

November 23, 2015

**REMEDIAL INVESTIGATION/
FEASIBILITY STUDY WORK PLAN
EXECUTIVE SUMMARY**

Prepared for

**COLUMBIA FALLS ALUMINUM COMPANY LLC
Former Primary Aluminum Reduction Facility
200 Aluminum Drive, Columbia Falls, Montana**

ROUX ASSOCIATES, INC.

Environmental Consulting & Management



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EXECUTIVE SUMMARY

On behalf of Columbia Falls Aluminum Company, LLC (CFAC), Roux Associates, Inc., has prepared this Remedial Investigation/Feasibility Study (RI/FS) Work Plan (hereinafter the “RI/FS Work Plan”) for the CFAC aluminum reduction facility located near Columbia Falls, Flathead County, Montana (hereinafter, “the Site”). The boundaries of the Site as defined in the RI/FS Work Plan are depicted in Plate ES-1. The Site was operated as a primary aluminum reduction facility (commonly referred to as an aluminum smelter) from 1955 until 2009. Aluminum production at the Site was suspended in 2009 due to a downturn in aluminum market conditions, and CFAC announced the permanent closure of the facility in March 2015. Since that time, CFAC has initiated decommissioning and demolition activities and has commissioned the development of an RI/FS Work Plan. The purpose of an RI/FS is to characterize the nature and extent of risks associated with environmental conditions at the Site and to evaluate potential remedial options to address those risks. More specifically, the RI/FS is designed to achieve the following objectives:

1. Identify contaminants of potential concern (COPCs) at the Site and their source(s);
2. Determine the nature and extent of Site-related COPCs in environmental media (soil, groundwater, surface water and sediment) at the Site;
3. Understand the fate and transport of COPCs in environmental media at the Site;
4. Identify any exposure pathways (considering both current and potential future land use);
5. Evaluate current and potential future human health and ecological risks posed by the COPCs present at the Site; and
6. Conduct an evaluation of remedial alternatives for the Site, including treatability studies where necessary.

This RI/FS Work Plan provides an overview of pertinent background information, an initial evaluation of existing data for the Site (including a preliminary Conceptual Site Model [CSM]), the identification of data needs to support the risk assessment and evaluation of remedial alternatives, and a scope of work designed to address the identified data needs. The RI/FS Work Plan also provides the framework and approach for conducting a baseline risk assessment and feasibility study.

The RI/FS Work Plan methodology is in accordance with the “Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA” (EPA, 1988) as well as other appropriate EPA and Montana Department of Environmental Quality (MDEQ) guidance; and, compliant with the substantive requirements of the National Contingency Plan (“hereinafter “NCP”) (40 CFR 300).

The RI/FS will be conducted in a phased approach to achieve the objectives outlined above. The Phase 1 Site Characterization will begin with detailed Site reconnaissance, followed by use of surface geophysics and soil gas screening methods, in an effort to optimize the placement of sampling locations. Then a sampling program will be implemented to provide detailed characterization of known and potential source areas, as well as broad characterization of hydrogeology, soil, groundwater, surface water and sediment across the Site. The Phase 1 Site Characterization will also include a wildlife habitat and biological survey to support performance of a Screening Level Ecological Risk Assessment (SLERA) in accordance with USEPA guidance.

The proposed Phase 1 Site Characterization sampling locations are depicted on Plate ES-1. As designed, the Phase 1 Site Characterization sampling program includes:

- Drilling of approximately 139 soil borings with associated soil sampling and analysis at each boring location;
- Systematic collection and analysis of an additional 43 surface and 43 shallow soil samples on a gridded basis across a large portion of the Site;
- Installation of approximately 43 monitoring wells, with subsequent collection and analysis of groundwater samples from all newly installed and existing monitoring wells; and
- Collection and analysis of surface water and sediment samples from approximately 9 locations within the Flathead River, 3 locations in Cedar Creek, and 4 locations in the Cedar Creek Overflow Drainage.

The results of the above activities will be evaluated and presented in a Phase I Site Characterization Summary Report. This will include: presentation and discussion of all Phase 1 Site Characterization results, an update of the CSM, identification of the data needs that remain

outstanding to achieve the RI objectives; and a Phase II Site Characterization sampling and analysis plan designed to address the data needs.

The RI/FS Work Plan specifies that the potential for defining operable units or using interim actions to accelerate remedial progress and risk reduction will be considered during the course of the Phase 1 Site Characterization Program and at its completion. As such opportunities are identified they will be evaluated. If a viable interim action appears to exist that meets applicable NCP criteria, a plan for such action will be prepared.

A Baseline Risk Assessment Work Plan will be prepared based upon the results of the Phase 1 Site Characterization. Following implementation of the Phase II Site Characterization and any additional phases of investigation deemed necessary, a Baseline Risk Assessment Report will be prepared to document the risk assessment process, methodology, and results. The results of all Site investigations will be presented collectively in a RI Summary Report.

A feasibility study (FS) will be conducted to evaluate remedial options to address any identified human health and environmental risks. The first phase of the FS, to commence following the Phase 1 Site Characterization, will identify and screen remedial and Site management technologies and methods based upon effectiveness, implementability, and cost. The screening process will utilize applicable USEPA and MDEQ guidance to identify candidate technologies and process options for assembly into remedial alternatives. The results of the technology screening process will be summarized in a technical memorandum.

A FS Work Plan will be prepared following completion of the RI Summary Report. The FS Work Plan will establish remedial action objectives (considering both USEPA and MDEQ standards and risk assessment results), identify areas and volumes of contamination exceeding the identified Remedial Action Objectives (RAOs) and identify remedial alternatives retained for detailed evaluation.

A FS Report will be prepared following the detailed evaluation of remedial alternatives. The FS Report will be prepared to document the entire FS process and serve as the basis for remedy selection at the Site. The detailed evaluation of alternatives shall apply the first seven of the nine

evaluation criteria described in the NCP, to the assembled remedial alternatives. The nine evaluation criteria include: (1) overall protection of human health and the environment; (2) compliance with ARARs; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume; (5) short-term effectiveness; (6) implementability; (7) cost; (8) state (or support agency) acceptance; and (9) community acceptance. Criteria 8 and 9 are anticipated to be addressed by the appropriate regulatory authority after the FS Report and the Proposed Plan have been released to the general public for comment.

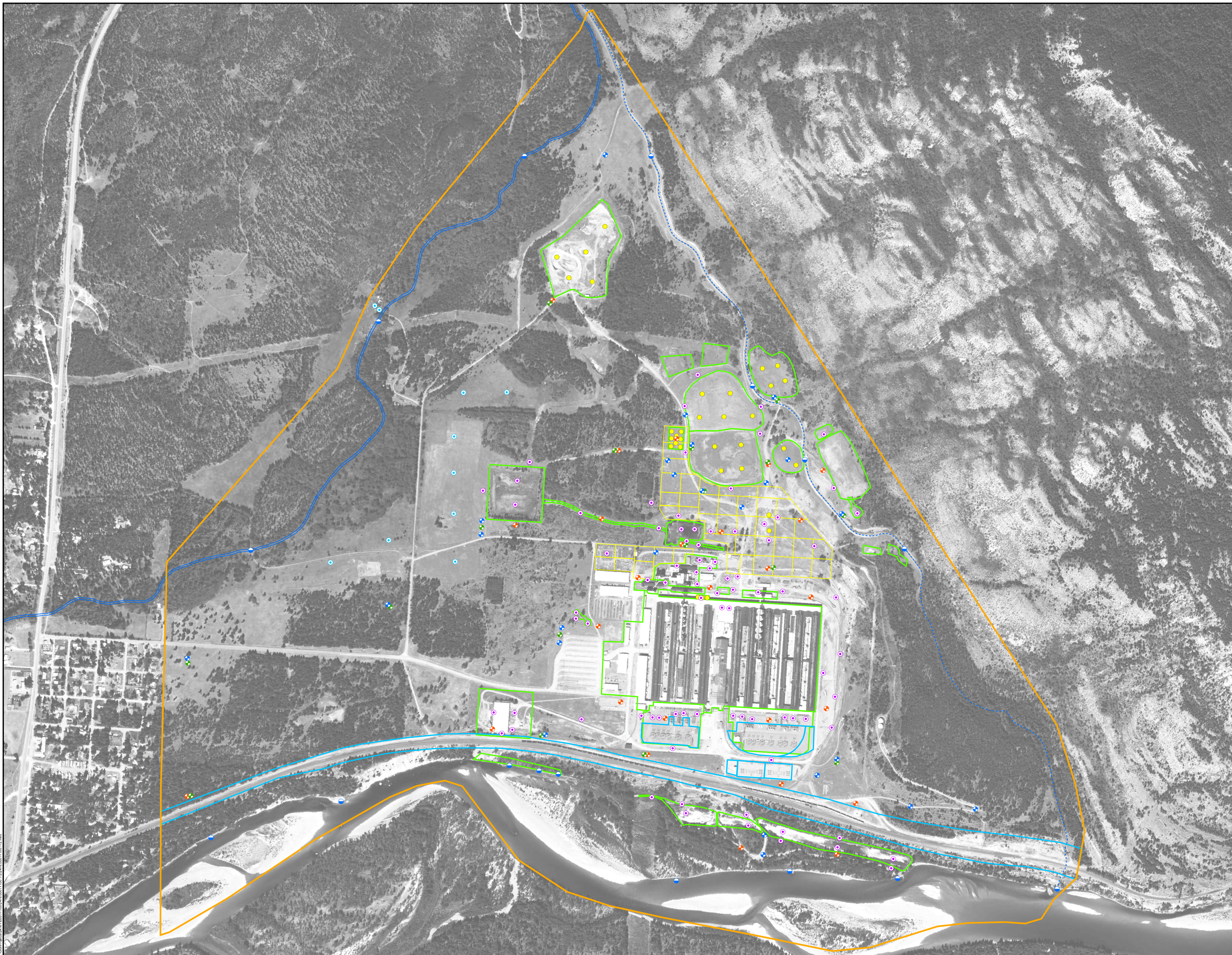
All of the RI/FS tasks will be conducted under the oversight of the USEPA. All deliverables listed above, as well as any additional deliverables required during the course of the project, will be initially submitted to USEPA and MDEQ as draft documents. Following receipt of USEPA comments, the documents will be revised as appropriate and submitted in final form for approval by USEPA.

The major phases of work and deliverables outlined in this Draft RI/FS Work Plan along with a preliminary schedule of completion dates are listed below:

- Phase I Site Characterization Field Program (4th Quarter 2016);
- Phase I Data Summary Report (1st Quarter 2017);
- Baseline Risk Assessment Work Plan (4th Quarter 2017);
- Phase II Site Characterization Field Program (3rd Quarter 2018);
- Phase II Data Summary Report (1st Quarter 2019);
- Baseline Risk Assessment (3rd Quarter 2019);
- Final RI Report (1st Quarter 2020);
- FS Work Plan (3rd Quarter 2020); and
- Feasibility Study (1st Quarter 2021).

CFAC is prepared to complete the RI/FS according to the preliminary schedule outlined above and in accordance with the RI/FS Work Plan. However, several factors not within CFAC's control could influence CFAC's ability to complete the RI/FS according to the project schedule, including but not limited to: the regulatory review and approval process, the availability of

specialized subcontractors for certain aspects of the work, and the need to modify the scope of work based upon the investigation findings. If a schedule extension is required to meet the due dates for any of the major deliverables, a formal notification and request for a schedule extension will be submitted to USEPA no less than 30 days prior to the deliverable due date. CFAC reserves the right, subject to USEPA approval, to make changes to the RI/FS Work Plan consistent with the NCP and other applicable rules or orders, including but not limited to the scope of work, schedule and process and retains all rights that it may have under applicable law and contracts.



Legend

- Existing Groundwater Monitoring Well
- Proposed Deep Monitoring Well
- Proposed Water Table Monitoring Well
- Proposed Soil Boring
- Proposed Surface Water and Sediment Sample
- Proposed Soil Gas Investigation Location
- Proposed Soil Boring Within Background Area
- Approximate Third-party Property Boundaries
- Site Features
- Site Boundary



**PROPOSED RI PHASE I SAMPLE LOCATIONS
SITE-WIDE**

2000 ALUMINUM DRIVE
COLUMBIA FALLS, MONTANA

Prepared For:
COLUMBIA FALLS ALUMINUM COMPANY, LLC

 <small>Environmental Consulting & Management</small>	Compiled by: M.A.	Date: 11/17/2015	ES-1
	Prepared by: A.M.	Scale: 1 in = 448 ft	
	Project Mgr: A.B.	Office: Islandia, NY	
	File No: 2476.0001Y100.112	Project: 2476.0001Y000	