STATE OF ALASKA

SARAH PALIN, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM

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File: # 300.38.266

January 8, 2008

Barbara Carroll
Rowan Companies Inc.
Williams Tower, Suite 5450
2800 Post Oak Boulevard
Houston TX, 77056-6127

Re: Rowan Deadhorse Yard Tract 52
Record of Decision

Dear Ms. Carroll:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed review of the report titled *Rowan Deadhorse Yard Phase II Environmental Investigation and Remediation Activities* dated November 2007. This site had been contaminated by the release of a hazardous substance; however, based on the information provided to date, the hazardous substance contamination has been adequately addressed and does not pose an unacceptable risk to human health or the environment. Therefore, ADEC has determined that no further remedial action is required, and that the Rowan Deadhorse Yard Tract 52 can be closed subject to the conditions outlined in this document.

This decision is based on the administrative record for this site which is located in the offices of the Alaska Department of Environmental Conservation (ADEC) in Anchorage, Alaska. This letter 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.

Introduction

Site Name and Location
Rowan Deadhorse Yard Tract 52
Deadhorse, AK

Name and Mailing Address of Contact Party:
Barbara Carroll
Rowan Companies Inc.
Williams Tower, Suite 5450
2800 Post Oak Boulevard
Houston TX, 77056-6127

Printed on Recycled Paper

Database Record Key and CS file number:
ADEC Reckey # 2007360119801
LUST file # 300.38.266

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

Background
This pad has been occupied by Rowan since the early 1980's and was impacted by spills and leaks during that time.

Site Characterization
In July 2007, Rowan began a removal action at an area of stained soil between the Maintenance Shop and the Old Shop in the northeast corner of the pad. This area became known as Area of Concern (AOC) #4, following a Phase I Site Assessment conducted by the Alaska Department of Natural Resources (ADNR) that also identified 13 other AOCs on the lease property.

A Phase II investigation was subsequently conducted in August 2007 and included the excavation and field screening of soil in 34 test pits, the collection of 8 subsurface soil samples, and 2 surface soil samples. Test pit samples found Diesel Range Organics (DRO) up to 3,550 mg/kg at 4 feet below grade in test pit 29; however AOC #4 remained the primary area of concern.

Three excavations were conducted at AOC #4 to remove petroleum impacted soil from between the Old Shop and the Maintenance Building resulting in the removal of approximately 388 cubic yards of soil that was characterized, then disposed of at the Oxbow Landfill. Confirmation samples collected after the excavation contained DRO up to 11,000 mg/kg and total xylenes up to 132 mg/kg. These concentrations were found in samples collected adjacent to the foundations of the two buildings where additional excavation was impracticable.

A visual inspection of the tundra surrounding the pad was conducted and no sheen, staining, or stressed vegetation was observed.

Contaminants of Concern
Diesel Range Organics (DRO)
Total Xylenes

Cleanup Levels
The cleanup levels for petroleum hydrocarbon-contaminated soil on manmade gravel pads and roads in the Arctic Zone are established in 18 AAC 75.341 Method One, Table A2 and 18 AAC 75.341 Method Two Tables B1 and B2.

A number of factors are considered by ADEC when evaluating site specific cleanup levels in the Arctic Zone including:

- human health (ingestion/inhalation);
- ecological impacts (contamination impacting ecological species other than humans);

- water (ground and surface) quality;
- presence of free phase product; and
- any other factors that might cause a deleterious impact to the environment.

In the Arctic Zone, the migration to surface water pathway is evaluated as the primary migration pathway since the migration to groundwater pathway is not considered applicable due to the presence of continuous permafrost.

The 18 AAC 75.341 Method Two Table B2 regulations also limit soil hydrocarbon concentrations to a "maximum allowable concentration". This concentration was established based on a specific soil type in which hydrocarbon product may become mobile as a separate phase and migrate in the soil. If a petroleum hydrocarbon exceeds a soil saturation limit, there may be an increased risk of migration off the gravel pad to surface water or tundra that has to be evaluated when making environmental decisions. Therefore, the soil type must be evaluated when establishing cleanup levels in the Arctic Zone to ensure the petroleum hydrocarbon does not exceed the residual saturation levels and pose a risk by migrating.

ADEC has evaluated the current site specific information regarding North Slope soil types and considers a coarse gravel soil type to be representative of those gravel pads rather than a fine sandy silt soil that was considered when establishing the Table B2 Arctic Zone levels. The diesel range saturation point in a coarse gravel material is 2200 mg/kg; the gasoline range saturation point is 950 mg/kg with residual range being 4800 mg/kg.

NOTE: Even though the migration to groundwater pathway is not complete in the Arctic Zone, the soil cleanup levels established for the migration to groundwater pathway in the Over 40 inch Zone are considered to be the most stringent cleanup levels, and protective of human health and the environment. If these cleanup levels are achieved at an Arctic Zone site, it will allow for unrestricted closure. In addition, the 18 AAC 75.341 Method One Table A2 cleanup levels may also be considered when making a final closure determination. Either Method One or Method Two migration to groundwater cleanup levels are considered protective to allow full site closure. The guidance document, "Policy for Establishing Cleanup Levels for Sites in the Arctic Zone in Accordance With 18 AAC 75, Article 3," provides additional information for management of residual contamination in the Arctic Zone.

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. These pathways may be complete but contaminant concentrations are below ADEC inhalation and ingestion cleanup levels

The migration to surface water pathway may be complete but the remaining contamination is over 100 feet from the nearest surface water and is surrounded by samples showing significantly lower contaminant concentrations.

The exposure pathway analysis above was supported by the most recent ADEC Exposure Tracking Model (ETM) ranking. The ETM results showed all pathways to be one of the following: De Minimis Exposure, Exposure Controlled, or Pathway Incomplete.

ADEC Decision

There is contamination remaining above established cleanup levels at the Rowan Deadhorse Yard Tract 52 but ADEC has determined there is no unacceptable risk to human health or the environment, and this site will be conditionally closed.

This decision is 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;

2. Any proposal to transport soil off site requires ADEC approval in accordance with 18 AAC 78.274(b)

This determination is in accordance with 18 AAC 75.380(d) (2) 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, William O'Connell at (907) 269-3057.

Sincerely,

Linda Quattlebaum for

Jim Frechione
Environmental Manager

Cc. Gary Schultz, ADNR Fairbanks