



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of
Environmental Conservation

DIVISION OF SPILL PREVENTION & RESPONSE
Contaminated Sites Program

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March 22, 2013

Mr. Brian Evans
Big State Logistics
P.O. Box 71540
3621 Royal Road
Fairbanks, AK 99707-1540

Re: Decision Document; Big State Logistics Vehicle Rollover – MP 77.8 Glenn Highway;
Cleanup Complete Determination

Dear Mr. Evans;

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records and project files associated with *Big State Logistics Vehicle Rollover – MP 77.8 Glenn Highway*, which is located on the east side of the Glenn Highway at Milepost 77.8. Based on the information provided to date, ADEC has determined that the remaining contaminant concentrations do not pose an unacceptable risk to human health or the environment, and this site will be closed.

This decision is based on the project files for the subject site, which are located in ADEC's offices in Anchorage, Alaska. This letter summarizes the decision process used to determine the environmental status of this site, and it provides a summary of regulatory issues considered in this Cleanup Complete Determination.

Site Name and Location:

Big State Logistics Vehicle Rollover – MP 77.8 Glenn Hwy
Milepost 77.8 Glenn Highway
Chickaloon, Alaska 99674

DEC Site Identifiers:

ADEC Reckey: None
File: 210.38.007
Hazard ID: 25618

Name and Mailing Address of Contact Party:

Mr. Brian Evans
Big State Logistics
P.O. Box 71540
3621 Royal Road
Fairbanks, AK 99707-1540

Regulatory Authority:

18 AAC 75

Background

The release site is approximately 1.7 miles northeast of Chickaloon, Alaska in a mostly uninhabited, rural area. The nearest residence is located over 1,600 ft. away, but private, recreational cabins exist nearly 550 ft. to the east, across the Matanuska River. These cabins are typically unoccupied.

The release occurred on October 07, 2010 when a Big State Logistics Inc. tanker truck, containing nearly 9,000 gallons of #1 arctic grade/low sulfur diesel fuel collided with a roadside barrier at Glenn Highway Milepost 77.8. This caused the truck to roll onto its side and release much of its contents onto the roadside shoulder east of the highway. The impacted area is approximately 200 ft. northwest of the Matanuska River and 260 ft. southwest of the mouth of the Chickaloon River (Figure 1).

The surrounding area is characterized by shallow, fractured bedrock, which allowed fuel to flow down the steeply-sloped embankment onto State property in the narrow margin of land east of the highway and west of the Matanuska River. Steep topography prevented access onto the floodplain with power tools, and despite multiple attempts, groundwater was not accessible using hand tools because of the abundance of glacial cobble and boulders.

Contaminants of Concern

During investigations at this site, soil and surface water samples were analyzed for Diesel Range Organics (DRO); Polynuclear Aromatic Hydrocarbons (PAHs); and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX). Based on these analyses and knowledge of the source area, the following Contaminants of Concern (COCs) were identified in soil:

- DRO
- Benzene
- Toluene
- Ethylbenzene
- Xylenes

Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Tables B1 and B2, Migration to Groundwater, and the default groundwater cleanup levels are established in 18 AAC 75.345 Table C.

<u>Contaminant</u>	<u>Soil Cleanup Levels (mg/kg)</u>	<u>Groundwater Cleanup Levels (mg/L)</u>
DRO	250	1.5
Benzene	0.025	0.005
Toluene	6.5	1.0
Ethylbenzene	6.9	0.7
Xylenes	63	10

Characterization and Cleanup Activities

First responders arrived on scene within two hours of the collision and deployed sorbent pads and booms to contain the release. Emerald Services Inc. arrived 2.5 hours after the collision and recovered approximately 6,340 gallons of fuel from the tanker and nearby surface soil. However, as

much as 2,460 gallons escaped into the roadbed and down the roadside embankment. The impacted area was covered with visqueen while approval to excavate soil from State lands was sought. Excavation began six days later, after approval was received from the Alaska Department of Natural Resources. By that time, a portion of the contamination within the roadbed had become inaccessible and was therefore left in place. A total of 101 samples were field screened in October 2010 to delineate the impacted area. The roadside shoulder was excavated to 8 ft. below ground surface, and approximately 330 cubic yards of impacted soil were transported to Alaska Soil Recycling for thermal desorption.

Confirmation soil samples were collected from the lower excavation limits on the roadside shoulder, from the steep roadside embankment, and from approximately 30 ft. downgradient (near the base of the embankment). Soil from the roadbed and fractured bedrock contained up to 13,500 mg/Kg DRO, 0.0687 mg/Kg benzene, 11.7 mg/Kg toluene, 28.8 mg/Kg ethylbenzene, and 133 mg/Kg total xylenes. Nearly a year later (in September 2011), maximum DRO concentrations reached 6,170 mg/Kg directly below the release site at the base of the embankment. Record snowfall during the winter of 2011-2012 led to heavy snowmelt, and the Matanuska River flooded. These factors, combined with low organic content of local soils, allowed most of the remaining contamination to wash from the rocky substrate. When re-sampled in October 2012 (two years after the release event) maximum DRO concentrations at the base of the embankment had fallen to 494 mg/Kg.

Soil samples containing the highest DRO concentrations in 2011 and 2012 were also analyzed for Polynuclear Aromatic Hydrocarbons (PAHs) by EPA method 8270M, but PAHs did not exceed Method Two default cleanup levels. Five surface water samples were collected from the Matanuska River (three in 2011 and two in 2012) to determine if contaminants had migrated into the river. Neither DRO nor BTEX were detected.

Pathway Evaluation

Following investigation and cleanup, exposure to remaining contaminants were evaluated using ADEC’s Exposure Tracking Model (ETM). Exposure pathways are conduits by which contamination may reach human and/or ecological receptors. ETM results show all pathways to be one of the following: De Minimis Exposure, Exposure Controlled, or Pathway Incomplete. A summary of this evaluation is depicted in Table 3.

Table 3 – Exposure Pathway Evaluation

Exposure Pathway	Result	Explanation
Surface Soil Contact	De Minimis Exposure	Contaminated soil was excavated to a maximum of 8’ BGS and replaced with clean soil. The remainder was excavated to the maximum extent practical, but some was inaccessible within shallow, fractured bedrock.
Sub-Surface Soil Contact	De Minimis Exposure	Contaminated soil was excavated to a maximum of 8’ BGS and replaced with clean soil. The rest remains inaccessible within the roadbed or fractured bedrock.
Inhalation – Outdoor Air	Pathway Incomplete	Volatile and aromatic compounds were not detected during the two most recent sampling events. Therefore, this pathway is considered to be incomplete.

Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There are no buildings within a 550 ft. radius. Topography and hydrology preclude future construction on the Matanuska floodplain. Therefore, this pathway is considered to be incomplete.
Groundwater Ingestion	De Minimis Exposure	Although DRO concentrations remain above default cleanup levels in soil, impact to local properties is unlikely. Future construction or drinking well installation near the source area is also unlikely. The closest residence is over 1,600 ft. away. Private cabins exist 550 ft. across the Matanuska River from the source area, but impacted groundwater on these properties is unlikely.
Surface Water Ingestion	Pathway Incomplete	Analytical samples from the Matanuska River (the closest surface water body downgradient of the release site) have not shown evidence of contamination.
Wild Foods Ingestion	De Minimis Exposure	Contamination was released onto the highway shoulder and quickly escaped into fractured bedrock. Therefore, future exposure is unlikely but would be minimal, if it occurs.
Exposure to Ecological Receptors	De Minimis Exposure	Most of the contamination appears to have already washed away, and there is no evidence of ecological damage.

Notes to Table 3: “De Minimis Exposure” means that in ADEC’s judgment receptors are unlikely to be affected by the minimal volume of remaining contamination. “Pathway Incomplete” means that in ADEC’s judgment contamination has no potential to contact receptors. “Exposure Controlled” means there is an administrative mechanism in place limiting land or groundwater use, or a physical barrier in place that deters contact with residual contamination.

ADEC Decision

Based on available information, ADEC has determined that there is no longer an unacceptable risk to human health or the environment at this site, and no further assessment or cleanup is required. Therefore, the site identified as: *Big State Logistics Vehicle Rollover – MP 77.8 Glenn Highway* will be designated as “Cleanup Complete” in the Department’s database.

Although a Cleanup Complete determination is being granted, ADEC approval is required prior to off-site transport of soil or groundwater that has been subject to the release of hazardous substances in accordance with 18 AAC 75.325(i). 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, regardless of property ownership. 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, so confirmation samples should be analyzed prior to soil transport and deposition. This determination is in accordance with 18 AAC 75.380(d) and does not preclude ADEC from requiring additional assessment and/or cleanup 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 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.

If you have questions about this closure determination, please contact the ADEC project manager, Richard Bernhardt, at (907) 269-7546.

Sincerely,



Richard R. Bernhardt, PhD
Environmental Program Specialist

cc: Lyle Greschover, ARES

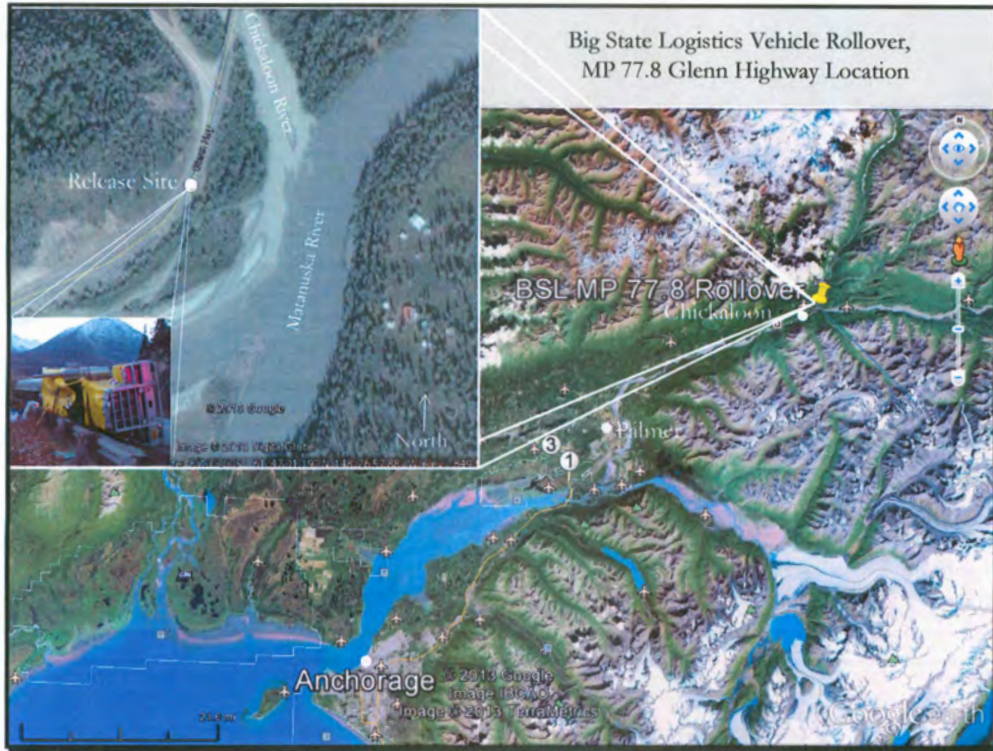


Figure 1. Site Map. A Big State Logistics Inc. tanker truck collided with the guardrail at Glenn Highway Milepost 77.8 and released approximately 2,264 gallons of #1 low sulfur diesel fuel onto the east side of the Glenn Highway. Contamination spread onto the Matanuska River floodplain at the base of the roadside embankment.