

STATE OF ALASKA

**DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM**

SEAN PARNELL, GOVERNOR
610 University Avenue
Fairbanks, AK 99709-3643
PHONE: (907) 451-2181
FAX: (907) 451-5105
www.dec.state.ak.us

File: 400.38.011

June 5, 2012

BLM Anchorage Field Office
Attn: Lawrence J. Beck
Environmental Protection Specialist
4700 BLM Road
Anchorage, AK 99507

Re: DEC Approval of *Field Report for Feather River Dumpsite, 2011 Hazardous Materials and Solid Waste Removal near Nome, Alaska*
DEC Approval of *2011 Monitoring Report, Feather River Landspread near Nome, Alaska*
Summary of Evaluations and Determinations for BLM sites at Feather River

Dear Mr. Beck:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has received and reviewed the above referenced Work Reports documenting site investigation and remedial action completed at the Bureau of Land Management (BLM) Feather River Dump Site (FRDS), located 36 miles Northwest of Nome and adjacent to the Teller Highway. The *Field Report for Feather River Dumpsite, 2011 Hazardous Materials and Solid Waste Removal near Nome, Alaska* (FRDS Report) was received by DEC on January 27, 2012. The report describes work completed during the summer of 2011 under a work plan approved by DEC in May 2011. The *2011 Monitoring Report, Feather River Landspread Near Nome, Alaska* (FRLS 2011 Monitoring Report) was received by DEC on March 2, 2012. This report describes multi-incremental samples collected to measure the natural attenuation of petroleum contamination in soil at the Landspread associated with the debris removal site.

The FRLS 2011 Monitoring Report is approved under 18 AAC 75. The FRDS Report is approved under 18 AAC 75 conditional to the following editorial changes:

- 1) Page 1, the site name is erroneously abbreviated as FDRS. This should be changed to FRDS.
- 2) Page 6, the text says that the "95% UCL of the mean value to be 186.1 mg/kg." This value is the 95% UCL for $n \geq 40$, while the number of samples is only 29, thus the 95% UCL which applies to the source area is 190.7 mg/kg.

Based on the findings of the above referenced reports and a review of the environmental records associated with the BLM Feather River Airstrip site, DEC has determined the site status for the areas of concern. The history of investigation at this site is described below, and summarizes the site history, investigation of areas of concern, removal actions at areas of concern, establishment of a land spread area, and current site status for areas of concern at the BLM Feather River site.

Site History

In 1995 the Bureau of Land Management (BLM) conducted a Preliminary Assessment (PA) of the Feather River Airstrip site, identifying historical photos of debris and a drum spilling product, as well as stained soil associated within this source area. In 2005, BLM contractor MACTEC was contracted and mobilized to the site to excavate soils affected by lead-acid batteries and the spilled grease drum. 1 cubic yard of soil was removed from the grease-stained area and confirmation samples confirmed that remaining soil was below cleanup levels for diesel range organics (DRO), residual range organics (RRO), and benzene, toluene, ethylbenzene, and xylenes (BTEX). An additional 1 cubic yard of soil was excavated from a site of stained soil identified as the Battery Stain Area (BSA). Diesel fuel odor was identified during this excavation and confirmation samples collected after the excavation found that lead and cadmium were below the DEC cleanup levels, but DRO was above the cleanup levels.

In 2006, MACTEC removed four drums containing either water and oil, or water and grease. The oil and grease was removed from the drums, and the water was treated to remove petroleum, oil, and lubricants (POLs) before being released on site. Grease, oil, and contaminated drums and soil were disposed of. Three areas of soil staining and POL contamination were excavated to remove contaminated soil: Drum Area 1 (DA1), Drum Area 2 (DA2), and the Battery Stain Area (BSA). 41 cubic yards of soil were removed and landspreading treatment was established at the former landing strip. The Feather River Landspread (FRLS) was has been in place since 2006.

Petroleum contaminated soil that remained in DA2 and BSA was removed to the FRLS in 2007. A total of 750 cubic yards of soil was removed from the BSA and an additional 10 cubic yards of soil was removed from DA2. A total of approximately 775 cubic yards of soil was placed at the FRLS in a plot 350 ft by 120 ft to a depth of approximately 6 inches. After its initial establishment, 38 sample locations were set up to determine the extent of the petroleum fraction contamination in the soil. DRO was present at a maximum concentration of 1760 mg/kg, above the 250 mg/kg cleanup level, and RRO was present at a maximum concentration of 3800 mg/kg, below the 11,000 mg/kg cleanup level. Additionally, in 2007 removal of solid waste from the FRDS was initiated. Time constraints forced termination of the cleanup activities before all debris was removed.

The objectives of the 2011 field activities were: removal of all visible debris from the North Bluff; investigation beneath tires on the North Bluff used as erosion control for buried debris; removal of remaining debris from the South Bluff; and disposal of

all hazardous and non-hazardous waste in an appropriate manner. Field screening was completed using a photoionization detector (PID) to detect petroleum contaminants in soil, PetroFLAG sampling to verify clean soil, and X-ray fluorescence (XRF) to identify lead and zinc above DEC cleanup levels.

North Bluff Cleanup

EMI addressed the debris left behind over an area 600 ft in length and extending 30 ft down the bluff face. Visible debris, including drums, steel cables, and other miscellaneous construction camp materials were identified and removed. None of the drums contained any product, and where they contained rocks and soil they were emptied prior to disposal. No batteries or other signs of hazardous wastes were identified during this cleanup, and no confirmation samples were collected.

North Bluff Tires Investigation/Cleanup

EMI began the cleanup as an investigation of the soil beneath tires identified by MACTEC in 2007, to determine if there was any debris or hazardous materials buried there. Test pits identified significant amount of scrap metal, possibly buried to reinforce the erosion wall. Excavation of the debris removed automobile and heavy equipment components and approximately four broken batteries. None of the mechanical components contained any fluids suggesting potential petroleum contamination, but 44 soil samples were collected to screen for petroleum, oil, or lubricants (POLs). All results were below the 20 ppm PID screening limit, and two PetroFLAG samples taken for confirmation were below the 250 ppm action limit. No laboratory samples were collected, based on the field screening data.

Battery casings discovered during the investigation were broken, exposing the lead plates and allowing leakage of electrolytes. Many of the lead plates were broken into small pieces. All visible battery materials were removed and 8 XRF readings were taken from beneath the battery casings. All screening results were below the 200 mg/kg action level, and one laboratory confirmation sample was collected. Analysis reported a lead concentration of 32.4 mg/kg, well below the DEC Method 2 cleanup level of 400 mg/kg.

Sampling of the soil stockpile confirmed the soil was clean and suitable for backfill, and tires removed during the investigation were replaced for erosion management.

South Bluff Cleanup

The South Bluff was separated into two close, but distinct areas. East of the access road was a small area containing debris associated with either a mobile home or job trailer. Two automotive batteries were identified; they were damaged, but less extensively than batteries from other areas at Feather River. Debris was removed and battery materials were collected in steel drums. 5 XRF field screening samples were collected from the sites of the two batteries. The highest XRF reading was 99 mg/kg, and an analytical sample was collected from that location. Analytical results identified a lead concentration of 47.6 mg/kg in the sample with the highest XRF reading, below the Method 2 Cleanup Level.

The main South Bluff Cleanup area involved a large area where MACTEC suspected there was debris in 2007, but did not have time to clean up. The debris found during excavation included vehicle parts, house wares, miscellaneous objects, and a number of drums. Most of the drums were empty, but one drum contained 5 gallons of what appeared to be unused motor oil. A puncture in the drum spilled approximately 1 to 2 cups of oil. Remaining product was transferred to a new drum, and donated to the Nome Harbormaster's Used Oil Collection Program. Impacted soil was immediately collected in a 5 gallon bucket for later disposal by Emerald, Alaska in Anchorage. PetroFLAG screening of the spill area detected 110 ppm, below the action level of 250ppm. The main area of the South Bluff cleanup also contained an estimated 10 to 15 batteries, significantly damaged and difficult to differentiate. All battery components were collected by hand and placed in steel drums for disposal. A total of 1226 lbs of broken lead battery debris was transported to US Ecology Idaho, Inc for disposal. Due to the extent of the battery debris, and the highly variable range of XRF readings in adjacent reading, DEC approved a change to the work plan to screen the soil in the South Bluff Cleanup area systematically to try and verify lead contamination from the batteries.

Twenty nine samples were collected from across the area. Soil samples were collected from between 0-3 ft bgs, and placed into re-sealable quart-sized bags. Samples were subjected to XRF screening to identify areas of potential lead contamination. Four laboratory samples were collected from the samples displaying the highest XRF screening levels (178 to 528 mg/kg). Two of the four samples were reported to contain lead above the 400mg/kg cleanup level (max concentration 560 mg/kg), and the remaining samples were then sent for laboratory analysis. Analytical results from all 29 samples were used to calculate a 95% upper confidence limit (UCL) for the mean concentration over the exposure area. The mean concentration of lead over the total area of exposure is calculated at 190.7 mg/kg, which is below the DEC Method 2 Cleanup Level.

Feather River Landspread Monitoring

EMI reestablished the sampling grid utilized by MACTEC in 2009 monitoring sampling, and took 38 soil samples from depths of 0-2", 2-4", and 4-6" bgs. Based on the variability calculated from triplicate sampling done in 2009 and 2011, the 95% UCL for DRO concentration at the FRLS is 395 mg/kg, slightly above the 250 mg/kg cleanup level.

DEC Determinations

DEC has reviewed the investigations and removal actions that have occurred at areas of concern within the BLM Feather River Airstrip site. The characterization and removal of contamination associated with areas of concern at the BLM Feather River Airstrip has effectively addressed contamination issues. Contaminated soil has been removed from these sites and placed in the Feather River Landspread, and confirmation sampling confirms that each area of concern meets DEC Method 2 cleanup standards.

Although the concentration of DRO at the Feather River Landspread remains slightly above the DEC Method 2 Migration to Groundwater Cleanup level, DEC has determined that the action of excavation, transportation, and dispersal of excavated soil resulted in accelerated remediation at the Feather River Landspread. Significant migration of contamination is unlikely based on limited depth of the Landspread, and declining contaminant concentration is documented by site investigation activities. Remaining contamination is well below DEC Method 2 Ingestion and Inhalation cleanup levels. The land spread may be closed in place with no further sampling required. To prevent movement of the treated soil DEC suggests modifying the signage at the land spread site to notify the user that the soil there has been treated and should not be moved off site.

The cleanup actions to date have served to excavate and adequately remove contaminated soil from all known areas of concern associated with the site. Based on the information available, ADEC has determined no further assessment or cleanup action is required. There is no longer a risk to human health or the environment, and this site will be designated as "Cleanup Complete" on the DEC database.

Although a Cleanup Complete determination has been granted, DEC approval is required for off-site soil disposal in accordance with 18 AAC 75.325(i). It should be noted that movement or use of potentially contaminated soil in a manner that results in a violation of 18 AAC 70 water quality standards is unlawful. This determination is in accordance with 18 AAC 75.325(i) and does not preclude DEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

Appeal

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 -18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Division Director, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 15 days after receiving the department's decision reviewable under this section. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 30 days after the date of issuance of this decision document, or within 30 days after the department issues a final decision under 18 AAC 15.185. If a hearing is not requested within 30 days, the right to appeal is waived.

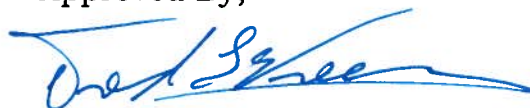
Thank you for your work at this site. If you have any questions or comments, please feel free to contact Fred Vreeman by phone at (907) 451-2181 or by email at fred.vreeman@alaska.gov.

Prepared by,



David Robinson
Graduate Intern

Approved By,



Fred Vreeman
Environmental Program Manager

cc: Bruce Campbel, ADOT&PF
Clark Milne, ADOT&PF

Attachments: Feather River Dump Site General Site Location Map
Feather River Dump Site map
Feather River Site Layout map

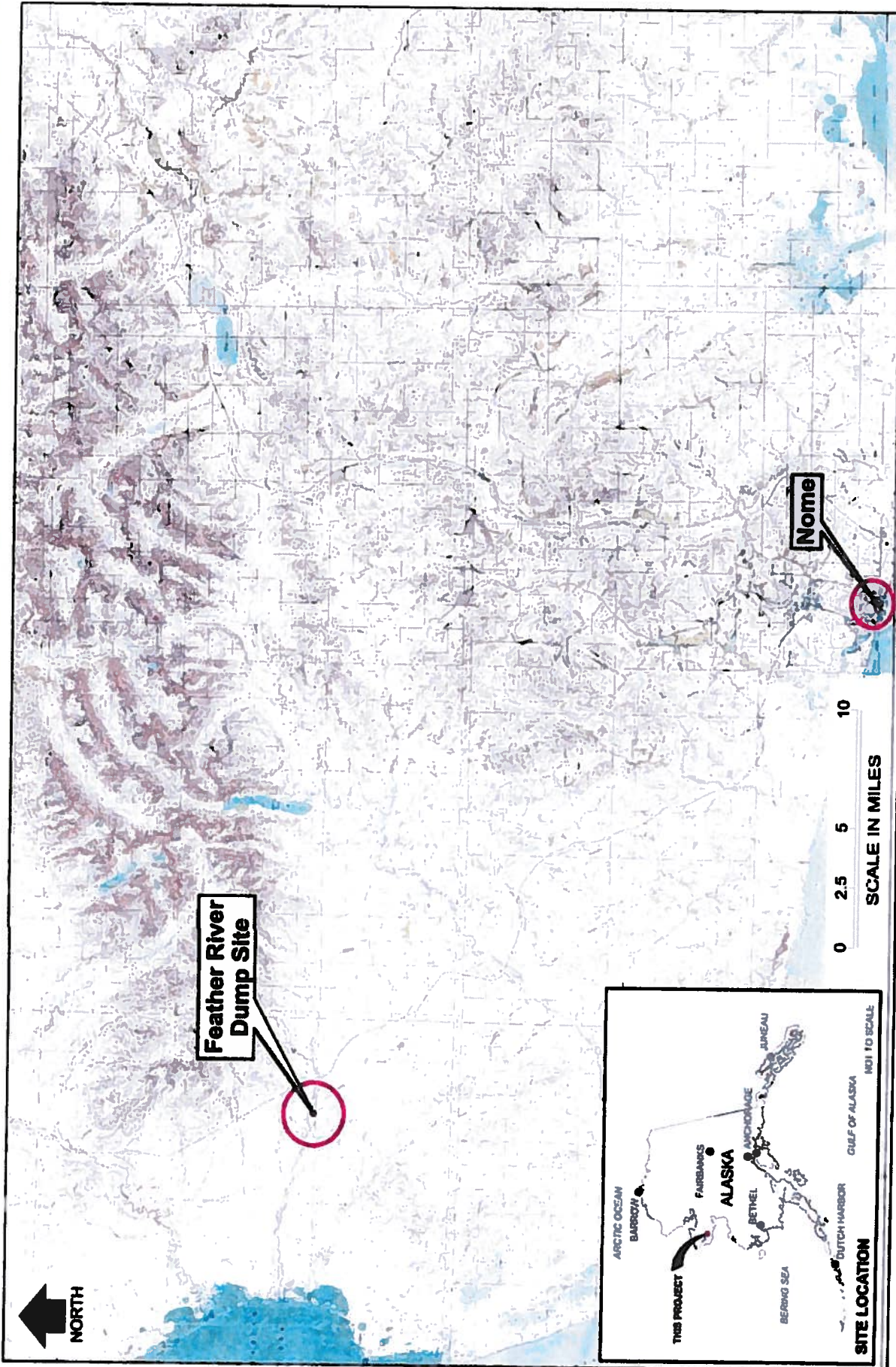
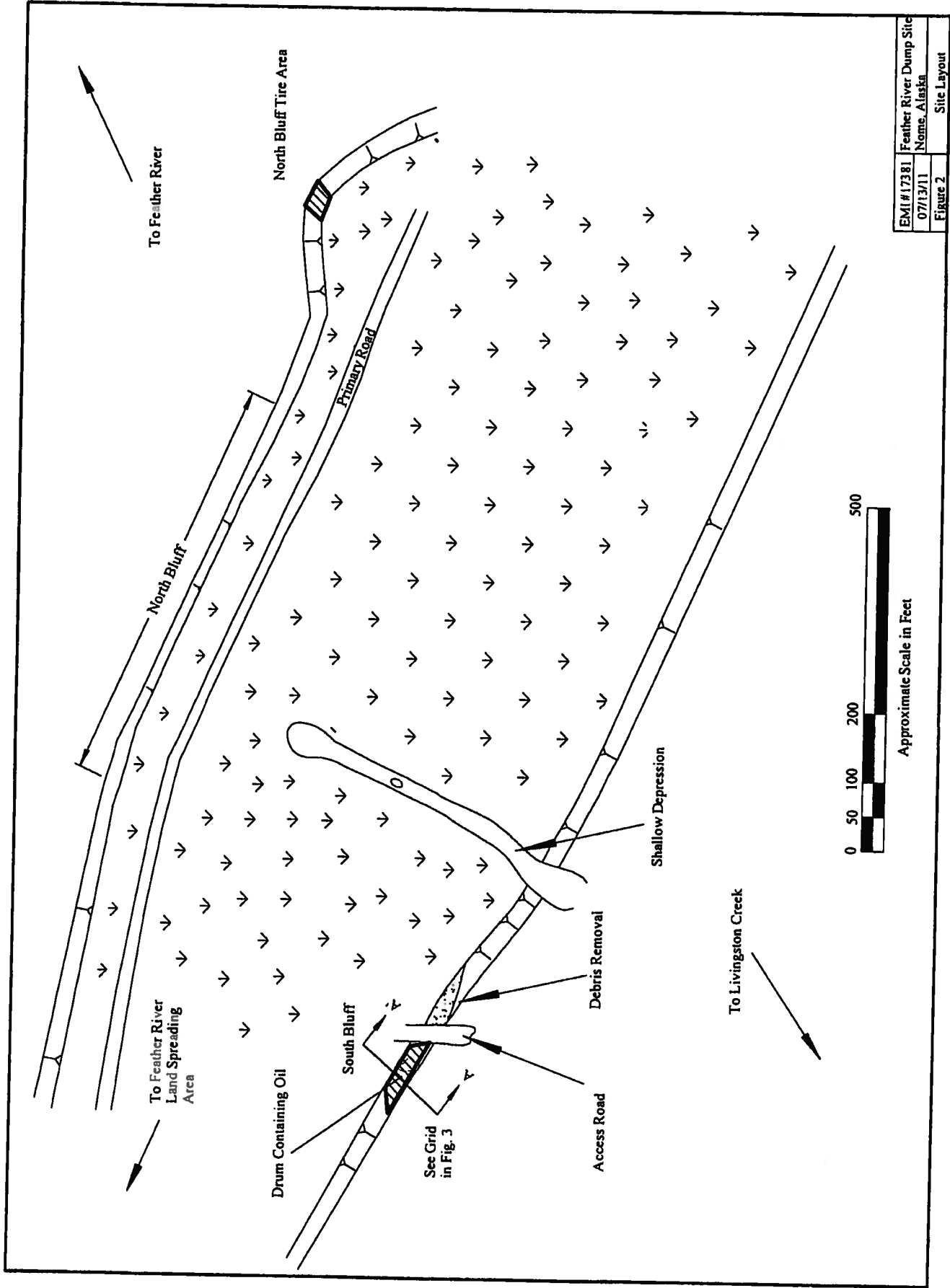


Figure 1
Feather River Dump Site
General Site Location Map

Environmental management Inc.
January 9, 2011



EMI#17281	Feather River Dump Site
07/13/11	Nome, Alaska
Figure 2	Site Layout



Approximate Scale in Feet

See Grid in Fig. 3

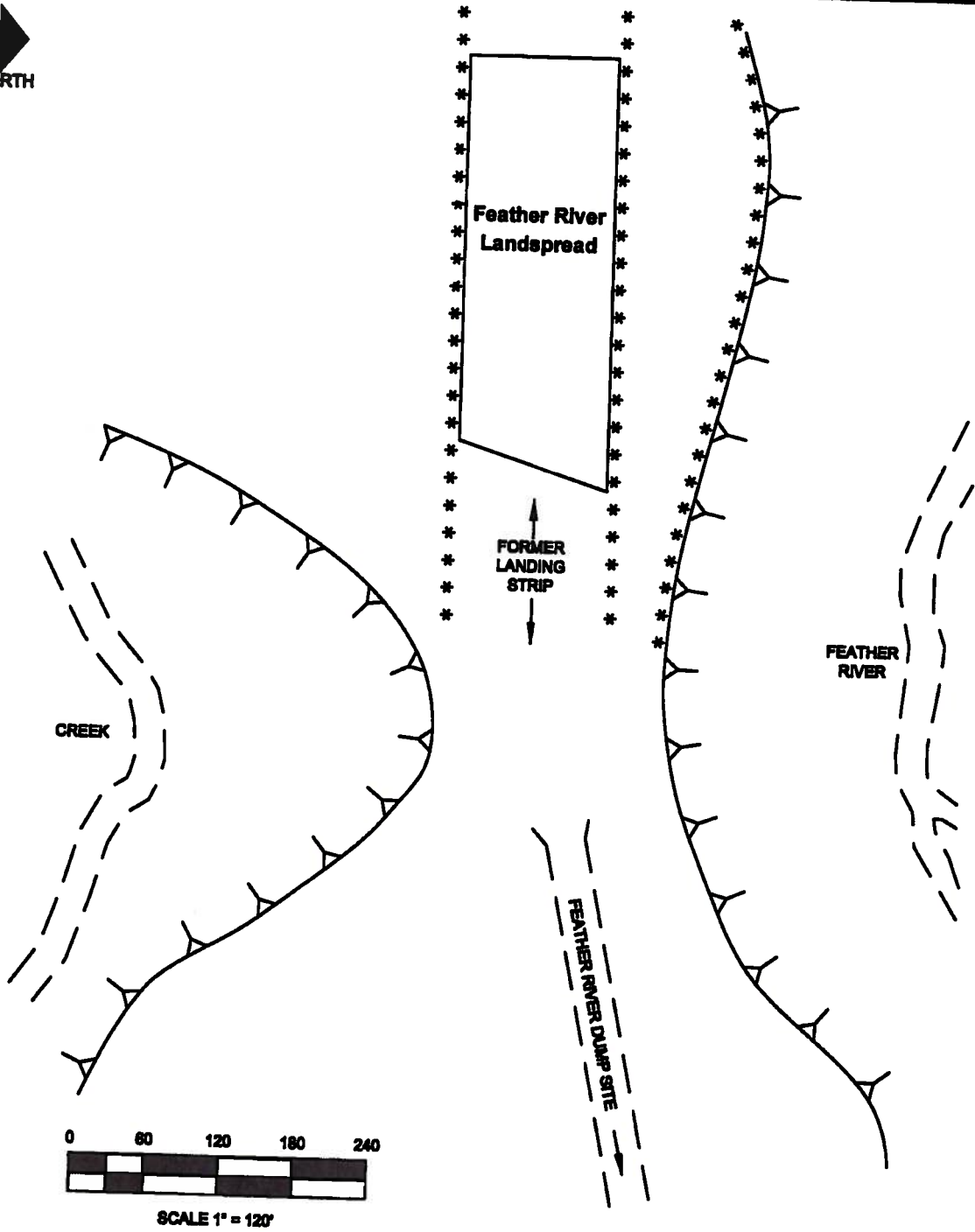


Figure from 12/9/09 MACTEC Report
Altered by EMI 2/20/12



Figure 2
Feather River Site Layout
Near Nome, Alaska

February 20, 2012