



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

1250 W Alder St • Union Gap, WA 98903-0009 • (509) 575-2490

April 9, 2020

Charlotte Mitchel  
Parks, Recreation and Cultural Services  
City of Wenatchee  
1350 McKittrick Street  
Wenatchee, WA 98801

**RE: Amendment No. A-01 to Agreed Order No. DE 15823**

- **Site Name:** Gold Knob Prospects aka Saddle Rock Park
- **Site Address:** Circle Street And Dry Gulch Road, Wenatchee
- **Facility/Site ID No.:** 22496
- **Cleanup Site ID No.:** 11610

Dear Charlotte Mitchel:

The Scope of Work for Agreed Order (AO) No. DE 15823 between the City of Wenatchee and the Department of Ecology (Ecology) was for the City to perform a Phase 1 Interim Action to clean up contaminated waste rock piles at the Site. The Interim Action was split between two phases so that potential lessons learned from the first phase could be applied during the second phase. This amendment for AO DE 15823 is to add the Scope of Work for the Phase 2 Interim Action, now that the Phase 1 Interim Action is complete. The Phase 2 Scope of Work and Schedule is attached to this letter.

*In addition to the Phase 2 Scope of Work, the City's project coordinator for the project has changed as follows:*

Page 9, Section VIII. Amend Terms and Conditions of Order, Subsection C, Designated Project Coordinators to reflect the current project coordinator for the City of Wenatchee.

- a. The project coordinator for the City is:

Charlotte Mitchel  
Parks, Recreation and Cultural Services  
City of Wenatchee  
1350 McKittrick Street  
Wenatchee, WA 98801  
(509) 888-3662



Charlotte Mitchel  
City of Wenatchee  
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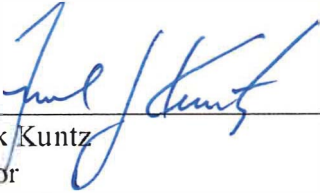
b. The project coordinator for Ecology is:

Frank Winslow  
1250 W. Alder Street  
Union Gap, WA 98903  
(509) 454-7835

By signing below, the signatories agree to the Amendment of the Agreed Order No. DE 15823 Scope of Work presented herein. These changes take effect as of Ecology's signature date below.

THE CITY OF WENATCHEE

STATE OF WASHINGTON,  
DEPARTMENT OF ECOLOGY



Frank Kuntz  
Mayor  
City of Wenatchee  
P.O. Box 519  
Wenatchee, WA 98807-00519  
(509) 888-6204

Valerie Bound  
Section Manager  
Toxics Cleanup Program  
Central Regional Office  
(509) 454-7886

4/27/2020

4/28/2020

Signature Date

Signature Date

Please contact me at [Frank.Winslow@ecy.wa.gov](mailto:Frank.Winslow@ecy.wa.gov) or (509) 454-7835 with any question.

Sincerely,



Frank Winslow LHG  
Site Manager  
Toxics Cleanup Program  
Central Regional Office

Enclosures (2): Phase 2 Scope of Work (SOW) and Schedule  
Figures 1, 2, 3

# PHASE 2 SCOPE OF WORK (SOW) AND SCHEDULE

## PHASE 2 SCOPE OF WORK

### PURPOSE AND BACKGROUND

The work under this Agreed Order (AO) involves the steps needed in order to complete Interim Remedial Action (IRA) cleanup activities at the Site. A Feasibility Study report was prepared for the City of Wenatchee (CITY) in June 2013. This Feasibility Study identified and screened various remedial alternatives for the Site. The more permanent option for the Site was identified as excavation and offsite disposal of waste rock piles in addition to downslope areas impacted by the waste rock piles.

This Scope of Work (SOW) is for the development and implementation of a Phase 2 IRA at the Site. The Phase 1 IRA has been implemented, under Agreed Order DE 15823, dated October 25, 2018. The Phase 1 IRA consisted of excavation and offsite disposal of contaminated waste rock in areas designated SR-01, SR-02, SR-03, and SR-08. The Phase 2 area is above the Phase 1 area within Saddle Rock park. Phase 2 was separated from Phase 1 in order to allow the application of “lessons learned” from implementation of the Phase 1 IRA within the design of the Phase 2 IRA.

### Waste Rock Piles in the Phase 2 Area

Based on the work done in the RI and FS phases of the project, three waste rock pile areas were found to exist within the Phase 2 area; SR-04, SR-05, and SR-06. GeoEngineers, the City’s consultant, and Ecology performed supplemental site characterization work, characterizing soils in the vicinity of the waste rock piles at the Site in 2019. The work performed by GeoEngineers was presented in *Technical Memorandum for Saddle Rock Interim Remedial Action Field Sampling Summary* dated April 2019. Ecology conducted additional characterization in the Phase 2 area as presented in Technical Memoranda dated July 23, 2019 and July 25, 2019.

This 2019 work included further characterization of soils surrounding SR-04, SR-05, and SR-06 areas. This work confirmed that while SR-04 and SR-05 are indeed waste rock piles, SR06 is a road cut in an area of natural arsenic mineralization. This work also determined that arsenic concentrations in waste rock pile SR-04 are similar to arsenic concentrations in surrounding background soils, and arsenic concentrations in waste rock pile SR-05 are considerably higher than arsenic concentrations in surrounding background soils.

In addition to the SR-06 road cut, the 2019 work also identified areas with elevated arsenic concentration in bare soils. Like the waste rock piles, these bare soils are also regulated under MTCA if they are “anthropogenically impacted.” However, it is not necessarily easy to determine whether or not soils have been anthropogenically impacted. Further activities are included within this scope of work to address this concern.

## Exhibit B Scope of Work and Schedule

Based on the data presented within the July 2019 Technical Memoranda, Ecology prepared a Technical Memorandum dated October 2, 2019 which identified a project approach and tasks for the Phase 2 IRA, including both waste rock piles and anthropogenically impacted soils with elevated arsenic concentrations.

### **PHASE 2 TASKS**

This Phase 2 Scope of Work presents the following tasks:

- TASK 1a – Further delineation of arsenic in bare soils (influenced by human activities) within the Phase 2 area (non-waste rock area).
- TASK 1b – Assessment and identification of appropriate mitigation measures for contaminated soil influenced by human activities (not including SR05 waste rock).
- TASK 2 – Phase 2 IRA preliminary design and engineering cost estimate.
- TASK 3 – Preparation of Phase 2 IRA design report and bid package (including both waste rock remediation and anthropogenically impacted soil mitigation measures).
- TASK 4 – Interim Remedial Action Implementation.
- TASK 5 – Interim Remedial Action Report.

#### **TASK 1a. FURTHER DELINEATION OF ARSENIC IN BARE SOILS WITHIN THE PHASE 2 AREA.**

The highest concentrations of arsenic found at the site were in bare soils near the Saddle Rock ridge top within the Phase 2 area. As discussed in Ecology's Technical Memorandum dated October 2, 2019, contaminated materials requiring cleanup under MTCA are any hazardous substance that does not occur naturally or occurs at greater than natural background levels. "Natural background levels" are defined as concentrations of hazardous substances consistently present in the environment that have not been influenced by localized human activities. Human activities appear to have resulted in uncovering of soil within the Phase 2 area. The highest concentrations of arsenic at the site were found in one bare soil area designated "Ridge Top." The characterization work performed in these areas, with the exception of the road cut at SR-06 area have been limited. Additional characterization of arsenic in surface soils is warranted.

Under this task, an x-ray fluorescentometer (XRF) survey will be performed by the CITY'S consultant to define the extent of arsenic in bare soil throughout the Site above the Method A cleanup level of 20 mg/kg, and above the site-specific background concentration of 95 mg/kg. "Bare soils" can be defined as areas with no vegetative cover, not including rock outcrop and scree slopes, where the lack of vegetative cover appears to

## Exhibit B Scope of Work and Schedule

be likely attributable to human activities. The majority of these areas are anticipated to be trails. It should be noted that in vegetated areas, soil may be bare between plants; the intent of this task is to focus on significant areas of bare soils where hikers may be expected to walk, stand, or sit, both including on and off of main trails. Figures 1-3 illustrate the anticipated level of effort to define arsenic in bare soils. XRF arsenic characterization of soils can be at the soil surface; no digging is expected to characterize subsurface soils, since no excavation of soils in these areas is anticipated.

The outcome of this effort will be enhanced understanding of all areas within the site where risk to hikers due to arsenic in soils is greater. The delineation of arsenic in soils at elevated concentrations is anticipated to later be used to support identifying appropriate locations for mitigation measures such as trail closings or warning signs.

The results of the XRF arsenic characterization shall be presented within a Technical Memorandum submitted to Ecology. This Technical Memorandum should include tabulated and mapped XRF arsenic results and can be in letter report format. No offsite laboratory confirmation sampling is needed for this task. The maps should include an aerial photograph base such that the areas of bare soil are visible.

The CITY's Consultant shall prepare the *Draft* Arsenic in Bare Soil Technical Memorandum and submit one hard copy and one electronic copy in Adobe (.pdf) format to Ecology for review, after CITY review/comment/approval. The CITY's Consultant shall address Ecology's comments and then prepare the *Final* Technical Memorandum and submit one hard copy and one electronic copy in Adobe (.pdf) format, to Ecology.

### **TASK 1b. ASSESSMENT AND IDENTIFICATION OF APPROPRIATE MITIGATION MEASURES TO ADDRESS CONTAMINATED SOIL INFLUENCED BY HUMAN ACTIVITIES (NON-WASTE ROCK AREAS)**

The CITY's consultant will assess potential mitigation measures to address bare soil (impacted by human activities) with elevated arsenic concentrations. These areas are primarily hiking trails but also includes the SR-04 waste rock area where waste rock arsenic concentrations were found to be consistent with surrounding native soil arsenic concentrations.

This task includes all areas both within the Phase 1 and Phase 2 areas where bare soil is present and arsenic concentrations are greater than the Method A cleanup level of 20 mg/kg, and in particular where arsenic concentrations are greater than the site-specific background concentration of 95 mg/kg. There may also be elevated arsenic in areas of outcrop or scree; however, those areas are anticipated to be considered "naturally occurring," if no evidence of human activities is present.

Potential mitigation measures in this assessment should include, but not be limited to:

- Public education and signs.
- Potential trail realignments and/or trail closures.

## Exhibit B Scope of Work and Schedule

- Revegetation or covering of bare soils.
- Appropriate features for trail closures.
- Installation of benches at selected locations to encourage hikers to sit/rest in areas with lower arsenic concentrations in soil.
- Potential feature(s) at the trailhead to support removal of dirt and dust from shoes, boots, and paws before hikers leave the site.

The assessment shall be completed in a report format, with discussions including screening of potentially applicable mitigation measures, further development of applicable mitigation measures, and recommendations regarding what mitigation measures should be implemented at the Site.

Factors to be included within the assessment report in evaluating mitigation measures shall be protectiveness, permanence, cost, management of short-term risks, technical and administrative implementability, and consideration of public concerns. This assessment should also consider and discuss long-term operations and maintenance requirements and costs.

The CITY's Consultant shall prepare the *Draft* Mitigations Measures Assessment Report and submit one hard copy and one electronic copy in Adobe (.pdf) format to Ecology for review, after CITY review/comment/approval. The CITY's Consultant shall address Ecology's comments and then prepare the *Final* Mitigations Measures Assessment Report and submit one hard copy and one electronic copy in Adobe (.pdf) format, to Ecology.

### **TASK 2. PHASE 2 IRA PRELIMINARY DESIGN & ENGINEERING COST ESTIMATE**

The Phase 2 IRA preliminary design will include both activities related to the excavation and offsite disposal of SR-05 area waste rock, and selected mitigation measures for bare soil areas. The preliminary design of the SR-05 area remediation can commence immediately following Agreed Order amendment signing; however, the preliminary design of the selected mitigation measures must await completion of Tasks 1a and 1b (*Ecology will approve the appropriate mitigation measures at the conclusion of Task 1b.*)

Ecology understands that the City wishes to review potential options for road/trail routing and improvements to reach the SR-05 area. This review will potentially include developing road/trail sub-options, as needed for development of an engineering cost estimate that is consistent with existing budgeted projected funds. Ecology does not need to review the comparison of road/trail sub-options; only the final selected option needs to be submitted to Ecology within the preliminary design report and engineering cost estimate.

After Ecology's approval of the selected mitigation measures, the CITY's consultant shall prepare a draft PHASE 2 IRA preliminary design report and engineering cost

## Exhibit B Scope of Work and Schedule

estimate for submittal to Ecology. Elements of this preliminary design shall include the preliminary remedial design for the SR05 waste rock pile, and the preliminary design of Ecology-approved mitigation measures for bare soil areas with elevated arsenic concentrations.

For the mitigation measures portion of this report, examples of types of information to be included area as follows:

- Signage – number and location of signs, sign contents, sign materials and construction, and maintenance requirements.
- Revegetation or covering – materials, thicknesses, seed mixes, and installation methods.
- Trail closing – methods, materials, and design of barriers.

The CITY's Consultant shall also prepare an engineering cost estimate for the implementation of the Phase 2 IRA. This cost estimate shall include the estimated costs for completion of all components of the Phase 2 IRA:

- Trail/road improvements;
- Remedial excavation and rehabilitation of SR-05;
- Implementation of the selected mitigation measures.

The purpose of this cost estimate is to ensure that sufficient funds have been allocated to complete the Phase 2 IRA prior to preparation of the bid package.

The CITY's Consultant shall prepare the *Draft* Phase 2 IRA Preliminary Design Report and Engineering Cost Estimate and submit one hard copy and one electronic copy in Adobe (.pdf) format to Ecology for review, after CITY review/comment/approval. The CITY's Consultant shall address Ecology's comments and then prepare the *Final* Phase 2 IRA Design Report and Engineering Cost Estimate and submit one hard copy and one electronic copy in Adobe (.pdf) format, to Ecology.

### **TASK 3. PHASE 2 IRA DESIGN REPORT & BID PACKAGE**

After Ecology and City review of the Task 2 Preliminary Design Report and Engineering Cost Estimate, a decision will be made by Ecology and the City with respect to proceeding with preparing the Task 3 IRA design report and bid package. If insufficient funds have been allocated to complete the entire scope, then the scope of work within the bid package may be adjusted. Components of the bid package are anticipated to include:

1. IRA Design narrative including discussion of the purpose of the document.
2. Narrative description of planned remedial actions and mitigation measures.
3. Design of Phase 2 haul road/trail improvements, including stormwater management features.

## Exhibit B Scope of Work and Schedule

4. Design of the SR-05 remedial actions and the selected bare soil mitigation measures.
5. IRA Schedule
6. IRA Design Drawings (Plans and Sections)
7. IRA Design Specifications (as needed)
8. IRA Safety Plan
9. IRA confirmatory SAP for SR-05 waste rock pile (can be separate from bid package)
10. Landfill acceptance of waste documentation

### **Phase 2 IRA Schedule**

The Phase 2 IRA Schedule should define the anticipated cleanup schedule, including preparation work for roads, cleanup of the SR-05 waste rock area, and implementation of the selected bare soil mitigation measures.

### **Phase 2 IRA Design Drawings and Specifications**

IRA Design Drawings shall include plans and sections including a topographic map and several sections for the Site as a whole, and a detailed topographic plan map and several sections for the SR-05 area, as appropriate. The sections should include both the current surface and the anticipated post remedial action surface.

IRA Design Specifications should include detailed specifications for road and trail construction (including storm water management features), and specifications for grading and reclamation of any excavated areas and temporary access road as well as any areas of bare soil selected for cover or revegetation.

### **Phase 2 IRA Safety Plans**

The IRA Safety Plan will include safety procedures for the project including prevention of contamination exposure to workers, locations of hospitals and emergency procedures, a site security plan to ensure no members of the public have access to the areas where work is being performed, safety plans specific to steep slope operations, and safety plans for hauling soil from the Site to the Greater Wenatchee Regional Landfill.

### **Phase 2 IRA Confirmatory Sampling and Analysis Plan (SAP)**

The existing SAP for the site dated February 20, 2019, should be amended, as appropriate, based on any more recent information. Because implementation of the SAP is anticipated to be conducted by the Site Consultant/Engineers, rather than the Contractor, any SAP amendment should be submitted to Ecology separate from the Bid Package.



## Exhibit B Scope of Work and Schedule

### **Task Deliverables**

The CITY's Consultant shall prepare the *Draft* Design Report and Bid Package and submit one hard copy and one electronic copy in Adobe (.pdf) format to Ecology for review, after CITY review/comment/approval. The CITY's Consultant shall address Ecology's comments and then prepare the *Draft Final* Design Report and Bid Package and submit one hard copy and one electronic copy in Adobe (.pdf) format, to Ecology. The *Draft Final* Design Report will undergo public review and comment prior to being deemed *Final*, and prior to proceeding to Task 5. Significant public comments could result in revision of the Design Report.

### **TASK 4. PHASE 2 INTERIM REMEDIAL ACTION IMPLEMENTATION**

After Ecology approval of the Design Report and Bid Package, the CITY will select the contractors and implement the Phase 2 IRA. The CITY's Contractor and Consultant/Engineer shall perform the work with an utmost focus on health and safety.

Ecology shall be notified at least two weeks prior to beginning of Phase 2 IRA implementation. Ecology may observe Phase 2 IRA activities at any time during the implementation of the IRA.

During the course of the Phase 2 IRA implementation, Ecology should be updated on a weekly basis with the progress of the IRA. In addition, Ecology should be notified immediately in the event of a significant problem, concern, or accident.

### **TASK 5. PHASE 2 INTERIM REMEDIAL ACTION COMPLETION REPORT**

After completion of the Phase 2 IRA field activities, the CITY's Consultant shall prepare the Phase 2 Interim Remedial Action Completion Report.

The IRA completion report should include the following components:

- As-built map for the constructed trail/road improvements and stormwater features.
- Disposal weight tickets (if applicable) and estimated volume changes for the SR-05 waste rock area.
- As-built maps for the SR-05 waste rock area delineating the waste rock areas on topography before remedial action and applicable overlays for excavation, regrading, and revegetation and added storm water management features.
- Map for the SR-05 waste rock area confirmatory sampling locations and depths (as applicable).
- Tabulations of confirmatory results for Site constituents of concern (including both confirmatory arsenic XRF results and laboratory analytical results for constituents of concern).

## Exhibit B Scope of Work and Schedule

- Data quality review for the XRF confirmatory results.
- Laboratory analytical reports including laboratory QA/QC samples, and associated data quality review.
- Receipts for any purchased revegetation materials for the SR-05 area.
- Appropriate as-built information for the installed mitigation measure features to address bare soil areas.
- Operations and Maintenance Plan for the installed mitigation measure features to address bare soil areas.

The CITY's Consultant/Contractor shall prepare the *Draft* Phase 2 IRA Completion Report and submit one hard copy and one electronic copy in Adobe (.pdf) format to Ecology for review, after CITY review/comment/approval. The CITY's Consultant/Contractor shall address Ecology's comments and then prepare the *Draft Final* Phase 2 IRA Completion Report and submit one hard copy and one electronic copy in Adobe (.pdf) format, to Ecology. The *Draft Final* Design Report will undergo public review and comment prior to being deemed *Final*. Significant public comments could result in revision of the report.

Exhibit B Scope of Work and Schedule

**PHASE 2 SCHEDULE OF DELIVERABLES**

The schedule for deliverables described in the Agreed Order and the Scope of Work is presented below. If the date for submission of any item or notification required by this Schedule of Deliverables occurs on a weekend, state or federal holiday, the date for submission of that item or notification is extended to the next business day following the weekend or holiday. Where a deliverable due date is triggered by Ecology notification, comments or approval, the starting date for the period shown is the date the CITY received such written notification, comments or approval unless otherwise noted below. Where triggered by Ecology receipt of a deliverable, the starting date for the period shown is the date that Ecology receives the deliverable by email.

<b>Task</b>	<b>SOW Deliverable</b>	<b>Deliverable description</b>	<b>Subtask Duration</b>	<b>Completion Times</b>	<b>Estimated Date</b>
	Effective date of Agreed Order Amendment			After signing and public notice.	04/30/20, pending potential COVID-19 work restrictions.
1a	As in Bare Soils Technical Memorandum	Submittal of draft report to CITY & Ecology	90 days	Within 90 calendar days following the effective date of the Agreed Order	
		Ecology review of report	30 days	Within 30 calendar days following receipt of draft report	
		Submittal of final document to Ecology <sup>1</sup>	30 days	Within 30 days following receipt of Ecology comments	
1b	Bare Soils Mitigation Measures Assessment Report	Submittal of draft report to CITY & Ecology	90 days	Within 90 calendar days following the effective date of the Agreed Order	
		Ecology review of report	30 days	Within 30 calendar days following receipt of draft report	
		Submittal of final document to Ecology <sup>1</sup>	30 days	Within 30 days following receipt of Ecology comments	

Exhibit B Scope of Work and Schedule

2	IRA Preliminary Design and Cost Estimate	Submittal of draft document to Ecology	90 days	Within 90 calendar days following Ecology approval of reports from Tasks 1a and 1b	
		IRA Preliminary Design Review Telephone Meeting	1 day	Within 10 calendar days following receipt of draft document	
		Submittal of final document to Ecology <sup>1</sup>	30 days	Within 30 days following receipt of Ecology comments	
3	Design Report and Bid Package	Submittal of draft document to CITY & Ecology <sup>2</sup>	90 days	Within 90 calendar days following the effective date of the Agreed Order	
		Ecology review of bid package	30 days	Within 30 calendar days of submittal of draft document	
		Submittal of final document to Ecology <sup>1</sup>	30 days	Within 30 days following receipt of Ecology comments	
	Procurement of Construction CONTRACTOR	Bidding by City	60 days	Within 60 days following City & Ecology approval of design document and bid package	
		Selection & Contracting of CONTRACTOR	30 days	Within 30 days of bid due deadline.	
4	IRA Field Implementation	IRA Field Implementation Kickoff Meeting	1 day	Immediately following City selection of Contractor	
		Start of IRA Field Implementation	1 day	Within 1 day following Kickoff meeting	
		Completion of IRA Field Implementation <sup>2</sup>	90 days	Within 90 days of Field Implementation Start	

Exhibit B Scope of Work and Schedule

5	IRA Completion Report	Submittal of draft document to CITY & Ecology	60 days	Within 60 days following completion of field implementation	
		Ecology review of draft document	30 days	Within 30 calendar days following receipt of draft document	
		Submittal of final document to Ecology <sup>1</sup>	30 days	Within 30 calendar days of City & Ecology approval of responses to comments	

1 – Ecology reserves the right, at the sole discretion of Ecology, to require one additional comment and document revision round, if needed. All Ecology comments must be addressed to Ecology's satisfaction prior to document finalization.

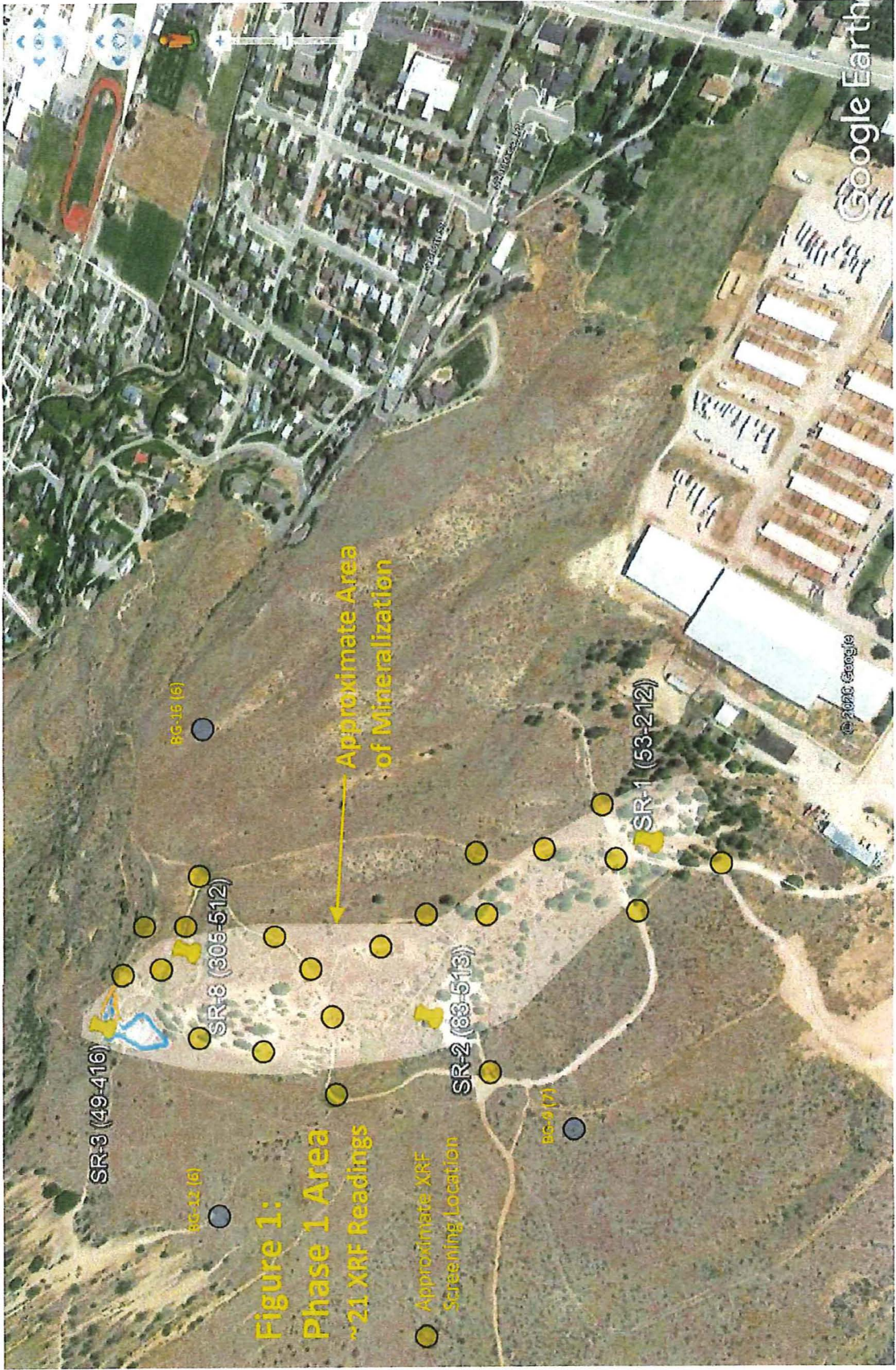
2 – Any field delays due to weather or safety considerations shall be considered by Ecology.



## Figures







**Figure 2: Ridge Top Area**  
**~13 XRF Readings**

● Approximate XRF  
Screening Location

SR-4 (43-134)

SR-5 (122-1290)

Approximate Area  
of Mineralization

20-17 (101)

21-59

1-170

1-163

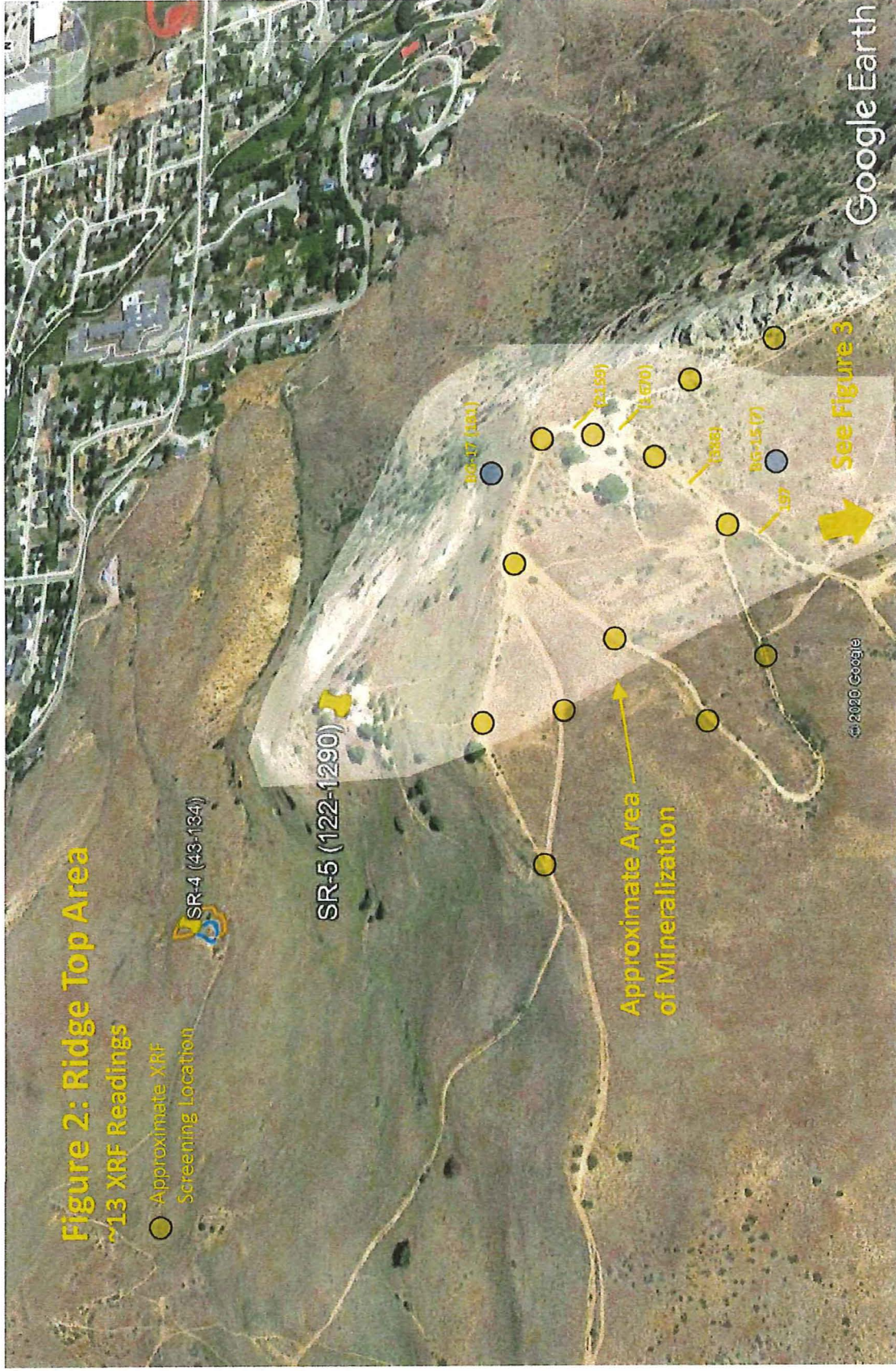
95-15 (17)

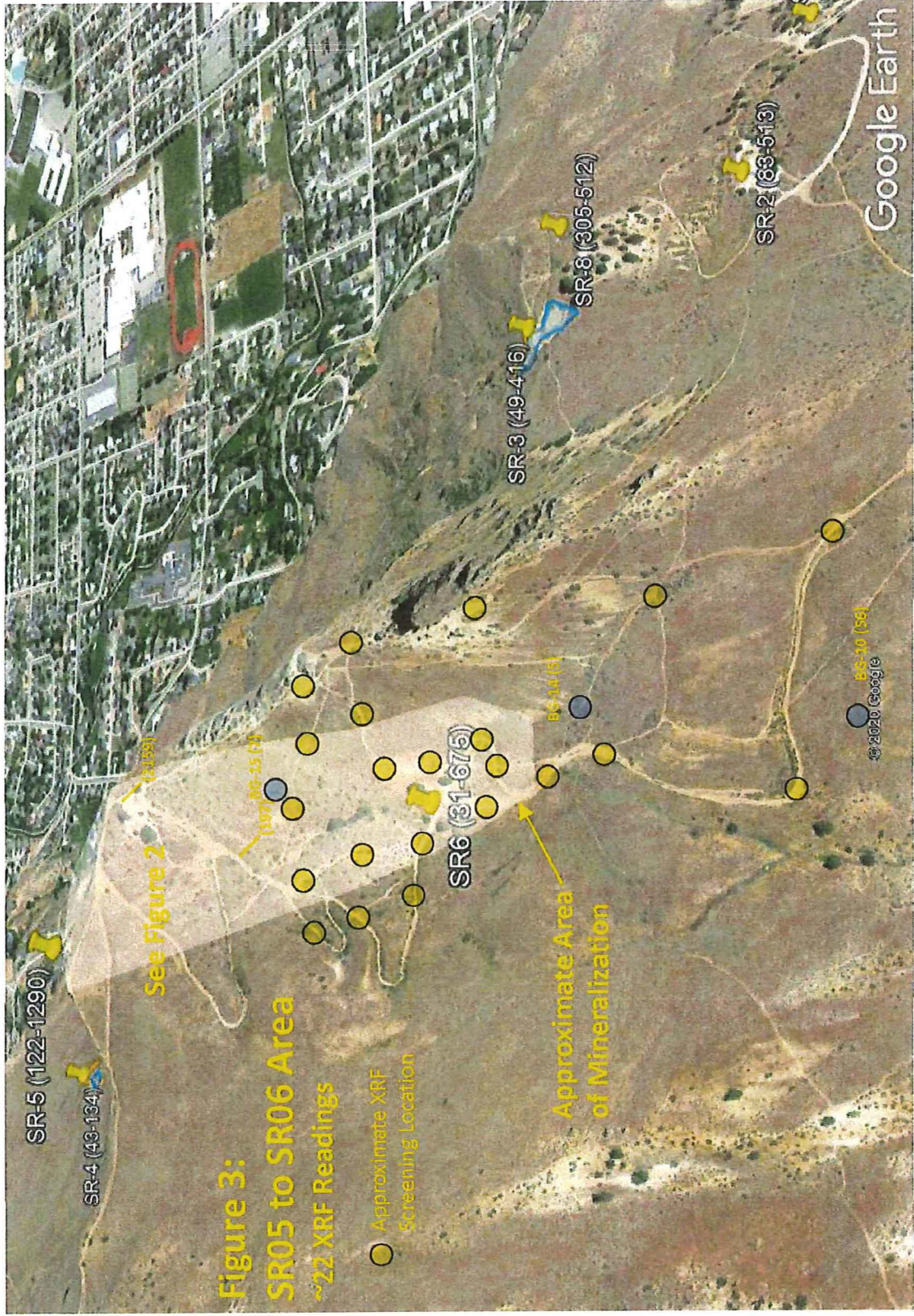
1-97

See Figure 3

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Google Earth





**Figure 3:**  
**SR05 to SR06 Area**  
 ~22 XRF Readings

● Approximate XRF Screening Location

Approximate Area of Mineralization