



AGENDA
TOWN OF RICO BOARD OF TRUSTEES
2 Commercial Street– Rico Town Hall
March 6th, 2024
7:00 PM

- Trustee meeting packets are available on the Town website
<https://townofrico.colorado.gov/>.
- Action may be taken on any agenda item.
- Notice is hereby given that a majority or quorum of the Planning Commission may be present at the above noticed Rico Board of Trustee’s meeting to discuss any or all of the matters on the agenda below for Trustee’s consideration.
- The Town of Rico is not responsible for audio, video, or connectivity issues. In-person attendance is highly recommended.
- Public comments on agendized and non-agendized items are limited to 3 minutes.

Join Zoom Meeting

<https://us02web.zoom.us/j/84103297747?pwd=OHdQVkorNVgyTjNjNUZ2cmJSdkY3UT09>

Meeting ID: 841 0329 7747

Passcode: 207262

ROLL CALL

APPROVAL OF THE AGENDA

DISCUSSION ITEM

- Voluntary lead soils clean up (“VCUP”)

EXECUTIVE SESSION

- Townwide Voluntary Cleanup financial assurance and funding agreement. Determination of positions relative to matters that may be subject to negotiations, Development of strategy for negotiations and instruction of negotiators § 24-6 402(4)(e) C.R.S.

ADJOURN



Rico Town Site Soil Voluntary Clean-Up Program (VCUP)-2023 Road Sampling Results

March 6, 2024

Agenda

- 2023 VCUP Road Sampling Scope of Work
- 2023 Road Sampling Results
- Summary

2023 Road Sampling Scope of Work

- Atlantic Richfield (AR) performed lead concentration testing of Rico's roads and alleys in October 2023
 - AR sampled all (109) Town road and alley segments
 - The segments sampled in 2023 were similar in length to the segments sampled previously
- Samples were collected in accordance with the CDPHE-approved VCUP Work Plan attached to the final April 2023 VCUP Application, which specified requirements consistent with USEPA sampling methods and guidance
 - A composite sample (consisting of four subsamples) was collected from the 0 to 2-inch interval in each segment
 - Soil samples were analyzed for total lead using an XRF spectrometer, with additional soil retained for confirmation of lead concentrations by laboratory analysis
- AR included a Pb standard from NIST for control

2023 Road Sampling Results

- Although the Work Plan only required laboratory analysis for ten percent of samples analyzed by XRF, AR elected to submit 100% of the samples for laboratory analysis using EPA Method 6010
- Of the 109 road and alley segments sampled, laboratory analysis found that 21 exceeded the residential lead action level of 761 mg./kg.
 - This is fewer than the number of exceedances in past sampling events
- The 2023 road sampling data set is of better quality and more representative of current conditions than the previous data.
 - CDPHE agreed that the data is of high quality and meets the VCUP requirements and were analyzed in conformance with EPA guidance
- The earlier samples were collected under three different studies, using different sampling approaches, which impacts comparability.

Road Sampling Results Figure

Summary

- The 2023 road sampling produced results that met the VCUP data quality objectives and are suitable for remedial decision making
 - The 2023 XRF results correlate well with the laboratory results
 - The 2023 results also compare well with the results of the testing of 0 – 12-inch road material composite samples collected in 2020
 - The 2023 results compare well with the NIST lead standard
 - The use of composite samples improved accuracy and representativeness of results
- Consistent with USEPA guidance, the top 2 inches of material on the Town roads and alleys is the depth interval most relevant for assessing the need for road remediation
 - This is the depth of material to which people, including children, are most likely to have contact with, either because of direct exposure, track-in on shoes or tires, or ingestion or inhalation of wind-blown dust



Columbia Tailings Voluntary Clean-Up Program (VCUP) Operations & Maintenance (O&M) Plan

March 6/7, 2024

Columbia Tailings before the 1990's VCUP

- Columbia Tailings material contained an average lead concentration of 7,600 mg./kg.



1990's VCUP Actions

- The Columbia Tailings, the site of historical mill tailings disposal, was originally cleaned up in the 1990's (VCUP site).
- The clean-up included:
 - Consolidation of approximately 13,000 cubic yards (CY) of tailings and waste rock on site.
 - Placement of lime and a 24-inch cap on top of the pile.
 - Installation of stormwater controls to include a riprap lined ditch, culverts, and a retention area; the site was also revegetated.
- After completion of the clean-up, the cap was damaged when the owner allowed it to be used in a manner inconsistent with the remedy.

Current Conditions

- Depressions formed by settling and disturbance of the cover allow water to occasionally pool in the depressions and seep into the tailings.
- The orange-stained soil and orange water observed seeping from the site are likely caused by this water. Visible mine waste on the eastern site of the site may also be contributing factor.
- To address the impacts, AR implemented interim measures including installation of check dams and sandbags to provide for additional retention time for stormwater or seepage.



- Next steps include consolidation of exposed mine waste into the waste pile and regrading of the cap so that it drains to the west and then compacted to minimize infiltration.

Path Forward for the Site

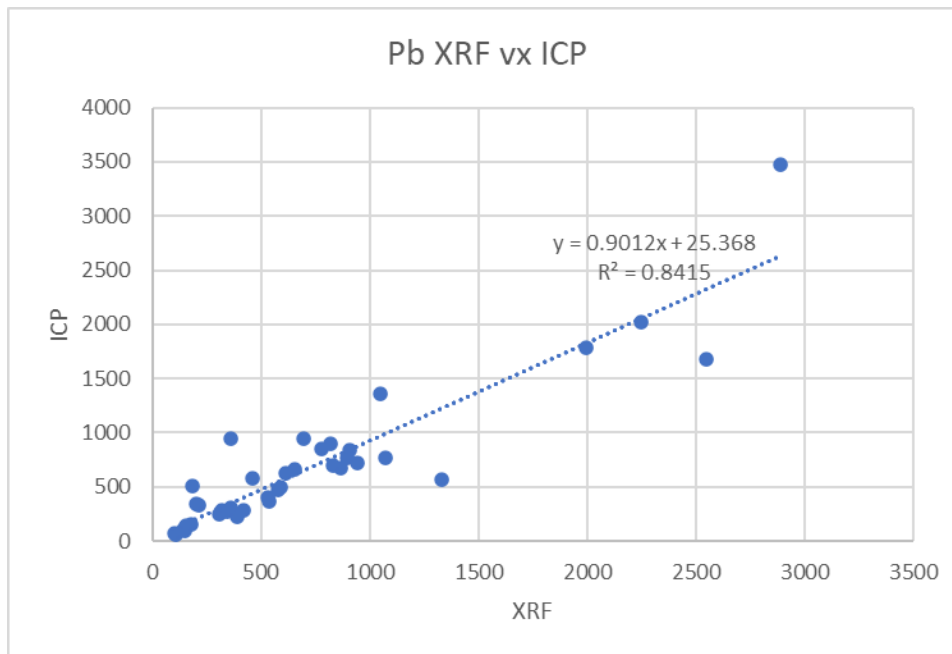
- Over two to three construction seasons, approximately 22,000 CY of impacted soil from roads and residential lots will be placed on site.
- The site will be graded with 4:1 side slopes, and a 24-inch clean soil cap will be placed over the impacted soil.
 - The final surface will be about 12 feet higher than it is now; but still about 25 feet lower than CO-145 to the east.
- New stormwater controls will be installed, and the retention area will be improved; the site will then be revegetated.
- Fencing will be removed at the end of construction; the site will be ready for future recreational use.
- An O&M Plan will be submitted to CDPHE for approval

Site After Maintenance and Addition of Townsite VCUP Material

Rico Road Sampling Results

Summary of 2023 Rico Road and Alley Sampling

- Atlantic Richfield (AR) performed lead concentration testing of Rico’s road and alley segments in October 2023. Although not specifically required by the VCUP Application, AR elected to sample all Town road and alley segments, including those previously sampled in 2004, 2008, and 2014.
- The segments sampled in 2023 were similar in length to the segments sampled previously.
- Samples were collected in accordance with the CDPHE-approved VCUP Work Plan attached to the final April 2023 VCUP Application.
 - A composite sample (consisting of four subsamples) was collected from the 0 to 2-inch interval in each segment.
 - Soil samples were analyzed for total lead using an XRF spectrometer, with additional soil retained for confirmation of lead concentrations by laboratory analysis.
- The XRF results showed that 22 of the 109 road and alley segments had lead concentrations exceeding the residential lead action level (LAL) of 761 mg/kg.
- Although the Work Plan only requires laboratory analysis for ten percent of samples analyzed by XRF, AR elected to submit 100% of the samples for laboratory analysis using EPA Method 6010.
- As shown in the graph below, the laboratory results were generally consistent with the XRF results (R^2 of 0.84):



- Laboratory testing identified 21 segments with lead concentrations above the LAL. Of the 22 segments that tested above the LAL based on XRF results, four tested below the LAL based on the lab results. Three segments with XRF results less than the LAL had lab results that greater than the LAL.
- AR believes the 2023 road sampling data set is of better quality and more representative of current conditions than the previous data, which were collected under three different studies using different sampling approaches:

- SEH, 2004: one composite sample was collected for each road segment comprised of two subsamples from the road centerline approximately ¼ of the way and ¾ of the way along the length of the segment.
- Anderson, 2008: samples were collected from road segments not sampled in 2004 at point locations or as composites across the width of roads.
- TREC, 2014: samples were collected from point locations from a few remaining unsampled roads and alleys.
- The 2023 sampling effort employed a uniform approach across the entire Town road system in accordance with the CDPHE-approved Townsite Soils VCUP Application, Work Plan, and Standard Operating Procedures. Each sample was composited from four subsamples collected from the top 2 inches of road material at locations on either side of the centerline approximately ¼ of the way and ¾ of the way along the length of the segment.
- The 2023 lead results are also generally consistent with the results of a road sampling effort AR performed in Rico in October 2020, in which samples were collected at 9 road locations over a depth profile of 0-12 inches below the road surface,
 - The 2020 sampling effort evaluated the top 12 inches of road material for geotechnical and geochemical properties (to see if excavated road material might be suitable for use as fill at the St. Louis Tunnel site) in segments where previous sampling had detected lead concentrations >1,700 mg/kg.
 - All five of the road segments that tested below the LAL in 2020 also tested below the LAL in the 2023 sampling effort. Three of the four road segments that tested above the LAL in 2020 also tested above the LAL in 2023. The only road segment where the screening results of the two studies differed is Segment 17, which tested above the LAL in 2020 and below the LAL in 2023.

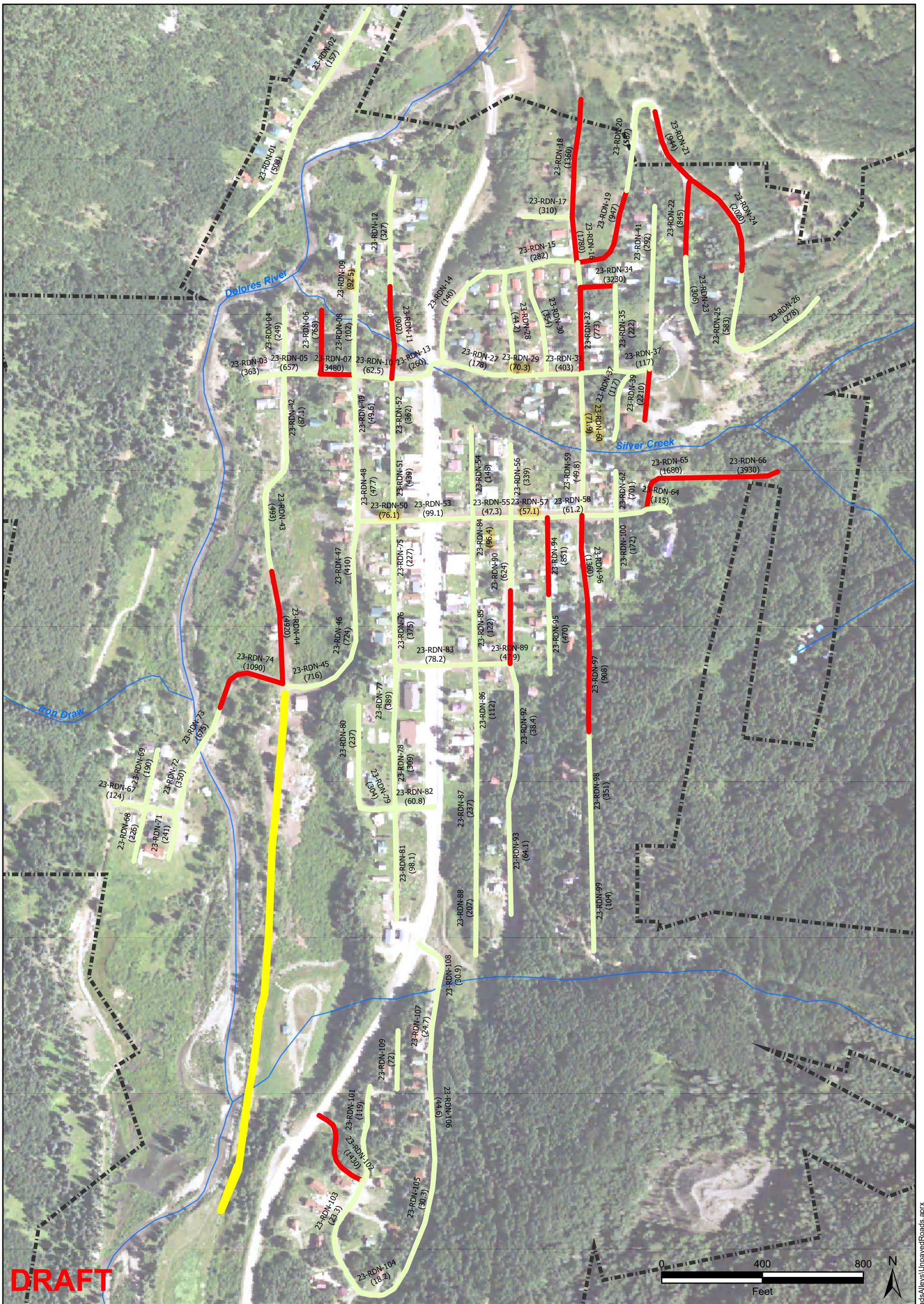
Field Sampling Crew Observations

- Field personnel did not observe conditions during the 2023 road sampling effort that would suggest road or alley surfaces had been recently disturbed or that fresh road base had been applied.
- On average the crew had to spend approximately 35 to 45 minutes per road segment (four subsample locations) loosening soil with a hammer and chisel to be able to collect the soil samples.
- Approximately 95% of all road segments (and 90% of all subsample locations) required soil loosening (using a hammer and chisel) to conduct sampling.
- Crews needed to collect a minimum of 6 to 8 ounces of sieved soil per sampling location. To meet this requirement, the sampling crew had to collect approximately 36 to 48 ounces of unsieved material per location. The extra (unused) volume at each location was oversized material (rocks) that was either physically removed by the crew or removed during the sieving process.

Conclusions

- The 2023 sampling of Rico roads and alleys was conducted in accordance with the requirements of the VCUP Work Plan and Standard Operating Procedures.

- The 2023 XRF results correlate well with the laboratory results. The 2023 results also compare well with the results of the testing of 0 – 12-inch road material composite samples collected in 2020.
- The top 2 inches of material on the Town roads and alleys is the depth interval most relevant for assessing the need for road remediation. This is the depth of material to which people, including children, are most likely to have contact with, either because of direct exposure, track-in on shoes or tires, or ingestion or inhalation of wind-blown dust.
- Sampling the top 2 inches of road material is also consistent with USEPA recommendations in its soil sampling guidance, which are based on a long history of soil exposure studies reported in peer-reviewed literature and agency research.
 - Exposure to depths below 2 inches occurs less frequently during intrusive activities (e.g., subsurface utility maintenance) and does not reflect activities resulting in chronic residential exposures.
- The difficulty the sampling crew had in collecting samples from the roads and alleys in Rico is further evidence that residents are unlikely to be exposed to road materials below the top 2 inches.



DRAFT

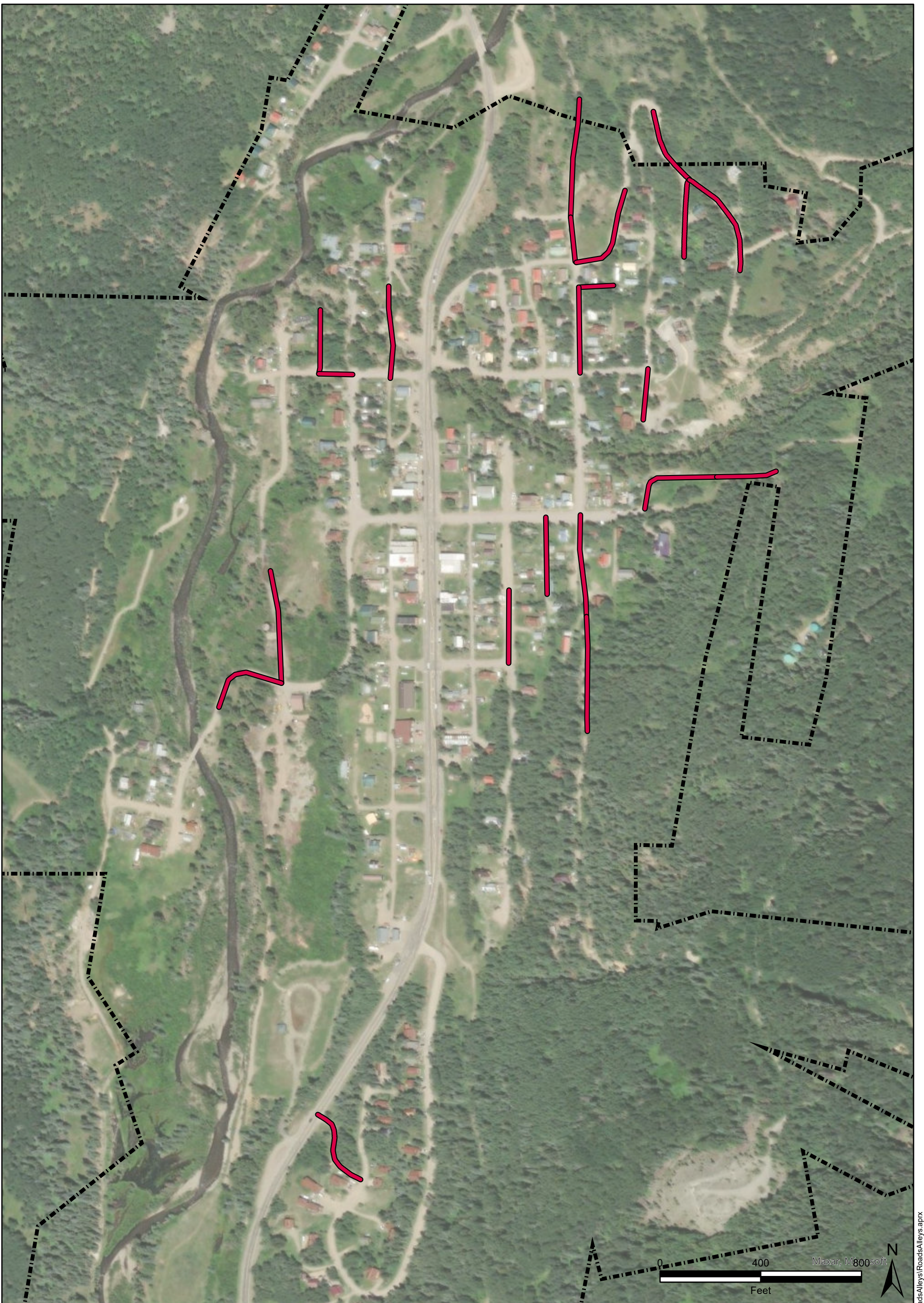
Legend

Lead in Unpaved Road Samples (mg/kg)

- < 761 mg/kg Lead
- >= 761 mg/kg Lead
- Railroad Corridor, >761 mg/kg, cap only
- Rivers and Streams
- Town of Rico Boundary

Lead results are from Pace Analytical method 6010 ICP.

RICO, COLORADO	
FIGURE 1	
2023 LEAD CONCENTRATIONS IN UNPAVED ROAD AND ALLEY SAMPLES 0 - 2" DEPTH	
DATE: JAN 03, 2024	FORMATION
By: DKG	ENVIRONMENTAL
For: BGH	



Legend

- Unpaved Road ICP Pb Results > 761 mg/kg
- Town of Rico Boundary

Total length of road segments > 761 mg/kg/ Lead = ~6,765 Feet

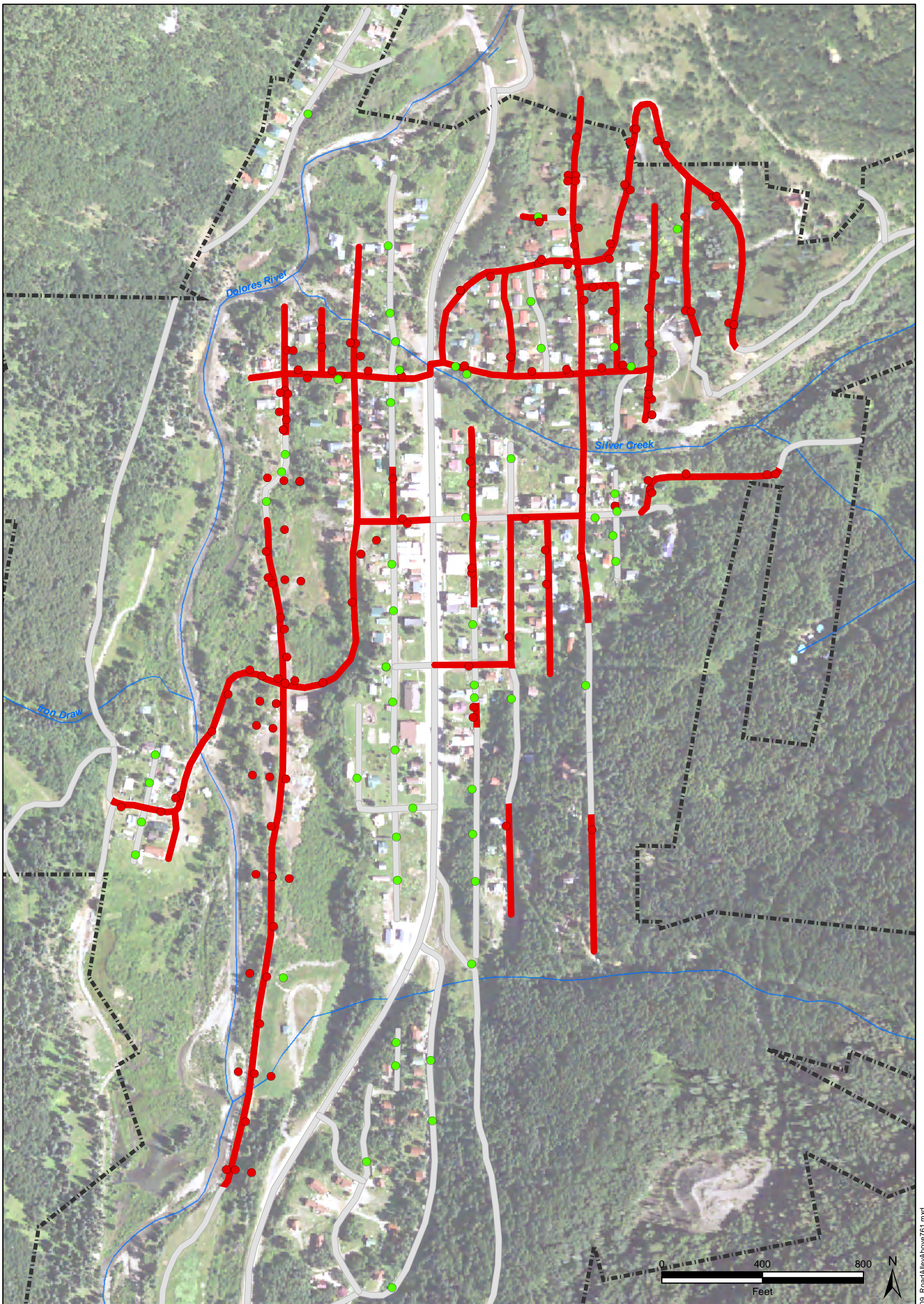
RICO, COLORADO
 FIGURE 1
**LEAD CONCENTRATIONS
 IN UNPAVED ROAD SEGMENTS
 OCTOBER, 2023**

DATE: DEC 01, 2023

By: DKG

For: BGH

FORMATION
 ENVIRONMENTAL



Legend

Road/Alley Lead Results 0 - 2"

- ≤ 761mg/kg Lead
- > 761 mg/kg Lead

Roads and Alleys

- ≥ 761 mg/kg Lead

- Rivers and Streams
- Town of Rico Boundary

Sources:
 1. Anderson Engineering, Railroad Corridor and Alley Samples, 2008.
 2. Short Elliott Hendrickson Inc. (SEH), Collected 2 subsamples that were taken at locations approximately equally spaced from the center of each block then composited, 2004.
 3. Trec Inc., 2014
 Total length of road segments > 761 mg/kg/ Lead = ~ 21530 Feet

RICO, COLORADO
 FIGURE 9

**LEAD CONCENTRATIONS
 IN UNPAVED ROAD AND
 ALLEY SAMPLES
 0 - 2" DEPTH**

DATE: NOV 10, 2022

BY: DKG

FOR: BGH

FORMATION
 ENVIRONMENTAL