STATUTORY DETERMINATIONS

The final remedies documented in this ROD are protective of human health and the environment. The remedies are cost-effective and comply with all applicable or relevant and appropriate federal and state requirements. The remedies also satisfy the statutory preference for treatment as a principal element of the remedy. Because the remedies will result in hazardous substances remaining on-site above risk-based levels, they will be reviewed by USAF and ADEC at a frequency of not less than once every five years after implementation to evaluate if the remedies continue to be effective and appropriate. Input from Federal and State trustees, King Salmon Village Council, Naknek Village Council, South Naknek Native Village Council, and the King Salmon Restoration Advisory Board (RAB) will be solicited prior to implementing any significant changes. These decisions may be reviewed and modified in the future if new information becomes available which indicates the presence of previously undiscovered contamination or exposure routes that may cause a risk to human health or the environment.

18 Dec 03

L. Dean Fox, Maj Gen, USAF
The Civil Engineer
DCS/Installations & Logistics

Date

John Halverson, for

Signed

18 Dec 2002

Jennifer Roberts, Contaminated Sites Program
DoD Section Manager
State of Alaska Department of Environmental Conservation

Date

ADDENDUM ONE

TO

RECORD OF DECISION
FOR
FINAL REMEDIATION

GROUNDWATER ZONE 2 (OT028)
WASTE ACCUMULATION AREA 3 (SS017)
ESKIMO CREEK DUMP (SS022)
REFUELER SHOP (SS021)
OLD POWER PLANT BUILDING (SS020)

KING SALMON AIR STATION
KING SALMON, ALASKA

FINAL
ADDENDUM ONE
19 NOV 03

Prepared by:

United States Air Force
611th Civil Engineer Squadron
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The following addendum is intended to supplement and clarify the discussion in the King Salmon Record of Decision (ROD) for Final Remedial Action for Groundwater Zone 2 (OT028), Waste Accumulation Area 3 (SS017), Eskimo Creek Dump (SS022), Refueler Shop (SS021), and Old Power Plant Building (SS020) dated December 2002. It does not change the remedies selected for the King Salmon Industrial Area, but does give additional detail describing the remedies for SS022 and OT028 and clarifies the objectives of the remedies regarding various media at specific locations. If there is any ambiguity or inconsistency between the ROD itself and this document, the terms of this document should govern.

Background

As described on page 2-2 of the ROD, the Eskimo Creek Dump Site SS022 extends approximately 1,800 feet beside Eskimo Creek and is located on both sides of the Creek. Drums and other metallic debris were at one time scattered along the bluff leading down to the Creek, but have since been obscured by cover. For the purpose of this ROD and subsequent remediation work, the media of concern at the Eskimo Creek Dump Site (SS022) is landfill debris and soil. As described on page 2-2 Groundwater Zone 2 (OT028) includes the groundwater beneath the Eskimo Creek Site SS022. The portion of Figure 1 of the ROD that shows Groundwater Zone 1 encompassing the west side of Eskimo Creek Dump (Site SS022) is misleading as the entire site SS022 is considered to be within Groundwater Zone 2 (OT028).

The remedy and Remedial Action Objectives for Groundwater Zone 2 (OT028) just pertain to Aquifer A and the surface water influenced by Aquifer A. Aquifers B and C within Groundwater Zone 2 (OT028) are not contaminated and are not medias of concern. Monitoring of Aquifers B and C is not required.

Although known conditions at SS022 and OT028 do not show any current human or ecological exposure to contaminated media above relevant action levels, the Air Force has identified significant levels of contaminants at these sites as described on page 4-6 through page 4-10 of the ROD. Past monitoring results indicate that additional monitoring is appropriate for SS022 and OT028 to ensure the action levels are not exceeded and to ensure that the selected remedies are protective of human health and the environment. The Air Force and ADEC agree that the following remedial action objectives and implementing actions are appropriate to ensure continued protectiveness of human health and the environment at the King Salmon Industrial Area (particularly regarding SS022 and OT028).

Remedial Action Objectives for SS022:

(a) Prevent direct exposure to soil and debris with VOCs, GRO and DRO.
(b) Prevent contaminants of concern from migrating from the landfill at action levels that present an unacceptable risk to human health or the environment (the action levels are recited on page iv and in Table 8-2).

In order to achieve the above-described Remedial Action Objectives for SS022, the Air Force will:

(1) Remove extruding surface drums and debris and revegetate cover throughout site SS022 as needed to minimize erosion and exposure to VOCs, GRO, and DRO.
(2) Fill in surface depressions to facilitate surface water drainage, minimize erosion, and reduce potential exposure and migration of contaminants.
(3) Maintain institutional controls to restrict excavations and other subsurface activities, by appropriate notations of such restrictions in the base master plan and state land records. The goal of the institutional controls is to minimize direct exposure to contaminants and minimize contaminant migration.
(4) Conduct annual monitoring of VOCs, GRO, and DRO. The Air Force will test for VOCs, GRO, and DRO in the groundwater in the vicinity of SS022 for up to five years to confirm the remedy for SS022 soil and debris is adequate to protect human health and the environment. The Air Force will develop and maintain as necessary approximately 7 monitoring points or wells within the vicinity of SS022. The well locations, sampling, and testing will be consistent with the technical requirements 18 AAC 75 and will be developed by the Air Force with ADEC input. The Air Force will conduct a comprehensive review of the monitoring results and contamination left in place within 5 years after initiation of the remedy.

Remedial Action Objective (b) will be achieved when two consecutive annual sampling events from SS022 monitoring wells show that the cleanup levels presented on page iv and Table 8-2 of the ROD have been attained. When objective (b) is achieved the sampling and monitoring for SS022 (as outlined in paragraph 4 above) may be discontinued and the monitoring wells decommissioned. Site SS022 will become a No Further Response Action Planned (NFRAP) site when Objective (b) has been achieved and the items in paragraphs 1-4 above have been accomplished.

Remedial Action Objectives for OT028 (Groundwater Zone 2):

(A) Prevent or minimize potential exposure to contaminated groundwater in Aquifer A and surface water influenced by Aquifer A.

(B) Reduce contaminant levels of VOCs, DRO, and GRO in Aquifer A to meet cleanup levels identified on page iv and Table 8-2 of the ROD.

In order to achieve the above-described Remedial Action Objectives for OT028, the Air Force will:

(1) Maintain institutional controls to restrict excavations and other subsurface activities, by appropriate notations of such restrictions in the base master plan and

state land records in order to minimize direct exposure to contaminants and minimize contaminant migration.

(2) Use monitored natural attenuation to reduce contaminant levels of VOCs, GRO, and DRO to meet cleanup levels identified on page iv and Table 8-2 of the ROD.

(3) Perform the monitored natural attenuation remedy and assure its protectiveness by sampling on an annual basis for VOCs, GRO, DRO, and monitored natural attenuation parameters at approximately twelve groundwater wells and by sampling on an annual basis for VOCs in surface water at three surface water locations.

(4) Prepare groundwater modeling every five years and as required by the Comprehensive Environmental Response Compensation Liability Act and the Defense Environmental Restoration Program conduct five-year reviews as long as objective (B) above has not been achieved.

Remedial Action Objective B will be achieved when two consecutive sampling events show that the cleanup levels presented on page iv and Table 8-2 of the ROD has been attained. Site OT028 will become a NFRAP site when Remedial Action Objective B is achieved and when the institutional controls outlined in subparagraph (1) above have been successfully implemented.

The following interpretations or minor modifications are made to the ROD:

1. Unless stated specifically otherwise, the term groundwater in the ROD when referring to groundwater within Groundwater Zone 2 is referring to the water saturated zone in the A Aquifer.

2. When the ROD refers to a monitoring plan developed by the agencies, it will be a monitoring program developed by the Air Force with ADEC input. The monitoring program developed by the Air Force will be consistent with the technical requirements set forth in state of Alaska regulations and will be designed to address the Remedial Action Objectives set forth in this addendum. It is the intention of the ROD and this Addendum that the substances being monitored are limited to those listed in this addendum (i.e. VOCs, GRO and DRO).

3. When the ROD refers to action levels it is referring to those action levels listed on Remedial Action Objectives Table 8-2 appearing on pages iv and 8-3 of the ROD.

4. The reference to Table 8-1 on page 11-2 of the ROD is a typographical error. The ROD intended to refer to Table 8-2.

5. Annual sampling may be modified to less frequent sampling when sufficient data to establish trends have been established.

6. Pursuant to CERCLA and DERP it is the intention of the Air Force to conduct a five-year review of these sites with ADEC input (i.e., a policy review consistent with the lead agency responsibilities as described in the EPA document *Comprehensive Five -Year Review Guidance* dated June 2001). As a part of the five-year review the Air Force intends to evaluate the protectiveness of the remedies selected and make modifications if necessary to protect human health and the environment. It is possible that the selected remedy of natural attenuation will result in TCE breakdown compounds and these compounds in the future may need to be regarded as Chemicals of Concern (COCs) if monitoring results show these compounds pose an unacceptable risk to human health or the environment.

7. These decisions may be reviewed and modified in the future if new information becomes available which indicates the presence of previously undiscovered contamination or exposure routes that may cause a risk to human health or the environment.

SIGNATURES:

L. DEAN FOX, Maj Gen, USAF
The Civil Engineer

12 Dec 03
Date

Jennifer Roberts, Contaminated Sites Program
DOD Section Manager
Alaska Department of Environmental Conservation

17 Dec. 03
Date