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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 9
AND THE
DEPARTMENT OF HEALTH SERVICES
AND THE
CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD
AND THE
UNITED STATES ARMY

IN THE MATTER OF:)

The U.S. Department)
of the Army)

Riverbank Army)
Ammunition Plant)

Federal Facility
Agreement Under
CERCLA Section 120

Administrative
Docket Number:

Riverbank Army Ammunition Plant - Federal Facility Agreement

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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 State ARARs; and

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

1.2 Specifically, the purposes of this Agreement are to:

(a) Identify operable unit (OU) 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 pursuant to CERCLA and State ARARs. 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 State ARARs;

(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;

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(d) Implement the selected remedial actions(s) in accordance with CERCLA;

(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 Riverbank Army Ammunition Plant;

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

(h) Provide for DHS and RWQCB involvement in the initiation, development, selection and enforcement of remedial actions to be undertaken at Riverbank Army Ammunition Plant, 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.

(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 Army, DHS and the RWQCB. The terms of the Agreement shall apply to and be binding upon EPA, the DHS, RWQCB, 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 or unless established by the Dispute Resolution Process contained in Section 12. 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.

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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. § 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. §§ 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), the Clean Water Act, 33 U.S.C. § 1251 et. seq., 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. § 9620(e)(2), RCRA sections 6001, 3008(h), 3004(u) & (v), 42 U.S.C. §§ 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. § 9620(e)(1), RCRA sections 6001, 3008(h) and 3004(u) & (v), 42 U.S.C. §§ 6961, 6928(h), 6924(u) & (v), Executive Order 12580, the National Environmental Policy Act, 42 U.S.C. § 4321, and the Defense Environmental Restoration Program (DERP), 10 U.S.C. § 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. § 9620(e)(2), RCRA sections 6001, 3004(u) & (v), and 3008(h), 42 U.S.C. §§ 6961, 6928(h), 6924(u) & (v), Executive Order 12580 and the DERP; and

(e) DHS and RWQCB enter into this agreement pursuant to CERCLA sections 120(f) and 121, 42 U.S.C. §§ 9620(f) and 9621, and the California Health and Safety Code, Section 102, and Division 20, Chapters 6.5 and 6.8 and California Water Code Division 7.

(f) The Department of Health Services (DHS) is the designated single State agency, in accordance with California Government Code section 12018, and Health and Safety Code section 25159.7, responsible for the federal programs to be carried out under this Agreement, and the lead state agency for the State of California.

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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 as well as Department of Defense (DOD), to the extent necessary to effectuate the terms of this Agreement, including, but not limited to, appropriations and Congressional reporting requirements.

(c). "ARARs" shall mean federal and State applicable or relevant and appropriate requirements, standards, criteria, or limitations, 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. § 9620(a)(1).

(d). "CERCLA" shall mean the Comprehensive Environmental Response, Compensation and Liability Act, Public Law 96-510, 42 U.S.C. § 9601 et. seq., as amended by the Superfund Amendments and Reauthorization Act of 1986, 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 Saturday, Sunday, or holiday shall be due on the following business day.

(f). "DHS" shall mean the California Department of Health Services, its successors and assigns, and its duly authorized representatives, which may include its employees and authorized representatives.

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

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

(i). "Federal Facility" shall include Riverbank Army

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Ammunition Plant and any real property subject to the jurisdiction of Riverbank Army Ammunition Plant.

(j). "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).

(k). "Meeting," in regard to Project Managers, shall mean an in-person discussion at a single location or a conference telephone call of all Project Managers. A conference call will suffice for an in-person meeting at the concurrence of the Project Managers.

(l). "National Contingency Plan" or "NCP" shall refer to the regulations contained in 40 CFR 300.1 et seq.

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

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

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

(p). "RWQCB" shall mean the Regional Quality Water Quality Control Board, Central Valley Region, its successors and assigns, and its duly authorized representatives, which may include its employees and authorized representatives.

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

(r). "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

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Army shall conduct and prepare the RI in a manner to support the intent and objectives of Section 17 (Statutory Compliance/RCRA-CERCLA Integration).

(s). "Remedy" or "Remedial Action" or "RA" shall have the same meaning as provided in section 101(24) of CERCLA, 42 U.S.C. § 9601(23), and the NCP, and may consist of Operable Units.

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

(u). "RPM" or "Remedial Project Manager" shall have the same meaning and authority as provided in the NCP.

(v). "Site" shall include the federal facility of Riverbank Army Ammunition Plant as defined above, the facility as defined above, 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 Riverbank Army Ammunition Plant. For the purposes of obtaining permits, the term "on-site" shall have the same meaning as provided in the NCP.

(w). "State" shall mean the State of California and its employees and authorized representatives, represented by the Department of Health Services (DHS) and the California Regional Water Quality Control Board (RWQCB).

5. DETERMINATIONS

This section contains determinations made by the U.S. Army, U.S. EPA, DHS and RWQCB for the purposes of this Agreement only. This section shall not be used by any other person related or unrelated to this Agreement for any purpose other than the enforcement of this Agreement pursuant to its terms.

5.1 This Agreement is based upon the placement of Riverbank Army Ammunition Plant, Stanislaus County, California, on the National Priorities List by the Environmental Protection Agency, 55 Federal Register 6154-6174 (21 February 1990).

5.2 Riverbank Army Ammunition Plant 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 Riverbank Army Ammunition Plant is a federal facility

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under the jurisdiction of the Secretary of Defense within the meaning of CERCLA section 120, 42 U.S.C. § 9620, and Superfund Amendments and Reauthorization Act of 1986 (SARA) Sec. 211, 10 U.S.C. §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 An Appendix to this Agreement shows those documents, secondary or primary, which have been accepted as final before or on the effective date of this Agreement.

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

5.8 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.

5.9 With respect to these releases, the Army is a responsible party and owner subject to the provisions of 42 U.S.C. Section 9607 and within the meaning of California Health and Safety Code section 25323.5(a).

5.10 Included as an Attachment to this Agreement is a map showing source(s) of suspected 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; State ARARs; 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 par-

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Participation of the Parties as set forth in this Agreement:

- (a) Remedial Investigations of the Site;
- (b) Feasibility Studies for the Site;
- (c) All response actions, including Operable Units, for the Site;
- (d) 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 documents, specified herein as either primary or secondary documents. In accordance with CERCLA section 120, 42 U.S.C. Sections 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.

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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 issuance 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, DHS and RWQCB. 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 draft documents of the following primary documents for each remedial action to the EPA, DHS and RWQCB, for review and comment in accordance with the provisions of this Section:

- (1) RI/FS Workplans, including Sampling and Analysis Plans and target dates for RI/FS tasks
- (2) Quality Assurance Project Plans (QAPPs)
- (3) 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).)
- (4) RI Reports
- (5) FS Reports
- (6) Proposed Plans
- (7) Records of Decision (RODs)
- (8) Remedial Designs (RDs)
- (9) Remedial Action Work Plans (to include schedules for RA, and operation and maintenance plans)

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(10) Risk Assessments

(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 draft documents of the following secondary documents for each remedial action to the EPA and the State for review and comment.

(1) Sampling and Data Results

(2) Treatability Studies (if generated)

(b) Although EPA and the State may comment on the draft documents 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 approximately every ninety (90) days, except as otherwise agreed by the Parties, to review and discuss the progress on the primary and secondary documents. However, progress meetings shall be held more frequently, but not less than thirty (30) days apart, 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) For those primary documents or secondary documents

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for which ARAR determinations are appropriate, prior to the issuance of a draft document, the Project Managers shall identify and propose all potential ARARs pertinent to the document being addressed, including any permitting requirements which may be a source of ARARs. At that time, DHS and RWQCB shall identify potential State ARARs as required by CERCLA section 121(d)(2)(A)(ii), 42 U.S.C. Section 9621(d)(2)(A)(ii), which are pertinent to those activities for which it is responsible and the document being addressed. Draft ARAR determinations shall be prepared by the Army in accordance with CERCLA section 121(d)(2), 42 U.S.C. §9621(d)(2), the NCP and pertinent guidance issued by EPA.

(b) DHS will contact those State and local governmental agencies which are a potential source of ARARs. The proposed ARARs obtained from the identified agencies will be submitted to the Army, along with a list of those agencies who failed to respond to DHS's solicitation of proposed ARARs.

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

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 sixty (60) day period for review and comment. In reviewing any document, the EPA, DHS and RWQCB 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 California 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,

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DHS and RWQCB 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 sixty (60) day comment period for an additional thirty (30) days by written notice to the Army prior to the end of the sixty (60) day period. On or before the close of the comment period, EPA, DHS and RWQCB 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 timely submitted written comments. 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 sixty (60) 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 sixty (60) 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 sixty (60) 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 ex-

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tended 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 sixty (60) 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 other than the Community Relations Plan 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.

(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

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(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 shall be made an Appendix 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 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 Designs

(b) Remedial Action Work Plans (to include schedules for RA, and operation and maintenance plans)

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

8.3 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 (7) (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 proposed, finalized and published using the same procedures set forth in Subsection 8.2, above.

8.4 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.

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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

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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

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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. § 9601(23) and Health and Safety Code section 25323, including all modifications to, or extensions of, the 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.

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(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. § 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. § 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. § 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

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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 the consistency of a removal action with the final remedial action, or whether the Army will take a removal action requested by any Party pursuant to Section 11.3(f), 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. EPA, the Army, and collectively the parties representing the State of California as a unit, 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) the issuance 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

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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 individual and an alternate to serve on the DRC. The individuals designated to serve on the DRC shall be employed at the policy level Senior Executive Service (SES) or equivalent or be delegated the authority to participate on the DRC for the purposes of dispute resolution under this Agreement. The EPA representative on DRC is the Deputy Director, Superfund Programs of EPA's Region 9. The Army's designated member is the Base Commander. The DHS representative is the Chief of the Site Mitigation Unit, Region 1. The RWQCB representative is the Supervising Engineer for Stanislaus County. 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 DHS representative on the SEC is the DHS Deputy Director. The RWQCB's representative is the Executive Officer. 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.

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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 Army's Representative, DHS Deputy Director, and RWQCB Executive Director to discuss the issue(s) under dispute. Upon resolution, the Administrator 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 Whenever the dispute resolution process provided for in this section is invoked, DHS and RWQCB, as agencies of the State of California, shall have one vote between them regardless of the fact that they may have more than one representative representing them at the particular stage of dispute resolution. It shall be their responsibility to determine the State's position on the issue in dispute and to cast one vote on their behalf.

12.9 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.

12.10 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

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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.

12.11 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.

12.12 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.

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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 or 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. § 9620(e)(5), shall include, with respect to each final assessment of a stipulated penalty against the Army under this

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- (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, DHS and RWQCB, agree, to the extent allowed by law, to divide equally any stipulated penalties paid on behalf of Riverbank Army Ammunition Plant with fifty (50) percent allocated to the EPA and fifty (50) percent allocated to the state agencies.

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. § 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 request that the

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Department of Defense include in its 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. § 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 CERCLA, 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.

15.6 Pursuant to CERCLA §120(a)(3), the Army is exempt from the bonding, insurance, or financial responsibility which CERCLA otherwise may have required.

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. § 9620(j)(1), or RCRA section 6001, 42 U.S.C. § 6961; or

(b) The order of an appropriate court.

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16.2 The State reserves any statutory right they 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 9601 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, 42 U.S.C. § 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 Riverbank Army Ammunition Plant 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

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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 documents, 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. Prior to, and if practicable at least one week before 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 business 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 documents on the progress of the work as the Project Managers

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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 Riverbank Army Ammunition Plant 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 Riverbank Army Ammunition Plant 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.

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19. PERMITS

19.1. The Parties recognize that under sections 121(d) and 121(e)(1) of CERCLA/SARA, 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 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 Riverbank Army Ammunition Plant 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.

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

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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:

Remedial Project Manager
Riverbank Army Ammunition Plant (H-7-3)
U.S. Environmental Protection Agency, Region 9
Hazardous Waste Management Division
1235 Mission Street
San Francisco, CA 94103;

Senior Waste Management Engineer of Military Team
California Department of Health Services
Toxic Substances Control Program
Region 1, Site Mitigation Unit
10151 Croydon Way
Sacramento, CA 95827;

Project Manager, Riverbank Army Ammunition Plant
Regional Water Quality Control Board
3443 Routier Road, Suite A
Sacramento, CA 95827-3098; and

Project Manager
Riverbank Army Ammunition Plant
5300 Claus Road
Riverbank, CA 95367-0670.

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 10 business days in advance of any sample collection. If it is not possible to provide 10 business 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

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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. 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, 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. § 552, or the California Public Records Act, section 6250, et seq. of the California Government Code, 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 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 California Public Records Act, even if available, if no governmental interest would be jeopardized by access or release as determined solely by that Party.

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

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determination may pursue the objection through the determining Party's appeal procedures.

24. PRESERVATION OF RECORDS

Despite any document retention policy to the contrary, the Parties shall preserve, during the pendency of this Agreement and for a minimum of ten years after its termination, all records and documents contained in the Administrative Record and any additional records and documents retained in the ordinary course of business which relate to the actions carried out pursuant to this Agreement. After this ten year period, each Party shall notify the other Parties at least 45 days prior to destruction of any such documents. Upon request by any Party, the requested Party shall make available such records or copies of any such records, unless withholding is authorized 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 Riverbank Army Ammunition Plant 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, or the State shall not use any camera, sound recording or other recording device at Riverbank Army Ammunition Plant 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. To the extent possible such regulation shall not be

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applied so as to impede 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, subject to Section 23 (Release of Records) 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 unless such a delay would create an endangerment to human health or the environment. If such a delay would create an endangerment, the Army will provide the EPA and the State with all information obtained in such sampling event or other work conducted. If the delay created in rescheduling a sampling event or other work so that the EPA and/or the State can be assured access jeopardizes compliance with the schedule contained in this Agreement, such delay will constitute good cause for an extension of the jeopardized compliance date for the time period of the delay. 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 Riverbank Army Ammunition Plant 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

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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 California Health and Safety Code section 25185, 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 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. § 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 States 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 pertinent 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 Except in case of an emergency, any Party issuing a press release with reference to any of the work required by this Agreement shall advise the other Parties of such press release and the contents thereof, at least two business days prior to issuance.

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27. FIVE YEAR REVIEW

27.1 Consistent with 42 U.S.C. § 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 final 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 Riverbank Army Ammunition Plant shall in any way alter the status of responsibility 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. § 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 substance 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 conveyance subject to section 120(h) of CERCLA, the Army shall notify all Parties of the transfer of any real property subject to this Agreement and the provisions made for any additional remedial actions, if required.

28.2 Until six months following the earlier of the date of promulgation or the effective date of the final regulations implementing CERCLA section 120(h)(2), 42 U.S.C. § 9620(h)(2), the Army agrees to comply with such regulations and all other substantive and procedural provisions of CERCLA section 120(h) and Subsection 28.1 of this Section.

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29. AMENDMENT OR MODIFICATION OF AGREEMENT

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.

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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, DHS, or RWQCB 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 Riverbank Army Ammunition Plant:

(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 installation in performing response actions, especially State applicable or relevant and appropriate requirements (ARARs).

(c) Field visits to ensure investigations and cleanup ac-

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tivities 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 construction of the remedial action(s). This total reimbursement limit is currently estimated to be a sum of \$150,000.00 over the life of the Agreement.

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Circumstances could arise whereby fluctuations in the Army estimates or actual costs through the construction 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 Commander, Riverbank Army Ammunition Plant and the Site Mitigation Chief, Region 1, 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 Commander, Riverbank Army Ammunition Plant and the Site Mitigation Chief, Region 1 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 Regional Administrator, Region 1, Toxic Substances Control Program.

(d) In the event the Regional Administrator, Region 1, Toxic Substances Control Program and the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health are un-

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able 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 Riverbank Army Ammunition Plant;

(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 when the State enters into a Defense/State Memorandum of Agreement (DSMOA) with the Department of Defense which addresses State reimbursement.

35. STATE PARTICIPATION CONTINGENCY

35.1 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 will 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, Riverbank Army Ammunition Plant shall only have to comply with any State and local requirements, conditions, or standards, including those specifically listed in this Agreement, which Riverbank Army Ammunition Plant 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

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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.

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 Within fifteen (15) days of the date of the execution of 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, including publication in at least two major local newspapers of general circulation. Comments received shall be transmitted promptly to the other Parties after the end of the comment period. The Parties shall review such comments and shall either:

(a) Determine that this Agreement should be made effective in its present form, in which case EPA shall promptly notify all Parties in writing, and this Agreement shall become effective on the date that Riverbank Army Ammunition Plant receives such notification; or

(b) If the determination in Subsection 36.2(a) is not made, the Parties shall meet to discuss and agree upon any proposed changes. If the Parties do not mutually agree on all needed changes within fifteen (15) days from the close of the public comment period or within such other time period mutually agreed upon among the Parties, the Parties shall submit their written notices of position, concerning those provisions still in dispute, directly to the Dispute Resolution Committee, and the procedures of Section 12 (Dispute Resolution) shall be applied to the disputed provisions. Upon resolution of any proposed changes, the Agreement, as modified, shall be re-executed by the Parties, with EPA signing last, and shall become effective on the date that it is signed by EPA.

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

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

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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 key elements to be included (in draft or draft final) Riverbank Army Ammunition Plant RI/FS Workplan

(c) All final primary documents and completed secondary documents which will be created in accordance with Section 7 (Consultation) or have been accepted by the EPA as final on the effective date of this Agreement; and

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 5.10)

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(b) Chemicals of Concern

(c) Statement of Facts

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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.

3/30/90
Date

DEPARTMENT OF THE ARMY

Lewis D. Walker

LEWIS D. WALKER

Deputy Assistant Secretary of the Army
for Environment, Safety and
Occupational Health

4/2/90
Date

Robert J. Rivas

CAPTAIN ROBERT J. RIVAS

Base Commander, Riverbank Army Ammunition
Plant
U.S. Army

4-5-90
Date

U.S. ENVIRONMENTAL PROTECTION AGENCY

Daniel W. McGovern

DANIEL W. MCGOVERN

Regional Administrator
U.S. Environmental Protection Agency
Region 9

4/3/90
Date

CALIFORNIA DEPARTMENT OF HEALTH SERVICES

C. David Willis

C. DAVID WILLIS

Deputy Director
Toxic Substances Control Program
California Department of Health Services

4/2/90
Date

REGIONAL WATER QUALITY CONTROL BOARD

William Crooks

WILLIAM CROOKS

Executive Officer
Regional Water Quality Control Board,
Central Valley Region

APPENDICES

- A) DOCUMENTS PREVIOUSLY SUBMITTED
AND DEADLINES PREVIOUSLY ESTABLISHED
- B) WORKPLAN OUTLINE

APPENDIX A

DOCUMENTS PREVIOUSLY SUBMITTED

AND

DEADLINES PREVIOUSLY ESTABLISHED

APPENDIX A: DOCUMENTS PREVIOUSLY SUBMITTED AND DEADLINES PREVIOUSLY ESTABLISHED

I. DOCUMENTS SUBMITTED BEFORE THE EFFECTIVE DATE OF THE AGREEMENT

The Parties agree that, for the purposes of formally initiating the review and comment period set forth in Section 7.7 of this Agreement (Review and Comment on Draft Documents), the effective date of this Agreement shall be deemed the deadline for the issuance of the following:

Draft RI/FS Workplans, dated May 1986, October 1986, and December 1989

Draft Quality Assurance Project Plan, dated October 1987

Draft Community Relations Plan

Draft Remedial Investigation Reports, dated April 1987 and December 1989

II. DEADLINES FOR DOCUMENTS NOT SUBMITTED BEFORE THE EFFECTIVE DATE OF AGREEMENT

In accordance with Section 8.1 of this Agreement, the following deadlines for submission of draft primary and removal documents have been agreed upon by the Parties before the effective date of this Agreement:

	DUE DATE
Draft Engineering Evaluation/Cost Analysis for Evaporation/Percolation Ponds	4/15/90
Draft Final EE/CA for E/P Ponds (comment period for regulatory review is 60 days)	60 days after close of regulatory comment period
Final EE/CA for E/P Ponds	Not more than 30 days after Draft Final, if dispute resolution has not been invoked.
Completion of E/P Ponds Removal Action	In accordance with EE/CA time schedule

The objective of the Engineering Evaluation/Cost Analysis (EE/CA) is to compare removal action options for a hazardous waste site. The EE/CA process will be conducted for a non-time critical removal action in accordance with the NCP and the most current EPA Guidance. (E.g., EE/CA Guidance for Non Time Critical Removal Actions, June 1987.) The Evaporation/Percolation Ponds EE/CA will analyze options for removal of the contaminants in the ponds' sediments. It will show justification for a removal action and consistency with a final remedy. It will also include a time schedule for implementation.

**Draft Remedial Investigation Report
Site Wide**

12/30/90

The objective of the Remedial Investigation (RI) is to collect sufficient information to support an informed risk management decision regarding the appropriate remedy for the site. The RI process will be conducted in accordance with the NCP and the most current EPA Guidance. (E.g., Guidance for conducting Remedial Investigations and Feasibility Studies under CERCLA, October 1988.) This RI will be based on information collected in earlier RIs, the RI/FS Workplans, and removal actions. It will be a comprehensive, site wide RI. Tasks shall include, but not be limited to the following:

- field investigation data evaluation and validation
- nature and extent of contamination
- Federal/State ARARs
- treatability studies

**Draft Risk Assessment Report
Site Wide**

12/30/90

The objective of the Risk Assessment is to evaluate the potential risks and hazards to public health and the environment. The Risk Assessment process will be conducted in accordance with the NCP and the most current EPA Guidance. (E.g., Risk Assessment Guidance for Superfund, Vol I, December 1989 and Risk Assessment Guidance for Superfund, Vol II, Environmental Evaluation Manual, March 1989.)

The Risk Assessment will be conducted from a site wide perspective. Tasks shall include, but not be limited, to the following:

- Data Collection and Evaluation
 - Gather and analyze releant site data
 - Identify potential chemicals of concern

- Exposure Assessment
 - Analyze contaminant releases
 - Identify exposed populations
 - Identify potential exposure pathways
 - Estimate exposed concentrations for pathways
 - Estimate contaminant intakes for pathways
- Toxicity Assessment
 - Collect qualitative and quantitative toxicity information
 - Determine appropriate toxicity values
- Risk Characterization
 - Characterize potential for adverse health effects to occur
 - estimate cancer risks
 - estimate non-cancer hazard quotients
 - Evaluate uncertainty
 - Summarize risk information

The Ecological Assessment will be conducted from a site wide perspective. Tasks shall include, but not be limited, to the following:

- Determination of need, objectives, and level of effort
- Evaluation of site characteristics
- Contamination evaluation
- Potential for exposure
- Selection of assessment and measurement endpoints
- Sampling and analysis plan

Draft Feasibility Study Report

90 days from
date of final
RI

The objective of the Feasibility Study (FS) is to develop and evaluate a range of remedial options that ensure the protection of human health and the environment. The FS process will be conducted in accordance with the NCP and the most current EPA Guidance (E.g., Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA, October 1988.) The final remedy FS will be from a site wide perspective and will use information obtained in the RIs and removal actions. Tasks shall include, but not be limited to, the following:

- evaluation criteria for detailed analysis of alternatives ("the nine criteria")
- short term effectiveness

- long term effectiveness
- reduction of toxicity, mobility, and volume
- implementability
- cost
- compliance with ARARs
- overall protection of human health & the environment
- state acceptance, to the extent known at this stage
- community acceptance, to the extent known at this stage

Draft Proposed Plan

**30 days from
date of the
final FS**

The objective of the proposed plan is to facilitate public participation in the remedy selection process by:

- identifying the preferred alternative for a remedial action at a site and explaining the reason for the preference,
- describing other remedial options that were considered in the RI/FS reports,
- soliciting public review and comment on all the alternatives described, and
- providing information on how the public can be involved in the remedy selection process.

The Proposed Plan is a public participation document and is expected to be widely read. Therefore, the Proposed Plan should be written in a clear and concise manner using non-technical language. The Proposed Plan should be written in accordance with the NCP and the most current EPA Guidance. (E.g., Guidance on Preparing Superfund Decision Documents, November 1989.)

Draft Record of Decision

**60 days from
date of the
close of the
public comment
period**

NOTE: 15 days for public notice plus 60 days for public comment period, then 60 days from close of public comment period. Therefore, draft ROD is due 135 days from the date of the final Proposed Plan.

The purpose of the Record of Decision (ROD) is to illustrate the final remedial action plan for the site. The ROD summarizes the problems posed by the conditions at the site, the alternative remedies considered for addressing those problems, and the comparative analysis of those alternative against the nine evaluation criteria.

The ROD then presents the selected remedy and provides the rationale for the selection. The ROD will be written in accordance with the NCP and the most current EPA Guidance (E.g., Guidance on Preparing Superfund Decision Documents, November 1989.) This ROD will be from a site wide perspective. Essential ROD Components include the following:

- The Declaration
- The Decision Summary
- The Responsiveness Summary

NOTE: The projected target dates to be submitted with the primary documents shall be subject to revision by the Project Managers in accordance with Section 18.3, and shall not be subject to Section 9 (Extensions) or Section 13 (Enforceability) of this Agreement, or Section 14 (Stipulated Penalties).

APPENDIX B
WORKPLAN OUTLINE

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APPENDIX B: RI/FS WORKPLAN OUTLINE

The following outline lists topics to be included, at a minimum, in the RI/FS Workplans for Riverbank AAP. The workplan shall also include additional topics and tasks, as appropriate, for example, as set forth in the Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (OSWER Directive 9355.3-01, Interim Final, October 1988 and as amended) and applicable State Law.

I. ELEMENTS OF A WORKPLAN

INTRODUCTION - A general explanation of the reasons for the RI/FS and the expected results or goals of the RI/FS process are presented.

SITE BACKGROUND AND PHYSICAL SETTING - The current understanding of the physical setting of the site, the site history, and the existing information on the conditions of the site are described.

INITIAL EVALUATION - The conceptual site model developed during scoping is presented, describing the potential migration and exposure pathways and the preliminary assessment of public health and environmental impacts.

WORKPLAN RATIONALE - Data requirements for both the risk assessment and the alternatives evaluation identified during the formulation of the Data Quality Objectives (DQOs) are documented, and the workplan approach is presented to illustrate how the activities will satisfy data needs.

RI/FS TASKS - The tasks to be performed during the RI/FS are presented. If an RI/FS is divided into distinct operable units, each operable unit should be monitored and reported on separately. This description incorporates RI site characterization tasks identified in the Quality Assurance Project Plan (QAPP) and the Field Sampling Plan (FSP), the data evaluation methods identified during scoping and the preliminary determination of tasks to be conducted after site characterization.

II. STANDARD RI/FS WORKPLAN TASKS

Task 1. Project Planning (Project Scoping)

This task includes efforts related to initiating a project. The project planning task is defined as complete when the workplan and supplemental plans are approved (in whole or in part). The following typical elements are included in this task:

- Workplan memorandum
- Kickoff meeting (RI/FS brainstorming meeting)
- Site visit/meeting
- Obtaining easements/permits/site access
- site reconnaissance and limited field investigation
- site survey/topographic map/review of existing aerial photographs
- Collection and evaluation of existing data
- Development of conceptual site model
- Identification of data needs and DQOs
- Identification of preliminary remedial action objectives and potential remedial alternatives
- Identification of treatability studies that may be necessary
- Identification of RCRA/CERCLA Integration requirements
 - Conduct RCRA Facility Assessment (RFA) to identify Solid Waste Management Units (SWMUs) using EPA RFA Guidance.
- Screening of expedited response alternatives
- Preliminary identification of ARARs
- Preparation of plans (e.g., workplan, health and safety plan, QAPP, FSP)
- Initiation of coordination with analytical laboratories (CLP and non-CLP)
- Task management and quality control

Task 2. Response Action Taken

This task identifies removal actions previously taken at this site and analyzes the consistency of those removal actions with remedial action currently under consideration.

Task 3. Community Relations

This task incorporates all efforts related to the preparation and implementation of the community relations plan for the site and is initiated during the scoping process. It includes time expended by both technical and community relations personnel. This task ends when community relations work under Task 13 is completed, but the task does not include work on the responsiveness summary in the ROD (see Task 12). The following are typical elements included in this task:

- Conducting community interviews
- Preparing a community relations plan
- Preparing fact sheets
- Providing public meeting support
- Providing technical support for community relations
- Implementing community relations
- Managing tasks and conducting quality control

Task 4. Field Investigation

This task involves efforts related to fieldwork in conducting the RI. The task begins when any element, as outlined in the workplan, is approved (in whole or in part) and fieldwork is authorized. Field investigation is defined as complete when the contractor and subcontractors are demobilized from the field. The following activities are typically included in this task:

- Procurement of contractors
- Mobilization
- Media Sampling
- Source testing
- Geology/hydrogeological investigations
- RCRA Facility Investigations (RFA)
- Geophysics
- Site survey/topographic mapping (if not performed in project planning task)
- Field screening/analyses
- RI waste disposal
- Task management and quality control

Task 5. Sample Analysis/Validation

This task includes efforts related to the analysis and validation of samples after they leave the field. Separate monitoring of close support laboratories may be required. Any

efforts associated with laboratory procurement are also included in this task. The task ends on the date that data validation is complete. The following typical activities are usually included in this task:

- Sample management
- Non-Contract Laboratory Program (CLP) analysis
- Use of mobile laboratories
- Data validation
- Testing of physical parameters
- Task management and quality control

Task 6. Data Evaluation

This task includes efforts related to the analysis of data once it has been verified that the data are of acceptable accuracy and precision. The task begins on the date that the first set of validated data are received by the project team and ends during preparation of the RI report when it is deemed that no additional data are required. The following are typical activities:

- Data evaluation
- Data reduction and tabulation
- Environmental fate and transport modeling/evaluation
- Task management and quality control

Task 7. Assessment of Risks

This task includes efforts related to conducting the baseline risk assessment. The task will include work to assess the potential human health and environmental risks associated with the site. Work will begin during the RI and is completed once the baseline risk assessment is completed. The following are typical activities:

- Data collection and evaluation
- Exposure assessment
- Toxicity assessment
- Risk characterization
- Task management and quality control

Ecological Assessment

- Determination of need, objectives, and level of effort
- Evaluation of site characteristics

- Contamination evaluation
- Potential for exposure
- Selection of assessment and measurement endpoints
- Sampling and analysis plan

Task 8. Treatability Study/Pilot Testing

As appropriate, this task includes efforts to prepare and conduct pilot, bench, and treatability studies. This task begins with the development of workplans for conducting the tests and is complete once the report has been completed. The following are typical activities:

- Workplan preparation or workplan amendments
- Test facility and equipment procurement
- Vendor and analytical service procurement
- Equipment operation and testing
- Sample analysis and validation
- Evaluation of results
- Report generation
- Task management and quality control

Task 9. Remedial Investigation Reports

This task covers all efforts related to the preparation of the finding once the data have been evaluated under tasks 6 and 7. The task covers all draft and final RI reports as well as task management and quality control. The task ends when the RI document is submitted as final to EPA. The following are typical activities:

- Preparation of a preliminary site characterization summary
- Data presentation (formatting tables, preparing graphics)
- Writing the report
- Reviewing and providing quality control efforts
- Printing and distributing the report
- Holding review meetings
- Revising the report on the basis of agency comments
- Providing task management and control

Task 10. Remedial Alternatives Development/Screening

This task includes efforts to select the alternatives to undergo full evaluation. The task is initiated once sufficient data are available to develop response actions and begin the ini-

tial evaluation of potential technologies. This task is defined as complete when a final set of alternatives is chosen for detailed evaluation. The following are typical activities:

- Identifying/screening potential technologies
- Screening technologies
- Assembling potential alternatives
- Identifying action-specific ARARs
- Evaluating each alternative on the basis of screening criteria (effectiveness, implementability, grossly inappropriate cost)
- Reviewing and providing quality control of work effort
- Holding review meetings
- Refining the list of alternatives to be evaluated

Task 11. Detailed Analysis of Remedial Alternatives

This task applies to the detailed analysis and comparison of alternatives. The evaluation activities includes performing detailed public health, environmental, and institutional analyses. The task begins when the alternatives to undergo detailed analysis have been identified and agreed upon and ends when the analysis is complete. The following are typical activities:

- Evaluate each alternative and compare the relative performance of each alternative according to the following criteria:
 - Overall protection of human health and the environment
 - Compliance with ARARs
 - Long-term effectiveness
 - Reduction of toxicity, mobility and volume
 - Short-term effectiveness
 - Implementability
 - Cost
 - State acceptance, if known
 - Community acceptance, if known
- Review of Quality Control efforts
- Review meetings
- Task management and quality control

Task 12. Feasibility Study (or RI/FS) Reports

Similar to the RI reports task, this task is used to report FS deliverables. However, this task should be used in lieu of the RI reports task to report costs and schedule for combined RI/FS deliverables. The task ends when the FS (or RI/FS) is released to the public. The following are typical activities:

- Presenting data (formatting tables, preparing graphics)
- Writing the report
- Printing and distributing the report
- Holding review meetings
- Revising the report on the basis of agency comments
- Providing task management and quality control

Task 13. Post RI/FS Support

This task includes efforts to prepare the responsiveness summary, support the ROD, conduct any predesign activities, and close out the work assignment. All activities occurring after the release of the FS to the public should be reported under this task. The following are typical activities:

- Preparing the predesign report
- Preparing the conceptual design
- Attending public meetings
- Writing and reviewing the responsiveness summary
- Supporting ROD preparation and briefings
- Reviewing and providing quality control of the work efforts
- Providing task management and quality control

Task 14. ATSDR Coordination

This task is used to report coordination efforts with the Agency for Toxic Substances and Disease Registry (ATSDR). All necessary environmental investigation results, including that of the remedial investigation will be provided to ATSDR so that they will be able to conduct a health assessment for the site.

SECONDARY DOCUMENTS IN SUPPORT OF THE RI/FS

A. Quality Assurance Project Plans

This document will follow the most current EPA guidance for Quality Assurance Project Plans. The following elements should be included:

- Title page
- Table of Contents
- Project Description
- Project Organization and Responsibilities
- QA Objectives for Measurement
- Sampling Procedures
- Sample Custody
- Calibration Procedures
- Analytical Procedures
- Data Reduction, Validation, and Reporting
- Internal Quality Control
- Performance and System Audits
- Preventative Maintenance
- Precision, Accuracy and Completeness
- Corrective Actions

B. Field Sampling Plan

This document will follow the most recent EPA guidance and will address, at a minimum, the following:

Site Background - If the analysis of existing data is not included in the workplan or QAPP, it must be included in the Field Sampling Plan (FSP). This analysis would include a description of the site and surrounding areas and a discussion of known and suspected contamination sources, probable transport pathways, and other information about the site. The analysis should also include descriptions of specific data gaps and ways in which sampling is designed to fill those gaps. Including this discussion in the FSP will help orient the sampling team in the field.

Sampling Objectives - Specific objectives of a sampling effort that describe the intended uses of data should be clearly and succinctly stated.

Sample Location and Frequency - This section of the sampling plan identifies each sample matrix to be collected and the constituents to be analyzed. A table may be used to clearly identify the number of samples to be collected along with the appropriate number of replicates and blanks. A figure should be included to show the location of existing or proposed sample points.

Sample Designation - A sample numbering system should be established for each project. The sample designation should include the sample well number, the sampling round, the sample matrix (e.g., surface soil, ground water, soil boring), and the name of the site.

Sample Equipment and Procedures - Sampling procedures must be clearly written. Step-by-step instruction for each type of sampling are necessary to enable the field team to gather data that will meet the DQOs. A list should include the equipment to be used and the material composition (e.g., Teflon, stainless steel) of the equipment along with decontamination procedures.

Sample Handling and Analysis - A table should be included that identifies sample preservation methods, types of sampling jars, shipping requirements, and holding times. Examples of paperwork and instructions for filling out the paperwork should be included. Specific documentation for the laboratory and field work should be included (e.g., field notebooks, photographs).

Provisions should be made for the proper handling and disposal of wastes generated onsite. The site specific procedures need to be described to prevent contamination of clean areas and to comply with existing regulations.

C. Health and Safety Plan

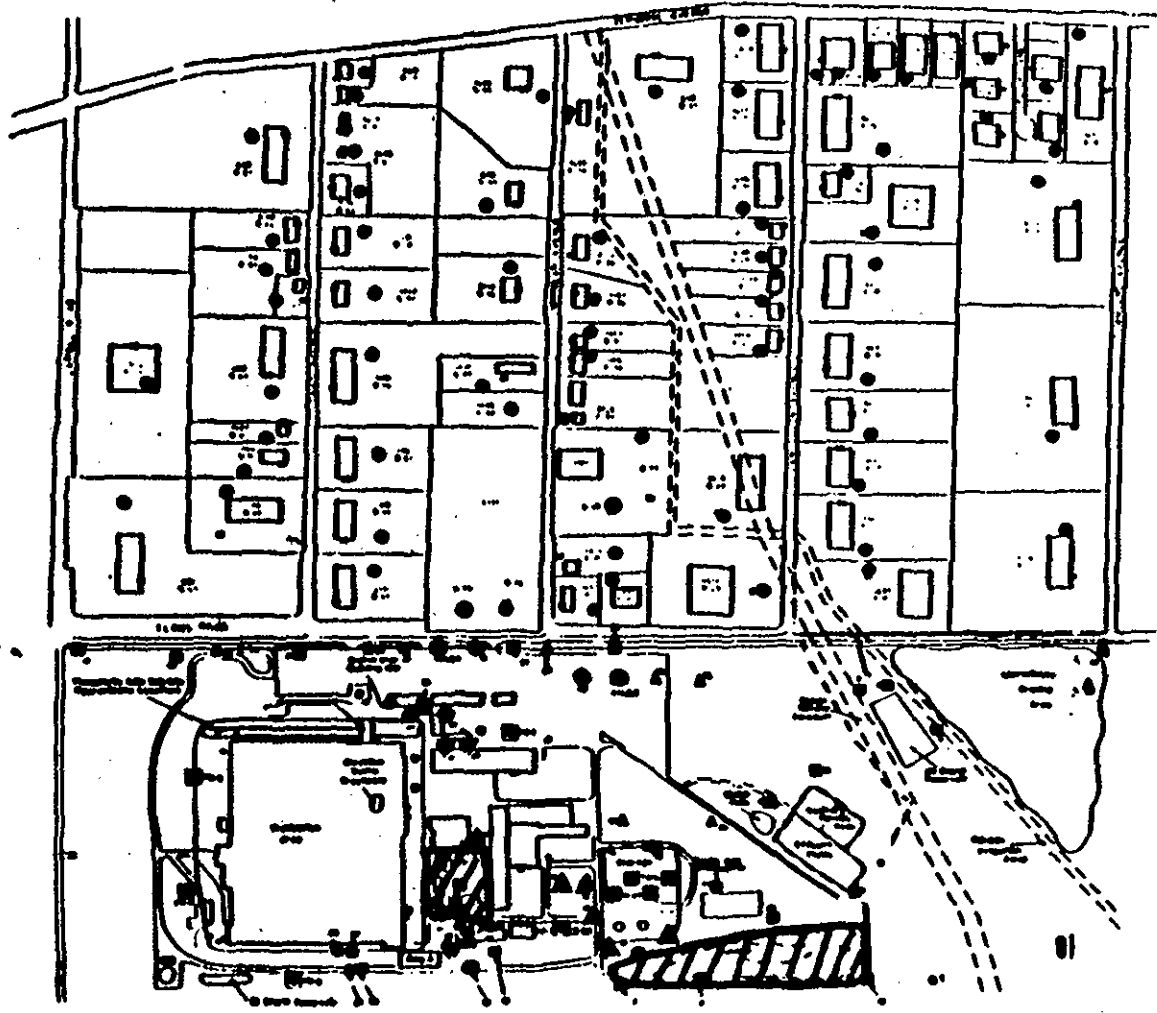
ATTACHMENTS

- A) **SITE MAPS**
- B) **CHEMICALS OF CONCERN**
- C) **STATEMENT OF FACTS**

ATTACHMENT A

SITE MAPS

 - Known source of contamination



LEGEND

- PHASE 1 MONITORING WELLS
- △ PHASE 2 MONITORING WELLS
- PRODUCTION WELLS
- SOIL BORINGS
- SPICOT SAMPLED
- ⊙ DOMESTIC WELL NO.

CONTAMINANT CONCENTRATIONS

- CHROMIUM > 50 ug/L
- △ CYANIDE > 200 ug/L
- ▽ U-DICHLOROETHYLENE > 0.33ug/L

WELLS

W-11 AND W-12 HAVE BEEN DECEASED.

W-10 AND W-13 AND W-14 ARE OPERATIONAL.

BLINDED WELLS ARE OPERATED AS FOLLOWS:


- 0-11 AND 0-12 SCREENED
- 0-13 AND 0-14 SCREENED
- 0-15 AND 0-16 SCREENED
- 0-17 AND 0-18 SCREENED

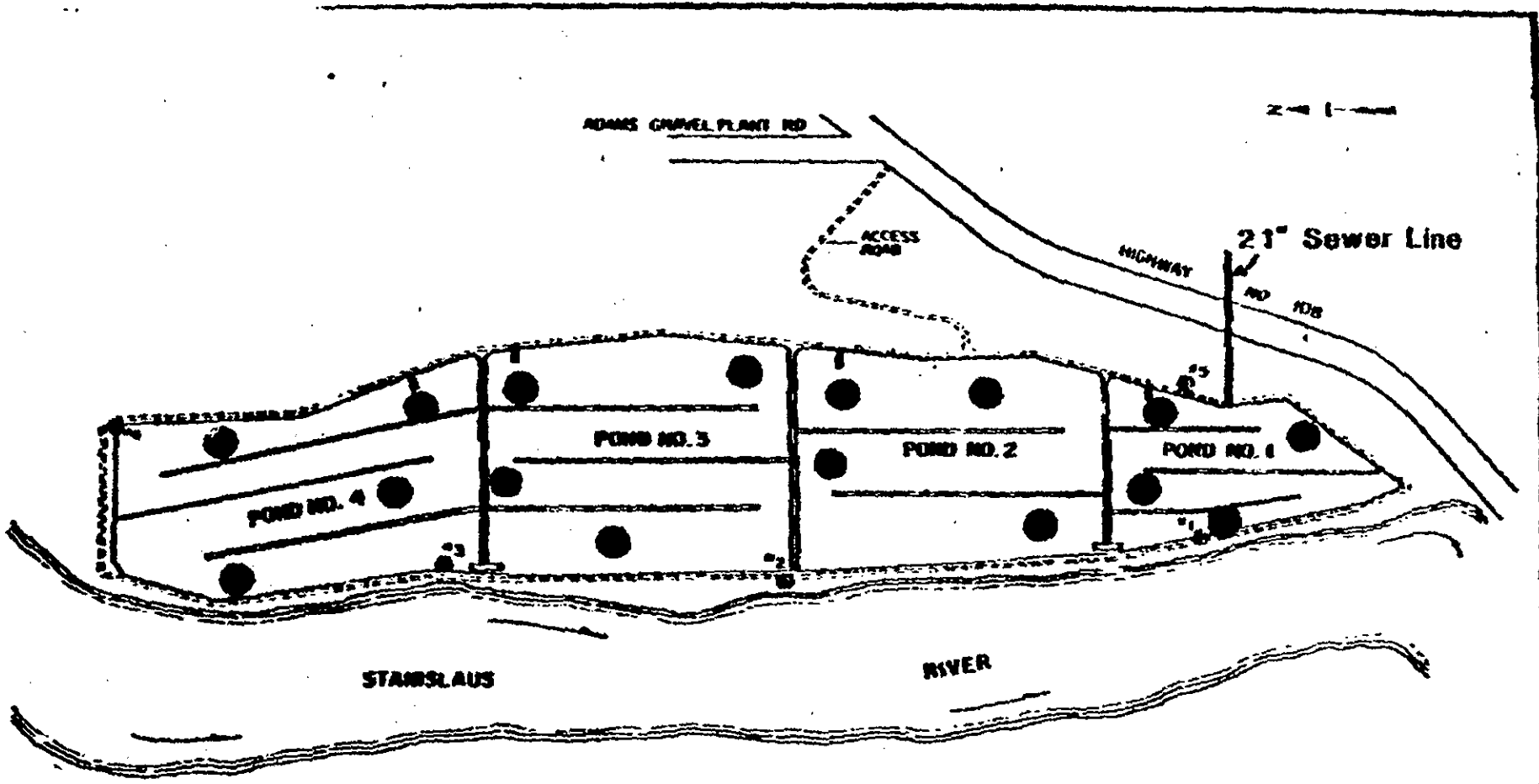
ALL WELLS HAVE SHALLER THAN SCREENING UNLESS OTHERWISE INDICATED.

LOCATION OF THE DOMESTIC WELLS AT 0-19 AND 0-20 ARE UNKNOWN.

DOMESTIC WELLS 0-19 AND 0-20 ARE DEEP BRINE WATER WELLS WHICH WERE INSTALLED BY OTHERS.

North





- Sediment Sample Point
- ◻ Monitor Well
- Effluent Pipe

FIGURE 2-1
Collection Points In E/P Ponds
Location of Sediment Sample

ATTACHMENT B
CHEMICALS OF CONCERN

CHEMICALS OF CONCERN

The following chemicals have been identified at the Riverbank Army Ammunition Plant Site at levels in excess of recognized regulatory standards. A short narrative is provided here which details the applicable, or relevant and appropriate, regulatory standard for each chemical based on its potential route of exposure, and the potential negative health effects associated with exposure to these chemicals via various exposure routes.

HEXAVALENT CHROMIUM OR CHROMIUM (VI)

Chromium VI is present in groundwater beneath the RBAAP site. The potential route of exposure to the chemical is via the ingestion of groundwater from drinking water wells. A drinking water Maximum Contaminant Level (MCL) of 50 parts per billion (PPB) has been proposed for chromium VI by the U.S. Environmental Protection Agency (EPA). Health effects associated with exposure to chromium VI are as follows:

Chromium is an essential micronutrient, and trace quantities are required for proper carbohydrate metabolism. High levels of both chromium VI and chromium III can produce kidney and liver damage following an acute oral exposure. Chronic inhalation exposure may cause respiratory system damage. Epidemiological studies of workers exposed to chromium in the air have shown that chromium VI is a human carcinogen. However, by the oral route, there are no studies indicating chromium VI is carcinogenic.

CYANIDE

Cyanide is present in groundwater beneath the RBAAP site. The potential route of exposure to the chemical is via the ingestion of groundwater from drinking water wells. A Drinking Water Health Advisory (DWHA) of 200 PPB has been established for cyanide by the EPA. Health effects associated with exposure to cyanide are as follows:

Cyanide is a rapidly acting chemical asphyxiant, readily absorbed from the lungs and gastrointestinal tract. At sufficiently high doses, it acts very quickly to inhibit respiration. Chronic exposures to low concentrations are generally not well studied. Humans have a number of metabolic systems which detoxify low concentrations of cyanide very rapidly. This suggests that the health risks of chronic low-level exposures to cyanide are minimal. This is supported by animal studies in which chronic treatment with cyanide failed to demonstrate a consistent toxic effect.

ZINC

Zinc is present in the soils/sediments of RBAAP's Evaporation/Percolation (E/P) Ponds, located near the Stanislaus River. Potential routes of exposure to the chemical are via inhalation of dust, dermal adsorption, or ingestion of pond soils. A Total Threshold Limit Concentration (TTL) of 5000 parts per million (PPM) has been established for zinc by the State of California.

Zinc is an essential nutrient involved in enzyme functions, protein synthesis and carbohydrate metabolism. Diets deficient in zinc can result in adverse health consequences. At high concentrations, zinc can be toxic. Inhalation of zinc mists or fumes may irritate the respiratory tract. Ingestion of excessive amounts of zinc may cause fever, vomiting, stomach cramps and diarrhea. There is no data to suggest that zinc is mutagenic or teratogenic in animals or humans, nor is there evidence to suggest that it causes cancer in humans.

ATTACHMENT C
STATEMENT OF FACTS

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 Parties have determined that:

A. Facilities Location and Operations

Riverbank Army Ammunition Plant (AAP) is located 18 miles northeast of Modesto, California, and covers approximately 167 acres. The main facility comprises 139 acres. Four Evaporation/Percolation ponds are located adjacent to the Stanislaus River, approximately 1.5 miles north of the main facility, accounting for the remaining 28 acres. Riverbank AAP is a government-owned, contractor-operated (GOCO) facility.

Riverbank AAP was originally constructed in 1942-1943, as an aluminum reduction plant, supplying the military with aluminum through 1944, when the plant operation was closed.

B. Waste Generation

From 1944 to 1951, the plant was used for the storage of a variety of government surplus material, including corn and grain. In 1951, a decision was made to convert the plant to a steel cartridge case manufacturing facility for joint Army and Navy use. Manufacturing operations continued until 1958, when the production ceased and the plant was placed on standby status. Operations have been limited to the production of mortar projectile casings, grenade bodies, maintenance operations, and the lay-away of idle facilities.

Since 1972, Riverbank AAP has treated industrial waste in the existing Industrial Waste Treatment Plant, which allowed treated effluent water to flow to the Evaporation/Percolation (E/P) ponds. Between the period of 1953 and 1974, the ponds have been inundated by the Stanislaus River on at least two occasions. The existing Waste Treatment Plant is required to eliminate various heavy metals from the treated effluent water. Prior to 1978, chromium waste solutions were treated by the Industrial Waste Treatment Plant, without reduction to the tri-valent stage. In 1978, a Batch Chromium Reduction System was installed, which eliminated the continued use of Industrial Waste Treatment Plant for initial reduction.

Solid waste disposal has included landfilling and incineration on-site prior to 1988. The on-site landfill was used for the disposal of various substances, including oils, sludges, paper, and wood materials. Subsequent to 1988, all sludges and solid waste have been disposed of off-site.

C. Installation Restoration Program Activities

In 1979, an installation assessment was conducted by the Army. The Army concluded that areas of the installation and the adjoining waste disposal ponds were suspected of being contaminated with heavy metals and other chemicals. The United States Army and Hazardous Materials Agency (USATHAMA) broke the Remedial Investigation into two phases, an exploratory phase and a confirmation phase.

The exploratory phase was conducted in 1984/1985, and the following conclusions were reached:

- Groundwater contamination has occurred; the primary sources being the the Industrial Waste Treatment Plant (IWTP) and the landfill.
- The contaminants have migrated beyond the installation boundary.
- The primary contaminants of concern are chromium and cyanide.

Based on the information from the exploratory phase, the confirmation phase was designed to better define the contamination sources, determine the lateral and vertical extent of the groundwater plume, delineate the geological profile of the Riverbank AAF area, and determine the hydraulic characteristics to the aquifer.

Data collected from these two phases did confirm levels of chromium and cyanide were present above acceptable levels. These contaminants of concern were further evaluated by means of a groundwater flow and transport model during 1987. This data confirms that both cyanide from the landfill and chromium from the IWTP has migrated in a northwest direction. The contamination has likewise migrated off-post in the same general direction. Exact plume direction and location will be better confirmed with completion of the Remedial Feasibility Study in 1990.

Monitoring of local drinking water sources is conducted regularly. Domestic wells are sampled on a quarterly basis. Water samples from 3 wells have consistently indicated chromium levels in excess of the 50 ug/l drinking water standard. The 3 affected wells have been replaced. The new wells have been constructed, at a depth of 250 feet, for the affected residences.

In accordance with the approved plan for final remediation efforts, USATHAMA continues to retain contractors to support the Riverbank program. Primary emphases are interim groundwater treatment, definitive groundwater plume direction and location, and removal of the contamination from the R/P ponds.