STATE OF ALASKA

SARAH PALIN, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM

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File: # 2225.38.001

January 10, 2008

Susan Schrader
Alaska Railroad Corporation
P.O. Box 107500
Anchorage, Alaska 99510

Re: ARRC Gold Creek Derailment
Record of Decision

Dear Ms. Schrader:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of administrative records associated with the Alaska Railroad Corporation (ARRC) Gold Creek Derailment and the report titled *Summary Report: 2002 to 2007 Groundwater Monitoring Results and Hydrocarbon Fate and Transport Modeling.* This site had been contaminated by the release of a hazardous substance; however, based on the information provided to date, it has been determined that the remaining hazardous substance contamination does not pose an unacceptable risk to human health or the environment. Therefore, the ARRC Gold Creek Derailment can be closed subject to the conditions outlined in the Record of Decision (ROD).

This determination is in accordance with 18 AAC 75.380(d) 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. Site closure (without conditions) can be achieved when soil sampling confirms that all soil meets the most stringent ADEC cleanup levels.

If you have questions about this closure decision, please contact the ADEC Project Manager, Linda Nuechterlein at (907) 269-7530.

Sincerely,

Linda Nuechterlein for

Jim Frechione
Environmental Manager

Attachments: Record of Decision

cc: Wyn Menefee, ADNR

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM

RECORD OF DECISION
January 10 2008

ARRC Gold Creek Derailment
Alaska RR Milepost 262
File No. 2225.38.001

This Record of Decision (ROD) presents the selected cleanup action and supporting rationale for the cleanup at the Alaska Railroad Corporation (ARRC) Gold Creek Derailment site. This decision is based on a review of the administrative record which is located in the offices of the Alaska Department of Environmental Conservation (ADEC) in Anchorage, Alaska. This site had been contaminated by the release of a hazardous substance; however, based on the information provided to date, ADEC has determined that no further remedial action is required, and that the ARRC Gold Creek Derailment site can be closed subject to the conditions outlined in this document. This ROD summarizes the decision process used to determine the environmental status of this site and provides a summary of the regulatory issues considered in the ADEC determination.

Site Name and Location
ARRC Gold Creek Derailment
Milepost 262, Alaska Railroad
35 Miles north of Talkeetna, Alaska

Name and Mailing Address of Contact Party:
Susan Schrader
Alaska Railroad Corporation
P.O. Box 107500
Anchorage, Alaska
99510

ADEC Identification Numbers:
ADEC Reckey # 1999220135601
CS File # 2225.38.001

Legal Description:
Tract A, US Survey 9042 (west side or RR ROW)
Lot 13, US Survey 4851 (east side of ROW)
Within T31N, R2W, SM

Regulatory authority under which the site is being cleaned up:
18 AAC 75 and 18 AAC 70

Background

On December 22, 1999, a southbound Alaska Railroad Corporation (ARRC) fuel train derailed at the Gold Creek siding spilling approximately 120,000 gallons of Jet-A fuel.

Spill response began immediately following the spill and consisted of product recovery and cleanup of contaminated snow at the site. Additional product was removed with recovery wells and by vapor extraction. It was estimated, that 16,000 gallons of product were recovered during the initial spill response.

Comprehensive site investigation activities began in 2000 with the installation of a monitoring well array. Extensive evaluation of site geology, hydrogeology, hydraulic conductivity, groundwater flow direction/velocity, and natural attenuation parameters followed. These activities continued in 2001 with additional monitoring and an evaluation of potential human health risks.

In 2002, a Proposed Plan was prepared by ADEC and presented to the public for comment. The plan identified Monitored Natural Attenuation as the preferred remediation technique and this was supported by field measurements of natural attenuation parameters such as a decrease in dissolved oxygen levels. The groundwater data indicates the dissolved-phase hydrocarbon plume has attenuated to drinking water standards within a few hundred feet of the source area.

Since 2002, groundwater has been monitored three to four times throughout the year to evaluate contaminant concentrations during different seasons and at various groundwater elevations. Monitoring activities included measurement of free phase product, evaluation of groundwater flow direction, and an analysis of natural attenuation and groundwater quality parameters. The results of groundwater monitoring activities indicated the following:

- Free phase product plume is relatively stable and has not migrated from the historic footprint.
- The free product footprint and the thickness of free product are decreasing over time.
- Distinct boundaries exist both upgradient and cross gradient for the free product area and areas that remain uncontaminated.
- Sentinel wells installed between the free product area and the Susitna River have not detected contamination to date.
- The dissolved-phase plume has not migrated beyond 100 to 150 feet of the free product area.

In addition, the fate and transport of hydrocarbons at Gold Creek have been modeled to better understand the long term risk and help develop institutional controls. The computer modeling concluded that the remaining free product and dissolved phase contaminant plumes will not migrate downgradient and reach the Susitna River.

Furthermore, an analysis of groundwater monitoring data collected between 2001 and 2007 has established that petroleum hydrocarbon contamination is stable and not increasing beyond the limits indicated by the fate and transport computer model. This has also been documented by sampling results from the 26 site-wide groundwater monitoring events representing all seasons.

Contaminants of Concern
Diesel Range Organics (DRO)
Gasoline Range Organics (GRO)
Benzene
Toluene
Ethyl benzene
Total Xylenes

Cleanup Levels
The soil cleanup levels established for this site can be found in 18 AAC 75.341 Tables B1 and B2, Under 40 inch Zone, Migration to Groundwater.

Contaminant	Site Cleanup Level (mg/kg)
Diesel Range Organics	250
Gasoline Range Organics	300
Benzene	0.02
Toluene	5.4
Ethyl benzene	5.5
Total Xylenes	78

The groundwater cleanup levels established for this site can be found in 18 AAC 75.345 Table C.

Contaminant	Site Cleanup Level (mg/kg)
Diesel Range Organics	1.3
Gasoline Range Organics	1.3
Benzene	0.005
Toluene	1.0
Ethyl benzene	0.7
Total Xylenes	10.0

Pathway Evaluation
The human health exposure and/or migration pathways were evaluated in this decision document. The exposure pathways for human health included: inhalation of outdoor air; ingestion of soil; dermal contact with soil; and ingestion of groundwater. Even though the exposure pathways may be complete, the exposure risk is considered acceptable based on the current (and proposed future) use of the property. The inhalation and ingestion pathways do not pose an unacceptable risk because contamination is at depth in the subsurface. Restrictions on soil excavation will be a condition of the decision document to ensure protection of workers when (or if) soil is ever excavated. Furthermore, the site is remote and within a State Park that does not allow permanent residents.

The migration pathways include migration to ground and surface water. The migration to groundwater pathway is complete but groundwater is not used as a drinking water source and there are no domestic wells in the area. A restriction on groundwater use (in the area of contamination) will be part of the decision document.

The nearest surface water body is the Susitna River which is located approximately 300 feet downgradient of the dissolved phase plume. Both groundwater monitoring and fate and transport modeling indicate that contamination is stable and/or decreasing. There is no evidence of migration to the Susitna River.

The pathway evaluation above is supported by the most recent ranking using ADEC's Exposure Tracking Model, which indicates all of the potential exposure pathways are one of the following: incomplete, exposure controlled, or de minimis.

ADEC Decision

There is contamination remaining above established cleanup levels at the ARRC Gold Creek Derailment Site but monitoring data indicates it is stable or decreasing in concentration. Based on the information presented to date, ADEC has determined there is no unacceptable risk posed to human health or the environment at this site, and it will be conditionally closed subject to the following conditions:

1. A Notice of Environmental Contamination will be recorded on the ADEC database to document that there is residual contamination remaining on site above the most stringent ADEC cleanup levels. In addition, ADNR shall be requested to post a notice on State status plats that indicates there are restrictions on land and groundwater use in the area, and that ADEC shall be contacted regarding any proposed uses.

2. Any proposal to transport soil or groundwater off site requires ADEC approval in accordance with 18 AAC 75.325(i).

3. A groundwater monitoring plan will be submitted to ADEC for review and approval, prior to the next sampling event to occur in 2008 which should include monitoring wells ELV4, ELV25, ELV26, ELV28, ELV29, ELV42, ELV43, ELV53, ELV54, ELV57, and ELV58. Samples will be analyzed for DRO, GRO, and BTEX. The need for further groundwater sampling will be evaluated after results from the 2008 monitoring are available. Additional wells may be added to the monitoring program on an as-needed basis.

4. Any monitoring wells that are not needed for future groundwater monitoring shall be decommissioned in accordance with an ADEC approved work plan.
5. Groundwater wells will not be installed on this property without prior approval from ADEC.
6. Any proposal to excavate soil on site will require ADEC approval to ensure protection of workers.

7. ARRC shall notify the ADEC if the land use changes or if the land is leased or

transferred to another owner.

This determination is in accordance with 18 AAC 75.380(d) 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. Site closure (without conditions) can be achieved when soil sampling confirms that all soil meets the most stringent ADEC cleanup levels.

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 decision, please contact the ADEC Project Manager, Linda Nuechterlein at (907) 269-7530.

Sincerely,

Linda Nuechterlein for

Jim Frechione
Environmental Manager

Alaska Railroad Corporation agrees to the terms and conditions noted in the above Record of Decision.

_____ _____

Name/Title
Alaska Railroad Corporation

Date