THE STATE of ALASKA
GOVERNOR BILL WALKER

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

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File No.: 2108.38.005

September 12, 2016

John Smith
Municipality of Anchorage Public Works
Project Management and Engineering Division
4700 Elmore Road
Anchorage, AK 99519

Jim Arnesen
Corporate Lands and Regulatory Manager
Eklutna, Inc.
16515 Centerfield Drive, Suite 201
Eagle River, AK 99577

Re: Decision Document, MOA Eklutna River Bridge
Cleanup Complete Determination

Dear Mr. Smith and Mr. Arnesen:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the Municipality of Anchorage (MOA) Eklutna River Bridge contaminated site located at mile 24 of the Old Glenn Highway. This decision letter memorializes the site history, cleanup actions, and standard conditions for long-term site management. No further remedial action is required.

Site Name and Location:
MOA Eklutna River Bridge
MP 24 Old Glenn Highway
Chugiak, AK 99567

Name and Mailing Address of Contact Party:
Municipality of Anchorage Public Works
4700 Elmore Road
Anchorage, AK 99519

DEC Site Identifiers:
File No.: 2108.38.005
Hazard ID: 26330

Regulatory Authority for Determination:
18 AAC 75

Site Description and Background

The Eklutna River Bridge is located at mile 24 of the Old Glenn Highway near Eagle River, Alaska. The bridge was originally constructed in 1935, and was widened in 1952. The bridge was closed to vehicle traffic in 2012 after a bridge inspection documented deterioration, rust, and paint failure. Due to the era of construction, lead based paint was used during construction and renovations which apparently flaked off to the area directly below the bridge. In 2016 the bridge was removed and replaced because of safety concerns.

Contaminants of Concern
During the course of the investigation and cleanup, summarized below in the Characterization and Cleanup Activities section of this decision letter, soil samples were analyzed for lead, which was the only contaminant of concern at the site.

Cleanup Levels
The approved cleanup level for lead in soil is the Method 2 for the under 40-inch precipitation zone direct contact cleanup level established in 18 AAC 75.341(c), Table B1.

Table 1 – Approved Cleanup Levels

Contaminant	Soil- Direct Contact (mg/kg)
Lead	400/800*

*- Residential/ industrial cleanup level
mg/kg = milligrams per kilogram

Characterization and Cleanup Activities
In May 2012 the Eklutna river bridge was closed to vehicle traffic after a bridge inspection documented deficiencies in the structure as well as paint failure. Originally constructed in 1935 and widened in 1952 the bridge was painted using lead based paint which apparently flaked off onto the area below the bridge.

Prior to demolition, 49 soil samples were collected from areas beneath the bridge to evaluate the impacts to soil from lead based paint that had potentially flaked off of the bridge. Soil samples contained lead ranging from 5.99 to 3,240 mg/kg with an average concentration of 224.5 mg/kg. Five of the 49 samples contained lead above the residential cleanup level of 400 mg/kg.

Lead abatement was performed by bridge removal which included dismantling the bridge in pieces and transporting to an approved facility for disposal. Following bridge demolition and construction of the new bridge, an additional 49 soil samples were collected from the same areas below the bridge that had been sampled previously. Soil samples contained lead ranging from 14 mg/kg to 680 mg/kg with an average concentration of 102.5 mg/kg. Two of the 49 samples contained lead above the residential cleanup level of 400 mg/kg. All contaminated soil that was on the project site prior to bridge demolition remained on site at the end of the project, and at no time during the project was lead impacted soil stockpiled or removed. Soil disturbance was minimal throughout work on the site.

In order to further evaluate the presence of lead in soil at the site the ADEC calculated the 95th percent upper confidence limit (UCL) of the Mean for lead samples as outlined in 18 AAC 75.380. Statistical analysis was performed using the U.S. Environmental Protection Agency's (EPA) ProUCL software, and resulted in a 95th percent upper confidence level of 183.9 mg/kg.

Cumulative Risk Evaluation
Pursuant to 18 AAC 75.325(g), when detectable contamination remains on-site following a cleanup, a cumulative risk determination has been made that the risk from hazardous substances does not exceed a cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and does not exceed a cumulative non-carcinogenic risk standard at a hazard index of one across all exposure pathways.

Although the property is zoned for industrial use, cumulative risk at this site was calculated assuming a residential land use and using the most recently detected concentrations of contaminants in all of the soil samples collected in 2016.

Based on a review of the environmental record, ADEC has determined that residual contaminant concentrations do not pose a cumulative human health risk.

Exposure Pathway Evaluation

Following investigation and cleanup at the site, exposure to the remaining contaminants was evaluated using ADEC's Exposure Tracking Model (ETM). Exposure pathways are the conduits by which contamination may reach human or ecological receptors. ETM results show all pathways to be either De-Minimis Exposure or Pathway Incomplete. A summary of this pathway evaluation is included in Table 2.

Table 2 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De-Minimis Exposure	Lead is only present above the cleanup level at discrete areas and site is located underneath a bridge and where receptors are only infrequently present.
Sub-Surface Soil Contact	De-Minimis Exposure	Lead is only present above the cleanup level at discrete areas and site is located underneath a bridge where receptors are only infrequently present.
Inhalation – Outdoor Air	Pathway Incomplete	Volatile contaminants are not present above the inhalation cleanup level and receptors are only infrequently present at the site.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	The site is underneath a bridge and no buildings are present or will be present in the foreseeable future.
Groundwater Ingestion	Pathway Incomplete	Contaminants are not expected to migrate to groundwater.
Surface Water Ingestion	Pathway Incomplete	Surface water is not used as a drinking water source.
Wild Foods Ingestion	Pathway Incomplete	The affected area is under a bridge and wild foods were not observed.
Exposure to Ecological Receptors	De-Minimis Exposure	Residual contamination on site is not likely to affect ecological receptors because of the limited amount of contaminants remaining on site.

Notes to Table 2: "De-Minimis Exposure" means that in ADEC's judgment receptors are unlikely to be affected by the minimal volume or concentration of remaining contamination. "Pathway Incomplete" means that in ADEC's judgment contamination has no potential to contact receptors.

ADEC Decision

This site will receive a "Cleanup Complete" designation on the Contaminated Sites Database, subject to the following standard conditions.

Standard Conditions

1. Any proposal to transport soil or groundwater off-site (the site is shown in the attached figure) requires ADEC approval in accordance with 18 AAC 75.325. A "site" [as defined by 18 AAC 75.990 (115)] means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership.)

2. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

This determination is in accordance with 18 AAC 75.380 and does not preclude ADEC 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. Please note, if soil is removed from site the soil may be classified as hazardous waste under the Resource Conservation and Recovery Act (RCRA) requiring coordination with EPA on the handling and disposal of any soil that exceeds RCRA benchmark criteria.

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 99811-1800, 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 99811-1800, within 30 days after the date of issuance of this letter, 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.

Sincerely,

Chelsy M Passmore

Chelsy Passmore
Environmental Program Specialist