

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VII
AND THE
STATE OF IOWA
AND THE
UNITED STATES ARMY CORPS OF ENGINEERS

IN THE MATTER OF:)	
The U.S. ARMY CORPS OF)	
ENGINEERS)	FEDERAL FACILITY
IOWA ARMY AMMUNITION)	AGREEMENT UNDER
PLANT)	CERCLA SECTION 120
MIDDLETOWN, IOWA)	Administrative
)	Docket Number: CERCLA-07-2005-0378

TABLE OF CONTENTS

<u>PRELIMINARY STATEMENT</u>	1
<u>I. JURISDICTION</u>	1
<u>II. DEFINITIONS</u>	3
<u>III. PURPOSE</u>	6
<u>IV. PARTIES</u>	7
<u>V. SCOPE OF THE AGREEMENT</u>	7
<u>VI. FINDINGS OF FACT</u>	8
<u>VII. DETERMINATIONS</u>	17
<u>VIII. STATUTORY COMPLIANCE/RCRA-CERCLA INTEGRATION</u>	18
<u>IX. CONSULTATION WITH EPA AND THE STATE OF IOWA</u>	19
<u>X. ASSESSMENT AND SELECTION OF SUPPLEMENTAL RESPONSE ACTIONS</u> ...	24
<u>XI. EMERGENCY REMOVAL ACTIONS</u>	25
<u>XII. RESOLUTION OF DISPUTES</u>	26
<u>XIII. QUALITY ASSURANCE</u>	28
<u>XIV. SAMPLING AND DATA DOCUMENT AVAILABILITY</u>	29
<u>XV. PROJECT MANAGERS</u>	29
<u>XVI. ACCESS</u>	31
<u>XVII. ENFORCEABILITY</u>	33
<u>XVIII. STIPULATED PENALTIES</u>	34
<u>XIX. PERMITS</u>	35
<u>XX. EXTENSIONS</u>	35
<u>XXI. RESERVATION OF RIGHTS</u>	36

<u>XXII. OTHER CLAIMS</u>	37
<u>XXIII. PUBLIC PARTICIPATION</u>	38
<u>XXIV. PUBLIC COMMENT</u>	39
<u>XXV. FORCE MAJEURE</u>	40
<u>XXVI. FUNDING</u>	41
<u>XXVII. TERMINATION AND SATISFACTION</u>	41
<u>XXVIII. EXEMPTIONS</u>	42
<u>XXIX. EFFECTIVE DATE</u>	42
<u>XXX. DEADLINES AND CONTENTS OF SITE MANAGEMENT PLAN</u>	42
<u>XXXI. BUDGET DEVELOPMENT AND AMENDMENT OF SITE MANAGEMENT PLAN</u>	44
<u>XXXII. WORK TO BE PERFORMED</u>	50
<u>XXXIII. PERIODIC REVIEW</u>	54
<u>XXXIV. REPORTING</u>	55
<u>XXXV. PROTECTED INFORMATION</u>	56
<u>XXXVI. PRESERVATION OF RECORDS</u>	57
<u>AUTHORIZED SIGNATURES</u>	57

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PRELIMINARY STATEMENT

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:

I. JURISDICTION

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

- A. The U.S. Environmental Protection Agency (EPA), Region VII, 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/SARA or CERCLA) and Sections 6001, 3008(h) and 3004(u) and (v) of the Resource Conservation and Recovery Act (RCRA), 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/HSWA or RCRA) and Executive Order 12580;
- B. The EPA, Region VII, enters into those portions of this Agreement that relate to interim remedial actions and final remedial actions pursuant to Section 120(e)(2) of CERCLA/SARA, Sections 6001, 3008(h) and 3004(u) and (v) of RCRA and Executive Order 12580;
- C. The Army Corps of Engineers (Corps) enters into those portions of this Agreement that

relate to the RI/FS and Remedial Actions pursuant to Section 120 of CERCLA, Sections 6001, 3008(h) and 3004(u) and (v) of RCRA, Executive Order 12580, the National Environmental Policy Act, 42 U.S.C. 4321, the Energy and Water Development Appropriations Acts for Fiscal Years 1998, 1999, and 2000 (Public Laws 105-62, 105-245, and 106-60, respectively), and subsequent consecutive Energy and Water Development Appropriations Acts.

D The State of Iowa enters into this Agreement pursuant to Section 120(f) and 121(f) of CERCLA, 42 U.S.C. § 9620(f) and § 9621(f), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Section 3006 of RCRA and the Iowa Codes 136C, 455B and 455E.

E Although the Iowa Army Ammunition Plant (IAAAP) is under the custody and control of the U.S. Army Joint Munitions Command (JMC), a Major Command within the Department of the Army, the Corps is not entering into this Agreement under the Defense Environmental Restoration Program (DERP)), 10 U.S.C. Sec. 2710 et seq. Rather, pursuant to Public Law 106-60, Section 611 (September 29, 1999), the Corps is conducting the investigation, remediation and maintenance of sites at the IAAAP as a site formerly utilized by the Atomic Energy Commission (AEC) and the Department of Energy (DOE). Details of the relationship between the Corps and the IAAAP, and their responsibilities to one another, are set out in a separate Memorandum of Agreement (MOA), entitled, "Memorandum of Agreement Between Iowa Army Ammunition Plant, U.S. Army Joint Munitions Command and U.S. Army Corps of Engineers, St. Louis District for Coordination on Remediation of Formerly Utilized Sites Remedial Action Program (FUSRAP) Atomic Energy Commission / Department of Energy Sites at Iowa Army Ammunition Plant." Said Memorandum is included in the Administrative Record for this FFA for informational purposes only and not for purposes of enforcement.

F. The U.S. Department of Energy (DOE) enters this agreement pursuant to the Energy and Water Development Appropriations Acts for Fiscal Years 1998, 1999, and 2000 (Public Laws 105-62, 105-245, and 106-60, respectively), CERCLA and the NCP, for the limited purposes of performing periodic reviews in accordance with Section XXXIII (Periodic Review) and long-term surveillance, operation and maintenance, including monitoring and enforcement of any institutional controls which may be selected as part of the remedy for areas associated with Atomic Energy Commission activity which are identified in Section V (Scope of the Agreement) of this Agreement, below, and in the red areas of the map attached as Appendix A. DOE agrees that it shall be successor to USACE for long-term surveillance, operation and maintenance, for those areas.

II. DEFINITIONS

Except as otherwise explicitly stated herein, terms used in this Agreement which are defined in CERCLA and CERCLA/SARA shall have the meaning as defined in CERCLA. As used in this Agreement, unless the context clearly requires some other meaning, the following definitions shall apply for purposes of this Agreement:

- A. “Agreement” means this Federal Facility Agreement, all attachments to this Agreement and all reports, plans, notices and other documents developed pursuant to this Agreement. All such attachments and documents are an integral and enforceable part of this Agreement.
- B. “ARAR” or “Applicable or Relevant and Appropriate Requirement” shall mean “legally applicable” or “relevant and appropriate” standards, requirements, criteria or limitations as those terms are used in CERCLA Section 121(d), 42 U.S.C. 9621(d).
- C. “Authorized representative” means a person designated to act on behalf of a Party to this Agreement, including, inter alia, contractors retained to perform work at or relating to the site.
- D. “CERCLA” means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. 9601 et seq.
- E. “Corps” means the United States Army Corps of Engineers, its employees and authorized representatives.
- F. “Days” means calendar days, unless business days are specified. Any Submittal, Written Notice of Position or written statement of dispute that, under the terms of this Agreement, would be due on a Saturday, Sunday or Federal or State holiday shall be due on the next business day.
- G. “Deadlines” shall mean the Near Term Milestones specifically established for the current fiscal year under the Site Management Plan. Deadlines are subject to stipulated penalties in accordance with Section XVIII, Stipulated Penalties.
- H. “Emergency removals” means a removal action taken because of an imminent and substantial endangerment to human health or the environment which requires implementation of a response action in such a timely manner that consultation with EPA and the State would be impractical.
- I. “Facility” shall mean that property owned by the United States of America and operated by the U.S. Department of the Army currently known as the Iowa Army Ammunition Plant, which is located in or near the city of Middletown, Iowa, including all of the areas indicated on the attached map as well as any site or area where a hazardous substance from the IAAAP has

been deposited, stored, disposed of, or placed, or otherwise come to be located.

J. "Feasibility Study" or "FS" means that study which fully evaluates and develops remedial action alternatives to prevent or mitigate the migration or the release or threat of release of hazardous substances, pollutants or contaminants at and from the site.

K. "Fiscal year" shall mean the time period used by the United States Government for budget management and commences on October 1 and ends September 30th of the following calendar year.

L. "Formerly Utilized Sites Remedial Action Program" or "FUSRAP" means the Army Corps of Engineers' program to develop, identify, clean up, or otherwise control sites containing residual contamination from the Nation's early atomic energy program or from commercial operations that resulted in conditions Congress has authorized the Corps to remedy.

M. "Land use controls" shall mean any restriction or administrative action, including engineering and institutional controls, arising from the need to reduce risk to human health and the environment.

N. "Milestones" shall mean the dates established by the Parties in the Plan for the initiation or completion of Primary Actions and the submission of Primary Documents and Project End Dates. Milestones shall include Near Term Milestones, Out Year Milestones, and Project End Dates.

O. "National Contingency Plan" or "NCP" means the implementing regulations for CERCLA found in the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300.

P. "Near Term Milestones" shall mean the Milestones within the current fiscal year (FY), the next fiscal year or "budget year" (FY+1), and the year for which the budget is being developed or "planning year" (FY + 2).

Q. "Operable Unit" or "OU" means any discrete element of the remedial action selected prior to selection of the final remedial action for the entire Site.

R. "Out Year Milestones" shall mean the Milestones within those years occurring after the planning year until the completion of the cleanup or phase of the cleanup (FY+3 through Project End Date).

S. "pCi/g" means picocurie per gram.

T. "Plan", unless the context indicates otherwise, shall refer to the Iowa Army Ammunition Plant FUSRAP Site Management Plan.

U. "Primary Actions" as used in these definitions shall mean start and completion of fieldwork for the Remedial Investigation and the start and completion of fieldwork for the Remedial Action.

V. "Project End Dates" shall mean the dates established by the Parties in the Plan for the completion of the major portions of the cleanup or completion of the FUSRAP Project at IAAAP. The Parties recognize that, in many cases, a higher degree of flexibility is appropriate with Project End Dates due to uncertainties associated with establishing such dates.

W. "Remedial Design" or "RD" means the technical analysis and procedures which follow the selection of a remedial action and which result in a detailed set of plans and specifications for implementation of the remedial action.

X. "Remedial Investigation" or "RI" means those investigations conducted to fully determine the nature and extent of the release or threat of release of hazardous substances, pollutants or contaminants and to gather necessary data to support the feasibility study and risk assessment.

Y. "Site" means the areas within the IAAAP and any other areas where a hazardous substance, hazardous waste, hazardous constituent, pollutant, or contaminant from the Facility has been deposited, stored, disposed of, or placed, or has migrated or otherwise come to be located. The Site is a "facility" within the meaning of Section 101(9) of CERCLA, 42 U.S.C. §9601(9).

Z. "State" means the State of Iowa, including all departments, offices, and agencies thereof.

AA. "Submittal" means each document, report, schedule, deliverable, work plan or other item to be submitted by any Party to any other Party pursuant to this Agreement.

BB. "Target Dates" shall mean dates established for the completion and transmission of secondary documents. Target Dates are not subject to dispute resolution and they are not Milestones.

CC. "Timetables and Deadlines" means schedules as well as the work and those actions which are to be completed and performed in conjunction with such schedules, including performance of actions established pursuant to the dispute resolution procedures set forth in Section XII of this Agreement.

DD. "U.S. EPA" or "EPA" means the United States Environmental Protection Agency, its employees and authorized representatives.

EE. “Written Notice of Position” means a written statement by a Party of its position with respect to any matter about which any other Party may initiate dispute resolution pursuant to Section XII of this Agreement.

III. PURPOSE

A. The general purposes of this Agreement are to:

1. ensure that the environmental impacts associated with past AEC activities at the Site are thoroughly investigated and appropriate remedial action taken as necessary to protect the public health, welfare and the environment;

2. establish a procedural framework and schedule for developing, implementing and monitoring appropriate response actions at the Site in accordance with CERCLA/SARA, the NCP, Superfund guidance and policy, RCRA, RCRA guidance and policy, and the FUSRAP statutory authorities cited in Paragraph C of Section I. (Jurisdiction) of this Agreement; and,

3. facilitate cooperation, exchange of information and participation of the Parties in such actions.

B. Specifically, the purposes of this Agreement are to:

1. Identify Interim Remedial Action (IRA) and Final Remedial Action (FRA) alternatives which are appropriate at the Site. IRA alternatives shall be identified and proposed to the Parties as early as possible prior to formal proposal of IRAs to EPA and the State pursuant to CERCLA/SARA. This process is designed to promote cooperation among the Parties in identifying remedial alternatives prior to selection of FRAs.

2. 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 or 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 areas of AEC activity at the Site in accordance with CERCLA/SARA, and applicable State of Iowa laws.

3. Identify the nature, objective and schedule of response actions to be taken at the areas of AEC activity at the Site. Response actions at the Site shall attain that degree of cleanup of hazardous substances, pollutants or contaminants mandated by CERCLA/SARA, and applicable State of Iowa laws.

4. Implement the selected interim and final remedial action(s) in accordance with CERCLA and applicable State of Iowa laws and meet the requirements of Section 120(e)(2) of CERCLA for an interagency agreement between EPA , the Corps, and the State.

5. Assure compliance, through this Agreement, with RCRA and other federal and state hazardous waste laws and regulations for matters covered herein.

6. Coordinate response actions at the Site with the mission and support activities at the IAAAP.

7. Expedite the cleanup process to the extent consistent with protection of human health and the environment including shortening time frames.

8. Provide for the State of Iowa involvement in the initiation, development, selection, and enforcement of remedial actions to be undertaken at the Site, including the review of all applicable data as it becomes available, and the development of studies, reports, and action plans, and to identify and integrate State ARARs into the remedial action process.

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

IV. PARTIES

A. The parties to this Agreement are the Corps, the EPA, and the State of Iowa (State) and DOE only for the purposes identified in Section I(F) (Jurisdiction) of this Agreement.

B. The terms of this Agreement shall apply to and be binding upon the Parties and upon their successors and assigns. The undersigned representative of each of the Parties certifies that he or she is fully authorized to enter into the terms and conditions of this Agreement and to bind legally that party to it. The Corps shall provide a copy of this Agreement to all contractors and subcontractors retained to perform work pursuant to this Agreement and to the present owner of any property which is not owned by the United States and upon which any work under this Agreement is to be performed. Each party shall be responsible for assuring that its contractors comply with the terms and conditions of this Agreement.

C. This Agreement shall not establish precedent for non-FUSRAP Federal Facility Agreements entered into by the Army or other components of the Department of Defense pursuant to Section 120 of CERCLA, 42 U.S.C. § 9620.

V. SCOPE OF THE AGREEMENT

A. This Agreement covers response actions at 7 areas associated with AEC activity which

are outlined in red on the attached map. The 7 areas outlined in red are the following:

1. Line 1
2. Firing Site Area
3. West Burn Pads Area (South of the Road)
4. Warehouse 3-01
5. Yard G
6. Yard C
7. Yard L, areas surrounding Warehouses L-37-1, L-37-2, and L-37-3

B. At the areas outlined in red on the attached map, the Corps shall respond to all releases and threats of releases of hazardous substances, pollutants or contaminants, except for groundwater contamination.

C. Other areas beyond those identified in this Section may be added to the list of areas subject to this Agreement if it is determined that they contain contamination resulting from AEC activities.

D. Groundwater and surface water contamination on or from the Iowa Army Ammunition Plant, including such contamination associated with the 7 areas identified herein as FUSRAP areas, is considered outside of the Scope of this Agreement, and shall be addressed pursuant to the IAAAP/Army FFA (Administrative Docket Number VII-F-90-0029). However, nothing in this provision shall prevent the Corps from conducting groundwater investigation and response actions incidental to FUSRAP response actions, as appropriate. The Corps is responsible for managing water that is considered excavation water under this Agreement. Excavation water is defined to be the water present in an excavation (associated with a response action) due to groundwater infiltration, storm water run-off, or precipitation.

VI. FINDINGS OF FACT

For the purpose of this Agreement only, the following constitutes a summary of the facts known to the parties at this time and upon which this Agreement is based. None of the information related herein shall be considered admissions by any Party.

A. Background

1. The IAAAP covers 19,127 acres in rural Des Moines County near Middletown, IA, approximately 10 miles west of Burlington, IA and the Mississippi River. IAAAP is 1 mile northeast of Augusta, Iowa and the Skunk River.
2. IAAAP is a Government-Owned, Contractor-Operated installation under the command of the Joint Munitions Command (JMC), Rock Island, Illinois. The current operating contractor is American Ordnance, LLC.

3. IAAAP's primary task since 1941 and intermittently to the present has been Load, Assemble, and Pack (LAP) operations dealing with a variety of conventional ammunitions and fusing systems.
4. The IAAAP was proposed for inclusion on the National Priority List (NPL) pursuant to Section 105 of CERCLA on July 14, 1989, and was added to the NPL in 1990. On September 21, 1990, the U.S. Army and United States Environmental Protection Agency (EPA) Region VII entered into a Federal Facilities Agreement (FFA; Administrative Docket Number VII-F-90-0029) pursuant to CERCLA Section 120.
5. Nuclear Regulatory Commission (NRC) license SUC - 1381 was transferred by NRC letter of March 16, 2000, and reissued by the Iowa Department of Public Health as Iowa radioactive materials license, number 0290-1-29-SM1, to American Ordnance, LLC, at the IAAAP, on or about April 13, 2000. The license authorizes assembly and demilitarization of staballoy penetrators in munitions assemblies, and for research and development as described in the application to the U.S. Nuclear Regulatory Commission, dated October 6, 1993.
6. The Atomic Energy Commission (including predecessor and successor agencies) conducted operations at the IAAAP from 1947 – 1975.
7. The Corps and DOE signed a Memorandum of Understanding (MOU) on March 17, 1999, that stipulated the rights and obligations of each agency with respect to FUSRAP. In a letter dated March 31, 2000, the DOE notified the Corps that the IAAAP site was eligible for FUSRAP. In accordance with the terms of the MOU, the Corps conducted a Preliminary Assessment (PA) of the IAAAP.

B. Environmental Studies and Cleanup

1. A number of environmental investigations and cleanup activities have been conducted by the Army at the IAAAP pursuant to CERCLA and the Army-EPA FFA (VII-F-90-0029). These CERCLA response actions, including, but not limited to Remedial Investigations, Feasibility Studies, Proposed Plans, Records of Decisions, EE/CAs, Removal Action Memoranda, and Remedial Action Reports are incorporated into the Army-EPA FFA.
2. Two Records of Decision (ROD) exist for the IAAAP site. An Interim Soils ROD, signed in March 1998, addresses the excavation, relocation and placement of contaminated soils from fifteen areas to the IAAAP Inert Disposal Area. The Final Soils ROD, signed in September 1998, specifies the treatment of the most highly contaminated fraction of that soil. Remedial actions, as specified in the RODs, have been implemented

at the East Burn Pads, the West Burn Pads area, the North Burn Pads, the North Burn Pads Landfill, the Inert Disposal Area, and Lines 5A/B. These remedial actions are documented in RA Reports contained in the Administrative Record.

3. The Army has performed soil cleanups as non-time critical removal actions at the Former Line 1 Impoundment, the Line 800 Pinkwater Lagoon, the Fire Training Pit, the Pesticide Pit, the Inert Disposal Area, explosive-contaminated sumps and other areas at the IAAAP.

4. Contaminated soils from the Former Line 1 Impoundment and the Explosive Disposal Area, including the North Burn Pads, North Burn Pads Landfill, West Burn Pads Area, and the East Burn Pads, have been excavated pursuant to Army CERCLA response actions and disposed at the Inert Disposal Area.

5. The Corps performed a Preliminary Assessment (PA) of AEC activity at the IAAAP, dated December 2001. The PA describes AEC activity at Line 1, the Explosive Disposal Area, Yards C, G, and L, and the Firing Site. Documentation provided by the DOE describes AEC activity at Line 1, the Explosive Disposal Area, Yards C, G, and L, the Firing Site, the SECOM, ERC, and the Deactivation Furnace Area.

6. In October 2002, the Army conducted an Aerial Radiometric Survey, with the results published in August 2003. The survey concluded that there was no anthropogenic radioactive contamination on the majority of the plant within the detection capabilities of the analytical system. The areas of exception included the Firing Site area, which showed uranium-238 contamination. Another area showed a uranium signature that was attributed to the licensed activities currently on-going at the plant under Iowa radioactive materials license, number 0290-1-29-SM1. Uranium was also reported above the detection capability of the system at the IAAAP heating plant, which was attributed to the natural uranium in the coal used in the plant.

7. The Agency for Toxic Substances and Disease Registry has conducted a Public Health Assessment (December 1999) and several Health Assessments for the IAAAP.

8. The Army conducted a Supplemental RI for Line 1 and the Firing Site dated August 2002. The Supplemental RI concluded that additional data was necessary to define the nature and extent of contamination associated with the COCs at these areas.

9. In 2004, FUSRAP conducted a radiological screening survey of the Explosive Disposal Area, Inert Disposal Area, Demolition Area/Deactivation Furnace and the Line 1 Former Waste Water Impoundment Area. The survey identified a small area at the Inert Disposal Area that contained a ¹³⁷Cs object. The object was removed. The IRP has assumed responsibility for actions required to remediate the surrounding soils that were left in place and covered. The site screening survey of the 6 identified areas, completed

in the fall of 2005 reported that these areas are free from radiological contamination and recommended elimination of these sites from further FUSRAP action. The FFA parties approved of the *Final Summary of the Radiological Survey Findings for the Iowa Army Ammunition Plant Explosive Disposal Area, Inert Disposal Area, Demolition Area / Deactivation Furnace, and Line 1 Former Waste Water Impoundment Area*, completed in the fall of 2005. These areas will continue to be under the control of the IRP remediation program and will not be a part of this FFA.

10. The Administrative Record for IAAAP CERCLA actions is maintained by the Army, and includes information and documentation that support remedy decisions at the site, including RIs, FSs, Proposed Plans, RODs, EE/CAs, Action Memoranda, RA Reports, and other documents.

C. Area-Specific Findings

Line 1

1. The types of materials processed at Line 1 and potentially discharged as waste included: Composition B, PBX, RDX, TNT, baratol, and boracitol.
2. Line 1 began operations in 1941 and continues to operate. An abandoned containment impoundment (Former Line 1 Impoundment) was located near Line 1. The Impoundment was created in 1948, when a dam was constructed along the upper reaches of Brush Creek to impound wastewater effluent discharged from Line 1.
3. In the 1950's, Line 1 was expanded to include 2 separate production lines, which doubled the plant capacity for producing the high explosive components for weapons. This expansion consisted of the addition of four new process buildings: an x-ray/final machining facility (1-100), a rest house (1-07), a machining bay (1-40) and an assembly bay (1-61). Additionally, six bays in 1-10 and 1-12 were converted into machining bays. A laboratory (1-60) was also constructed after 1-08-2 was demolished. Storage of radiological materials occurred at Buildings 1-11, 1-13 and portions of 1-40 and 1-61.
4. The Former Line 1 Impoundment extended about 1300 feet upstream of the dam and covered approximately 3.6 acres. During periods of high flow, the Impoundment may have reached as far as 2400 feet upstream and covered approximately 7.5 acres.
5. The primary function of the Former Line 1 Impoundment was to allow settlement of particulates from explosives-contaminated wastewater prior to discharge downstream.
6. Wastes discharged into the Former Line 1 Impoundment included TNT and its degradation products.

7. No known water treatment process was employed at the Former Line 1 Impoundment other than the intermittent addition of fly ash to adsorb explosive components and reduce color.
8. The Former Line 1 Impoundment was addressed in an Army removal action. Approximately 8300 cubic yards of explosive-contaminated sediments were excavated from the Line 1 Impoundment and disposed at the Inert Disposal Area in this removal action.
9. The Line 1 production facility is approximately 1700 feet by 4900 feet, encompassing an area of approximately 194 acres, situated on the northeast portion of the IAAAP. The facility was constructed in 1941 and was in operation from late 1941 to September 1945. From 1948 to 1975, Line 1 was operated by the AEC. During this period, boratol and boracitol were used. Line 1 is currently a missile warhead, cartridge and grenade LAP facility. The principal feedstocks are TNT, Composition B, PBX, and RDX. Additional wastes include LX-14, octal, sump scrap, acetone, xylene, solvents, 1,1,1 TCA, stoddard solvent, MEK, and toluene.
10. During the AEC activity at Line 1, a number of buildings were used in the production of baratols. The Line 1 baratols consisted of baratol, boracitol, TNT, Composition B and cyclotol. Baratol is a mixture of TNT and barium nitrate or nitric acid. Boracitol is a mixture of boric acid and TNT. Composition B is a mixture of TNT and RDX. AEC weapons components were assembled at Line 1. Tritium, in an elemental gaseous form, was stored in cylinders at Line 1. DOE records indicate that tritium was released to the atmosphere.
11. AEC operations at Line 1 included machining of DU. Methylene orthochloroaniline (MOCA) was used at Line 1 as a curing agent for resins and epoxies. A spill of MOCA was reported at building 1-53. MOCA operations were reported at buildings 1-04, 1-10, 1-12, 1-19-7, 1-40, 1-53, 1-61, and 1-63-7. Worker monitoring (blood/urine) for MOCA was conducted. Beryllium was used at Line 1. Beryllium swipe tests to evaluate the presence of beryllium dust was conducted at buildings 1-11, 1-18, 1-63, 1-64, 1-67, 1-69, 1-77, 1-80, and 1-161. Worker monitoring (urine) for beryllium was conducted. DOE records indicate that plutonium (1968, 1974) and DU (1975) wastes were shipped by AEC from IAAAP to the Pantex facility in Amarillo, TX.
12. In 1975, Line 1 operations under the AEC ceased, and radiological surveys were performed. Line 1 then reverted to Army control.
13. In 2000, the DOE performed an indoor survey of selected Line 1 buildings used by the AEC. Buildings surveyed included: 1-11, 1-12, 1-13, 1-18, 1-19, 1-40, 1-61, 1-63, 1-64, 1-65, 1-66, 1-67, 1-77, 1-100, 1-137-4, 1-148. Levels of residual depleted uranium

(DU) found in Buildings 1-11, 1-63-6, 1-12 and 1-61 were 19,000 pCi/g, 39,000 pCi/g, 180 pCi/g and 2,700 pCi/g, respectively. The DU found in Building 1-61 was found in a plastic pan, which was removed and disposed of as radioactive waste.

Explosives Disposal Area (EDA)

14. The EDA is located in the northeast part of the IAAAP, approximately 1 mile from the IAAAP boundary. Several areas comprised the EDA, including the North Burn Pads, North Burn Pads Landfill, West Burn Pads, West Burn Pads Landfill, and East Burn Pads. Propellant, explosive, and pyrotechnic contaminated materials have been managed at the EDA.

15. Early histories refer to the EDA as the Burning Grounds. Originally, it was located on a portion of the area presently known as the East Burn Pads. The EDA was subsequently expanded by the addition of the West Burn Pads, North Burn Pads, West Burn Pads Landfill, and the North Burn Pads Landfill. Records indicate that explosives contaminated with DU may have been burned at locations within the EDA. Following cessation of AEC activities in 1975, the Army continued operations at the EDA.

16. Areas within the EDA were investigated in the RI (1996). The North Burn Pads, North Burn Pads Landfill, East Burn Pads, and West Burn Pads area are addressed in the 1998 Interim ROD. In the interim remedial action, soil from these areas with contaminants at levels exceeding ROD-specified remediation goals was disposed at the Inert Disposal Area, as follows:

<u>Date</u>	<u>Area</u>	<u>Soil Volume (cubic yards)</u>
2000	West Burn Pads Area	43, 000
1998	East Burn Pads	12,000
1998	North Burn Pads	3,000
1998	North Burn Pads Landfill	14,000

17. While the West Burn Pads area was remediated by the Army in 2000, sampling results indicated that the West Burn Pads area south of the road had elevated levels of barium. The nature and extent of soil contamination at the West Burn Pads area south of the road was not determined during the 2000 Army remedial action. Contaminated soil remains in place at the West Burn Pads area south of the road.

Firing Site (FS)

18. The Firing Site Area is used on a routine basis to perform static testing of warheads produced at the IAAAP. The Firing Site has been in operation since the 1940's and was used for AEC activities from 1948 to 1974. The Firing Site measures

approximately 4000 feet by 5000 feet, and is characterized by hilly terrain. The nearest IAAAP boundary is approximately 1 mile away. The nearby land areas adjoining the IAAAP are agricultural. The Firing Site is grouped into 3 areas, the North Test Fire Site consists of FSs 9 through 12. The South Test Fire Site consists of FS 6 and FS 15. The third area consists of FSs 3 through 5. FS 14 is considered separate. FS 1 and FS 2 are used for offices.

19. “Plane wave” shots were tested at FS-6. The explosives used in these plane wave shots were Composition B and barium nitrate. Some tests at FS-6 involved explosive components that contained a thin sheet of DU. The quantity of tests at FS-6 is unknown. Presently FS-6 is active and used by the Army for the testing of ordnance. During a radiological walkover survey conducted by the U.S. Army Corps of Engineers in 2001, DU was discovered in a berm at FS-6.

20. FS-12 was constructed by the AEC in 1964. FS-12 was used to test hydroshots. Hydroshots were tests conducted to observe and test the hydrodynamic performance of shaped explosives used as detonators in ordnance produced by AEC. The setup involved a hemispherical-shaped explosive charge, approximately half the size of a basketball. Several pounds of explosives were used in each test. A ring of DU was placed around the bottom of the explosive hemispherical shell. Records of hydroshot testing at FS-12 indicate that 701 hydroshots were performed between December 1965 and December 1973. These hydroshot tests reportedly dispersed about 4,000 kilograms (about 8,870 pounds) of DU into the environment. Some of the DU was recovered and disposed of by the AEC at the time the hydroshots were conducted. The AEC Standard Operating Procedure (SOP) stated that all pieces of DU that could be found would be collected and disposed as radioactive waste.

21. In 1975, the AEC performed a cleanup at FS-12, by excavating soils at the hydroshot detonation point, known as “ground zero”, and by scraping a few inches of topsoil off an area of several hundred square meters surrounding ground zero. In the cleanup, approximately 31,000 cubic feet, or 1,200 barrels of soil contaminated with DU metal pieces were temporarily stored in Building 1-11. These materials were subsequently disposed at a Sheffield, Illinois radioactive waste disposal facility. After the AEC turned over operations of FS-12 to the Army in 1975, it was used for testing conventional weapons not containing depleted uranium until November 2000.

22. In November 2000, visible chunks of DU were observed on the ground surface at FS-12. Subsequent to this discovery, the Army halted all munitions testing at FS-12. The DU chunks observed at FS-12 resemble portions of the DU ring used in the AEC hydroshots. The Corps of Engineers conducted a radiological walkover survey of FS-12 in 2001. DU chunks weighing several pounds, along with DU contamination located several hundred feet from ground zero, were reported in the survey. In addition to DU, the possibility of unexploded ordnance exists at FS-12.

Yard C

23. Yard C was constructed in 1941–1942 to serve as a storage yard. Yard C consists of 43 igloos. The AEC utilized Yard C for the storage of raw explosives materials. These raw materials were transported to Yard C by rail in cardboard boxes with plastic liners. From Yard C, the raw explosives were transported to Building 1-50 on Line 1. The DOE performed limited radiological surveys of Yard C Building 23-53, and igloos 23-1, 23-2 and 23-3 in 2000. Results of the *Indoor Radiological Survey of the Iowa Army Ammunition Plant*, Middletown, Iowa (DOE, July 2001), indicated no radioactive contamination present above detection capability in the Yard C buildings surveyed. Based upon the survey results, DOE recommended a MARSSIM classification of Yard C buildings as Class 3 and that appropriate radiological surveys be performed.

Yard G

24. Yard G was constructed in 1942 to serve as a storage area for the finished castings of classified explosive shapes. Seven igloos were used for this purpose. It is a secured, fenced facility that was used by the AEC from 1948 until 1954, and was returned to the Army in 1975.

Yard L

25. Starting in 1960, 3 warehouses in Yard L, as indicated on a 1972 map prepared as part of an environmental agency evaluation of AEC activities, were used by the AEC to store classified components from Line 1. This portion of Yard L had double security fencing. Radiation warning signs were posted in some buildings in Yard L. A Site Reconnaissance Survey of the three warehouses (L-37-1, L-37-2, and L-37-3) performed by the Corps in 2003 concluded that there was no indication of radionuclide contamination of the interior or exterior of the buildings.

Line 3, Warehouse 3-01

26. A former employee at the site has indicated that Line 3, Warehouse 3-01 was used as part of AEC operations.

D. Other General Background

1. Since the 1940's, the Manhattan Engineer District (MED) and its immediate successor, the Atomic Energy Commission (AEC), have conducted programs involving research, development and production of materials and components as part of the Nation's atomic weapons program.

2. The Formerly Utilized Sites Remedial Action Program (FUSRAP) was created in 1974 to prevent, mitigate, or abate the release or threatened release of hazardous substances, pollutants or contaminants at the areas of former AEC activity.
3. In 1941, the Iowa Ordnance Plant (IOP) was constructed. Under contract to the Army, Day and Zimmerman Company, Inc. operated the plant and produced the first ordnance items in the fall of 1941.
4. In 1947, the AEC selected the IOP as the first production facility for manufacturing of high explosives components for weapons. At that time, a portion of Line 1, the Explosive Disposal Area areas, Yards C, G and L and the Firing Site areas, came under control of the AEC and their contractor, Silas Mason Company, later known as Mason & Hanger – Silas Mason Co. Inc. AEC programs also have used the Security Command (SECOM), Emergency Response Center (ERC) and Deactivation Furnace areas. These areas occupied approximately 1,630 acres within the 19,100 acre IOP and became known as the Burlington Atomic Energy Commission Plant (BAECP).
5. In the late 1960's, the AEC decided to phase out their programs at the BAECP and move them to the Pantex Plant near Amarillo, Texas. The BAECP closed in July 1975 and control of the areas reverted to the IOP under direction of the Army. Prior to its departure, the AEC conducted a radiological survey of the areas it occupied. Later, the plant name was changed from the IOP to the Iowa Army Ammunition Plant (IAAAP), as it is referred to today.

E. Legislative History

1. In 1942, under the jurisdiction of the U.S. Army, the Manhattan Engineer District (MED) was established as the agency responsible for the development of nuclear materials for national defense and security.
2. On December 31, 1946, MED was deactivated and its responsibilities were transferred to the newly constituted U.S. Atomic Energy Commission (AEC).
3. In the Energy Reorganization Act of 1974, Public Law 93-438 passed on October 11, 1974, and codified at 42 United States Code of 5875, the AEC was disestablished and its functions were transferred to the Energy Research and Development Administrations (ERDA) and the Nuclear Regulatory Commission (NRC).
4. Pursuant to the provisions of the "Department of Energy (DOE), Organization Act" (Public Law 95-91 passed on August 4, 1977), the functions and authority of the ERDA were transferred to the newly formed DOE.

5. With the Energy and Water Development Appropriations Act of 1998 (Public Law 105-62, passed on October 13, 1997), Congress transferred responsibility for administration and execution of FUSRAP from the Department of Energy to the U.S. Army Corps of Engineers (Corps). Congress established continuing programmatic authority for FUSRAP in the Energy and Water Development Appropriations Act for Fiscal Year 2000, Public Law 106-60, Section 611, passed on September 29, 1999, and directed that the Corps should execute the response actions subject to CERCLA and the NCP.

VII. DETERMINATIONS

Based upon the foregoing findings and conclusions, the Parties have made the following determinations.

A. At the Iowa Army Ammunition Plant, areas which were formerly utilized by the Atomic Energy Commission meet the definition of a facility, as defined in Section 101(9) of CERCLA, 42 U.S.C. 9601(9).

B. The U.S. Department of the Army and U.S. Department of Energy are persons as defined in Section 101(21) of CERCLA, 42 U.S.C. Section 9601(21).

C. The IAAAP is a facility under the jurisdiction, custody and control of the Department of Defense (DOD) within the meaning of Executive Order 12580, 52 FR 2923, Jan. 29, 1987.

D. The U.S. Army Corps of Engineers is authorized to carry out the Formerly Utilized Sites Remedial Action Program authorized in Public Law 106-60, Section 611, codified at 10 U.S.C. 2701, Note.

E. The IAAAP is a facility designated by the Department of Energy (DOE) as eligible for the FUSRAP pursuant to a letter from DOE to the Corps, dated March 31, 2000 and budgeted under FUSRAP by the Corps in order to determine the extent of FUSRAP-related contamination and response action as required under CERCLA.

F. The Army has been delegated authority from the Department of Defense (DoD) pursuant to Executive Order 12580. The Corps has authority for administration and execution of FUSRAP with the Energy and Water Development Appropriations Act of 1998 (Public Law 105-62, passed on October 13, 1997) and later Energy and Water Appropriation Acts including Public Law 106-60, Section 611, with regard to those sites or areas at or near the IAAAP that are being addressed by the FUSRAP.

G. Radionuclides including depleted uranium, and hazardous substances related to the early

atomic energy activities at the IAAAP are present at the sites or areas described above and are listed in the National Contingency Plan at 40 CFR 302.4, and are therefore hazardous substances as defined in Section 101(14) of CERCLA, 42 U.S.C. 9601(14).

H. The presence of the radionuclide DU and other hazardous substances in the soils at the aforesaid sites or areas constitutes a release or threatened release of hazardous substances into the environment as defined at Section 101(22) of CERCLA, 42 U.S.C. 9601 (22).

I. The actions to be taken pursuant to this Agreement are necessary to protect the public health and the environment and are not inconsistent with the National Contingency Plan.

VIII. STATUTORY COMPLIANCE/RCRA-CERCLA INTEGRATION

A. The Parties intend to integrate the Corps' 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 be deemed to achieve compliance with CERCLA, 42 U.S.C. §9601 *et seq.*; to satisfy the corrective action requirements of Sections 3004(u) and (v) of RCRA, 42 U.S.C. §6924(u) and (v), for a RCRA permit, and Section 3008(h), 42 U.S.C. §6928(h), for interim status facilities; and to meet or exceed all applicable or relevant and appropriate Federal and State laws and regulations, to the extent required by Section 121 of CERCLA, 42 U.S.C. §9621.

B. Based upon the foregoing, the Parties intend that any remedial action selected, implemented and completed under this Agreement shall be deemed by the Parties to 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 Section 121 of CERCLA.

C. The Parties recognize that the requirement to obtain permits for response actions undertaken pursuant to this Agreement shall be as provided for in CERCLA and the NCP. The Parties further recognize that on-going hazardous waste management activities at the Iowa 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 IAAAP or the Corps for on-going hazardous waste management activities at the Site, EPA and/or the State shall reference and incorporate any appropriate provisions, including appropriate schedules (and the provision for extension of such schedules), of this Agreement into such permit. The Parties intend that the judicial review of any permit conditions, which reference this Agreement, shall, to the extent authorized by law, only be reviewed under the provisions of CERCLA.

D. Nothing in this Agreement shall alter the Corps' authority with respect to removal actions conducted pursuant to Section 104 of CERCLA, 42 U.S.C. §9604.

IX. CONSULTATION WITH EPA AND THE STATE OF IOWA

Review and Comment Process for Draft and Final Documents

A. Applicability:

1. The provisions of this Section establish the procedures that shall be used by the Parties to provide each other with appropriate notice, review, comment, and response to comments regarding RI/FS and Remedial Design/Remedial Action (RD/RA) documents, specified herein as either primary or secondary documents. In accordance with Section 120 of CERCLA, the Corps 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 and final reports for any deliverable document identified herein shall be prepared, distributed and subject to dispute in accordance with Paragraphs B through J below.

2. The designation of a document as "draft" or "final" is solely for purposes of consultation with EPA and the State in accordance with this Part. 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.

B. General Process for RI/FS and RD/RA documents:

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

2. Secondary documents include those reports that are discrete portions of the primary documents and are typically input or feeder documents. Secondary documents are issued by the Corps in draft subject to review and comment by EPA and the State. Although the Corps 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.

C. Primary Reports:

1. The Corps shall complete and transmit draft reports for the following primary documents to EPA and the State for review and comment in accordance with the provisions of this Part:

- a. RI/FS Work Plan(s), including Sampling and Analysis Plan(s) and QAPP(s)
- b. Risk Assessment(s)
- c. RI Report(s)
- d. FS Report(s)
- e. Proposed Plan(s)
- f. Record of Decision(s)
- g. Remedial Design(s)
- h. Remedial Action Work Plan(s)
- i. Site-Screening Process Work Plans (s) and Site-Screening Process Report(s), including Radiation Screening Work Plan(s) and Radiation Screening Report(s)
- j. RA Completion Report(s)
- k. Site Management Plan and Amendments

2. Only the draft final reports for the primary documents identified above shall be subject to dispute resolution in accordance Section XII (Resolution of Disputes), of this Agreement. The Corps shall complete and transmit draft primary documents in accordance with the timetable and deadlines established in Section XXX (Deadlines and Contents of Site Management Plan) of this Agreement.

D. Secondary Documents:

1. The Corps shall complete and transmit draft reports for the following secondary documents to EPA and the State for review and comment in accordance with the provisions of this Part:

- a. Initial Remedial Action / Data Quality Objectives
- b. Site Characterization Summary
- c. Detailed Analysis of Alternatives
- d. Treatability Studies
- e. Sampling and Data Results
- f. Preliminary RDs

- g. Operations and Maintenance Plans
- h. Health and Safety Plans

2. Although EPA and the State may comment on the draft reports for the secondary documents listed above, such documents shall not be subject to dispute resolution except as provided by Paragraph B hereof. Target dates shall be established for the completion and transmission of draft secondary reports pursuant to Section XXX (Deadlines and Contents of Site Management Plan) of this Agreement.

E. Meetings of the Project Managers on Development of Reports:

The Project Managers shall meet in person or via teleconference approximately every 30 days, except as otherwise agreed by the Parties, to review and discuss the progress of work being performed at the site on the primary and secondary documents. Prior to preparing any draft report specified in Paragraphs C and D above, the Project Managers shall meet to discuss the report results in an effort to reach a common understanding, to the maximum extent practicable, with respect to the results to be presented in the draft report.

F. Identification and Determination of Potential ARARs:

1. For those primary reports or secondary documents that consist of or include ARAR determinations, prior to the issuance of a draft report, the Project Managers should meet to identify and propose, to the best of their ability, potential ARARs pertinent to the report being addressed. The State shall identify all potential State ARARs as early in the remedial process as possible consistent with the requirements of CERCLA Section 121, 42 U.S.C. Section §9621, and the NCP. The Corps shall consider any written interpretations of ARARs provided by the State. Draft ARAR determinations shall be prepared by the Corps in accordance with Section 121(d)(2) of CERCLA, the NCP and pertinent guidance issued by EPA, which is not inconsistent with CERCLA and the NCP.

2. 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 proposed as a remedy and the characteristics of a site. The Parties recognize that ARAR identification is necessarily an iterative process and that potential ARARs must be re-examined throughout the RI/FS process until a ROD is issued.

G. Review and Comment on Draft Reports:

1. The Corps shall complete and transmit each draft primary report to EPA and the State on or before the corresponding deadline established for the issuance of the report.

The Corps shall complete and transmit draft secondary documents in accordance with the target dates established for the issuance of such reports established pursuant to Section XXX (Deadlines and Contents of Site Management Plan) of this Agreement.

2. Unless the Parties mutually agree to another time period, all draft reports shall be subject to a 45-day period for review and comment. Review of any document by the EPA and the State may concern all aspects of the report (including completeness) and should include, but is not limited to, technical evaluation of any aspect of the document, and consistency with CERCLA, the NCP and any pertinent guidance or policy promulgated by the EPA and/or the State. Comments by the EPA and the State shall be provided with adequate specificity so that the Corps may respond to the comment and, if appropriate, make changes to the draft report. Comments shall refer to any pertinent sources of authority or references upon which the comments are based, and, upon request of the Corps, the EPA and/or the State shall provide a copy of the cited authority or reference. In cases involving complex or unusually lengthy reports, EPA may extend the 45-day comment period for an additional 20 days by written notice to the Corps prior to the end of the 45-day period. On or before the close of the comment period, EPA and the State shall transmit by next day mail their written comments to the Corps.

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

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

5. Following the close of the comment period for a draft report, the Corps shall give full consideration to all written comments on the draft report submitted during the comment period. Within 45 days of the close of the comment period on a draft secondary report, the Corps shall transmit to EPA and the State its written response to comments received within the comment period. Within 45 days of the close of the comment period on a draft primary report, the Corps shall transmit to EPA and the State a draft final primary report, which shall include the Corps' response to all written comments, received within the comment period. While the resulting draft final report shall be the responsibility of the Corps, it shall be the product of consensus to the maximum extent possible.

6. The Corps may extend the 45-day period for either responding to comments on a draft report or for issuing the draft final primary report for an additional 20 days by providing written notice to EPA and the State. In appropriate circumstances, this time period may be further extended in accordance with Section XX (Extensions), hereof.

H. Availability of Dispute Resolution for Draft Final Primary Documents:

1. Dispute resolution shall be available to the Parties for draft final primary reports as set forth in Section XII (Resolution of Disputes).

2. When dispute resolution is invoked on a draft final primary report, work may be stopped in accordance with the procedures set forth in the Section XII (Resolution of Disputes).

I. Finalization of Reports:

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

J. Subsequent Modifications of Final Reports:

Following finalization of any primary report pursuant to Paragraph I above, EPA, the State, or the Corps may seek to modify the report, including, but not limited to, seeking additional field work, pilot studies, computer modeling or other supporting technical work, only as provided in Paragraphs 1 and 2 below.

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

2. In the event that a consensus is not reached by the Project Managers on the need for a modification, the EPA, the State, or the Corps may invoke dispute resolution to determine if such modification shall be conducted. Modification of a report shall be

required only upon a showing that: (a) the requested modification is based on significant new information, and (b) 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.

3. Nothing in this Subpart shall alter EPA's or the State's ability to request the performance of additional work which was not contemplated by this Agreement. The Corps' obligation to perform such work must be established by either a modification of a report or document or by amendment to this Agreement.

X. ASSESSMENT AND SELECTION OF SUPPLEMENTAL RESPONSE ACTIONS

A. The Parties recognize that subsequent to finalization of the ROD, a need may arise for one or more supplemental response actions to remedy continuing or additional releases or threats of releases of hazardous substances, pollutants or contaminants at or from the Site. If such a release or threat of release presents an immediate threat to human health or the environment, it shall be addressed pursuant to Section XI (Emergency Removal Actions). If such a release or threat of release does not present an immediate threat to human health or the environment, it shall be addressed pursuant to paragraphs B through E below.

B. A supplemental response action shall be undertaken only when:

1. A determination is made that as a result of the release or threat of release of a hazardous substance, pollutant or contaminant at or from the Site, an additional response action is necessary and appropriate to assure the protection of human health and the environment; and

2. Either of the following conditions is met for any determination made pursuant to subparagraph B.1 above:

a. For supplemental response actions proposed after finalization of the ROD, but prior to EPA Certification, the determination must be based on conditions that were unknown at the time of finalization of the ROD or based upon information received in whole or in part by EPA following finalization of the ROD; or

b. For supplemental response actions proposed after EPA Certification, the determination must be based upon conditions that were unknown at the time of EPA Certification or based upon information received in whole or in part by EPA or the State following EPA Certification.

C. If, after finalization of the ROD, any Party concludes that a supplemental response action is necessary, based on the criteria set forth in paragraph B, such Party may promptly notify the

others of its conclusion in writing. The Project Managers shall confer and attempt to reach consensus on the need for such an action within 45 days of the receipt of such notice. If within that 45-day period, the Project Managers have failed to reach consensus, any Party may notify the other Parties in writing that it intends to invoke dispute resolution. If the Project Managers are still unable to reach consensus within 14 days of the issuance of such notice, the question of the need for the supplemental response action shall be resolved through dispute resolution.

D. If the Project Managers agree or if it is determined through dispute resolution that a supplemental response action is needed based on the criteria set forth in paragraph B, the Corps shall propose a Deadline for submittal of the Supplemental Work Plans and a Schedule for the performance of the Work thereunder to the EPA and the State in the next Draft Amended SMP.

E. After finalization of a Supplemental Work Plan, the Corps shall conduct a Supplemental RI/FS. Following finalization of the Supplemental RI/FS, the procedures described in paragraphs B and C of Section XXXII (Work to Be Performed) shall be followed.

XI. EMERGENCY REMOVAL ACTIONS

A. Notwithstanding any other provision of this Agreement, the Corps retains the right, consistent with Executive Order 12580, to conduct such emergency removal actions as may be necessary to alleviate immediate threats to human health or the environment from the release or threat of release of hazardous substances, pollutants or contaminants at or from the Site. Such actions may be conducted at any time, either before or after the issuance of a ROD.

B. The Corps shall provide the other Parties with oral notice as soon as possible and written notice within 48 hours after the Corps determines that an emergency removal action is necessary. In addition, within seven days of initiating such an action the Corps shall provide written notice to the other Parties explaining why such action is or was necessary. Promptly thereafter, the Corps shall provide the other Parties with the written basis (factual, technical, and scientific) for such action and any available documents supporting such action. Within 30 days of completion of an emergency removal action, the Corps shall notify the other Parties in writing that the emergency removal action has been implemented and furnish them with an Action Memorandum. Such notice shall state whether, and to what extent, the emergency removal action varied from the description of the action in the written notice provided pursuant to the second sentence of this paragraph and provide any other information required by CERCLA or the NCP.

XII. RESOLUTION OF DISPUTES

Except as specifically set forth elsewhere in this Agreement, if a dispute arises under this Agreement, the procedures of this Section shall apply.

A. Promptly but not later than thirty (30) days after: (1) the receipt of a draft final primary document pursuant to Section IX(B)(1) (Consultation with EPA and the State) of this Agreement, or (2) any action which leads to or generates a dispute, the disputing Party shall send the other Parties a short, written Notice of Dispute which shall identify the nature of the dispute and the disputing Party's position with respect to the dispute. Once signed by appropriate personnel, the Notice may be sent by email or fax. The dispute shall be considered to have arisen on the day the Notice of Dispute is received by the other Parties.

B. All Parties to this Agreement shall make reasonable efforts to informally resolve disputes at the Project Manager or immediate supervisor level. During this informal dispute resolution period the Parties shall meet as many times as are necessary to discuss and attempt resolution of the dispute. The period for informal negotiations shall not exceed 21 days from the time the dispute arises, unless it is modified by written agreement of the Parties.

C. If agreement cannot be reached on any issue within the informal dispute resolution period, the disputing Party shall immediately forward the written Notice of Dispute to the Dispute Resolution Committee (DRC) thereby elevating the dispute to the DRC for resolution and initiating formal dispute resolution.

D. Within seven (7) days after elevation of the dispute to the DRC, the Parties shall file Written Statements of Dispute setting forth the nature of the dispute, the work affected by the dispute, the Party's position with respect to the dispute and the technical, legal or factual information the Party is relying upon to support its position. The Parties may also file additional statements or materials as requested by the DRC.

E. The DRC will serve as a forum for resolution of disputes for which agreement has not been reached through informal dispute resolution. The Parties shall each designate an 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 the DRC is the Superfund Division Director of EPA, Region VII. The State's representative on the DRC is the Director of the Department of Public Health. The Corps' designated member is the District Engineer, U.S. Army Engineer District, St. Louis. 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 XV(B) (Project Managers).

F. Following elevation of a dispute to the DRC, the DRC shall have twenty-eight (28) days to unanimously resolve the dispute and issue a written decision, unless the Parties extend the time period by written agreement. If the DRC is unable to unanimously resolve the dispute within this twenty-eight (28) 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-eight (28) day resolution period.

G. 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 VII. The State's representative on the SEC is the Legal Counsel to the Governor. The Corps' representative on the SEC is the Division Engineer, U.S. Army Engineer Division, Mississippi Valley. 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 or such other time as the Parties agree upon in writing, the EPA Regional Administrator shall issue a written position on the dispute. The Assistant Secretary of the Army for Civil Works (ASA-CW) or the Governor of Iowa 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 that a Party elects not to elevate the dispute to the Administrator within the designated fourteen (14) day escalation period, the Party shall be deemed to have agreed with Regional Administrator's written position with respect to the dispute.

H. Upon escalation of a dispute to the Administrator of EPA pursuant to Paragraph G, 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 ASA-CW and the Governor of Iowa to discuss the issue(s) under dispute. Upon resolution, the Administrator shall provide the Corps 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.

I. The pendency of any dispute under this Section shall not affect the Corps' 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 schedule.

J. When dispute resolution is in progress, work affected by the dispute will immediately be discontinued if the Superfund Division Director for EPA Region VII or the Iowa Director of the Department of Public Health requests, in writing, that work related to the dispute be stopped because, in the opinion of EPA or the State, 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. To the extent possible, EPA and the State shall consult with the Corps prior to initiating a work stoppage request. After stoppage of work, if the Corps believes that the work stoppage is inappropriate or may have potential significant adverse impacts, the Corps may immediately meet with the Superfund Division Director and the Director of the Department of Public Health to discuss the work stoppage. Following this meeting and further consideration of the issues, the Superfund Division Director will issue within two (2) days following the meeting, in writing, a final decision with respect to the work stoppage. The final written decision of the Superfund Division Director may immediately be subjected to formal dispute resolution. Such dispute may be brought directly to either the DRC or the SEC, at the discretion of the Corps or the State.

K. Within twenty-eight (28) days of resolution of a dispute pursuant to the procedures specified in this Part, the Corps 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.

L. 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, except as provided below in this Section XII(M) (Resolution of Disputes), below.

M. The State reserves the right to maintain an action under CERCLA Section 121(f)(3)(B), 42 U.S.C. Section §9621(f)(3)(B), to challenge the selection of a remedial action that the State determines does not attain a legally applicable or relevant and appropriate standard, requirement, criteria, or limitation.

XIII. QUALITY ASSURANCE

A. The Parties shall use Quality Assurance, Quality Control (QA/QC) and chain-of-custody procedures during all field investigation, sample collection, and laboratory analysis activities in accordance with EPA guidance. For each chemical data collection effort, the Corps shall develop an element specific Quality Assurance Project Plan (QAPP), as necessary, for review and comment by EPA and the State. The QAPP shall be prepared in accordance with applicable EPA guidance.

B. In order to assure quality assurance and maintain quality control regarding all samples collected pursuant to this Agreement, the Corps shall submit all protocols to be used for sampling and analysis to EPA and the State for review and comment. The Corps shall also ensure that any laboratory used for analysis is a participant in a quality assurance/quality control program that is consistent with EPA guidance.

C. The Corps shall also ensure that appropriate EPA and State personnel or their authorized representatives will be allowed access to any laboratory used by the Corps in implementing this Agreement. Such access shall be for the purpose of validating sample analyses, protocols and procedures required by the Remedial Investigation and Quality Assurance Project Plan. The Corps shall ensure that lab audits are conducted as appropriate, and results of audits are provided as requested to EPA and State.

XIV. SAMPLING AND DATA DOCUMENT AVAILABILITY

A. The Corps shall make available to EPA and the State all results of sampling, tests and other data collection, including quality assurance documentation obtained by it, or on its behalf, with respect to the implementation of this Agreement within thirty (30) days of receipt of such results. This includes, but is not limited to, sampling of all areas known or suspected to have been contaminated by hazardous substances, and any water supply wells and systems, included in the remedial investigation. If quality assurance is not completed within thirty (30) days of receipt of results, summarized raw data or results shall be submitted within the thirty (30) day period and quality assured data or results shall be submitted immediately upon receipt by the Corps.

B. At the request of EPA or the State, the Corps shall allow the Party making the request to collect split or duplicate samples of all samples collected pursuant to this Agreement. The Corps shall notify EPA and the State at least fourteen (14) days prior to any sample collection. If it is not possible to provide fourteen (14) business days advance notice, the Corps shall provide as much notice as possible that samples will be collected. EPA and the State shall make the quality-assured results of all sampling, test, or other data available to the Corps within thirty (30) days of receipt of such results.

XV. PROJECT MANAGERS

A. The following individuals are designated as the Project Manager for the respective party:

1. For EPA:

Scott Marquess
Superfund Division
U.S. Environmental Protection Agency
Region VII
901 North 5th Street
Kansas City, Kansas 66101
Telephone number (913) 551-7131

Fax number: (913) 551-7063
Email: marquess.scott@epa.gov

2. For the Corps:

Sharon Cotner
FUSRAP Manager
8945 Latty Ave.
Berkeley, MO 63134
Telephone number: (314) 260-3915
Fax number: (314) 260-3941
Email: Sharon.R.Cotner@mvs02.usace.army.mil

3. For the State of Iowa:

Tom Newton
Iowa Department of Public Health (IDPH)
Lucas State Office Building, Des Moines, Iowa 50319
Telephone number (515) 281-5099
Fax number: (515) 281-4529
Email: TNewton@idph.state.ia.us

B. All verbal notices and written documents, including, but not limited to written notices, reports, plans, and schedules requested or required to be submitted pursuant to this Agreement shall be directed to the designated Project Managers. To the maximum extent possible, all communications between the Parties concerning the terms and conditions of this Agreement shall be directed through the Project Managers. Each Project Manager shall be responsible for assuring that all communications from the other Project Managers are appropriately disseminated and processed by the entities which the Project Managers represent.

C. The EPA and State Project Managers and designees shall have the authority to:

1. Take samples, request split samples of the Corps' samples and ensure that work is performed properly, pursuant to EPA or State protocols as well as pursuant to the Attachments and plans incorporated into this Agreement;
2. Observe all activities performed pursuant to this Agreement, take photographs or have photographs taken, and make such other reports on the progress of the work as the Project Manager deems appropriate, subject to the limitations set forth in Section XVI (Access) of this Agreement;
3. Review records, files and documents relevant to this Agreement; and

4. Recommend and request minor field modifications to the work to be performed pursuant to this Agreement, or in techniques, procedures or design utilized in carrying out this Agreement, which are necessary to the completion of the final remedial action.
- D. At the request of the Corps Project Manager, the EPA and State similarly shall allow the Corps to take split or duplicate samples of samples collected by EPA or the State.
- E. The Corps Project Manager may recommend and request minor field modifications to the work to be performed pursuant to this Agreement, or in techniques, procedures or design utilized in carrying out this Agreement, which are necessary to the completion of the final remedial action.
- F. Any field modifications proposed under this Section by any Party must be approved orally by the EPA, State, and Corps Project Managers to be effective. If agreement cannot be reached on the proposed additional work or modification to work, dispute resolution as set forth in Section XII (Resolution of Disputes) may be used in addition to this Part.
- G. Within five (5) business days following a modification made pursuant to this Part, the Project Manager who requested the modification shall prepare a memorandum detailing the modification and the reasons therefore, and shall provide a copy of the memorandum to the other Project Managers. The Parties recognize that modifications and corresponding changes to remedial investigation and response action contracts may necessitate extensions of timetables and deadlines.
- H. The Project Manager for the Corps or his/her authorized designated representative shall be physically present on the Site or reasonably available to supervise work performed at the Site during implementation of the work performed pursuant to this Agreement and shall make himself/herself available to EPA and the State for the pendency of this Agreement. The EPA and State Project Managers need not be present at the Site and their absence from the Site shall not be cause for work stoppage.
- I. Either Party may change its designated project manager by providing written notice to the other Parties of the change, within five (5) days of the change.

XVI. ACCESS

- A. The Corps shall provide access to the EPA and the State to all property upon which any activities are being conducted or have been conducted pursuant to this Agreement. The EPA and the State, and their authorized representatives shall be able to enter and move freely about such property at all reasonable times for the purposes related to activities conducted pursuant to this Agreement, including, among other things, the following:

1. Inspecting and copying records, files, photographs, operating logs, contracts and other documents relative to the implementation of this Agreement;
2. Reviewing the status of activities being conducted pursuant to this Agreement;
3. Collecting such samples or conducting such tests as the EPA or State determines are necessary or desirable to monitor compliance with the terms of this Agreement or to protect the public health, welfare, or the environment;
4. Using sound, optical or other types of recording equipment to record activities which have been or are being conducted pursuant to this Agreement; and
5. Verifying data and other information submitted by the Corps pursuant to this Agreement.

B. The Corps shall provide an authorized escort, or ensure that an authorized escort is provided, whenever the EPA or the State requires access to restricted areas of IAAAP for purposes consistent with the provisions of this Agreement. The EPA and the State shall provide reasonable notice to the Corps Project Manager of dates of proposed site inspections. The EPA and the State shall not use any camera, sound recording or other electronic recording device at IAAAP without prior authorization, consistent with IAAAP security procedures. Such authorization shall not be unreasonably withheld.

C. The rights to access by the EPA and the State granted in Paragraph A of this Section, shall be consistent with those regulations as may be necessary to protect national security. Upon denying any aspect of access, the Corps shall provide an explanation within forty eight (48) hours of the reason for the denial and provide a recommendation for accommodating the requested access in an alternate manner. The Parties agree that this Agreement is subject to CERCLA 120(j), 42 U.S.C. 9620(j), regarding the issuance of Site Specific Presidential orders as may be necessary to protect national security.

D. All Parties with access to IAAAP pursuant to this Section shall comply with all applicable health and safety plans.

E. To the extent that activities pursuant to this Agreement must be carried out on other than Army/IAAAP property, the Corps shall use its best efforts to obtain access agreements from the owners which shall provide reasonable access for the EPA, the State, and their representatives. In the event that the Corps is unable to obtain such access agreements, the Corps shall promptly notify the EPA and the State.

XVII. ENFORCEABILITY

A. The Parties agree that:

1. 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 Section 310 of CERCLA, and any violation of such standard, regulation, condition, requirement or order will be subject to civil penalties under Sections 310(c) and 109 of CERCLA; and
2. All timetables or deadlines associated with the RI/FS shall be enforceable by any person pursuant to Section 310 of CERCLA, and any violation of such timetables or deadlines will be subject to civil penalties under Sections 310(c) and 109 of CERCLA;
3. All terms and conditions of this Agreement which relate to interim or final remedial actions, including corresponding timetables, deadlines or schedules, and all work associated with the interim or final remedial actions, shall be enforceable by any person pursuant to Section 310(c) of CERCLA, and any violation of such terms or conditions will be subject to civil penalties under Sections 310(c) and 109 of CERCLA; and
4. Any final resolution of a dispute pursuant to Section XII (Resolution of Disputes) of this Agreement which establishes a term, condition, timetable, deadline or schedule shall be enforceable by any person pursuant to Section 310(c) of CERCLA, and any violation of such term, condition, timetable, deadline or schedule will be subject to civil penalties under Sections 310(c) and 109 of CERCLA.
5. 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 Section 113 and 310, 42 U.S.C. Sections §§ 9613 and 9659. The Corps does not waive any rights it may have under CERCLA Section 120, SARA Section 211, 10 U.S.C. 2701 et seq., and Executive Order 12580.
6. The parties agree to exhaust their rights under Section XII (Resolution of Disputes) prior to exercising any rights to judicial review that they may have.

B. 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 Section 113(h) of CERCLA.

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

XVIII. STIPULATED PENALTIES

A. In the event that the Corps fails to submit a primary document as provided for in Section IX (Consultation) to EPA 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 is related to an interim or final remedial action, EPA may assess a stipulated penalty against the Corps. 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 Paragraph occurs.

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

C. The annual reports required by Section 120(e)(5) of CERCLA shall include, with respect to each final assessment of stipulated penalty against the Corps under this Agreement, each of the following:

1. The facility responsible for the failure;
2. A statement of the facts and circumstances giving rise to the failure;
3. A statement of any administrative or other corrective action taken at the relevant facility, or a statement of why such measures were determined to be inappropriate;
4. A statement of any additional action taken by or at the facility to prevent recurrence of the same type of failure; and
5. The total dollar amount of the stipulated penalty assessed for the particular failure.

D. 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 Corps for the FUSRAP for this purpose.

E. In no event shall this Section give rise to a stipulated penalty in excess of the amount set forth in Section 109 of CERCLA.

F. This Section shall not affect the Corps' ability to obtain an extension of a timetable, deadline or schedule pursuant to Section XX (Extensions) of this Agreement.

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

XIX. PERMITS

As provided in Section 121(e)(1) of CERCLA, 42 U.S.C. § 9621(e) (1), no Federal, state, or local permit shall be required for those portions of the response actions undertaken pursuant to this Agreement which are conducted entirely on-site. "On-site" is defined in the National Contingency Plan as "the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action." (40 CFR §300.5.) Such on-site response actions must satisfy the substantive requirements of all applicable or relevant and appropriate Federal and State standards, requirements, criteria, or limitations which would have been included in any such permit.

XX. EXTENSIONS

A. Either a timetable and deadline or a schedule 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 the Corps shall be submitted in writing and shall specify:

1. The timetable and deadline or the schedule that is sought to be extended;
2. The length of the extension sought;
3. The good cause(s) for the extension; and
4. Any related timetable and deadline or schedule that would be affected if the extension were granted.

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

1. An event of force majeure as defined in Section XXV (Force Majeure);
2. A delay caused by another party's failure to meet any requirement of this Agreement;
3. A delay caused by the good faith invocation of dispute resolution or the initiation of judicial action;

4. 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; and

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

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

D. Within seven days of receipt of a request for an extension of a timetable and deadline or a schedule, EPA and the State shall advise the Corps in writing of their respective positions on the request. Any failure by EPA or the State to respond within the 7-day period shall be deemed to constitute concurrence in the request for extension. If EPA or the State does not concur in the requested extension, it shall include in its statement of non-concurrence an explanation of the basis for its position.

E. If there is consensus among the Parties that the requested extension is warranted, the Corps 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 determination resulting from the dispute resolution process.

F. Within seven days of receipt of a statement of non-concurrence with the requested extension, the Corps may invoke dispute resolution.

G. A written, timely, and good faith request 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.

XXI. RESERVATION OF RIGHTS

A. Nothing in this Agreement shall preclude the EPA or the State from exercising any administrative, legal, or equitable remedies available to them in the event that:

1. Conditions previously unknown or undetected by the EPA or the State arise or are discovered at the Site; or

2. The EPA or the State receives information not previously available concerning the premises they employed in reaching this Agreement; or
 3. The implementation of the requirements of this Agreement are no longer protective of human health and the environment; or
 4. The Corps fails to meet any of its obligations under this Agreement; or
 5. The Corps fails or refuses to comply with any applicable requirement of CERCLA or RCRA or State laws or related regulations; or
 6. The Corps, its officers, employees, contractors, or agents falsify information, reports, or data, or make a false representation or statement in a record, report, or document relating to the release of hazardous materials at the Site, and this information affects the determination of whether an RA is protective of human health and the environment. For purposes of this paragraph, conditions at the Site and information known to the EPA and the State shall include only those conditions and information known as of the date of the relevant response action decision document.
- B. The Corps reserves the right to raise or assert any defense, whether procedural or substantive, in law or equity, or to raise any issue to jurisdiction or standing of any Party, or any other matter in any proceeding related to this Agreement, which the Corps might otherwise be entitled to raise or assert where those rights are not inconsistent with the provisions of this Agreement, CERCLA or the NCP.
- C. EPA and the State reserve such rights as they may have to undertake response action(s) to address the release or threat of release of hazardous substances at or from the Site at any time and, to the extent permitted by law, to seek reimbursement from the Army thereafter for costs incurred.
- D. Neither the EPA nor the State shall be held as a party to any contract entered into by the Corps to implement the requirements of this Agreement.

XXII. OTHER CLAIMS

- A. Subject to Section VIII (Statutory Compliance), nothing in this Agreement shall restrict EPA or the State from taking any action under CERCLA, RCRA, state law, or other environmental statutes for any matter not specifically part of the work performed pursuant to this Agreement.
- B. Nothing in this Agreement shall constitute or be construed as a release from any claim,

cause of action or demand in law or equity 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 wastes, pollutants, or contaminants found at, taken to, or taken from the IAAAP.

XXIII. PUBLIC PARTICIPATION

A. In accordance with Section 117 of CERCLA, 42 U.S.C. 9617, before adoption of any plan for remedial action pursuant to this Agreement, the Corps shall:

1. Publish in a local newspaper, or newspapers of general circulation, a notice and brief analysis of the Proposed Plan, including an explanation of the Proposed Plan and alternatives considered;
2. Make such Plan available to the public; and
3. Provide a reasonable opportunity for submission of written and oral comments and an opportunity for a public meeting at or near the facility regarding the Proposed Plan and any proposed findings under Section 121(d) (4) of CERCLA, 42 U.S.C. 9621 (d)(4).

B. Before commencement of any remedial action, the Corps shall publish a notice of the Record of Decision adopted and shall make available to the public, the Plan, a discussion of any significant changes and the reasons for the changes in the Proposed Plan, a response to each significant comment, criticism, and new data submitted during the public comment on the proposed plan.

C. The Corps shall develop and implement a Community Relations Plan (CRP) which responds to the need for an interactive relationship with all interested community elements, regarding activities and elements of work undertaken by the Corps. The CRP shall recognize the need for public information meetings to be held during RI/FS and RD/RA activities. The EPA or the State may request that the Corps hold a public information meeting at any time during the RI/FS and RD/RA activities. The Corps agrees to develop and implement a CRP in a manner consistent with Section 117 of CERCLA, the NCP, EPA guidelines set forth in EPA's Community Relations Handbook, and any modifications thereto.

D. As part of its Community Relations activities, the Corps shall maintain a mailing list of interested and affected individuals. The EPA and the State will submit the name of the requester for site information to the Corps. The Corps shall add the name of the requester to the mailing list. The Corps shall provide the EPA and the State with annual updates of the mailing list.

E. Except for EPA press releases regarding enforcement actions, any Party issuing a formal press release to the media regarding any of the work required by this Agreement shall advise the other Party of such press release and the contents thereof, at least two (2) business days before the issuance of such press release and of any subsequent changes prior to release.

F. Within thirty (30) days of the effective date of this Agreement, the Corps shall establish and maintain an Administrative Record, which will include an index of all documents contained therein. The Administrative Record shall be maintained at or near the Site in accordance with Section 113(k) of CERCLA, 42 U.S.C. 9613(k). The Administrative Record shall be established and maintained in accordance with current and future EPA policy and guidelines. The Administrative Record developed by the Corps shall be routinely updated and copies of documents included within the Administrative Record shall be provided to the EPA and the State on at least a quarterly basis beginning with the first quarter following the effective date of this Agreement. The Corps shall maintain a current index of the documents in the Administrative Record and shall provide the EPA and the State copies of the current index on at least a quarterly basis beginning with the first quarter following the effective date of this Agreement. The EPA shall make the final determination on whether a document is appropriate for inclusion in the Administrative Record.

G. The Corps shall follow the public participation requirement of Section 113(k) of CERCLA and comply with any guidance and/or regulations promulgated by the EPA.

XXIV. PUBLIC COMMENT

A. Within fifteen (15) days of the date EPA receives a fully executed copy of this Agreement the EPA shall announce the availability of this Agreement to the public for review and comment. EPA shall accept comments from the public for a period of forty-five (45) days after such announcement. Upon completion of the public comment period, the EPA shall provide copies of all comments received to the Corps and the State.

B. Upon completion of the public comment period, each of the Parties shall review the comments and shall determine either that:

1. The Agreement should be made effective in the present form; or,
2. Modification of the Agreement is necessary.

C. Any Party that determines modification of the Agreement is necessary shall provide a written request for modification to each of the other Parties. This request for modification shall be made within twenty (20) days of the date that Party received copies of the comments from the EPA, or, in the event the EPA requests modification, within twenty (20) days of the date copies of the comments were provided to the other Party. The request for modification shall include:

1. A statement of the basis for determining the modification is necessary; and
2. Proposed revisions to the Agreement addressing the modification.

D. If no request for modification is made within the time period specified above, this Agreement shall be made effective in its present form in accordance with Section XXIX (Effective Date), hereof.

E. If any Party requests modification of the Agreement as provided above, the Parties shall meet to discuss the proposed modification. If the Parties agree on the modification, the Agreement shall be revised, in writing, in accordance with the agreed upon modification. The revised Agreement shall be signed by representatives of each Party and shall be made effective in accordance with Section XXIX (Effective Date), hereof. If the Parties are unable to agree upon such modification, any Party reserves the right to withdraw from the Agreement. Before any Party exercises its right to withdraw from the Agreement, it shall make its SEC representatives, as identified in Section XII(G) (Resolution of Disputes) hereof, available to meet with the other Parties' SEC representatives to discuss the withdrawal.

F. In the event of a significant modification to the Agreement after public comment, notice procedures of Sections 117 of CERCLA and 211 of SARA shall be followed and a responsiveness summary published by the EPA.

XXV. FORCE MAJEURE

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 Corps; delays caused by compliance with applicable statutes or regulations governing contracting, procurement or acquisition procedures, despite the exercise of reasonable diligence; and insufficient availability of appropriated funds, if the Corps shall have made timely request for such funds as part of the budgetary process as set forth in Section XXVI (Funding), of this Agreement, below. 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.

XXVI. FUNDING

- A. It is the expectation of the Parties to this Agreement that all obligations of the Corps arising under this Agreement will be fully funded. The Corps agrees to seek sufficient funding through the Corps budgetary process to fulfill its obligations under this Agreement.
- B. In accordance with CERCLA Section 120(e)(5)(B), 42 U.S.C. Section 9620(e)(5)(B) the Corps shall submit to Congress the specific cost estimates and budgetary proposals associated with the implementation of this Agreement.
- C. Any requirement for the payment or obligation of funds, including stipulated penalties, by the Corps 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.
- D. If appropriated funds are not available to fulfill the Corps' obligations under this Agreement, EPA and the State reserve the right to initiate an action against any other person, or to take any response action, which would be appropriate absent this Agreement.
- E. Funds authorized and appropriated annually by Congress under the FUSRAP Appropriation in the Energy and Water Appropriations Acts will be the source of funds for activities addressed by this Agreement. However, should the FUSRAP appropriation be inadequate in any year to meet the total Corps implementation requirements under this Agreement, the Corps will, after consulting with the other Parties and discussing the inadequacy with the members of the public interested in the action in accordance with Section XXXI (Budget Development and Amendment of the Site Management Plan), prioritize and allocate that year's appropriation.

XXVII. TERMINATION AND SATISFACTION

- A. The provisions of this Agreement shall be deemed satisfied upon a consensus of the Parties that the Corps has completed its obligations under the terms of this Agreement. Following EPA Certification of the remedial actions at the Site pursuant to Section XXXII.D.2 (Work to be Performed) any Party may propose in writing the termination of this Agreement upon a showing that the objectives of this Agreement have been satisfied. A Party opposing termination of this Agreement shall serve its objection upon the proposing Party within 30 days of receipt of the proposal. No Party shall unreasonably withhold or delay termination of this Agreement.

B. The obligations and objectives of this Agreement, except for the continuing obligations identified below, shall be deemed satisfied and terminated upon receipt by the Corps of written notice from the EPA, with concurrence of the State, that the Corps has demonstrated that all the requirements of this Agreement have been satisfied.

C. Any disputes arising from this Termination and Satisfaction process shall be resolved pursuant to the provisions of Section XII (Resolution of Disputes) of this Agreement.

D. This Section shall not affect the Parties' continuing obligations pursuant to Section XXXVI (Preservation of Records) or Section XXXIII (Periodic Review) of this Agreement. In no event will this Agreement terminate prior to the Corps' completion of the Work required by this Agreement.

XXVIII. EXEMPTIONS

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

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

B. The order of an appropriate court.

XXIX. EFFECTIVE DATE

This Agreement is effective upon issuance of a notice to the Corps by EPA following implementation of Section XXIV (Public Comment), above, of this Agreement.

XXX. DEADLINES AND CONTENTS OF SITE MANAGEMENT PLAN

A. This Agreement establishes a process for creating the Site Management Plan (SMP). The SMP is attached to this Agreement as Appendix B. The SMP and each annual Amendment to the SMP shall be Primary Documents. Milestones established in an SMP or established in a Final Amendment to an SMP remain unchanged unless otherwise agreed to by the Parties or unless directed to be changed pursuant to the agreed dispute resolution process set out in Paragraphs D.2 and E.1 of Section XXXI (Budget Development and Amendment of Site Management Plan). In addition, if an activity is fully funded in the current fiscal year, Milestones associated with the performance of Work and submittal of Primary Documents associated with such activity shall be enforceable.

B. Milestones in the SMP reflect the priorities agreed to by the Parties through a priority setting process. Site activities have been prioritized by weighing and balancing a variety of factors including, but not limited to: (i) the risks for the Site; (ii) current, planned, or potential uses of the Facility; (iii) ecological impacts; (iv) impacts on human health; (v) intrinsic and future value of affected resources; (vi) cost effectiveness of the proposed activities; (vii) environmental justice considerations; (viii) regulatory requirements; and (ix) actual and anticipated funding levels. While Milestones should not be driven by budget targets, such targets should be considered when setting Milestones. Furthermore, in setting and modifying Milestones, the Parties agree to make good faith efforts to accommodate federal fiscal constraints, which include budget targets established by the Corps.

C. The SMP and its annual Amendments include:

1. A description of FUSRAP actions necessary to mitigate any immediate threat to human health or the environment;
2. A listing of all currently identified FUSRAP SSAs, OUs, IRAs, Supplemental Response Actions, and Time-Critical and Non-Time Critical Removal Actions covered or identified pursuant to this Agreement;
3. Activities and schedules for response actions covered by the SMP:
 - a. Identification of any Primary Actions;
 - b. All Deadlines;
 - c. All Near Term Milestones;
 - d. All Out Year Milestones;
 - e. All Target dates;
 - f. Schedule for initiation of RDs, IRAs, Non-Time Critical Removal Actions, and any initiation of other planned response action(s) covered by this Agreement; and,
 - g. All Project End Dates.

D. The Corps shall submit an Amendment to the SMP on an annual basis as provided in Section XXXI (Budget Development and Amendment of Site Management Plan). All Amendments to the SMP shall conform to all of the requirements set forth in this Section.

E. The Milestones established in accordance with this Section and Section XXXI (Budget Development and Amendment of Site Management Plan) remain the same unless otherwise agreed by the Parties, or unless changed in accordance with the dispute resolution procedures set out in Paragraphs D.2 and E.1 of Section XXXI. The Parties recognize that possible bases for requests for changes or extensions of the Milestones include but are not limited to:

1. the identification of significant new conditions at this installation;
2. the reprioritization of activities under this Agreement caused by changing priorities or new site conditions elsewhere in the Corps;
3. the reprioritization of activities under this Agreement caused by budget adjustments (e.g., recisions, inflation adjustments, and reduced Congressional appropriations);
4. an event of Force Majeure;
5. a delay caused by another Party's failure to meet any requirement of this Agreement;
6. a delay caused by the good faith invocation of dispute resolution or the initiation of judicial action;
7. 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; and
8. any other event or series of events mutually agreed to by the Parties as constituting good cause.

F. The Deadlines established in the SMP and its Amendments shall be published by the EPA and the State.

XXXI. BUDGET DEVELOPMENT AND AMENDMENT OF SITE MANAGEMENT PLAN

A. The Corps, as a federal agency, is subject to federal fiscal controls. A planning, programming, and budgeting process (budget process) is used to review total requirements for Corps/FUSRAP programs and make appropriate adjustments to outyear budgets. The Parties recognize that the budget process is a multi-year process. The Parties also agree that all Parties should be involved in the full cycle of budget development activities as specified in this Agreement. Further, the Parties agree that each Party should consider the factors listed in Paragraph B of Section XXX (Deadlines and Contents of Site Management Plan), including

federal fiscal constraints, as well as each of the other factors, in their priority-setting decisions. Initial efforts to close any gap between cleanup needs and funding availability shall be focused on the identification and implementation of cost savings.

B. Facility-Specific Budget Building. In order to promote effective involvement by the Parties in the budget development process, the Parties will meet at the Project Manager level in person or by phone for the purpose of (1) discussing the outyear budget controls; (2) developing a list of requirements/Work to be performed by FUSRAP at the Site for inclusion in the Corps' budget process; and, (3) participating in development of the Corps' submission to the President's proposed budget, based on budget decisions for the year currently under consideration. In May of each FY, unless the Parties agree to a different time frame, the Parties will meet, at the Project Manager level to discuss the budget controls. This consultation must occur at least 10 days prior to the Corps' initial budget submission to Corps Headquarters. In the event that the Project Managers cannot agree on funding levels required to perform all Work outlined in the SMP, the Parties agree to make reasonable efforts to informally resolve these disagreements, either at the immediate or secondary supervisor level; this would also include discussions, as necessary, with Corps Headquarters. If agreement cannot be reached informally within a reasonable period of time, the Corps shall resolve the disagreement, if possible with the concurrence of all Parties, and notify each Party. If all Parties do not concur in the resolution, the Corps will forward to Corps Headquarters its budget request with the views of the Parties not in agreement and also inform Corps Headquarters of the possibility of future enforcement action should the money requested not be sufficient to perform the Work subject to disagreement. In addition, if the Corps' budget submission relating to the terms and conditions of this Agreement does not include sufficient funds to complete all Work in the existing SMP, such budget submission shall include supplemental reports that fully disclose the Work required by the existing SMP, but not included in the budget request due to fiscal controls (e.g., a projected budget shortfall). These supplemental reports shall accompany the cleanup budget that the Corps submits through its higher Headquarters levels until the budget shortfall has been satisfied. If the budget shortfall is not satisfied, the supplemental reports shall be included in the Corps' budget submission to the Corps Comptroller. The Assistant Secretary of the Army (Civil Works) shall receive information copies of any supplemental reports submitted to the Corps Comptroller.

C. Corps Budget for Clean Up Activities. The Corps shall forward to the other Parties documentation of the budget requests (and any supplemental reports) for the Site, as submitted by the Corps to Corps Headquarters, within 14 days after the submittal of such documentation to Corps Headquarters. If the Corps proposes a budget request relating to the terms and conditions of this Agreement that impacts other installations, discussions with other affected EPA Regions and states regarding the proposed budget request need to take place.

D. **Amended SMP**

1. No later than July 15 of each year after the initial adoption of the SMP, the Corps shall submit to the other Parties a Draft Amendment to the SMP. When formulating the Draft Amendment to the SMP, the Corps shall consider funding circumstances (including OMB targets/guidance) and prioritization factors outlined in Paragraph B of Section XXX (Deadlines and Contents of Site Management Plan) to evaluate whether the previously agreed upon Milestones should change. Prior to proposing changes to Milestones in its annual Amendment to the SMP, the Corps will first offer to meet with the other Parties to discuss the proposed changes. The Parties will attempt to agree on Milestones before the Corps submits its annual Amendment by July 15, but failure to agree on such proposed changes does not modify the July 15 date, unless agreed by all the Parties. Any proposed extensions or other changes to Milestones must be explained in a cover letter to the Draft Amendment to the SMP. The Draft Amendment to the SMP should reflect any agreements made by the Parties during the budget development process outlined in this Section. Resolution of any disagreement over adjustment of Milestones pursuant to this subsection shall be resolved pursuant to Paragraph D.2 of Section XXXI (Budget Development and Amendment of Site Management Plan).

2. The Parties shall meet in-person or by phone as necessary to discuss the Draft Amendment to the SMP. The Parties shall use the consultation process contained in Section IX (Consultation) except that none of the Parties will have the right to use the extension provisions provided therein. Accordingly, comments on the Draft Amendment will be due to the Corps no later than 30 days after receipt by the EPA and the State of the Draft Amendment. If either the EPA or the State provide comments and are not satisfied with the Draft Amendment during this comment period, the Parties shall meet in-person or by phone to discuss the comments within 15 days of the Corps' receipt of comments on the Draft Amendment. The Draft Final Amendment to the SMP will be due from the Corps no later than 30 days after the end of the EPA and State comment period. During this second 30-day time period, the Corps will, as appropriate, make revisions and re-issue a revised draft herein referred to as the Draft Final Amendment. To the extent that Section IX (Consultation) contains time periods differing from these 30-day periods, this provision will control for consultation on the Amendment to the SMP.

a. If the Corps proposes in the Draft Final Amendment to the SMP modifications of Milestones to which either the EPA or the State have not agreed, those proposed modifications shall be treated as a request by the Corps for an extension. Milestones may be extended during the SMP review process by following Paragraphs D and E of Section XXX (Deadlines and Contents of Site Management Plan). All other extensions will be governed by Section XX (Extensions). The time period for the EPA and the State to respond to the request for extension will begin on the date the EPA and the State receive the Draft Final Amendment to the SMP, and the EPA and State shall advise the Corps in writing

of their respective positions on the request within 30 days. If the EPA and the State approve of the Corps' Draft Final Amendment, the document shall then await finalization in accordance with Paragraphs D.2.c and E of Section XXX (Deadlines and Contents of Site Management Plan). If the EPA or the State deny the request for extension, then the Corps may amend the SMP in conformance with the EPA's and the State's comments or seek and obtain a determination through the dispute resolution process established in Section XII (Resolution of Disputes) within 21 days of receipt of notice of denial. Within 21 days of the conclusion of the dispute resolution process, the Corps shall revise and reissue, as necessary, the Draft Final Amendment to the SMP. If the EPA or the State initiates a formal request for a modification to the SMP to which the Corps does not agree, the EPA or the State may initiate dispute resolution as provided in Section XII (Resolution of Disputes) with respect to such proposed modification. In resolving a dispute, the persons or person resolving the dispute shall give full consideration to the basis for changes or extensions of the Milestones referred to in Paragraph E of Section XXX (Deadlines and Contents of Site Management Plan) asserted to be present, and the facts and arguments of each of the Parties.

b. Notwithstanding Paragraph D.2.a of Section XXX (Deadlines and Contents of Site Management Plan), if the Corps proposes, in the Draft Final Amendment to the SMP, modifications of Project End Dates that are intended to reflect the time needed for implementing the remedy selected in the ROD but to which either the EPA or the State have not agreed, those proposed modifications shall not be treated as a request by the Corps for an extension, but consistent with Section XII (Resolution of Disputes), the EPA or the State may initiate dispute resolution with respect to such Project End Date.

c. In any dispute under this Section, the time periods for the standard dispute resolution process contained in Sections XII (Resolution of Disputes) shall be reduced by half in regard to such dispute, unless the Parties agree to dispute directly to the Senior Executive Committee (SEC) level.

d. The Corps shall finalize the Draft Final Amendment as a Final Amendment to the SMP consistent with the mutual consent of the Parties, or in the absence of mutual consent, in accordance with the final decision of the dispute resolution process. The Draft Final Amendment to the SMP shall not become final until 21 days after the Corps receives official notification of Congress' authorization and appropriation of funds if funding is sufficient to complete Work in the Draft Final SMP or, in the event of a funding shortfall, following the procedures in Paragraph E of Section XXX (Deadlines and Contents of Site Management Plan). However, upon approval of the Draft Final Amendment or conclusion of the dispute resolution process, the Parties shall implement the SMP

while awaiting official notification of Congress' authorization and appropriation to the extent permissible in accordance with fiscal law.

E. Resolving Appropriations Shortfalls

1. After authorization and appropriation of funds by Congress and within 21 days after the Corps has received official notification of Corps'/FUSRAP allocation, the Corps shall determine if planned Work (as outlined in the Draft Final Amendment to the SMP) can be accomplished with the allocated funds.

a. If the allocated funds are sufficient to complete all planned Work for that fiscal year and there are no changes required to the Draft Final Amendment to the SMP, the Corps shall immediately forward a letter to the other Parties indicating that the Draft Final Amendment to the SMP has become the Final Amendment to the SMP.

b. If the Corps determines within the 21-day period specified above that the allocated funds are not sufficient to accomplish the planned Work for the Site (an appropriations shortfall), the Corps shall immediately notify the Parties. The Project Managers shall meet within 30 days to determine if planned Work (as outlined in the Draft Final Amendment to the SMP) can be accomplished through: i) rescoping or rescheduling activities in a manner that does not cause previously agreed upon Near Term Milestones and Out Year Milestones to be missed; or ii) developing and implementing new cost-saving measures. If, during this 30-day discussion period, the Parties determine that rescoping or implementing cost-saving measures are not sufficient to offset the appropriations shortfall such that Near Term Milestones, Out Year Milestones, and Project End Dates should be modified, the Parties shall discuss these changes and develop modified Milestones. Such modifications shall be based on the prioritization process discussed in Paragraph B of Section XXX (Deadlines and Contents of Site Management Plan) and shall be specifically identified by the Corps. The Corps shall submit a new Draft Final Amendment to the SMP to the other Parties within 30 days of the end of the 30-day discussion period. In preparing the revised Draft Final Amendment to the SMP, the Corps shall give full consideration to EPA and State input during the 30-day discussion period. If the EPA and the State concur with the modifications made to the Draft Final Amendment to the SMP, the EPA and the State shall notify the Corps and the revised Draft Final Amendment shall become the Final Amendment. In the case of modifications of Milestones due to appropriations shortfalls, those proposed modifications shall, for purposes of dispute resolution, be treated as a request by the Corps for an extension, which request is treated as having been made on the date that the EPA and the State receive the new Draft Final SMP or Draft Final Amendment to the SMP. The EPA and the State shall advise the Corps in writing of their respective positions on the request within 21 days. The Corps may seek and obtain a determination

through the dispute resolution process established in Section XII (Resolution of Disputes). The Corps may invoke dispute resolution within 14 days of receipt of a statement of nonconcurrence with the requested extension. In any dispute concerning modifications under this Section, the Parties will submit the dispute directly to the SEC level, unless the Parties agree to use the standard dispute resolution process, in which case the time periods for the dispute resolution process contained in Section XII (Resolution of Disputes) shall be reduced by half in regard to such dispute. Within 21 days after the conclusion of the dispute resolution process, the Corps shall revise and reissue, as necessary, the Final Amendment to the SMP.

2. It is understood by all Parties that the Corps will work with representatives of the other Parties to reach consensus on the reprioritization of work made necessary by any annual appropriations shortfalls or other circumstances as described in the preceding paragraph. This may also include discussions with other EPA Regions and States with installations affected by the reprioritization; the Parties may participate in any such discussions with other States.

F. **Public Participation.** In addition to any other provision for public participation contained in this Agreement and as required by CERCLA, the development of the SMP, including its annual Amendments, shall include opportunity for participation by members of the public interested in this action. The Corps must ensure that the opportunity for such public participation is timely; but this Paragraph F shall not be subject to Section XVIII (Stipulated Penalties).

1. The Parties will meet, after seeking the views of the general public, and determine the most effective means to provide for participation by members of the public interested in this action in the budget process and the development of the SMP and its annual Amendments. The “members of the public interested in this action” may be represented by inclusion of a restoration advisory board or technical review committee, or by other appropriate means.

2. The Corps shall provide timely notification under Paragraph E of Section XXXI (Budget Development and Amendment of Site Management Plan) to the members of the public interested in this action.

3. The Corps shall provide opportunity for discussion under Paragraphs B, D.2, E and F of Section XXXI (Budget Development and Amendment of Site Management Plan) to the members of the public interested in this action.

4. The Corps shall ensure that public participation provided for in this Paragraph F complies with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

G. No provision herein shall be interpreted to require communications in violation of Section 22 OMB Circular No. A-11 (2003).

XXXII. WORK TO BE PERFORMED

General

1. It is hereby agreed by the Parties that the Corps shall conduct each of the following activities in accordance with the schedules set forth in the Site Management Plan pursuant to Section XXX. (Deadlines and Contents of Site Management Plan) of this agreement.

2. The Parties recognize that background information exists and must be reviewed prior to developing the Work Plans required by this Agreement. It is the intent of the Parties to this Agreement that Work done and data generated prior to the Effective Date of this Agreement be retained and utilized as elements of the RI/FS to the extent feasible.

3. The Corps is conducting a RI and FS for the sites listed in the attached Appendix A. The results of the RI may indicate that no response actions are required at some of these sites.

A. Remedial Investigation and Feasibility Study

1. The Corps shall conduct a Remedial Investigation and Feasibility Study (RI/FS), including a Baseline Risk Assessment, in accordance with the guidelines set forth in the document Entitled "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" OSWER Directive 9355.3-01 (October 1988) or more recent version thereof as EPA shall make available to the Corps during the course of the RI/FS. The Remedial Investigation shall include, among other things, the collection of data necessary to adequately characterize the site for the purpose of developing and evaluating effective remedial alternatives. Any disagreement as to the appropriateness of using any such guidance which changes during the course of work in progress shall be resolved in accordance with the dispute resolution in Section XII of this Agreement. The Remedial Investigation shall address the extent and nature of soil contamination at the Site and the extent and nature of releases of hazardous substances from the Site.

2. The RI shall be coordinated with the FS such that both activities are completed in a timely and cost effective manner.

B. Remedial Action Selection

1. Upon approval of a FS Report by the EPA and the State, the Corps shall, after consultation with the EPA and the State pursuant to Section IX. (Consultation with EPA

and the State) of this Agreement, publish the proposed plan for public review and comment in accordance with the public participation requirements of Part XXIII. (Public Participation) of this Agreement.

2. Within ninety (90) days of the completion of the public comment period on the proposed plan, the Corps shall submit its draft ROD, including its response to all significant comments received from the public during the public comment period (Responsiveness Summary), to the EPA and the State. The draft ROD and Responsiveness Summary shall be written in accordance with the guidance document entitled, "A Guide to Preparing Superfund Proposed Plan, Records of Decision, and Other Remedy Selection Decision Documents," OSWER Directive No. 9200.1-23P (July 1999) or more recent version thereof. In accordance with 40 C.F.R. Section 300.430 (f) (4) (iii), the selection of the remedial action(s) at the Site shall be jointly made by the Corps and the EPA in consultation with the State. If the Corps and the EPA are unable to reach agreement on selection of a remedial action in accordance with the dispute resolution procedures of Section XII (Resolution of Disputes), selection of the remedial action shall be made by the EPA Administrator. The remedial action selected by the EPA Administrator shall be final and is not subject to dispute resolution

3. The Corps shall commence substantial continuous physical onsite remedial action at the Site within fifteen (15) months of receipt of written notice of final approval of the ROD by the EPA.

4. The Corps shall implement the remedial action in accordance with the provisions, time schedule, standards and specifications set forth in the approved Remedial Action Work Plan.

5. Prior to commencement of any remedial action, the Corps shall provide for public participation in accordance with Section XXIII. (Public Participation) of this Agreement.

C. Remedial Design and Remedial Action

1. The SMP shall include a Target Date for submission of any preliminary RDs and a Deadline for the Draft RD, which documents shall be prepared in accordance with this Agreement and applicable Guidance issued by the EPA, including the EPA-Navy *Principles and Procedures for Specifying, Monitoring and Enforcement of Land Use Controls and Other Post-ROD Actions* (October 2003) and as may be amended by agreement of the EPA and the Navy and as accepted by the Army.

2. The RD shall provide the appropriate plans and specifications describing the intended remedial construction and shall include provisions necessary to ensure that the RA will achieve ARARs and performance standards identified in the ROD. The RD shall

describe short and long-term implementation actions, and responsibilities for the actions, to ensure long-term viability of the remedy, which may include both Land Use Controls and an engineered portion (e.g., landfill caps, treatment systems) of the remedy. The term “implementation actions” includes all actions to implement, operate, maintain, and enforce the remedy.

3. RA Work Plan(s) shall be prepared consistent with EPA guidance. The schedule contained in the final RA Work Plan(s) will be used to immediately update the SMP.

4. The RA shall be completed in accordance with the approved final RD and RA Work Plan.

5. Following the completion of the RA for each OU, the Corps shall submit to the EPA and the State the Remedial Action Completion Report (RACR), in accordance with the Schedule in the SMP. The RACR shall document the cleanup activities that took place at the OU, and that performance standards specified in the ROD have been met. The RACR shall outline in detail, and provide an explanation for, any activities that were not conducted in accordance with the final RD and/or RA Work Plan(s). In the event that any remedial action is a Long-Term Response Action (LTRA), a RACR shall be prepared when the physical construction of the system is complete and the unit is operating as designed. Such RACR shall be amended and finalized when the LTRA performance standards specified in the ROD are achieved.

6. EPA, the State and the Corps have committed to streamlining procedures and documentation for post-ROD activities.

D. Construction Completion/Remedial Action/EPA Certification

1. Construction Completion. The Corps agrees that it shall submit to EPA and the State information required to document completion of physical construction of the remedial action for all OUs within 30 days of completing physical construction at the Site as part of the final, amended RACR. This information must satisfy the NCP and provide a schedule for any remaining activities necessary to reach Site completion. The information will also address any Five-Year Review requirements.

2. Remedial Action/ Site Completion.

a. When the Corps determines that remedial actions at all OUs have been completed, it shall document this event by amending the final RACR and submitting it to EPA and the State for review. The information provided therein shall document compliance with statutory requirements and provide a consolidated record of all remedial activities for all OUs at the Site. In order for a Site to be eligible for completion, the following criteria must be met:

- i. Performance standards specified in all RODs have been met, and all cleanup actions and other measures identified in the RODs have been successfully implemented.
 - ii. The constructed remedies are operational and performing according to engineering specifications.
 - iii. All sites are protective of human health and the environment.
 - iv. The only remaining activities, if any, at the site are operation and maintenance activities (which may include long-term monitoring).
- b. Information provided shall summarize work at the entire site (i.e., all OUs). The RACR for each OU, including the final OU, is required to document that Work was performed according to design specifications. Information amended to the final RACR to indicate remedial action completion shall include a discussion regarding any operation and maintenance requirements and/or land use restrictions.
- c. Information provided for remedial action completion shall be signed by the Corps' signatory authority or designee, certifying that remedial activities have been completed in full satisfaction of the requirements of this Agreement, and shall include a request for EPA certification of remedial action completion at the Site. Within ninety (90) days of EPA's receipt of the Corps's request for certification of Site completion, EPA, in consultation with State, shall:
- i. Certify that all response actions have been completed at the Site in accordance with CERCLA, the NCP and this Agreement, based on conditions known at the time of certification; or
 - ii. Deny the Corps' request for certification of Site completion, stating the basis of its denial and detailing the additional Work needed for the completion and certification.
- d. If EPA, in consultation with the State, denies the Corps's request for certification for Site completion in accordance with this Agreement, the Corps may invoke dispute resolution in accordance with Section XII (Resolution of Disputes) of this Agreement within twenty-eight (28) days of receipt of the written denial of certification or determination that additional Work is necessary. If the denial of certification is upheld through the dispute resolution process, the Corps will perform the requested additional Work. If the denial is not upheld, then EPA shall issue the requested certification within twenty-eight (28) days of

resolution of dispute.

e. If dispute resolution is not invoked, or if a denial of certification is upheld through dispute resolution, the Corps shall, in the next draft Amended Site Management Plan submitted after receipt of the written denial of certification or dispute resolution finding, propose a Deadline for the submittal of a draft Supplemental Work Plan. The draft Supplemental Work Plan shall contain a Schedule for completion of the additional Work required. This Schedule, once approved, will be incorporated in the Site Management Plan. After performing the additional Work, the Corps may resubmit a request for certification to EPA as outlined in this Paragraph. EPA, in consultation with the State, shall then grant or deny certification pursuant to the process set forth in this Paragraph.

E. Removal Actions

1. Any removal actions undertaken by the Corps at the site shall be conducted in a manner consistent with CERCLA, the NCP, EPA guidance and applicable state law.

2. For all removal actions except emergency removals, prior to undertaking the action, the Corps shall advise EPA, in writing, as to the basis for the action, the nature of the action, the expected time period during which the action will be implemented, and the impact, if any on any remedial action contemplated at the Site. For emergency removals, the Corps shall provide as much advance notice as the circumstances leading to the removal action allow.

3. Prior to the initiation of any removal action, which is not an emergency removal, the Corps shall provide EPA adequate opportunity for timely review and comment on any such proposed removal action. Following consideration of EPA comment, the Corps shall provide to EPA a written response to those comments, as soon as practicable. The Corps determination as to the necessity for taking emergency removal action shall not be subject to Sections XII and XVIII of this agreement.

4. Upon completion of a removal action, the Corps shall provide to EPA in writing, notification of the completion of the removal action and a description of the action taken.

5. Nothing in this Agreement shall alter the Corps authority with respect to removal actions conducted pursuant to Section 104 of CERCLA, 42 U.S.C. Section 9604.

XXXIII. PERIODIC REVIEW

A. Subject to paragraph B below, the Corps or DOE shall conduct a periodic review of any final and supplemental response action taken at the Site to determine whether and to what extent

any additional remedial action is necessary. The periodic review shall be conducted in accordance with CERCLA § 121(c), 42 U.S.C. § 9621(c), and any pertinent regulation or guidance issued by EPA that is not inconsistent with CERCLA and NCP. Upon completion, the Corps or DOE shall provide the assessment report to the Parties.

B. When a remedial action is selected that results in hazardous substances, pollutants or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the Corps or DOE shall review such remedial action no less often than every five years after initiation of such remedial action to assure that human health and the environment are being protected. The Corps shall perform any such five-year review which shall take place prior to and two years after EPA approval of the Corps' RACR report and DOE shall perform any such five-year review which shall take place more than two years after EPA approval of the Corps' RACR report.

C. The assessment and selection of any additional response action determined necessary in the course of a periodic review shall be in accordance with Section X (Assessment and Selection of Supplemental Response Actions) hereof. Emergency actions shall be governed by Section XI (Emergency Removal Actions) hereof. Non-emergency response actions shall be implemented as a supplemental response action in accordance with Section X (Assessment and Selection of Supplemental Response Actions) hereof, unless the Project Managers agree in writing that more streamlined procedures are appropriate to correct deficiencies identified in the Periodic Review.

D. The EPA reserves the right to exercise any available authority to seek the performance of additional Work that arises from a Periodic Review, pursuant to applicable law.

E. The State reserves the right to exercise any authority under state law to seek the performance of additional Work when it is determined that such additional Work is necessary.

XXXIV. REPORTING

A. Throughout the course of the activities required by this Agreement, the Corps shall submit to the EPA and the State written quarterly progress reports, which shall include, but are not limited to, the following:

1. A brief description of the actions completed during the quarter towards compliance with this Agreement;
2. A brief description of all actions scheduled for completion during the quarter which were not completed, along with a statement indicating why such actions were not completed and an anticipated completion date;

3. Copies of all data and sampling and test results and all other laboratory deliverables received by the Corps and completed pursuant to this Agreement during the quarter, if not previously provided; and
 4. A brief description of the actions which are scheduled for the following quarter.
- B. These quarterly reports shall be due on or before the thirtieth (30th) day of the month following the quarter for which the report is submitted.
- C. The EPA and the State reserve the right to make reasonable requests for raw data and all other laboratory deliverables at any time.

XXXV. PROTECTED INFORMATION

- A. A Party may assert a confidentiality claim covering all or part of any information submitted to the parties pursuant to this Agreement, provided such claim is allowed by Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7). Analytical and other data specified in Section 104(e)(7)(F) of CERCLA shall not be claimed as confidential. Such a claim may be made by placing on or attaching to the information, at the time it is submitted to the other party, a cover sheet, stamped or typed legend or other suitable form of notice employing language such as "privileged", or "confidential". Allegedly confidential portions of otherwise non-confidential documents should be clearly identified and may be submitted separately to facilitate identification and handling by the other parties. If confidential treatment is sought only until a certain date or occurrence of a certain event, the notice should so state.
- B. If no such claim accompanies the information when it is received by receiving parties, the information may be made available to the public without further notice to the submitting Party.
- C. When a request to EPA seeks records in its possession which were submitted and claimed as confidential by the Corps, the EPA will either:
1. Refer the request to the Corps which will take responsibility for responding to the request; or
 2. Notify the Corps and provide the Corps with an opportunity to object to the release of the requested document. EPA agrees that the Corps' release determination will be controlling on EPA's use, release or sharing of the Corps-provided materials. For each document that the Corps determines should not be released pursuant to this subparagraph, the Corps shall provide the date, author(s), addressee(s), subject, the privilege or grounds claimed, and the factual basis for assertion of the privilege. The EPA will maintain the information determined to be confidential by the Corps in accordance with 40 C.F.R. Part 2.

D. All information submitted to the State will be treated as a public record by the State unless a party requests that the information be treated as confidential at the time it is submitted by marking the document as confidential. If the State receives a request for the release of a document marked confidential by another party, the State shall notify the party that submitted the document. The State shall provide that party an opportunity to object to the release of the requested document. Any objection must specify the specific ground in Iowa Code chapter 22 or other relevant provision of state or federal law which supports treatment of the information as confidential. A party's failure to request confidential treatment of information submitted to the State will be deemed by the State to be a waiver of any right to confidentiality that another party to this Agreement may have had.

XXXVI. PRESERVATION OF RECORDS

Despite any document retention policy to the contrary, a Party shall preserve during the pendency of this Agreement and for a minimum of seven (7) years after its termination, the records and documents normally kept by the Party which relate to the actions carried out pursuant to this Agreement. After this seven (7) year period, each Party shall notify the other Parties at least thirty (30) 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.

XXXVII. AMENDMENT OF THE AGREEMENT

This Agreement may be amended by the written agreement of all Parties hereto. No such amendment shall be final until signed by the Parties. Each such amendment shall be effective on the last date such written agreement is signed by the Parties. The Project Managers designated pursuant to Section XV (Project Managers) shall be the contacts for routing the Amendment for signatures by the respective Parties.

AUTHORIZED SIGNATURES

Each of the undersigned representatives of the Parties certifies that he or she is fully authorized by the Party he or she represents to enter into the terms and conditions of this Agreement. This Agreement shall apply to and be binding on the EPA, the Corps, the State and, only for purposes identified in Section I(F) (Jurisdiction) of this Agreement, DOE.

*IN THE MATTER OF:
THE U.S. ARMY CORPS OF ENGINEERS
IOWA ARMY AMMUNITION PLANT
MIDDLETOWN, IOWA*

*FUSRAP FEDERAL FACILITY AGREEMENT UNDER CERCLA SECTION 120
U.S. EPA, Region VII, Administrative Docket Number: CERCLA-07-2005-0378*

IT IS SO AGREED:

For the United States Army Corps of Engineers:

Brigadier General Robert Crear
Division Engineer
Mississippi Valley Division
U.S. Army Corps of Engineers

Date:

*IN THE MATTER OF:
THE U.S. ARMY CORPS OF ENGINEERS
IOWA ARMY AMMUNITION PLANT
MIDDLETOWN, IOWA*

*FUSRAP FEDERAL FACILITY AGREEMENT UNDER CERCLA SECTION 120
U.S. EPA, Region VII, Administrative Docket Number: CERCLA-07-2005-0378*

IT IS SO AGREED:

For the United States Department of Energy:

Michael Owen
Director
Office of Legacy Management
U.S. Department of Energy

Date:

*IN THE MATTER OF:
THE U.S. ARMY CORPS OF ENGINEERS
IOWA ARMY AMMUNITION PLANT
MIDDLETOWN, IOWA*

*FUSRAP FEDERAL FACILITY AGREEMENT UNDER CERCLA SECTION 120
U.S. EPA, Region VII, Administrative Docket Number: CERCLA-07-2005-0378*

IT IS SO AGREED:

For the State of Iowa:

Thomas J. Vilsack
Governor of Iowa

Date:

*IN THE MATTER OF:
THE U.S. ARMY CORPS OF ENGINEERS
IOWA ARMY AMMUNITION PLANT
MIDDLETOWN, IOWA*

*FUSRAP FEDERAL FACILITY AGREEMENT UNDER CERCLA SECTION 120
U.S. EPA, Region VII, Administrative Docket Number: CERCLA-07-2005-0378*

IT IS SO AGREED:

For the United States Environmental Protection Agency:

William W. Rice
Acting Regional Administrator
Region VII
U.S. Environmental Protection Agency

Date:

APPENDIX A

This Agreement covers response actions at the following 7 areas:

- Line 1
- Firing Site Area
- West Burn Pads Area (South of the Road)
- Warehouse 3-01
- Yard G
- Yard C
- Yard L, areas surrounding Warehouses L-37-1, L-37-2, and L-37-3

APPENDIX B

SITE MANAGEMENT PLAN

For

FUSRAP Activities

At

**Iowa Army Ammunition Plant
Middletown, Iowa**

May 2006

SITE MANAGEMENT PLAN IOWA ARMY AMMUNITION PLANT

Table of Contents

1.0	Introduction.....	65
	1.1 Purpose of the Site Management Plan.....	65
	1.2 Facility Description.....	66
	1.3 Previous Investigations and Response Actions	67
	1.4 Scope of FFA	69
2.0	Site Descriptions	70
	2.1. Line 1	70
	2.2. Firing Site (FS)	70
	2.3 Yard C.....	71
	2.4 Yard G.....	71
	2.5 Yard L.....	71
	2.6 Line 3, “Warehouse” 3-01	71
	2.7 West Burn Pads Area South of the Road	72
3.0	FUSRAP Actions Necessary to Mitigate Immediate Threats to Human Health or the Environment	72
	4.1 OUs	72
	4.2 Supplemental Response Actions	72
	4.3 Time-critical and Non-Time Critical Removal Actions	72
5.0	Proposed Activities For FY 2006 Through Completion	72
	5.1. Remedial Investigation	73
	5.2 Feasibility Study/Proposed Plan	73
	5.3. Record of Decision.....	74
	5.4 Remedial Design / Remedial Action	74
	5.5 Closeout	75
6.0	Identification of Schedule Elements	75
7.0	Site Management Plan Schedules	76
	7.1 Scheduling Assumptions.....	76
	7.2 FFA Schedule.....	77
	7.3 SMP Revision Schedule	77

1.0 Introduction

This Site Management Plan (SMP) for the Iowa Army Ammunition Plant (IAAAP) located in Des Moines County near Middletown, IA, fulfills the requirements for a SMP as described in Section XXX and XXXI of the Federal Facilities Agreement (FFA). This SMP has been prepared for use by the U.S. Army Corps of Engineers (USACE), St. Louis District, the United States Environmental Protection Agency (USEPA), Region VII and the State of Iowa, in accordance with the Iowa Army Ammunition Plant Formerly Utilized Sites Remedial Action Program (FUSRAP) CERCLA Section 120 Federal Facilities Agreement. The FFA will be completed by the Corps of Engineers under their FUSRAP. FUSRAP addresses contamination resulting from the Nation's early atomic weapons program as executed by the Manhattan Engineer District and the Atomic Energy Commission.

1.1 Purpose of the Site Management Plan

The purpose of the SMP and each of its subsequent annual amendments is to provide USACE, through its FUSRAP, EPA, and the State of Iowa with a management tool for planning, scheduling, and setting priorities for environmental remedial response activities to be conducted at IAAAP. This SMP addresses all of the activities associated with the FUSRAP activities at IAAAP. The SMP will address the following:

- a. A description of actions necessary to mitigate any immediate threat to human health or the environment.
- b. A listing of all currently identified Site Screening Areas (SSAs), Operable Units (OUs) (including Accelerated OUs), Interim Remedial Actions (IRAs), Supplemental Response Actions (SRAs), and Critical and Non-Time Critical Removal Actions.
- c. Activities and schedules for response actions covered by the SMP:
 - (1). Identification of any Primary Actions;
 - (2). All Deadlines;
 - (3). All Near Term and Out Year Milestones;
 - (4). All Target dates;
 - (5). Schedule for initiation of Remedial Designs (RDs), IRAs, Non-Time Critical Removal Actions, and any initiation of other planned response action(s) covered by this Agreement; and,
 - (6). All Project End Dates.

The SMP will be amended annually according to the process described in Section XXXI of the FFA.

1.2 Facility Description

The IAAAP is currently a Government-Owned, Contractor-Operated installation under the command of the Joint Munitions Command (JMC), Rock Island, Illinois. The current operating contractor is American Ordnance, LLC. The IAAAP is located in the southeastern part of Iowa, near Middletown approximately 10 miles west of the Mississippi River. It is a secured facility covering an area of approximately 19,100 acres in a rural setting. Public access to the installation is restricted by contractor security measures, including perimeter fencing, but various recreational activities are allowed in some non-industrial, on-site areas. These recreational activities include hunting and fishing. Approximately 7,700 acres are leased for agricultural use, 7,400 acres are forested, and the remaining approximately 4,000 acres are used for administrative and industrial purposes (i.e., ammunition plant areas). The topography of the IAAAP is roughly 60 percent flat and 40 percent rough and hilly. Little Flint Creek, Skunk River, Spring Creek, Brush Creek and Long Creek have portions of their watersheds on the facility.

The IAAAP produced munitions for World War II from the plant's inception in September 1941 until August 1945. Production was resumed in 1949 and has continued to the present. The ammunition items that are loaded, assembled and packed at the IAAAP include projectiles, mortar rounds, warheads, demolition charges, anti-tank mines, anti-personnel mines, and the components of those munitions, including primers, detonators, fuses, and boosters. The load, assemble and pack (LAP) operations use explosive material and lead-based initiating compounds. Only a few of the existing production lines are currently in operation.

Historical research indicates that portions of the IAAAP used by the Atomic Energy Commission (AEC), also known as the Burlington Atomic Energy Commission Plant, may contain contamination from activities that supported the nation's early atomic energy program. Areas used by AEC included Line 1 (including Former Line 1 Impoundment), the Explosives Disposal Area (including East Burn Pads, West Burn Pads Area, North Burn Pads, North Burn Pads Landfill), Yards C, G, and L, the Firing Site, Deactivation Furnace Area, Warehouse 3-01, the Security Command Center (SECOM) and Emergency Response Command Post (ERC). The IAAAP areas impacted by AEC operations consist of approximately 1,630 acres.

The IAAAP was placed on the National Priority List in August 1990 (EPA ID# IA7213820445). The site is in the Army's Installation Restoration Program (IRP) and investigation and remediation of non-radiological contamination has been ongoing since the early 1990s. The Administrative Record for IAAAP Comprehensive Environmental Response Compensation and Liability Act (CERCLA) actions is maintained by the Army and includes information and documentation that support remedy decisions at the site, including Remedial Investigations (RI), Feasibility Studies (FS), Proposed Plans, Records

of Decision (RODs), Engineering Evaluation/Cost Analyses (EE/CAs), Action Memoranda, Remedial Action (RA) Reports, and other documents.

1.3 Previous Investigations and Response Actions

a. General

(1) A number of environmental investigations and cleanup activities have been conducted at the IAAAP pursuant to CERCLA and the Army-EPA FFA (VII-F-90-0029). These CERCLA response actions, including, but not limited to RI, FS, Proposed Plans, Records of Decisions, EE/CAs, Removal Action Memoranda, and Remedial Action Reports are incorporated into the Army-EPA FFA.

(2) Three Records of Decision (ROD) exist for the IAAAP site. An Interim Soils ROD, dated March 1998, addresses the excavation, relocation and placement of contaminated soils from fifteen areas to the IAAAP Inert Disposal Area. The Final Soils ROD, dated August 1998, specifies the treatment of the most highly contaminated fraction of that soil. Remedial actions, as specified in the RODs, have been implemented at the Explosive Disposal Area (East Burn Pads), the West Burn Pads area, the North Burn Pads, the North Burn Pads Landfill. These remedial actions are documented in RA Reports contained in the Administrative Record. The existing soil RODs address non-radiological contamination at Line 1 and the West Burn Pads Area. Remedial action has yet to be implemented at these areas, both of which are to be addressed under the FUSRAP FFA. The third ROD is the Off Site Groundwater ROD dated June 2005. This ROD specifies the remedy for contaminated ground water south of IAAAP.

(3) The Army has performed soil cleanups as non-time critical removal actions at the Former Line 1 Impoundment, the Line 800 Pinkwater Lagoon, the Fire Training Pit, the Pesticide Pit, and other areas at the IAAAP.

b. Specific

(1) Prior to departure from the IAAAP in 1975, AEC conducted radiological survey of the Line 1 areas it occupied, including Buildings 1-2, 1-3, 1-5, 1-7, 1-11, 1-12, 1-13, 1-19, 1-40, 1-63, 1-64, 1-65, 1-66, 1-67, 1-77 and 1-137-2 and determined that no real property contained residual radioactive contamination above standard. However, the “standard” for comparison is not specified.

(2) In 1975, the AEC performed a cleanup at Firing Site (FS)-12, by excavating soils at the hydroshot detonation point, known as “ground zero”, and by scraping a few inches of topsoil off an area of several hundred square meters surrounding ground zero. In the cleanup, approximately 31,000 cubic feet, or 1,200 barrels of soil contaminated with depleted uranium (DU) metal pieces were temporarily stored in Building 1-11. These materials were subsequently disposed at a Sheffield, Illinois radioactive waste

disposal facility. After the AEC turned over operations of FS-12 to the Army in 1975, it was used for testing conventional weapons not containing DU until November 2000. Subsequent investigations in 2001 found chunks of DU at FS-12.

(3) Areas within the EDA were investigated in the RI (1996). The North Burn Pads, North Burn Pads Landfill, East Burn Pads, and West Burn Pads area are addressed in the 1998 Interim ROD. In the interim remedial action, soil from these areas with contaminants at levels exceeding ROD-specified remediation goals was disposed at the Inert Disposal Area, as follows:

<u>Date</u>	<u>Area</u>	<u>Soil Volume (cubic yards)</u>
1998	East Burn Pads	12,000
1998	North Burn Pads	3,000
1998	North Burn Pads Landfill	14,000
2000	West Burn Pads Area	43, 000

No radioactive materials were discovered during gross radiological screening.

(4) The Agency for Toxic Substances and Disease Registry has conducted a Public Health Assessment (December 1999) and several Health Assessments for the IAAAP.

(5) In 2000, the DOE performed an indoor survey of selected Line 1 buildings used by the AEC. Buildings surveyed included: 1-11, 1-12, 1-13, 1-18, 1-19, 1-40, 1-61, 1-63, 1-64, 1-65, 1-66, 1-67, 1-77, 1-100, 1-137-4, 1-148. Levels of residual DU found in Buildings 1-11, 1-63-6, 1-12 and 1-61 were 19,000 pCi/g, 39,000 pCi/g, 180 pCi/g and 2,700 pCi/g, respectively. The DU found in Building 1-61 was found in a plastic pan, which was removed and disposed of as radioactive waste.

(6) In 2000 DOE performed limited radiological surveys of Yard C Buildings 23-53 and igloos 23-1, 23-2 and 23-3. These surveys found no radioactive contamination. Results of the *Indoor Radiological Survey of the Iowa Army Ammunition Plant*, Middletown, Iowa (DOE, July 2001), indicated no radioactive contamination present above detection capability in the Yard C buildings surveyed. Based upon the survey results, DOE recommended a MARSSIM classification of Yard C buildings as Class 3 and that appropriate radiological surveys be performed.

(7) FUSRAP performed a Preliminary Assessment (PA) of AEC activity at the IAAAP, dated December 2001. The PA describes AEC activity at Line 1, the Explosive Disposal Area, Yards C, G, and L, Deactivation Furnace Area, and the Firing Site. Documentation provided by the DOE describes AEC activity at Line 1, the Explosive Disposal Area, Yards C, G, and L, the Firing Site, and the SECOM, ERC.

(8) In 2001 a radiological walkover survey conducted by FUSRAP discovered DU in a berm at FS-6 and at the surface at FS-12.

(9) In October 2002, the Army Munitions Command conducted an Aerial Radiometric Survey, with the results published in August 2003. The survey concluded that there was no anthropogenic radioactive contamination on the majority of the plant. The areas of exception included the Firing Site area, which showed uranium-238 contamination. Another area showed a uranium signature that was attributed to the licensed activities currently on-going at the plant under Iowa radioactive materials license, number 0290-1-29-SM1. Uranium was also reported above the detection capability of the system at the IAAAP heating plant, which was attributed to the natural uranium in the coal used in the plant. No off-post radioactive contamination was found.

(10) The Army-IRP conducted a Supplemental RI for Line 1 and the Firing Site dated August 2002. The Supplemental RI evaluated only non-radiological contaminants, and concluded that additional data was necessary to define the nature and extent of contamination associated with the contaminants of concern (COCs) at these areas.

(11) In 2003, a Site Reconnaissance Survey of Buildings L-1, L-2 and L-3 performed under FUSRAP found no radiological contamination and concluded that the buildings could be released for unrestricted use free of radiological restrictions.

(12) In 2004, FUSRAP conducted a radiological screening survey of the Explosive Disposal Area, Inert Disposal Area, Demolition Area/Deactivation Furnace and the Line 1 Former Waste Water Impoundment Area. The survey identified a small area at the Inert Disposal Area that contained a ¹³⁷Cs object. The object was removed. The IRP has assumed responsibility for actions required to remediate the surrounding soils that were left in place and covered. The site screening survey of the 6 identified areas, completed in the fall of 2005 reported that these areas are free from radiological contamination and recommended elimination of these sites from further FUSRAP action. The FFA parties approved of the *Final Summary of the Radiological Survey Findings for the Iowa Army Ammunition Plant Explosive Disposal Area, Inert Disposal Area, Demolition Area / Deactivation Furnace, and Line 1 Former Waste Water Impoundment Area*, completed in the fall of 2005. These areas will continue to be under the control of the IRP remediation program and will not be a part of this FFA.

1.4 Scope of FFA

This FFA is to ensure that environmental impacts associated with past AEC activities at the Iowa Army Ammunition Plant are thoroughly investigated and appropriate remedial action taken, as necessary, to protect the public health, welfare and the environment.

The FFA covers response actions at 7 areas:

- Line 1
- Firing Site Area
- West Burn Pads Area (South of the Road)
- Warehouse 3-01
- Yard G

- Yard C
- Yard L, areas surrounding Warehouses L-1, L-2, and L-3

The above sites are outlined in red on the attached map.

At Line 1, Firing Site, West Burn Pads (Area South of the Road), Warehouse 3-01, and Yards G, C, and L, FUSRAP shall respond to all releases and threats of releases of hazardous substances, pollutants or contaminants, except for groundwater and surface water contamination, which will be addressed under the IAAAP/Army FFA.

2.0 Site Descriptions

A Preliminary Assessment of IAAAP completed in FY2002 identified 13 areas for further FUSRAP investigation. Six of these areas were addressed as described in Section 1.3. b. (12) of this SMP. One Operable Unit (soils/structures) consisting of seven geographically separate sites is recommended for further FUSRAP investigation and remediation, where required. These sites include Line 1, the Firing Site Area, Yard C, Yard G, Yard L (soils surrounding Warehouses L-1,-2 and -3), Warehouse 3-01, and the West Burn Pads Area south of the road. These sites are described in the following paragraphs.

2.1. Line 1

Line 1 was the first production line placed in service at the IAAAP by the Army in 1941, and is still in use. It is located on approximately 190 acres, situated in the northeastern portion of the plant approximately ½ mile from the plant boundary. Starting in 1947, Line 1 facilities were used, modified and operated by the Atomic Energy Commission (AEC) for the fabrication of high explosive components for various weapons. Process buildings were used to assemble components into finished weapons and to disassemble weapons for shipment. Radioactive materials used at the Line were received/shipped in a sealed configuration and swipe tested for leaks. Additionally, some machining of radioactive components may have occurred. This site is subject to the 1998 Interim Soils ROD. Follow-on sampling to support that ROD was conducted by the Army in the form of a Supplemental RI (reference, 2002). The Supplemental RI evaluated only non-radiological COCs, and concluded that additional data was required to define the nature and extent of contamination. Additional data is needed at this site to evaluate potential radiological contamination, and to define the extent of contamination.

2.2. Firing Site (FS)

The Firing Sites Area is fenced and encompasses about 450 acres in the western portion of the plant approximately one mile from the nearest installation boundary and is characterized by hilly terrain. Firing Site Area structures are designated as FS-1 to FS-14. The Firing Site Area is used on a routine basis to perform static testing of warheads produced at the IAAAP. The Firing Site has been in operation since the 1940s and was

used for AEC activities from 1948 to 1974. A Supplemental RI (reference, 2002) was conducted by the Army at the Firing Site in 2002. The Supplemental RI evaluated only non-radiological COCs, and concluded that additional data was required to define the nature and extent of contamination. Additional data is needed at this site to evaluate potential radiological contamination, and to define the extent of contamination. DU has been detected in previous sampling at FS-6 and at FS-12.

2.3 Yard C

Yard C was constructed in 1941–1942 to serve as a storage yard. Yard C consists of 43 igloos. The AEC utilized Yard C for the storage of raw explosives materials and finished products. These raw materials were transported to Yard C by rail in cardboard boxes with plastic liners. From Yard C, the raw explosives were transported to Building 1-50 on Line 1. AEC operations utilized Yard C for the storage of raw explosive materials and finished products. DOE recommended a MARSSIM classification of Yard C buildings as Class 3 and that appropriate radiological surveys be performed. Because of this historical information, further investigation at this site is necessary to determine if radiological contaminants or other chemical COCs exist.

2.4 Yard G

Yard G was constructed in 1942 to serve as a storage area for the finished castings of classified explosive shapes. Seven igloos were used for this purpose. It is a secured, fenced facility that was used by the AEC from 1948 until 1954, and was returned to the Army in 1975. Although no radioactive components were reportedly stored in Yard G, because of historical information it will be further investigated to determine if radiological contaminants or other chemical COCs exist.

2.5 Yard L

Starting in 1960, three warehouses in Yard L, as indicated on a 1972 map prepared as part of an environmental agency evaluation of AEC activities, were used by the AEC to store classified components from Line 1. This portion of Yard L had double security fencing. Radiation warning signs were posted in some buildings in Yard L. Due to the lack of specific information on AEC activities in Yard L further investigation is required to determine if radiological contaminants or other chemical COCs exist around warehouses L-1, L-2 and L-3.

2.6 Line 3, “Warehouse” 3-01

This area consists of one “warehouse” building. A former employee at the site has indicated that Line 3, “Warehouse” 3-01 was used as part of AEC operations. Due to the lack of specific information on AEC activities further investigation is required to determine if contaminants are present at this “warehouse” structure.

2.7 West Burn Pads Area South of the Road

The West Burn Pads, used by the AEC and Army from 1949 to 1982, were where explosive contaminated metal parts were flashed in order to rid the metal of all explosives through the burning process. This site is subject to the 1998 Interim Soils ROD. While no radiological contamination was identified during the 2000 IRP remediation of the area North of the road, the area South of the road was not addressed during the remedial action. During the remedial action, stained areas potentially indicative of explosives soil contamination were observed at the area South of the road. Limited sampling of this area indicated soil contamination exceeding action levels. Additional data is needed at this site to evaluate potential radiological contamination, and to define the extent of contamination.

3.0 FUSRAP Actions Necessary to Mitigate Immediate Threats to Human Health or the Environment

The Iowa Army Ammunition Plant is a fenced secured facility. No immediate threats to human health or the environment have been identified due to past AEC activities. Therefore no immediate response actions have been identified for FUSRAP areas.

4.0 OUs, IRAs, Supplemental Response Actions and Time-Critical and Non-Time Critical Removal Actions Covered by the FFA

4.1 OUs: One Operable Unit addressing soils/structures will be used to manage FUSRAP actions.

4.2 Supplemental Response Actions: None are anticipated or planned at this time.

4.3 Time-critical and Non-Time Critical Removal Actions: No immediate threat to human health or the environment has been identified for FUSRAP sites and therefore, no interim removal actions either non-time critical or time critical are planned.

5.0 Proposed Activities For FY 2006 Through Completion

FUSRAP activities will be conducted in accordance with CERCLA, the NCP, this FUSRAP FFA, and appropriate State requirements. In general, the objective of the CERCLA process is to evaluate the nature and extent of contamination at a site, and to identify, develop and implement appropriate remedial actions in order to protect human health and the environment. The typical process consists of a Remedial Investigation, development of a Feasibility Study report/Proposed Plan, and execution of a Record of

Decision. The Record of Decision, which establishes the selected remedy to address unacceptable risks, is followed by Remedial Design, Remedial Action, and Closeout.

At the IAAAP, FUSRAP will be applying this remedial process to address the 13 areas identified in Section 1.4 of this SMP. The following actions will be taken to address these areas:

5.1. Remedial Investigation

At the “Red Sites” (Line 1, the Firing Site, Yards C, G, and L, “Warehouse” 3-01, and the West Burn Pads (Area South of the Road)), FUSRAP shall conduct a Remedial Investigation to evaluate all releases and threats of releases of hazardous substances, pollutants or contaminants, except for groundwater contamination. The initial phase of this RI will consist of a radiological walkover survey which will be performed pursuant to a Work Plan developed by FUSRAP. The initial walkover will address Line 1, Yards C, G and L, and “Warehouse” 3-01. Following the walkover, an RI Work Plan will be developed by FUSRAP. The RI Work Plan will report the findings of the radiological walkover survey, and will outline a sampling program to define the nature and extent of contamination, both radiological and non-radiological, at all seven areas. Where practicable, data will be collected during the RI to allow for preparation of the RA work plan. The Parties intend that the RI Work Plan be “dynamic” and utilize the “Triad” approach. The RI Work Plan will be implemented and the results will be documented in the RI Report. It is understood that a ROD exists that addresses non-radiological contamination at Line 1 and the West Burn Pads (Area South of the Road).

A baseline risk assessment, consistent with EPA guidance, will be included as part of the RI Report.

5.2 Feasibility Study/Proposed Plan

Following completion of the RI Report, FUSRAP will prepare a Feasibility Study (FS) and Proposed Plan, following processes outlined in the FFA. Based on the RI results, the FS will evaluate possible remedial actions, if required, to address radiological and non-radiological contamination at the Firing Site, Yards C, G, and L, Warehouse 3-01. If no remedial actions are required at these sites, this will be documented appropriately in the FS/ Proposed Plan/ROD process.

As has been previously noted, a ROD currently exists that addresses Line 1 and the West Burn Pads (Area South of the Road). If the RI described in Section 5.1 above indicates the presence of actionable levels of radiological contamination, or other contamination not addressed in the RODs described in Section 1.3 (a)(2), the FS will evaluate alternatives to address this contamination. If this situation occurs, the ROD(s) will be modified appropriately, either by an Explanation of Significant Differences, or a ROD Amendment, to address the previously unidentified contamination.

If radiological contamination, or other contamination not addressed in the RODs is not found at Line 1 or the West Burn Pads (Area South of the Road), these sites will not be included in the FS. In this instance, FUSRAP will implement the remedies for these areas specified in the existing RODs.

The Proposed Plan will summarize the findings from the FS, and will identify the Preferred Alternative for remedial action. Public participation requirements of the NCP will be met during the remedy selection process.

5.3. Record of Decision

As described in Section 5.2 above, FUSRAP will prepare a ROD to specify remedies, or to specify “No Further Action”, as appropriate, at the Firing Site, Yards C, G, and L, and Warehouse 3-01.

Also as described previously, depending on findings from the RI, a modification of existing IAAAP RODs may be required to address contamination at Line 1 and the West Burn Pads (Area South of the Road). It should be noted that the Parties are presently planning to modify the 1998 Interim Soils ROD to revise remediation goals for radiological constituents that are specified in that ROD. Subsequent to the ROD, it was determined that the remediation goals for radiological constituents were consistent with background levels and thus inappropriate.

5.4 Remedial Design / Remedial Action

FUSRAP is developing the remedial approach and FFA schedule with the assumption that any remedial actions to be implemented by FUSRAP will involve an excavation and disposal scenario, similar to what has been implemented under the Army’s IRP RODs. If radiological contamination is found at levels requiring remedial action, FUSRAP is assuming, for purposes of developing this FFA schedule, that such wastes would likely be excavated and disposed at a permitted off-site facility. If radiological contamination is not found at levels requiring remedial action, FUSRAP is intending to implement remedies consistent with those implemented by the Army according to existing RODs. This would entail excavation of soils at the area of concern and management/disposal of those soils at the Inert Disposal Area. Treatment of those soils at the Inert Disposal Area, if required, would also follow processes previously employed in Army remedial actions, where applicable.

Following these simplifying assumptions, this allows the schedule to be streamlined such that the Remedial Design and Remedial Action Work Plans can essentially be combined. To the extent possible, data will be collected during the RI that will allow for the identification of any areas that may require excavation. Where excavation areas are not defined during the RI, additional data collection will be conducted during the RA. Details regarding excavation areas, along with other information necessary to implement the RA, will be specified in the RA Work Plan, consistent with EPA guidance.

Where warranted, RD activities will be performed and these activities will be specified in a SMP amendment.

The Remedial Action will be implemented as specified in the RA Work Plan. After the RA is completed, the RA will be documented in a RA Completion Report.

When a remedial action is selected that results in hazardous substances, pollutants or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the Corps or DOE shall review such remedial action no less often than every five years after initiation of such remedial action to assure that human health and the environment are being protected. The five-year reviews for the FUSRAP areas will be coordinated with and conducted on the same five year cycle as the IAAAP facility-wide five-year reviews. A facility wide five-year review was conducted in 2006.

5.5 Closeout

When remedial action is complete, a Remedial Action Completion Report, consistent with guidance and Section XXXII of the FFA will be prepared.

6.0 Identification of Schedule Elements

Activities and schedules for response actions covered by the SMP include:

- (1). Identification of any Primary Actions - Primary actions are defined as the start and completion of fieldwork for the Remedial Investigation and the start and completion of fieldwork for the Remedial Action. No Primary Actions are scheduled during the current FY. The schedule for Primary Actions scheduled in the Near Term and Out Years is contained in Section 7.
- (2). All Deadlines – Deadlines are defined as Near Term Milestones specifically established for the current fiscal year.
- (3). All Near Term and Out Year Milestones - Milestones are defined as the dates for initiation or completion of Primary Actions and the submission of Primary Documents and Project End Dates. Near Term Milestones are Milestones within the current fiscal year (FY), the next fiscal year (FY+1), and the year for which the budget is being developed (FY+2). Out Year Milestones are Milestones that occur after the planning year until the completion of the cleanup (FY+3 through Project End Date).
- (4). All Target dates - Target dates are defined as dates for the completion and transmission of secondary documents.
- (5). Schedule for initiation of RDs, IRAs, Non-Time Critical Removal Actions, and any initiation of other planned response action(s) covered by this Agreement – As previously described, the initiation of the RD will be concurrent with the

development/submittal of the RA Work Plan, based on current project assumptions. No removal actions are currently scheduled.

(6). All Project End Dates – Project End Dates are the dates for the completion of major portions of the cleanup, or the completion of the FUSRAP project in total. The Project End Date illustrated in the following schedule represents the completion of the FUSRAP cleanup at IAAAP.

7.0 Site Management Plan Schedules

This section presents activity-specific schedules for the project in accordance with Section XXX of the FFA. Activity-specific schedules for ongoing actions will be updated annually in the SMP. The Near Term milestones for activities occurring in the current fiscal year (FY), activities projected for the budget year (FY+1) and activities being recommended for the planning year (FY+2) are contained in this SMP schedule.

7.1 Scheduling Assumptions

Assumptions regarding durations of field investigations, laboratory analysis, and data validation are discussed below. The schedule does not account for any dispute periods or schedule extensions that may be granted under the FFA.

(a) Duration of RI Field Work – Due to on-going plant operations, FUSRAP access to all areas where work is required may be limited. The schedule assumes FUSRAP will have access for a minimum of five days per week (The five day period may include Friday, Saturday and/or Sunday).

(b) Laboratory Turn-Around Time – The schedule developed assumes a 30-day turnaround time for laboratory analysis. An additional 45 days is assumed for data management.

7.2 FFA Schedule

Activity	Milestone	Milestone Type
Submit Draft RI Work Plan	5/16/2006	Near Term
Initiate RI Field Work	9/21/2006	Near Term
Complete RI Field Work	3/9/2007	Out Year
Submit Draft RI Report	7/9/2007	Out Year
Initiate FS Phase	11/29/2007	N/A
Submit Draft FS Report and Proposed Plan	5/30/2008	Out Year
Submit Draft ROD	2/17/2009	Out Year
Submit Draft RD/RA Work Plan	10/16/2009	Out Year
Initiate RA Fieldwork	4/5/2010	Out Year
Complete RA Fieldwork	July 2012	Out Year
Submit Draft RACR and Certification Report	Oct. 2012	Out Year

7.3 SMP Revision Schedule

Activity	Milestone
Initiate Revision	First Tuesday of February CY*
Submit Revision	July 15, CY

* Coincides with release of Presidents Budget

*IN THE MATTER OF:
THE U.S. ARMY CORPS OF ENGINEERS
IOWA ARMY AMMUNITION PLANT
MIDDLETOWN, IOWA*

*FUSRAP FEDERAL FACILITY AGREEMENT UNDER CERCLA SECTION 120
U.S. EPA, Region VII, Administrative Docket Number: CERCLA-07-2005-0378*

IT IS SO AGREED:

For the United States Army Corps of Engineers:



Brigadier General Robert Crear
Division Engineer
Mississippi Valley Division
U.S. Army Corps of Engineers

Date:

3 Aug 06

*IN THE MATTER OF:
THE U.S. ARMY CORPS OF ENGINEERS
IOWA ARMY AMMUNITION PLANT
MIDDLETOWN, IOWA*

*FUSRAP FEDERAL FACILITY AGREEMENT UNDER CERCLA SECTION 120
U.S. EPA, Region VII, Administrative Docket Number: CERCLA-07-2005-0378*

IT IS SO AGREED:

For the United States Department of Energy:



Michael Owen
Director
Office of Legacy Management
U.S. Department of Energy

Date:

7/31/06

*IN THE MATTER OF:
THE U.S. ARMY CORPS OF ENGINEERS
IOWA ARMY AMMUNITION PLANT
MIDDLETOWN, IOWA*

*FUSRAP FEDERAL FACILITY AGREEMENT UNDER CERCLA SECTION 120
U.S. EPA, Region VII, Administrative Docket Number: CERCLA-07-2005-0378*

IT IS SO AGREED:

For the State of Iowa:



Thomas J. Vilsack
Governor of Iowa

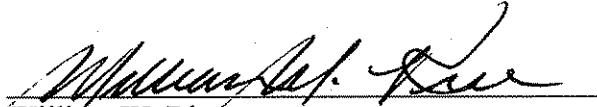
Date: *June 12th, 2006*

*IN THE MATTER OF:
THE U.S. ARMY CORPS OF ENGINEERS
IOWA ARMY AMMUNITION PLANT
MIDDLETOWN, IOWA*

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IT IS SO AGREED:

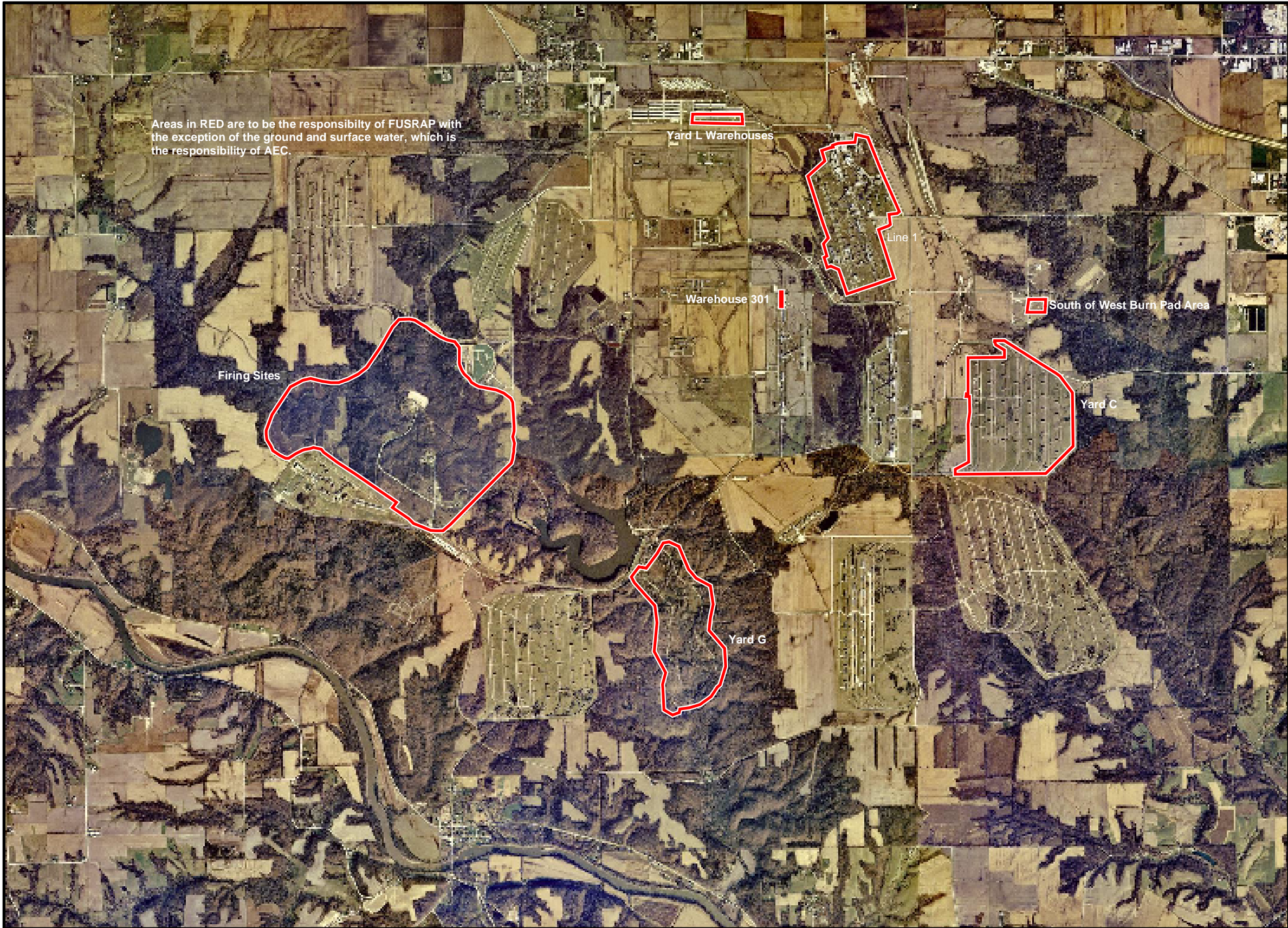
For the United States Environmental Protection Agency:


William W. Rice
Acting Regional Administrator
Region VII
U.S. Environmental Protection Agency

Date:

8/16/06

U:\GPS\IAAAP\Projects\IAAAP FUSRAP Federal Facility Agreement Areas.mxd



Areas in RED are to be the responsibility of FUSRAP with the exception of the ground and surface water, which is the responsibility of AEC.

Yard L Warehouses

Warehouse 301

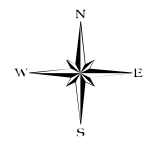
Line 1

South of West Burn Pad Area

Firing Sites

Yard C

Yard G



Iowa-South State Plane
(NAD 83, Meters)

0 600 1,200 Meters



Iowa Army Ammunition Plant
Burlington, Iowa

FUSRAP

DRAWN BY:	REV:	DATE:
SAIC	0	04/18/2006

IAAAP FUSRAP Federal Facility Agreement Areas