

Explanation of Significant Differences

Mountain Home Air Force Base, Mountain Home, ID

I. Introduction

This document presents an Explanation of Significant Differences (ESD) for the Record of Decision (ROD), signed 20 October 1995, for four operable units (OUs 1, 3, 5, and 6) of Mountain Home Air Force Base (MHAFB), in Elmore County, Idaho. The ESD specifically addresses Site ST-11, a JP-4 fuel system leak. Site ST-11 is included in OU 1 and 3. The ROD was signed by the United States Air Force (USAF), the United States Environmental Protection Agency (EPA), and the Idaho Department of Health and Welfare (now Idaho Department of Environmental Quality [IDEQ]).

This ESD, prepared in accordance with Section 117(c) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and 40 CFR 300.435(c)(2)(I), documents significant differences to the remedy for ST-11 selected in the ROD. Briefly, the ESD documents enhanced institutional controls (IC) procedures and clarifies the institutional controls (IC) required for ST-11. The IDEQ supports the need for this ESD. This ESD will become part of the Administrative Record for MHAFB. The Administrative Record is located at the 366 CES/CEVR, 1181 Desert St., Building 1296, MHAFB, Idaho, 83648, telephone, (208) 828-6351. This ESD will also be available at the Information Repository at the Mountain Home Air Force Base Public Library, 520 Phantom Ave., MHAFB, Idaho, 83648, telephone, (208) 828-2326.

II. Summary of Site History, Contamination Problems and Selected Remedy

MHAFB is located in southwestern Idaho in Elmore County, approximately 10 miles southwest of the city of Mountain Home, 50 miles southeast of Boise and two miles north of the Snake River. The Base occupies approximately 6,900 acres (11 square miles) and is situated at an elevation ranging from 2,985 to 3,049 feet above sea level. The Base was established in 1943 by the U.S. Department of Defense as a training base for several bombardment groups during World War II. The Base was deactivated in the fall of 1945, reactivated as a Strategic Air Command (SAC) Base in 1948, and then deactivated in 1950. The Base was assigned to the Military Air Transport Service in 1951, and served as a training base for Aerial Resupply and Communication wings through 1953. The Base was under SAC jurisdiction until 1965 when the Tactical Air Command (TAC) assumed control. Three Titan I missile complexes were supported by MHAFB from 1960 to 1965. The 366th Tactical Fighter Wing has been assigned to MHAFB since 1972. On 1 June 1992, the base was transferred from TAC to the Air Combat Command (ACC).

In August 1990, MHAFB was listed on the EPA National Priorities List (NPL). A Federal Facility Agreement (FFA) under the statutory authority of Section 120 of CERCLA was signed on January 16, 1992, between the USAF, EPA Region 10, and the Idaho Department of Health and Welfare (now IDEQ).

To facilitate investigation and cleanup of MHAFB, the suspected contaminated areas were organized into 6 operable units (OUs), based on specific site problems, with a total of 32 sites. Investigation efforts are completed for sites in all the OUs. Final response actions were recommended, according to CERCLA guidance in a Proposed Plan, and

agreed to by the FFA managers in the 8 May 1992 ROD for OU-4, the 15 June 1993 ROD for OU-2, and the 20 October 1995 ROD for OUs 1, 3, 5, and 6.

ST-11 is an area where leaks of JP-4 jet fuel from the flight line fuel supply system in the late 1950s led to contamination of soil and perched groundwater. Concentrations of benzene in the perched water are significantly higher than the federal standard for drinking water, or Maximum Contaminant Limit (MCL). Other contaminants, such as toluene and xylene are also elevated. Samples have also indicated the presence of CERCLA contaminants such as acetone and 2-Butanone commingled at the site. Free phase fuel was observed in the perched groundwater during the RI/FS, and has since been found in the perched zone well PZMW-7, monitored since the ROD. The source of contamination is believed to lie mostly under the paved areas of the flightline and parking apron, but data indicate the potential for contaminant migration to the regional aquifer in soil water or in a vapor phase. MHAFB is investigating contaminant migration concerns, as recommended in the Five Year Review. While the remedy in the ROD is currently protective, the Five Year Review also recommended updating the IC requirements.

This ESD provides a description and basis for the significant difference represented by updating and clarifying the IC requirements. Attachment 1 summarizes the major components of the remedy selected for ST-11 in the 20 October 1995 ROD. Since this ESD presents an enhanced description of the ROD for ST-11, it does not address issues which affect sites other than ST-11.

III. Description of the Significant Differences and the Basis for the Differences

In the absence of active remediation, contaminants are likely to be present in perched groundwater and soils at ST-11 above health based levels indefinitely. ICs are being relied upon to protect human health and the environment at ST-11. This ESD has been prepared to address deficiencies in the ROD description of the ICs.

Since the ROD was issued in 1995, the Air Force has clarified ROD requirements for ICs in its "Air Force Policy and Guidance on Remedy Selection Documentation in Records of Decision (RODs)" memorandum dated 23 January 2002, and its "Air Force Principles for Performance-Based Records of Decision in Environmental Restoration," dated 7 October 2003. According to this guidance, RODs and changes to RODs that include ICs should contain the following: site-specific ICs including geographic location where ICs apply, the objectives of the control or restriction, and descriptions of the types of restrictions which need to be in place; the duration of the control(s), if not permanent, monitoring frequency, submission of an information only report of the monitoring event, and the entities responsible for establishing, implementing, and maintaining ICs. These ICs are implemented and enforced through the AF land management process and the base general or comprehensive plan, as described in III B. below.

III. A. Site-Specific IC requirements

ST-11 is located in an area where the current land use is as a flight line and flight support parking ramp. To supplement the institutional control requirements in the 20 October 1995 ROD, this ESD defines the objectives of the institutional controls, provides specific institutional controls for ST-11, and specifies the geographic location where they apply, and their duration. The Air Force will implement, monitor, maintain and enforce

remedies at ST-11 that protect human health and the environment (including land use controls (LUCs)) in accordance with CERCLA and the NCP.

III. B. Remedial Objectives for ST-11

The following IC objectives supplement the ICs established for ST-11 by the 20 October 1995 ROD, pages 72-73:

- To minimize potential for completing the contact and inhalation exposure pathway, limit future uses at ST-11 to industrial uses and prevent residential or commercial future uses until and unless it is demonstrated that soil and perched groundwater at ST-11 are no longer a threat to human health and the environment.
- To minimize potential for completing the ingestion exposure pathway for shallow groundwater, prevent future uses of perched (shallow) groundwater contaminated by fuel releases at site ST-11 until and unless it is demonstrated that perched groundwater at ST-11 is no longer a threat to human health and the environment.
- To minimize potential for completing the ingestion exposure pathway for regional groundwater, prevent drilling of wells or any other activity at site ST-11 which would penetrate or otherwise disturb the perched aquifer and continue into or provide a pathway to the regional (deep) aquifer currently located at approximately 370 feet below ground surface until and unless it is demonstrated that perched groundwater at ST-11 is no longer a threat to human health and the environment.

III. C. Specific Institutional Controls for ST-11

- The Air Force will implement, monitor, maintain and enforce remedies at ST-11 that protect human health and the environment (including land use controls (LUCs)) in accordance with CERCLA and the NCP. The specific controls listed below shall be in addition to those listed in the ROD. Air Force personnel, specifically those assigned to Mountain Home AFB, shall be responsible for implementing, monitoring, reporting and enforcing the land use controls at ST-11.
- Use of ST-11 is restricted to industrial purposes, to include the purpose for which it is currently used.
- The Air Force will ensure that the paved areas of the flightline and parking apron currently reducing surface water infiltration is not reduced in area or thickness, subject to temporary changes due to construction or repair. Such temporary changes shall not exceed a reasonable length of time to accomplish the planned construction or repair. Construction or repair shall include any work which the AF deems necessary to keep the flightline and parking area at ST-11 in its usable industrial condition, including replacement or repair of shattered, broken, cracked or defective concrete parking slabs, or upgrading of concrete slabs which comprise the runway or apron, during the annual construction periods of April through December.

- MHAFB has a Base General Plan which governs MHAFB's internal procedures for maintaining institutional controls at ST-11. MHAFB will provide EPA and IDEQ 30 days notice of any changes to the Base General Plan internal procedures for maintaining institutional controls which may affect ST-11.
- The Air Force has administrative procedures that require project approvals for projects that require construction or subsurface soil disturbance (for example, Air Force Instruction (AFI) 32-1021, Planning and Programming of Facility Construction Projects, and work request procedures under AFI 32-1001, Operations Management, or their equivalents as they may be amended). Air Force instructions and procedures require coordination with and prior approval by environmental personnel if a proposed project is located on or near an Environmental Restoration Project (ERP) site. The Air Force will ensure that these or similar instructions, processes, and requirements will be complied with for all proposed construction or subsurface soil-disturbing activities at ST-11.
- The Air Force will visually inspect ST-11, on at least an annual basis, to verify compliance with the IC requirements, objectives, and controls in the ROD and this ESD, and for violations of these controls as well as indications of tampering, incompatible use, and trespass.
- An annual report of the inspection will be developed by the Air Force and provided for information only to EPA Region 10 and Idaho DEQ. The report will include a statement as to whether all requirements, objectives, and controls in the ROD and this ESD have been complied with and whether the base's administrative procedures are effective. The report will also be included in the Administrative Record and/or Information Repository for ST-11.
- The Air Force shall provide prompt notice to the regulators if it discovers any activity that is inconsistent with the IC requirements, objectives or controls, or any action that may interfere with the effectiveness of the ICs. The Air Force shall include in such notice a list of corrective actions taken or planned to address such deficiency or failure. Prompt notification shall be no longer than 3 business days after discovery of the remedy deficiency or failure.
- The Air Force shall seek prior concurrence from EPA and IDEQ to (a) terminate land use controls, or (b) modify land use from industrial uses at ST-11; in addition, the Air Force shall seek prior concurrence before any anticipated action that may disrupt the effectiveness of the land use controls, or any action that may alter or negate the need for land use controls at ST-11.
- The Air Force will ensure that a notice (including, at least, a narrative description of the controls and reason for the controls, map or survey of the controlled area of ST-11, and a point of contact) of the land use control will be placed in the Base Comprehensive Plan, as well as in the files of the base real estate manager's office.
- The Air Force will provides notice to EPA and Idaho DEQ, consistent with

CERCLA Section 120(h) at least six (6) months prior to any transfer or sale of ST-11 including transfers to private, state or local entities, so that EPA and IDEQ can be involved in discussions to ensure that appropriate provisions are included in the transfer terms or conveyance documents to maintain effective ICs. If it is not possible for the facility to notify EPA and IDEQ at least six months prior to any transfer or sale, then the facility will notify EPA and IDEQ as soon as possible but no later than 60 days prior to the transfer or sale of any property subject to ICs. In addition to the land transfer notice and discussion provisions above, the Air Force further agrees to provide EPA and Idaho DEQ with similar notice, within the same time frames, as to federal to federal transfer of property accountability and administrative control of ST-11. Review and comment opportunities afforded to EPA and Idaho DEQ as to such federal to federal transfers shall be in accordance with all applicable federal laws.

III. D. Geographic Location Where ICs Apply

ST-11 is defined as a circular area of roughly 18 acres, centered on a point (Latitude 43.05.117 degrees north and Longitude 115.87646 degrees west) approximately 108 feet southwest of perched zone monitoring well PZMW-7 and having a 500-foot radius. Attached as Attachment 2 to this ESD is a map depicting the geographic location of the IC area for ST-11.

III. E. Duration of Institutional Controls

The Air Force, represented by the installation commander for Mountain Home AFB, is responsible for implementing, monitoring, and enforcing these land use controls at site ST-11 until and unless it is demonstrated that perched groundwater at ST-11 is no longer a threat to human health and the environment, verified by two years of semi-annual sampling events where analytical results show that the contaminants of concern are less than the maximum contaminant levels (MCLs).

The Air Force recognizes that, at sites where contaminants are left in place above levels allowing unlimited use and unrestricted exposure, ICs are used to ensure that these contaminants do not pose an unacceptable risk to human health or the environment. Thus, where there is failure to meet IC Objectives or failure of LUC implementation actions that could lead directly to remedy failure, the Air Force acknowledges that the regulators may seek to re-open the remedy decision in addition to exercising any other authorities they may have under CERCLA. MHAFB will not waive, delete, or terminate any ROD-required IC unless done in accordance with this ROD or ESD for ST-11.

IV. State Agency Comments

The IDEQ has reviewed this ESD and supports these clarifications to the selected remedy for site ST-11.

V. Public Participation Activities

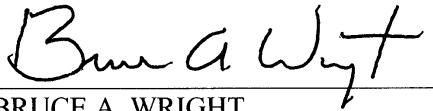
MHAFB will publish a notice of availability and a brief description of this ESD in the local newspaper, the Mountain Home News. In addition, the topic will be discussed

during the FY04 Spring and Fall Restoration Advisory Board meetings for Mountain Home AFB.

VI. Affirmation of the Statutory Determinations

The Applicable or Relevant and Appropriate Requirements (ARARs) addressed by the ROD are not modified by this ESD. This ESD clarifies the intent of the ROD as a result of the Five Year Review, in furtherance of new guidance from the Air Force stated above.

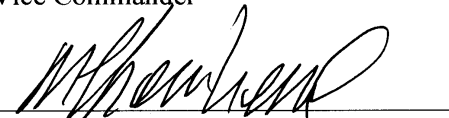
Considering the clarifications to the selected remedy as documented in this ESD, the USAF, EPA, and IDEQ believe that the institutional controls portion of the remedy for ST-11 remains protective of human health and the environment, complies with federal and state requirements that were identified in the ROD as ARARs, and is cost-effective. In addition, the remedy continues to utilize permanent solutions and alternative treatment technologies to the maximum extent practicable for this site.



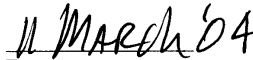
BRUCE A. WRIGHT
Lieutenant General, USAF
Vice Commander



Date



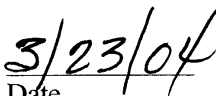
MICHAEL F. GEARHEARD
Director, Environmental Cleanup Office
EPA, Region 10



Date



C. STEPHEN ALLRED
Director
Idaho Department of Environmental Quality



Date

Attachment 1

The Selected Remedial Actions for ST-11 in the 20 October 1995 ROD

The ROD Declaration, page ii, states:

“[T]he Flightline Fuel Spill site (ST-11- the Perched Zone), will undergo a Limited Action consisting of the following:

Notice of Restriction which will identify the perched zone and prohibit drilling of the perched zone or use of the perched water as drinking water on the MHAFFB Comprehensive Plan. The Plan will be registered on land plat maps held by MHAFFB. The land is held by lease by the Air Force and can not go back to the land holder (Bureau of Land Management) until contamination is below MCLs.

Leak Detection Program, which will ensure early detection of any future petroleum leaks at the site. The program includes petroleum inventory and annual flight line leak detection programs.

Sampling of the perched groundwater prior to the removal of the land use restriction to ensure that perched water meets the standards of the Safe Drinking Water Act.

Monitoring of the perched groundwater quality in accordance with the approved groundwater monitoring plan.

The Limited Action alternative addresses the principal threat posed by Site ST-11 because the perched water would only present an unacceptable risk if site use changed and if the perched water could be used as a source of water for residential use.”

Also, the ROD, Section VIII, The Selected Remedy (page 73) states:

“This action is necessary because of the risk identified from the contaminated perched water, if the perched water zone were considered as a source of drinking water. This action will meet the remedial action objectives within the reasonable time frame for this site by ensuring:

- The protection of human health by preventing human exposure to the perched water
- The protection of environment by preventing an inadvertent release through either accidental penetration of the contaminated zone or extraction and release of contaminated perched groundwater to the environment”

ST - 11

