HS-14	0.0653
HS-15	0.0087
HS-16	0.0119
HS-17	0.0253
HS-18	0.0462
HS-19	0.0561
HS-20	0.0661
HS-21	0.0351
HS-22	0.0576
BS-1	0.0354
BS-2	0.0273
BS-3	0.0207
DU 2-1	0.0358
DU 2-2	0.0834
DU 2-3	0.0221
DU 2-4	0.1194
DU 2-5	0.1177
DU 2-6	0.0451
DU 2-7	0.0484
DU 2-8	0.0794
DU 2-9	0.0372
DU 2-10	0.0380
DU 2-11	0.0295
DU 2-12	0.0763
DU 2-13	0.0320
DU 1-1	0.0235
DU 1-2	0.0931
DU 1-3	0.0471
DU 1-4	0.0440
DU 1-5	0.0241
DU 1-7	0.0860
DU 1-8	0.0259
DU 1-9	0.0400
DU 1-10	0.0482
DU 1-11	0.0228
DU 1-12	0.0810
DU 1-13	0.0357
DU 9-1	0.0139
DU 9-2	0.0217
DU 9-3	0.0411
DU 9-4	0.0215
DU 9-5	0.0191
DU 9-6	0.0215
DU 9-7	0.0190
DU 9-8	0.0100
DU 9-9	0.0445

Appendix J: ICP Raw Data, Full Excel Worksheet (Credit: Chemistry Department)

Sample name (code)	Duplicate #	Soil mass (g)	Date	Concentration As (ppb) from O2 mode data
DU6-2 (D6)	1	0.5008	4/18/2026	7683.7725
	2	0.5007	4/18/2026	8035.5542
	3	0.5001	4/18/2026	7018.8397
DUI-12 (D12)	1	0.5009	4/18/2026	34049.7324
	2	0.5008	4/18/2026	27176.9332
	3	0.5000	4/18/2026	25938.2703
DUI-3 (D3)	1	0.5005	4/18/2026	9727.4062
	2	0.5004	4/18/2026	13092.6313
	3	0.5004	4/18/2026	11138.7863
HS-11-F (HS)	1	0.5004	4/18/2026	11766.8923
	2	0.5006	4/18/2026	9348.3256
	3	0.5006	4/18/2026	11231.3592
DU6-3 (D63)	1	0.5006	4/18/2026	4182.0023
	2	0.5000	4/18/2026	4560.3227
	3	0.5005	4/18/2026	5319.8841
HS2 (HS2)	1	0.5008	4/18/2026	5133.9165
	2	0.5001	4/18/2026	5117.9793
	3	0.5009	4/18/2026	6582.3968
DU2-5 (D5)	1	0.5005	4/18/2026	5875.4533
	2	0.5002	4/18/2026	5173.614
	3	0.5005	4/18/2026	7768.6297
DU9-2 (D9)	1	0.5004	4/18/2026	6136.3689
	2	0.5003	4/18/2026	6001.1251
	3	0.5001	4/18/2026	6137.2768
DU2-2-F (D2)	1	0.5007	4/18/2026	5595.0424
	2	0.5001	4/18/2026	5779.407
	3	0.5005	4/18/2026	7333.9433
	1	0.5001	4/18/2026	3169.7926

mL/g dilution after digestion	Total dilution factor after second dilution
99.84	10697
99.86	10699
99.98	10712
99.82	10695
99.84	10697
100.00	10714
99.90	10704
99.92	10706
99.92	10706
99.92	10706
99.88	10701
99.88	10701
99.88	10701
100.00	10714
99.90	10704
99.84	10697
99.98	10712
99.82	10695
99.90	10704
99.96	10710
99.90	10704
99.92	10706
99.94	10708
99.98	10712
99.86	10699
99.98	10712
99.90	10704
99.98	10712

DU9-8 (D98)	2	0.5006	4/18/2026	3467.2963
	3	0.5008	4/18/2026	3455.7224
Method blank	1	0	4/18/2026	0.0509
	2	0	4/18/2026	0.0447

99.88	10701
99.84	10697
#DIV/0!	#DIV/0!
#DIV/0!	#DIV/0!

Appendix K: Averaged Ex-Situ Data with Corrected Arsenic Values, Full Excel Worksheet

Area (DU)	Sample ID	Pb (mg/kg)	Corrected As (mg/kg)	U (mg/kg)	Mo (mg/kg)	Zr (mg/kg)	Sr (mg/kg)	Rb (mg/kg)	Th (mg/kg)	Au (mg/kg)	Se (mg/kg)	Hg (mg/kg)	Zn (mg/kg)	W (mg/kg)	Cu (mg/kg)	Ni (mg/kg)	Co (mg/kg)	Fe (mg/kg)	Mn (mg/kg)	Cr (mg/kg)	V (mg/kg)	Ti (mg/kg)	Sc (mg/kg)	Ca (mg/kg)	K (mg/kg)	S (mg/kg)
6	DU 6-1, RS-1	24092.6	615.3	5.0	12.0	99.6	266.0	58.2	126.9	14.4	3.5	5.0	9130.3	0.0	149.5	89.0	30.0	72997.4	7142.2	32.1	38.9	953.9	3.5	55655.9	11394.8	13381.2
6	DU 6-2, RS-2	16671.3	615.3	7.4	5.3	161.1	218.2	66.4	105.0	1.8	3.5	5.0	11330.7	0.0	86.8	73.8	30.0	68488.3	5261.5	31.4	53.6	1120.1	3.5	80493.3	13091.7	9338.7
6	DU 6-3, RS-3	25102.1	615.3	6.3	9.0	91.9	201.1	49.5	135.2	0.0	3.5	5.0	11677.8	0.0	124.6	90.6	30.0	73558.1	7155.1	28.7	25.0	837.3	3.5	58031.9	10377.1	15317.4
HS	HS-1	16869.2	615.3	6.4	5.5	149.7	217.5	66.2	103.3	2.1	3.5	5.0	19665.3	0.0	112.0	103.5	30.0	125509.4	10886.3	38.7	52.7	1343.4	3.5	62408.7	12596.1	9419.8
HS	HS-2	28090.0	812.8	6.9	7.4	109.8	243.6	61.9	177.5	0.0	3.5	5.0	37162.9	0.0	135.1	176.6	30.0	207398.8	21787.6	40.7	73.0	1328.5	3.5	64342.3	11039.5	14613.2
HS	HS-3	229534.9	1419.5	5.0	24.7	4.5	462.4	231.3	422.8	0.0	3.5	5.0	15331.9	0.0	2589.8	35.0	30.0	165579.8	10307.2	58.3	25.0	908.2	3.5	44463.7	10952.7	78217.0
HS	HS-4	4033.5	902.3	5.0	5.9	42.7	30.1	48.0	108.7	0.0	19.1	5.0	5348.2	0.0	1875.0	96.1	30.0	512522.3	1608.4	35.0	25.0	518.6	3.5	16817.0	7669.9	131820.0
HS	HS-5	516.5	800.3	9.6	7.8	819.4	240.3	109.3	41.3	0.0	5.0	5.5	2244.7	5.7	589.5	58.5	49.9	73332.2	753.1	47.9	93.2	3817.0	3.5	47755.6	20517.8	57526.7
HS	HS-6	3331.1	772.8	8.8	4.7	198.5	187.8	92.7	53.7	0.0	4.9	7.5	8692.2	0.0	2005.4	70.9	30.0	81400.0	1972.9	46.1	83.9	2604.5	15.4	35975.6	19763.3	18599.4
HS	HS-7	1926.9	799.0	10.5	5.3	610.2	242.9	104.2	43.8	0.0	3.8	6.3	4356.1	10.8	1853.2	57.6	60.7	59872.7	1141.5	44.0	99.3	3313.1	3.5	51642.0	20998.7	24597.7
HS	HS-8	177.3	682.2	11.4	6.0	867.6	231.2	104.6	26.0	0.0	3.5	5.0	231.9	34.4	46.3	51.1	300.8	45607.4	747.0	58.7	115.2	4360.2	3.5	42284.9	25116.1	746.4
HS	HS-9	11440.1	1000.6	5.0	8.3	134.6	118.7	52.2	154.5	0.0	42.1	5.0	5813.7	0.0	4977.1	80.0	30.0	278547.2	1432.4	35.0	25.0	891.2	3.5	24535.9	8069.3	78084.5
HS	HS-10	10691.2	1003.8	5.0	8.4	4.5	17.5	21.1	173.3	0.0	99.1	5.0	4431.9	0.0	1310.0	49.6	30.0	954911.9	548.5	35.0	25.0	35.0	3.5	3970.4	536.0	286276.0
HS	HS-11	445326.3	1598.2	5.0	31.2	4.5	618.2	3.0	231.8	0.0	3.5	5.0	24313.0	0.0	5525.1	35.0	30.0	199779.5	9958.5	57.2	25.0	512.4	3.5	26039.7	8863.5	95507.2
HS	HS-11A	267096.5	1471.2	5.0	22.3	4.5	445.1	12.3	5.0	0.0	3.5	5.0	19539.0	0.0	2402.9	35.0	30.0	155717.9	8125.7	42.1	25.0	736.7	3.5	31518.4	11349.6	77343.5
HS	HS-12	898120.8	1812.8	5.0	5.0	4.5	88.7	3.0	1837.6	0.0	3.5	5.0	18994.3	0.0	3362.4	35.0	30.0	293493.3	9631.2	43.7	25.0	357.9	3.5	12455.2	5329.3	175684.5
HS	HS-13	23280.1	615.3	5.6	12.6	89.0	452.2	63.6	128.6	2.2	3.5	5.0	10328.4	0.0	207.5	148.7	30.0	110671.6	11688.0	35.7	52.6	759.1	3.5	69285.5	11159.5	12489.1
HS	HS-14	1899.1	735.9	8.2	46.4	299.3	149.1	122.1	60.8	1.5	8.0	10.1	6539.0	205.0	1411.4	50.0	30.0	81972.5	915.4	36.2	46.8	1836.8	3.5	72559.3	17338.5	50286.0
HS	HS-15	11860.4	615.3	7.2	9.5	329.8	195.0	80.5	54.0	0.0	3.5	5.0	10237.0	68.0	508.0	61.7	30.0	70295.9	4482.0	40.2	44.2	1639.2	3.5	53537.8	14209.6	7745.4
HS	HS-16	15272.6	615.3	7.8	4.9	66.5	116.4	42.2	23.1	0.0	3.5	5.0	9830.5	31.2	49.4	61.6	30.0	42737.9	3236.7	30.1	25.0	518.2	3.5	62586.6	9630.9	8796.4
HS	HS-17	6053.2	615.3	9.5	9.3	274.0	145.4	107.5	44.3	1.1	3.5	5.9	14089.8	67.3	645.2	71.3	30.0	79145.3	3671.7	61.1	63.5	1893.5	3.5	61889.6	20014.9	17294.4
HS	HS-18	2936.2	772.5	9.5	13.1	249.9	238.6	172.4	48.2	1.7	10.6	5.7	7585.9	170.3	772.1	46.6	30.0	58720.4	2015.3	43.8	57.0	2062.2	3.5	51853.9	24023.4	13782.5
HS	HS-19	6799.1	927.0	5.0	8.4	149.4	97.9	65.4	97.5	0.0	36.7	5.0	9273.7	0.0	10852.5	39.2	30.0	311463.7	1387.3	34.8	25.0	1199.8	3.5	30516.0	9453.4	90015.7
HS	HS-20	4512.7	866.2	5.0	7.6	290.9	125.5	78.5	86.2	0.0	19.8	7.4	13471.8	0.0	6626.0	72.7	30.0	198313.0	1025.0	38.5	67.2	2371.1	3.5	31704.2	14920.1	50372.1
HS	HS-21	6022.9	615.3	7.9	6.2	421.0	175.8	59.9	36.9	1.0	3.5	6.3	6549.5	45.9	151.9	66.1	30.0	47696.8	2808.4	27.9	50.0	1854.6	3.5	76517.8	14038.2	4068.4
HS	HS-22	12312.2	1041.9	5.0	5.4	94.7	42.9	48.1	237.2	0.0	50.0	5.0	15889.0	0.0	7521.3	62.1	30.0	743464.5	1289.5	35.0	25.0	681.6	3.5	12798.5	6493.0	154209.6
BS	BS-1	82.9	8.3	8.2	5.3	755.0	216.8	99.7	23.0	0.0	3.5	5.0	150.6	33.9	61.8	52.0	106.0	34617.4	594.7	56.1	110.3	4481.0	11.4	34967.8	24088.2	515.4
BS	BS-2	58.6	11.3	9.1	7.3	982.4	259.6	118.5	23.9	0.0	3.5	5.0	136.1	17.9	48.4	47.0	83.4	38273.1	693.7	50.6	113.8	5104.8	15.7	19331.8	25008.0	768.6
BS	BS-3	80.8	14.0	11.6	9.9	1458.2	265.4	117.2	32.1	0.0	3.5	5.0	153.2	38.6	52.6	51.3	347.3	62328.5	870.0	66.6	145.8	5786.1	16.6	18019.1	25326.7	604.9
2	DU 2-1	3639.1	615.3	5.9	5.0	75.8	71.4	42.7	27.4	1.6	3.5	8.8	7794.3	0.0	36.2	67.7	30.0	36561.3	2762.5	23.9	26.5	774.3	3.5	63464.8	10901.1	3866.9
2	DU 2-2	6285.6	755.6	8.1	4.4	68.1	322.4	57.1	43.0	4.8	3.5	10.9	3896.8	6.0	121.1	100.1	30.0	43979.8	5569.3	40.8	47.0	675.2	3.5	64565.2	14237.9	6890.6
2	DU 2-3	2341.2	615.3	5.3	4.3	52.4	51.4	35.1	13.8	0.0	3.5	6.8	6451.6	30.4	33.1	52.3	30.0	26892.7	1602.2	35.0	27.1	530.4	3.5	48734.0	9684.0	2411.1
2	DU 2-4	594.8	743.5	10.0	8.4	935.9	356.0	119.7	29.1	0.0	3.5	5.0	565.5	34.2	72.0	65.1	179.9	47552.3	1066.9	47.3	126.5	5096.5	3.5	39936.3	25791.5	1198.1
2	DU 2-5	10210.6	615.3	7.6	4.3	55.1	256.2	47.1	30.4	2.7	3.5	5.0	7513.8	26.4	98.8	96.6	30.0	49030.4	5613.2	46.7	25.0	523.8	3.5	67098.3	11247.4	7946.5
2	DU 2-6	5540.3	615.3	8.2	5.0	124.7	99.2	49.5	43.0	1.1	3.5	5.9	6699.4	0.0	33.7	65.2	30.0	34198.9	2619.3	28.3	34.6	1052.6	3.5	49296.8	13151.2	5307.0
2	DU 2-7	6013.7	615.3	7.0	4.2	64.5	100.1	41.4	44.8	1.9	3.5	5.4	4070.0	0.0	30.3	61.9	30.0	36190.9	3001.2	31.1	29.6	604.4	3.5	48817.1	10136.7	5936.9
2	DU 2-7-A	8039.7	615.3	6.5	5.0	69.6	116.7	43.9	28.0	0.0	3.5	5.0	4726.6	6.8	37.3	68.1	30.0	42850.2	3589.7	32.8	27.3	574.6	3.5	49837.1	10545.5	6841.8
2	DU 2-8	8210.1	615.3	8.1	4.8	79.1	112.5	44.1	44.3	0.0	3.5	6.6	7862.9	0.0	29.8	66.7	30.0	37966.4	3483.1	26.6	25.0	678.1	3.5	51985.5	10522.1	6831.8
2	DU 2-9	6255.4	615.3	7.1	4.6	58.0	77.3	40.7	36.9	0.0	3.5	5.8	6463.9	5.2	31.0	54.6	30.0	31734.9	2367.1	31.4	25.0	530.4	3.5	53415.9	9272.4	5905.1
2	DU 2-10	6423.0	615.3	8.6	4.2	59.1	107.0	46.3	37.7	1.1	3.5	7.1	11326.8	25.7	113.2	78.4	30.0	53045.5	4860.3	33.1	28.4	671.2	3.5	67661.5	10113.4	5304.8
2	DU 2-11	7698.5	615.3	7.7	5.7	112.8	115.0	42.9	18.6	0.0	3.5	5.0	11085.8	67.5	91.0	87.7	30.0	65120.6	6274.8	30.7	25.0	1074.8	3.5	61736.4	9542.4	6400.3
2	DU 2-12	7891.3	615.3	9.7	4.9	50.7	134.0	43.3	36.6	0.0	3.5	5.0	13621.0	25.4	87.8	72.2	30.0	59372.6	5942.7	36.5	25.0	543.0	3.5	63618.1	9509.2	5577.4
2	DU 2-13	6899.8	615.3	7.4	4.4	84.1	119.8	45.1	45.5	2.5	3.5	12.4	12421.9	7.2	164.4	99.7	30.0	58920.2	6092.5	31.3	50.3	1104.7	3.5	66421.6	10324.1	6797.1
1	DU 1-1	1163.8	799.1	12.2	14.5	908.5	229.2	168.1	58.6	3.5	6.7	7.8	705.6	196.5	863.0	60.2	30.0	59456.3	787.8	55.3	117.9	5239.2	9.7	13113.1	30691.2	5311.5
1	DU 1-2	2384.5	852.3	12.2	42.7	124.4	47.7	226.7	106.7	11.0	18.4	17.8	1968.0	541.9	3800.2	51.1	30.0	112249.9	583.7	31.6	47.1	1927.2	3.5	29052.6	26017.2	81699.1
1	DU 1-3	2020.4	716.6	9.2	5.5	515.7	249.8	100.2	41.3	1.1	3.7	6.1	3556.5	18.2	549.0	77.8	30.0	77917.3	1928.0	55.4	109.5	3843.3	3.5	26942.4	23402.3	8225.0
1	DU 1-3A	2341.9	615.3	10.3	4.8	453.4	234.9	95.0	42.5	1.5	3.5	6.4	3311.1	0.0	446.7	76.9	30.0	71635.8	2061.2	49.2	103.9	3457.5	3.5	27849.8	21743.9	9813.5
1	DU 1-4	539.8	698.4	11.9	5.1	985.8	351.9	116.8	25.4	0.0	3.5	5.4	540.9	15.7	76.9	60.5	159.8	49531.3	1028.4	50.0	129.5	4708.8	3.5	37940.0	24930.5	1141.2
1	DU 1-5	3036.7	890.6	5.0	6.4	387.2	104.4	73.5	86.2	0.0	19.6	5.9	1694.3	0.0	588.0	73.3	30.0	335008.9	1141.5	35.0	25.0	2730.2	3.5	16542.4	13266.1	83302.3
1	DU 1-7	8315.4	727.5	8.2	6.3	67.9	425.4	40.5	53.7	4.3	3.5	7.2	3530.2	26.5	161.5	131.0	30.0	57653.1	8417.1	44.7	45.6	421.9	3.5	78578.2	9086.4	8943.2
1	DU 1-8	7792.3	691.1	7.5	5.6	59.1	426.6	37.0	31.1	1.3	3.5	10.7	2672.4	23.1	161.9	135.1	30.0	58206.5	8922.0	40.7	25.0	442.7	3.5	77826.9	8402.6	8830.6
1	DU 1-9	2199.9	852.3	5.0	7.3	473.9	170.1	90.1	65.5	0.0	16.0	5.0	1075.8	0.0	376.6	72.7	30.0	224222.5	919.0	35.0	50.8	4086.5	3.5	21766.1	17930.7	52530.9
1	DU 1-10	4187.6	833.1	5.4	4.8	92.4	113.2	54.3	54.2	1.8	6.8	5.8	1832.6	0.0	740.2	75.4	30.0	121733.2	1278.6	32.6	27.4	1031.8	3.5	20807.6	12166.0	48719.7
1	DU 1-11	7234.2	615.3	6.6	4.1	67.2	220.3	36.1	23.4	0.0	3.5	5.5	4155.2	29.7	71.7	86.1	30.0	40147.0	4811.5	32.7	25.0	495.0	3.5	58591.3	8721.7	7396.3
1	DU 1-12	4441.8	905.5	5.0	7.3	264.2	137.2	70.5	112.5	0.0	23.6	7.0	2074.6	0.0	653.2	89.5	30.0	375786.7	982.5	35.0	30.4	2677.3	3.5	17080.0	12374.5	95486.3
1	DU 1-13	6949.7	676.5	9.4	3.8	93.8	353.2	55.4	46.5	4.8	3.5	6.0	3121.2	6.6	116.6	116.0	30.0	47054.8	5821.7	40.6	71.0	738.9	3.5	68032.9	14136.4	7240.1
9	DU 9-1	3634.1	615.3	5.6	4.6	125.8	96.2	55.4	23.4	0.0	3.5	5.9	7161.3	39.8	188.1	66.5	30.0	40398.7	2978.5	26.0	38.6	1354.8	3.5	46753.4	13791.5	3914.8
9	DU 9-2	3666.8	615.3	9.2	6.0	316.8	153.4	57.7	38.6	1.0	3.5	6.1	4580.1	18.3	314.7	69.8	30.0	38744.8	2582.9	25.1	45.4	1658.0	3.5	43964.8	14863.2	3450.7
9	DU 9-3	147.8	629.2	7.5	6.2	577.0	261.4	92.1	19.6	0.0	3.4	6.0	179.2	4.2	38.6	48.2	30.0	20597.0	467.1	30.8	65.7	2804.1	3.5	80154.4	21737.9	574.5
9	DU 9-3-A	160.2	656.2	7.7	4.9	579.8	258.6	91.7	18.7	0.0	3.5	5.0	168.5	12.6	46.4	41.1	37.6	22346.9	477.0	26.2	64.7	2960.4	3.5	71827.5	19531.3	578.8
9	DU 9-4	240.9	685.5	9.7	6.6	831.6	209.7	103.4	27.8	0.0	3.5	5.0	312.6	8.0	65.0	34.1	156.0	41825.1	697.3	59.1	103.2	4250.4	29.1	19828.4	22302.6	996.9
9	DU 9-5	1108.0	615.3	15.8	13.3	1273.4	249.7	86.3	35.7	0.0	3.5	5.0	1485.0	61.9	114.7	51.5	507.3	97198.4	1521.7	60.7	145.0	5874.2	3.5	40381.3	19707.3	1313.6
9	DU 9-6	1127.1	615.3	8.2	9.6	515.7	203.7	81.8	19.9	0.5	3.5	5.0	1439.0	29.2	71.0	47.4	30.0	21128.3	925.1	32.2	49.6	1988.1	3.5	40862.2	19949.9	1265.1
9	DU 9-7	2996.2	615.3	6.4	4.4	78.3	72.9	42.6	26.4	1.2	3.5	7.1	5734.4	0.0	37.2	59.1	30.0	29146.5	2134.8	35.0	29.5	814.8	3.5	47493.7	11563.9	3023.2
9	DU 9-8	3498.6	615.3	9.4	5.5	447.3	132.7	57.1	40.4	1.6	3.5	5.6	5419.9	24.5	77.6	61.2	92.3	46011.6	2386.5	32.5	61.9	2074.4	3.5	50270.6	14137.8	3448.6
9	DU 9-9	1205.1	615.3	6.6	5.0	588.2	239.5	72.7	26.4	0.6	3.5	5.9	1255.2	4.6	101.8	54.7	81.1	31262.9	945.4	36.8	78.0	3012.9	3.5	112973.5	18856.1	1810.9

Appendix L: Ex-Situ Data AZSRLs Comparison, Full Excel Worksheet

Area (DU)	Sample ID	Pb (mg/kg) Average	Corrected As (mg/kg) Average	U (mg/kg) Average	Mo (mg/kg)	Sr (mg/kg)	Hg (mg/kg)	Zn (mg/kg)	Cu (mg/kg)	Ni (mg/kg)	Co (mg/kg)	Mn (mg/kg)	Cr (mg/kg)	V (mg/kg)	Ti (mg/kg)
6	DU 6-1, RS-1	24092.6	615.3	5.0	12.0	266.0	5.0	9130.3	149.5	89.0	30.0	7142.2	32.1	38.9	953.9
6	DU 6-2, RS-2	16671.3	615.3	7.4	5.3	218.2	5.0	11330.7	86.8	73.8	30.0	5261.5	31.4	53.6	1120.1
6	DU 6-3, RS-3	25102.1	615.3	6.3	9.0	201.1	5.0	11677.8	124.6	90.6	30.0	7155.1	28.7	25.0	837.3
HS	HS-1	16869.2	615.3	6.4	5.5	217.5	5.0	19665.3	112.0	103.5	30.0	10886.3	38.7	52.7	1343.4
HS	HS-2	28090.0	812.8	6.9	7.4	243.6	5.0	37162.9	135.1	176.6	30.0	21787.6	40.7	73.0	1328.5
HS	HS-3	229534.9	1419.5	5.0	24.7	462.4	5.0	15331.9	2589.8	35.0	30.0	10307.2	58.3	25.0	908.2
HS	HS-4	4033.5	902.3	5.0	5.9	30.1	5.0	5348.2	1875.0	96.1	30.0	1608.4	35.0	25.0	518.6
HS	HS-5	516.5	800.3	9.6	7.8	240.3	5.5	2244.7	589.5	58.5	49.9	753.1	47.9	93.2	3817.0
HS	HS-6	3331.1	772.8	8.8	4.7	187.8	7.5	8692.2	2005.4	70.9	30.0	1972.9	46.1	83.9	2604.5
HS	HS-7	1926.9	799.0	10.5	5.3	242.9	6.3	4356.1	1853.2	57.6	60.7	1141.5	44.0	99.3	3313.1
HS	HS-8	177.3	682.2	11.4	6.0	231.2	5.0	231.9	46.3	51.1	300.8	747.0	58.7	115.2	4360.2
HS	HS-9	11440.1	1000.6	5.0	8.3	118.7	5.0	5813.7	4977.1	80.0	30.0	1432.4	35.0	25.0	891.2
HS	HS-10	10691.2	1003.8	5.0	8.4	17.5	5.0	4431.9	1310.0	49.6	30.0	548.5	35.0	25.0	35.0
HS	HS-11	445326.3	1598.2	5.0	31.2	618.2	5.0	24313.0	5525.1	35.0	30.0	9958.5	57.2	25.0	512.4
HS	HS-11A	267096.5	1471.2	5.0	22.3	445.1	5.0	19539.0	2402.9	35.0	30.0	8125.7	42.1	25.0	736.7
HS	HS-12	898120.8	1812.8	5.0	5.0	88.7	5.0	18994.3	3362.4	35.0	30.0	9631.2	43.7	25.0	357.9
HS	HS-13	23280.1	615.3	5.6	12.6	452.2	5.0	10328.4	207.5	148.7	30.0	11688.0	35.7	52.6	759.1
HS	HS-14	1899.1	735.9	8.2	46.4	149.1	10.1	6539.0	1411.4	50.0	30.0	915.4	36.2	46.8	1836.8
HS	HS-15	11860.4	615.3	7.2	9.5	195.0	5.0	10237.0	508.0	61.7	30.0	4482.0	40.2	44.2	1639.2
HS	HS-16	15272.6	615.3	7.8	4.9	116.4	5.0	9830.5	49.4	61.6	30.0	3236.7	30.1	25.0	518.2
HS	HS-17	6053.2	615.3	9.5	9.3	145.4	5.9	14089.8	645.2	71.3	30.0	3671.7	61.1	63.5	1893.5
HS	HS-18	2936.2	772.5	9.5	13.1	238.6	5.7	7585.9	772.1	46.6	30.0	2015.3	43.8	57.0	2062.2
HS	HS-19	6799.1	927.0	5.0	8.4	97.9	5.0	9273.7	10852.5	39.2	30.0	1387.3	34.8	25.0	1199.8
HS	HS-20	4512.7	866.2	5.0	7.6	125.5	7.4	13471.8	6626.0	72.7	30.0	1025.0	38.5	67.2	2371.1
HS	HS-21	6022.9	615.3	7.9	6.2	175.8	6.3	6549.5	151.9	66.1	30.0	2808.4	27.9	50.0	1854.6
HS	HS-22	12312.2	1041.9	5.0	5.4	42.9	5.0	15889.0	7521.3	62.1	30.0	1289.5	35.0	25.0	681.6
BS	BS-1	82.9	8.3	8.2	5.3	216.8	5.0	150.6	61.8	52.0	106.0	594.7	56.1	110.3	4481.0
BS	BS-2	58.6	11.3	9.1	7.3	259.6	5.0	136.1	48.4	47.0	83.4	693.7	50.6	113.8	5104.8
BS	BS-3	80.8	14.0	11.6	9.9	265.4	5.0	153.2	52.6	51.3	347.3	870.0	66.6	145.8	5786.1
2	DU 2-1	3639.1	615.3	5.9	5.0	71.4	8.8	7794.3	36.2	67.7	30.0	2762.5	23.9	26.5	774.3
2	DU 2-2	6285.6	755.6	8.1	4.4	322.4	10.9	3896.8	121.1	100.1	30.0	5569.3	40.8	47.0	675.2
2	DU 2-3	2341.2	615.3	5.3	4.3	51.4	6.8	6451.6	33.1	52.3	30.0	1602.2	35.0	27.1	530.4
2	DU 2-4	594.8	743.5	10.0	8.4	356.0	5.0	565.5	72.0	65.1	179.9	1066.9	47.3	126.5	5096.5
2	DU 2-5	10210.6	615.3	7.6	4.3	256.2	5.0	7513.8	98.8	96.6	30.0	5613.2	46.7	25.0	523.8
2	DU 2-6	5540.3	615.3	8.2	5.0	99.2	5.9	6699.4	33.7	65.2	30.0	2619.3	28.3	34.6	1052.6
2	DU 2-7	6013.7	615.3	7.0	4.2	100.1	5.4	4070.0	30.3	61.9	30.0	3001.2	31.1	29.6	604.4
2	DU 2-7-A	8039.7	615.3	6.5	5.0	116.7	5.0	4726.6	37.3	68.1	30.0	3589.7	32.8	27.3	574.6
2	DU 2-8	8210.1	615.3	8.1	4.8	112.5	6.6	7862.9	29.8	66.7	30.0	3483.1	26.6	25.0	678.1
2	DU 2-9	6255.4	615.3	7.1	4.6	77.3	5.8	6463.9	31.0	54.6	30.0	2367.1	31.4	25.0	530.4
2	DU 2-10	6423.0	615.3	8.6	4.2	107.0	7.1	11326.8	113.2	78.4	30.0	4860.3	33.1	28.4	671.2
2	DU 2-11	7698.5	615.3	7.7	5.7	115.0	5.0	11085.8	91.0	87.7	30.0	6274.8	30.7	25.0	1074.8

2	DU 2-12	7891.3	615.3	9.7	4.9	134.0	5.0	13621.0	87.8	72.2	30.0	5942.7	36.5	25.0	543.0
2	DU 2-13	6899.8	615.3	7.4	4.4	119.8	12.4	12421.9	164.4	99.7	30.0	6092.5	31.3	50.3	1104.7
1	DU 1-1	1163.8	799.1	12.2	14.5	229.2	7.8	705.6	863.0	60.2	30.0	787.8	55.3	117.9	5239.2
1	DU 1-2	2384.5	852.3	12.2	42.7	47.7	17.8	1968.0	3800.2	51.1	30.0	583.7	31.6	47.1	1927.2
1	DU 1-3	2020.4	716.6	9.2	5.5	249.8	6.1	3556.5	549.0	77.8	30.0	1928.0	55.4	109.5	3843.3
1	DU 1-3A	2341.9	615.3	10.3	4.8	234.9	6.4	3311.1	446.7	76.9	30.0	2061.2	49.2	103.9	3457.5
1	DU 1-4	539.8	698.4	11.9	5.1	351.9	5.4	540.9	76.9	60.5	159.8	1028.4	50.0	129.5	4708.8
1	DU 1-5	3036.7	890.6	5.0	6.4	104.4	5.9	1694.3	588.0	73.3	30.0	1141.5	35.0	25.0	2730.2
1	DU 1-7	8315.4	727.5	8.2	6.3	425.4	7.2	3530.2	161.5	131.0	30.0	8417.1	44.7	45.6	421.9
1	DU 1-8	7792.3	691.1	7.5	5.6	426.6	10.7	2672.4	161.9	135.1	30.0	8922.0	40.7	25.0	442.7
1	DU 1-9	2199.9	852.3	5.0	7.3	170.1	5.0	1075.8	376.6	72.7	30.0	919.0	35.0	50.8	4086.5
1	DU 1-10	4187.6	833.1	5.4	4.8	113.2	5.8	1832.6	740.2	75.4	30.0	1278.6	32.6	27.4	1031.8
1	DU 1-11	7234.2	615.3	6.6	4.1	220.3	5.5	4155.2	71.7	86.1	30.0	4811.5	32.7	25.0	495.0
1	DU 1-12	4441.8	905.5	5.0	7.3	137.2	7.0	2074.6	653.2	89.5	30.0	982.5	35.0	30.4	2677.3
1	DU 1-13	6949.7	676.5	9.4	3.8	353.2	6.0	3121.2	116.6	116.0	30.0	5821.7	40.6	71.0	738.9
9	DU 9-1	3634.1	615.3	5.6	4.6	96.2	5.9	7161.3	188.1	66.5	30.0	2978.5	26.0	38.6	1354.8
9	DU 9-2	3666.8	615.3	9.2	6.0	153.4	6.1	4580.1	314.7	69.8	30.0	2582.9	25.1	45.4	1658.0
9	DU 9-3	147.8	629.2	7.5	6.2	261.4	6.0	179.2	38.6	48.2	30.0	467.1	30.8	65.7	2804.1
9	DU 9-3-A	160.2	656.2	7.7	4.9	258.6	5.0	168.5	46.4	41.1	37.6	477.0	26.2	64.7	2960.4
9	DU 9-4	240.9	685.5	9.7	6.6	209.7	5.0	312.6	65.0	34.1	156.0	697.3	59.1	103.2	4250.4
9	DU 9-5	1108.0	615.3	15.8	13.3	249.7	5.0	1485.0	114.7	51.5	507.3	1521.7	60.7	145.0	5874.2
9	DU 9-6	1127.1	615.3	8.2	9.6	203.7	5.0	1439.0	71.0	47.4	30.0	925.1	32.2	49.6	1988.1
9	DU 9-7	2996.2	615.3	6.4	4.4	72.9	7.1	5734.4	37.2	59.1	30.0	2134.8	35.0	29.5	814.8
9	DU 9-8	3498.6	615.3	9.4	5.5	132.7	5.6	5419.9	77.6	61.2	92.3	2386.5	32.5	61.9	2074.4
9	DU 9-9	1205.1	615.3	6.6	5.0	239.5	5.9	1255.2	101.8	54.7	81.1	945.4	36.8	78.0	3012.9

Appendix M: Resource Recovery Calculations and Estimated Mineral Market Value

Location	Description	Height/depth (ft)	Surface area (ft^2)	Volume (ft^3)	Volume (gal)	# of samples	Avg soil sample weight (kg/sample)	Location weight (kg)
HS-1	Waste rock	7	2225	15575	116509.0909	186414.5455	4.354	811648.9309
HS-2	Waste rock	8	1333	10664	79772.25974	127635.6156	4.427	565042.8702
DU6	Ore pile	5	2690	13450	100612.987	160980.7792	3.862	621707.7693
DU1	Large tailings-just disturbed areas	1	180507	180507	1350286.13	2160457.808	2.307714286	4985719.347
DU2 (1)	Western small tailings	1	51422	51422	384663.2727	615461.2364	2.297	1413714.46
DU2 (2)	Eastern small tailings	1	310143	310143	2320030.753	3712049.205	2.2632	8401109.761
Vol sample (gal) ~	between 0.5 and 0.75 gal	Assuming =	0.625	gal/sample				

Location	Description	Pb (Mg)	Corrected As (Mg)	U (Mg)	Mo (Mg)	Zr (Mg)	Sr (Mg)	Rb (Mg)	Th (Mg)	Au (Mg)	Se (Mg)	Hg (Mg)	Zn (Mg)	W (Mg)
HS-1	Waste rock	13691.84959	499.3887197	5.169044	4.43972	121.5398	176.5429	53.7671	83.82478	1.723015	2.840771	4.058245	15961.34	0
HS-2	Waste rock	15872.0292	459.2933244	3.906868	4.17486	62.06269	137.6695	34.96405	100.3008	0	1.97765	2.825214	20998.61	0
DU6	Ore pile	13649.79776	382.5223383	3.875904	5.447048	73.06843	142.0149	36.07	76.08904	3.360479	2.175977	3.108539	6660.324	0
DU1	Large tailings-just disturbed areas	18734.93222	3516.246449	38.4287	42.14917	1600.267	1091.124	414.6134	266.1957	10.40082	41.20595	34.3628	10768.59	305.6322
DU2 (1)	Western small tailings	10218.54371	869.8256441	11.81865	6.775227	108.3976	168.1462	62.77448	48.91351	1.26376	4.948001	10.40443	17125.59	44.46384
DU2 (2)	Eastern small tailings	47996.08614	5394.614959	62.00859	42.05115	1330.022	1313.342	438.0003	286.155	10.18455	29.40388	54.83524	47083.84	91.44608

Location	Description	Cu (Mg)	Ni (Mg)	Co (Mg)	Fe (Mg)	Mn (Mg)	Cr (Mg)	V (Mg)	Ti (Mg)	Sc (Mg)	Ca (Mg)	K (Mg)	S (Mg)
HS-1	Waste rock	90.90236126	84.00914284	24.34947	101869.5	8835.865	31.43168	42.77158	1090.406	2.840771	50653.94	10223.61	7645.54
HS-2	Waste rock	76.35989348	99.80110055	16.95129	117189.2	12310.91	22.98675	41.26912	750.6699	1.97765	36356.17	6237.799	8257.092
DU6	Ore pile	74.7899644	52.5325302	18.65123	44564.79	4053.284	19.10656	24.35585	603.3307	2.175977	40241.32	7224.974	7882.696
DU1	Large tailings-just disturbed areas	3064.57669	393.7324317	185.1299	580695	13775.88	191.5401	287.8592	11324.76	18.39425	175968.5	79368.86	149087.1
DU2 (1)	Western small tailings	161.2720015	119.4558425	42.41143	83571.35	8189.064	46.50767	45.46859	1199.433	4.948001	91692.64	13956.62	8510.41
DU2 (2)	Eastern small tailings	439.5244599	586.6194907	377.9767	325087.5	26610.01	288.8722	330.7253	9275.146	29.40388	451266.5	105425.3	44639.95

	Pb	As	U	Mo	Zr	Sr	Rb	Th	Au	Se	Hg	Zn	W
$/kg	2.29	1.74	57.76	16	23.14	5.4	14720	176	38189	30.37	38.44	2.83	25.52
$/Mg	2290	1740	57760	16000	23140	5400	14720000	176000	38189000	30370	38440	2830	25520

http://www.leonland.de/elements_by_price/en/list

Location	Description	Pb ($)	Corrected As ($)	U ($)	Mo ($)	Zr ($)	Sr ($)	Rb ($)	Th ($)	Au ($)	Se ($)	Hg ($)	Zn ($)	W ($)
HS-1	Waste rock	31354335.57	868936.3722	298563.9925	71035.51443	2812430.727	953331.7597	791451766.2	14753161.74	65800209.54	86274.22311	155998.9245	45170580.75	0
HS-2	Waste rock	36346946.87	799170.3844	225660.6867	66797.75371	1436130.75	743415.1191	514670751.3	17652933.74	0	60061.23189	108601.2397	59426054.56	0
DU6	Ore pile	31258036.87	665588.8687	223872.2072	87152.77142	1690803.377	766880.619	530950466.5	13391670.61	128333314.2	66084.42734	119492.2333	18848716.78	0
DU1	Large tailings-just disturbed areas	42902994.77	6118268.821	2219641.928	674386.7137	37030174.85	5892067.772	6103109813	46850442.47	397196955.2	1251424.79	1320905.983	30475107.1	7799734
DU2 (1)	Western small tailings	23400465.09	1513496.621	682645.3906	108403.6248	2508319.677	907989.4156	924040285.2	8608777.851	48261721	150270.7785	399946.4248	48465414.1	1134717
DU2 (2)	Eastern small tailings	109911037.3	9386630.028	3581616.225	672818.4773	30776701.95	7092046.198	6447363805	50363280.04	388937602.3	892995.9621	2107866.763	133247256	2333704

	Cu	Ni	Co	Fe	Mn	Cr	V	Ti	Sc	Ca	K	S
$/kg	5.9	9.19	59.5	0.08	2.06	7.64	22.6	3.77	15000	5.93	13.02	0.1
$/Mg	5900	9190	59500	80	2060	7640	22600	3770	15000000	5930	13020	100

Location	Description	Cu ($)	Ni ($)	Co ($)	Fe ($)	Mn ($)	Cr ($)	V ($)	Ti ($)	Sc ($)	Ca ($)	K ($)	S ($)	Total ($)
HS-1	Waste rock	536323.9315	772044.0227	1448793.342	8149562.751	18201882.62	240138.0703	966637.7004	4110831.667	42611568.87	300377841	133111431.6	764554.0452	9.54E+08
HS-2	Waste rock	450523.3715	917172.114	1008601.523	9375138.672	25360471.85	175618.7789	932682.0404	2830025.699	29664750.69	215592083.2	81216140.86	825709.1736	6.32E+08
DU6	Ore pile	441260.7899	482773.9526	1109748.368	3565182.872	8349764.835	145974.1185	550442.1183	2274556.663	32639657.89	238631002.7	94069162.08	788269.557	7.26E+08
DU1	Large tailings-just disturbed areas	18081002.47	3618401.048	11015231.09	46455597.31	28378315.64	1463366.707	6505616.907	42694338.73	275913778.6	1043493326	1033382568	14908712.36	6.68E+09
DU2 (1)	Western small tailings	951504.8089	1097799.192	2523480.311	6685708.09	16869472.26	355318.6098	1027590.164	4521863.221	74220009.15	543737378.2	181715170.4	851040.9579	1.06E+09
DU2 (2)	Eastern small tailings	2593194.313	5391033.119	22489615.41	26006999.51	54816612.98	2206983.296	7474391.504	34967298.98	441058262.5	2676010090	1372637119	4463995.32	7.19E+09

Appendix N: Project Tasks and Hours

Task	**Totals**
Task 1.0: Project Work Plan	71
Task 1.1: Sampling and Analysis Plan (SAP)	29
Task 1.2: Health and Safety Plan (HASP)	24
Task 1.3: Lab Binder	18
Task 2.0: Site Activities	69
Task 3.0: Laboratory Analysis	165
Task 3.1: Moisture Content and Sieving	89
Task 3.2: X-Ray Fluorescence Screening	0
Task 3.2.1: Sample Preparation for XRF	32
Task 3.2.2: Sample Analysis by XRF	24
Task 3.3: Inductively Conductive Plasma Verification (sub-contracted)	20
Task 4.0: Data Analysis	0
Task 4.1: Identification of HH CoCs	30
Task 4.2: Identification of ECO CoCs	14
Task 4.3: QA/QC	12
Task 4.4: CoC Mapping	12
Task 5.0: Contaminant Migration Pathways	8
Task 6.0: Risk Assessment - Human Health	56
Task 6.1: HH CoC EPCs	16
Task 6.2: Toxicology Assessment	14
Task 6.3: Exposure Assessment	15
Task 6.4: Risk Characterization	11

Task	**Totals**
Task 7.0: Risk Assessment - Ecological	26
Task 7.1: Species and Habitat Evaluation	17
Task 7.2: ECO Risk Levels	3
Task 7.3: Qualitative Assessment of EcoRisk	6
Task 8.0: Remedial Action Development	18
Task 8.1: Development of RAOs	2
Task 8.2: Remedial Alternatives	9
Task 8.3: Selection of Preferred Alternatives	7
Task 9.0: Economic and Resource Recovery Assessment	8
Task 10.0: Project Impacts	3
Task 11.0: Project Deliverables	128
Task 11.1: 30% Project Deliverable	29
Task 11.2: 60% Project Deliverable	35
Task 11.3: 90% Project Deliverable	51
Task 11.4: Final Project Report	13
Task 12.0: Project Management	89
Task 12.1: Meetings and Communication	48
Task 12.2: Schedule Management	9
Task 12.3: Resource Management	32
Subtotal Hours	**Total Hours**
Total Hours	709