

IAG COVER SHEET

FILE NAME: FEWarren.pdf

Title: F.E. WARREN AIR FORCE BASE

Subject: Region 8, VIII

Author: Air Force, DoD, Wyoming, WY

Keywords: 9/26/91, 1991, FY91

UNITED STATES ENVIRONMENTAL PROTECTION
AGENCY REGION VIII
AND THE
STATE OF WYOMING
AND THE
UNITED STATES AIR FORCE

IN THE MATTER OF:)

The U.S. Department)
of the Air Force)

F.E. Warren Air Force Base)
Cheyenne, Wyoming)
EPA ID NO WY557:924179)

) Federal Facility
) Agreement Under
) CERCLA Section 120

) Administrative
) Docket Number:

) CERCLA-VIII-91-23

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
AND THE
STATE OF WYOMING
AND THE
UNITED STATES AIR FORCE

IN THE MATTER OF:)
) Federal Facility
The U.S. Department) Agreement Under
of the Air Force) CERCLA Section 120
)
) Administrative
F.E. Warren Air Force Base) Docket Number:
Cheyenne, Wyoming)
EPA ID NO WY5571924179) CERCLA-VIII-91-23

Based on the information available to the Parties on the effective date of this Federal Facility Agreement (Agreement) and without trial or adjudication of any issues of fact or law, the Parties agree as follows:

1. PURPOSE

1.1 The general purposes of this Agreement are to:

(a) Ensure that the environmental impacts associated with past and present activities at the Site are thoroughly investigated and appropriate remedial action taken as necessary to protect the public health, welfare, and the environment;

(b) Establish a procedural framework and schedule for developing, implementing, and monitoring appropriate response actions at the Site in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the National Contingency Plan (NCP), Superfund guidance and policy, the Resource Conservation and Recovery Act (RCRA), RCRA guidance and policy, and applicable State law; and

(c) Facilitate cooperation, exchange of information, and participation of the Parties in such action.

1.2 Specifically, the purposes of this Agreement are to:

(a) Identify Operable Unit (OU) Remedial Actions which are appropriate at the Site prior to implementation of Final Remedial Action at the Site. Operable Unit Remedial Action Alternatives shall be identified and proposed to the Parties as early as possible prior to proposal of the Final Remedial Action at the Site. This process is designed to promote cooperation

among the Parties in identifying Operable Unit Remedial Actions prior to selection of the Final Remedial Action at the Site.

(b) Establish requirements for the performance of a Remedial Investigation (RI) to determine fully the nature and extent of the threat to the public health or welfare or the environment caused by the release and threatened release of hazardous substances, pollutants, or contaminants at the Site and to establish requirements for the performance of a Feasibility Study (FS) for the Site to identify, evaluate, and select alternatives for the appropriate remedial action(s) to prevent, mitigate, or abate the release or threatened release of hazardous substances, pollutants, or contaminants at the Site in accordance with CERCLA and applicable State law;

(c) Identify the nature, objective, and schedule of response actions to be taken at the Site. Response actions at the Site shall attain that degree of cleanup of hazardous substances, pollutants, or contaminants mandated by CERCLA and applicable State law;

(d) Implement the selected remedial actions(s) in accordance with CERCLA and applicable State law and meet the requirements of CERCLA Section 120(e)(2), 42 U.S.C. Section 9620(e)(2), pertaining to interagency agreements;

(e) Ensure compliance, through this Agreement, with RCRA and other Federal and State hazardous waste laws and regulations for matters covered herein;

(f) Coordinate response actions at the Site with the mission and support activities at F.E. Warren Air Force Base, Cheyenne, Wyoming (F.E. Warren AFB);

(g) Expedite the cleanup process to the extent consistent with protection of human health and the environment;

(h) Provide for State involvement in the initiation, development, selection, and enforcement of remedial actions to be undertaken at F.E. Warren AFB, including the review of all applicable data as it becomes available and the development of studies, reports, and action plans, and identify and integrate State applicable or relevant and appropriate requirements (ARARs) into the remedial action process and;

(i) Provide for operation and maintenance of any remedial action selected and implemented pursuant to this Agreement.

2. SCOPE OF AGREEMENT

2.1 Except as provided in paragraphs 2.2, 2.3, 2.4, and 2.5 of this Section, the Parties agree that the purpose of this Agreement is to set forth a process to identify, investigate, and remediate the releases or threatened releases of hazardous substances, pollutants, or contaminants, including those petroleum products releases as described in paragraph 2.2 of this Section, at or from the Site. Except as provided in paragraphs 2.2, 2.3, 2.4, and 2.5, the Parties agree that the releases or threatened releases of hazardous substances, pollutants, or contaminants, including petroleum products releases as described in paragraph 2.2 of this Section, at or from the Site will be addressed under the authorities of CERCLA and RCRA through this Agreement. (See Section 17, Statutory Compliance/RCRA-CERCLA Integration.)

2.2 The Parties agree that the obligation of the Air Force to identify, investigate, and remediate the release or threatened release of petroleum products, including petroleum products originating from Underground Storage Tanks (USTs) at the Site which are not commingled and do not threaten to commingle with hazardous substances, pollutants, or contaminants, is not within the scope of this Agreement. However, the Parties agree that in the event that releases of petroleum products, including those determined to be originating from USTs, are wholly or partially commingled with releases of hazardous substances, pollutants, or contaminants that are within the scope of this Agreement (see paragraph 2.1 above), such releases shall be within the scope of this Agreement. In such case, the obligation of the Air Force to identify, investigate, and remediate such releases shall be pursuant to this Agreement, and in such case any State or Federal laws or regulations pertinent to releases or threatened releases of petroleum products from USTs shall be evaluated as potential ARARs according to the processes set forth in this Agreement.

2.3 The Parties agree that the Air Force currently maintains certain environmental permits at the Site including but not limited to an NPDES permit for storm water discharges, an NPDES pretreatment permit, and an air permit for the heating plant. The Parties agree that the obligation of the Air Force to maintain such permits is not within the scope of this Agreement and that such obligations shall be fulfilled pursuant to independent State and Federal programs pertinent thereto. The Parties further agree that the requirement to obtain permits for response actions that are within the scope of this Agreement shall be as set forth in Section 17 (Statutory Compliance/RCRA-CERCLA Integration) and Section 19 (Permits) of this Agreement.

2.4 The Parties agree that the Air Force may apply for certain additional RCRA ongoing hazardous waste management permits at the Site including but not limited to a RCRA permit

for a storage facility and a RCRA permit for an open burn/open detonation facility (these additional permits shall hereinafter be referred to as "RCRA ongoing hazardous waste management permits"). The Parties agree that any obligation of the Air Force to maintain such RCRA ongoing hazardous waste management permits is not within the scope of this Agreement and that such obligation, if any, shall to the extent required by law be fulfilled pursuant to independent State and Federal programs pertinent thereto.

2.5 The Parties agree that the obligation, if any, of the Air Force to identify, investigate, and remediate any releases or threatened releases that occur or are discovered subsequent to the effective date of this Agreement of hazardous substances, pollutants, or contaminants, and which: (a) originate solely and exclusively from units authorized to operate pursuant to RCRA ongoing hazardous waste management permits (as referred to in paragraph 2.4 above) at the Site, (b) may reasonably be anticipated to remain separate and not become commingled with releases and threatened releases covered by this Agreement, and (c) which are regulated pursuant to an authority specifically enumerated in the RCRA ongoing hazardous waste management permit shall be pursuant to such ongoing hazardous waste management permit. Any such subsequent releases and threatened releases meeting these three conditions are not within the scope of this Agreement. Such obligations, if any, shall be fulfilled by the Air Force or other person designated in the RCRA ongoing hazardous waste management permit and pursuant to the Federal and/or State authority designated in the RCRA ongoing hazardous waste management permit.

2.6 The Parties agree that nothing in this agreement affects the existing obligations of the Air Force to notify and consult with EPA and/or the State of releases or threatened releases of hazardous substances, pollutants, or contaminants and petroleum products as required by, but not limited to CERCLA Section 103, 12 U.S.C. 9603, the NCP or 10 U.S.C. 2705, including those releases not within the scope of this Agreement.

2.7 The Parties further agree that in the event that a dispute among the Parties arises regarding the scope of this Agreement the procedures set forth in Section 13 (Dispute Resolution) shall apply.

3. PARTIES

3.1 The Parties to this Agreement are EPA, the Air Force, and the State. The terms of the Agreement shall apply to and be binding upon EPA, the State, the Air Force, and their successors and assigns. Closure of F.E. Warren AFB shall not affect the Air Force's obligations to comply with the terms of this Agreement.

3.2 This Agreement shall be enforceable against all of the Parties to this Agreement. This Section shall not be construed as an agreement to indemnify any person. The Air Force shall notify its agents, members, employees, response action contractors for the Site, and all subsequent owners, operators, and lessees of the Site of the existence of this Agreement, and this Agreement shall be binding upon and fully enforceable against said persons to the maximum extent permitted by law.

3.3 Each Party shall be responsible for ensuring that its contractors comply with the terms and conditions of this Agreement. The Air Force shall notify EPA and the State of the identity and assigned tasks of each of its contractors performing work under this Agreement upon their selection.

3.4 The Wyoming Department of Environmental Quality (DEQ) is the designated single State agency, in accordance with the Wyoming Environmental Quality Act (EQA), responsible for the Federal programs to be carried out under this Agreement, and the lead agency for the State of Wyoming and its actions pursuant to this Agreement are binding on the State of Wyoming.

4. JURISDICTION

4.1 Each Party is entering into this Agreement pursuant to the following authorities:

(a) EPA enters into those portions of this Agreement that relate to the RI/FS pursuant to Section 120(e)(1) of CERCLA, 42 U.S.C. Section 9620(e)(1), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. 99-499 (hereinafter jointly referred to as CERCLA), and RCRA Sections 6001, 3008(h) and 3004(u) and (v), 42 U.S.C. Sections 6961, 6928(h), 6924(u) and (v), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA) (hereinafter jointly referred to as RCRA), and Executive Order 12580;

(b) EPA enters into those portions of this Agreement that relate to operable units and final remedial actions pursuant to CERCLA Section 120(e)(2), 42 U.S.C. Section 9620(e)(2), RCRA Sections 6001, 3008(h) and 3004(u) and (v), 42 U.S.C. Sections 6961, 6928(h), 6924(u) and (v), and Executive Order (EO) 12580;

(c) The Air Force enters into those portions of this Agreement that relate to the RI/FS pursuant to CERCLA Section 120(e)(1), 42 U.S.C. Section 9620(e)(1), RCRA Sections 6001, 3008(h) and 3004(u) and (v), 42 U.S.C. Section 6961, 6928(h), 6924(u) and (v), Executive Order 12580, the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4321 et seq. and the Defense Environmental Restoration Program (DERP), 10 U.S.C. Section 2701 et seq.;

(d) The Air Force enters into those portions of this Agreement that relate to operable units and final remedial actions pursuant to CERCLA Section 120(e)(2), 42 U.S.C. Section 9620(e)(2), RCRA Sections 6001, 3004(u) and (v) and 3008(h), 42 U.S.C. Section 6961, 6928(h), 6924(u) and (v), EO 12580 and the DERP; and

(e) The State enters into this Agreement pursuant to CERCLA Sections 120(f) and 121(f), 42 U.S.C. Sections 9620(f) and 9621(f), and EQA.

5. DEFINITIONS

5.1 Except as noted below or otherwise explicitly stated, the definitions provided in CERCLA and the NCP shall control the meaning of terms used in this Agreement.

(a) "Agreement" shall refer to this document and shall include all Appendices to this document to the extent they are consistent with the original Agreement as executed or modified. All such Appendices shall be attached to and made an integral and enforceable part of this document.

(b) "Air Force" shall mean U.S. Air Force, its employees, members, agents, and authorized representatives as well as Department of Defense (DOD) to the extent necessary to effectuate the terms of this Agreement, including, but not limited to, appropriations and Congressional reporting requirements.

(c) "ARARs" shall mean Federal and State applicable or relevant and appropriate requirements, standards, criteria, or limitations as defined in Section 121 of CERCLA.

(d) "CERCLA" shall mean the Comprehensive Environmental Response, Compensation and Liability Act, Public Law 96-510, 42 U.S.C. Section 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Public Law 99-499, and any subsequent amendments thereto.

(e) "Community Relations Plan" shall mean a plan prepared by the Air Force based on community interviews and other relevant information specifying the community relations activities that the Air Force expects to undertake during the response activities.

(f) "Days" shall mean calendar days, unless working days are specified. Any submittal that under the terms of this Agreement would be due on Saturday, Sunday, or a Federal holiday shall be due on the following working day.

(g) "EPA" shall mean the United States Environmental Protection Agency, its employees, agents, and authorized representatives.

(h) "Federal facility" shall mean F.E. Warren Air Force Base.

(i) "Meeting," in regard to Project Managers, shall mean an in-person discussion at a single location or a conference telephone call of all Project Managers. A conference call will suffice for an in-person meeting upon the concurrence of the Project Managers. Following each meeting, the Air Force Project Manager shall prepare and transmit minutes of such meeting to the EPA and State Project Managers for their concurrence.

(j) "National Contingency Plan" or "NCP" shall refer to the regulations contained in 40 C.F.R. Part 300 et seq. and any subsequent amendments thereto.

(k) "Operation and maintenance" shall mean activities required to maintain the effectiveness of response actions.

(l) "RCRA" or "RCRA/HSWA" shall mean the Resource Conservation and Recovery Act of 1976, Public Law 94-580, 42 U.S.C. Section 6901 et seq., as amended by the Hazardous and Solid Waste Amendments of 1984, Public Law 98-616, and any subsequent amendments thereto.

(m) "Remove" or "Removal" shall have the same meaning as provided in Section 101(23) of CERCLA, 42 U.S.C. Section 9601(23), and the NCP.

(n) "Site" shall mean F.E. Warren Air Force Base and any area off F.E. Warren Air Force Base to or under which a release of hazardous substances, pollutants, or contaminants has migrated, or threatens to migrate, from a source on or at F.E. Warren Air Force Base. For the purposes of obtaining permits, the terms "on-site" and "off-site" shall have the same meaning as provided in the NCP.

(o) "State" shall mean the State of Wyoming and its employees, agents, and authorized representatives, represented by the DEQ as the lead agency.

6. CONCLUSIONS OF LAW AND DETERMINATIONS

These Conclusions of Law and Determinations are not to be construed as admissions by any Party nor are they binding upon any Party with respect to claims or causes brought by persons not a party to this Agreement.

6.1 This Agreement is based upon the placement of F.E. Warren Air Force Base (F.E. Warren AFB), Laramie County, Wyoming, on the National Priorities List by EPA on February 21, 1990, 55 Federal Register, 6161.

6.2 F.E. Warren AFB is a Federal facility under the jurisdiction, custody, or control of the Department of Defense (DOD) within the meaning of EO 12580, 52 Fed. Reg. 2923, January 29, 1987. The Department of the Air Force is authorized to act on behalf of the Secretary of Defense for all functions delegated by the President to the Secretary of Defense through E.O. 12580 which are relevant to this Agreement.

6.3 F.E. Warren AFB is a Federal facility under the jurisdiction of the Secretary of Defense within the meaning of CERCLA Section 120, 42 U.S.C. Section 9620, and SARA Section 211, 10 U.S.C. Section 2701 et seq. and subject to DERP.

6.4 The Air Force is the authorized delegatee of the President under EO 12580 for receipt of notification by the State of its ARARs, as required by CERCLA Section 121(d)(2)(A)(ii), 42 U.S.C. Section 9621(d)(2)(A)(ii).

6.5 The authority of the Air Force to exercise the removal authority as delegated by the President pursuant to CERCLA Section 104, 42 U.S.C. Section 9604, is not altered by this Agreement.

6.6 The actions to be taken pursuant to this Agreement are reasonable and necessary to protect the public health, welfare, and/or the environment.

6.7 There are areas within the boundaries of the Federal facility where "hazardous substances," as defined at 42 U.S.C. Section 9601(14) and as specified in Attachment A (Statement of Facts) have been deposited, stored, placed, or otherwise come to be located within the meaning of 42 U.S.C. Section 9601(9).

6.8 There have been "releases" as defined at 42 U.S.C. Section 9601(22) of hazardous substances, pollutants, or contaminants at or from the "facility" as defined at 42 U.S.C. Section 9601(9) into the environment and within the meaning of 42 U.S.C. Section 9604, 9606, and 9607.

6.9 With respect to these releases, the Air Force is an owner and/or operator as defined at 42 U.S.C. Section 9601(20) and is a "responsible party" subject to the provisions of 42 U.S.C. Section 9607.

6.10 Included as "Attachment A" to this Agreement is a "Statement of Facts" concerning F.E. Warren AFB and upon which this Agreement is based.

6.11 Included as "Attachment B" to this Agreement is a map showing source(s) of suspected contamination and the areal extent of known contamination, based on information available at the time of the signing of this Agreement.

7. WORK TO BE PERFORMED

7.1 The Parties agree to perform the tasks, obligations, and responsibilities described in this Section in accordance with CERCLA and CERCLA guidance and policy; the NCP; EO 12580; the Statement of Work attached hereto as Attachment C; and all other terms and conditions of this Agreement including documents prepared and incorporated in accordance with Section 8 (Consultation).

7.2 The Air Force agrees to undertake, seek adequate funding for, fully implement and report on the following tasks for each Operable Unit with participation of the Parties as set forth in this Agreement:

- (a) Remedial Investigations of the Site;
- (b) Feasibility Studies for the Site;
- (c) All response actions for the Site;
- (d) Operation and maintenance of response actions at the Site; and
- (e) Funding State support services.

The above tasks to be performed are more specifically set forth in the Statement of Work attached hereto as Attachment C.

7.3 The Parties agree to:

- (a) Make their best efforts to expedite the initiation of response actions for the Site, particularly for Operable Units;
- (b) Carry out all activities under this Agreement so as to protect the public health, welfare, and the environment.

7.4 Upon request, EPA and the State agree to provide any Party with guidance or reasonable assistance in obtaining guidance relevant to the implementation of this Agreement.

8. CONSULTATION: REVIEW AND COMMENT PROCESS FOR DRAFT AND FINAL DOCUMENTS

8.1 Applicability: The provisions of this Section establish the procedures that shall be used by the Parties to

provide each other with appropriate notice, review, comment, and response to comments regarding RI/FS and RD/RA documents specified herein as either primary or secondary documents. In accordance with CERCLA Section 120, 42 U.S.C. Section 9620, and 10 U.S.C. Section 2705, the Air Force will normally be responsible for issuing primary and secondary documents to EPA and the State. As of the effective date of this Agreement, all draft, draft final, and final reports for any deliverable document identified herein shall be prepared, distributed, and subject to dispute in accordance with Subsections 8.2 through 8.10 below. The designation of a document as "draft" or "final" is solely for purposes of consultation with EPA and the State in accordance with this Section. Such designation does not affect the obligation of the Parties to issue documents, which may be referred to herein as "final," to the public for review and comment as appropriate and as required by law.

8.2 General Process for RI/FS and RD/RA Documents

(a) Primary documents include those reports that are major, discrete portions of RI/FS or RD/RA activities. Primary documents are initially issued by the Air Force in draft subject to review and comment by EPA and the State. Following receipt of comments on a particular draft primary document, the Air Force will respond to the comments received and issue a draft final primary document subject to dispute resolution. The draft final primary document will become the final primary document thirty (30) days after issuance if dispute resolution is not invoked or as modified by decision of the dispute resolution process.

(b) Secondary documents include those reports that are discrete portions of the primary documents and are typically input or feeder documents. Secondary documents are issued by the Air Force in draft subject to review and comment by EPA and the State. Although the Air Force will respond to comments received, the draft secondary documents may be finalized in the context of the corresponding final primary document. A secondary document may be disputed at the time the corresponding draft final primary document is issued.

8.3 Primary Reports

(a) The Air Force shall complete and transmit draft reports of the following primary documents to EPA and the State for review and comment in accordance with the provisions of this Section:

1. Community Relations Plan
2. Sampling and Analysis Plan Including a Quality Assurance Project Plan

3. Remedial Investigation and Feasibility Study Work Plan, Including Data Quality Objectives (for Each Operable Unit)
4. Remedial Investigation Report, Including Risk Assessment and Ground Water Assessment (for Each Operable Unit)
5. Feasibility Study (for Each Operable Unit)
6. Proposed Plan (for Each Operable Unit).
7. Record of Decision With Responsiveness Summary (for Each Operable Unit)
8. Remedial Design Work Plan (for Each Operable Unit)
9. Remedial Action Work Plan (for Each Operable Unit)
10. Remedial Design Document, 100 percent Completion Stage (for Each Operable Unit)

(b) Only draft final reports for primary documents shall be subject to dispute resolution. The Air Force shall complete and transmit draft primary documents in accordance with the timetables and deadlines established in the Deadlines and Target Dates attached hereto as Appendix A or established pursuant to Section 9 (Deadlines) of this Agreement.

8.4 Secondary Documents

(a) The Air Force shall complete and transmit draft reports of the following secondary documents to EPA and the State for review and comment in accordance with the provisions of this Section:

1. Memorandum on Remedial Action Objectives (for Each Operable Unit)
2. Memorandum on Development and Screening of Alternatives (for Each Operable Unit)
3. Intermediate Design Stage Report, 60 percent Completion Stage (for Each Operable Unit)
4. Site-wide Health and Safety Plan

(b) Although EPA and the State may comment on the draft reports for the secondary documents listed above, such documents shall not be subject to dispute resolution except as provided by Subsection 8.2 hereof. Target dates shall be established for the completion of draft secondary reports

pursuant to Section 9 (Deadlines and Target Dates) of this Agreement.

8.5. Meetings of the Project Managers. (See also Subsection 18.3). The Project Managers shall meet in person approximately every thirty (30) days, except as otherwise agreed by the Parties, to review and discuss the progress of work being performed at the Site, including progress on the primary and secondary documents. The Air Force Project Manager shall prepare and transmit minutes of such meetings to the other Project Managers for their concurrence. Prior to preparing any draft report specified in Subsections 8.3 and 8.4 above, the Project Managers shall meet in an effort to reach a common understanding to the maximum extent practicable with respect to the results to be presented in the draft report.

8.6 Identification and Determination of Potential ARARs

(a) For those primary reports or secondary documents that consist of or include ARAR determinations, the Project Managers shall meet (prior to the issuance of a draft report) to identify and propose all potential ARARs pertinent to the report being addressed. At that time, DEQ, as the lead State agency, shall identify potential State ARARs as required by CERCLA Section 121(d)(2)(A)(ii), 42 U.S.C. Section 9621(d)(2)(A)(ii), which are pertinent to those activities for which it is responsible and the report being addressed. Draft ARAR determinations shall be prepared by the Air Force in accordance with CERCLA Section 121(d)(2), 42 U.S.C. Section 9621(d)(2), the NCP, and pertinent guidance issued by EPA.

(b) DEQ, as the State lead agency, will contact those State and local governmental agencies which are a potential source of proposed ARARs. The proposed ARARs obtained from the identified agencies will be submitted to the Air Force, along with a list of those agencies which failed to respond to DEQ's solicitation of proposed ARARs. The Air Force will contact those agencies which failed to respond and again solicit these inputs.

(c) In identifying potential ARARs, the Parties recognize that actual ARARs can be identified only on a site-specific basis and that ARARs depend on the specific hazardous substances, pollutants, and contaminants at a site, the particular actions associated with a proposed remedy and the characteristics of a site. The Parties recognize that ARAR identification is necessarily an iterative process and that potential ARARs must be identified and discussed among the Parties as early as possible and must be reexamined throughout the RI/FS process until a ROD is issued.

8.7 Review and Comment on Draft Reports

(a) The Air Force shall complete and transmit each draft primary report to EPA and the State on or before the corresponding deadline established for the issuance of the report. The Air Force shall complete and transmit the draft secondary documents in accordance with the target dates established for the issuance of such reports.

(b) Unless the Parties mutually agree to another time period, all draft reports shall be subject to a thirty (30) day period for review and comment. Review of any document by the EPA and the State may concern all aspects of the report (including completeness) and should include, but is not limited to, technical evaluation of any aspect of the document and consistency with CERCLA, the NCP, any pertinent guidance or policy issued by the EPA, and pertinent State law. Comments by EPA and the State shall be provided with adequate specificity so that the Air Force may respond to the comment and, if appropriate, make changes to the draft report. Comments shall refer to any pertinent sources of authority or references upon which the comments are based and, upon request of the Air Force, EPA or the State, as appropriate, shall provide a copy of the cited authority or reference. In cases involving reports of complex or unusual length, EPA or the State may extend the thirty (30) day comment period for an additional twenty (20) days by written notice to the Air Force prior to the end of the thirty (30) day period. On or before the close of the comment period, EPA and the State shall transmit by 11:59 p.m. (local time) of the closing day their written comments to the Air Force. These comments will be sent so they are received within two (2) working days. In appropriate circumstances, this time period may be further extended in accordance with Section 10 (Extensions).

(c) Representatives of the Air Force shall make themselves readily available to EPA and the State during the comment period for purposes of informally responding to questions and comments on draft reports. Oral comments made during such discussions need not be the subject of a written response by the Air Force on the close of the comment period.

(d) In commenting on a draft report which contains a proposed ARAR determination, EPA and the State shall include a reasoned statement of whether it objects to any portion of the proposed ARAR determination. To the extent that EPA or the State does object, it shall explain the basis for its objection in detail and shall identify any ARARs which it believes were not properly addressed in the proposed ARAR determination.

(e) Following the close of the comment period for a draft report, the Air Force shall give full consideration to all written comments. On a draft secondary report the Air Force

shall, within thirty (30) days of the close of the comment period, transmit to the EPA and the State its written response to the comments received. On a draft primary report the Air Force shall, within thirty (30) days of the close of the comment period, transmit to EPA and the State a draft final primary report, which shall include the Air Force's response to all written comments received within the comment period. While the resulting draft final report shall be the responsibility of the Air Force, it shall be the product of consensus to the maximum extent possible.

(f) The Air Force may extend the thirty (30) day period for either responding to comments on a draft report or for issuing the draft final primary report for an additional twenty (20) days by providing notice to EPA and the State. In appropriate circumstances, this time period may be further extended in accordance with Section 10 (Extensions).

8.8 Availability of Dispute Resolution for Draft Final Primary Documents

(a) Dispute resolution shall be available to the Parties for draft final primary reports as set forth in Section 13 (Dispute Resolution).

(b) When dispute resolution is invoked on a draft final primary report, work may be stopped in accordance with the procedures set forth in Subsection 13.9 regarding dispute resolution.

8.9 Finalization of Reports

The draft final primary report shall serve as the final primary report if no party invokes dispute resolution regarding the document or, if invoked, at completion of the dispute resolution process should the Air Force's position be sustained. If the Air Force's determination is not sustained in the dispute resolution process, the Air Force shall prepare, within not more than thirty-five (35) days, a revision of the draft final report which conforms to the results of dispute resolution. In appropriate circumstances, the time period for this revision period may be extended in accordance with Section 10 (Extensions).

8.10 Subsequent Modification of Final Reports

Following finalization of any primary report pursuant to Subsection 8.9 above, any Party may seek to modify the report including seeking additional field work, pilot studies, computer modeling, or other supporting technical work, only as provided in subparagraphs (a) and (b) below.

(a) Any Party may seek to modify a report after finalization if it determines, based on new information (i.e., information that becomes available or conditions that become known, after the report was finalized) that the requested modification is necessary. Any Party may seek such a modification by submitting a concise written request to the Project Managers of the other Parties. The request shall specify the nature of the requested modification and how the request is based on new information.

(b) In the event that a consensus is not reached by the Project Managers on the need for a modification, any Party may invoke dispute resolution to determine if such modification shall be conducted. Modification of a report shall be required only upon a showing that:

(1) The requested modification is based on significant new information; and

(2) The requested modification could be of significant assistance in evaluating impacts on the public health or the environment, in evaluating the selection of remedial alternatives, or in protecting human health and the environment.

(c) Nothing in this Section shall alter EPA's or the State's ability to request the performance of additional work which was not contemplated by this Agreement. The Air Force's obligation to perform much work must be established by either a modification of a report or document or by amendments to this Agreement.

(d) This Agreement shall not be construed to restrict EPA, DEQ, or Air Force from taking any appropriate action under pertinent statute, law, regulation, or other authority relative to matters which are not within the scope of this Agreement.

9. DEADLINES AND TARGET DATES

9.1 Enforceable deadlines for primary documents and target dates for secondary documents agreed upon before the effective date of this Agreement are set forth in Appendix A to this Agreement. These deadlines and target dates shall be published in accordance with Section 9.2 and shall be incorporated into the appropriate work plans.

9.2 Within sixty (60) days of the issuance of the Record of Decision for each operable unit, the Air Force shall propose, in the Remedial Design Work Plan, deadlines and target dates for completion of the post-ROD draft primary and secondary documents set forth in Sections 8.3 and 8.4 for that Operable Unit. In the

context of reviewing the Remedial Design Work Plan, EPA and the State shall review and provide comments to the Air Force regarding the proposed deadlines and target dates. In the context of responding to EPA and State comments on the proposed Remedial Design Work Plan, Air Force shall, as appropriate, make revisions and reissue the proposed deadlines and target dates. The Parties shall meet as necessary to discuss and finalize the proposed deadlines and target dates. All agreed-upon deadlines and target dates shall be incorporated into the appropriate work plans. If the Parties fail to agree on the proposed deadlines and target dates, the matter shall immediately be submitted for dispute resolution pursuant to Section 13 (Dispute Resolution) in the context of a dispute concerning the Remedial Design Workplan. The final deadlines and target dates established pursuant to this Section shall be published by EPA, in conjunction with the State, and shall become an Appendix to this Agreement.

9.3 For any operable units not identified as of the effective date of this Agreement, the Air Force shall propose deadlines and target dates for all documents listed in Section 8.3 (a)(3)-(7) and 8.4 (a)(1) and (2) above within twenty-one (21) days of agreement by all the Parties or following dispute resolution on the proposed operable unit. Within fifteen (15) days of receipt, EPA and the State shall review and provide comments to the Air Force regarding the proposed deadlines and target dates. Within fifteen (15) days following receipt of the comments the Air Force shall, as appropriate, make revisions and reissue the proposal. The Parties shall meet as necessary to discuss and finalize the proposed deadlines and target dates. All agreed-upon deadlines and target dates shall be incorporated into the appropriate work plans. If the Parties fail to agree within thirty (30) days on the proposed deadlines, the matter shall immediately be submitted for dispute resolution pursuant to Section 13 (Dispute Resolution). The final deadlines and target dates established pursuant to this Subsection shall be published by EPA, in conjunction with the State, and shall become an Appendix to this Agreement.

9.4 The deadlines set forth in this Section, or to be established as set forth in this Section, may be extended pursuant to Section 10 (Extensions). The Parties recognize that one possible basis for extension of the deadlines for completion of the Remedial Investigation and Feasibility Study Reports is the identification of significant new Site conditions during the performance of the remedial investigation.

10. EXTENSIONS

10.1 Timetables, deadlines, and schedules shall be extended upon receipt of a timely request for extension and when good cause exists for the requested extension. Any request for

extension by a Party shall be submitted to the other Parties in writing and shall specify:

- (a) The timetable, deadline, or schedule that is sought to be extended;
- (b) The length of the extension sought;
- (c) The good cause(s) for the extension; and
- (d) The extent to which any related timetable and deadline or schedule would be affected if the extension were granted.

10.2 Good cause exists for an extension when sought in regard to:

- (a) An event of Force Majeure;
- (b) A delay caused by another Party's failure to meet any requirement of this Agreement;
- (c) A delay caused by the good faith invocation of dispute resolution or the initiation of judicial action;
- (d) A delay caused, or which is likely to be caused, by the grant of an extension in regard to another timetable and deadline or schedule;
- (e) Any work stoppage within the scope of Section 12 (Emergencies and Removals); or
- (f) Any other event or series of events mutually agreed to by the Parties and memorialized in writing as constituting good cause.

10.3 Absent agreement of the Parties with respect to the existence of good cause, a Party may seek and obtain a determination through the dispute resolution process that good cause exists.

10.4 Within seven (7) days of receipt of a request for an extension of a timetable, deadline, or schedule, each receiving Party shall advise the requesting Party in writing of the receiving Party's position on the request. Any failure by a receiving Party to respond within the seven-day period shall be deemed to constitute concurrence with the request for extension. If a receiving Party does not concur in the requested extension, it shall include in its statement of nonconcurrence an explanation of the basis for its position.

10.5 If there is consensus among the Parties that the requested extension is warranted, the Air Force shall extend the affected timetable and deadline or schedule accordingly. If there is no consensus among the Parties as to whether all or part of the requested extension is warranted, the timetable and deadline or schedule shall not be extended except in accordance with a determination resulting from the dispute resolution process.

10.6 Within seven (7) days of receipt of a statement of nonconcurrence with the requested extension, the requesting Party may invoke dispute resolution.

10.7 A timely and good faith request by the Air Force for an extension shall toll any assessment of stipulated penalties or application for judicial enforcement of the affected timetable and deadline or schedule until a decision is reached on whether the requested extension will be approved. If dispute resolution is invoked and the requested extension is denied, stipulated penalties may be assessed and may accrue from the date of the original timetable, deadline, or schedule. Following the grant of an extension, an assessment of stipulated penalties or an application for judicial enforcement may be sought only to compel compliance with the timetable and deadline or schedule as most recently extended.

11. FORCE MAJEURE

11.1 A Force Majeure shall mean any event arising from causes beyond the control of a Party that causes a delay in or prevents the performance of any obligation under this Agreement, including, but not limited to, acts of God; fire; war; insurrection; civil disturbance; explosion; unanticipated breakage or accident to machinery, equipment or lines of pipe despite reasonably diligent maintenance; adverse weather conditions that could not be reasonably anticipated; unusual delay in transportation; restraint by court order or order of public authority; inability to obtain at reasonable cost and after exercise of reasonable diligence, any necessary authorizations, approvals, permits, or licenses due to action or inaction of any governmental agency or authority other than the Air Force; delays caused by compliance with applicable statutes or regulations governing contracting, procurement, or acquisition procedures, despite the exercise of reasonable diligence; and insufficient availability of appropriated funds if the Air Force shall have made timely request for such funds as part of the budgetary process as set forth in Section 16 (Funding). A Force Majeure shall also include any strike or other labor dispute not within the control of the Parties affected thereby. Force Majeure shall not include increased costs or expenses of Response Actions, whether or not anticipated at the time such Response Actions were initiated.

12. EMERGENCIES AND REMOVALS

12.1 Discovery and Notification

If any Party discovers or becomes aware of an emergency or other situation that may present an endangerment to public health, welfare, or the environment at or near the Site, which is related to or may affect the work performed under this Agreement, that Party shall orally notify all other Parties within twenty-four (24) hours of such discovery. If the emergency arises from activities conducted pursuant to this Agreement, the Air Force shall then take immediate action to notify the appropriate State and local agencies and affected members of the public.

12.2 Work Stoppage

In the event any Party determines that activities conducted pursuant to this Agreement will cause or otherwise be threatened by a situation described in Subsection 12.1, the Party may propose the termination of such activities. If the Parties mutually agree, the activities shall be stopped for such period of time as required to abate the danger. In the absence of mutual agreement, the activities shall be stopped in accordance with the proposal, and the matter shall be immediately referred to the EPA Hazardous Waste Management Division Director for a work stoppage determination in accordance with Section 13.9.

12.3 Removal Actions

(a) The provisions of this Section shall apply to all removal actions as defined in CERCLA Section 101(23), 42 U.S.C. 9601(23) and the NCP, including all ongoing removal actions and all new removal actions proposed or commenced following the effective date of this Agreement.

(b) Any removal actions conducted at the Site shall be conducted in a manner consistent with this Agreement, CERCLA, the NCP, and Executive Order 12580.

(c) Nothing in this Agreement shall alter the Air Force's authority with respect to removal actions conducted pursuant to Section 104 of CERCLA, 42 U.S.C. Section 9604.

(d) Nothing in this Agreement shall alter any authority the State or EPA may have with respect to removal actions conducted at the Site.

(e) All reviews conducted by EPA and the State pursuant to 10 U.S.C. Section 2705(b)(2) will be expedited so as not to unduly jeopardize fiscal resources of the Air Force for funding the removal actions.

(f) If a Party determines that there may be an endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance, pollutant, or contaminant at or from the Site, the Party may request that the Air Force take such response actions as may be necessary to abate such danger or threat and to protect the public health or welfare or the environment.

12.4 Notice and Opportunity to Comment

(a) The Air Force shall provide the other Parties with timely notice and opportunity to review and comment upon any proposed removal action for the Site, in accordance with 10 U.S.C. Section 2705(a) and (b). The Air Force agrees to provide the information described below pursuant to such obligation.

(b) For emergency removal action, the Air Force shall provide EPA and DEQ with notice in accordance with Section 12.1. Such notification shall, except in the case of extreme emergencies, include adequate information concerning Site background, threat to the public health and welfare or the environment (including the need for response), proposed actions and costs, comparison of possible alternatives, means of transportation of any hazardous substance off-site and proposed manner of disposal, expected change in the situation should no action be taken or should action be delayed (including associated environmental impacts), any important policy issues and recommendations of the Air Force Project Manager. Within forty-five (45) days of completion of the emergency removal action, the Air Force will furnish EPA and DEQ with an Action Memorandum addressing the information required pursuant to CERCLA and the NCP and in accordance with pertinent EPA guidance for such actions.

(c) For other removal actions the Air Force will provide EPA and the DEQ with any information required by CERCLA and the NCP, and pertinent EPA guidance, such as the Action Memorandum, the Engineering Evaluation/Cost Analysis (in the case of non-time-critical removals) and, to the extent it is not otherwise included, all information required to be provided in accordance with paragraph (b) of this Subsection. Such information shall be furnished at least thirty (30) days before the response action is to begin.

(d) All activities related to ongoing removal actions shall be reported by the Air Force in the progress reports as described in Section 18 (Project Managers) of this Agreement.

12.5 Any dispute among the Parties as to whether a proposed non-emergency removal action as defined by the NCP and this Agreement, is properly considered a removal action or as to the

consistency of such action with any remedial action shall be subject to Section 13 (Dispute Resolution). Such dispute may be brought directly to the Dispute Resolution Committee (DRC) or the Senior Executive Committee (SEC) at any Party's request.

13. DISPUTE RESOLUTION

13.1 Except as specifically set forth elsewhere in this Agreement, if a dispute arises under this Agreement, the procedures of this Section shall apply. Any party may invoke this dispute resolution procedure. All Parties to this Agreement shall make reasonable efforts to informally resolve disputes at the Project Manager or immediate supervisor level. If resolution cannot be achieved informally, the procedures of this Section shall be implemented to resolve a dispute.

13.2 Within thirty (30) days after: (a) the issuance of a draft final primary document pursuant to Section 8 (Consultation), or (b) any action which leads to or generates a dispute, the disputing Party shall submit to the Dispute Resolution Committee (DRC) a written statement of dispute setting forth the nature of the dispute, the work affected by the dispute, the disputing Party's position with respect to the dispute, and the technical, legal, or factual information the disputing Party is relying upon to support its position.

13.3 Prior to any Party's issuance of a written statement of a dispute, the disputing Party shall engage the other Parties in informal dispute resolution among the Project Managers and/or their immediate supervisors. During this informal dispute resolution period the Parties shall meet as many times as are necessary to discuss and attempt resolution of the dispute.

13.4 The DRC will serve as a forum for resolution of dispute for which agreement has not been reached through informal dispute resolution. The Parties shall each designate one individual and an alternate to serve on the DRC. The individuals designated to serve on the DRC shall be employed at the policy level Senior Executive Service (SES) or equivalent or be delegated the authority to participate on the DRC for the purposes of dispute resolution under this Agreement. The EPA representative on DRC is the Hazardous Waste Management Division Director of EPA's Region VIII. The Air Force's designated member is Director of Environmental Management, Strategic Air Command. The DEQ representative is the Director, Water Quality Division, DEQ. Written notice of any delegation of authority from a Party's designated representative on the DRC shall be provided to all other Parties pursuant to the procedures of Section 22 (Notification).

13.5 Following elevation of a dispute to the DRC, the DRC shall have twenty-one (21) days to unanimously resolve the

dispute and issue a written decision. If the DRC is unable to unanimously resolve the dispute within this twenty-one (21) day period, the written statement of dispute shall be forwarded to the Senior Executive Committee (SEC) for resolution within seven (7) days after the close of the twenty-one (21) day resolution period.

13.6 The SEC will serve as the forum for resolution of disputes for which agreement has not been reached by the DRC. The EPA representative on the SEC is the Regional Administrator of EPA Region VIII. The Air Force's representative on the SEC is Deputy Assistant Secretary of the Air Force for Environment, Safety, and Occupational Health. The DEQ representative on the SEC is Director of DEQ. The SEC members shall as appropriate confer, meet, and exert their best efforts to resolve the dispute and issue a written decision. If unanimous resolution of the dispute is not reached within twenty-one (21) days, EPA's Regional Administrator shall issue a written position on the dispute. The Air Force or the State may, within fourteen (14) days of the Regional Administrator's issuance of EPA's position, issue a written notice elevating the dispute to the Administrator of EPA for resolution in accordance with all applicable laws and procedures. In the event neither the Air Force nor the State elects to elevate the dispute to the Administrator within the designated fourteen (14) day escalation period, the Air Force and the State shall be deemed to have agreed with the Regional Administrator's written position with respect to the dispute.

13.7 Upon escalation of a dispute to the Administrator of EPA pursuant to Subsection 13.6 above, the Administrator will review and resolve the dispute within twenty-one (21) days. Upon request and prior to resolving the dispute, the EPA Administrator shall meet and confer with the Air Force's Secretariat Representative and the Governor of Wyoming to discuss the issue(s) under dispute. Upon resolution, the Administrator shall provide the Air Force and the State with a written final decision setting forth resolution of the dispute. The duties of the Administrator set forth in this Section shall not be delegated.

13.8 The pendency of any dispute under this Section shall not affect any Party's responsibility for timely performance of the work required by this Agreement, except that the time period for completion of work affected by such dispute shall be extended for a period of time usually not to exceed the actual time taken to resolve any good faith dispute in accordance with the procedures specified herein. All elements of the work required by this Agreement which are not affected by the dispute shall continue and be completed in accordance with the applicable timetable, deadline, or schedule.

13.9 When dispute resolution is in progress or a dispute concerning work stoppage arises pursuant to Section 12.2 of this

Agreement, work affected by the dispute will immediately be discontinued if the Hazardous Waste Management Division Director for EPA Region VIII requests in writing that work related to the dispute be stopped because, in EPA's opinion, such work is inadequate or defective, and such inadequacy or defect is likely to result in an adverse effect on human health or the environment, or is likely to have a substantial adverse effect on the remedy selection or implementation process. The State may request the EPA Hazardous Waste Management Division Director to order work stopped for the reasons set out above. To the extent possible, the Party seeking work stoppage shall consult with the other Parties prior to initiating a work stoppage request. After work stoppage if a Party believes that the work stoppage is inappropriate or may have potential significant adverse impacts, the Party may meet with the other Parties to discuss the work stoppage. Following this meeting and further considerations of this issue, the EPA Hazardous Waste Management Division Director will issue in writing a final decision with respect to the work stoppage. The final written decision of the EPA Hazardous Waste Management Division Director may immediately be subject to formal dispute resolution. Such dispute may be brought directly to the DRC at the discretion of the Party requesting dispute resolution.

13.10 Within twenty-one (21) days of resolution of a dispute pursuant to the procedures specified in this Section, the Air Force shall incorporate the resolution and final determination into the appropriate plan, schedule, or procedures and proceed to implement this Agreement according to the amended plan, schedule, or procedures.

13.11 Resolution of a dispute pursuant to this Section of the Agreement constitutes a final resolution of any dispute arising under this Agreement. All Parties shall abide by all terms and conditions of any final resolution of dispute obtained pursuant to this Section of this Agreement.

14. ENFORCEABILITY

14.1 The Parties agree that:

(a) Upon the effective date of this Agreement, any standard, regulation, condition, requirement, or order which has become effective under CERCLA and is incorporated into this Agreement is enforceable by any person pursuant to CERCLA Section 310, and any violation of such standard, regulation, condition, requirement, or order will be subject to civil penalties under CERCLA Sections 310(c) and 109;

(b) All timetables or deadlines associated with the RI/FS shall be enforceable by any person pursuant to CERCLA Section 310, and any violation of such timetables or deadlines

will be subject to civil penalties under CERCLA Sections 310(c) and 109;

(c) All terms and conditions of this Agreement which relate to remedial actions, including corresponding timetables, deadlines or schedules, and all work associated with remedial actions shall be enforceable by any person pursuant to CERCLA Section 310(c), and any violation of such terms or conditions will be subject to civil penalties under CERCLA Sections 310(c) and 109; and

(d) Any final resolution of a dispute pursuant to Section 12 (Dispute Resolution) of this Agreement which establishes a term, condition, timetable, deadline, or schedule shall be enforceable by any person pursuant to CERCLA Section 310(c), and any violation of such terms, condition, timetable, deadline, or schedule will be subject to civil penalties under CERCLA Sections 310(c) and 109.

14.2 Nothing in this Agreement shall be construed as authorizing any person to seek judicial review of any action or work where review is barred by any provision of CERCLA including CERCLA Section 113(h).

14.3 Nothing in this Agreement shall be construed as a restriction or waiver of any rights the EPA or the State may have under CERCLA, including but not limited to any rights under Sections 113 and 310, 42 U.S.C. Section 9613 and 9659. The Air Force does not waive any rights it may have under CERCLA Sections 120 and 211 and EO 12580.

14.4 The Parties agree to exhaust their rights under Section 13 (Dispute Resolution) prior to exercising any rights to judicial review that they may have.

14.5 The Parties agree that all Parties shall have the right to enforce the terms of this Agreement.

15. STIPULATED PENALTIES

15.1 In the event that the Air Force fails to submit a primary document listed in Section 8 (Consultation) to EPA and the State pursuant to the appropriate timetable or deadline in accordance with the requirements of this Agreement or fails to comply with a term or condition of this Agreement which relates to an operable unit or final remedial action, EPA may assess a stipulated penalty against the Air Force. A stipulated penalty may be assessed in an amount not to exceed \$5,000 for the first week (or part thereof), and \$10,000 for each additional week (or part thereof) for which a failure set forth in this Subsection occurs.

15.2 Upon determining that the Air Force has failed in a manner set forth in Subsection 15.1, EPA shall so notify the Air Force in writing. If the failure in question is not already subject to dispute resolution at the time such notice is received, the Air Force shall have fifteen (15) days after receipt of the notice to invoke dispute resolution on the question of whether the failure did in fact occur. The Air Force shall not be liable for the stipulated penalty assessed by EPA if the failure is determined, through the dispute resolution process, not to have occurred. No assessment of a stipulated penalty shall be final until the conclusion of dispute resolution procedures related to the assessment of the stipulated penalty.

15.3 The annual reports required by CERCLA Section 120(e)(5), 42 U.S.C. Section 9620(e)(5), shall include, with respect to each final assessment of a stipulated penalty against the Air Force under this Agreement, each of the following:

- (a) The Federal facility responsible for the failure;
- (b) A statement of the facts and circumstances giving rise to the failure;
- (c) A statement of any administrative or other corrective action taken at the relevant Federal facility; or a statement of why such measures were determined to be inappropriate;
- (d) A statement of any additional action taken by or at the Federal facility to prevent recurrence of the same type of failure; and
- (e) The total dollar amount of the stipulated penalty assessed for the particular failure.

15.4 Stipulated penalties assessed pursuant to this Section shall be payable to the Hazardous Substances Response Trust Fund only in the manner and to the extent expressly provided for in acts authorizing funds for, and appropriations to, the DOD.

15.5 In no event shall this Section give rise to a stipulated penalty in excess of the amount set forth in CERCLA Section 109, 42 U.S.C. Section 9609.

15.6 This Section shall not affect the Air Force's ability to obtain an extension of a timetable, deadline, or schedule pursuant to Section 10 (Extensions).

15.7 Nothing in this Agreement shall be construed to render any officer or employee of the Air Force personally liable for the payment of any stipulated penalty assessed pursuant to this Section.

16. FUNDING

16.1 It is the expectation of the Parties to this Agreement that all obligations of the Air Force arising under this Agreement will be fully funded. The Air Force agrees to seek sufficient funding through the DOD budgetary process to fulfill its obligations under this Agreement.

16.2 In accordance with CERCLA Section 120 (e)(5)(B), 42 U.S.C. Section 9620 (e)(5)(B), the Air Force shall include in its submission to the DOD annual report to Congress, the specific cost estimates and budgetary proposals associated with the implementation of this Agreement.

16.3 Any requirement for the payment or obligation of funds, including stipulated penalties, by the Air Force established by the terms of this Agreement shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. Section 1341. In cases where payment or obligation of funds would constitute a violation of the Anti-Deficiency Act, the dates established requiring the payment or obligation of such funds shall be appropriately adjusted.

16.4 If appropriated funds are not available to fulfill the Air Force's obligations under this Agreement, EPA and the State reserve the right to initiate an action against any other person or to take any response action which would be appropriate absent this Agreement.

16.5 Funds authorized and appropriated annually by Congress under the "Environmental Restoration, Defense" appropriation in the DOD Appropriation Act and allocated by the Deputy Assistant Secretary of Defense for Environment to the Air Force shall be the source of funds for activities required by this Agreement consistent with Section 211 of CERCLA, 10 U.S.C. Chapter 160. However, should the Environmental Restoration Defense appropriation be inadequate in any year to meet the total Air Force CERCLA implementation requirements, the DOD shall employ and the Air Force shall follow a standardized DOD prioritization process which allocates that year's appropriations in a manner which maximizes the protection of human health and the environment. A standardized DOD prioritization model shall be developed and utilized with the assistance of EPA and the states.

17. STATUTORY COMPLIANCE/RCRA-CERCLA INTEGRATION

17.1 The Parties intend to integrate the Air Force's CERCLA response obligations and RCRA corrective action obligations which relate to the release(s) of hazardous substances, hazardous

wastes, pollutants, or contaminants covered by this Agreement into this comprehensive Agreement (see Section 2--Scope of Agreement). Therefore, the Parties intend that activities covered by this Agreement will: (1) achieve compliance with CERCLA, 42 U.S.C. Section 9601 et seq.; (2) satisfy the corrective action requirements of RCRA Section 3004(u) and (v), 42 U.S.C. Section 6924(u) and (v), for a RCRA permit, and RCRA Section 3008(h), 42 U.S.C. Section 6928(h); for interim status facilities; and (3) meet or exceed all applicable or relevant and appropriate Federal and State laws and regulations, to the extent required by CERCLA Section 121, 42 U.S.C. Section 9621.

17.2 Based upon the foregoing, the Parties intend that any remedial action selected, implemented, and completed under this Agreement will be protective of human health and the environment such that remediation of releases covered by this Agreement shall obviate the need for further corrective action under RCRA (i.e., no further corrective action shall be required). The Parties agree that with respect to the releases of hazardous waste covered by this Agreement, RCRA shall be considered an applicable or relevant and appropriate requirement pursuant to CERCLA Section 121, 42 U.S.C. Section 9621.

17.3 The Parties recognize that the requirement to obtain permits for response actions undertaken pursuant to this Agreement shall be as provided for in CERCLA and the NCP. The Parties further recognize that ongoing hazardous waste management activities at F.E. Warren AFB may require the issuance of permits under Federal and State laws. This Agreement does not affect the requirements, if any, to obtain such permits. However, if a permit is issued to the Air Force for ongoing hazardous waste management activities at the Site, as referenced in Subsections 2.4 and 2.5 of this Agreement, and if releases from such permitted units are found to be commingled with releases covered by this Agreement, the issuing party shall reference and incorporate, in connection with such releases, any appropriate provision including appropriate schedules (and the provision for extension of such schedules) of this Agreement into such permit. With respect to those portions of this Agreement incorporated by reference into permits, the Parties intend that judicial review of the incorporated portions shall, to the extent authorized by law, only be reviewed under the provisions of CERCLA.

18. PROJECT MANAGERS

18.1 On or before the effective date of this Agreement, EPA, the Air Force, and the State shall each designate a Project Manager and an alternate (each hereinafter referred to as Project Manager) for the purpose of overseeing the implementation of this agreement. The Project Managers shall be responsible on a daily basis for assuring proper implementation of the RI/FS and the RD/RA in accordance with the terms of the Agreement. In

addition to the formal notice provisions set forth in Section 21 (Notification), to the maximum extent practicable, communications among the Air Force, EPA, and the State on all documents, including reports, comments, and other correspondence concerning the activities performed pursuant to this Agreement, shall be directed through the Project Managers.

18.2 The Air Force, EPA, and the State may change their respective Project Managers. The other Parties shall be notified in writing within five (5) days of the change.

18.3 The Project Managers shall (as described in Subsection 8.5) meet regularly to review and discuss progress of the work being performed at the Site. To the maximum extent practicable, these meetings will be held in conjunction with meetings of the Technical Review Committee as established in CERCLA Section 211, 10 U.S.C. 2705(c). Although the Air Force has ultimate responsibility for meeting its respective deadlines or schedule, the Project Managers shall assist in this effort by consolidating the review of primary and secondary documents whenever possible and by scheduling progress meetings to review reports, evaluate the performance of environmental monitoring at the Site, review RI/FS or RD/RA progress, discuss schedules for elements of the RI/FS to be conducted in the following one hundred and eighty (180) days, resolve disputes, and adjust deadlines or schedules. At least one week prior to each scheduled progress meeting, the Air Force will provide to the other Parties a draft agenda and summary of the status of the work subject to this Agreement. The minutes of each progress meeting, with the meeting agenda and all documents discussed during the meeting (which were not previously provided) as attachments, shall constitute a progress report which will be sent to all Project Managers within ten (10) working days after the meeting ends. If an extended period occurs between Project Manager progress meetings, the Project Managers may agree that the Air Force shall prepare an interim progress report and provide it to the other Parties. The report shall include the information that would normally be discussed in a progress meeting of the Project Managers. Other meetings shall be held more frequently upon request by any Project Manager.

18.4 The authority of the Project Managers shall include, but is not limited to:

(a) Taking samples and ensuring that sampling and other field work is performed in accordance with the terms of any final work plan and Quality Assurance Project Plan (QAPP);

(b) Observing and taking photographs and making such other reports on the progress of the work as the Project Managers deem appropriate, subject to the limitations set forth in Section 25 (Access to Federal Facility) hereof;

(c) Reviewing records, files, and documents relevant to the work performed;

(d) Determining the form and specific content of the Project Manager meetings and of progress reports based on such meetings; and

(e) Recommending and requesting minor field modifications to the work to be performed pursuant to a final Work Plan or in techniques, procedures, or design utilized in carrying out such Work Plan.

18.5 To be effective, any minor field modification proposed by any Party pursuant to this Section must be approved orally by all Parties' Project Managers. The Air Force Project Manager will make a contemporaneous record of such modification and approval in a written log, and a copy of the log entry will be provided as part of the next progress report. Even after approval of the proposed modification, no Project Manager will require implementation by a government contractor without approval of the appropriate Government Contracting Officer.

18.6 The Project Manager for the Air Force shall be responsible for day-to-day field activities at the Site and, consistent with other provisions of this Agreement, shall exercise the authority established in the NCP for the lead agency remedial project manager and on-scene coordinator. The Air Force Project Manager or other designated employee of F.E. Warren AFB Environmental Management Branch shall be present at the Site or reasonably available to supervise work during all hours of work performed at the Site pursuant to this Agreement. For Air Force work being performed under a contract, exercise of the Air Force project manager's responsibility and supervision will be through the Air Force Contracting Officer. For all times that such work is being performed, the Air Force Project Manager shall inform the command post at F.E. Warren AFB of the name and telephone number of the designated individual responsible for supervising the work.

18.7 The Project Managers shall be reasonably available to consult on work performed pursuant to this Agreement and shall make themselves available to each other during the pendency of this Agreement. The absence of EPA, the State, or Air Force Project Managers from the facility shall not be cause for work stoppage of activities taken under this Agreement.

19. PERMITS

19.1. The Parties recognize that under Sections 121(d) and 121(e)(1) of CERCLA/SARA, 42 U.S.C. Section 9621(d) and 9621(e)(1), and the NCP, portions of the response actions called for by this Agreement and conducted entirely on-site are exempted

from the procedural requirement to obtain a Federal, State, or local permit but, to the extent required by CERCLA, must satisfy all the applicable or relevant and appropriate Federal and State standards, requirements, criteria, or limitations which would have been included in any such permit.

19.2 This Section is not intended to relieve the Air Force from any and all regulatory requirements, including obtaining a permit, whenever it proposes a response action involving either the movement of hazardous substances, pollutants, or contaminants off-site, or the conduct of a response action off-site.

19.3 The Air Force shall notify EPA and the State in writing of any permit required for off-site activities as soon as it becomes aware of the requirement. Upon request of the Air Force Project Manager, the Project Managers of EPA and the State will assist the Air Force to the maximum extent practicable in obtaining any required permit. The Air Force agrees to obtain any permits necessary for the performance of any work under this Agreement. Upon request, the Air Force shall provide EPA and the State copies of all such permit applications and other documents related to the permit process. Copies of permits obtained in implementing this Agreement shall be appended to the appropriate submittal or progress report.

20. QUALITY ASSURANCE

20.1 In order to provide quality assurance and maintain quality control regarding all field work and sample collection performed pursuant to this Agreement, the Air Force agrees to designate a Quality Assurance Officer (QAO) who will ensure that all work is performed in accordance with approved work plans, sampling plans, and QAPPs. The QAO shall maintain for inspection a log of quality assurance field activities and audits and provide a copy to the Parties upon request.

20.2 To ensure compliance with the QAPP, the Air Force shall arrange for access, upon request by EPA or the State, to all laboratories performing analysis on behalf of the Air Force pursuant to this Agreement.

21. NOTIFICATION

21.1 All Parties shall transmit primary and secondary documents and comments thereon and all notices required herein so that they are received within two (2) working days. Time limitations shall commence upon receipt.

21.2 Notice to the individual Parties pursuant to this Agreement shall be sent to the addresses specified by the Parties. Initially these shall be as follows:

U.S. EPA:

Michael Mutnan, 8HWM-FF
U.S. Environmental Protection Agency, Region 8
Hazardous Waste Management Division
999 18th Street, Suite 500
Denver, CO 80202-2405

State of Wyoming:

Margaret Davison
DEQ/WQD
Southeast District Project Engineer
Herschler Building 4 West
Cheyenne, WY 82002

F.E. Warren Air Force Base:

Barry Mountain P.E.
Installation Restoration Program Manager
90 CSG/DEVR
F.E. Warren AFB
Wyoming 82005-5000

21.3 All routine correspondence may be sent via first class mail to the above addressees.

22. DATA AND DOCUMENT AVAILABILITY

22.1 Each Party shall make all sampling results, test results, or other data or documents generated through the implementation of this Agreement available to the other Parties. All quality assured data shall be supplied within sixty (60) days of its collection. If the quality assurance procedure is not completed within sixty (60) days, raw data or results shall be submitted within the sixty (60) day period and quality assured data or results shall be submitted as soon as they become available.

22.2 The sampling Party's Project Manager shall notify the other Parties' Project Managers not less than ten (10) days in advance of any sample collection. If it is not possible to provide ten (10) days prior notification, the sampling Party's Project Manager shall notify the other Project Managers as soon as possible after becoming aware that samples will be collected. Each Party shall allow split or duplicate samples to be taken by the other Parties or their authorized representatives.

23. RELEASE OF RECORDS

23.1 The Parties may request of one another access to or a copy of any record or draft final or final document pertaining to

activities within the scope of this Agreement. If the Party that is the subject of the request (the originating Party) has the record or document, that Party shall provide access to or a copy of the record or document; provided, however, that no access to or copies of records or documents need be provided if they are subject to claims of attorney-client privilege, attorney work product, or enforcement confidentiality. Records or documents which are properly classified pursuant to law or regulation shall be accessed subject to these laws or regulations.

23.2 Records or documents identified by the originating Party as subject to other nondisclosure provisions of the Freedom of Information Act, 5 U.S.C. Section 552, or the Public Records Act, Wyoming Statute 16-4-021 through 205, shall be released to the requesting Party, provided the requesting Party states in writing that it will not release the record or document to the public without prior approval of the originating Party. Records or documents which are provided to the requesting Party and which are not identified as subject to nondisclosure may be made available to the public without further notice to the originating Party.

23.3 Subject to Section 120(j)(2) of CERCLA, 42 U.S.C. Section 9620(j)(2), any draft final or final documents required to be provided by Section 8 (Consultation) and quality assured analytical data showing test results will always be releasable and no exemption shall be asserted by any Party.

23.4 This Section does not change any requirement regarding press releases in Section 26 (Public Participation and Community Relations).

23.5 A determination not to release a document for one of the reasons specified above shall not be subject to Section 13 (Dispute Resolution). Any Party objecting to another Party's determination may pursue the objection through the determining Party's appeal procedures.

24. PRESERVATION OF RECORDS

24.1 Despite any document retention policy to the contrary, the Parties shall preserve, during the pendency of this Agreement and for a minimum of ten (10) years after its termination, all records and documents contained in the Administrative Record and any additional records and documents which relate to the actions carried out pursuant to this Agreement. After this ten (10) year period, each Party shall notify the other Parties at least forty-five (45) days prior to destruction of any such documents. Upon request by any Party, the requested Party shall make available such records or copies of any such records, unless withholding is authorized by this Agreement and determined appropriate by law.

25. ACCESS

25.1 Without limitations on any authority conferred on EPA or the State by statute or regulation, EPA, the State, or their authorized representatives shall be allowed to enter F.E. Warren AFB at reasonable times for purposes consistent with the provisions of the Agreement. Such access shall include, but not be limited to, reviewing the progress of the Air Force in carrying out the terms of this Agreement; ascertaining that the work performed pursuant to this Agreement is in accordance with approved work plans, sampling plans, and QAPPs; and conducting such tests as EPA, the State, or the Project Managers deem necessary.

25.2 The Air Force shall honor all reasonable requests for access by the EPA or the State conditioned upon presentation of proper credentials. The EPA or the State will, to the maximum extent practicable and in light of the purpose of the Access, notify the Air Force Project Manager 24 hours in advance of the time they request access to F.E. Warren AFB. The Air Force Project Manager will provide briefing information, coordinate access and escort to restricted or controlled-access areas, arrange for base passes, and coordinate any other access requests which arise.

25.3 EPA and the State shall provide reasonable notice to the Air Force Project Manager to request any necessary escorts. EPA and the State shall not use any camera, sound recording, or other recording device at F.E. Warren AFB without the permission of the Air Force Project Manager. The Air Force shall not unreasonably withhold such permission.

25.4 The access by EPA and the State, granted in Subsection 25.1 of this Section, shall be subject to those regulations necessary to protect national security or mission essential activities. Such regulation shall not be applied so as to unreasonably hinder EPA or the State from carrying out their responsibilities and authority pursuant to this Agreement. If requested by EPA or the State, Air Force shall assist EPA and the State in obtaining authorizations or clearances needed to effectuate access consistent with this Section 25. In the event that access requested by either EPA or the State is denied by the Air Force, the Air Force shall provide an immediate verbal explanation of the reason for denial and, within 48 hours of the denial, a written explanation, including reference to the applicable regulations and upon request a copy of such regulations. The Air Force shall expeditiously make alternative arrangements for accommodating the requested access. The Parties agree that this agreement is subject to CERCLA section 120(j), 42 U.S.C. 9620(j), regarding the issuance of Site Specific Presidential Orders as may be necessary to protect national security.

25.5 If EPA or the State requests access in order to observe a sampling event or other work being conducted pursuant to this Agreement and access is denied or limited, the Air Force agrees to reschedule or postpone such sampling or work if EPA or the State so requests, until such mutually agreeable time when the requested access is allowed. The Air Force shall not restrict the access rights of the EPA or the State to any greater extent than the Air Force restricts the access rights of its contractors performing work pursuant to this Agreement.

25.6 All Parties with access to F.E. Warren AFB pursuant to this Section shall comply with all applicable health and safety plans.

25.7 To the extent the activities pursuant to this Agreement must be carried out on other than Air Force property, the Air Force shall use its best efforts to the maximum extent of its authority, including its authority under CERCLA Section 104, to obtain access from the owners which shall provide reasonable access for the Air Force, EPA, and the State and their representatives. In the event that the Air Force is unable to obtain such access agreements, the Air Force shall promptly notify EPA and the State.

25.8 With respect to non-Air Force property on which monitoring wells, pumping wells, or other response actions are to be undertaken, the Air Force shall use its best efforts to ensure that any access agreements shall provide for the continued right of entry for all Parties for the performance of such response actions. In addition, the Air Force shall use its best efforts to ensure that any access agreement shall provide that no conveyance of title, easement, or other interest in the property shall be consummated without the continued right of entry.

25.9 Nothing in this Section shall be construed to limit EPA's, Air Force's, and the State's right of access under applicable law.

26. PUBLIC PARTICIPATION AND COMMUNITY RELATIONS

26.1 The Parties agree that response actions at the Site arising out of this Agreement shall comply with the Administrative Record and public participation requirements of CERCLA Sections 113(k) and 117, 42 U.S.C. Section 9313(k) and 9617, relevant community relations provisions in the NCP, EPA guidance, and, to the extent they may apply, State statutes and regulations. The State agrees to inform the Air Force of all State requirements which it believes pertain to public participation. The provisions of this Section shall be carried out in a manner consistent with, and shall fulfill the intent of, Section 17 (Statutory Compliance-RCRA/CERCLA Integration).

26.2 The Air Force shall develop and implement a Community Relations Plan (CRP) addressing the community concerns and involvement in environmental activities and elements of work undertaken by the Air Force pursuant to this Agreement.

26.3 The Air Force shall establish and maintain an administrative record at a place at or near the Federal facility which is freely accessible to the public. The administrative record shall be established and maintained in accordance with relevant provisions in CERCLA, the NCP, and EPA guidance. A copy of each document placed in the administrative record, not already provided, will be provided by the Air Force to the other Parties. The administrative record developed by the Air Force shall be updated and new documents supplied to the other Parties on at least a quarterly basis. An index of documents in the administrative record will accompany each update of the administrative record.

26.4 Except in case of an emergency, or with regard to enforcement matters, any Party issuing a press release with reference to any of the work required by this Agreement shall advise the other Parties of such press release and the contents thereof, at least forty-eight (48) hours prior to issuance.

27. FIVE-YEAR REVIEW

27.1 Consistent with CERCLA section 121(c), 42 U.S.C. Section 9621(c) and in accordance with this Agreement, if the selected response actions results in any hazardous substances, pollutants, or contaminants remaining at the Site, the Parties shall review the remedial action program at least every five (5) years after the initiation of the final remedial action to assure that human health and the environment are being protected by the remedial action being implemented.

27.2 To synchronize the five-year reviews for all operable units and final remedial actions, the following procedure will be used: Review of operable units will be conducted every five (5) years counting from the initiation of Remedial Action for the first operable unit, until initiation of the final remedial action for the Site. At that time a separate review for all operable units shall be conducted. Review of the final remedial action (including all operable units) shall be conducted every five (5) years, thereafter.

28. TRANSFER OF REAL PROPERTY

28.1 The Air Force shall not transfer any real property comprising the Federal facility except in compliance with Section 120(h) of CERCLA, 42 U.S.C. Section 9620(h) and those regulations set forth at 55 F.R. 14212. At least thirty (30) days prior to

any conveyance subject to Section 120(h) of CERCLA, the Air Force shall notify all Parties of the transfer of any real property subject to this Agreement and the provisions made for any additional response actions, if required.

29. AMENDMENT OR MODIFICATION OF AGREEMENT

29.1 This Agreement can be amended or modified solely upon written consent of all Parties. Such amendments or modifications may be proposed by any Party and shall be effective the third business day following the day the last Party to sign the amendment or modification sends its notification of signing to the other Parties. The Parties may agree to a different effective date.

30. TERMINATION OF THE AGREEMENT

30.1 The provisions of this Agreement shall be deemed satisfied and terminated upon receipt by the Air Force of written notice from EPA, that the Air Force has demonstrated that all the terms of this Agreement have been completed. If EPA denies or otherwise fails to grant a termination notice within ninety (90) days of receiving a written Air Force request for such notice, EPA shall provide a written statement of the basis for its denial and describe the Air Force actions which, in the view of EPA, would be a satisfactory basis for granting a notice of completion. Such denial shall be subject to the dispute resolution procedures contained in Section 13 of this Agreement.

30.2 This provision shall not affect the requirements set forth in CERCLA section 121(c); 42 U.S.C. 9621(c), for periodic review at maximum five (5) year intervals of the efficacy of the remedial actions.

31. OTHER CLAIMS

31.1 Nothing in this Agreement shall constitute or be construed as a bar or release from any claim, cause of action or demand in law or equity by or against any person, firm, partnership or corporation not a signatory to this Agreement for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous substances, hazardous waste, pollutants, or contaminants found at, taken to, or taken from the federal facility. Unless specifically agreed to in writing by the Parties, EPA and the State shall not be held as a party to any contract entered into by the Air Force to implement the requirements of this Agreement.

32. RECOVERY OF EPA EXPENSES

32.1 This Agreement does not in any way or manner provide for the Air Force to reimburse EPA for its role in performing or complying with this Agreement. The Parties agree to amend this Agreement at a later date in accordance with any subsequent national resolution of the issue of EPA cost reimbursement by the Air Force. Pending such resolution, EPA reserves the rights it may have to seek or obtain reimbursement of any funds expended by EPA at or in conjunction with response actions at F.E. Warren Air Force Base to the extent authorized by CERCLA; nothing herein shall prejudice EPA's ability to exercise any right to initiate a cost recovery action as provided for by CERCLA.

33. STATE SUPPORT SERVICES

33.1 The Air Force and the State of Wyoming agree to use the Defense-State Memorandum of Agreement between the State and The Department of Defense, signed on June 27, 1990, for the reimbursement of services provided in direct support of the Air Force environmental restoration activities at the Site pursuant to this Agreement.

34. EPA CERTIFICATION OF COMPLETION OF REMEDIAL ACTION

34.1 When the Air Force determines that any OU remedial action, including any groundwater remediation, has been completed in accordance with the requirements of this Agreement for an OU it shall so advise EPA and the State in writing and shall request from EPA certification that the remedial action(s) have been completed in accordance with the requirements of this Agreement. Within ninety (90) days of the receipt of the request for EPA certification, EPA in consultation with the State shall advise the Air Force in writing that:

(a) EPA certifies that the remedial action has been completed in accordance with this Agreement and based on conditions known at the time of certification; or

(b) EPA denies the Air Force request for certification, stating in full the basis of the denial and describing the additional work needed to bring the remedial action into compliance with the terms and requirements of the primary document relating to such remedial action.

34.2 If EPA denies the Air Force request for certification that a remedial action has been completed in accordance with this Agreement, the Air Force or the State may invoke dispute resolution to review EPA's determination on certification and/or the additional work needed.

35. EFFECTIVE DATE AND PUBLIC COMMENT

35.1 The provisions of this Section shall be carried out in a manner consistent with and shall fulfill the intent of Section 17 (Statutory Compliance--RCRA/CERCLA Integration).

35.2 Within fifteen (15) days of the date of the execution of this Agreement, the Air Force shall announce the availability of this Agreement to the public for a forty-five (45) day period of review and comment, including publication in at least two (2) major local newspapers of general circulation. Comments received shall be transmitted promptly to the other Parties after the end of the comment period. The Parties shall review such comments and shall either:

(a) Unanimously determine that this Agreement should be made effective in its present form in which case EPA shall promptly notify all Parties in writing, and this Agreement shall become effective on the date that F.E. Warren AFB receives such notification; or

(b) If the determination in Section 35.2(a) is not made, the Parties shall meet to discuss and agree upon any proposed changes. If the Parties do not mutually agree on all proposed changes within fifteen (15) days from the close of the public comment period, the Parties shall submit their written notices of position concerning those provisions still in dispute directly to the Dispute Resolution Committee, and the Procedures of Section 13 (Dispute Resolution) shall be applied to the disputed provisions except that the SEC shall be the final level of dispute. Upon resolution by unanimous agreement of any proposed changes, the Agreement shall be modified and shall be re-executed by the Parties with EPA signing last and shall become effective on the date that it is signed by EPA.

35.3 If there is a written request for a public meeting or opposition to finalization of this Agreement within the time period for public comment, the Parties shall hold a public meeting after thirty (30) days prior notice. A written transcript or tape recording of the meeting shall be prepared and provided to the Parties, and such written transcript or tape recording shall be a part of the administrative record required under this Agreement.

36. APPENDICES AND ATTACHMENTS

36.1 Appendices shall be an integral and enforceable part of this Agreement. They shall include the most current versions of:

(a) All final primary and final secondary documents created in accordance with Section 8 (Consultation);

(b) All deadlines established in accordance with Section 9 (Deadlines) and extended in accordance with Section 10 (Extensions); and,

(c) Deadlines previously established and set forth in Appendix A hereto.

36.2 Attachments shall be for information only and shall not be enforceable parts of this Agreement. The information in these attachments is provided to support the initial review and comment upon this Agreement, and they are only intended to reflect the conditions known at the signing of this Agreement. None of the facts related therein shall be considered admissions by, nor are they legally binding upon, any Party with respect to any claims unrelated to, or persons not a Party to, this Agreement.

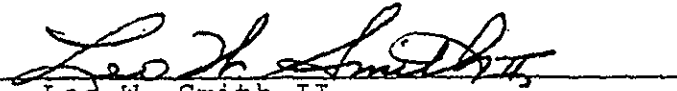
37. AUTHORIZED SIGNATURES

37.1 Each undersigned representative of a Party certifies that he or she is fully authorized to enter into the terms and conditions of this Agreement and to legally bind such Party to this Agreement.

It Is So Agreed

UNITED STATES AIR FORCE

BY:



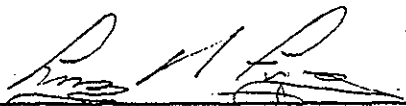
Leo W. Smith II
Lieutenant General, USAF
Vice Commander in Chief
Strategic Air Command

20 September 1991
DATE

It Is So Agreed

UNITED STATES AIR FORCE

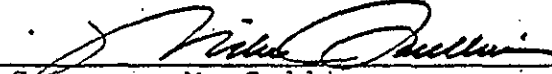
BY:


Thomas A. Fagan III, Colonel, USAF
Commander, 90th Missile Wing
F.E. Warren AFB, Wyoming

20 Sep 91
DATE

It Is So Agreed

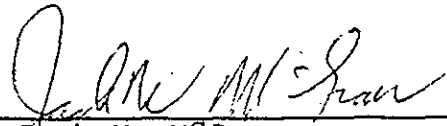
STATE OF WYOMING

BY: 
Governor M. Sullivan

9/23/91
DATE

It Is So Agreed

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

BY: 

Jack W. McGraw
Acting Regional Administrator
U.S. Environmental Protection Agency,
Region VIII

SEP 23 1991
DATE

APPENDIX A

DEADLINES AND TARGET DATES

DEADLINES (D) and TARGET (T) DATES

Health and Safety Plan:

Draft HASP (T) 01 October 1991

Community Relations Plan:

Draft CRP (D) 01 October 1991

General Sampling and Analysis Plan:

Draft SAP (D) 01 October 1991

OU 4 Acid Dry Wells:

Draft Remedial Investigation
Work Plan (D) 01 October 1991

Draft MRAO (T) 01 October 1991

Draft Feasibility Study
Work Plan (D) 01 November 1991

Draft MDSA (T) 29 January 1992

Draft Remedial Investigation
Report (D) 18 March 1992

Draft Feasibility Study
Report (D) 05 June 1992

Draft Proposed Plan (D) 05 June 1992

Draft Record of Decision (D) 12 September 1992

OU 1 - Spill Sites 1, 2, 3, 4, 5, 6 and 7:

Draft Remedial Investigation
Work Plan (D) 22 October 1991

Draft MRAO (T) 22 October 1991

Draft Feasibility Study
Work Plan (D) 16 December 1991

Draft MDSA (T) 06 April 1992

| | | | |
|--|----|----------|------|
| Draft Remedial Investigation Report (D) | 14 | December | 1992 |
| Draft Feasibility Study Report (D) | 24 | May | 1993 |
| Draft Proposed Plan (D) | 24 | May | 1993 |
| Draft Record of Decision (D) | 13 | August | 1993 |
| OU 5 - Fire Protection Training Areas 1 and 2: | | | |
| Draft Remedial Investigation Work Plan (D) | 23 | June | 1992 |
| Draft MRAO (T) | 23 | June | 1992 |
| Draft Feasibility Study Work Plan (D) | 12 | August | 1992 |
| Draft MDSA (T) | 01 | December | 1992 |
| Draft Remedial Investigation Report (D) | 17 | February | 1993 |
| Draft Feasibility Study Report (D) | 23 | July | 1993 |
| Draft Proposed Plan (D) | 23 | July | 1993 |
| Draft Record of Decision (D) | 12 | October | 1993 |
| OU 3 - Landfills 2, 3, 4, 5, 6 and 7: | | | |
| Draft Remedial Investigation Work Plan (D) | 06 | January | 1993 |
| Draft MRAO (T) | 06 | January | 1993 |
| Draft Feasibility Study Work Plan (D) | 26 | February | 1993 |
| Draft MDSA (T) | 15 | June | 1993 |
| Draft Remedial Investigation Report (D) | 03 | March | 1994 |
| Draft Feasibility Study Report (D) | 05 | August | 1994 |

| | | | |
|---|----|----------|------|
| Draft Proposed Plan (D) | 05 | August | 1994 |
| Draft Record of Decision (D) | 25 | October | 1994 |
| OU 6 - Open Burning/Open Detonation Area: | | | |
| Draft Remedial Investigation Work Plan (D) | 23 | March | 1994 |
| Draft MRAO (T) | 23 | March | 1994 |
| Draft Feasibility Study Work Plan (D) | 11 | May | 1994 |
| Draft MDSA (T) | 26 | August | 1994 |
| Draft Remedial Investigation Report (D) | 08 | November | 1994 |
| Draft Feasibility Study Report (D) | 19 | April | 1995 |
| Draft Proposed Plan (D) | 19 | April | 1995 |
| Draft Record of Decision (D) | 07 | July | 1995 |
| OU 7 - Firing Range: | | | |
| Draft Remedial Investigation Work Plan (D) | 23 | March | 1994 |
| Draft MRAO (T) | 23 | March | 1994 |
| Draft Feasibility Study Work Plan (D) | 11 | May | 1994 |
| Draft MDSA (T) | 26 | August | 1994 |
| Draft Remedial Investigation Report (D) | 08 | November | 1994 |
| Draft Feasibility Study Report (D) | 19 | April | 1995 |
| Draft Proposed Plan (D) | 19 | April | 1995 |
| Draft Record of Decision (D) | 07 | July | 1995 |

OU 2 - Groundwater:

| | | | |
|---|----|----------|------|
| Draft Remedial Investigation Work Plan (D) | 05 | January | 1994 |
| Draft MRAO (T) | 05 | January | 1994 |
| Draft Feasibility Study Work Plan (D) | 25 | February | 1994 |
| Draft MDSA (T) | 14 | June | 1994 |
| Draft Remedial Investigation Report (D) | 01 | March | 1995 |
| Draft Feasibility Study Report (D) | 04 | August | 1995 |
| Draft Proposed Plan (D) | 04 | August | 1995 |
| Draft Record of Decision (D) | 25 | October | 1995 |

ATTACHMENT A
STATEMENT OF FACTS

STATEMENT OF FACTS

1. For purposes of this Agreement, the following constitutes a summary of the facts on which this Agreement is based. None of the facts related herein shall be considered admissions by any Party.

2. The Site, known as F. E. Warren Air Force Base (F. E. Warren AFB), occupies approximately 5,866 acres on the west side of Cheyenne, Wyoming. Under F. E. Warren AFB's command structure is a microwave relay station which occupies 1/4 of an acre located to the north of the base. Also under the Base's command structure are numerous missile silos located in Wyoming, Colorado and Nebraska. The microwave relay station and all missile silo locations are not included under this Agreement.

3. F. E. Warren AFB is bordered by either agricultural land or residential areas in various stages of development. The facility began operation in 1867 as a United States Army outpost named Fort D. A. Russell. The facility's name was changed to Fort F. E. Warren in 1930. F. E. Warren AFB was transferred to the newly formed United States Air Force (AF) in 1947.

4. Historically the facility has served a number of military functions. F. E. Warren AFB was a major training facility during and after World War II. Beginning in 1958, F. E. Warren AFB became a Strategic Air Command (SAC) base. The facility then served as an operations center for first the Atlas missile, then the Minuteman and followed by the Peacekeeper (MX).

5. F. E. Warren AFB underwent extensive renovation after World War II. The majority of training facilities were torn down and not replaced. Construction since that time has centered on facilities for missile operations. The facility continues operation of a firing range that first saw use when the facility opened.

6. Waste generation at the facility has consisted primarily of spent solvents from equipment cleaning and various maintenance operations. The AF also maintained an acid well used for spent battery acid disposal. Five landfills are located at the facility and these hold various non-hazardous and hazardous wastes. Only one landfill is presently in operation, the others have been closed. Two fire protection areas involve extensive use of various fuels and combustible materials for fire training exercises. Both areas are now closed and were replaced by a third.

7. In 1984-1985 the AF, as part of the Department of Defense Installation Restoration Program (IRP)-Phase I, conducted a records search regarding past waste management practices at the Site. A ground-water investigation began in 1985. The findings

of the IRP Phase 1 activity were presented in a report issued in September 1985 which was provided to the EPA and Wyoming Department of Environmental Quality (DEQ). The report identified twenty-five (25) areas at F. E. Warren AFB where hazardous materials might have been used, stored, treated or disposed. The report recommended further investigative work on fourteen (14) areas. The report also provided hydrogeologic information about the site. Conclusions included:

a. F. E. Warren AFB is underlain by a series of water bearing formations known as the High Plains Aquifer. The Ogallala Formation is the first major water bearing zone in the High Plains Aquifer. An alluvial zone, considered part of the High Plains Aquifer, overlies the Ogallala Formation for most of the Site.

b. There is no apparent continuous confining layer between the alluvial zone and the Ogallala Formation and between any of the water bearing formations which make up the High Plains Aquifer.

c. Crow and Diamond Creeks, streams which flow through F. E. Warren AFB, are discharge points for the alluvial zone.

8. Beginning in 1987, the AF conducted Phase II of the IRP (Confirmation/Quantification) which included an initial assessment of contamination at the Site and a more comprehensive assessment designed to quantify the extent, direction and rate of contaminant migration. The assessment covered eighteen (18) area and evaluated surface water quality at the Site. The findings of this activity were presented in a undated report available approximately December 1987. Contamination from trichloroethylene (TCE), gasoline, oils, hydraulic fluid, ethylene glycol and battery acid were found in groundwater along with soils contamination. The report also recommended further investigative work in order to better define Site contamination. Hydrogeologic conclusions formulated in the Phase I report were re-confirmed. This information was provided to the EPA and DEQ.

9. EPA placed F. E. Warren AFB on the National Priority List (NPL) on February 21, 1989.

10. An IRP Phase II report was issued in approximately December 1989. This undated report further identified areas of concern at the base and recommended action for all sites investigated. This information was provided to the EPA and DEQ. Investigation results indicate that shallow groundwater discharges to Crow Creek. TCE was found in surface water samples at various locations. Contaminated groundwater, discharging to surface water, is believed to be the TCE contamination sources. Further monitoring was recommended.

11. Attachment B to the Agreement is a map showing the operable units (OUs) located at F. E. Warren AFB. These OUs were identified as a result of AF investigations and are described below:

OU1

The areas covered by this OU are suspected contamination sources. The listing below contains those areas known at the time of FFA signing. Further areas may be identified during investigation activities:

Phase 1-Spill Site No. 1: In 1973, the on-base service station, Building 400, experienced a 2,000-2,500 gallon leaded gasoline release. A storage tank at the service station was found to have leaked and was replaced. Gasoline recovery was attempted. Volatile organic compounds (VOCs) were detected in the groundwater, with the majority of positive readings from a well upgradient to the site. Recommendations of the IRP investigations were to repair the leaking gasoline storage tank and further monitoring of the area.

Phase 2-Spill Site No. 2: An oil spill occurred at this location, which is near Building 810, in September 1983. During the same period approximately thirty 55-gallon drums, which were thought to contain water but held hydraulic fluid and motor oil residues, were emptied onto the ground at this location. The area also served as a waste accumulation area, for oils and hydraulic fluid, and has experienced numerous releases. Soils at the accumulation area were heavily stained. TCE and chloroform, at low levels, were found in some ground-water monitoring wells. These compounds were thought to originate from another source(s). No further action was a recommendation of the IRP investigations.

Phase 3-Spill Site No. 3: In April, May and June 1980, used battery acid was disposed on the ground west of Building 338. Fifty gallons per month, an estimated total of 150 gallons, was estimated to be released. No significant ground-water metals contamination was found. A further records investigation found potential contamination areas along with a drain system fed from Building 338. The area will be further characterized.

Phase 4-Spill Site No. 4: The location of a trichloroethylene (TCE) release in October 1982. Approximately 15-20 gallons of TCE were lost from a drum which developed a leak. This area is near Building 1250, a missile maintenance shop. Approximately 530 yards of contaminated soil were removed. Initially, three wells were installed to monitor groundwater conditions with three others installed at a later date. Monitoring showed TCE, chloroform and other organic compound

contamination present in the groundwater. TCE and chloroform ground-water contamination was found in certain wells. Recommendations of the IRP investigations were installation of additional wells; further monitoring; and renovation of the drum storage area near Building 1250.

Phase 5-Spill Site No. 5: A waste material accumulation area located east of Building 336 and in use since 1962. The area contains 2-200 gallon tanks located in a fenced area. One contains oil, the other waste anti-freeze. Several 55-gallon drums, containing waste and clean oil, are also stored in the fenced area. Stained soil in the area was evidence of past releases. TCE and chloroform were detected in some wells. No further action was a recommendation of the IRP investigations.

Phase 6-Spill Site No. 6: A waste accumulation point near Building 316 and in operation since 1962. The area was used for radiator cleaning; waste and new oil storage; and waste battery acid disposal. Stained soil in the area was evidence of past releases. The area was covered with new soil. TCE and chloroform were detected in some wells. Lead was found in soil samples. No further action was a recommendation of the IRP investigations.

Phase 7-Spill Site No. 7: This was a new contamination area identified during the investigation. The site is a sump fed by floor drains found in Building 4000. Maintenance operations occurred in the building with extensive use of TCE. Sump sludge, surrounding soil and groundwater were found to be heavily contaminated with TCE. Further monitoring and cleanup of the area were recommendations of the IRP investigations.

OU2

Facility Groundwater: This OU covers all groundwater at the facility. The depth of contamination in the Ogallala Formation is not fully known and will be investigated. Contamination in the upper zone of the Ogallala was investigated and TCE plumes mapped. Crow and Diamond Creeks are ground-water discharge points and contamination plumes are moving towards both creeks.

OU3

Phase 1-Landfill No. 2: This area was used from 1900 to 1941. The types of waste material deposited are not well known and open burning may have occurred. On-base housing is now located near or on certain portions of the landfill. The fill area has a soil and grass cover and experiences some subsidence. TCE and chloroform were found in an upgradient well. No further action was a recommendation of the IRP investigations.

Phase 2-Landfill No. 3: This area was used from 1941 to 1947. The types of waste material deposited are not well known. The fill area has a soil and grass cover and experiences some subsidence. TCE ground-water contamination was found. Further monitoring was a recommendation of the IRP investigations.

Phase 3-Landfill No. 4: This area was used from 1947 to 1959. Waste from on-going base operations during the above period were deposited in the landfill. Available information also indicates solvents, waste oils, batteries and other industrial wastes may have been placed in the unit. The fill area has a soil and grass cover and experiences some subsidence. Petroleum hydrocarbons were found in some ground-water wells. No further action was a recommendation of the IRP investigations.

Phase 4-Landfill No. 5: This area was used from 1960 to 1970 for shop wastes and on-base refuse disposal. Operations consisted of open burning and placing the residues in trenches. Available information also indicates solvents, waste oils, batteries and battery acid may have been placed in the landfill. TCE groundwater contamination was found. Installation of additional wells and continued monitoring were recommendations of the IRP investigations.

Phase 5-Landfill No. 6: This area began operation in 1970 and was partially in use until mid-1990. The only operating portions were trenches used for disposal of on-base power plant flyash. The unit also received wastes from base shops and housing units. The closed portions have soil and grass cover. TCE and VOC ground-water contamination were found. Further monitoring was a recommendation of the IRP investigations.

Phase 6-Landfill No. 7: TCE was found in some wells, but the landfill is not believed to be the source. No further action was a recommendation of the IRP investigations.

OU4

Acid Dry Well: This unit is located near Building 826. A shallow well served as a disposal point for neutralized waste battery acid. Per DEQ order, the acid disposal practice was discontinued and soil removed from the area. Lead was present in some soil samples. No further action was a recommendation of the IRP investigations.

OU5

Phase 1-Fire Protection Training Area No. 1: This area was utilized from 1950 to 1965 for fire training purposes. Combustible/flammable materials (i.e. waste oils, solvents, gasolines and fuel oils) were spread on the ground, ignited and

crews used various materials to extinguish the fire. Runoff from the area went to Crow Creek. VOC, TCE and petroleum hydrocarbon groundwater contamination were found. Installation of further wells and continued monitoring were recommendations of the IRP investigations.

Phase 2-Fire Protection Training Area No. 2: This area replaced the above unit beginning in 1965. Similar operations and exercises to that described above were conducted. Runoff also went to Crow Creek. Widespread TCE and VOC groundwater contamination were found. Contaminated soil was found, but the site is currently being used. Monitoring of the area was the only recommendation of the IRP investigations.

OU6

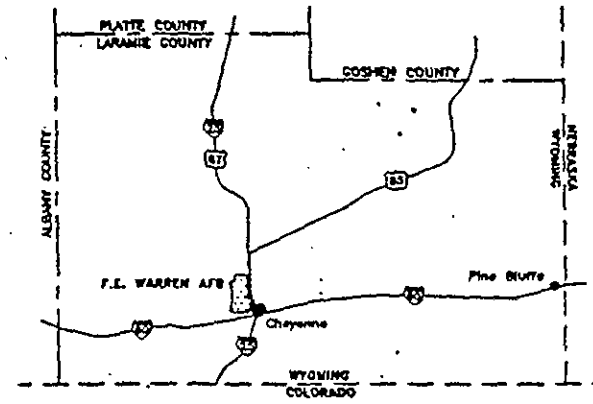
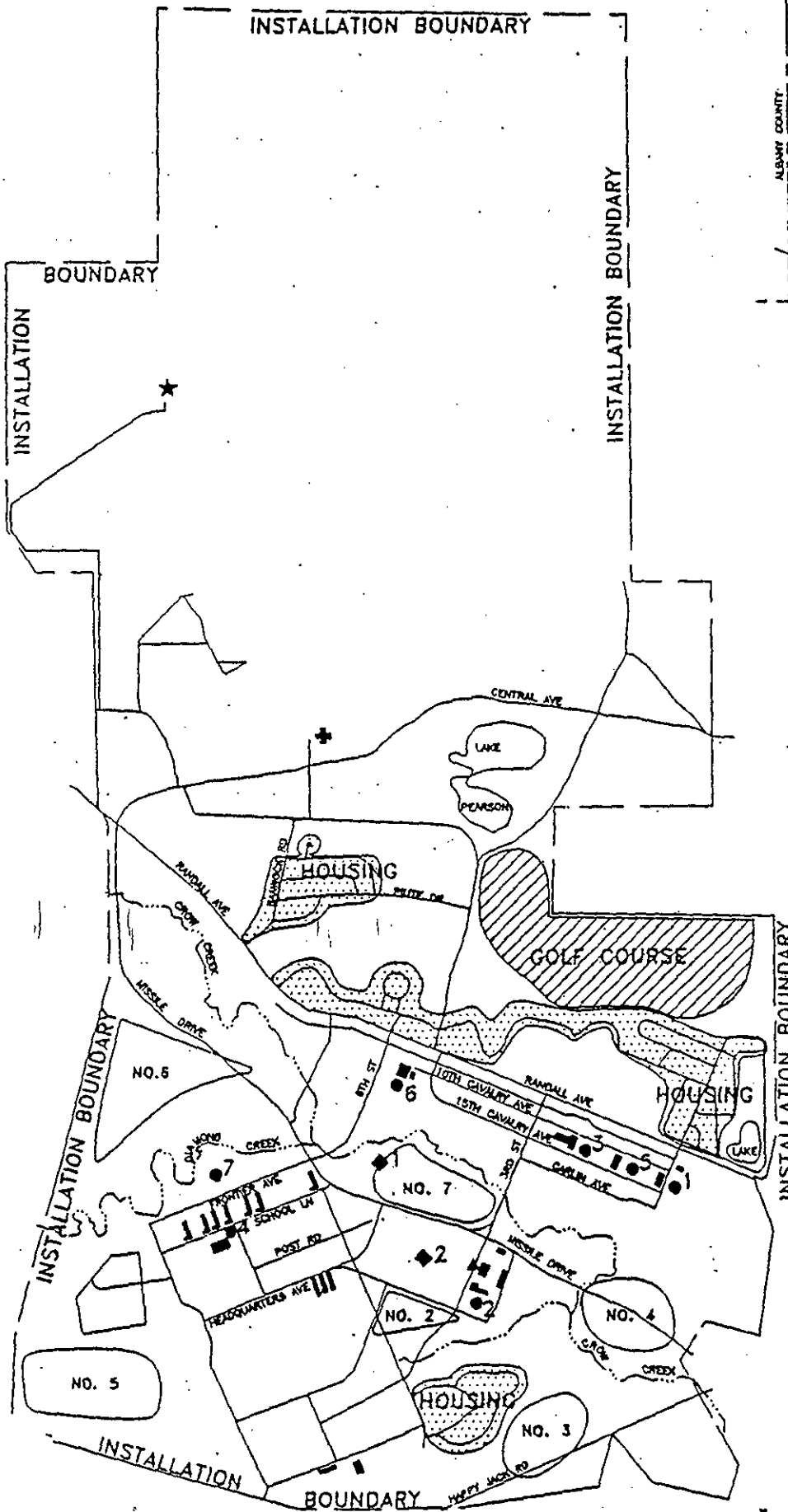
Open Burning, Open Detonation Area: This area was used for detonation of munitions. Operations ceased in 1984? Special AF teams have investigated the area and destroyed munitions found in the area. The full extent of the area is unknown since specific areas were used over the years. None of the IRP investigations looked at the area.

OU7

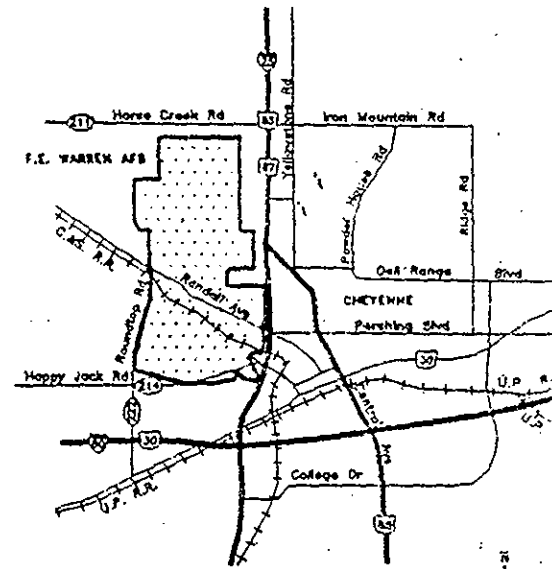
Firing Range: Low lead levels were found in the soil. No further action was a recommendation of the IRP investigations.

ATTACHMENT B

MAP OF SITE



VICINITY MAP
(NOT TO SCALE)



LOCATION MAP
SCALE 1:10000

LEGEND

| | | |
|---|-------------------------------------|------|
| ● | SPILL SITES (1-7) | OU 1 |
| | GROUND WATER | OU 2 |
| ○ | LANDFILLS (2-7) | OU 3 |
| ▲ | ACID DRY WELL | OU 4 |
| ◆ | FIRE PROTECTION TRAINING AREA (1&2) | OU 5 |
| ★ | OPEN BURNING | OU 6 |
| ★ | OPEN DETONATION | OU 6 |
| + | FIRING RANGE | OU 7 |

DEPT. of the AIR FORCE
 STRATEGIC AIR COMMAND
 NATIONAL PRIORITY LIST
 FEDERAL FACILITY AGREEMENT/
 INTERAGENCY AGREEMENT
 ATTACHMENT B
 FACILITY SITE MAP
 90TH CIVIL ENGINEERING SQUADRON
 F.E. WARREN A.F.B., WYOMING
 SEPTEMBER 1990

FACILITY SITE MAP

SCALE 1:10000

ATTACHMENT C
STATEMENT OF WORK

STATEMENT OF WORK

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STATEMENT OF WORK

CHAPTER 1.0 INTRODUCTION

The United States Air Force (USAF), the Environmental Protection Agency (EPA), and the State of Wyoming (State) negotiated the Interagency Agreement (IAG) required by Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The Wyoming Department of Environmental Quality (WDEQ) is the designated single State agency responsible for the program carried out in compliance with the FFA. The IAG, hereafter referred to as a Federal Facility Agreement (FFA), identifies the procedures by which remedial action will be conducted at F. E. Warren Air Force Base (FEW AFB). This Statement of Work (SOW) is identified in the FFA as Appendix A of the FFA. The schedule for delivery of documents in accordance with Sections 8.3(b) and 9 of the FFA is identified in the FFA as Appendix A.

Documents and procedures will conform as closely as practicable with guidance listed in the Bibliography attached to this SOW. The most recent version of the bibliography citations, published at least four months prior to the document submittal date will be used. The EPA Remedial Project Manager and the State Remedial Project Manager will provide information to the USAF Remedial Project Manager on new guidance as they become aware of it. While this SOW provides details on specific response requirements that must be met during the investigatory and study phase of the response process, it is incumbent upon USAF to perform all response activities in compliance and consistent with the FFA, applicable Federal and State laws, Federal and State regulations and EPA guidance.

1.1 Purpose of the Statement of Work

The purpose of the SOW, which augments the FFA is to define the work elements and support requirements necessary for production of the primary and secondary documents, and to integrate past work completed at FEW AFB under the Installation Restoration Program. It is intended to generally describe circumstances of uncontrolled releases of hazardous substances at FEW AFB and the procedure mandated by CERCLA in responding to risks to human health and the environment.

1.2 Roles of the USAF, EPA and WDEQ

Section 300.5 of the National Oil and Hazardous Substances Contingency Plan (NCP), 40 CFR Part 300, designates the USAF as the lead agency for response activities at FEW AFB. EPA and the WDEQ will serve as support agencies.

1.3 Administrative Record

The USAF has established an administrative record. The record is located in the offices of the Environmental Restoration Section at FEW AFB. The USAF will compile and maintain the administrative record in accordance with Subpart I of the NCP. The USAF has also established an administrative record repository, as described in paragraph 3.2, at the Laramie County Library, Cheyenne, Wyoming.

1.4 Document Delivery Schedule

Deadlines for primary documents and target dates for secondary documents are set forth in Appendix A of the FFA. USAF is required by Sections 8.3 and 8.4 of the FFA to complete and transmit draft reports of the primary and secondary documents to the EPA and State on or before these deadlines and target dates. The Community Relations Plan, Sampling and Analysis Plan, and Health and Safety Plan will be developed as site-wide documents, which encompass all Operable Units (OUs) identified as of the effective date of the FFA. The remaining documents will be produced for each OU. In the interest of convenience and timely execution of the FFA, the USAF may redefine some OUs, subject to EPA and WDEQ concurrence.

1.5 Operable Units

Operable units have been established based on preliminary assessments, results of the Department of Defense Installation Restoration Program (IRP) investigations, and interim remedial actions (IRAs) already completed or ongoing at the facility. Previously identified locations at FEW AFB have been grouped and labelled as OUs based on possible response actions and related characteristics. Future locations, if any will be incorporated by amending this SOW. FEW AFB has been divided into 10 OUs. These OUs are based on the Site locations (phases) identified by IRP activities. These OUs are identified as follows:

- Operable Unit #1-Spill Sites (SS-001 through -007)
- Operable Unit #2-Ground water (GW-001 and -002)
- Operable Unit #3-Landfills (LF-011 through -016)
- Operable Unit #4-Acid-Dry Well
- Operable Unit #5-Fire Protection Training Areas (FT-008 and FT-009)
- Operable Unit #6-Open Burning/Open Detonation Area
- Operable Unit #7-Firing Range

A description of the known releases with each OUs is found in FFA Attachment A, Statement of Facts.

CHAPTER 2.0 PROJECT MANAGEMENT (NCP §300.430 (b))

USAF will be guided by Chapter 2, Scoping of the RI/FS, of "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA, Interim Final (Oct 88)" in order to comply with the scoping requirements of the NCP. During the scoping process USAF shall consider the program goal, program management principles, and the expectations as delineated in §300.430 (a) of the NCP. The parties will confer during scoping to identify the optimal set and sequence of actions necessary to conduct remediation at FEW AFB. The following elements are steps in the scoping process:

2.1 Assemble and Evaluate Existing Data

2.1.1 Site Maps

FFA Attachment B is a map of FEW AFB. Site maps indicating known wetlands, water features, drainage patterns, 100-year flood plains, tanks, buildings, surface and underground utilities, paved areas, easements, rights-of-way, railroad tracks, and other features are available at FEW AFB and will be used throughout the scoping process.

2.1.2 Documents

Site information is found in the following publications:

INSTALLATION RESTORATION PROGRAM, PHASE I RECORDS SEARCH;
F.E. WARREN AFB, WY (1985)

PHASE II-INSTALLATION RESTORATION PROGRAM, F.E. WARREN
AFB, WY (1987)

REMEDIAL INVESTIGATION FOR F. E. WARREN AFB, WY (undated)

[NOTE: This document was delivered to EPA and the State in 1989 and is being revised. The revised document is expected to be delivered to USAF in mid-1991.]

FEW AFB ADMINISTRATIVE RECORD

F. E. WARREN BASE COMPREHENSIVE PLAN

2.1.3 History of Past Response Actions

OPERABLE UNIT #1-USAF conducted a response action (Phase I-Contaminant Source Removal) at IRP Spill Site 7 near Building 1294 (formerly Building 4000) in late 1989. This area contained an oil/water separator which was highly contaminated by trichloroethylene (TCE). The action consisted of removing a reinforced concrete separator structure, TCE contaminated liquid, sludge, and 250 cubic yards of surrounding soil. USAF has

contracted for construction of an environmental restoration project (Phase II-Ground Water Remediation) at this location using a "pump and treat" concept adopted by USAF and endorsed by the Wyoming Department of Environmental Quality (WDEQ). The effort will be incorporated as a "treatability study" to the Remedial Investigation/Feasibility Study (RI/FS) process to evaluate the groundwater interception and air stripping system methods for use in locations exhibiting similar contamination characteristics at the base.

USAF conducted a response action near Building 1250 during 1984. The project involved removal and disposal of TCE contaminated soil which resulted from a container leak. The total amount of spillage was estimated at 15 to 20 gallons.

OPERABLE UNIT #4-USAF conducted a response action at the Acid Dry Well (near Building 826) in 1986. This action consisted of removing a battery acid disposal well and surrounding soil. This action was endorsed by the WDEQ and documented in the Acid Dry Well Closure Document.

2.1.4 Evaluation of Existing Data

The USAF has conducted, in compliance with the Defense Environmental Restoration Program (10 USC Part 2701, et seq.), an intensive preliminary ground water, surface water, and soil investigation at various locations on FEW AFB to validate the findings of the Preliminary Assessment/Site Investigation (PA/SI) conducted in 1985. Hundreds of soil and water samplings were collected between 1984 and 1990 by the United States Geological Survey-Water Resources Division (USGS). The approximately 29,000 pieces of data produced from these samples will be termed "existing data" for the purposes of this SOW.

Existing data will be used when it is determined that it meets the intent of EPA's Contract Laboratory Program (CLP) standard, is substantiated through validation, or is otherwise determined to meet Data Quality Objectives. Data will be validated using EPA guidance. Existing data which has not been validated is usable for the scoping process.

The parties have agreed that specifically, the existing data is usable for scoping subsequent investigations; initiating a review of technologies to be covered by the feasibility study; and to prepare a location-wide baseline risk assessment. Unvalidated data, which is not supplemented by validated data, will not be used to prepare proposed plans (PPs).

Data gathered after the effective date of the FFA will be termed "subsequent data". This data will be subjected to the field and laboratory QA/QC procedures described in the base-wide SAP.

2.2 Develop Conceptual Understanding of the Site

The Parties will develop a conceptual understanding of the site based upon an evaluation of the data in 2.1 and a site visit to familiarize representatives of the parties with the topography, access routes, and proximity of potential receptors to possible contamination.

2.3 Prepare Draft Baseline Risk Assessment

The USAF will prepare a draft baseline risk assessment for purposes of scoping additional fieldwork and ultimate development of the Risk Assessment for each OU. The draft baseline risk assessment will use existing data to identify contaminants of concern, actual and potential exposure points and pathways, and will introduce conceptual models for exposure points and pathways. The draft baseline risk assessment will be prepared using procedures outlined in Risk Assessment Guidance for Superfund, Environmental Evaluation Manual, Interim Final; Superfund Exposure Assessment Manual (SEAM); Integrated Risk Information System (IRIS); and Public Health Risk Evaluation Data Base (PHRED).

2.4 Identify Response Scenarios and Technologies

Identify likely response scenarios and potentially applicable technologies that may address the Operable Units.

2.5 Limited Data Collection for Scoping

Undertake limited data collection efforts or studies where this information will assist in scoping the RI/FS or accelerate response actions, and begin to identify the needs for treatability studies, as appropriate. All data collection will be according to the Sampling and Analysis Plan (paragraph 2.8) and the RI/FS Work Plan (paragraph 4.2).

2.6 Identify Type of Data Needed for RI/FS

Identify the type, quality, and quantity of the data that will be collected during the RI/FS to support decisions regarding remedial response activities.

2.7 Prepare Site Specific Health and Safety Plan

USAF will prepare a base-wide Health and Safety Plan (HSP) to document specific health and safety concerns related to contamination at FEW AFB and the procedures to be followed to ensure the health and safety of personnel during all phases of response actions. The HSP will specify employee training and protective equipment, medical surveillance requirements, standard operating procedures, and a contingency plan that conforms to

29 CFR §1910.120(1)(1) and (1)(2). The site-wide HSP is designated a secondary document, in Section 8.4 of the FFA. The USAF is required to complete and transmit a draft of this plan to EPA and WDEQ in accordance with the target date listed in Appendix A of the FFA. EPA and WDEQ shall review and comment on the plan as provided in Section 8.7 of the FFA.

2.8 Prepare Sampling and Analysis Plan (SAP)

The USAF will develop a Sampling and Analysis Plan (SAP) that will provide a process for obtaining data of sufficient quality and quantity to satisfy data needs. The Sampling and analysis plans will include:

The Field Sampling Plan (FSP), which describes the standard operating procedures and field techniques to be utilized during the investigation of the Site, and provides guidance for the performance of all fieldwork.

The quality assurance project plan (QAPP), which describes policy, organization, and functional activities and the data quality objectives dictated by the intended use of the data, and measures necessary to achieve adequate data for use in selecting the appropriate remedy.

The USAF intends to follow the suggested format for the SAP (FSP and QAPP) contained in table 2.4 of the RI/FS Guidance the "Interim Guidelines and Specification for Preparing Quality Assurance Project Plans", QAM-005/80, USEPA, 1983 will be used as guidance by USAF to the extent practicable in the production of the QAPP.

The SAP will insure that field observations, measurements, and significant events that have occurred during field activities will be documented in field logs. Laboratory reports will document sample custody, analytical responsibility, analytical results, adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies. USAF will maintain field reports, sample shipment records, analytical results, and Quality Assurance/Quality Control (QA/QC) reports to ensure that data reported and used in the development and evaluation of remedial alternatives can be validated. Analytical results will not be included in any characterization reports unless accompanied by or cross-referenced to a corresponding QA/QC report which will be submitted. In addition, USAF will safeguard chain-of-custody forms and other project records to prevent loss, damage, or alteration.

The SAP is designated as a primary document in Section 8.3 of the FFA. The USAF is required to complete and transmit a draft of this plan to EPA and the State on or before the deadline listed in Appendix A of the FFA. The SAP will be finalized

pursuant to Section 8, Consultation: Review and Comment Process for Draft and Final Documents, of the FFA.

2.9 Initiate the Identification of Applicable or Relevant and Appropriate Requirements

The USAF is responsible for ARAR determinations. The EPA and the State are responsible for identifying potential ARARs to the USAF. ARARs are defined in Section 300.5 of the NCP. Applicable requirements at FEW AFB will be those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at FEW AFB. Relevant and appropriate requirements at FEW AFB will be those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at FEW AFB, address problems or situations sufficiently similar to those encountered at FEW AFB that their use is well suited to the particular site. Only those state standards that are identified in a timely manner and are more stringent than federal requirements may be applicable or relevant and appropriate. The South Dakota Department of Environment and Natural Resources, as the State lead agency, will contact those state and local governmental agencies which are a potential source of proposed ARARs. The proposed ARARs obtained from the identified agencies will be submitted to the USAF, along with a list of those agencies which failed to respond to DENR's solicitation of proposed ARARs. The USAF will contact those agencies which failed to respond and again solicit their input.

The process of identifying and determining potential ARARs is contained in Section 8.6 of the FFA.

2.10 Prepare Remedial Investigation/Feasibility Study Work Plans (RI/FS WP)

The USAF will prepare a RI/FS WP as described in paragraph 4.2 below. The RI/FS WP will include, as necessary, OU specific amendments to the Sampling and Analysis Plan.

CHARTER 3.0 COMMUNITY RELATIONS

The Air force shall provide for the conduct of community relations activities at FEW AFB in accordance with CERCLA, the FFA, and Sections 300.415(m), 300.430(c), 300.430(f)(3) and (6) of the NCP, and "Community Relations In Superfund: A Handbook, "USEPA, Interim, June 1988. In developing the Community

Relations Plan, the USAF will consider EPA Region VIII Guidance dated September 24, 1990.

3.1 Solicitation of Concerns and Information Needs

Prior to commencing field work the Air force will solicit the concerns and information needs of the affected community, and learn how and when citizens would like to be involved in the remedial activities at FEW AFB. Representatives of FEW AFB and the EPA have already conducted several interviews with local officials, community residents, public interest groups, and other interested parties around FEW AFB. FEW AFB has local and state officials attend regular meetings of the Technical Review Committee which was established by 10 USC §2705(c).

3.2 Community Relations Plan (CRP)

The Air force will prepare a formal Community Relations Plan (CRP) based on the community interviews and other relevant information. The CRP is designated as a primary document in Section 8.3 of the FFA. The USAF is required to complete and transmit a draft of this plan to EPA and the State on or before the deadline listed in Appendix A of the FFA. The CRP will be finalized pursuant to Section 8, Consultation: Review and Comment Process for Draft and Final Documents, of the FFA.

The purpose of the CRP is to assure that members of the public have appropriate opportunities for involvement in a wide variety of site-related decisions. These decisions include: selection of the remedy; determining appropriate activities to ensure public involvement; and providing appropriate opportunities for the community to learn about the site. The CRP will describe the procedures and techniques which will be utilized to address community concerns and interests as identified in the interview process.

In order to provide appropriate opportunities for the community to learn about the site the USAF will establish an Administrative Record repository at the Laramie County Library. The Administrative Record repository will contain a copy of the administrative record maintained in the office of the Environmental Restoration Section at FEW AFB. The primary documents listed in Section 8.3 of the FFA will be placed in the repository at the time they become final. Copies of documents submitted for public comment will also be placed in the repository. The Administrative Record Index will be revised quarterly.

3.3 Other Community Relations Activities

The USAF will establish a mailing list of interested community members, interest groups, local, State and Federal

officials and the media. USAF will update the mailing list quarterly and will provide copies to EPA and the State. USAF, EPA or the State may distribute information in the form of a direct mailing to those persons on the mailing list. Direct mailings may be in the form of news releases, fact sheets, or information updates, and will specify the point of contact for the USAF, EPA, and the State for the public to request additional information. Any Party issuing a formal news release to the media regarding any of the work required by the FFA will advise the other Parties of such news release and the contents thereof at least two business days before the issuance, except in the case of emergency response actions. USAF, EPA or the State may conduct public meetings relating to on-going activities at FEW AFB. The Party conducting the public meeting will notify the other Parties of such meeting at least seven days before the meeting.

Community relations to support the selection of a remedy are detailed in Section 300.430(f)(3) of the NCP. After preparation of the proposed plan (PP) the USAF shall publish a notice of the availability and brief analysis of the PP in a major local newspaper of general circulation; place the PP in the Administrative Record and at the information repository; provide the opportunity for a public meeting to be held in Cheyenne, Wyoming, provide a reasonable opportunity of not less than 30 days for submission of written and oral comments on the proposed plan and supporting documents; prepare a transcript of the public meeting pursuant to CERCLA §117(a) and make it available to the public; and prepare a responsiveness summary of significant comments, criticisms, and new relevant information submitted during the comment period.

The above Community Relations Activities will be incorporated into the CRP.

3.4 Technical Assistance Grants

Section 117(e) of CERCLA provides for Technical Assistance Grants (TAGs). This is a mechanism by which the Federal Government, through the Superfund, funds a chartered public group for document review. The USAF will refer any individuals or groups requesting information about TAGs to the EPA Program Manager for FEW AFB.

3.5 Technical Review Committee

The USAF has established a Technical Review Committee (TRC) as mandated by 10 USC §2705(c). Members of the committee include representatives of the USAF, EPA, the State, local government authorities and at least one member of the public who is not an elected official and can represent the interests of the affected community. Selection of the public members will be by a process

accepted by the TRC members. TRC meetings will be scheduled at least quarterly to review and comment on the proposed remedial actions at FEW AFB.

CHAPTER 4.0 REMEDIAL INVESTIGATION (NCP §300.430(d))

4.1 Purpose

The purpose of the Remedial Investigation (RI) is to collect subsequent data necessary to adequately characterize the OUs for the purpose of developing and evaluating effective remedial alternatives. To characterize the OUs the USAF shall, as appropriate, conduct field investigations, including treatability studies, and conduct a baseline risk assessment. The RI will provide information to help determine: the actual and potential magnitude of releases from the site, the horizontal and vertical migration of any contamination, the mobility and persistence of contaminants, the risks to human health and the environment, and other appropriate characteristics important for determining possible remedial actions and remedial alternative screening. The RI will support the development, evaluation, and selection of appropriate response alternatives.

4.2 Work Plan

During the Project Scoping stage, USAF will prepare a Remedial Investigation/Feasibility Study Work Plan (RI/FS WP) for each OU which will incorporate the most recent amendments/modifications to site wide plans, as necessary for OU-specific contamination. Existing data will be used in developing the Work Plans. Appendix B of "Guidance for Conducting Remedial Investigations/Feasibility Studies Under CERCLA", October 1988 (RI/FS Guidance), contains a description of Work Plans contents, and will be used to the greatest extent practical. Appendix B lists the following Work Plan elements: Introduction, Site Background and Physical Setting, Initial Evaluation, Work Plan Rationale, and RI/FS Tasks.

The RI/FS WP will include:

- 1) A discussion of existing data to be used;
- 2) A method to identify and evaluate conceptual model(s), including sensitivity analysis for the probable contaminant sources, and potential migration and exposure pathways and probable receptors;
- 3) The methods to be used for identifying physical characteristics, chemical constituents, contamination sources and background conditions;

- 4) Data collection methods;
- 5) Results from ongoing treatability studies;
- 6) Identification of potential ARARs;
- 7) Procedures to ensure that collected data will meet Data Quality Objectives (DQOs)'
- 8) The process to document the quality and validity of field and laboratory data compiled during the RI/FS activities and in any monitoring pursuant to those activities; and
- 9) A method(s) for the evaluation of any environmental risks.

To the extent that information was not developed during Project Scoping, the RI/FS WP will cover the tasks contained in Appendix B of the RI/FS Guidance.

The RI/FS WP is designated as a primary document in Section 8.3 of the FFA. The USAF is required to complete and transmit a draft of the RI/FS work plan to EPA and the State on or before the deadline listed in Appendix A of the FFA. The RI/FS will be finalized pursuant to Section 8, Consultation: Review and Comment Process for Draft and Final Documents, of the FFA.

4.2.1 Data Quality Objectives (DQOs)

DQOs will be established to ensure that environmental data, health effects data, and treatability data will be of a quality appropriate for the intended use. The DQOs will be prepared in accordance with "Data Quality Objectives for Remedial Response Activities (Development Process and Example Scenario)," EPA, March 1987, and other pertinent EPA guidance. Existing data will be used to identify DQOs. The DQOs will be stated in the RI/FS WPs.

4.3 Field Investigations

USAF will conduct field investigations, as appropriate, to augment existing information in order to assess: the physical characteristics of the site, including important surface features, soils, geology, hydrogeology, meteorology, and ecology; characteristics or classifications of air, surface water, and ground water; general characteristics of the waste, including quantities, state, concentration, toxicity, propensity to bioaccumulate, persistence, and mobility; the extent to which the source can be adequately identified and characterized; actual and potential exposure pathways through environmental media; actual and potential exposure routes; and other factors that pertain to the characterization of the site or support the analysis of

potential remedial action alternatives. Field investigations will also be conducted to comply with CERCLA/RCRA Integration procedures contained in Section 17 of the FFA.

Field Investigation activities anticipated for this site include:

4.3.1 Waste Characterization

All hazardous materials, pollutants, or contaminants at the site will be characterized to assess the extent to which contaminants have migrated or are expected to migrate from source(s), locations, and whether future migration may pose a threat to public health, welfare, or the environment. The information will be used to refine conceptual models, and evaluate remedial alternatives. Samples will be collected in accordance with the SAP.

4.3.2 Hydrogeologic Investigation

Since a release of hazardous waste to the environment at FEW AFB may affect the local aquifer, investigations to supplement existing geologic and hydrologic data for use in contaminant fate and transport modeling plus other determinations may be required. The characteristics of the water-bearing strata have been generally defined through previous geologic and hydrologic investigations. The investigations will be conducted according to the adopted RI/FS WP will identify proposed sampling wells, including cluster descriptions, construction techniques, materials of construction and procedures for well development. The well development procedures will define techniques or conditions that will ensure that the wells have stabilized.

4.3.3 Ground Water Investigations

Necessary ground water investigations will be developed to define the character of the site specific ground water regime in the aquifer. Further investigation will define the lateral and vertical extent of the contamination. Data produced from the investigations will conform to the SAP.

4.3.4 Surface Water Investigation

Surface water investigations may be necessary to provide information to identify possible contamination and data gaps. Surface water sampling locations will be identified in the RI/FS WP. Sampling procedures will adhere to the SAP.

4.3.5 Soil and Sediment Investigation

USAF will augment existing information on the location and extent of contamination of soils and sediments as necessary.

Existing data on soils and sediments will be incorporated into this investigation. Soil samples, sediment samples, and drill cuttings will be analyzed for contamination. Background samples will be analyzed.

Results of previous investigations indicate areas of potential soil contamination. The extent, both areal and vertical, will be determined. Also USAF conducted several removal actions prior to listing on the NPL and the signing of the FFA. Areas in which these removal actions were conducted will be investigated to identify if sufficient soil was removed from the contamination areas.

Sediment sampling may take place concurrent with surface water sampling. Techniques to be utilized during soil and sediment sampling will be developed during the SAP preparation. Samples will be collected from zones of obvious discoloration, odors, and expected presence of contamination.

4.3.6 Air Quality Investigation

An air quality investigation may be necessary to: define the extent of windblown contamination; gather data on the concentration of contaminants in the air (contaminant plume dimensions and movement); gather data on particulate and volatile characteristics; and summarize the effects of atmospheric, climatic, geographic and institutional controls on potential or actual air releases.

As part of the treatability study at Spill Site 7, the USAF will investigate the potential effects of emissions from proposed air stripping system. This will include emission plume modeling from the treatment system and development of a human health and environmental risk assessment of those emissions.

4.3.7 Biota Investigation

The abundance and diversity of flora and fauna species affected by contamination will be studied and defined. The presence of any threatened or endangered species in the area will be identified. The extent of field studies necessary will depend upon the availability of existing information at the site. Existing information will be compiled and evaluated prior to the inception of any field studies.

4.4 Identification of ARARs

USAF will request that EPA and the State identify their respective potential ARARs related to the site in accordance with Section 8.6 of the FFA. As defined in the NCP, only those state standards that are identified in a timely manner and are more

stringent than federal requirements may be applicable or relevant and appropriate.

4.5 Baseline Risk Assessment (BRA)

A BRA will be prepared for FEW AFB using existing data and data developed during Project Scoping and the RI. The BRA will characterize the current threats (and potential threats in the absence of any remedial action) to human health and the environment that may be posed by contaminants migrating to ground water or surface water, releasing to air, leaching through soil, remaining in the soil and bioaccumulating in the food chain. The results of the BRA will help establish acceptable exposure levels for use in developing remedial alternatives in the FS.

The BRA will identify contaminants, assess exposure, assess toxicity, and characterize risk. The BRA will also characterize the toxicity and levels of all hazardous substances present, contaminant fate and transport, the potential for human and environmental exposure, and the risk of potential impacts or threats on human health and the environment. The BRA will provide the basis for the risk assessment which will be used in determining the type of remedial actions alternatives to be investigated and provide a justification for performing the removal action.

USAF will use the procedures in the following reference documents, or superseding documents, to the extent practicable:

- o Risk Assessment Guidance for Superfund, Volume I;
- o Human Health Evaluation Manual (Part A), Interim Final;
- o Risk Assessment Guidance for Superfund, Volume II, Environmental Evaluation Manual, Interim Final, March 1989;
- o Superfund Public Health Evaluation Manual (SPHEM); October 1986, (SPHEM);
- o Superfund Exposure Assessment Manual (SEAM);
- o Integrated Risk Information System (IRIS); and
- o Public Health Risk Evaluation Database (PHRED);

The BRA is part of the Remedial Investigation Report which is identified as a Primary Document in the FFA.

The BRA will include a scenario for assessing human health risks for potential future uses at each OU. A discussion of

sources of uncertainty, data gaps, incomplete toxicity information, modeling characteristics, identifying limitations, and assumptions should be included. USAF will use the Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), Interim Final, December 1989, for an outline of the report format for the human health portion of the report.

The BRA must include a comprehensive description of the following components using SPHEM to the extent possible:

Contaminant identification and documentation.

Exposure assessment and documentation.

Toxicity assessment and documentation. For those substances lacking an EPA toxicity value and for which USAF wishes to develop its own toxicity value, USAF will submit for review and comment to EPA and WDEQ a technical memorandum listing the toxicological and epidemiological studies that will be utilized to perform the toxicity assessment. The memorandum will be used in the development of the BRA.

Risk Characterization.

In addition to the human health risk assessment, the risks to the environment from exposure or the contaminants will be addressed. These risk assessments are a requirement of the NCP, Part §300.430(d)(4).

4.6 Prepare Remedial Action Objectives (RAOs) (NCP §300.430(e)(2)(i))

A technical Memoranda on Remedial Action Objectives (RAOs) will specify contaminants and media of concern, potential exposure pathways, and remediation goals. Preliminary remediation goals will be developed based on preliminary results, objectives and general response actions appropriate for each OU. RAOs will include existing and subsequent data and will be modified, as necessary, as more information becomes available during the RI/FS. RAO preparation will occur concurrently with investigation activities and development of the BRA. A memorandum on Remedial Action Objectives (for each Operable Unit) is designated as a secondary document in Section 8.4 of the FFA. Target dates for the submittal of these memoranda by USAF to EPA and the State are listed in Appendix A of the FFA.

4.7 Prepare Remedial Investigation Report (RI Report)

A Remedial Investigation Report, including Risk Assessment and Groundwater Assessment, is designated as a primary document for each OU in Section 8.3 of the FFA. USAF will use the RCRA

Facility Investigation Guidance, Interim Final, May 1980 and the Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA, Interim Final, October 1988, for an outline of the report format and contents. USAF is required to complete and transmit a draft RI report to EPA and the State on or before the deadline listed in Appendix A of the FFA. The RI Report will be finalized pursuant to Section 8, Consultation: Review and Comment Process for Draft and Final Documents, of the FFA.

CHAPTER 5.0 FEASIBILITY STUDY (FS) (NCP §300.430(e))

A Feasibility Study will be conducted for each OU at FEW AFB. The objective of the feasibility study is to ensure that appropriate remedial alternatives are developed and evaluated so that relevant information concerning the remedial action options can be presented and an appropriate remedy selected. The development and evaluation of alternatives for each OU at FEW AFB shall reflect the scope and complexity of the remedial action under consideration and the site problems being addressed. The USAF may develop a screening process, when needed, to select a reasonable number of alternatives for detailed analysis. The screening process will be identified in the RI/FS WP. The USAF will identify its preferred alternative in the FS Report. The FS will lead to the preparation of a Proposed Plan (Chapter 6.0)

5.1 FS Work Plan (FS WP)

See Chapter 2.10 and 4.2. The FS portion of the RI/FS WP will discuss the procedures to be used to identify, screen, analyze, and select remedial action alternatives.

5.2 Developing and Screening of Alternatives

5.2.1 Memorandum on Development and Screening of Remedial Alternatives (MDSA)

The USAF will prepare a MDSA for each Operable Unit. The MDSA will serve to: refine the RAOs (paragraph 4.6), as necessary; quantify an approximation of the volume of contamination; identify probable contaminant exposure routes; and assess the need for specific treatability studies to support the feasibility study (FS) remedy selection process. The MDSA is designated as a secondary document in Section 8.4 of the FFA and supports the FS Report. Target dates for the submittal of these memoranda by USAF to EPA and the State are listed in Appendix A of the FFA.

5.2.2 Identification of Potential Treatment Technologies

Based on site information obtained during the remedial investigation, general alternative response actions will be developed. These general response actions will not necessarily identify specific technologies, but will include categories of appropriate actions that could be taken to remedy site problems identified during the RI process. Remedial responses will focus on treatment alternatives which permanently and significantly reduce the toxicity, volume, and mobility of the hazardous substances, pollutants and contaminants at the OU.

5.2.3 Assemble Suitable Technologies

The USAF will identify and evaluate potentially suitable technologies, including innovative technologies. Suitable technologies will be assembled into alternative remedial actions.

5.3 Develop Alternatives

The USAF will identify and describe a range of alternatives in the FS for each OU. The Development and Screening of Remedial Alternatives will consider an appropriate range of remedial action options for evaluation. The process is interactive and iterative with investigatory activities, treatability studies, and additional information pertinent to the ultimate selection of remedy. For source control OUs, alternatives which reduce the toxicity, mobility, or volume of the hazardous substances, pollutants, or contaminants through treatment will be considered. Alternatives which treat the principal threats posed by the OU, but vary in the degree of treatment employed and the quantities and characteristics of the treatment residuals and untreated waste that must be managed, will also be developed, as appropriate. For OUs requiring ground-water response actions, a limited number of remedial alternatives that attain site-specific remediation levels within different restoration time periods utilizing one or more different technologies, will be developed. The no-action alternative shall also be developed as required by NCP §300.430(e)(6) for each OU. During this process, any incompatibility between source control and management of ground-water alternatives will be defined.

The criteria of effectiveness, implementability, and cost, as defined in NCP §300.430(e)(7) will be used as appropriate, and to the extent sufficient information is available, for developing and screening remedial alternatives.

5.4 Feasibility Study Report (NCP §300.430(e)(9))

The USAF will prepare a Feasibility Study (FS) Report for each OU. The report will contain a detailed analysis on the alternatives that represent viable approaches to remedial action after evaluation in the screening stage. Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA, Interim Final, October 1988 will be used for the report format.

The FS Report will identify the ARARs which will be used to evaluate and select the remedial actions at each OU. The FS Report will also contain anticipated time schedules for implementation and completion of remedial design and remedial action.

The remedial alternatives will identify the contaminant volume considered in the proposed process and the sizing or operation of critical units. Information used will be adequate for a comparison of alternatives. Action-specific ARARs will be updated as the remedial alternatives are refined.

USAF will conduct a detailed analysis of each alternative using the set of nine evaluation criteria set forth in the NCP Part §300.430(e)(9). The alternatives will be subjected to a comparative analysis that will focus on the relative performance of each alternative against the nine criteria. The nine evaluation criteria are categorized into three groups:

Threshold criteria:

- 1) Overall protection of human health and the environment;
- 2) Compliance with all ARARs (unless a specific ARAR is waived);

Primary balancing criteria:

- 3) Long-term effectiveness and permanence;
- 4) Reduction of toxicity, mobility, or volume through treatment;
- 5) Short-term effectiveness;
- 6) Implementability;
- 7) Cost;

Modifying criteria:

- 8) State acceptance; and
- 9) Community acceptance.

The USAF will describe the waste management strategy involved and the key ARARs associated with each alternative. An analysis between the remedial alternatives will use the evaluation criteria as a basis of comparison.

The USAF will identify its preferred remedial action alternative in the FS Report. The preferred alternative will be protective of human health and the environment and in compliance with the ARARs (unless the USAF intends to seek a waiver of an ARAR as provided in the NCP). The preferred alternative will also be cost effective. An alternative is cost effective when its costs are proportional to its overall effectiveness. Overall effectiveness is determined by evaluating the three balancing criteria of long-term effectiveness and permanence, reduction of toxicity, mobility, or volume through treatment, and short-term effectiveness.

A Feasibility Study is designated as a primary document for each OU in Section 8.3 of the FFA. USAF will use the Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA, Interim Final, October 1988, for an outline of the report format and contents. The USAF is required to complete and transmit a draft of this report to EPA and the State on or before the deadline listed in Appendix A of the FFA. The FS Report will be finalized pursuant to Section 8, Consultation: Review and Comment Process for Draft and Final Documents, of the FFA.

CHAPTER 6.0 THE PROPOSED PLAN AND RECORD OF DECISION (NCP §300.430(f)(2))

6.1 The Proposed Plan (PP) (NCP §300.430(f)(2))

The PP supplements the RI/FS and will highlight key aspects of the RI report and FS reports. It will provide a brief summary description of remedial alternatives evaluated in the FS, identify and provide a discussion of the rationale that supports the preferred alternative, and provide a summary explanation of any proposed waiver from an ARAR. The Proposed Plan is designated as a primary document for each OU in Section 8.3 of the FFA. The USAF is required to complete and transmit a draft of this report to EPA and the State on or before the deadline listed in Appendix A of the FFA. The Proposed Plan will be finalized pursuant to Section 8, Consultation: Review and Comment Process for Draft and Final Documents, of the FFA.

6.2 Community Relations to Support the Selection of Remedy (NCP §300.430(f)(3))

After the Proposed Plan is finalized, the USAF will conduct the community relations activities detailed in the CRP. See paragraph 3.5 of this Statement of Work.

6.3 Record of Decisions (ROD) (NCP §300.430(f)(4))

6.3.1 Selecting the Remedial Action.

As provided in CERCLA §120(e)(4) and the NCP §300.430(f)(4)(iii), the selection of the remedial action will be a joint selection by the USAF, EPA, and the State; or, if mutual agreement on the remedy is not reached, the selection of the remedial action will be by the Administrator of EPA. The USAF, EPA, and the State will consider all comments and new information expressed during the public comment period and reassess the preferred alternative as presented in the PP. These comments may result in the modification of the preferred alternative or a selection of a different alternative.

6.3.2 Documenting the Decision

The selection of the remedial action will be documented in a Record of Decision (ROD). The ROD is composed of three components:

The Declaration is a formal statement, signed by the USAF, that identifies the selected remedy and indicates that the selection was conducted in compliance with the CERCLA regulations.

The Decision Summary provides an overview of the contamination at the OU. The decision Summary explains the rationale for the remedy selection and describes how the remedy meets statutory requirements.

The Responsiveness Summary is a dual purpose section of the ROD. It summarizes comments received during the comment period regarding both the remedial alternatives and general concerns about the site. It also demonstrates to members of the public how their comments were taken into account as an integral part of the decision making process.

The ROD with Responsiveness Summary is designated as a primary document for each OU in Section 8.3 of the FFA. The USAF is required to complete and transmit a draft of this document to EPA and the State on or before the deadline listed in Appendix A of the FFA. The ROD with Responsiveness Summary will be finalized pursuant to Section 8, Consultation: Review and

Comment Process for Draft and Final Documents, of the FFA. EPA and USAF must agree on the remedy selected by the USAF. If mutual agreement is not reached the EPA Administrator will select the remedial action.

After the ROD is finalized, the USAF will publish a notice of the availability of the ROD in a major local newspaper of general circulation and make the ROD available for public inspection and copying as required by the NCP prior to commencing any remedial action.

CHAPTER 7.0 REMEDIAL DESIGN (RD) AND REMEDIAL ACTION (RA) (NCP §300.435)

USAF will conduct the RD and RA phases of the remedy selected in the ROD for each OU. The RD and RA activities will follow the requirements of the NCP Section 300.435. The USAF will use "Superfund Remedial Design and Remedial Action Guidance" OERR, June 1986, OSWER Directive 9355.0-4 to the extent possible in the organization and content of the RD and RA documents.

7.1 RD Work Plan

The RD WP is designated as a primary document for each OU in Section 8.3 of the FFA. The RD WP will include any pilot and treatability studies to be conducted. Further the RD WP will include procedures on how the studies will be conducted. A focussed HSP will be developed according to OSHA, 29 CFR §1910.120 and will be attached to the RD WP to cover any safety issues related solely to pilot and treatability studies. The Department of Labor, Occupational Safety and Health Administration (OSHA) 29 Code of Federal Regulations, Section 1910.120, Hazardous Waste Operations and Emergency Response; Final Rule dated 06 March 89 will be used by USAF as required by the NCP, Section 300.150 in the production of the HSP. The RD WP is designated as a primary document for each OU in Section 8.3 of the FFA. The USAF is required to complete and transmit a draft of this document to EPA and the State on or before 60 days of the issuance of the ROD. The RD WP will be finalized pursuant to Section 8, Consultation: Review and Comment Process for Draft and Final Documents, of the FFA. The RD WP will contain an outline of the post-ROD RD work efforts. The WP will also include the deadlines and target dates for submittal of post-ROD primary and secondary documents required by the FFA.

7.2 Remedial Design

The RD process for each OU will develop the actual design of the remedy selected in the ROD. An Intermediate Design Stage Report, 60 percent Completion Stage is designated as a secondary document in Section 8.4 of the FFA for each OU. The target date

for the submittal of this report by USAF to EPA and the State will be established in the RD WP.

The Remedial Design Document, 100 percent Completion Stage is designated as a primary document for each OU in Section 8.3 of the FFA. The USAF is required to complete and transmit a draft of this document to EPA and the State on or before the deadline established in the RD WP. The document will be finalized pursuant to Section 8, Consultation: Review and Comment Process for Draft and Final Documents, of the FFA.

7.3 Remedial Action

USAF will carry out the remedial action identified in the ROD for each OU. A Remedial Action Work Plan (RA WP) is designated as a primary document for each OU in Section 8.3 of the FFA. The USAF is required to complete and transmit a draft of the RA WP to EPA and the State on or before the deadline established in the RD WP. The document will be finalized pursuant to Section 8, Consultation: Review and comment Process for Draft and Final Documents, of the FFA.

The RA WP will include a construction quality control section and construction contingency section that will provide procedures to ensure the remedial system is installed properly. The plan will further include procedures on how waste materials generated by the remedial action will be handled.

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