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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
AND
THE STATE OF HAWAII
AND
THE UNITED STATES ARMY

12/14/92

Note: State not officially a party to the Agreement yet. They retracted their signature.

IN THE MATTER OF:	Federal Facility Agreement Under CERCLA Section 120
The U.S. Department of the Army	
Schofield Barracks	Administrative Docket Number: 92-06

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
AND
THE STATE OF HAWAII
AND
THE UNITED STATES ARMY

IN THE MATTER OF: The U.S. Department of the Army Schofield Barracks	Federal Facility Agreement Under CERCLA Section 120 Administrative Docket Number:

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 CERCLA, the NCP, Superfund guidance and policy, RCRA, RCRA guidance and policy, and applicable State law;

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

(d) Ensure the adequate assessment of potential injury to natural resources and the prompt notification to and cooperation and coordination with the Federal and State Natural Resource Trustees to ensure the implementation of response actions achieving appropriate cleanup levels.

1.2 Specifically, the purposes of this Agreement are to:

(a) Identify operable unit (OU) alternatives which are appropriate at the Site prior to the implementation of final remedial action(s) for the Site. OU alternatives shall be identified and proposed to the Parties as early as possible prior to formal proposal of OUs to EPA and the State. This process is designed to promote cooperation among Parties in identifying OU alternatives prior to the final selection of Operable Units;

(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) Assure 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 Schofield Barracks;

(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 Schofield Barracks, including the review of all applicable data as it becomes available and the development of studies, documents, and action plans; and to identify and integrate State 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. PARTIES

2.1 The Parties to this Agreement are EPA, the State of Hawaii, and the U.S. Army. The terms of the Agreement shall apply to and be binding upon EPA, the State of Hawaii, and the Army.

2.2 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 Army 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.

2.3 Each Party shall be responsible for ensuring that its contractors comply with the terms and conditions of this Agreement. Failure of a Party to provide proper direction to its contractors and any resultant noncompliance with this Agreement by a contractor shall not be considered a Force Majeure event or other good cause for extensions under Section 9 (Extensions), unless the Parties so agree. The Army will 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. JURISDICTION

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

(a) The U.S. Environmental Protection Agency (EPA), enters into those portions of this Agreement that relate to the Remedial Investigation/Feasibility Study ("RI/FS") pursuant to Section 120(e)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (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 the Resource Conservation and Recovery Act (RCRA) Sections 6001, 3004(u) and (v), and 3008(h), 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 remedial actions pursuant to CERCLA Section 120(e)(2), 42 U.S.C. Section 9620(e)(2), RCRA Sections 6001, 3008(h), 3004(u) & (v), 42 U.S.C. Sections 6961, 6928(h), 6924(u) & (v), and Executive Order 12580;

(c) The Army 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) & (v), 42 U.S.C. Sections 6961, 6928(h), 6924(u) & (v), Executive Order 12580, the National Environmental Policy Act, 42 U.S.C. Section 4321, and the Defense Environmental Restoration program (DERP), 10 U.S.C. Section 2701 et seq.;

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

(e) The State of Hawaii, represented by the Department of Health, enters into this agreement pursuant to CERCLA Sections 120(f) and 121, 42 U.S.C. Sections 9620(f) and 9621, and 3 Hawaii Revised Statutes Sections 342B-35(2), 342D-59(2) and 342J-40

4. DEFINITIONS

4.1 Except as noted below or otherwise explicitly stated, the definitions provided in CERCLA, CERCLA case law, 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 made an integral and enforceable part of this document. Copies of Appendices shall be available as part of the Administrative Record, as provided in Subsection 26.3.

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

(c). "ARARs" shall mean federal and State applicable or relevant and appropriate requirements, standards, criteria, or limitations, identified pursuant to Section 121 of CERCLA. ARARs shall apply in the same manner and to the same extent that such are applied to any non-governmental entity, facility, unit, or site, as defined in CERCLA and the NCP. See CERCLA Section 120(a)(1), 42 U.S.C. Section 9620(a)(1).

(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.

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

(f). "Department of Health" shall mean the Hawaii Department of Health, its employees and authorized representatives.

(g). "DERP" shall refer to the Defense Environmental Restoration Program, as set forth in SARA Sec. 211, 10 U.S.C. Section 2701 et seq.

(h). "DRC" shall mean the Dispute Resolution Committee, as described in Section 12.4.

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

(j). "Facility" shall have the same definition as in CERCLA Section 101(9), 42 U.S.C. Section 9601(9).

(k). "Federal Facility" shall include Schofield Barracks and any real property subject to the jurisdiction of the Commander, Schofield Barracks.

(l). "Feasibility Study" or "FS" means a study conducted pursuant to CERCLA and the NCP which fully develops, screens and evaluates in detail remedial action alternatives to prevent, mitigate, or abate the migration or the release of hazardous substances, pollutants, or contaminants at and from the Site. The Army shall conduct and prepare the FS in a manner to support the intent and objectives of Section 17 (Statutory Compliance/RCRA-CERCLA Integration).

(m). "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.

(n). "National Contingency Plan" or "NCP" shall refer to the regulations contained in 40 CFR Part 300, including any amendments thereto.

(o). "Natural Resource Trustee(s)" shall have the same meaning and authority provided in CERCLA and the NCP.

(p). "Operable Unit" or "OU" shall have the same meaning as provided in the NCP.

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

(r). "QAPP" shall mean a Quality Assurance Project Plan.

(s). "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.

(t). "Remedial Design" or "RD" shall have the same meaning as provided in the NCP.

(u). "Remedial Investigation" or "RI" means that investigation conducted pursuant to CERCLA and the NCP, as supplemented by the substantive provisions of the EPA RCRA Facilities Assessment guidance. The RI serves as a mechanism for collecting data for Site and waste characterization and conducting treatability studies as necessary to evaluate performance and cost of the treatment technologies. The data gathered during the RI will also be used to conduct a baseline risk assessment, perform a feasibility study, and support design of a selected remedy. The Army shall conduct and prepare the RI in a manner to support the intent and objectives of Section 17 (Statutory Compliance/RCRA-CERCLA Integration).

(v). "Remedy" or "Remedial Action" or "RA" shall have the same meaning as provided in Section 101(24) of CERCLA, 42 U.S.C. Section 9601(24), and the NCP, and may consist of Operable Units.

(w). "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.

(x). "SARA" shall mean the Superfund Amendments and Reauthorization Act of 1986, Public Law 99-499.

(y). "SEC" shall mean the Senior Executive Committee, as described in Subsection 12.6.

(z). "Site" shall include the federal facility of Schofield Barracks as defined above, the facility as defined above, and any area off the facility to or under which a release of hazardous substances has migrated, or threatens to migrate,

from a source on or at the Federal Facility. For the purposes of obtaining permits, the term "on-site" shall have the same meaning as provided in the NCP.

(aa). "State" shall mean the State of Hawaii and its employees and authorized representatives, represented by the Department of Health.

5. DETERMINATIONS

5.1 This Agreement is based upon the placement of Schofield Barracks, Oahu, Hawaii, on the National Priorities List by the Environmental Protection Agency, 55 Federal Register 35509 (August 30, 1990).

5.2 The Federal Facility is a facility under the jurisdiction, custody, or control of the Department of Defense within the meaning of Executive Order 12580, 52 Federal Register 2923, 29 January 1987. The Department of the Army is authorized to act in behalf of the Secretary of Defense for all functions delegated by the President through E.O. 12580 which are relevant to this Agreement.

5.3 The Federal Facility 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 Superfund Amendments and Reauthorization Act of 1986 (SARA) Sec. 211, 10 U.S.C. Section 2701 et seq., and subject to the Defense Environmental Restoration Program (DERP).

5.4 The Army is the authorized delegate of the President under E.O. 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. 9621(d)(2)(A)(ii).

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

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

5.7 There have been releases of hazardous substances, pollutants or contaminants at or from the federal facility into the environment within the meaning of 42 U.S.C. Sections 9601(9), 9601(14), 9601(22), 9604, 9606, and 9607.

5.8 With respect to these releases, the Army is an owner, operator, and/or generator subject to the provisions of 42 U.S.C. Section 9607 and within the meaning of Hawaii Revised Statutes Sections 342J-2, 342J-30, 128D-1 and 128D-6(a).

5.9 Included as an Attachment 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.

6. WORK TO BE PERFORMED

6.1 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; pertinent provisions of RCRA and RCRA guidance and policy; Executive Order 12580; applicable State laws and regulations; and all terms and conditions of this Agreement including documents prepared and incorporated in accordance with Section 7 (Consultation).

6.2 The Army agrees to undertake, seek adequate funding for, fully implement and report on the following tasks, with participation of the Parties as set forth in this Agreement:

(a) Remedial Investigations of the Site;

(b) Federal and State Natural Resource Trustee Notification and Coordination;

(c) Feasibility Studies for the Site;

(d) All response actions, including Operable Units, for the Site; and

(e) Operation and maintenance of response actions at the Site.

6.3 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.

6.4 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.

7. CONSULTATION: Review and Comment Process for Draft and Final Documents

7.1 Applicability: The provisions of this Section establish the procedures that shall be used by the Parties to provide each other with appropriate technical support, notice, review, comment, and response to comments regarding RI/FS and RD/RA docu-

ments, 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 Army 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 documents for any deliverable document identified herein shall be prepared, distributed and subject to dispute in accordance with Subsections 7.2 through 7.10 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.

7.2 General Process for RI/FS and RD/RA documents:

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

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

7.3 Primary Documents:

(a) The Army shall complete and transmit drafts of the following primary documents for each remedial action to the EPA and the State, for review and comment in accordance with the provisions of this Section:

(1) RI/FS Workplans, including target dates for RI/FS tasks
(2) Sampling and Analysis Plans
(3) Quality Assurance Project Plans (QAPPs)

(4) Community Relations Plan (May be amended, as appropriate, to address Operable Units. Any such amendment shall not be subject to the threshold requirements of Section 7.10. Any disagreement among the Parties concerning any amendment shall be handled pursuant to Section 12 (Dispute Resolution).)
(5) RI Reports
(6) FS Reports
(7) Proposed Plans
(8) Records of Decision (RODs)
(9) Remedial Design Work Plans
(10) Final Remedial Designs
(11) Remedial Action Work Plans
(12) Construction Quality Assurance Plans
(13) Construction Quality Control Plans
(14) Contingency Plans
(15) Project Closeout Reports
(16) Federal and State Natural Resource Trustee Notifications
(17) Operation and Maintenance Plans

(b) Only draft final documents for primary documents shall be subject to dispute resolution. The Army shall complete and transmit draft primary documents in accordance with the timetable and deadlines established pursuant to Section 8 (Deadlines) of this Agreement.

(c) Primary documents may include target dates for subtasks as provided for in Subsection 7.4(b) and 18.3. The purpose of target dates is to assist the Army in meeting deadlines, but target dates do not become enforceable by their inclusion in the primary documents and are not subject to Section 8 (Deadlines), Section 9 (Extensions), or Section 13 (Enforceability).

7.4 Secondary Documents

(a) The Army shall complete and transmit drafts of the following secondary documents for each operable unit and final remedial action to the EPA and the State for review and comment.

(1) PA/SI or RCRA Facility Assessment (RFA)
(2) Site Characterization Summaries
(3) Sampling and Data Results
(4) Risk Assessments
(5) Treatability Studies (if generated)
(6) Initial Screenings of Alternatives
(7) Detailed Analyses of Alternatives
(8) Preliminary Remedial Design
(9) RCRA Closure Plans

(b) Although EPA and the State may comment on the drafts for the secondary documents listed above, such documents shall not be subject to dispute resolution except as provided by Subsection 7.2 hereof. Target dates for the completion and transmission of draft secondary documents may be established by the Project Managers. The Project Managers also may agree upon additional secondary documents that are within the scope of the listed primary documents.

7.5. Meetings of the Project Managers. (See also Subsection 18.3) The Project Managers shall meet, in person or by conference call, approximately every ninety (90) 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. However, progress meetings shall be held more frequently, as needed, upon request by any Project Manager. Prior to preparing any draft document specified in Subsections 7.3 and 7.4 above, the Project Managers shall meet in an effort to reach a common understanding with respect to the contents of the draft document.

7.6 Identification and Determination of Potential ARARs:

(a) The Department of Health 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 the Department of Health is responsible and the document being addressed. The Department of Health also shall contact in writing in a timely manner those State and local governmental agencies which are a potential source of ARARs. Prior to the issuance of a draft primary or secondary documents for which ARAR determinations are appropriate, the Department of Health shall submit the proposed State ARARS obtained from the identified agencies to the Army, along with a list of agencies that failed to respond to the Department of Health's solicitation of proposed ARARs. The Army will contact those agencies who failed to respond and again solicit their input.

(b) Draft ARAR determinations shall be prepared by the Army in accordance with CERCLA Section 121(d)(2), 42 U.S.C. Section 9621(d)(2), the NCP and pertinent guidance issued by EPA.

(c) Prior to the issuance of a draft primary or secondary document for which ARAR determinations are appropriate, the Project Managers shall meet, if needed, to identify, propose, and discuss potential ARARs pertinent to the document being addressed, including any permitting requirements which may be a source of ARARs.

(d) 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 re-examined throughout the RI/FS process until a ROD is issued.

7.7 Review and Comment on Draft Documents:

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

(b) Unless the Parties mutually agree to another time period, all draft documents shall be subject to a forty-five (45) day period for review and comment. In reviewing any document, the EPA, and the State may review all aspects of the document (including completeness). This review should consider, but is not limited to, technical evaluation of any aspect of the document, and consistency with CERCLA, the NCP, applicable Hawaii law, and any pertinent guidance or policy issued by the EPA or the State. At the request of any Project Manager, and to expedite the review process, the Army shall make an oral presentation of the document to the Parties at the next scheduled meeting of the Project Managers following transmittal of the draft document or at the earliest possible date following the request, whichever is sooner. Comments by the EPA and the State shall be provided with adequate specificity so that the Army may respond to the comment and, if appropriate, make changes to the draft document. Comments shall refer to any pertinent sources of authority or references upon which the comments are based and, upon request of the Army, the EPA or the State, as appropriate, shall provide a copy of the cited authority or reference. EPA or the State may extend the forty-five (45) day comment period for an additional thirty (30) days by written notice to the Army prior to the end of the forty-five (45) day period. On or before the close of the comment period, EPA and the State shall transmit their written comments to the Army. In appropriate circumstances, this time period may be further extended in accordance with Section 9 (Extensions).

(c) Representatives of the Army 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 documents. Oral comments made during such discussions need not be the subject of a written response by the Army on the close of the comment period.

(d) In commenting on a draft document which contains a proposed ARAR determination, the EPA or 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 document, the Army shall give full consideration to all written comments. Within fifteen (15) days following the close of the comment period on a draft secondary document or draft primary document, the Parties shall hold a meeting to discuss all comments received if requested by any party. On a draft secondary document the Army shall, within forty-five (45) 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 document the Army shall, within forty-five (45) days of the close of the comment period, transmit to EPA and the State a draft final primary document, which shall include the Army's response to all written comments received within the comment period. While the resulting draft final document shall be the responsibility of the Army, it shall be the product of consensus to the maximum extent possible.

(f) The Army may extend the forty-five (45) day period for either responding to comments on a draft document or for issuing the draft final primary document for an additional thirty (30) days by providing written notice to the EPA and the State. In appropriate circumstances, this time period may be further extended in accordance with Section 9 (Extensions).

7.8 Availability of Dispute Resolution for Draft Final Primary Documents:

(a) Dispute resolution shall be available to the Parties for draft final primary documents as set forth in Section 12 (Dispute Resolution).

(b) When dispute resolution is invoked on a draft final primary document, work may be stopped in accordance with the procedures set forth in Subsection 12.9 regarding dispute resolution.

7.9 Finalization of Documents: The draft final primary document shall serve as the final primary document if no party invokes dispute resolution regarding the document or, if invoked, at completion of the dispute resolution process should the Army's position be sustained. If the Army's determination is not sustained in the dispute resolution process, the Army shall prepare, within not more than forty-five (45) days, a revision of the draft final document 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 9 (Extensions).

7.10 Subsequent Modification of Final Documents: Following finalization of any primary document pursuant to Subsection 7.9 above, any Party may seek to modify the document including seeking additional field work, pilot studies, computer modeling or other supporting technical work, only as provided in subparagraphs (a) and (b) below. (These restrictions do not apply to the Community Relations Plan.)

(a) Any Party may seek to modify a document after finalization if it determines, based on new information (i.e., information that becomes available, or conditions that become known, after the document 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 document 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 Army's obligation to perform such work must be established by either a modification of a document or by amendments to this Agreement.

8. DEADLINES

8.1 All deadlines agreed upon before the effective date of this Agreement are set forth in Appendix A to this Agreement. To the extent that deadlines have already been mutually agreed upon by the Parties prior to the execution of this Agreement, they will satisfy the requirements of this Section and remain in effect, shall be published in accordance with Subsection 8.2, and shall be incorporated into the appropriate work plans.

8.2 Within fifteen (15) days of receipt of the Army's proposal for any schedule for submission of deliverables, EPA and the State shall review and provide comments to the Army regarding the proposed deadlines. Within fifteen (15) days following receipt of the comments the Army shall, as appropriate, make revisions and reissue the proposal. The Parties shall meet as necessary to discuss and finalize the proposed deadlines. All agreed-upon deadlines shall be incorporated into the appropriate work plans. If the Parties fail to agree on the proposed deadlines within thirty (30) days, as set forth in Section 12.2, the matter shall immediately be submitted to the DRC for dispute resolution pursuant to Section 12 (Dispute Resolution). The final deadlines established pursuant to this subsection shall be published by EPA, in conjunction with the State, and shall become an Appendix to this Agreement.

8.3 Within twenty-one (21) days of issuance of the Record of Decision for any operable unit or for the final remedy, the Army shall propose deadlines for completion of the following draft primary documents:

(a) Remedial Design/Remedial Action Work Plans
(b) Preliminary Remedial Design
(c) Final Remedial Design
(d) Construction Quality Assurance Plan
(e) Construction Quality Control Plan
(f) Contingency Plan
(g) Project Closeout Report

These deadlines shall be reviewed, finalized and published using the same procedures set forth in Subsection 8.2 above.

8.4 For any operable units not identified as of the effective date of this Agreement, the Army shall propose deadlines for all documents listed in Subsection 7.3 (a)(1) through (8) (with the exception of the Community Relations Plan) within twenty-one (21) days of agreement on the proposed operable unit by all Parties. These deadlines shall be reviewed, finalized and published using the same procedures set forth in Subsection 8.2, above.

8.5 The deadlines set forth in this Section, or to be established as set forth in this Section, may be extended pursuant to Section 9 (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.

9. EXTENSIONS

9.1 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.

9.2 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) A delay caused by public comment periods or hearings required under State law in connection with the State's performance of this Agreement;

(f) Any work stoppage within the scope of Section 11 (Emergencies and Removals); or

(g) Any other event or series of events mutually agreed to by the Parties as constituting good cause.

9.3 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.

9.4 Within seven 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 7-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.

9.5 If there is consensus among the Parties that the requested extension is warranted, the Army 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.

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

9.7 A timely and good faith request by the Army 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.

10. FORCE MAJEURE

10.1 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 Army; 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 which have been sought. In order for Force Majeure based on insufficient funding to apply to the Army, the

Army shall have made timely request for such funds as part of the budgetary process as set forth in Section 15 (Funding). A Force Majeure shall also include any strike or other labor dispute, whether or 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.

11. EMERGENCIES AND REMOVALS

11.1 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 immediately orally notify all other Parties. If the emergency arises from activities conducted pursuant to this Agreement, the Army shall then take immediate action to notify the appropriate State and local agencies and affected members of the public.

11.2 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 11.1, 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 12.9.

11.3 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. Section 9601(23) and Hawaii Revised Statutes Section 128D-1, including all modifications to, or extensions of, 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 Army'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 Army 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, including but not limited to discovery of contamination of a drinking water well at concentrations that exceed any State or Federal drinking water action level or standards, the Party may request that the Army 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. Such actions might include provision of alternative drinking water supplies or other response actions listed in CERCLA Section 101(23) or (24), or such other relief as the public interest may require.

11.4 Notice and Opportunity to Comment.

(a) The Army 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 Army agrees to provide the information described below pursuant to such obligation.

(b) For emergency response actions, the Army shall provide the EPA and the State with notice in accordance with Subsection 11.1. Such oral notification shall, except in the case of extreme emergencies, include adequate information concerning the Site background, threat to the public health and welfare or the environment (including the need for response), proposed actions and costs (including a comparison of possible alternatives, means of transportation of any hazardous substances 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 the Army On-Scene Coordinator recommendations. Within forty-five (45) days of completion of the emergency action, the Army will furnish EPA and the State with an Action Memorandum addressing the information provided in the oral notification, and any other information required pursuant to CERCLA and the NCP, and in accordance with pertinent EPA guidance, for such actions.

(c) For other removal actions, the Army will provide EPA and the State with any information required by CERCLA, the NCP, and in accordance with 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 forty-five (45) days before the response action is to begin.

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

11.5 Any dispute among the Parties as to: (a) whether a proposed response action is properly considered a removal action, as defined by CERCLA Section 101(23), 42 U.S.C. Section 9601(23); (b) whether a proposed response action is consistent with the final remedial action; or (c) whether the Army will take a removal action requested by any Party pursuant to Subsection 11.3(f) above; shall be resolved pursuant to Section 12 (Dispute Resolution). Such dispute may be brought directly to the DRC or the SEC at any Party's request.

12. DISPUTE RESOLUTION

12.1 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.

12.2 Within thirty (30) days after: (a) receipt by EPA and the State of a draft final primary document pursuant to Section 7 (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.

12.3 Prior to any Party's issuance of a written statement of a dispute, the disputing Party shall engage the other Party in informal dispute resolution among the Project Manager 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.

12.4 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 in-

dividual 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 the DRC is the Deputy Director, Hazardous Waste Management Division, Region 9. The Army's designated member is the Installation Commander. The State's representative is the Manager, Hazard Evaluation and Emergency Response Office, Department of Health. 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 21 (Notification).

12.5 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 which shall then be signed by the Parties. 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.

12.6 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 9. The Army's representative on the SEC is the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health. The State's representative on the SEC is the Deputy Director for Environmental Health, Department of Health. 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 Army 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 the Army or the State elects not to elevate the dispute to the Administrator within the designated fourteen (14) day escalation period, the Army and the State shall be deemed to have agreed with the Regional Administrator's written position with respect to the dispute.

12.7 Upon escalation of a dispute to the Administrator of EPA pursuant to Subsection 12.6 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 Assistant Secretary of the Army and the Deputy Director for Environmental Health to discuss the issue(s) under dispute. Upon resolution, the Ad-

ministrator shall provide the Army 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.

12.8 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 and deadline or schedule.

12.9 When dispute resolution is in progress, work affected by the dispute will immediately be discontinued if the Hazardous Waste Management Division Director for EPA Region 9 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 yield 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 a 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 either the DRC or the SEC, at the discretion of the Party requesting dispute resolution.

12.10 Within twenty-one (21) days of resolution of a dispute pursuant to the procedures specified in this Section, the Army 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, except as provided in Section 13.4.

12.11 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.

13. ENFORCEABILITY

13.1 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.

13.2 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).

13.3 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. Sections 9613 and 9659. The Army does not waive any rights it may have under CERCLA Section 120, SARA Section 211 and Executive Order 12580.

13.4 The Parties agree to exhaust their rights under Section 12 (Dispute Resolution) prior to exercising any rights to judicial review that they may have.

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

14. STIPULATED PENALTIES

14.1 In the event that the Army fails to submit a primary document listed in Section 7 (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 Army. The State may also recommend to EPA that a stipulated penalty be assessed. 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.

14.2 Upon determining that the Army has failed in a manner set forth in Subsection 14.1, EPA shall so notify the Army in writing. If the failure in question is not already subject to dispute resolution at the time such notice is received, the Army 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 Army 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.

14.3 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 Army 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.

14.4 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. EPA and the State agree, to the extent allowed by law, to divide equally any stipulated penalties paid on behalf of Schofield Barracks with fifty (50) percent allocated to the EPA and fifty (50) percent allocated to the State.

14.5 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.

14.6 This Section shall not affect the Army's ability to obtain an extension of a timetable, deadline or schedule pursuant to Section 9 (Extensions).

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

15. FUNDING

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

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

15.3 Any requirement for the payment or obligation of funds, including stipulated penalties, by the Army 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.

15.4 If appropriated funds are not available to fulfill the Army's obligations under this Agreement, the 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.

15.5 Funds authorized and appropriated annually by Congress under the "Environmental Restoration, Defense" appropriation in the Department of Defense Appropriation Act and allocated by the Deputy Assistant Secretary of Defense for Environment to the Army will be the source of funds for activities required by this Agreement consistent with Section 211 of SARA, 10 U.S.C. Chapter 160. However, should the Environmental Restoration, Defense appropriation be inadequate in any year to meet the total Army CERCLA implementation requirements, the DOD shall employ and the Army 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 the EPA and the States.

16. EXEMPTIONS

16.1 The obligation of the Army to comply with the provisions of this Agreement may be relieved by:

(a) A Presidential order of exemption issued pursuant to the provisions of CERCLA Section 120(j)(1), 42 U.S.C. Section 9620(j)(1), or RCRA Section 6001, 42 U.S.C. Section 6961; or

(b) The order of an appropriate court.

16.2 The State reserves any statutory right it may have to challenge any Presidential Order relieving the Army of its obligations to comply with this Agreement.

17. STATUTORY COMPLIANCE/RCRA-CERCLA INTEGRATION

17.1 The Parties intend to integrate the Army'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. Therefore, the Parties intend that activities covered by this Agreement will achieve compliance with CERCLA, 42 U.S.C. Section 9061 et seq.; satisfy the corrective action requirements of RCRA Section 3004(u) & (v), 42 U.S.C. Section 6924(u) & (v), for a RCRA permit, and RCRA Section 3008(h), 42 U.S.C. Section 6928 (h), for interim status facilities; and meet or exceed all Federal and State ARARs, 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 releases of hazardous waste covered by this Agreement, RCRA shall be considered an applicable or relevant and appropriate requirement pursuant to CERCLA Section 121, 421 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 recognize that ongoing activities outside the scope of this Agreement at Schofield Barracks 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 Army for ongoing hazardous waste management activities at the Site, the issuing party shall reference and incorporate in a permit condition any appropriate provision, including appropriate schedules (and the provision for extension of such schedules), of this Agreement into such permit. The Parties intend that any judicial review of any permit condition which references this Agreement 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 Army, 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 possible, communications among the Army, 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 Army, EPA, and the State may change their respective Project Managers. The other Parties shall be notified in writing within five days of the change.

18.3 The Project Managers shall meet to discuss progress as described in Subsection 7.5. Although the Army 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 documents, evaluate the performance of environmental monitoring at the Site, review RI/FS or RD/RA progress, discuss target dates 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 Army will provide to the other Parties a draft agenda and summary of the status of the work subject to this Agreement. Unless the Project Managers agree otherwise, 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) days after the meeting ends. If an extended period occurs between Project Manager progress meetings, the Project Managers may agree that the Army shall prepare an interim progress report and provide it to the other Parties. The document 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 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 The EPA-designated Project Manager shall have the authority to direct the Army to halt, conduct, or perform any tasks required by this Agreement and any response action portions thereof when the EPA Project Manager determines that conditions may present an immediate risk to public health or welfare or the environment. If EPA issues such verbal request, it shall follow up such request in writing within seven (7) days.

18.6 Any minor field modification proposed by any Party pursuant to this Section must be approved orally by all Parties' Project Managers to be effective. The Army 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.

18.7 The Project Manager for the Army shall be responsible for day-to-day field activities at the Site. The Army Project Manager or other designated employee of Schofield Barracks' Environmental Program 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 all times that such work is being performed, the Army Project Manager shall inform the command post at Schofield Barracks of the name and telephone number of the designated employee responsible for supervising the work.

18.8 The Project Managers shall be reasonably available to consult on work performed pursuant to this Agreement and shall make themselves available to each other for the pendency of this Agreement. The absence of EPA, the State, or Army 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, 42 U.S.C. Sections 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 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 Army 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 Army 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. The Army agrees to obtain any permits necessary for the performance of any work under this Agreement. Upon request, the Army shall provide EPA and the State with 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. Upon request by the Army Project Manager, the Project Managers of EPA and the State will assist the Army to the extent feasible in obtaining any required permit.

20. QUALITY ASSURANCE

20.1 In order to provide quality assurance and maintain quality control regarding all field work and sample collection pursuant to this Agreement, the Army 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 provide a copy to the Parties upon request.

20.2 To ensure compliance with the QAPP, the Army shall arrange for access, upon request by EPA or the State, to all laboratories performing analysis on behalf of the Army pursuant to this Agreement. If such access is not obtained for any laboratory, EPA or the State may reject all or portions of the data generated by such laboratory and require the Army to have the same or comparable data analyzed by a laboratory that will grant such access.

21. NOTIFICATION

21.1 All Parties shall transmit primary and secondary documents, and comments thereon, and all notices required herein by next day mail, hand delivery, or facsimile. 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:

Roberta Blank
U.S. Environmental Protection Agency, Region 9
Hazardous Waste Management Division (H-7-5)
75 Hawthorne St.
San Francisco, CA 94105;

Bruce Schlieman
Hawaii Department of Health
HEER Office
5 Waterfront Plaza
500 Ala Moana Boulevard, Suite 250
Honolulu, HI 96813

Dan Nakamura
Directorate of Facilities Engineering
Planning Division
Fort Shafter, HI 96858-5000

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, to the extent practicable, 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 document relating to this Agreement or the Installation Restoration Program (IRP). 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, deliberative process, enforcement confidentiality, or properly classified for national security under law or executive order.

23.2 Records or documents identified by the originating Party as confidential pursuant to other non-disclosure provisions of the Freedom of Information Act, 5 U.S.C. Section 552, or Chapter 92F of the Hawaii Revised Statutes (Uniform Information Practices Act), 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 or, after opportunity to consult and, if necessary, contest any preliminary decision to release a document, in accordance with applicable statutes and regulations. Records or documents which are provided to the requesting Party and which are not identified as confidential may be made available to the public without further notice to the originating Party.

23.3 The Parties will not assert one of the above exemptions, including any available under the Freedom of Information Act or Chapter 92F of the Hawaii Revised Statutes (Uniform Information Practices Act), even if available, if no governmental interest would be jeopardized by access or release as determined solely by that Party, unless access or release would constitute an unwarranted invasion of an individual's privacy interest.

23.4 Subject to Section 120(j)(2) of CERCLA, 42 U.S.C. Section 9620(j)(2), any documents required to be provided by Section 7 (Consultation), and analytical data showing test results, will always be releasable and no exemption shall be asserted by any Party.

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

23.6 A determination not to release a document for one of the reasons specified above shall not be subject to Section 12 (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 Notwithstanding any document retention policy to the contrary, during the pendency of this Agreement and for a minimum of ten (10) years after its termination, (a) the Army shall preserve all records and documents in its possession and in the possession of its contractors, including but not limited to all records and documents contained in the Administrative Record, which relate to the implementation of the Installation Restoration Program at the Site or to the actions carried out pursuant to this Agreement, and (b) each other Party shall preserve all records and documents it prepared or to which it substantially contributed that relate to the actions carried out pursuant to this Agreement.

24.2 After this ten year period, each Party shall notify the other Parties at least forty-five (45) days prior to the proposed 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 and determined appropriate by law.

25. ACCESS TO FEDERAL FACILITY

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 Schofield Barracks at reasonable times for purposes consistent

with the Provisions of the Agreement, subject to any statutory and regulatory requirements necessary to protect national security or mission essential activities. Such access shall include, but not be limited to, reviewing the progress of the Army 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 Army shall honor all reasonable requests for access by the EPA or the State conditioned upon presentation of proper credentials. The Army 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 Army Project Manager to request any necessary escorts. EPA and the State shall not use any camera, sound recording or other recording device at Schofield Barracks without the permission of the Army Project Manager. The Army shall not unreasonably withhold such permission.

25.4 The access by EPA or 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 regulations shall not be applied so as to unreasonably hinder EPA or the State from carrying out their responsibilities and authority pursuant to this Agreement. In the event that access requested by EPA or the State is denied by the Army, the Army shall provide an explanation within 48 hours of the reason for the denial, including reference to the applicable regulations, and, upon request, a copy of such regulations. The Army shall make alternative arrangements for accommodating the requested access as soon as possible. The Parties agree that this Agreement is subject to CERCLA Section 120(j), 42 U.S.C. Section 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 request access in order to observe a sampling event or other work being conducted pursuant to this Agreement, and access is denied or limited, the Army agrees to reschedule or postpone such sampling or work if the EPA or the State so requests, until such mutually agreeable time when the requested access is allowed. The Army shall not restrict the access rights of the EPA or the State to any greater extent than the Army restricts the access rights of its contractors performing work pursuant to this Agreement.

25.6 All Parties with access to Schofield Barracks 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 Army property, the Army shall use its best efforts, including its authority under CERCLA Section 104, to obtain access agreements from the owners which shall provide reasonable access for the Army, the EPA, the State, and their representatives. The Army may request the assistance of the State in obtaining such access, and upon such request, the State will use their best efforts to obtain the required access. In the event that the Army is unable to obtain such access agreements, the Army shall promptly notify EPA and the State.

25.8 With respect to non-Army property on which monitoring wells, pumping wells, or other response actions are to be located, the Army 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 remedial activities. In addition, 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 or the State's full right of access as provided in 42 U.S.C. Section 9604(e) and Hawaii revised Statutes Sections 342D-8(a) and (b), 342B-6, 342J-6 and 128D-4(b), except as that right may be limited by 42 U.S.C. Section 9620(j)(2), Executive Order 12580, or other applicable national security regulations or federal law.

26. PUBLIC PARTICIPATION AND COMMUNITY RELATIONS

26.1 The Parties agree that any proposed removal actions and remedial action alternative(s) and plan(s) for remedial action 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. Sections 9313(k) and 9617, relevant community relations provisions in the NCP, EPA guidances, and, to the extent they may apply, State statutes and regulations. The State agree to inform the Army 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 Army shall develop and implement a community relations plan (CRP) addressing the environmental activities and elements of work undertaken by the Army.

26.3 The Army shall establish and maintain an administrative record at a place, at or near the federal facility, which is freely accessible to the public, which record shall provide the documentation supporting the selection of each response action. The administrative record shall be established and maintained in accordance with relevant provisions in CERCLA, the NCP, and EPA guidances. A copy of each document placed in the administrative record, not already provided, will be provided by the Army to the other Parties. The administrative record developed by the Army 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 Communication among the Parties regarding press releases, press inquiries and other contacts with the media shall be coordinated through EPA's Public Affairs Specialist, the Army's Public Affairs Officer and the Hawaii Department of Health Communications Director.

26.5 Except in case of an emergency, any Party issuing a press release with reference to any of the work required by this Agreement shall notify the other Parties of the nature of such press release prior to issuance. If possible, such notice shall be provided at least 24 hours prior to issuance of a press release.

27. FIVE YEAR REVIEW

27.1 Consistent with 42 U.S.C. Section 9621(c) and in accordance with this Agreement, if the selected remedial action 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 remedial action to assure that human health and the environment are being protected by the remedial action being implemented.

27.2 If, upon such review, any of the Parties proposes additional work or modification of work, such proposal shall be handled under Subsection 7.10 of this Agreement.

27.3 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 years counting from the initiation of 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 years, thereafter.

28. TRANSFER OF REAL PROPERTY

28.1 No change in ownership of the Schofield Barracks shall in any way alter the responsibilities of the Parties under this Agreement. The Army 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). Prior to any sale of any portion of the land comprising the federal facility which includes an area within which any release of hazardous substances has come to be located, or property necessary for the performance of the remedial action, the Army shall give written notice of that condition to the buyer of the land. At least thirty (30) days prior to any lease, sale, conveyance, or other transfer of such property, the Army shall notify all Parties of such lease, sale, conveyance or transfer and the provisions made for continued implementation of this Agreement, including but not limited to any additional remedial 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 Army of written notice from EPA, with concurrence of the State, that the Army has demonstrated that all the terms of this Agreement have been completed. If EPA denies or otherwise fails to grant a termination notice within 90 days of receiving a written Army request for such notice, EPA shall provide a written statement of the basis for its denial and describe the Army actions which, in the view of EPA, would be a satisfactory basis for granting a notice of completion. Such denial shall be subject to dispute resolution.

30.2 This provision shall not affect the requirements for periodic review at maximum five year intervals of the efficacy of the remedial actions.

31. COVENANT NOT TO SUE AND RESERVATION OF RIGHTS

31.1 In consideration for the Army's compliance with this Agreement, and based on the information known to the Parties or reasonably available on the effective date of this Agreement, EPA, the Army, and the State agree that compliance with this Agreement shall stand in lieu of any administrative, legal, and equitable remedies against the Army available to them regarding the releases or threatened releases of hazardous substances including hazardous wastes, pollutants or contaminants at the Site which are the subject of any RI/FS conducted pursuant to this Agreement and which have been or will be adequately addressed by the remedial actions provided for under this Agreement.

31.2 Notwithstanding this Section, or any other Section of this Agreement, the State shall retain any statutory right it may have to obtain judicial review of any final decision of the EPA on selection of remedial action pursuant to any authority the State may have under CERCLA, including Sections 121(e)(2), 121(f), 310, and 113.

32. OTHER CLAIMS

32.1 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 Army to implement the requirements of this Agreement.

32.2 This Agreement shall not restrict EPA or the State from taking any legal or response action for any matter not part of the subject matter of this Agreement.

33. RECOVERY OF EPA EXPENSES

33.1 The Parties agree to amend this Agreement at a later date in accordance with any subsequent national resolution of the issue of cost reimbursement. Pending such resolution, EPA reserves any rights it may have with respect to cost reimbursement.

34. STATE SUPPORT SERVICES

34.1 The Army agrees to request funding and reimburse the State, subject to the conditions and limitations set forth in this Section, and subject to Section 15 (Funding), for all reasonable costs the State incurs in providing services in direct support of the Army's environmental restoration activities pursuant to this Agreement at the Site.

34.2 Reimbursable expenses shall consist only of actual expenditures required to be made and actually made by the State in providing the following assistance to Schofield Barracks:

(a) Timely technical review and substantive comment on documents or studies which the Army prepares in support of its response action and submits to the State.

(b) Identification and explanation of unique State requirements applicable to military installations in performing response actions, especially State applicable or relevant and appropriate requirements (ARARs).

(c) Field visits to ensure investigations and cleanup activities are implemented in accordance with appropriate State requirements, or in accordance with agreed upon conditions between the State and the Army that are established in the framework of this Agreement.

(d) Support and assistance to the Army in the conduct of public participation activities in accordance with federal and State requirements for public involvement.

(e) Participation in the review and comment functions of Army Technical Review Committees.

(f) Other services specified in this Agreement.

34.3 Within ninety (90) days after the end of each quarter of the federal fiscal year, the State shall submit to the Army an accounting of all State costs actually incurred during that quarter in providing direct support services under this Section. Such accounting shall be accompanied by cost summaries and be supported by documentation which meets federal auditing requirements. The summaries will set forth employee-hours and other expenses by major type of support service. All costs submitted must be for work directly related to implementation of this Agreement and not inconsistent with either the National Contingency Plan (NCP) or the requirements described in OMB Circulars A-87 (Cost Principles for State and Local Governments) and A-128 (Audits for State and Local Cooperative Agreements with State and Local Governments) and Standard Forms 424 and 270. The Army has

the right to audit cost documents used by the State to develop the cost summaries. Before the beginning of each fiscal year, the State shall supply a budget estimate of what it plans to do in the next year in the same level of detail as the billing documents.

34.4 Except as allowed pursuant to Subsection 34.5 or 34.6 below, within ninety (90) days of receipt to the accounting provided pursuant to Subsection 34.3 above, the Army shall reimburse the State in the amount set forth in the accounting.

34.5 In the event the Army contends that any of the costs set forth in the accounting provided pursuant to Subsection 34.3 above are not properly payable, the matter shall be resolved through a bilateral dispute resolution process set forth at Subsection 34.9 below.

34.6 The Army shall not be responsible for reimbursing the State for any cost actually incurred in the implementation of this Agreement in excess of one percent (1%) of the Army total lifetime project costs incurred through completion of the remedial action(s). Circumstances could arise whereby fluctuations in the Army estimates or actual costs through the completion of the final remedial action creates a situation where the State receives reimbursement in excess of one percent of these costs. Under these circumstances, the State remains entitled to payment for services rendered prior to the completion of a new estimate if the services are within the ceiling applicable under the previous estimate.

34.7 Either the Army or the State may request, on the basis of significant upward or downward revisions in the Army's estimate of its total lifetime costs through construction used in Subsection 34.6 above, a renegotiation of the cap. Failing an agreement, either the Army or the State may initiate dispute resolution in accordance with Subsection 34.9 below.

34.8 The State agrees to seek reimbursement for its expenses solely through the mechanisms established in this Section, and reimbursement provided under this Section shall be in settlement of any claims for State response costs relative to the Army's environmental restoration activities at the Site.

34.9 Section 12 (Dispute Resolution) notwithstanding, this Subsection shall govern any dispute between the Army and the State regarding the application of this Section or any matter controlled by this Section including, but not limited to, allowability of expenses and limits on reimbursement. While it is the intent of the Army and the State that these procedures shall govern resolution of disputes concerning State reimbursement, informal dispute resolution is encouraged.

(a) The Army and State Project Managers shall be the initial points of contact for coordination of dispute resolution under this Subsection.

(b) If the Army and State Project Managers are unable to resolve a dispute, the matter shall be referred to the Installation Commander and the Manager, Hazard Evaluation and Emergency Response Office, Department of Health as soon as practicable, but in any event within five (5) working days after the dispute is elevated by the Project Managers.

(c) If the Installation Commander and the Manager, Hazard Evaluation and Emergency Response Office, Department of Health are unable to resolve the dispute within ten (10) working days, the matter shall be elevated to the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health and the Deputy Director for Environmental Health, Department of Health.

(d) In the event the Deputy Director for Environmental Health, Department of Health and the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health are unable to resolve a dispute, the State retains any legal and equitable remedies it may have to recover its expenses. In addition, the State may withdraw from this Agreement by giving sixty (60) days notice to the other Parties. Such withdrawal by the State shall terminate the State's rights and obligations under this Agreement; provided, however, that any written approvals or written concurrences by the State under or pursuant to this Agreement prior to its withdrawal shall continue to have full force and effect as if the State were still a party to this Agreement.

34.10 Nothing herein shall be construed to limit the ability of the Army to contract with the State for technical services that could otherwise be provided by a private contractor including, but not limited to:

(a) Identification, investigation, and cleanup of any contamination beyond the boundaries of Schofield Barracks;

(b) Laboratory analysis; or

(c) Data collection for field studies.

34.11 Nothing in this Agreement shall be construed to constitute a waiver of any claims by the State for any expenses incurred prior to the effective date of this Agreement.

34.12 The Army and the State agree that the terms and conditions of this Section shall become null and void if the State enters into a Defense/State Memorandum of Agreement and Coopera-

tive Agreement (DSMOA) with the Department of Defense which addresses State reimbursement. Nothing herein shall be construed to require the State to enter into such a DSMOA or the Cooperative Agreement with the Department of Defense.

35. STATE PARTICIPATION CONTINGENCY

35.1 Section 36.2 notwithstanding, if the State fails to sign this Agreement within thirty (30) days of notification of the signature by both EPA and the Army, this Agreement shall become effective and shall be interpreted as if the State were not a Party, and any reference to the State in this Agreement will have no effect. In addition, all other provisions of this Agreement notwithstanding, if the State does not sign this Agreement within the said thirty (30) days, the Army shall only have to comply with any State and local requirements, conditions, or standards, including those specifically listed in this Agreement, which the Army would otherwise have to comply with absent this Agreement.

35.2 In the event that the State does not sign this Agreement:

(a) the Army agrees to transmit all primary and secondary documents to appropriate State and local agencies at the same time such documents are transmitted to EPA; and

(b) EPA intends to consult with the appropriate State and local agencies with respect to the above document and during implementation of this Agreement.

35.3 The Parties acknowledge that the State may encounter budgetary constraints that may restrict the State's ability to participate fully in the activities to be undertaken pursuant to this Agreement, including but not limited to the activities described in Sections 7 (Consultation), 8 (Deadlines), 9 (Extensions), 11 (Emergencies and Removals), and 18 (Project Managers). The Parties agree that failure of the State to fulfill its responsibilities under this Agreement due to lack of adequate funding or inability to fill funded positions shall not be construed as a breach of this Agreement, provided that the State has exercised its best efforts to obtain such funding or fill such positions. If the State decides that it cannot fulfill its obligations set forth in the Agreement due to inadequate funding or inability to fill funded positions, this Agreement shall terminate as to the State. Such termination shall be effective thirty (30) days after receipt by EPA and the Army of a written notice to terminate from the State. In this event, the provisions of Subsections 35.1 and 35.2 shall apply as though the State had not signed this Agreement.

36. EFFECTIVE DATE AND PUBLIC COMMENT

36.1 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).

36.2 This Agreement is effective upon signature by all the Parties to this Agreement.

36.3 Within fifteen (15) days after EPA, as the last signatory, executes this Agreement, the Army shall announce the availability of this Agreement to the public for a forty-five (45) day period of review and comment, but ending no earlier than the date on which comments from EPA and the State are due, under Section 8, on proposed deadlines. Publication shall include publication in at least two major local newspapers of general circulation.

36.4 Promptly upon the completion of the comment period, the Army shall transmit to the other Parties copies of all comments received within the comment period. The Parties shall review all such comments and, within thirty (30) days after the close of the comment period, the Army shall shall prepare a written response to the public comments, for the review and concurrence of the other Parties. Within sixty (60) days after the close of the comment period, the Parties shall determine that either:

(a) this Agreement shall remain effective in its present form; or

(b) the Parties will seek to modify the Agreement pursuant to Section 29 (Amendment or Modification of Agreement), in response to the comments received. Absent or pending an amendment of the Agreement pursuant to Section 29, the Agreement will remain effective in its form as originally executed.

36.5 Any response action underway upon the effective date of this Agreement shall be subject to oversight by the Parties.

36.6 At the start of the public comment period, the Army will also transmit copies of the Agreement, for review and comment, to the appropriate Federal Natural Resource Trustees. The State will transmit copies to appropriate State and local agencies and compile and consolidate comments from these agencies. The State will work with the Army prior to the start of the public comment period to develop the list of appropriate State and local agencies.

37. BASE CLOSURE

37.1 Closure of the Federal Facility will not affect the Army's obligation to comply with the terms of this Agreement and to specifically ensure the following:

(a) Continuing rights of access for EPA and the State in accordance with the terms and conditions of Section 25 (Access to Federal Facility);

(b) Availability of a Project Manager to fulfill the terms and conditions of the Agreement;

(c) Designation of alternate DRC members as appropriate for the purposes of implementing Section 12 (Dispute Resolution); and

(d) Adequate resolution of any other problems identified by the Project Managers regarding the effect of base closure on the implementation of this Agreement.

37.2 Base closure will not constitute a Force Majeure under Section 10 (Force Majeure), nor will it constitute good cause for extensions under Section 9 (Extensions), unless mutually agreed by the Parties.

38. APPENDICES AND ATTACHMENTS

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

(a) Deadlines previously established;

(b) Outline of topics to be addressed in the RI/FS and Related Reports;

(c) All final primary documents and secondary documents which will be created in accordance with Section 7 (Consultation); and

(d) All deadlines which will be established in accordance with Section 8 (Deadlines) and which may be extended in accordance with Section 9 (Extensions).

38.2 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. They shall include:

(a) Map(s) of Federal Facility (see also Subsection 5.9);

(b) Potential Contaminants;

(c) Statement of Facts; and

(d) Installation Restoration Program (IRP) Activities.

Schofield Barracks Federal Facility Agreement

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.

UNITED STATES ARMY

Date

Colonel Gerald F. King
Installation Commander
United States Army Support Command, Hawaii

9/23/91
Date

Louis D. Walker
Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health

U.S. ENVIRONMENTAL PROTECTION AGENCY

9.27.91
Date

for DANIEL W. McGOVERN
Regional Administrator
U.S. Environmental Protection Agency
Region 9

STATE OF HAWAII

12/3/91
Date

John C. Lewin, M.D.
Director of Health
State of Hawaii

APPENDICES

A) Deadlines Previously Established

B) Outline of Topics to be Addressed in the RI/FS and Related Reports

C) All Final Primary and Secondary Documents Which Will Be Created In Accordance With Section 7 (Consultation)

D) All Deadlines Which Will Be Established In Accordance With Section 8 (Deadlines) and Which May Be Extended in Accordance With Section 9 (Extensions)

Appendix A
Deadlines Previously Established

In accordance with Section 8.1 of this Agreement, the following deadlines for submission of Draft Primary Documents have been agreed upon by the Parties before the effective date of this Agreement:

Operable Unit (OU) #1 and OU #2 Phase I

Draft RI/FS Work Plan	3/18/92
Draft Community Relations Plan (CRP)	3/18/92
Draft Quality Assurance Project Plan (QAPP)	3/18/92
Draft Sampling and Analysis Plan (SAP)	6/01/92
Draft RI Report	7/26/93
Draft FS Report	10/24/93
Draft Proposed Plan	2/01/94
Draft ROD	7/16/94

OU #1 consists of sites which are suspected to be likely sources of TCE contamination. The goal of the work to be performed for OU #1 is to identify sources and any associated soil or subsurface contamination. The following sites are included in OU #1 and are located on Map A-3 in Attachment A.

Site 50 - old burn area
Site 17 - DOL vehicle maintenance motor pool (Bldg. 1029)
Site 52 - old laundry
Site 51 - East Range drum disposal area
Site 53 - shaft pump chamber and storage chambers
Site 25 - auto craft shop (Bldg. 910)
Site 18 - distribution warehouse (Bldg. T1052)
Site 42 - maintenance area (Bldg. 387)
Site 54 - East Range aircraft cleaning areas

In OU #2 phase I, existing wells in the Schofield well shaft will be sampled. Effort will be made to obtain discrete samples from other existing wells throughout the Schofield High Level Water Body, as well as to determine vertical and horizontal flow components.

Operable Unit #2 Phase II

Draft RI/FS Work Plan	3/18/92
Draft SAP	4/27/93
Draft RI Report	6/21/94
Draft FS Report	9/19/94
Draft Proposed Plan	12/18/94
Draft ROD	7/31/95

Operable Unit #2 consists of base wide ground water contamination. The goal is to define the nature and extent of contamination. This includes vertical and horizontal extent of TCE contamination. Phase II will include installation of monitoring wells needed to define contaminant boundaries. Phase II will be based in part on the OU #1 source identification.

Operable Unit #3

RI/FS Schedule	8/29/92
Draft RI/FS Work Plan	8/29/92
Draft SAP	8/29/92

A PA/SI effort will begin 2/1/92 to determine sites for OU #3. The results of the PA/SI, including site survey, literature search and field screening results, and the conclusions drawn from them will be included in the RI/FS work plan. The schedule for the OU #3 RI/FS shall include deadlines for all documents listed in subsection 7.3(a)(5) through (8) of this Agreement and shall be reviewed, finalized and published according to the same procedures set forth in Section 8.2 of this Agreement.

The currently known list of sites to be included in the PA/SI effort are listed below (based on a USATHAMA Property Report dated 08/09/90). In addition, other sites discovered during the PA/SI will be added.

Site 1 - drum storage area (Bldg. 2277 and 2276)
Site 2 - vehicle scrap yard (corner Conroy and Trimball)
Site 3 - 24 maintenance areas and USTs
Site 4 - 19 underground storage tanks
Site 5 - 44 underground storage tanks
Site 6 - 21 vehicle wash racks
Site 8 - photo lab (Bldg. 2065)
Site 9 - Training Aids Support Center (TASC) (Bldg. 2065)
Site 10 - repair shop for target model airplanes (Bldg. T-1125)
Site 11 - 9 vehicle wash racks with oil/water separators
Site 12 - three lockers with interior wells (Bldg. T-2276)
Site 13 - McCarthy Flats Ranges
Site 14 - Kolekole Firing Ranges

Site 15 - Central Ranges
Site 16 - target repair shop and carpentry shop (Bldg. 2275)
Site 19 - battery shop (Bldg. T1081)
Site 20 - POL area (Area R)
Site 21 - pest control shop (Bldgs. 370, 380 and former bldg. west of intersection of Ludlow Ave. and Humphreys Road)
Site 22 - pest control shop (golf course Bldgs. 2127, 2127b & c)
Site 23 - arts and crafts (Bldg. 585)
Site 24 - autocraft car wash (Bldg. 910)
Site 26 - car care (Bldg. 80)
Site 27 - veterinary clinic
Site 28 - health clinic
Site 29 - incinerator (Bldg. 673)
Site 30 - 5 underground storage tanks (former service station)
Site 31 - dental clinic
Site 32 - 24 hour photo service
Site 33 - maintenance area (Bldgs. 2054 and 2060)
Site 34 - weapons maintenance building (Bldg. 2131)
Site 35 - optical repair building (Bldg. 1054)
Site 36 - gas chamber (Bldg. 2253C)
Site 37 - pesticide storage buildings (Bldg. 368)
Site 38 - pesticide mixing area (Bldg. 368)
Site 39 - herbicide storage area (shed behind Bldg. 379)
Site 40 - 9 PCB transformers and transformer storage area
Site 41 - transformer leak area (in well shaft)
Site 43 - 27 ammo storage bunkers (Bldgs. 11-27)
Site 44 - chemical impregnation plant (Bldg. 2308 - demolished)
Site 45 - spray paint booth (Bldg. 2144a)
Site 46 - acid pit (northwest of 2138h)
Site 47 - photo operations (TASC)
Site 48 - industrial operations (Bldg. 370b)
Site 49 - Central Range disposal pits
Site 55 - three tunnels at Schofield Barracks (chemical munitions warehouses)
Site 56 - sewage treatment plants and waste lines

Operable Unit #4

Draft RI/FS Work Plan	3/18/92
Draft SAP	6/01/92
Draft RI Report	7/26/93
Draft FS Report	10/24/93
Draft Proposed Plan	2/01/94
Draft ROD	7/16/94

OU #4 consists of the Schofield Barracks landfill, Site 7.

Appendix B
Outline of Topics to be Addressed in The Remedial Investigation/Feasibility Study And Related Reports

The following outlines list topics to be included at a minimum in the RI/FS Documents in Section 7.3(a) (1)-(5) and 7.4(a) (2), as set forth in the most recent version of the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (OSWER Directive 9355.3-01, Interim Final, October, 1988) and applicable State law. EPA Guidance for Conducting Remedial Investigations/Feasibility Studies for CERCLA Municipal Landfill Sites (OSWER Directive 9355.3-11, February, 1991) will be used for the landfill(s). The documents shall also include additional topics and tasks, as appropriate, as set forth in the guidance, or as agreed upon by the Project Managers.

1.0 RI/FS Work Plan

Executive Summary
1. Introduction
2. Site Background and Setting
3. Initial Evaluation
   - 3.1 Types and Volumes of Waste Present
   - 3.2 Potential Pathways of Contaminant Migration/Preliminary Public Health and Environmental Impacts
   - 3.3 Preliminary Identification of Operable Units
   - 3.4 Preliminary Identification of Response Objectives and Remedial Action Alternatives.
4. Work Plan Rationale
   - 4.1 Data Quality Objectives
   - 4.2 Work Plan Approach
5. RI/FS Tasks
6. Costs and Key Assumptions
7. Schedule (including Operable Units)
8. Project Management
   - 8.1 Staffing
   - 8.2 Coordination
9. References

Appendices

2.0 Quality Assurance Project Plan

Title Page
Table of Contents
1. Project Description
2. Project Organization and Responsibilities
3. QA Objectives for Measurement of Data

4. Sampling Procedures
5. Sample Custody
6. Calibration Procedures
7. Analytical Procedures
8. Data Reduction, Validation and Reporting
9. Internal Quality Control
10. Performance and Systems Audits
11. Preventative Maintenance
12. Data Assessment Procedures
13. Corrective Action
14. Quality Assurance Reports

3.0 Sampling and Analysis Plans

1. Site Background
2. Sampling Objectives
3. Sample Location and Frequency
4. Sample Designation
5. Sampling Equipment and Procedures
6. Sample Handling and Analysis

4.0 Community Relations Plan

1. Overview of Community Relations Plan
2. Capsule Site Description
3. Community Background
4. Highlights of Program
5. Techniques and Timing

Appendices

5.0 RI Report

Executive Summary

1. Introduction
   - 1.1 Purpose of Report
   - 1.2 Site Background
     - 1.2.1 Site Description
     - 1.2.2 Site History
     - 1.2.3 Previous Investigations
   - 1.3 Report Organization
2. Study Area Investigation
   - 2.1 Includes field activities associated with site characterization of the following:
     - 2.1.2 Surface Features (topographic mapping, etc.) (Natural and manmade features)
     - 2.1.3 Contaminant Source Investigations
     - 2.1.4 Surface-water and Sediment Investigations
     - 2.1.5 Geologic Investigations
     - 2.1.6 Soil and Vadose Zone Investigations
     - 2.1.7 Ground Water Investigations
     - 2.1.8 Human Populations Surveys

2.1.9 Ecological Investigations

2.2 If technical memoranda documenting field activities were prepared, they may be included in an appendix and summarized in this chapter.

3. Physical Characteristics of the Study Area

3.1 Includes results of field activities to determine physical characteristics. These may include some, but not necessarily all, of the following:

3.1.1 Surface Features
3.1.2 Meteorology
3.1.3 Surface Water Hydrology
3.1.4 Geology
3.1.5 Soils
3.1.6 Hydrogeology
3.1.7 Demography and Land Use
3.1.8 Ecology

4. Nature and Extent of Contamination

4.1 Presents the results of site characterization, other natural chemical components and contaminants in the following:

4.1.1 Sources
4.1.2 Soils
4.1.3 Groundwater
4.1.4 Surface Water and Sediments
4.1.5 Air
4.1.6 Biota
4.1.7 Fish and Wildlife

5. Contaminant Fate and Transport

5.1 Potential Routes of Migration (i.e., air, groundwater, etc.)

5.2 Contaminant Persistence

5.2.1 If they are applicable (i.e., for organic contaminants), describe estimated persistence in the study area environment and physical, chemical, and/or biological factors of importance for the media of interest.

5.3 Contaminant Migration

5.3.1 Discuss factors affecting contaminant migration of the media of importance (e.g., sorption onto soils, solubility in water, movement of groundwater, etc.).

5.3.2 Discuss modeling methods and results, if applicable.

6. Baseline Risk Assessment

6.1 Human Health Evaluation

6.1.1 Exposure Assessment
6.1.2 Toxicity Assessment
6.1.3 Risk Characterization
6.2 Environmental Evaluation
7. Summary and Conclusions
7.1 Summary
7.1.1 Nature and Extent of Contamination
7.1.2 Fate and Transport
7.1.3 Risk Assessment
7.2 Conclusions
7.2.1 Data Limitations and Recommendations for Further Work.
7.2.3 Recommended Remedial Action Objectives

6.0 FS Report

Executive Summary
1. Introduction
1.1 Purpose and Organization of Report
1.2 Background Information (Summarized from RI)
1.2.1 Site Description
1.2.2 Site History
1.2.3 Nature and Extent of Contamination
1.2.4 Contaminant Fate and Transport
1.2.5 Baseline Risk Assessment
2. Identification and Screening of Technologies
2.1 Introduction
2.2 Remedial Action Objectives - Presents the development of remedial action objectives for each medium of interest (groundwater, soil, surface water, air, ecology, etc.). For each medium, the following should be discussed:
2.2.1 Contaminants of Interest
2.2.2 Allowable Exposure Based on Risk Assessment
2.2.3 Applicable or Relevant and Appropriate Requirements (ARARs)
2.2.4 Development of Remediation Goals
2.3 General Response Actions - For each medium of interest, describes the estimation of areas or volumes to which treatment, containment, or disposal technologies may be applied.
2.4 Identification and Screening of Technology Types and Process Options - For each medium of interest, describes:
2.4.1 Identification and Screening of Technologies
2.4.2 Evaluation of Technologies and Selection of Representative Technologies
3. Development and Screening of Alternatives

3.1 Development of Alternatives - Describes rationale for combination of technologies/media into alternatives. Note: This discussion may be by medium or for the site as a whole.
3.2 Screening of Alternatives (if conducted)
3.2.1 Introduction
3.2.2 Alternative 1
3.2.2.1 Description
3.2.2.2 Evaluation of
- Effectiveness
- Implementability
- Cost
3.2.3 Alternative 2
3.2.3.1 Description
3.2.3.2 Evaluation of
- Effectiveness
- Implementability
- Cost
3.2.4 Alternative 3
3.2.4.1 Description
3.2.3.2 Evaluation of
- Effectiveness
- Implementability
- Cost

4. Detailed Analysis of Alternatives
4.1 Introduction
4.2 Individual Analysis of Alternatives
4.2.1 Alternative 1
4.2.1.1 Description
4.2.1.2 Assessment of:
- Overall Protection
- Compliance with ARARs
- Long-term Effectiveness and Permanence
- Reduction of Toxicity, Overall Protection Mobility or Volume Through Treatment
- Short-Term Effectiveness
- Implementability
- Cost
- State Acceptance
- Community Acceptance
4.2.2 Alternative 2
4.2.2.1 Description
4.2.2.2 Assessment
4.2.3 Alternative 3
4.2.3.1 Description

4.2.3.2 Assessment
4.3 Comparative Analysis

Bibliography
Appendices

7.0 Treatability Studies - The need for treatability testing should be identified as early in the RI/FS process as possible. The purpose is to provide information needed for the detailed analysis of alternatives and to allow selection of a remedial action with a reasonable certainty of achieving the response actions. In general, treatability testing will include the following:

1. A work plan for Bench or Pilot Scale - see Chapter 5 of the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (October, 1988) for example work plan outlines.

2. Performing field sampling, and/or bench testing or pilot testing.

3. Evaluating data from field studies and/or bench or pilot testing.

4. Preparing a brief report documenting the results of the testing.

Appendix C

All Final Primary and Secondary Documents Which Will Be Created In Accordance With Section 7 (Consultation)

(To be incorporated by reference)

Appendix D

All Deadlines Which Will Be Established In Accordance With Section 8 (Deadlines) and Which May Be Extended in Accordance With Section 9 (Extensions)

(To be incorporated by reference)

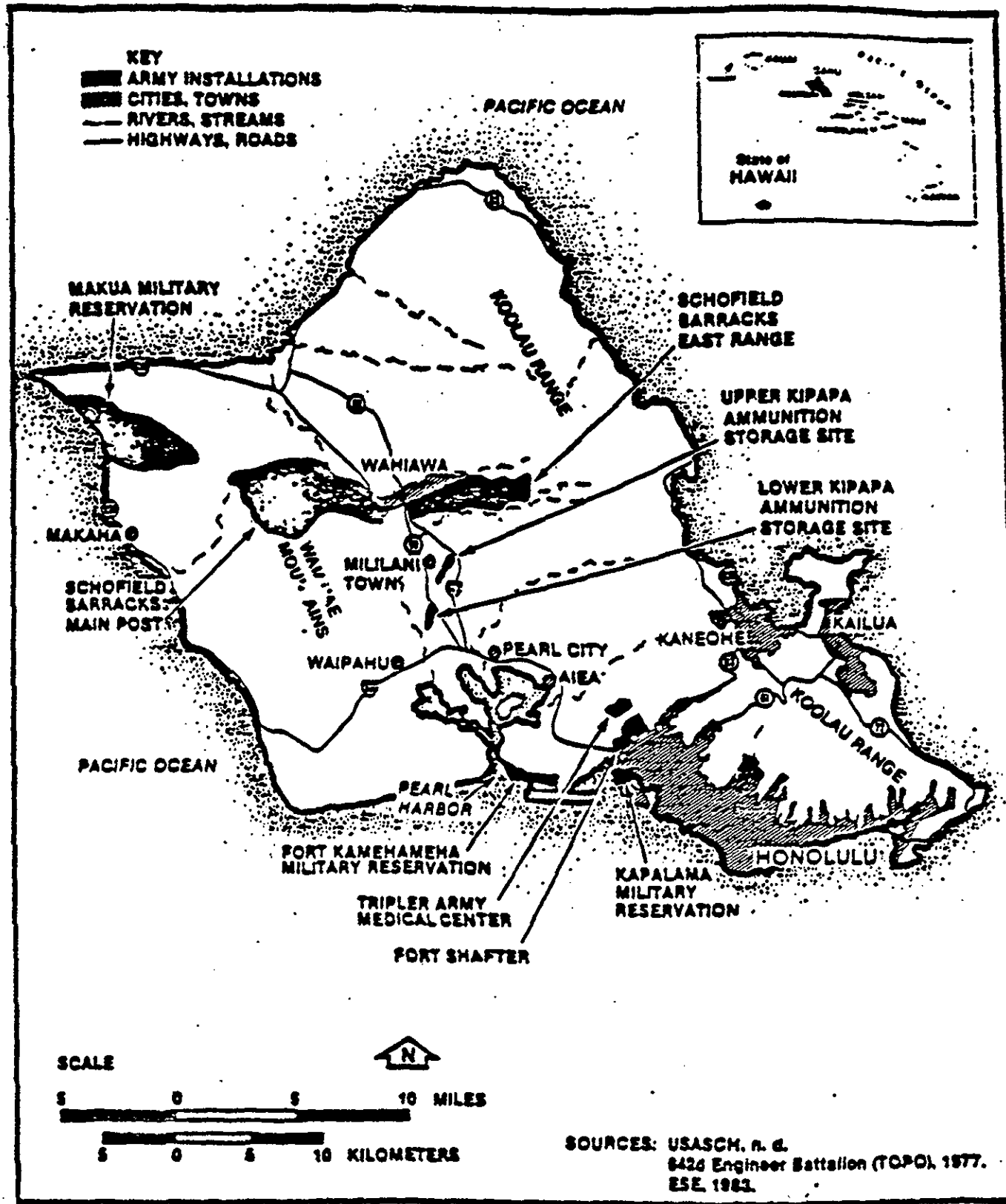
ATTACHMENTS

A) **Maps of Federal Facility**

B) **Potential Contaminants**

C) **Statement of Facts**

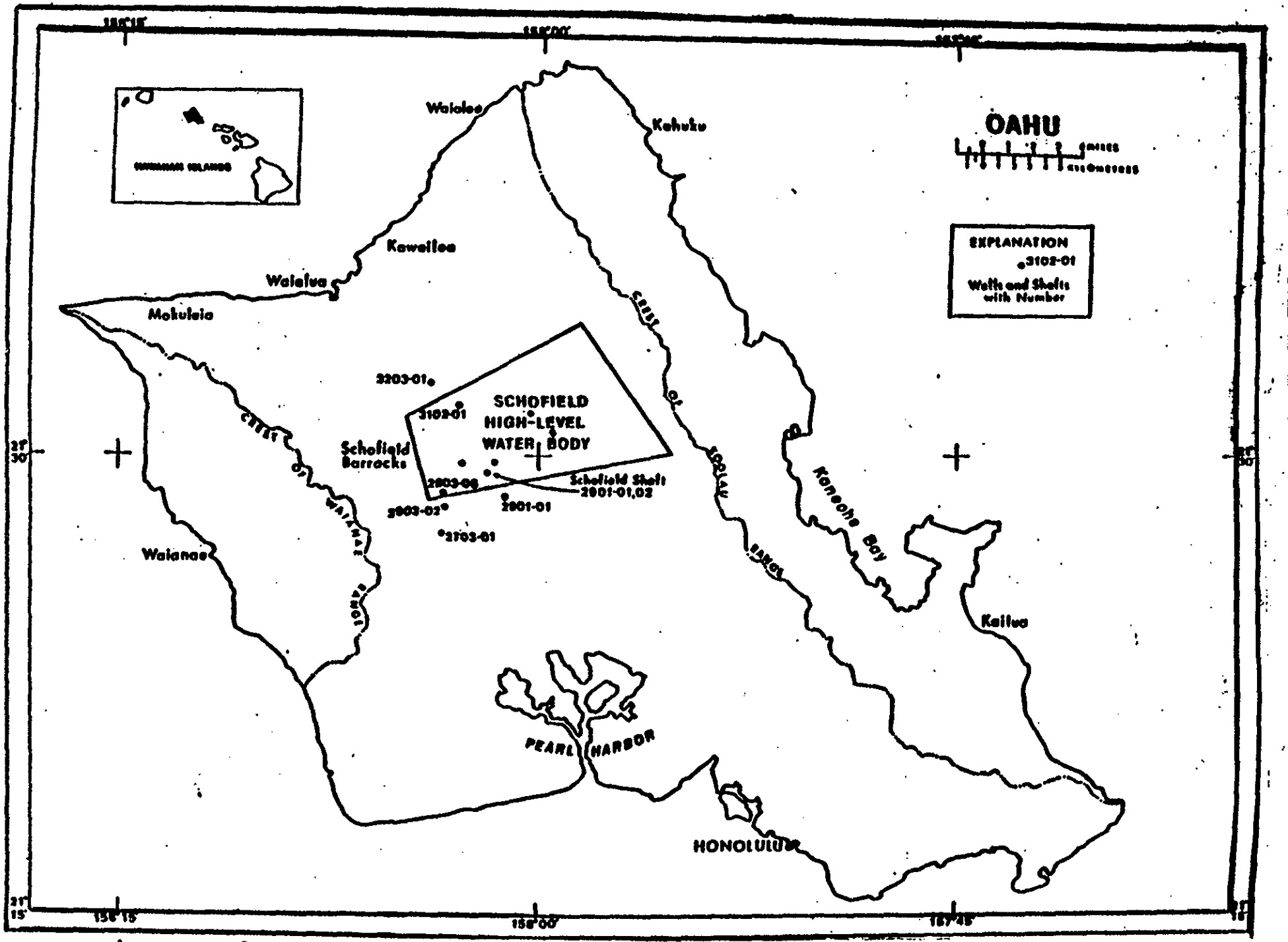
D) **Installation Restoration Program Activities**



LOCATION MAP OF INSTALLATIONS SURVEYED ON THE ISLAND OF OAHU

Prepared for:
U.S. Army Toxic and Hazardous Materials Agency
Aberdeen Proving Ground, Maryland

Map A-1 Location Map

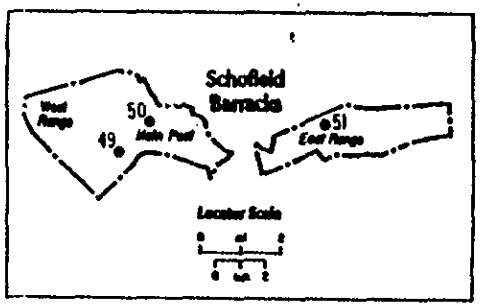


Map A-2 LOCATION OF SCHOFIELD HIGH-LEVEL GROUND-WATER BODY

Source: U.S. Geological Survey Water-Resources Investigations 76-47, May 1976.

Schofield Barracks
Wahiawa, HI

Waste Site Locations



1 - [OU 3] Drum Storage Area
2 - [OU 3] Vehicle Scrap Yard
3 - [OU 3] Maintenance Areas (24)
4 - [OU 3] Underground Storage Tanks (19)
5 - [OU 3] Underground Storage Tanks (44)
6 - [OU 3] Vehicle Wash Racks (9)
7 - [OU 4] Landfill
8 - [OU 3] Photo Lab (Bldg 2065)
9 - [OU 3] FASC (Bldg 2065)
10 - [OU 3] Bldg T-1125
11 - [OU 3] Vehicle Wash Rack w/Oil Water Separator (9)
12 - [OU 3] Bldg T-2276
13 - [OU 3] McCarthy Flats Ranges
14 - [OU 3] Kolekole Firing Ranges
15 - [OU 3] Central Ranges
16 - [OU 3] Bldg 2275
17 - [OU 1] Maintenance Area (Bldg T-1029 Area)
18 - [OU 1] Distribution Warehouse (Bldg T-1052)
19 - [OU 3] Battery Shop (Bldg T-1081)
20 - [OU 3] POL Area
21 - [OU 3] Pest Control Shop
22 - [OU 3] Pest Control Shop
23 - [OU 3] Arts and Crafts (Bldg 585)
24 - [OU 3] Autocraft Car Wash (Bldg 910)
25 - [OU 1] Autocraft Shop (Bldg 910)
26 - [OU 3] Car Care (Bldg 79)
27 - [OU 3] Veterinary Clinic
28 - [OU 3] Health Clinics
29 - [OU 3] Incinerator (Bldg 673)
30 - [OU 3] Underground Storage Tanks (5)
31 - [OU 3] Dental Clinic
32 - [OU 3] 24-Hour Photo Service
33 - [OU 3] Maintenance Area (Bldg T-2054, -2060, -2063)
34 - [OU 3] Weapons Maintenance (Bldg 2131)
35 - [OU 3] Optical Repair (Bldg 1054)
36 - [OU 3] Gas Chamber (Bldg 2253C)
37 - [OU 3] Pesticide Storage Bldgs
38 - [OU 3] Pesticide Mixing Area (T-368)
39 - [OU 3] Herbicide Storage Area (T-379)
40 - [OU 3] Transformers (9)
41 - [OU 3] Transformer Leak Area
42 - [OU 1] Maintenance Area
43 - [OU 3] Ammo Storage Bunkers (27)
44 - [OU 3] Chem Impreg Plant (Bldg 2308)
45 - [OU 3] Spray Paint Booth (Bldg 2144A)
46 - [OU 3] Acid Pit (Bldg 2138H)
47 - [OU 3] Photo Operations (Bldg 2065)
48 - [OU 3] Bldg 3708
49 - [OU 3] Landfill
50 - [OU 1] Landfill - Old Burn Area
51 - [OU 1] East Range Disposal Area
52 - [OU 1] Old Laundry
53 - [OU 1] Well #4 Shaft
54 - [OU 1] East Range Aircraft Cleaning Area
55 - [OU 3] Tunnels (3) (Loc Unknown)
56 - [OU 3] Sewage Treatment Plant/Waste Lines

Attachment B
Potential Contaminants

The Chemicals of Concern (COCs) are not known at the time of this agreement. Trichloroethene (TCE) is the exception, having been detected in the potable groundwater supply beneath the site. In accordance with EPA requirements for conducting an RI/FS, the Chemicals of Concern shall be identified in the Baseline Risk Assessment. For the purposes of this agreement, a preliminary list of potential chemicals is presented below. This list is based on available information on site usage, as well as known contamination problems at sites with some similarities in terms of site usage. This list is presented for informational purposes only, and should be considered a preliminary list which will be revised during the RI/FS as data are collected. Sampling has not yet taken place at Schofield Barracks, therefore data upon which to draw in identifying the chemicals which may be present in the various media at the site is very limited.

Toxicity information shall be provided when the COCs have been identified in the Risk Assessment. The chief source(s) of the toxicity information shall be one or more of the following:

- The Integrated Risk Information System (IRIS) - An EPA data base which is updated monthly.
- Health Effects Assessment Summary Tables (HEAST) - prepared by EPA's Environmental Criteria and Assessment Office for use at both Superfund and RCRA sites.
- Superfund Chemical Profiles - Toxicological profiles prepared by the Agency for Toxic Substances & Disease Registry, U.S. Public Health Service.

The RI/FS will focus on or investigate potential contaminants based on those known or suspected to have been used at the site, which may include, but not be limited to the compounds listed below.

<u>Organic Compounds:</u>
Acetone 67-64-1*
Benzene 71-43-2
Benzidine 92-87-5
2-Butanone, MEK 78-93-3
Butanol 71-36-3
Carbon Disulfide 75-15-0
Chlorobenzene 108-90-7
Dichlorobenzene 95-50-1

Dibromochloromethane 124-48-1
1,1-Dichloroethane, (DCA) 75-34-3
1,2-Dichloroethane, (DCA) 107-06-2
1,1-Dichloroethene, (DCE) 75-35-4
trans -1,2-Dichloroethene 156-60-5
Dichloromethane 75-09-2
Ethanol 64-17-5
Ethylbenzene 100-41-4
Freon 113 76-13-1
4-Methyl-1,2-Pentanone (MIBK) 108-10-1
Napthalenes 91-21-3
Pentachlorophenol 87-86-5

Organic Compounds (cont):
Pyrene 129-00-0
Styrene 100-42-5
Tetrachloroethene, PCE 127-18-4
Tetrachloromethane 56-23-5
Toluene 108-88-3
Trichlorofluoromethane 75-69-4
Trichloromethane 67-66-3
1,1,1-Trichloroethane, TCA 71-55-6
1,1,2-Trichloroethane, TCA 79-00-5
Trichloroethene, TCE 70-01-6
Vinyl Chloride 75-01-4
Xylenes isomers (1330-20-7, mixed isomers)
Phenols (108-95-2, total)
Polychlorinated dibenzo-p-dioxins (PCDDs)
Polychlorinated dibenzo-furans (PCDFs)

Pesticides/Herbicides:
Aldrin
Diazinon
Dieldrin
DDT
DDE
DDD
Lindane
Technical Grade Chlordane
2,4-D
EDB

PCBs:
Polychlorinated Biphenyls 1336-36-3

Metals:
Antimony 7440-36-0
Arsenic 7440-38-2
Barium 7440-39-3

Cadmium 7440-43-9
Chromium 7440-47-3
Cobalt 7440-48-4
Copper 7440-50-8
Lead 7439-92-1
Manganese 7439-96-5
Mercury 7439-97-6
Nickel 7440-02-0
Silver 7440-22-4
Zinc 7440-66-6

Inorganic Compound:
Asbestos 1332-21-4

Compounds Related to Chemical/Biological Warfare Agent usage:
Bis(2-choroethyl) sulfide 505-60-2, (mustard gas)
Thiodiglycol
Lewisite 541-25-3
Cyanogen Chloride 506-77-4
Hydrocyanic Acid 74-90-8

Petroleum materials:
Gasoline
Diesel fuel
Jet Fuel
MOGAS
Motor Oil

Medical Waste Materials:
Pathogens

* The Chemical Abstracts Service Registry Number ("CAS") is a numeric designation assigned by the American Chemical Abstracts Service and uniquely identifies a specific chemical compound. This entry allows one to identify a substance regardless of the name or naming system used.

Attachment C
Statement of Facts

For the purposes of this Agreement, the following constitutes a summary of the facts upon which this Agreement is based. None of the facts related herein shall be considered admissions by any Party, nor shall they be used by any person for purposes unrelated to this Agreement.

The information presented herein was gathered through documentation which is considered neither complete nor conclusive.

1. Schofield Barracks was established by the Army in 1908. It lies 22 miles northwest of Honolulu, covering 17,725 acres of the north-central plateau of the island of Oahu. Wheeler Air Force Base lies between and to the south of the two sections of Schofield Barracks, the east range and the main post. The installation is bisected by Highway H-2, and the municipality of Wahiawa lies immediately to the north. The former Hawaiian public domain land upon which Schofield Barracks lies was acquired by the U.S. Government when Hawaii was annexed in 1898. Originally established to provide a base for the Army's mobile defense of Pearl Harbor and the island of Oahu, the installation today is the largest Army post in Hawaii, housing the 25th Infantry Division and the 45th Support Group. Initial construction on the post occurred between 1909 and 1917. Following World War I, during which all regular military tenants of the post were deployed, various additional facilities including an airfield in the south-central portion of the post, were constructed. The airfield was made a separate entity in 1939, and was subsequently acquired by the U.S. Air Force and renamed Wheeler Air Force Base in 1956. Schofield Barracks was strafed and received minor damage during the Japanese attack on Pearl Harbor in World War II. The mission of Schofield Barracks is to provide administrative support, training, and housing facilities for the 25th Infantry and 45th Support Group. In addition, the installation houses depot and repair facilities, a medical facility, as well as community and housing support services offices.

2. Currently identified sites to be investigated under the terms of this Agreement are included in Appendix A, and are based on descriptions found in the following reports:

   1) Environmental Science and Engineering, Inc. 1984.

"Installation Assessment of U.S. Army support Command, Hawaii, Installations, prepared for U.S. Army Support Command, Hawaii" dated May, 1984 and,

2) The USATHAMA Property Report dated 08/09/90.

Furthur identification of sites will occur during the PA/SI, as described in Appendix A.

Past and current waste generation operations at Schofield have included vehicle and aircraft maintenance, rustproofing, painting, weapons refinishing, laundering, optical instrumentation maintenance, electrical equipment service, training aids manufacture, powder burning, weapons use, pesticide and herbicide use, municipal activities, etc. Laboratory operations generate small quantities of chemical and biological simulants. Wastes generated have included fuels, waste oil, solvents, metals, photographic chemicals, paint sludges, paint thinners, acids and bases, asbestos, pesticides, PCBs, sewage sludges, medical wastes, and radiological materials. In the past, lethal chemical agents have been stored at Schofield Barracks. Some of the wastes generated have reportedly been disposed of in onsite landfills, drainage ditches, firing ranges, burn areas, concrete surface impoundments, disposal pits, ravines, gravel sumps, the sanitary sewer, storm drains, and underground storage tanks, and were used on surface soils as dust prevention measures. Medical wastes have been incinerated. In addition to disposal areas, releases may have occurred from hazardous materials storage and use areas and hazardous waste storage areas associated with miscellaneous industrial operations.

A preliminary list of contaminants of potential concern is presented in Attachment B. This list was identified based on usage and disposal history, known information regarding sites with similar use histories, and known information regarding fate and transport of chemicals in the environment. Further effort is needed during the RI/FS to refine/verify this list of potential contaminants and to determine the extent of contamination, potential receptors, ARARS and cleanup goals.

3. In April 1985, the Director of Health, State of Hawaii, reported TCE in three of four Schofield Barracks drinking water wells in excess of the 2.8 parts per billion (ppb) health advisory level set by the State Department of Health, and the Federal MCL of 5 ppb. The fourth well was also later found to have TCE contamination. The wells were taken

out of service temporarily on May 2, 1985. Blending with City water then occurred for approximately 18 months. A facility to treat TCE-contaminated water for use by air stripping has been operational since late 1986.

Schofield Barracks was proposed for addition to the National Priorities List in July, 1989, and finalized in August, 1990.

4. The following is a review of general geology and hydrology at Schofield Barracks. There are four main physiographic provinces on Oahu, the Wainae and Koolau ranges trending northwest-southeast separated by the Schofield plateau, and ringed by a coastal plain. The Waianae range derives from volcanism of the Waianae volcano. The Waianae represents the earliest period of volcanism on Oahu. The lava flows are steep with dips ranging from 10 to 20 degrees. These flows interfinger with Koolau lavas beneath Schofield Barracks. The Koolau range resulted from volcanism of the Koolau volcano. Koolau volcanism occurred later than Waianae and has lava flows less steep than the Waianae in the range of 3 to 10 degrees. These lavas also comprise the Schofield plateau. Following these two periods of volcanism, the coastal plain was built by deposition of both marine and terrestrial sediments and by lava flows and pyroclastic deposits of later volcanism (Fisher and Mink, 1964).

   The island receives a large amount of rainfall annually, the maximum reaching 300 inches per year. The wettest areas are within the central portion of the Koolau range. Rainfall in general decreases progressively towards the ocean to less than 20 inches/year on the leeward side (Mink, 1960).

   The volcanism of both ranges is typical of Hawaii, resulting in thin interbedded flows of aa and pahoehoe. The aa are blocky viscous flows often associated with clinker while the pahoehoe are smoother, often flowing as ropey, braided structures. The two lava types are chemically similar, their differences due to factors affecting cooling and/or changes in viscosity related to outgasing. Ground water occurs within the volcanics and flow is through fractures, joints, lava tubes, clinker, vesicles, and interbedded soil horizons. The lavas are very permeable with hydraulic conductivities in excess of 1000 ft/day.

   Dikes are common and often associated with rift zones of the volcanoes. The dikes are generally vertical and often form no-flow or low-flow barriers to groundwater.

Groundwater occurs on Oahu in basal and high level water bodies. The basal water bodies have water table levels near sea level up to a few tens of feet in altitude. The water is fresh being derived from infiltration of rainfall and forms a lens floating on heavier sea water (Fisher and Mink, 1964). The high level water bodies occur in the mountain ranges (and the Schofield plain) where they are impounded by low permeability dikes (Stearns and Vaksvik, 1935). The Schofield high level water body is bounded by the Waianae to the west, the Koolau to the east and northern and southern ground water dams. The dams have not been directly sampled but are inferred to be dikes. The occurrence of a high water body is known through water level measurements. The general location of the southern dam is inferred by water level measurements. Indirect geophysical measurements also suggests location of the northern and southern dams and indicate water standing about 30 feet higher than the southern dam (Shettigra and Peterson, 1985).

Discharge is by flow from the high water body over (and likely through) the two dams. Most of the flow (80%) is to the south and discharge is to the Pearl basal water body. Estimates of flow to the south is on the order of ~120 million gallons per day (Dale and Takasaki, 1976).

Five wells exist at Schofield Barracks, located in an inclined shaft. One well is used for water level measurements, the remaining four are used as production wells and supply drinking water to Schofield Barracks.

Well number 4 has had higher levels of TCE than the other three, suggesting heterogeneity. Contaminant levels have been historically constant, which might suggest: a continuously "leaky" source; a saturated zone contaminated throughout; or contaminant stratification sampled by well 4.

The wells at Schofield Barracks do not define the vertical or horizontal extent of TCE contamination. They represent water quality of a portion of the Schofield high level water body.

5. Schofield Barracks is situated in an environmental setting of abundant plant and animal life, in the central plain of Oahu, between the Waianae Mountains to the west and the Koolau Mountains to the east. The various habitats include forests, grasslands, and riparian forests. In addition, various aquatic habitats surround Scofield Barracks. Waikele Stream bounds Schofield to the south, Kaukonahua Stream bounds Schofield to the north and northeast, and

Wahiawa Reservoir borders Schofield to the east. The isolation of the Hawaiian Islands is responsible for the unique assemblage of flora and fauna, which includes a number of threatened and endangered species. Surrounding land use includes urban areas to the north and south, Wheeler Air Force Base and Kunia Naval Reservation to the south, and Kawailoa Training area which adjoins Schofield's northeastern border. Forest reserve and private estates containing cultivated pineapple and sugarcane fields fill the remaining areas which surround Schofield Barracks.

The groundwater beneath Schofield Barracks is an important resource, providing potable water for the post as well as potentially providing potable water for growing municipalities nearby.

For the above reasons, coordination with the natural resources trustees and assessment of environmental impacts and risks will be important at this site.

Attachment D
Installation Restoration Activities

In 1976 the Department of Defense (DOD) initiated the Installation Restoration Program (IRP) to evaluate, characterize, and control the potential migration of possible contaminants resulting from past operations and disposal practices on DOD facilities.

An IRP Installation Assessment covering Schofield Barracks was conducted in June of 1983. The resulting final report, completed in May 1984, concluded that there was no off-post migration of contaminants via surface or subsurface waters. The report recommended that the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA), should not conduct a survey at that time.

However, in April 1985, the Director of Health, State of Hawaii reported TCE in three of four Schofield Barracks drinking wells in excess of the health advisory level and the MCL. The fourth well was also later found to contain TCE contamination. The wells were taken out of service temporarily on May 2, 1985. Blending with City water then occurred for approximately 18 months. A facility to treat TCE-contaminated water by air stripping has been operational since late 1986.

In response to the detection of TCE in the Schofield Barracks wells, an Installation Assessment report was prepared in May 1985. The objective of the report was to identify potential sources of the TCE contamination. The findings were inconclusive, but the following actions were recommended:

- Conduct in-depth onsite inspections of operations suspected of utilizing TCE.
- Evaluate the need to install monitoring wells at the closed Schofield Barracks sanitary landfill.
- Obtain the results of groundwater monitoring at former landfill sites at Wheeler Air Force Base.
- Evaluate the need/feasibility for conducting soil borings/tests at the old laundry site.
- Test and dispose of the contents in the waste oil tank at Kunia Military Reservation.

A subsequent identification of potential sources is documented in a USATHAMA Property Report dated 8/9/90. The RI/FS and a PA/SI

for this site will further identify and characterize sites and contaminants, as described in Appendix A of this Agreement.

Relevant documents prepared under the IRP include the following:

(1) U.S. Army Toxic and Hazardous Materials Agency. Installation Assessment of U.S. Army Support Command, Hawaii Installation. May, 1984.

(2) U.S Army Support Command, Hawaii. Installation Assessment Report for Trichloroethylene Contamination of Schofield Barracks Groundwater. May 6, 1985.

(3) USATHAMA, WESCOM. "USATHAMA Property Report". August 9, 1990.

In addition to these IRP reports, numerous other documents exist which have relevance to the project.