DEMONSTRATION SOLAR FACILITY AND ALTERNATIVE COVER DEPTH PROJECT

VEGETATION AND SOIL DATA SUMMARY AND INTERPRETATION REPORT - 2012 AND 2013 SAMPLING EVENTS
CHEVRON QUESTA MINE TAILING FACILITY
TAOS COUNTY, NEW MEXICO

MARCH 18, 2014

Prepared for:
Chevron Mining Inc.
Questa Mine
State Highway 38
Questa, NM 87556

Prepared by:
McDaniel Lambert, Inc.

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1.0 Introduction

McDaniel Lambert, Inc. has prepared this summary and preliminary interpretation of the 2012 soil sampling results and the 2013 vegetation and soil sampling results from the Demonstration Solar Facility and Alternative Cover Depth Project (the Project) conducted at the Chevron Mining Inc. (CMI) Tailing Facility at Questa Mine, located in Questa, New Mexico. The Project has been constructed on approximately 21 acres of tailing facility surface area at the north end of the Section 36 tailing impoundment, as shown in Figure 1. The Project will be used to evaluate whether a cover depth of one (1) and/or two (2) feet is as successful as a cover depth of three (3) feet in protecting human health and the environment. For chemicals of potential concern (COPC) concentrations, success is defined as:

> "*No significant differences, as determined by an ANOVA test with a p-value of 0.05, in COPC concentrations in composite soil samples collected from three or more locations in the 1 and 2 foot cover test plots and composite samples collected from the 3-foot cover test plot. The composite samples shall be taken from 0- to 3-inches beneath the ground surface. T-tests shall show no significant differences between 1 and 3 feet of cover and between 2 and 3 feet of cover to demonstrate the adequacy of the 1- and 2-foot covers*" (Chevron 2009).

2.0 Summary of Field Soil Sampling Activities

A series of field sampling activities have been undertaken since 2010 to achieve the Project objectives, including baseline sampling in 2010, two rounds of soil sampling in 2011, soil sampling in 2012, and vegetation and soil sampling in 2013. Prior to these sampling events, URS specified the objectives of field sampling activities and detailed the sampling procedures in the *Quality Assurance Project Plan (QAPP), Standard Operating Procedures (SOPs) and Sampling and Analysis Plan (SAP)*, which described the project organization and management components for the preconstruction sampling project at the tailing facility in support of the Demonstration Solar Facility and Alternative Cover Depth Project (URS 2010). The sampling events of interest in this report are the 2012 soil sampling and the 2013 vegetation monitoring and soil sampling. All sampling activities conducted to date are described briefly below.

2.1 Baseline Soil Sampling – April/May 2010

Baseline sampling conducted in April and May 2010 was intended to provide baseline results for comparison to future soil and vegetation results and to allow for an evaluation of the effectiveness of different cover depths (URS 2012a). As shown in Figure 2, during the baseline sampling event, cover soil samples were collected from 9 locations within each of the Project's three cover depth plots (i.e., 1-foot, 2-foot, 3-foot depth) for a total of 27 locations. Specifically, within each cover plot, samples were collected from 0-6 inches below ground surface (bgs) from three locations along each of three transects. Interim cover soil and tailing samples were collected within a 1-foot radius of the staked location for each of the 27 sampling locations. Sampling was conducted in accordance with the QAPP, SOPs, and SAP, although two sampling points were located on the west and east end of each transect line instead of on the transect line. All soil samples were analyzed for molybdenum by TestAmerica (Burlington, VT).

2.1.1 Cover Thickness and Re-grading

As discussed in the Construction Quality Assurance (CQA) Monitoring Report (GAI 2010), cover material placement started on July 13, 2010. From November to December 2010, final cover thickness observations and cover soil sampling were conducted as part of the CQA. To evaluate cover thickness, five test pits were excavated in each of the 1-, 2- and 3-foot cover areas, with one additional excavation in the 3 foot area. Results of the cover thickness measurements indicated that some areas were more than 10% above or below designed thickness and these areas were re-graded to meet the design.

2.2 Soil Cover Project Sampling – May 2011

In May 2011, URS Corporation (URS) conducted the first round of follow up sampling for comparison to baseline (URS 2011). Surface soil samples were collected following the same procedure as the baseline sampling event, with three samples collected from nine locations within each cover depth plot.

2.3 Tailing Water Use for Hydroseeding Event Soil Cover Sampling – August 2011

Between May and June 2011, tailing water inadvertently was used to hydroseed the vegetated areas of each cover plot. URS Corporation conducted an additional round of sampling in August 2011 to address the potential impacts from the use of tailing water (URS 2012a). Cover soil samples were collected from 9 locations within each of the three different cover depth plots within the Project; each cover plot contained 3 transects per plot and 3 samples per transect were collected (27 samples total). To adequately capture any impacts to surface soil from the hydroseeding, Chevron requested that samples be collected from 0 to 3 inches bgs in compliance with DP-933 instead of 0 to 6 inches bgs. Soil samples were also analyzed for molybdenum and molybdate by Frontier Geosciences (Seattle, WA).

2.4 Summary of 2012 Report (2010-2011 Data) Conclusions

In the previous report submitted in October 2012 (McDaniel Lambert 2012), soil data collected at the Project Site from three cover plot depth areas for the baseline (April 2010) and follow-up (May and August 2011) sampling events were reviewed and analyzed. Statistical evidence was used to make the following conclusions:

1) The analytical results for molybdenum in soil cover from Frontier Geosciences are significantly higher than those from TestAmerica for the August 2011 sampling event.
2) Molybdenum soil concentrations measured in late 2010 following re-grading activities are significantly lower than those detected during baseline sampling.
3) Molybdenum soil concentrations detected during May and August 2011 sampling events are not significantly different and were used as a combined dataset to evaluate differences between cover depths and transect locations.
4) No significant differences were revealed in the molybdenum distributions among the three cover depths. These results indicate a cover depth of one (1) and/or two (2) feet is to date as successful as a cover depth of three (3) feet in protecting human health and the environment.
5) Transect 2 was shown to have significantly lower concentrations of molybdenum than transects 1 and 3. Due to the character and placement of native soils during construction, and since a similar trend is not observed in the baseline samples, variability between transects is expected.

2.5 Soil Cover Project Sampling – September 2012

In September 2012, URS Corporation (URS) conducted follow up sampling for comparison to baseline (URS 2012b). Surface soil samples were collected following the same procedure as the baseline sampling event, with three samples collected from nine locations within each cover depth plot. As seen in Figure 3, modifications were made to the direction of transects as requested by Chevron Environmental Management Company (URS 2012b).

2.6 Vegetation and Soil Cover Project Sampling – September 2013

In late August and September 2013, URS Corporation conducted vegetation monitoring and soil sampling (URS 2013). As shown in Figure 4, samples were collected following the same procedure as the baseline sampling event, with three samples collected from nine locations within each cover plot depth. A surface soil sample was collected at each of the 27 sample locations. Samples of up to three plant life forms (grasses, forbs, and shrubs) were also collected at each of the locations, as available. Shrub samples were not available at 16 of the 27 sample locations.

Modifications were made during the vegetation sampling to achieve the level of sample adequacy required for the desired confidence level. These modifications included adjusting spacing of transect lines from 1 meter apart to 2 meters, repositioning of certain transect lines to allow collection of nearby vegetation, and overall increasing of sample radius to include more shrub samples.

3.0 Cover Project Results Summary – September 2012 Soil Sampling

3.1 QAPP Results

URS Corporation reported that all laboratory data were validated in accordance with the 2012 QAPP, and did not specifically note any data validation issues (URS 2012b).

3.2 Molybdenum Analytical Results

The analytical results for molybdenum from the September 2012 soil sampling event are summarized in Table 1. As shown in the table, there is a high frequency of "J-qualified" results in the molybdenum data, indicating that the concentrations reported are estimated values (i.e., above the method detection limit but below the reporting limit). There are also two possible outliers: 26.7 mg/kg at sampling location CVR2TR1-3, and 15.4 mg/kg at sampling location CVR1TR1-1. Identification and treatment of these outliers are discussed in detail below in Section 4.1.

4.0 Preliminary Interpretation – September 2012 Soil Sampling

Table 2 presents the summary statistics for molybdenum concentrations in soil for the three cover plot depth areas for the 2012 soil sampling event, both with and without the two samples identified as statistical outliers. As discussed below, comparisons were conducted to determine if there are statistically significant differences among cover depths using surface soil samples.

Copper data was also analyzed in conjunction with molybdenum data. Higher Cu:Mo ratios may be more protective of the environment, specifically grazing animals. Summary statistics for Cu:Mo ratios are presented in Table 3. Ratios were compared to determine if there are statistically significant differences among cover depths.

Multiple lines of evidence were used to evaluate whether the datasets were significantly different, including exploratory data analyses (e.g., lognormal quantile plots where possible and Shapiro-Wilks test for normality and lognormaility) and statistical analyses, including comparisons of central tendency. The exploratory analyses and comparative methods used were conducted using the open source software R (version 2.15.3) and ProUCL (version 5.0.00; 2013).

For each question identified above, first, the appropriate datasets were examined through normal and lognormal quantile plots. Then they were tested using the Shapiro-Wilks test to determine their data distributions (normal or log-normal distribution). Second, the central tendencies of the datasets were compared. The one-way analysis of variance (ANOVA) was used to compare more than two groups of data. For log-normally distributed data, the data was log-transformed before conducting the ANOVA. T-Tests were conducted to compare two datasets. Non-parametric comparison tests were conducted to accommodate the non-normal data distributions. The non-parametric Wilcoxon Rank Sum (WRS) test was conducted to compare two datasets, and the equivalent Kruskall-Wallis (KW) one-way analysis of variance (ANOVA) test was conducted to compare more than two groups of data.

The null hypothesis for the comparison tests was “there is no difference between distributions”, and an alpha value of 0.05 was selected as the desired significance level. If the reported p-value is smaller than the desired significance level (0.05), there is statistical evidence that distributions between datasets are significantly different, while a p-value above 0.05 indicates that the null hypothesis cannot be rejected and it is concluded that there is no difference in the distributions. A p-value equal to the significance level (0.05) indicates that distributions between datasets are on the borderline of significant difference.

4.1 Treating Outliers

Data exploration revealed that there were two outliers in the molybdenum soil data: Transect 3 in the 3 ft cover depth plot (26.7 mg/kg of molybdenum at sampling location CVR3TR3-2) and Transect 1 in the 1 ft cover depth plot (15.4 mg/kg of molybdenum at sampling location CVR1TR1-1). By conducting Rosner’s Outlier Test in ProUCL, statistical analysis revealed that both the 26.7 mg/kg and the 15.4 mg/kg were outliers. These data points can be seen clearly in the top right of the soil quantile plots (Figure 5). Comparison tests were conducted both with and without these outliers, and results revealed that they do not carry a significant influence. However, these samples should be noted as possible outliers in future analysis.

4.2 Soil Cover Plot Depths

In order to evaluate the effectiveness of the three cover depths, molybdenum concentrations were compared in surface soil. No significant difference was found among molybdenum concentrations in the three cover depths as shown in Table 4. This finding concurred with previous conclusions for the 2010 and 2011 soil data sets.

4.3 Copper Molybdenum Ratio

An important attribute of both the soil and plant material in potentially preventing molybdenosis in grazing animals is to have excess copper. A Cu:Mo ratio of greater than 1.0 in plants is desirable (Smolders 2009). Cu:Mo ratios were calculated for soil at each cover depth and compared to evaluate any differences between the different depths. Table 5 (and the associated quantile plots in Figure 6) show that there were no differences in Cu:Mo ratios among the three cover depth plots. Furthermore the mean Cu:Mo ratio in soil for the three plots ranged from 8.16 to 9.78 (see Table 3). Analyzing copper in vegetation as well as molybdenum is recommended for future samples so that the Cu:Mo ratio in plant material can be determined.

5.0 Cover Project Results Summary – September 2013 Vegetation and Soil Sampling

5.1 QAPP Results

URS Corporation reported that all laboratory data were validated in accordance with the 2013 QAPP, and did not specifically note any data validation issues (URS 2013).

5.2 Molybdenum Analytical Results

The analytical results for molybdenum from the vegetation monitoring (September 2013) sampling event are summarized in Table 6. As shown in the table, there is a high frequency of "J-qualified" results in the molybdenum data, indicating that the concentrations reported are estimated values (i.e., above the method detection limit but below the reporting limit). Table 6 also shows that shrub samples were available in only 11 of the 27 sampling locations, and that these were primarily located in the 3 ft cover depth. The soil samples also present a possible outlier (49.7 mg/kg) at sampling location CVR3TR3-2 as this concentration is unusually high compared to the rest of the soil samples. Treatment of this outlier is discussed in detail below in Section 6.1.

6.0 Preliminary Interpretation – September 2013 Vegetation and Soil Sampling

Tables 7 and 8 present the summary statistics for molybdenum concentrations for the three cover plot depth areas for the September sample event. Table 7 contains summary statistics for soil, both with and without the 3 ft cover sample identified as a statistical outlier. Table 8 contains summary statistics for vegetation. As with the 2012 soil sampling data discussed above in Section 4.0, comparisons were conducted to determine if there are statistically significant differences among cover depths using surface soil samples. However, additional comparison tests were conducted using vegetation samples (forbs, grasses, and shrubs) as well. The transects within each cover plot depth were also compared to determine the relative variability of molybdenum concentrations among cover depths.

Cu:Mo ratios were also calculated for this sampling event. Higher Cu:Mo ratios may be more protective of the environment, specifically grazing animals. Summary statistics for Cu:Mo ratios are presented in Table 9. Ratios were compared to determine if there are statistically significant differences among cover depths.

In addition to analyzing molybdenum concentrations in vegetation and soil samples, bioaccumulation factors (BAFs) were calculated for the three plant types at each of the 27 sample locations as the data was available. Higher BAFs may indicate higher intake of molybdenum from soil into plants. Summary statistics for the calculated BAFs are presented in Table 10. BAFs were also compared to determine if there are statistically significant differences among cover depths for each type of vegetation.

6.1 Treating Outliers

Data exploration revealed that there was an outlier in the soil samples, specifically Transect 3 in the 3 ft cover depth plot (49.7 mg/kg of molybdenum at sampling location CVR3TR3-2). This data point was more than 15 standard deviations away from the mean after excluding it from calculation, which is significantly more than what would be considered an outlier. As shown in the lognormal quantile plot (Figure 7), log-transforming this result did not effectively mitigate its influence on analysis of the 3 ft cover, so comparison tests were conducted both with and without the outlier. Removing the outlier influenced the distribution of the data and the appropriate statistical tests to be conducted, but most of the resulting conclusions from these analyses remained unaffected. This outlier may have influence in the forb BAF data, which is discussed in detail below in Section 6.5. Overall, the influence of this outlier was minimal but it should be used cautiously in future analysis, especially in BAF calculations.

6.2 Soil Cover Plot Depths

In order to evaluate the effectiveness of the three cover depths, molybdenum concentrations were compared in surface soil. No significant difference was found among molybdenum concentrations in the three cover depths as shown in Table 11. This finding concurred with previous conclusions for the 2010 and 2011 soil data sets. Transect 2 was found to have lower concentrations at 1 ft cover and 2 ft cover, which was also in line with previous conclusions for the 2010 and 2011 soil data sets.

6.3 Vegetation Cover Plot Depths

Molybdenum concentrations were also compared in forbs, grasses, and shrubs. This involved a comparison test of three sets of data, one pertaining to each cover plot depth, and this comparison test was conducted for each type of vegetation. Since shrubs only appeared in 2 ft and 3 ft cover plots, only two datasets were compared. As shown in Table 12, comparison of forb data showed that both 1 ft and 2 ft cover had significantly higher molybdenum concentrations than 3 ft cover, indicating that they may not be as effective as the 3 ft cover. This is difference is visible in the quantile plots as well (Figure 8).

Further analysis revealed that 1 ft cover depth has more spatial variability as the transects at this cover depth have significantly different forb concentrations of molybdenum. However, comparison of grass data (Table 13 and Figure 9) and shrub data (Table 14 and Figure 10) did not demonstrate a significant difference in molybdenum concentrations among cover depths, indicating that the difference in cover depth effectiveness may be limited to forb vegetation.

6.4 Copper Molybdenum Ratio

An important attribute of both the soil and plant material in potentially preventing molybdenosis in grazing animals is to have excess copper. A Cu:Mo ratio of greater than 1.0 in plants is desirable (Smolders 2009). Cu:Mo ratios were calculated for soil at each cover depth and compared to evaluate any differences between the different depths. Table 15 (and the associated quantile plot in Figure 11) show that there were no differences in Cu:Mo ratios among the three cover depth plots. Furthermore the mean Cu:Mo ratio in soil for the three plots ranged from 5.05 to 7.18 (see Table 9). Analyzing copper in vegetation as well as molybdenum is recommended for future samples so that the Cu:Mo ratio in plant material can be determined.

6.5 Bioaccumulation Factor (BAF)

As vegetation develops in the Project Site, bioaccumulation will become a more important factor in determining effectiveness of the three cover plot depths than molybdenum concentrations in vegetation and soil samples by themselves. Bioaccumulation factors (BAFs) were calculated for each sample location, as the data was available, by dividing the molybdenum concentration in vegetation by the respective concentration in surface soil. Higher BAFs may indicate higher intake of molybdenum from soil into plants.

BAFs were calculated for each type of vegetation (forb, grass, and shrub) though it is important to note the lack of shrub data. Three datasets of molybdenum BAFs were compared to evaluate cover depth effectiveness for forbs and grasses. Since shrub data for 1 ft cover depth was unavailable, only 2 ft and 3 ft cover depth BAFs were compared for shrub. Table 16 shows that there were significant differences among the cover depths for grass, with 1 ft cover having significantly higher BAFs than 3 ft cover. This difference is visible in the quantile plots as well (Figure 12). This may indicate that 1 ft cover is not as effective as 3 ft cover. Initially, there were no differences among cover depths for forb. However, by treating the outlier in 3 ft cover, further analysis revealed that cover depths were borderline different in forb. Further sampling and analysis is needed to confirm whether this difference is statistically significant. Comparison tests also revealed that there were no differences between 2 ft and 3 ft cover depth BAFs for forb and grass. Additionally, there were no differences between 2 ft and 3 ft cover depth BAFs for shrub. Further sampling and analysis is needed to confirm there is no difference between 2 ft and 3 ft cover depth for all vegetation.

7.0 Uncertainty

As discussed previously in Section 2.6, modifications were made to the sampling plan to accommodate more shrub samples as shrubs were much less common than grasses and forbs. Nonetheless, shrub samples were collected at only 11 of the 27 sampling locations despite these modifications, which limited the statistical inferences that could be made by analyzing shrub data. It is recommended that for future sampling events, more shrub samples be collected to achieve a desirable confidence level for statistical inferences.

Additionally, it is recommended that more vegetation and soil samples be collected overall as the current number of samples was barely sufficient to make valid statistical inferences (three samples per transect line, three transects per cover depth) for the 2013 vegetation monitoring data. For the 2012 soil data, the number of samples after removing outliers was insufficient to conduct comparisons among transects within each cover depth plot. Furthermore, the goal of the vegetation monitoring was to achieve a sample adequacy to reach 90% confidence that the sample mean is within 10% of the true population mean (URS 2013), but this may conflict with statistical inferences made at 95% confidence to detect differences among sample means. The small number of samples made it difficult to make reliable interpretations of many of the quantile plots. It is recommended that the sampling plan be revisited with these goals in mind and that the one-way analysis of variance (ANOVA) will likely be the appropriate statistical comparison test of means.

The outliers in the 2012 soil sampling data (26.7 mg/kg of molybdenum at sampling location CVR3TR3-2; 15.4 mg/kg at sampling location CVR1TR1-1) are important to address, but do not significantly impact the rest of the analysis, such as the distribution of the data and the statistical inferences concluded from the comparison tests. It is important, however, to note these points as possible outliers in the future and address them appropriately should they have a significant impact.

For the 2013 vegetation monitoring data, on the other hand, the outlier (soil sample 49.7 mg/kg of molybdenum at sampling location CVR3TR3-2) brings a notable level of uncertainty to the distribution of soil data and calculations on BAFs and Cu:Mo ratios for the 3 ft cover. Although it did not affect most of the statistical inferences concluded from the comparison tests, it showed some influence on conclusions for forb BAFs. Because soil samples can especially influence BAF and Cu:Mo calculations, this data point should be used with caution in future analysis.

Although copper was analyzed in both 2012 and 2013 soil samples, there were no data on copper concentrations in vegetation for the 2013 vegetation monitoring. Because Cu:Mo ratios in this report were calculated based on soil samples, our finding that there are no differences among cover depths applies only to animal consumption of soil. Comparing Cu:Mo ratios in vegetation may provide more valid conclusions in evaluating effectiveness in protecting the environment. We recommend analysis of copper as well as molybdenum in future vegetation sampling events.

One important uncertainty to address in this report is the number of comparison tests conducted to reach conclusions. Conducting any one statistical test has a very small probability of resulting in statistical significance by chance alone, and this probability is usually specified beforehand by a desired confidence level. However, the risk of arriving at a statistically significant conclusion by chance alone increases with the number of statistical tests conducted (Lane 2013).

Although the 2012 soil data involved several statistical tests to arrive at the conclusions below, the 2013 vegetation monitoring data involved considerably more statistical testing due to the inclusion of vegetation data and BAF calculations. Because analysis of this data involved a large number of statistical comparisons, the possibility that a conclusion for the 2013 vegetation data was made in error is a potential concern.

8.0 Conclusions

Soil and vegetation data collected at the Project Site from three cover plot depth areas for the 2012 soil sampling event and the 2013 vegetation monitoring sampling event were reviewed and analyzed in this report. For vegetation monitoring, shrub samples were collected in less than half of the sampling locations (11 of 27) and most were located in 3 ft cover plot depth. It is recommended that further analysis include more shrub sampling from all three cover plots depths for a more accurate analysis. It is also recommended that the sampling plan be revisited with the goal of means comparison at 95% confidence as this may mandate a larger sampling size.

There is statistical evidence to make the following conclusions:

1) Soil data revealed no significant difference in molybdenum concentrations among the three cover depths. This conclusion was found in both the 2012 and 2013 soil sampling data, which indicates that the data supports previous conclusions for the 2010 and 2011 soil data sets.
2) Both soil and forb data show that 1 ft cover has greater variability among its sampling locations (transects) than 3 ft cover while only soil data shows that 2 ft cover has greater spatial variability than 3 ft cover. One possible explanation is that shallower cover depths could result in more variable molybdenum concentrations. Additional soil data would reveal the importance of the difference in variability between 2 ft and 3 ft cover.
3) Both 1 ft and 2 ft cover depth plots were found to have higher concentrations of molybdenum in forb vegetation than 3 ft cover depth. This indicates that 1 ft and 2 ft cover depths may not be as effective as 3 ft cover depth in protecting human health and the environment. However, collecting more vegetation data is recommended to confirm these initial findings.
4) Cu:Mo ratios in soil revealed no significant difference among the three cover depths. For the 2012 soil sampling data, the mean Cu:Mo ratio for the three plots ranged from 8.16 to 9.78. For the 2013 vegetation monitoring data, the mean Cu:Mo ratio in soil for the three plots ranged from 5.05 to 7.18. Analyzing copper in vegetation as well as molybdenum is recommended for future samples.
5) The 1 ft cover depth was found to have higher BAFs than 3 ft cover depth in grass vegetation. Also, the 1 ft cover depth was found to potentially have higher BAFs than 3 ft cover depth in forb vegetation, after accounting for an outlier. This indicates that 1 ft cover depth may not be as effective as 3 ft cover depth in protecting human health and the environment. However, collecting more vegetation data is recommended to confirm the difference between 1 ft and 3 ft cover depths, especially for forb vegetation. The 2 ft cover depth was not found to have higher BAFs than 3 ft cover depth for any vegetation. Regardless, collecting more vegetation data is recommended to verify that there is no difference in BAFs between 2 ft and 3 ft cover depths.

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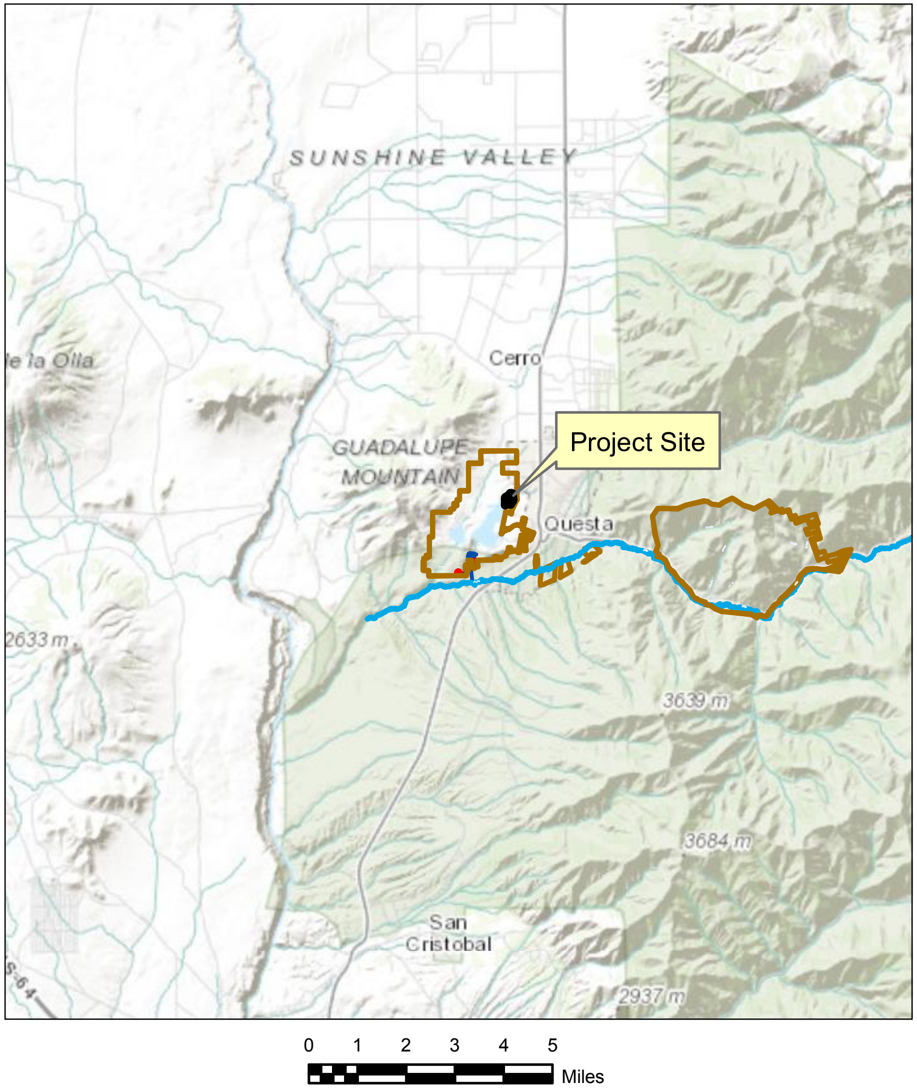

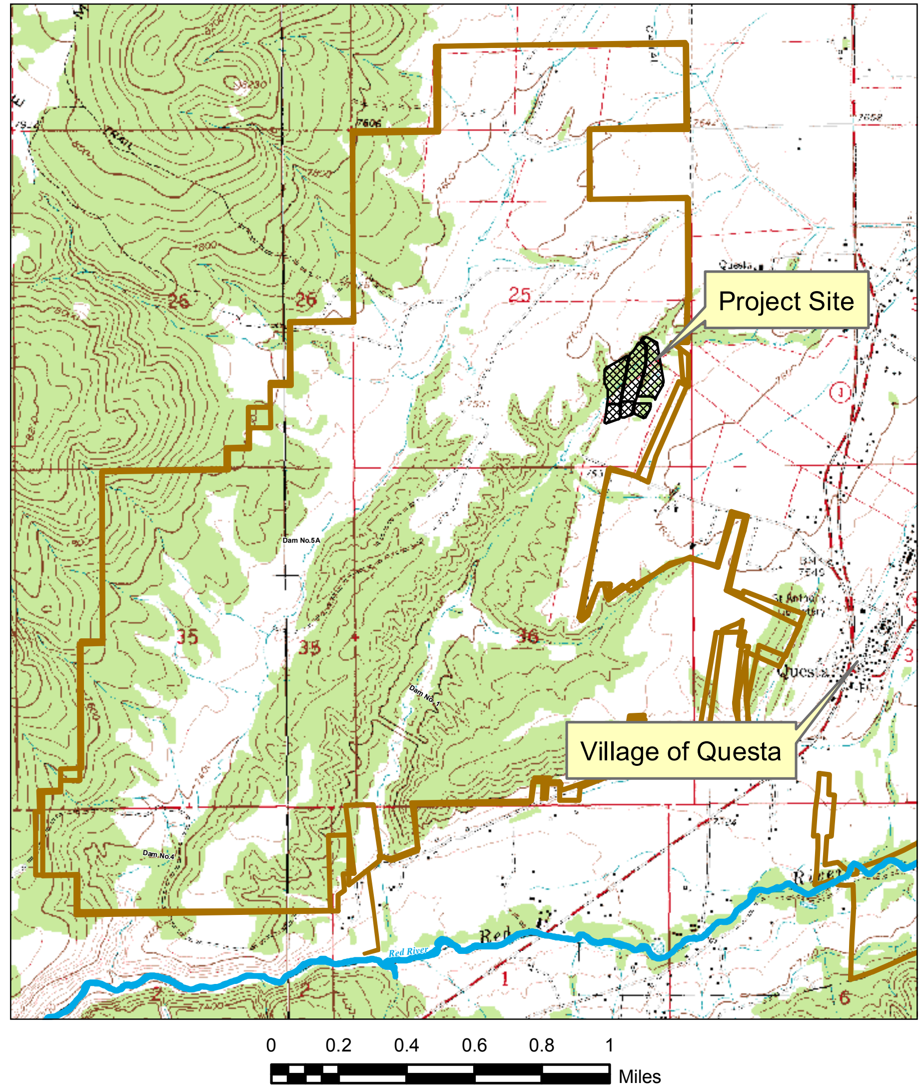

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APPLICATION ArcGIS 10	CHEVRON MINING INC. - QUESTA MINE	PROJECT 22242713
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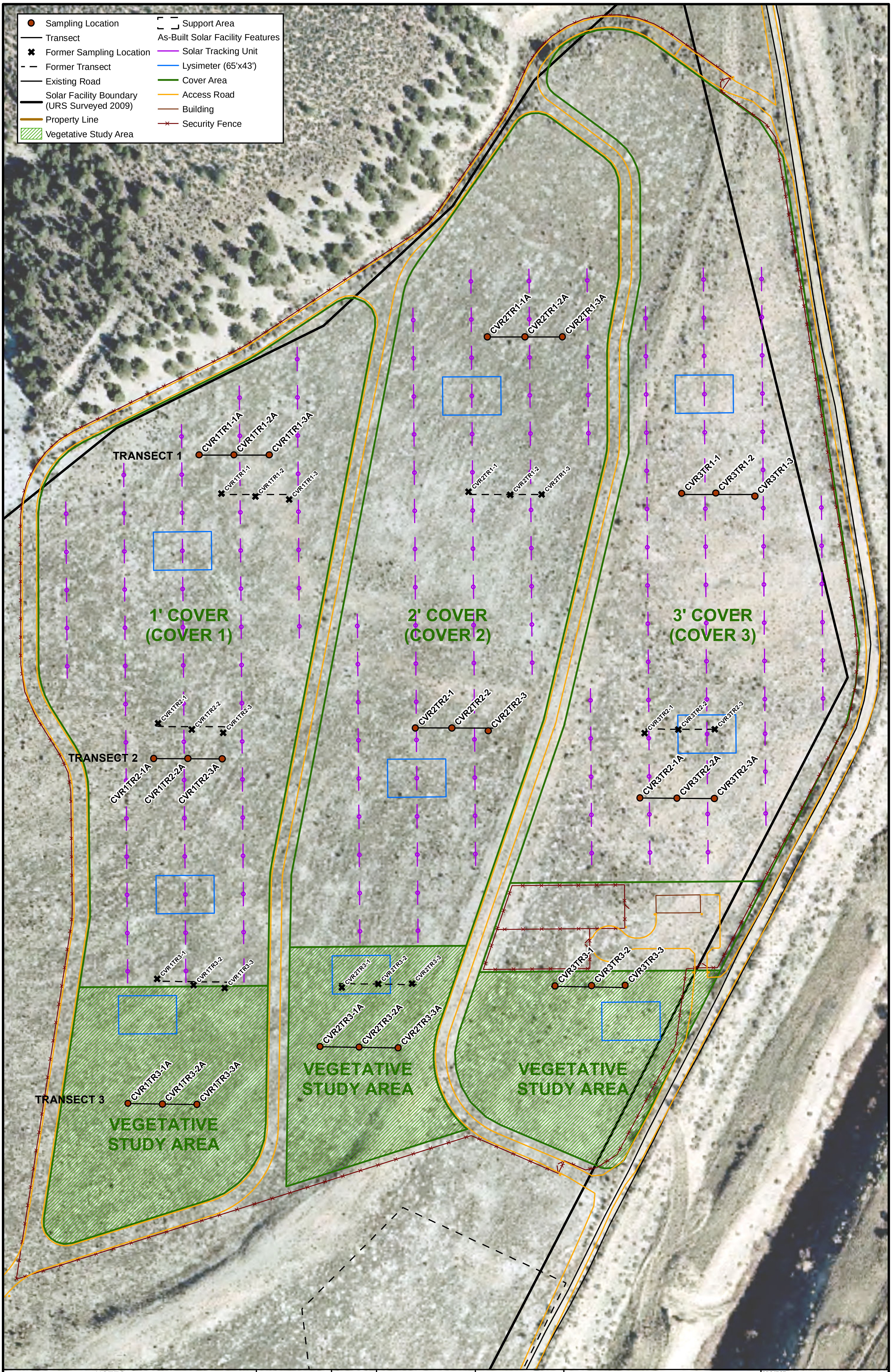
DRAWN BY GIS - Denver		
DATE 10/28/2013		



NOTES:

1. Tailing Facility topography (2007) and cover site plan (2010) provided by Chevron Mining Inc. - Quest Mine.

REVISION	DATE

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APPLICATION	ArcGIS 10
FILE NAME	AsbuiltSampLocs.mxd
DRAWN BY	GIS - Denver
DATE	05/16/2011

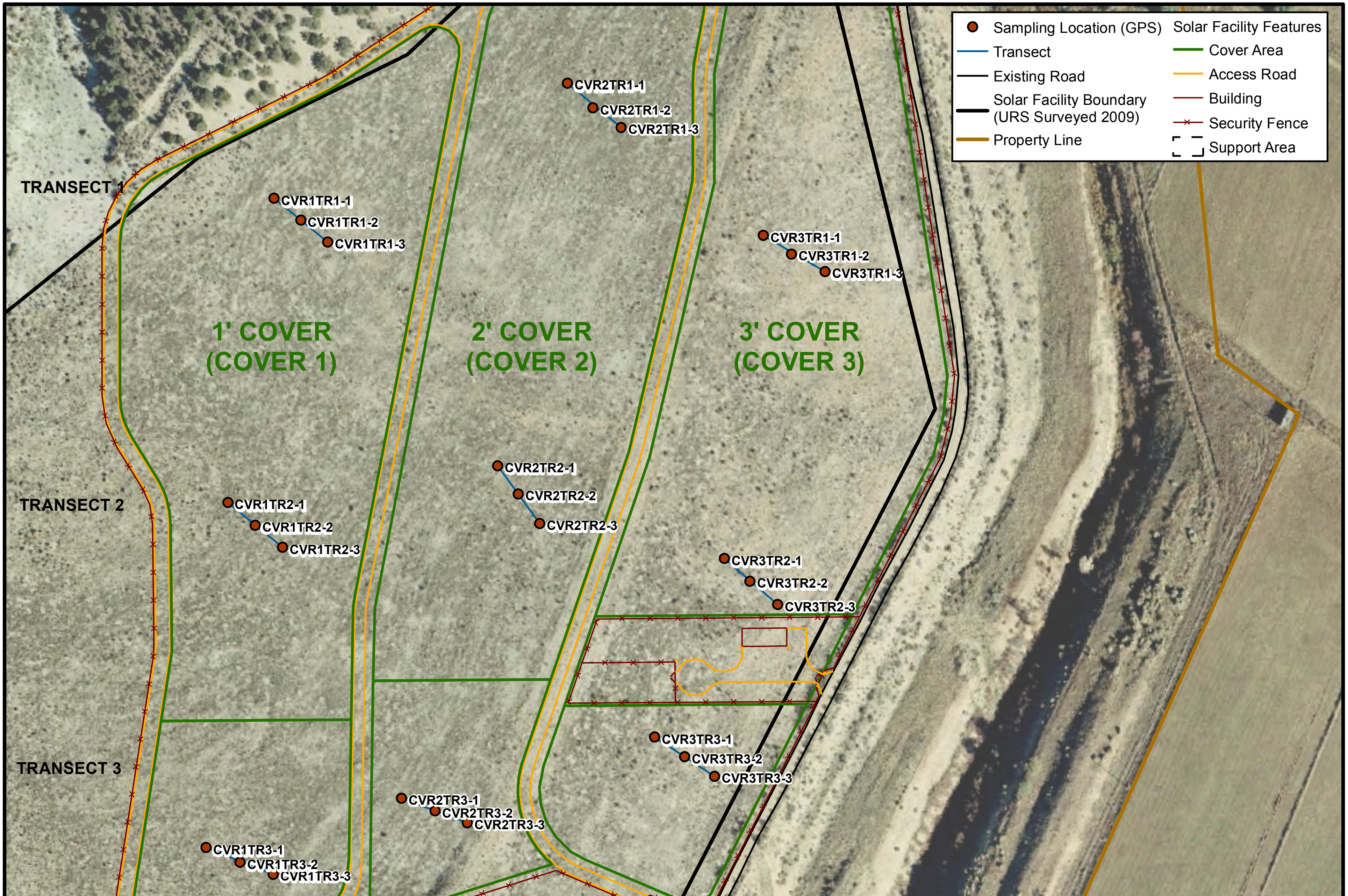
CHEVRON MINING INC. - QUESTA MINE

SOIL SAMPLE LOCATIONS IN COVER AREA WITH AS-BUILT SOLAR

PROJECT 22241609

Figure 2

Soil & Vegetation Sampling Cover Depth Project



NOTES:
1. Tailing Facility topography (2007), aerial photograpghy (2007), and cover site plan (2010) provided by Chevron Mining Inc. - Questa Mine.
2. Samples collected September 25, 2012.

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APPLICATION ArcGIS 10	CHEVRON MINING INC. - QUESTA MINE	PROJECT 22242713
FILE NAME fig2_SampLocs.mxd	SOIL SAMPLE LOCATIONS IN COVER AREA	**Figure 3** *Soil Sampling Cover Depth Project*
DRAWN BY GIS - Denver		
DATE 11/26/2012		

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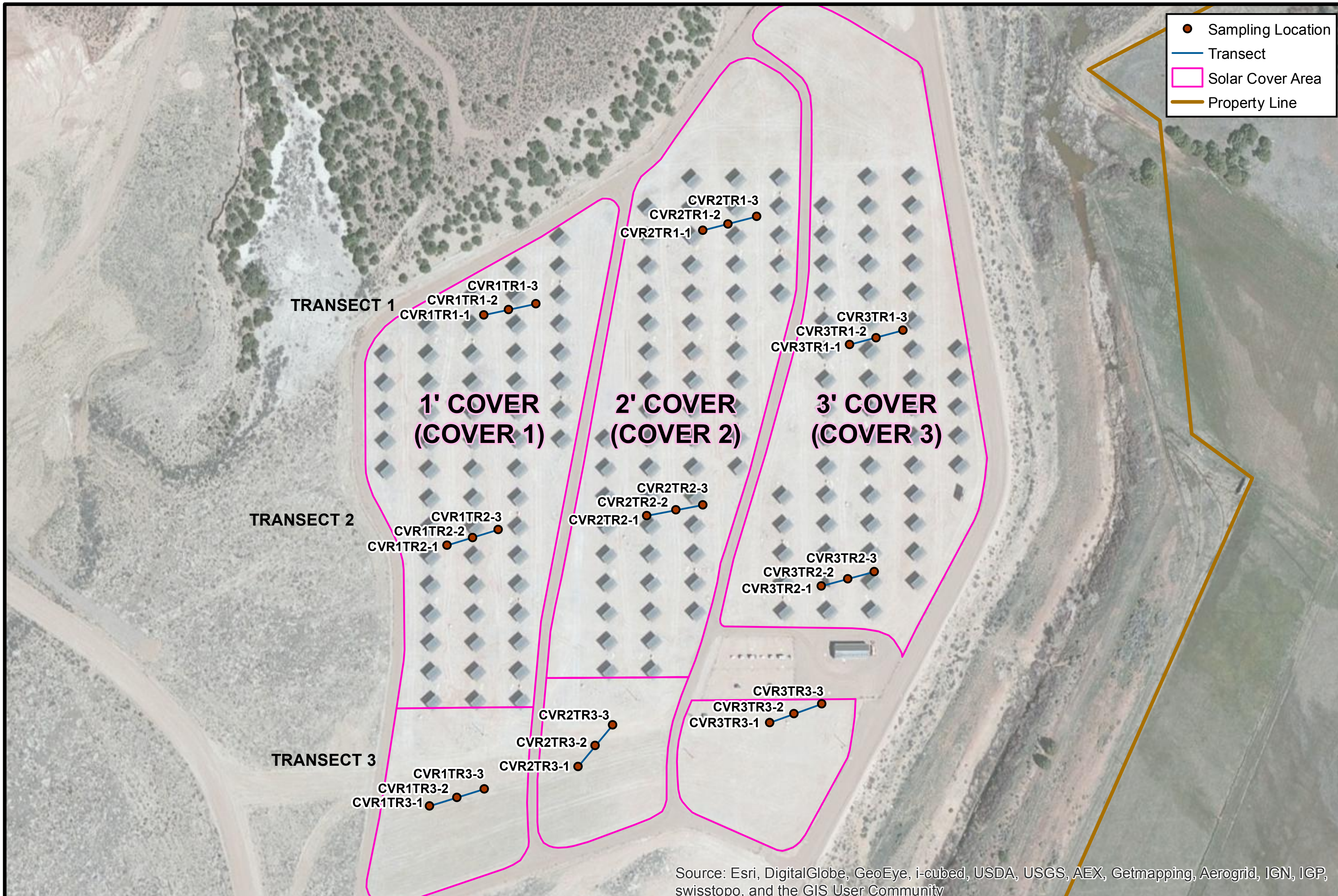

N

0 100

Feet

NOTES:
1. Tailing Facility topography (2007), aerial photograpghy (2007), and cover site plan (2010) provided by Chevron Mining Inc. - Questa Mine.
2. Samples collected in August, 2013.

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APPLICATION ArcGIS 10	CHEVRON MINING INC. - QUESTA MINE		PROJECT 22242713
FILE NAME fig2_SampLocs.mxd	SOIL & VEGETATION SAMPLE LOCATIONS IN COVER AREAS		**Figure 4** *Soil &Vegetation Sampling Cover Depth Project*
DRAWN BY GIS - Denver			
DATE 10/28/2013			

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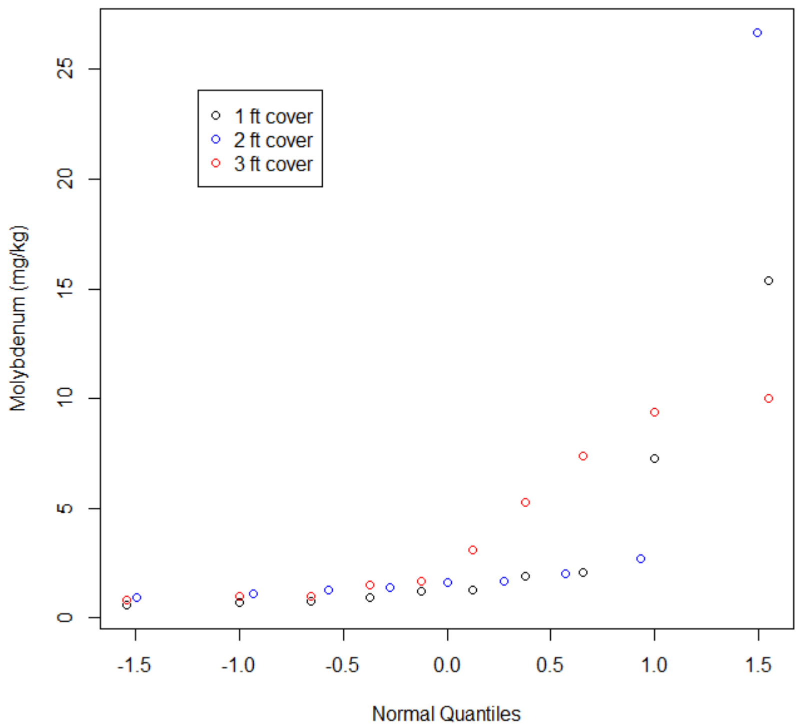
FIGURE 5

2012 Soil Molybdenum Concentrations (Normal QQ Plot)



2012 Soil Molybdenum Concentrations (Lognormal QQ Plot)

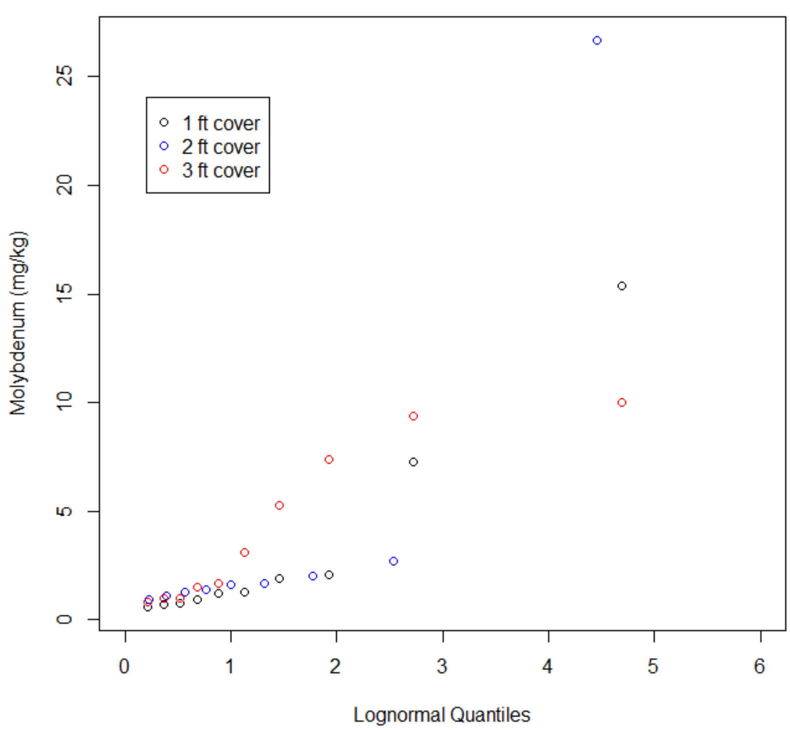
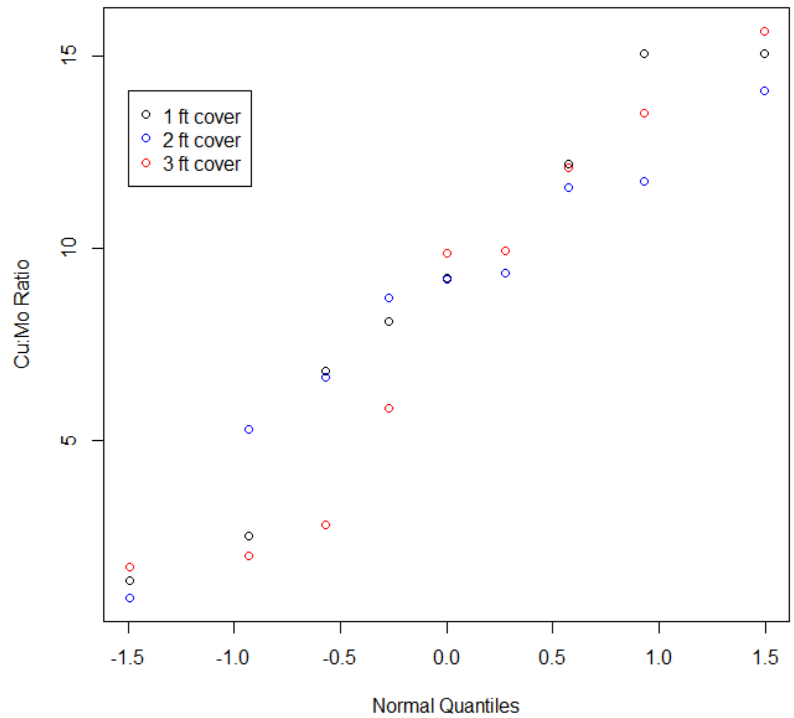


FIGURE 6

2012 Cu:Mo Ratios (Normal QQ Plot)



2012 Cu:Mo Ratios, excluding outliers (Normal QQ Plot)

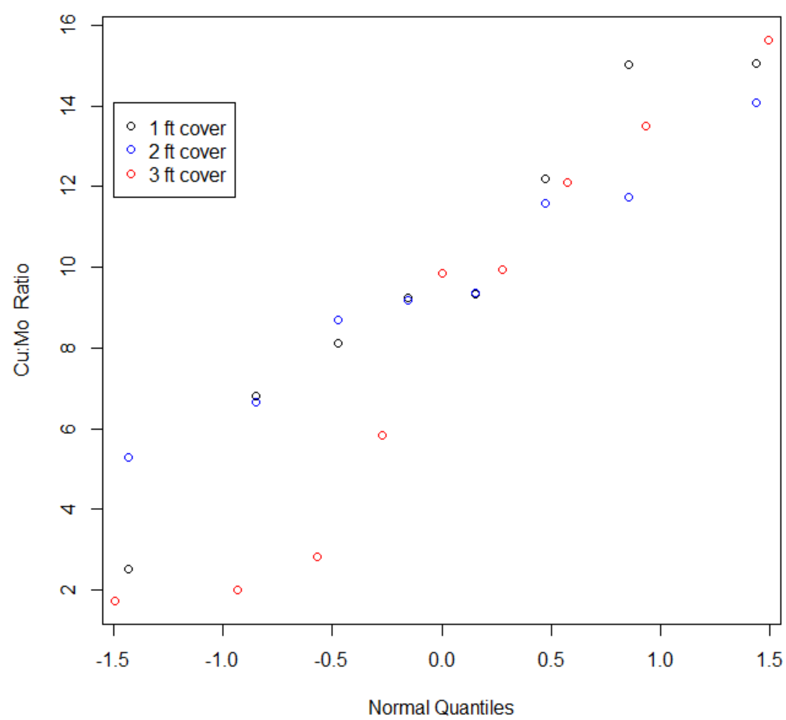
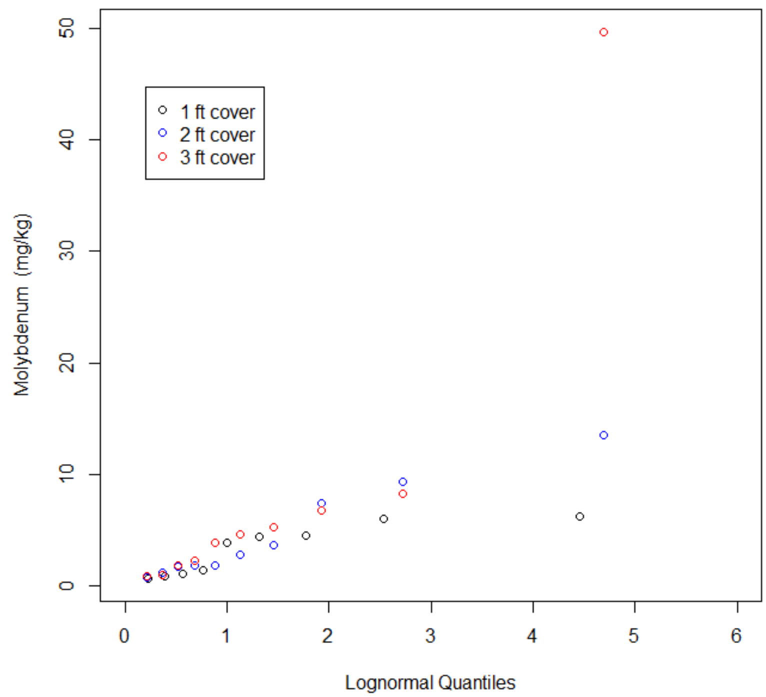


FIGURE 7

2013 Soil Molybdenum Concentrations (Lognormal QQ Plot)



2013 Soil Molybdenum Concentrations, excluding outlier (Lognormal QQ Plot)

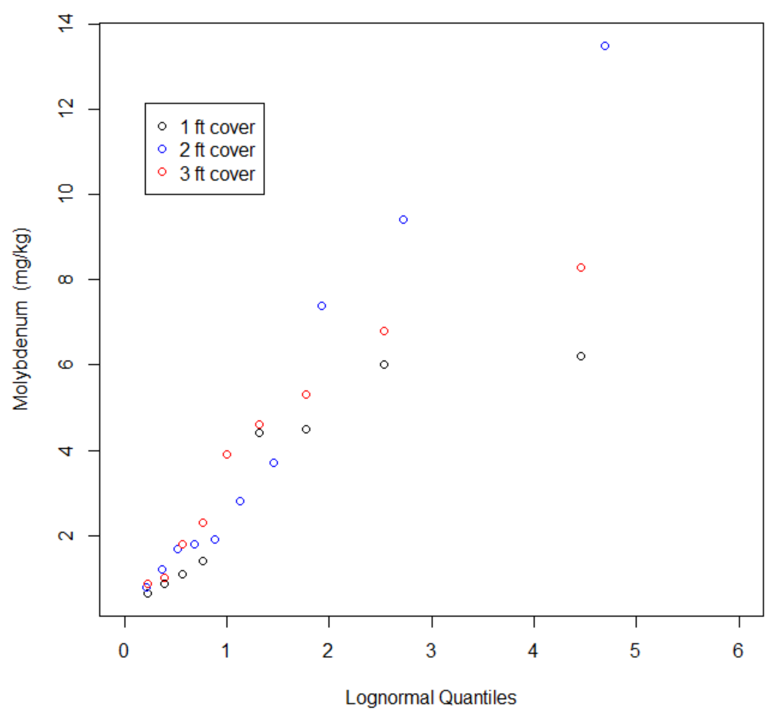
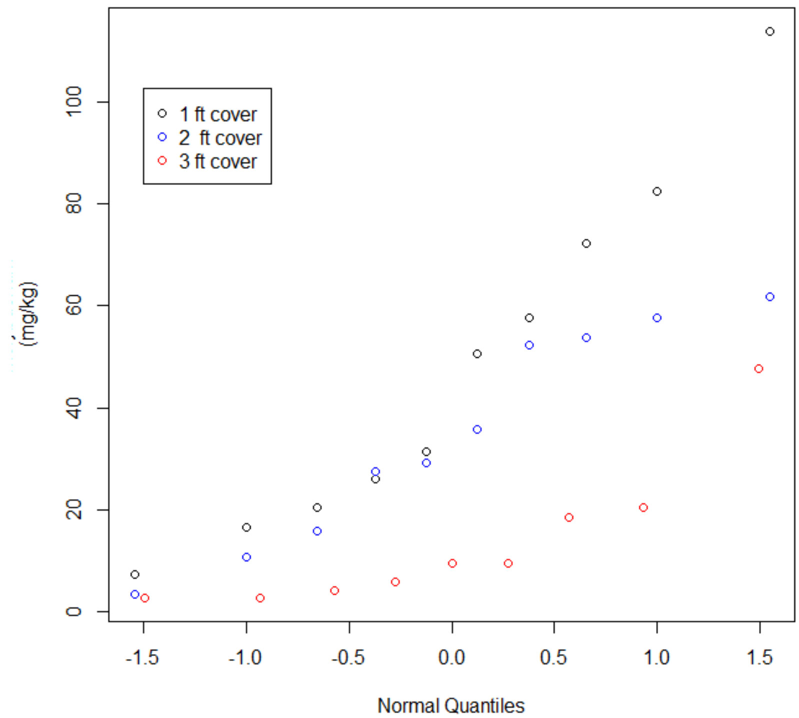


FIGURE 8

2013 Forb Molybdenum Concentrations (Normal QQ Plot)



2013 Forb Molybdenum Concentrations (Lognormal QQ Plot)

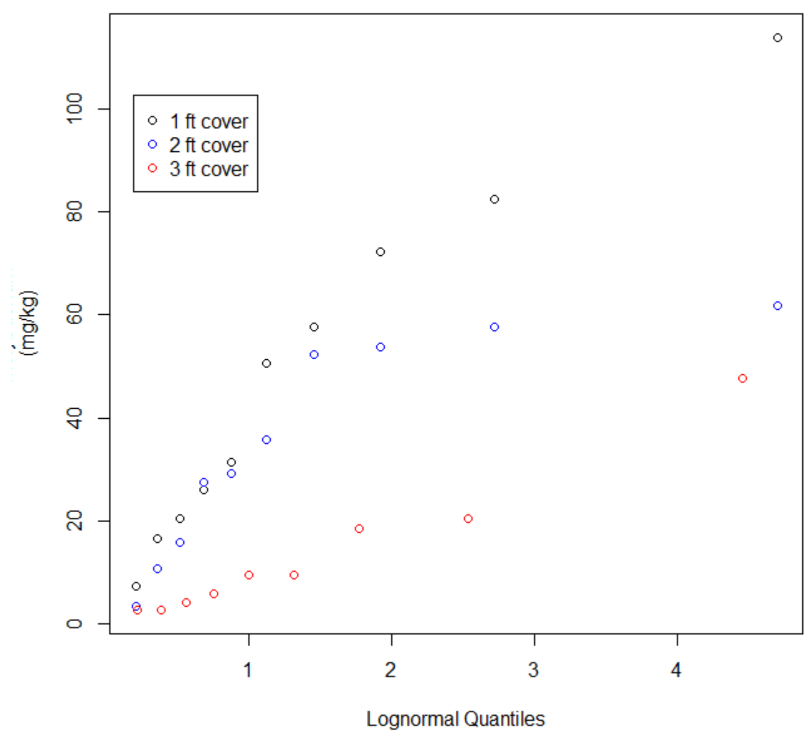
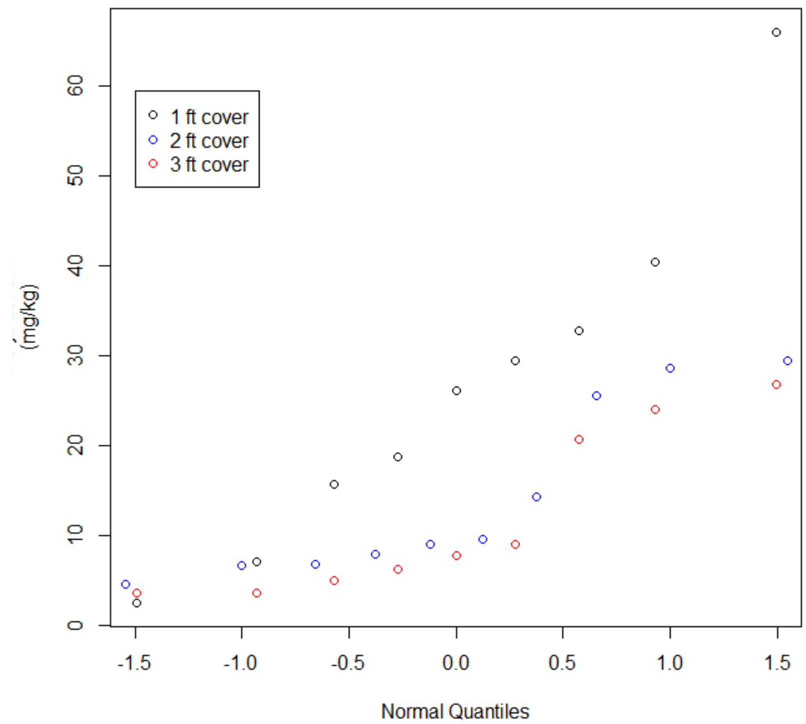


FIGURE 9

2013 Grass Molybdenum Concentrations (Normal QQ Plot)



2013 Grass Molybdenum Concentrations (Lognormal QQ Plot)

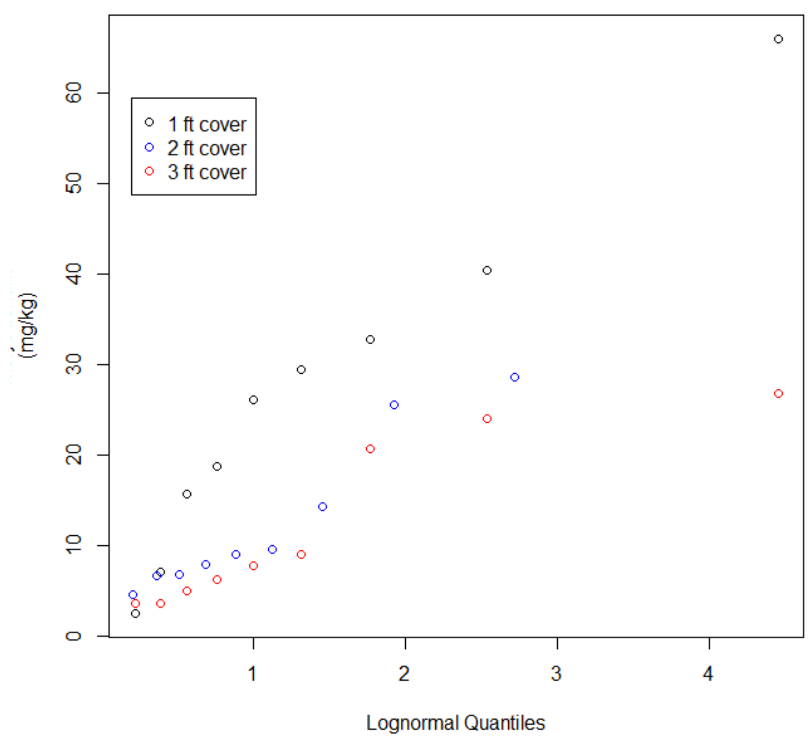
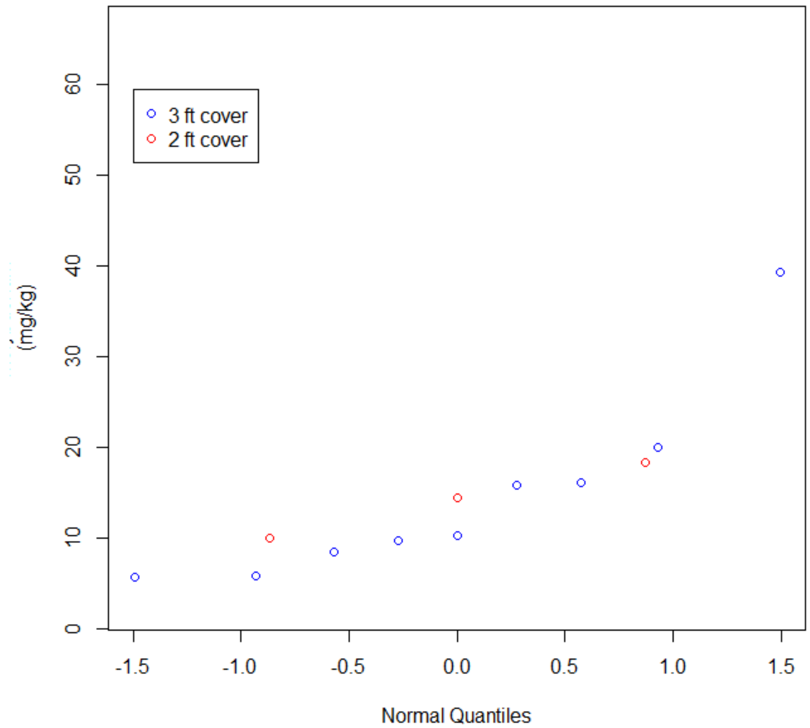


FIGURE 10

2013 Shrub Molybdenum Concentrations (Normal QQ Plot)



2013 Shrub Molybdenum Concentrations (Lognormal QQ Plot)

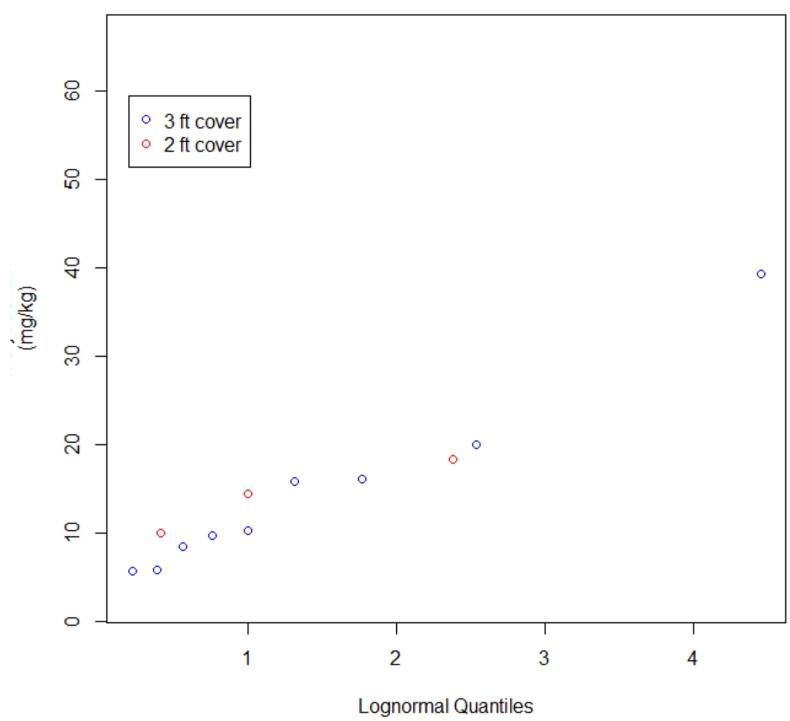
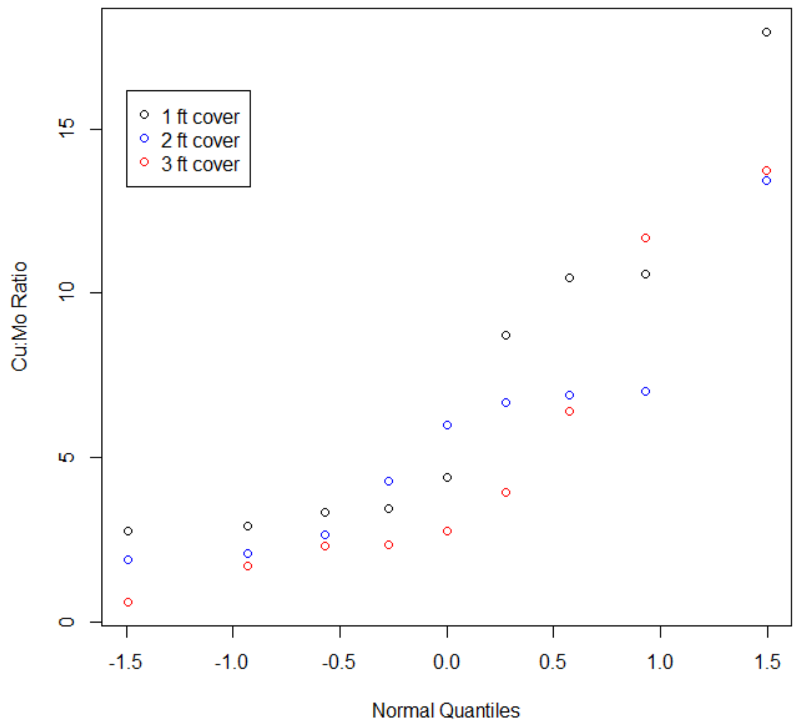


FIGURE 11

2013 Cu:Mo Ratios (Normal QQ Plot)



2013 Cu:Mo Ratios (Lognormal QQ Plot)

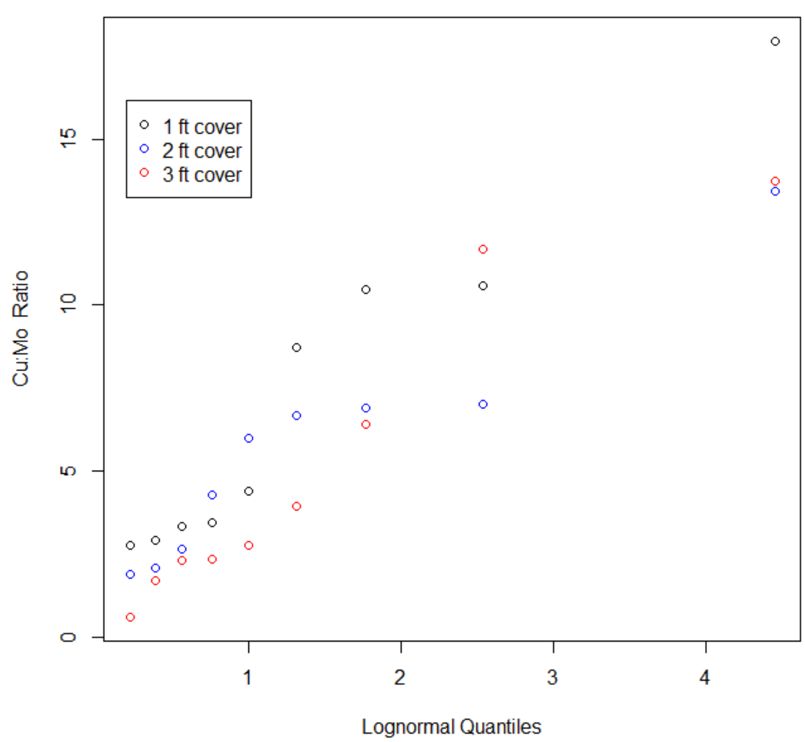
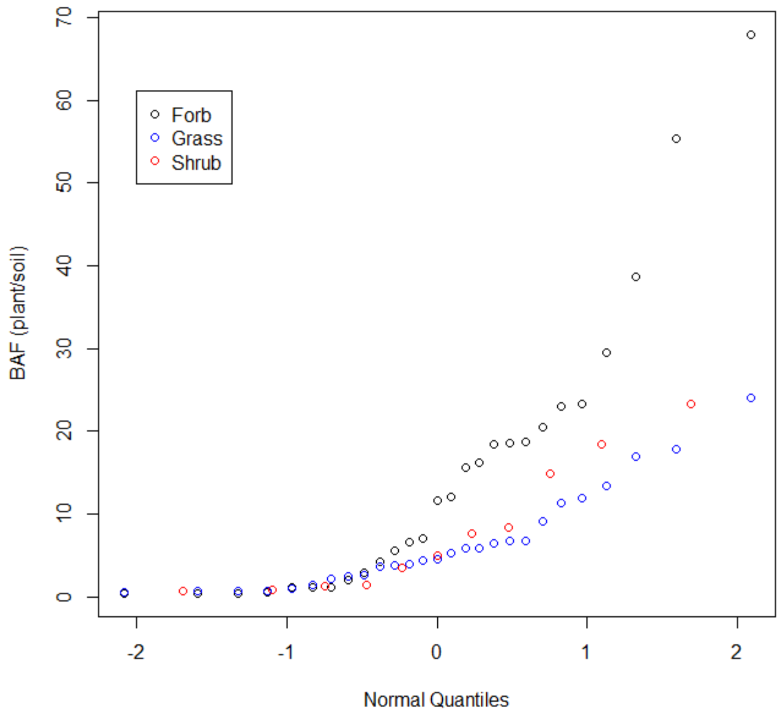


FIGURE 12

2013 Molybdenum BAFs (Normal QQ Plot)



2013 Molybdenum BAFs (Lognormal QQ Plot)

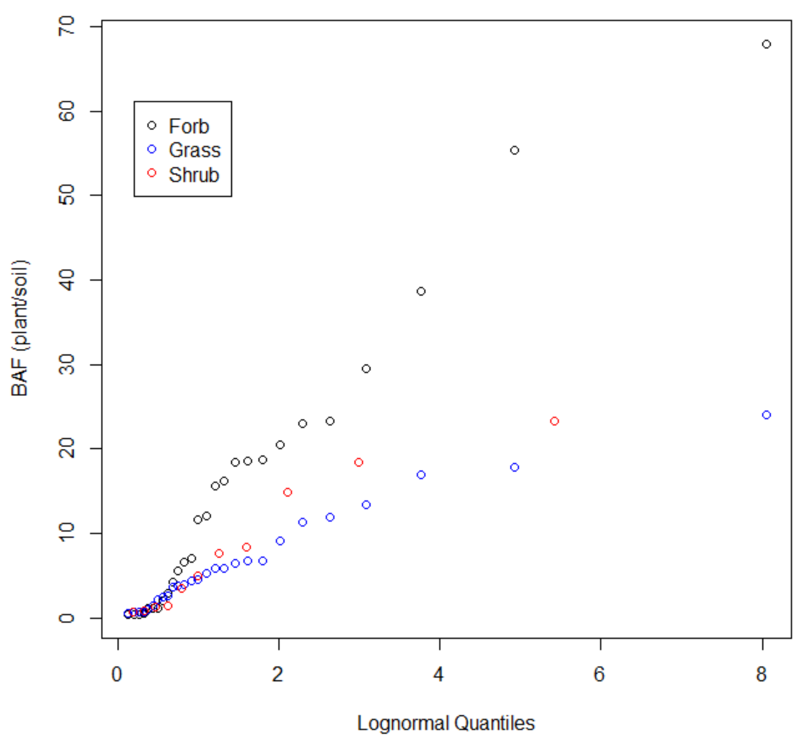


Table 1
SOIL LABORATORY ANALYTICAL RESULTS
CMI Questa Mine, Soil Sampling Event
September 2012

Cover Depth Plot	Transect No. per Cover Plot	Sample Location	Soil Concentrations (mg/kg)		
			Mo	Cu	SO_4
1-foot Plot	1	CVR1TR1-1	15.4 J	20.7 J	455
		CVR1TR1-2	1.9 J	15.4 J	293
		CVR1TR1-3	2.1 J	14.3 J	36.4
	2	CVR1TR2-1	0.96 J	11.7 J	1340
		CVR1TR2-2	0.75 J	11.3 J	96
		CVR1TR2-3	0.58 J	9.4 J	115
	3	CVR1TR3-1	7.3 J	18.3 J	17.9
		CVR1TR3-2	1.3 J	12 J	< 3.5
		CVR1TR3-3	1.2 J	11.2 J	< 3.2
2-foot Plot	1	CVR2TR1-1	1.3 J	11.3 J	662
		CVR2TR1-2	2.7 J	14.3 J	66.9
		CVR2TR1-3	26.7 J	24 J	510
	2	CVR2TR2-1	1.7 J	11.3	1290
		CVR2TR2-2	0.93 J	13.1 J	340
		CVR2TR2-3	1.1 J	12.9 J	93.6
	3	CVR2TR3-1	1.4 J	16.2 J	< 0.05
		CVR2TR3-2	2 J	18.7 J	14.3
		CVR2TR3-3	1.6 J	14.7 J	16.2
3-foot Plot	1	CVR3TR1-1	3.1 J	18.1 J	34.3
		CVR3TR1-2	1.7 J	16.9 J	13.3
		CVR3TR1-3	1.5 J	14.8 J	342
	2	CVR3TR2-1	7.4 J	18 J	142
		CVR3TR2-2	0.85 J	13.3 J	39.1
		CVR3TR2-3	1 J	13.5 J	28.9
	3	CVR3TR3-1	10 J	17.2 J	1250
		CVR3TR3-2	9.4 J	18.8 J	315
		CVR3TR3-3	1 J	12.1 J	129

Notes:
Results are from TestAmerica Burlington
< = indicates that the analytical result is less than the provided value
J = analytical result is estimated
mg/kg = milligrams per kilogram
Mo = molybdenum
Cu = copper
SO_4 = sulfate

Table 2 - Soil Molybdenum Concentrations (2012 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

	Cover Depth	N	Mean	Std. Dev.	Median	Min	Max
Soil	1 ft	10	3.22	4.72	1.25	0.58	15.4
	1 ft [b]	9	1.87	2.1	1.2	0.58	7.3
	2 ft	9	4.38	8.39	1.6	0.93	26.7
	2 ft [a]	8	1.59	0.56	1.5	0.93	2.7
	3 ft	10	4.12	3.63	2.4	0.85	10
1 ft cover	Transect 1	3	6.47	7.74	2.1	1.9	15.4
	Transect 1 [b]	2	2	0.14	2	1.9	2.1
	Transect 2	4	0.75	0.16	0.73	0.58	0.96
	Transect 3	3	3.27	3.49	1.3	1.2	7.3
2 ft cover	Transect 1	3	10.23	14.28	2.7	1.3	26.7
	Transect 1 [a]	2	2	0.99	2	1.3	2.7
	Transect 2	3	1.24	0.4	1.1	0.93	1.7
	Transect 3	3	1.67	0.31	1.6	1.4	2
3 ft cover	Transect 1	3	2.1	0.87	1.7	1.5	3.1
	Transect 2	4	3.64	3.25	3.15	0.85	7.4
	Transect 3	3	6.8	5.03	9.4	3.9	10

[a] outlier excluded from dataset (CVR2TR1-3)

[b] outlier excluded from dataset (CVR1TR1-1)

Table 3 - Copper Molybdenum Ratios (2012 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

	Cover Depth	N	Mean	Std. Dev.	Median	Min	Max
Cu:Mo Ratio	1 ft	9	8.85	4.87	9.23	1.34	15.07
	1 ft [b]	8	9.78	4.25	9.28	2.51	15.07
	2 ft	9	8.61	3.93	9.19	0.9	14.09
	2 ft [a]	8	9.57	2.85	9.27	5.3	14.09
	3 ft	9	8.16	5.24	9.87	1.72	15.65

[a] outlier excluded from dataset (CVR2TR1-3)

[b] outlier excluded from dataset (CVR1TR1-1)

Table 4 - Soil Molybdenum Comparison Results (2012 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

With Outlier	Cover Depth	Distribution	Statistical Method	Central Tendency Test Conclusion H_0: No difference btwn cover depths	Outcome
Soil	1 ft 2 ft 3 ft	Not normal	KW ANOVA	KW, p-value = 0.43	Concentrations are the same across the three cover depths.
Without Outlier	**Cover Depth**	**Distribution**	**Statistical Method**	**Central Tendency Test Conclusion H_0: No difference btwn cover depths**	**Outcome**
Soil	1 ft 2 ft 3 ft	Not normal	KW ANOVA	KW, p-value = 0.19	Concentrations are the same across the three cover depths.

Table 5 - Copper Molybdenum Ratios (2012 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

With Outlier	Cover Depth	Distribution	Statistical Method	Central Tendency Test Conclusion H_0: No difference btwn cover depths	Outcome
Cu:Mo Ratio	1 ft 2 ft 3 ft	Normal	ANOVA	F= 0.049, p-value= 0.95	CuMo Ratios are the same across the three cover depths.
Without Outlier	**Cover Depth**	**Distribution**	**Statistical Method**	**Central Tendency Test Conclusion H_0: No difference btwn cover depths**	**Outcome**
Cu:Mo Ratio	1 ft 2 ft 3 ft	Normal	ANOVA	F= 0.37, p-value= 0.70	CuMo Ratios are the same across the three cover depths.

Table 6
SOIL AND VEGETATION LABORATORY ANALYTICAL RESULTS
CMI Questa Mine
Soil and Vegetation Sampling Event
August-September 2013

Cover Depth Plot	Transect No. per Cover Plot	Sample Location	Soil			Grasses	Forbs	Shrubs
						Vegetation Aboveground Plant Tissue	Vegetation Aboveground Plant Tissue	Vegetation Aboveground Plant Tissue
			T01N-SOL			T02N-PLTGAW	T03N-PLTFAW	T04N-PLTSAW
			Mo (mg/kg)	Cu (mg/kg)	Sulfate (mg/kg)	Mo (mg/kg)	Mo (mg/kg)	Mo (mg/kg)
1-foot Plot	1	CVR1TR1-1	4.5 J	13.1 J	1110 J	26.1 J	31.4 J	-
		CVR1TR1-2	1.4 J	12.2 J	143 J	18.7 J	50.5 J	-
		CVR1TR1-3	3.9 J	13.5 J	448 J	66 J	16.6 J	-
	2	CVR1TR2-1	0.88 J	9.3 J	237 J	15.7 J	26 J	-
		CVR1TR2-2	1.1 J	11.5 J	155 J	7.1 J	20.4 J	-
		CVR1TR2-3	0.64 J	11.5 J	240 J	2.5 J	7.4 J	-
	3	CVR1TR3-1	6 J	20 J	13.5 J	40.4 J	72.2 J	-
		CVR1TR3-2	4.4 J	19.4 J	4.87 J	29.5 J	82.6 J	-
		CVR1TR3-3	6.2 J	17.1 J	155 J	32.8 J	114 J	-
2-foot Plot	1	CVR2TR1-1	3.7 J	15.8 J	84.8 J	9.6 J	57.6 J	-
		CVR2TR1-2	9.4 J	19.5 J	33.4 J	6.9 J	3.4 J	-
		CVR2TR1-3	13.5 J	25.3 J	50.1 J	29.5 J	15.7 J	-
	2	CVR2TR2-1	1.9 J	11.4 J	29.2 J	9.1 J	10.7 J	14.5 J
		CVR2TR2-2	0.79 J	10.6 J	182 J	4.6 J	53.7 J	18.4 J
		CVR2TR2-3	1.2 J	8.3 J	24.2 J	14.3 J	27.6 J	10 J
	3	CVR2TR3-1	2.8 J	15.6 J	43.5 J	25.5 J	52.3 J	-
		CVR2TR3-2	7.4 J	19.5 J	42.3 J	28.6 J	35.8 J	-
		CVR2TR3-3	1.8 J	12 J	380 J	6.7 J	29.1 J	-
3-foot Plot	1	CVR3TR1-1	4.6 J	12.7 J	229	6.3 J	9.4 J	16.1 J
		CVR3TR1-2	2.3 J	12.7 J	30.1 J	9 J	5.9 J	10.3 J
		CVR3TR1-3	0.86 J	11.8 J	919 J	7.8 J	47.6 J	15.8 J
	2	CVR3TR2-1	6.8 J	15.8 J	345 J	5 J	2.6 J	8.5 J
		CVR3TR2-2	5.3 J	12.5 J	132 J	3.7 J	2.6 J	-
		CVR3TR2-3	1 J	11.7 J	31.7 J	24.1 J	20.5 J	9.8 J
	3	CVR3TR3-1	3.9 J	15.3 J	2180 J	3.7 J	4.2 J	5.7 J
		CVR3TR3-2	49.7 J	29.2 J	442 J	26.8 J	18.6 J	39.3 J
		CVR3TR3-3	8.3 J	14.2 J	171 J	20.7 J	9.6 J	5.9 J

Table 6
SOIL AND VEGETATION LABORATORY ANALYTICAL RESULTS
CMI Questa Mine
Soil and Vegetation Sampling Event
August-September 2013

Notes:
- = denotes no sample was collected (plant type not available).
J = analytical result is estimated.
mg/kg = milligram per kilogram
Mo = molybdenum
Cu = copper

Analytical results are from TestAmerica Burlington (soil, tailing, vegetation).

Table 7 - Soil Molybdenum Concentrations (2013 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

	Cover Depth	N	Mean	Std. Dev.	Median	Min	Max
Soil	1 ft	9	3.22	2.24	3.9	0.64	6.2
	2 ft	10	4.42	4.26	2.35	0.79	13.5
	3 ft	10	8.46	14.7	4.25	0.86	49.7
	3 ft *	9	3.87	2.62	3.9	0.86	8.3
1 ft cover	Transect 1	3	3.27	1.64	3.9	1.4	4.5
	Transect 2	3	0.87	0.23	0.88	0.64	1.1
	Transect 3	3	5.53	0.99	6	4.4	6.2
2 ft cover	Transect 1	3	8.87	4.92	9.4	3.7	13.5
	Transect 2	3	1.3	0.56	1.2	0.79	1.9
	Transect 3	4	3.43	2.7	2.3	1.7	7.4
3 ft cover	Transect 1	4	2.39	1.59	2.05	0.86	4.6
	Transect 2	3	4.37	3.01	5.3	1	6.8
	Transect 3	3	20.63	25.27	8.3	3.9	49.7
	Transect 3 *	2	6.1	3.11	6.1	3.9	8.3

* outlier excluded from dataset (CVR3TR3-2)

Table 8 - Vegetation Molybdenum Concentrations (2013 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

	Cover Depth	N	Mean	Std. Dev.	Median	Min	Max
Forb	1 ft	10	47.88	33.98	40.95	7.4	114
	2 ft	10	34.76	20.88	32.45	3.4	61.7
	3 ft	9	13.44	14.37	9.4	2.6	47.6
1 ft cover	Transect 1	4	39.05	18.63	40.95	16.6	57.7
	Transect 2	3	17.93	9.54	20.4	7.4	26
	Transect 3	3	89.6	21.76	82.6	72.2	114
2 ft cover	Transect 1	3	25.57	28.42	15.7	3.4	57.6
	Transect 2	3	30.67	21.66	27.6	10.7	53.7
	Transect 3	4	44.72	14.94	44.05	29.1	61.7
3 ft cover	Transect 1	3	20.97	23.13	9.4	5.9	47.6
	Transect 2	3	8.57	10.33	2.6	2.6	20.5
	Transect 3	3	10.8	7.27	9.6	4.2	18.6
	Cover Depth	**N**	**Mean**	**Std. Dev.**	**Median**	**Min**	**Max**
Grass	1 ft	9	26.53	19.14	26.1	2.5	66
	2 ft	10	14.28	9.75	9.35	4.6	29.5
	3 ft	9	11.9	9.27	7.8	3.7	26.8
1 ft cover	Transect 1	3	36.93	25.44	26.1	18.7	66
	Transect 2	3	8.43	6.7	7.1	2.5	15.7
	Transect 3	3	34.23	5.59	32.8	29.5	40.4
2 ft cover	Transect 1	3	15.33	12.34	9.6	6.9	29.5
	Transect 2	4	9	4.02	8.55	4.6	14.3
	Transect 3	3	20.27	11.85	25.5	6.7	28.6
3 ft cover	Transect 1	3	7.7	1.35	7.8	6.3	9
	Transect 2	3	10.93	11.42	5	3.7	24.1
	Transect 3	3	17.07	11.97	20.7	3.7	26.8
	Cover Depth	**N**	**Mean**	**Std. Dev.**	**Median**	**Min**	**Max**
Shrub	1 ft	Insufficient samples collected					
	2 ft	3	14.3	4.2	14.5	10	18.4
	3 ft	3	14.6	10.47	10.3	5.7	39.3
2 ft cover	Transect 1	Insufficient samples collected					
	Transect 2	3	14.3	4.2	14.5	10	18.4
	Transect 3	Insufficient samples collected					
3 ft cover	Transect 1	3	14.07	3.27	15.8	10.3	16.1
	Transect 2	3	12.77	6.3	9.8	8.5	20
	Transect 3	3	16.97	19.34	5.9	5.7	39.3

Table 9 - Copper Molybdenum Ratios (2013 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

	Cover Depth	N	Mean	Std. Dev.	Median	Min	Max
Cu:Mo Ratio	1 ft	9	7.18	5.18	4.41	2.76	17.97
	2 ft	9	5.65	3.59	6	1.87	13.42
	3 ft	9	5.05	4.66	2.76	0.59	13.72
	3 ft *	8	5.61	4.64	3.34	1.71	13.72

* outlier excluded from dataset (CVR3TR3-2)

Table 10 - Molybdenum BAFs (2013 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

With Outlier	Cover Depth	N	Mean	Std. Dev.	Median	Min	Max
Forb	1 ft	9	17.64	10.88	18.39	4.26	38.64
	2 ft	9	17.74	20.73	15.57	0.36	67.97
	3 ft	9	9.36	18.41	1.16	0.37	55.35
	3 ft *	8	10.48	19.35	1.6	0.38	55.35
Grass	1 ft	9	9.22	5.32	6.7	3.91	17.84
	2 ft	9	5.19	3.93	3.86	0.73	11.92
	3 ft	9	4.93	7.7	1.37	0.54	24.1
	3 ft *	8	5.48	8.04	1.93	0.7	24.1
Shrub	2 ft	3	13.09	8.85	8.33	7.63	23.29
	3 ft	8	5.75	6.94	2.48	0.71	18.37
	3 ft *	7	6.46	7.18	3.5	0.71	18.37

* outlier excluded from dataset (CVR3TR3-2)

Table 11 - Soil Molybdenum Comparison Results (2013 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

With Outlier	Cover Depth	Distribution	Statistical Method	Central Tendency Test Conclusion H_0: No difference btwn cover depths	Outcome
Soil	1 ft 2 ft 3 ft	Lognormal	Log-transformed ANOVA	F= 0.6, p-value= 0.56	Concentrations are the same across the three cover depths.
1 ft cover	Transect 1 Transect 2 Transect 3	Normal	ANOVA	F= 13.1, p-value= 0.0065	Concentrations are different among transects. Specifically , Transect 3 has higher concentrations than Transect 2.
2 ft cover	Transect 1 Transect 2 Transect 3	Lognormal	Log-transformed ANOVA	F= 6.80, p-value= 0.023	Concentrations are different among transects. Specifically , Transect 1 has higher concentrations than Transect 2.
3 ft cover	Transect 1 Transect 2 Transect 3	Lognormal	Log-transformed ANOVA	F= 2.72, p-value= 0.13	Concentrations are the same across transects.
Without Outlier	**Cover Depth**	**Distribution**	**Statistical Method**	**Central Tendency Test Conclusion H_0: No difference btwn cover depths**	**Outcome**
Soil	1 ft 2 ft 3 ft	Lognormal	Log-transformed ANOVA	F= 0.19 , p-value= 0.83	Concentrations are the same across the three cover depths.

Table 12 - Forb Molybdenum Comparison Results (2013 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

	Cover Depth	Distribution	Statistical Method	Central Tendency Test Conclusion H_0: No difference btwn cover depths	Outcome
Forb	1 ft 2 ft 3 ft	Lognormal	Log-transformed ANOVA	F= 6.29, p-value= 0.0059	Concentrations are different among cover depths. Specifically, 1 ft and 2 ft cover have higher concentrations than 3 ft cover.
1 ft cover	Transect 1 Transect 2 Transect 3	Normal	ANOVA	F= 13.26, p-value= 0.0042	Concentrations are different among transects. Specifically, Transect 3 has higher concentrations than Transects 1 and 2.
2 ft cover	Transect 1 Transect 2 Transect 3	Normal	Log-transformed ANOVA	F= 0.76, p-value= 0.50	Concentrations are the same across transects.
3 ft cover	Transect 1 Transect 2 Transect 3	Lognormal	Log-transformed ANOVA	F= 0.69, p-value= 0.54	Concentrations are the same across transects.

Table 13 - Grass Molybdenum Comparison Results (2013 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

	Cover Depth	Distribution	Statistical Method	Central Tendency Test Conclusion H_0: No difference btwn cover depths	Outcome
Grass	1 ft 2 ft 3 ft	Lognormal	Log-transformed ANOVA	F= 1.97, p-value= 0.16	Concentrations are the same across the three cover depths.
1 ft cover	Transect 1 Transect 2 Transect 3	Normal	ANOVA	F= 3.08, p-value= 0.12	Concentrations are the same across transects.
2 ft cover	Transect 1 Transect 2 Transect 3	Lognormal	Log-transformed ANOVA	F= 1.00, p-value= 0.41	Concentrations are the same across transects.
3 ft cover	Transect 1 Transect 2 Transect 3	Lognormal	Log-transformed ANOVA	F= 0.36, p-value= 0.72	Concentrations are the same across transects.

Table 14 - Shrub Molybdenum Comparison Results (2013 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

	Cover Depth	Distribution	Statistical Method	Central Tendency Test Conclusion H_0: No difference btwn cover depths	Outcome
Shrub	1 ft 2 ft 3 ft	Lognormal	Log-transformed ANOVA	F= 0.12, p-value= 0.74	Concentrations are the same across the three cover depths.
2 ft cover	Transect 1 Transect 2 Transect 3	Normal	ANOVA	N/A	Insufficient data
3 ft cover	Transect 1 Transect 2 Transect 3	Lognormal	Log-transformed ANOVA	F= 0.36, p-value= 0.72	Concentrations are the same across transects.

Table 15 - Copper Molybdenum Ratios (2013 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

With Outlier	Cover Depth	Distribution	Statistical Method	Central Tendency Test Conclusion H_0: No difference btwn cover depths	Outcome
Cu:Mo Ratio	1 ft 2 ft 3 ft	Lognormal	Log-transformed ANOVA	F= 1.08, p-value= 0.38	CuMo Ratios are the same across the three cover depths.
Without Outlier	**Cover Depth**	**Distribution**	**Statistical Method**	**Central Tendency Test Conclusion H_0: No difference btwn cover depths**	**Outcome**
Cu:Mo Ratio	1 ft 2 ft 3 ft	Lognormal	Log-transformed ANOVA	F= 0.42, p-value= 0.66	CuMo Ratios are the same across the three cover depths.

Table 16 - Molybdenum BAF Comparison Results (2013 Sampling)
Tailing Facility Alternative Cover Depth Project
Questa Mine, Questa, New Mexico

With Outlier	Cover Depth	Distribution	Statistical Method	Central Tendency Test Conclusion H_0: No difference btwn cover depths	Outcome
Forb	1 ft 2 ft 3 ft	Not normal	KW ANOVA	KW, p-value = 0.078	BAFs are the same across cover depths.
Grass	1 ft 2 ft 3 ft	Lognormal	Log-transformed ANOVA	F= 5.24, p-value= 0.031	BAFs are different among cover depths. Specifically, 1 ft cover has higher BAFs than 3 ft cover.
Shrub	2 ft 3 ft	Lognormal	Wilcoxon Rank Sum Test	W = 20, p-value = 0.13	BAFs are the same beween cover depths.
Without Outlier	**Cover Depth**	**Distribution**	**Statistical Method**	**Central Tendency Test Conclusion H_0: No difference btwn cover depths**	**Outcome**
Forb	1 ft 2 ft 3 ft	Lognormal	Log-transformed ANOVA	F= 3.328, p-value= 0.054	BAFs are borderline different across cover depths. Specifically, 1 ft cover has higher BAFs than 3 ft cover.
Grass	1 ft 2 ft 3 ft	Lognormal	Log-transformed ANOVA	F= 3.438, p-value= 0.049	BAFs are different among cover depths Specifically, 1 ft cover has higher BAFs than 3 ft cover.
Shrub	2 ft 3 ft	Normal	T-Test	t = 1.099, df = 4.18, p-value = 0.33	BAFs are the same beween cover depths.