

Standing Operating Procedure
For
Soil Management Procedures during Construction Activities
Picatinny Arsenal

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Revised:

Prepared by:

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ATTACHMENTS

- Attachment 1. Soil Management Checklist & Flow Diagram
- Attachment 2. Environmental Affairs Program Requirements Checklist
- Attachment 3. Environmental Work Request for Site Clearance/Soil Management
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- Attachment 5. Potentially Contaminated Soil Management Manifest and Record
- Attachment 6. Picatinny Arsenal Excess Soil Manifest and Record Document

Section 2

SITE CONSTRUCTION MANAGER'S STATEMENT

I have read or have read to me the Guidelines established in this SOP. I certify to the best of my ability that the operation as described within this SOP can be conducted in a safe, healthy and environmentally sound manner. I have ensured that all operators are trained and are familiar with the requirements of this SOP and of the operation/activity. I agree to review the SOP every three months during continuing operations and at the renewal period of two years later. If deviations/alterations to the SOP are required, I will ensure that the operation is discontinued until the revised SOP is staffed for approval. Furthermore, if unexpected safety, health or environmental hazards are identified, I will ensure that the operation is discontinued until the hazard has been eliminated.

Name of Construction Manager, Title

Date

3.0 Purpose

This Standing Operating Procedure (SOP) summarizes the general soil management and environmental protection considerations that must be addressed when soils at Picatinny Arsenal are disturbed during construction activities.

Picatinny Arsenal is currently listed by the U.S. Environmental Protection Agency (USEPA) as a National Priority List (NPL) site and is Federally mandated to address soil and groundwater contamination at the installation. Many areas of the installation have been investigated and contain levels of contamination exceeding regulatory action levels. If excavated or disturbed soils contain a sufficient concentration of hazardous contaminants that results in classification as a industrial or hazardous waste, then those soils must be properly treated or disposed of in accordance with USEPA and New Jersey Department of Environmental Protection (NJDEP) regulations.

This SOP and the attached **Soil Management Checklist (Attachment 1)** are for use at all sites where activities will disturb the soils. In addition to construction activity, this includes such activities as (but not limited to) grubbing, grading, excavation, and significant heavy equipment traffic over soils. Adherence to the policies and procedures identified in this SOP is required for Picatinny to properly manage and track the movement of potentially contaminated soil removed during the above referenced activities.

The **Soil Management Checklist and Flow Diagram** outlines general soil management requirements related to Picatinny construction activities. Detailed guidelines describing the Installation's required soil management policies are provided in this Soil Management SOP. The Checklist should be reviewed and completed by all Department of Public Works (DPW) project managers and contractor site construction managers. A completed Checklist with supporting documentation should be submitted to EAO/Johnson Controls (Elaine Comings x-8010) for review.

This SOP does not address potential water treatment requirements if storm water or other water erosion effects cause water discharges from the site to exceed NJ Pollutant Discharge Elimination System (NJPDDES) regulatory limits. Nor does it cover NEPA, stream encroachment, wetlands, NJPES, or other permits that may be required as part of the construction planning process. The project proponent must contact the Environmental Affairs Office (EAO) x5818 to obtain an evaluation of all the potential or applicable permitting requirements for a proposed activity using EAO's most recent **Program Requirements Checklist (Attachment 2)**.

3.1 Definitions

Contaminated Soil:

Soil, which contains one or more contaminants from an unintentional or intentional spill or release of a hazardous substance, hazardous waste or pollutant at a concentration, which exceeds applicable remediation standards.

Hazardous Soil:

Soil is considered "hazardous" when any of the following criteria are met:

- a. Soil tests positive for characteristics of a hazardous waste defined at Title 40 CFR Part 261 Subpart 261.21-261.24.

- b. Soil containing a listed waste as per 40 CFR 261 Subpart D 261.31-261.33.
- c. Soil containing a mixture of a solid waste (non-hazardous) and one or more hazardous wastes listed in 40 CFR261 Subpart D 261.31-261.33.

Hazardous soils must be removed for treatment or disposal. This material must be properly manifested; transported by a licensed, insured hauler; and go to a facility authorized to accept hazardous soils.

Non-hazardous Soil:

Soil is considered to be ID-27 non-hazardous when the following criteria are met:

- a. The soil contains levels of contaminants exceeding NJDEP soil cleanup criteria (as per NJDEP proposed rule entitled Cleanup Standards for Contaminated Sites, N.J.A.C. 7:26D) however at levels not considered hazardous as per definition by Title 40 CFR.
- b. The contaminant levels in soil exceed the site-specific cleanup criteria.

Soils classified as non-hazardous ID-27, can be re-used onsite (with prior approval of NJDEP, USEPA and EAD) or transported by a licensed hauler to a facility authorized to receive solid waste.

Clean Soil:

Soil that contains contaminants at levels below the most stringent site cleanup levels established by the NJDEP for that specific site. These soils can be reused without treatment or prior approval of NJDEP or USEPA.

3.2 Applicable Documents

NJDEP “Soil Management Procedures”

Inter-Agency Agreement (IAG) with the EPA Docket II-CERCLA-FFA-00104

Army Regulation AR200-1 and the relevant sections of the National Environmental Protection Act (NEPA)

Army Regulation AR415-15, dated September 4, 1998

NJDEP “Field Sampling Procedures Manual” dated February 1988

NJDEP Technical Requirements for Site Remediation, N.J.A.C. 7:26E

NJDEP proposed rule entitled Cleanup Standards for Contaminated Sites, N.J.A.C. 7:26D

SOP for “Decon to Degree of 5X and Demolition of Contaminated Buildings”

4.0 General Procedures for All Soil Disturbance Activities

When construction activity is contemplated, AR415-15 requires all proposed construction sites be evaluated to determine the potential for encountering contamination through

qualitative analysis. If the site evaluation concludes that the potential for contamination exists, then soil sampling and analysis may be necessary to determine if the site is contaminated and provide a quantitative analysis of the site.

All construction projects or any project resulting in the excavation or movement of soil planned by any office at the Arsenal must complete and submit an **Environmental Work Request for Site Clearance/Soil Management** (Attachment 3.) to the EAO for review and approval prior to implementing the proposed work.

4.1 Environmental Work Request Requirements

The *Environmental Work Request for Site Clearance/Soil Management* should provide information regarding the following:

- a. Proposed location of project; with a map which showing location and construction footprint.
- b. Brief description of the project and scope of construction.
- c. Description of where soils will be disturbed and/or excavated, the depth of soil removal, and the anticipated amount of excess soil to be generated. Indicate if excess soil will be graded onsite or moved to another location.
- d. Provide a time schedule for the project.

EAO/JCI representatives will evaluate the information submitted in the *Environmental Work Request* and determine the need for additional site investigation and sampling prior to initiating the proposed construction activities. EAO/JCI will provide this determination within 2 weeks. Sampling to determine if a site is clean prior to any construction activity generally requires 4 to 8 weeks for scheduling, sampling and analysis. Therefore, the project schedule should make allowances for completing a site evaluation as necessary. Requirements for determining the need for additional investigation are presented below in Section 4.1.1 Site Evaluation Sampling Requirements. At some sites only sampling of the excess soil (for classification and re-use purposes) will be required.

Emergency utility line replacements or repairs are exempt from these requirements. The Department of Public Works (DPW) has a copy of the installations **Remedial Action Concept Plan**, which identifies existing sites requiring investigation and/or cleanup. Safety precautions must be taken during emergency repairs and for the management of obviously contaminated soil when utility line repair is required. EAO/JCI representatives should be notified @ x8010 within 24 hours to coordinate management of any excess soil issues associated with the emergency response activity.

4.1.1 Site Evaluation Sampling Requirements

AR 415-15 requires that all proposed construction sites be evaluated by the installation for potential site contamination and categorized as one of the following:

Category I:

These sites are located in traditional non-hazardous locations such as administrative, recreation, residential housing or wooded areas. The installation has no reason to suspect contamination, so in general, no sampling is required.

Category II:

These sites consist of former industrial sites or other hazard-producing areas. This site category includes locations that have a potential for contamination due to former use. Sampling will be required at Category II sites however there may be exemptions. If the nature of the project is small and no excess soil is generated, sampling will not be required. For example, projects such as the installation of a new utility line, shed or transformer pad may be exempt.

Category III:

This category includes sites, which are known to be contaminated. Alternate project sites should be considered if a project is proposed in a Category III location. Some NPL designated Category III sites are subject to future use restrictions and therefore cannot be used based on proposed or approved remedial actions.

EAO will make a determination of the appropriate category. The project proponent is required to pay for sampling and analytical costs. These activities typically cost approximately \$500 to upwards of thousands of dollars depending on the number of samples, required QA/QC protocols and the type of chemical analyses. In the absence of previously collected site investigation data, sampling will be required at Category II sites. Because of liability issues, sampling might also be required at Category I sites if the project will generate excess soil requiring offsite disposal. In addition, the project proponent should consider the time to plan, conduct and evaluate soil sampling in their project's overall schedule.

5.0 Site Investigation Sampling and Analysis

If an ***Environmental Work Request for Site Clearance/Soil Management*** evaluation indicates that a site may be contaminated, a ***Sampling and Analysis Plan*** should be developed for approval by EAO. The project proponent should contact the EAO to coordinate and discuss options for managing required sampling and/or investigations. EAO will provide information on any known contamination to the project proponent for inclusion in the Plan. The Sampling and Analysis Plan should be biased to sample locations with the greatest likelihood of contamination with the highest concentration levels. Proposed sampling should be completed in accordance with the New Jersey Department of Environmental Protection (NJDEP) Technical Requirements for Site Remediation, N.J.A.C. 7:26 E and the NJDEP Field Sampling Procedures Manual. These documents provide guidance on the required number of samples per location, placement of samples, sample depths, required analytical parameters, etc. Examples of choosing biased sampling points include:

- Sampling of outflow points from building drains and collection systems.
- Sampling of rain gutter outflows when hazardous materials may have been vented to the roof.
- Sediment sampling of sumps, manholes or catch basins.
- Boiler or compressor discharge points.

- Sediment sampling of ponds or drainage areas receiving stormwater runoff from the site.
- Sampling septic disposal fields and other wastewater treatment/disposal systems.
- Sampling around above-ground or underground storage tanks.
- Loading and unloading areas.
- Chemical storage and staging areas.
- Dumpsters or other disposal areas.

5.1 Investigation of Buildings Requiring TECUP Procedure

Specialized Picatinny site investigation procedures and sampling requirements, such as those associated with building demolitions requiring **TECUP procedures**, are addressed within the **SOP for Decon to Degree 5X and Demolition of Contaminated Buildings (DPW SOP AR-XP-WO19)**. The **TECUP SOP** contains instructions on required procedures for the investigation and remediation of buildings and subsurface utilities containing energetic materials. This document should be utilized in addition to the Soil Management SOP to determine specific soil management criteria for soils containing energetic materials.

6.0 Construction Planning/Site Excavation

After conducting a site investigation and any associated sampling and analysis for the site, the Site Construction Project Manager (SCM) should contact the EAO and request an evaluation of the findings report to determine if a re-location of the planned construction is warranted.

If the site has soils with contamination levels exceeding NJDEP cleanup criteria, it may be recommended that the soils not be disturbed as part of a construction activity but rather addressed as a separately funded remedial action. In addition, previously established Inter-Agency Agreements with State (NJDEP) and Federal (USEPA) regulatory agencies, including those developed as per a Record of Decision (ROD) and Land Use Control Restrictions, may preclude consideration of certain construction activities at a site. Consequently, the Project Manager must contact the EAO to obtain information and data associated with any potential use restrictions established for a site.

If the site has soils with contamination levels exceeding NJDEP cleanup criteria and those soils need to be excavated as part of the construction plan, the following soil management criteria will apply.

6.1 Soil Excavation Requirements

For large construction projects and major contracts such as those involving the demolition of structures followed by construction of new buildings or extensive construction of underground utilities, the SCM or contractor must develop a **Soil Management Plan (SMP)** for EAO review. The SMP should address issues regarding the procedures for the removal, handling, stockpiling, sampling, documenting, manifesting, transportation and disposal of

excavated material. The proposed activities within the SMP shall comply with criteria established in this SOP as well as all State and Federal regulatory requirements for managing contaminated soil.

Smaller projects will be exempt from the requirement to complete a SMP, however compliance with the soil management criteria identified below will be required.

6.1.1 Soil Excavation/Management of Excess Soil

Soils excavated during construction may be re-used at the project site if certain criteria are met. These criteria will apply to all construction related projects including the installation of subsurface utilities. Excavated material, which cannot be utilized at the same project location shall be considered excess soil and should be handled in accordance with the requirements detailed in Sections 6.2 and 6.3 of this document. All excess soil must remain separate from other materials such as rock, concrete, asphalt and demolition or construction debris.

All soils removed during the construction process must be visually screened for the presence of obvious contamination. If, during the course of the construction/excavation project, signs of contamination (stained soils, odor, drums, drain lines, etc.) or contamination pathways are encountered, then the Construction Project Manager must contact EAO immediately to request an environmental evaluation of this new site information.

Visually contaminated material must be segregated, properly stockpiled and characterized for future transport and disposal. Post-excavation sampling will also be required for those areas where visually contaminated soil is removed. Sampling shall be completed by the construction contractor or a qualified subcontractor in accordance with the requirements provided in the NJDEP Technical Requirements for Site Remediation, N.J.A.C. 7:26 E and the NJDEP Field Sampling Procedures Manual.

Soil not visually contaminated can be re-used for backfilling or grading purposes as long as the material is returned to the approximate position of its' original location. For example, the Site Construction Manager/Contractor should attempt to replace the soils back into the excavation at the same relative soil horizons as existed prior to excavation activities. It should be understood, however that large-scale re-grading is unacceptable at NPL designated sites, which will require future soil remediation or are regulated by Land Use Controls. If re-grading is necessary for a project within a NPL site, EAO personnel must be contacted by the Construction Project Manager in order to clear those areas where re-grading is proposed. Specific details regarding planned grading requirements should be provided within the Environmental Work Request for Soil Clearance/Soil Management previously discussed in Section (4.1) of this SOP.

If a project requires clean fill material from a source outside of the installation, the SCM must provide documentation to EAO, which shows that the fill used is certified virgin material from a commercial source. Bills of lading should also be provided to the EAO to document the source and volume of fill material. In addition, The SCM must forward a completed "**Soil Management Report Document (Attachment 4)**" to Elaine Comings (ext 8010) at EAO/JCI personnel. The Clean Soil Management Document should include a detailed site map delineating the location where clean fill material is used.

6.2 Management of Visually Contaminated Soil

Visually contaminated material must be segregated, properly stockpiled separately from any other stockpiles and characterized for future transport and disposal. Excavated soil should be placed on and covered with plastic at least 10 millimeters in thickness. Hay bales or something similar should be placed around the soil pile to control erosion and the plastic should be periodically checked prior to disposal. In addition, each stockpile must be properly tagged and labeled for future identification by EAO personnel. Information regarding the source location, date of excavation, estimated soil volume and the designated SCM contact, should be included on the label. The SCM must complete and submit a ***Potentially Contaminated Soil Management Record (Attachment 5)*** to Elaine Comings (ext 8010) at EAO/JCI and contact the EAO to obtain direction and guidance as to where excavated material should be stockpiled prior to disposal.

Waste Classification sampling and analysis of stockpiled soils shall be completed by the project contractor or a qualified subcontractor in accordance with the requirements provided by the designated disposal facility, NJDEP Division of Solid & Hazardous Waste Regulations and the NJDEP Field Sampling Procedures Manual. Required waste characterization parameters typically include Toxic Characteristic Leaching Procedure (TCLP) and Targeted Analyte List (TAL) analyses. Waste characterization results as well as detailed information regarding the source location of the material (including a map), the date of excavation and the estimated volume of material, must be submitted by the SCM to the EAO for review prior to transport and disposal.

The Site Construction Manager will be required to manifest and transport soil, which is characterized as hazardous, to an EPA approved offsite facility for treatment or disposal. The SCM must contact the EAO to obtain Picatinny's listing of EPA approved disposal facilities. Waste disposal manifests should be obtained directly from the selected disposal facility. The SCM will also be required to submit copies of all completed manifests to the EAO for regulatory reporting purposes. In accordance with NJDEP regulatory requirements, all hazardous soil must be removed for disposal within 90 days of generating the material.

6.3 Management of Soil/Excess Soil Not Visually Contaminated

Soil, which does not appear to be visually contaminated, can be re-used for backfilling or grading purposes at the site as long as the material is returned to the original location and approximate depth of removal. Characterization sampling is not required for soil, which is returned to its point of origin.

Any soil that is not used during the construction activity is considered excess soil. This material must be characterized to determine if it can be stored in Picatinny Arsenal's Soil Excess Area or whether it must be manifested and transported offsite for disposal.

Consequently, excess soil which cannot be re-used must be temporarily stockpiled at the project location and characterized (sampled and analyzed) for classification. This soil should be placed on and covered with plastic at least 10 millimeters in thickness. All excess soil must remain segregated from other materials such as visually contaminated soil, rock, concrete, asphalt and demolition or construction debris. Additionally, soil piles must

remain segregated by Building or Site Area and each stockpile must be properly tagged and labeled for future identification. Information regarding the source location, date of excavation, date of sampling, estimated soil volume and the designated SCM contact, should be included on the label. The SCM must forward a completed "**Potentially Contaminated Soil Management Manifest and Record**" Document (Attachment 5) to Elaine Comings (ext 8010) at EAO/JCI. The *Manifest and Record* should include a detailed site map indicating the location of excavated material as well as the location and final dimensions of the excavation or trench area.

Subsequent Waste Classification sampling and analysis of stockpiled excess soils shall be completed by the project contractor in accordance with the NJDEP Technical Requirements for Site Remediation, 7:26 E-6.4 "Post Remedial Action Requirements" and the NJDEP Field Sampling Procedures Manual. Soil samples should be collected at a frequency of 1 sample per 20 cubic yards for the first 100 cubic yards followed by 1 sample for each additional 100 cubic yards thereafter. Samples must be analyzed for (1) Targeted Analyte List (TAL) Metals by USEPA SW-846 Method 6020 (2) Semi-volatile Organic Compounds by USEPA SW-846, Method 8270B. Analysis for Explosives by USEPA SW-846, Method 8330 will also be required at sites where explosives are a contaminant of concern. Waste characterization results must be submitted by the SCM to the EAO for review prior to transport or disposal.

Excess soil characterized as non-hazardous industrial waste, shall be transported by the project contractor, to a designated installation soil storage area. Soils classified as hazardous must be managed in accordance with the requirements summarized above in Section 6.2 of this document. The SCM must coordinate with the EAO to determine the exact location for storage of excess soil. Additionally, excess soil identified for removal and transport to a designated installation storage area must be tracked utilizing the Picatinny Arsenal **Excess Soil Manifest and Record Document (Attachment 6)**. Completed Records must be forwarded by the SCM to Elaine Comings (ext 8010) at EAO/JCI.

Again, soil piles, which are transported to a soil storage area, must remain segregated by Building or Site Area and each stockpile must be properly tagged and labeled for future identification. Information regarding the source location, date of excavation, date of sampling, estimated soil volume and the designated SCM contact, should be included on the label.

7.0 Erosion Control

All construction/excavation activities must be conducted in a manner, which minimizes the potential for offsite transport of sediments by either wind or water erosion during the construction/excavation activity. In addition, if the disturbed area is greater than 5000 square feet, a Soil Erosion and Sediment Control Plan must be submitted to the Morris County SCS office.

7.1 Erosion Control Measures Prior to Excavation

Currently, there are no protection measures necessary for wind erosion prior to excavation activities. Protection from water erosion should be developed however, prior to disturbing any soils. Required protection measures include construction of diversion ditches up gradient of the excavation site. The ditches must be capable of containing a volume of

runoff typical of a 25-year 24-hour rainfall storm event. This will minimize or eliminate runoff erosion of loose soils resulting from the excavation/construction activity.

Down gradient of the excavation site, silt fences or sediment ponds shall be constructed to capture sediment, which might be transported off-site due to a rainfall event. Sediment fence material (i.e. opening size selection) and sediment pond detention time requirements will depend upon the soil type expected in the excavation. Therefore, a soils evaluation must be performed prior to installation of the erosion control measures. When silt fences are used, they must be installed at least 6 inches below ground surface to ensure that runoff will be properly filtered through the silt fence. Upon reaching 75 percent of capacity, a second fence must be constructed unless soils are removed (and stored in the temporary soil storage area) in order to re-establish sediment storage capacity.

7.2 Erosion Control Measures During Excavation

During excavation temporary storage/staging areas are often established on or adjacent to the excavating site. These on-site storage/staging areas should be clearly delineated, grubbed of vegetation and topsoil removed (unless the area is for topsoil storage) to prevent subsurface soils from mixing with existing topsoil. Additionally, a ditch or berm should be constructed around the staging/storage area to contain erosion of the soil stockpile.

During the construction/excavation project, erosion control will include maintenance of the erosion control measures established as per Section 7.1 and implementation of additional erosion control measures as necessary. If there is a significant amount of truck traffic over dirt roads, dust control may be warranted. Dust control of dirt roads may be maintained with water or preferably a mixture of water and commercially available additives such as DOWFLAKE (sodium carbonate), which will reduce the amount of water required to achieve good dust control. The soil at temporary onsite storage/staging areas must be placed on and covered with plastic sheeting to eliminate wind and water erosion.

7.3 Post Construction / Excavation Erosion Controls

When construction is completed, subsurface soils are returned into the excavation first. Previously removed, stored topsoil from the site is then placed above the subsurface soils. This is to restore the soil horizons back to what existed before soil disturbance. Subsequent to backfilling and re-grading, the affected area should be seeded with a wheat/grass/clover mix and covered with straw or mulch. The erosion control measures established for the project (i.e. diversion ditches, silt fences and sediment ponds) should be closed only after re-establishing good vegetative cover. Additionally, when erosion control measures are closed, the affected area should be restored to the original grade existing prior to construction, seeded with a wheat/grass/clover mix and covered with straw or mulch material.

8.0 Soil Storage Management

Excess soil characterized as clean or contaminated (but non-hazardous) material, may be stored at designated excess soil management sites. As discussed in Section 6.3, the SCM

for the project must contact EAO/JCI personnel to obtain direction on locating a soil storage area, which can accommodate project needs. The project manager or contractor utilizing each of these sites must establish erosion control measures as defined in Section 7.0 of this document. As these soil management areas will be used over a long term, erosion controls for stormwater runoff shall include a sediment pond or basin for contaminated soils, in addition to silt fences. Each designated site shall contain either clean or contaminated soils but not both in order to ensure proper storage and re-use. Soil stockpiles must be segregated by Building location, source area and soil classification (i.e. topsoil, clean soil, petroleum contaminated soils, non-hazardous heavy metals contaminated soils, etc.).

The ideal soil storage site should be located in an area with zero to two percent slopes and have erosion control measures at least ten feet above the 100-yr flood plain. In addition, the site should be located a sufficient distance away from steep slopes to eliminate potential stockpile erosion from large volumes of high velocity storm water. The SCM for a project generating excess soil will be responsible for closely monitoring the condition of soil piles while in the soil storage area. Soil piles shall be inspected by the SCM or designated alternate at least once per month in order to ensure that stockpiles are adequately covered and protected and that erosion control measures are functional.

8.1 “Clean” Soil Storage Management

Soils that are classified as clean can be used in an unrestricted manner at industrial sites in Picatinny Arsenal. “Clean” soils should be stored in a minimum of two separate piles, one for topsoil and one for other soils. Additional segregation by soil type may be employed for geo-technical considerations in future reuse plans. If clay soils, rocky soils, sandy soils, etc. are stored in separate piles then the reuse potential of excess soils is enhanced. This additional segregation is not required but rather is optional to the user. There will be no restrictions in composting “clean” soils from various sites around the Arsenal. Soils will be reused on a Last In/First out (LIFO) basis in order to minimize disturbing established vegetative cover on soil storage piles.

8.2 “Contaminated” Soils Storage Management

The greatest risk is from water transport of contaminated soils; therefore, additional measures must be taken to protect the environment from potential discharges from the soil management area. The contaminated soils storage site will be located, if possible, within an area containing an impervious surface such as asphalt or cement pavement. Additionally, soil piles should be placed on and covered with plastic at least 10 millimeters in thickness. These measures will ensure protection of surrounding soils and groundwater resources at the soil storage site.

Soils must be segregated by primary contaminant type (i.e. gasoline contaminated, diesel contaminated, heavy metals, pesticides, etc) so that the reuse potential can be maximized. Base on soil characterization data, soils of a similar contaminant type may be combined and sited into one pile. Each stockpile in the storage area must be properly tagged and labeled for future identification. Information regarding the source location, date of excavation, date of sampling, estimated soil volume and the designated SCM contact, should be included on the label.

9.0 Soils Re-Use Considerations

Soils that are “*Clean*” can be reused at Picatinny without restriction upon receiving approval of the Picatinny EAO. “*Contaminated Non-hazardous*” soils can be re-used at industrial sites within Picatinny. However, re-use proposals will require prior approval of the NJDEP, USEPA and Picatinny EAO. The primary consideration in determining re-use options is the potential for future transport of contaminated non-hazardous soils off site due to erosion and/or impact to groundwater. Contaminated non-hazardous soils cannot be used as the top layer of fill material at any site because of the risk of exposure to factors such as surface, wind or storm water erosion. However, if a protective, impervious cap (i.e. asphalt roadways, parking lots, buildings, etc) is created as part of the construction activity, then the contaminated non-hazardous fill may be used immediately below that protective layer.

**Picatinny Arsenal
Environmental Affairs Office**

Soil Management SOP Checklist

1. Purpose

This checklist and the attached flow diagram support the proper management and oversight of soil management activities as provided in Picatinny's Soil Management SOP. This checklist will help DPW project managers and contractor site construction managers identify applicable requirements for compliance with State and Federal solid waste management criteria. Additionally, this checklist identifies the general soil management and environmental protection considerations that must be addressed when soils at Picatinny Arsenal are disturbed during construction activities.

The objective of the checklist is to provide a uniform framework for managing and tracking the movement of soil at Picatinny Arsenal. This checklist will assist the user in identifying and documenting specific soil management requirements related to the construction process. When used, this checklist should also assist the project proponent in assessing potential impacts of these soil management requirements on proposed budgets and schedules.

2. Scope

The scope of this document covers all soil movement and soil management activities associated with construction at Picatinny.

3. Instructions for Completing Checklist

In each section, answer each question and include descriptions of current site conditions and activities applicable to the construction project being reviewed. In responding, the preparer must consider all relevant or available information and attach supporting documentation as necessary (i.e. Soil Manifests, analytical data, etc.). Detailed guidelines describing the Installation's required soil management policies are provided in the Soil Management SOP. Environmental/Site Clearance checklists and manifests can be found as attachment to the SOP or obtained from Picatinny EAO. This form and all supporting documentation should be forwarded to Elaine Comings (ext-8010) at EAO/Johnson Controls for review.

Picatinny Arsenal Soil Management SOP Requirements Checklist

Section I: Pre-Construction Requirements

1. All construction projects or any project resulting in the excavation or movement of soil must complete and submit an **Environmental Affairs Program Requirements Checklist**. **Has this checklist been completed?** : Yes____ No____

2. All construction projects or any project resulting in the excavation or movement of soil must complete and submit an **Environmental Work Request for Site Clearance form**. **Has Site Clearance Request been completed?** : Yes____ No____

**If yes, please indicate assigned site clearance number: _____

Section II: Site Construction/Project Implementation Requirements

1. Will proposed construction activities generate excess soil? **Yes**____ **No**____

**If yes, indicate estimated volume:_____cu yds. (or) tons

2. Will excess soil be utilized at the project site for purposes such as backfilling or re-grading?
Yes____ **No**____

If no, the project manager must complete and submit a **Potentially Contaminated Soil Management Record to Elaine Comings (ext 8010) at EAO/Johnson Controls.

Has a manifest record been submitted to EAO? **Yes**____ **No**____

3. Excess soil that cannot be utilized at the project site (i.e. visually contaminated soil or soil which cannot be used for backfilling or re-grading purposes) must be properly stockpiled, sampled and laboratory analyzed in order to characterize the material for future use or disposal. Sampling requirements are identified and discussed in the Soil Management SOP. **Have soil samples been collected and analyzed?** **Yes**____ **No**____

**If yes, the project manager must submit a complete laboratory data package to EAO personnel for review. This data will be used by EAO to classify the soil as hazardous or non-hazardous.

4. Have stockpiled soils been characterized as:

a. Hazardous? _____

b. Non-hazardous_____

5. Will the project require use of clean fill material? **Yes**____ **No**____

If yes, the project manager must provide documentation to Elaine Comings (ext.8010) at EAO/Johnson Controls showing that the fill is certified as clean. Bills of lading must also be provided to EAO as well as a **Picatinny Soil Management Report Document. **Has a Soil Management Report been completed and submitted to EAO?** **Yes**____ **No**____

Section III: Management of Excess Soil

1. Non-Hazardous Soil:

Any soil not re-used during the construction activity is considered excess soil. Excess soil characterized, as “**non-hazardous**” shall be transported from the construction site to a designated Installation storage area. Detailed guidelines regarding Picatinny’s soil storage requirements are provided in the Installation’s Soil Management SOP, Sections 6.3 and 8.0 to 8.2. In general, soil piles must remain segregated according to Building or Site location and each stockpile must be staked, tagged and labeled for future identification. Information regarding the source location, date of excavation, date of sampling, estimated soil volume and the project POC should be included. Additionally, excess soil identified for removal and transport to an installation storage area must be tracked utilizing the Picatinny Arsenal **Excess Soil Manifest and Record Document**.

Has an Excess Soil Manifest and Record been submitted to EAO/Johnson Control personnel? Yes___ No___

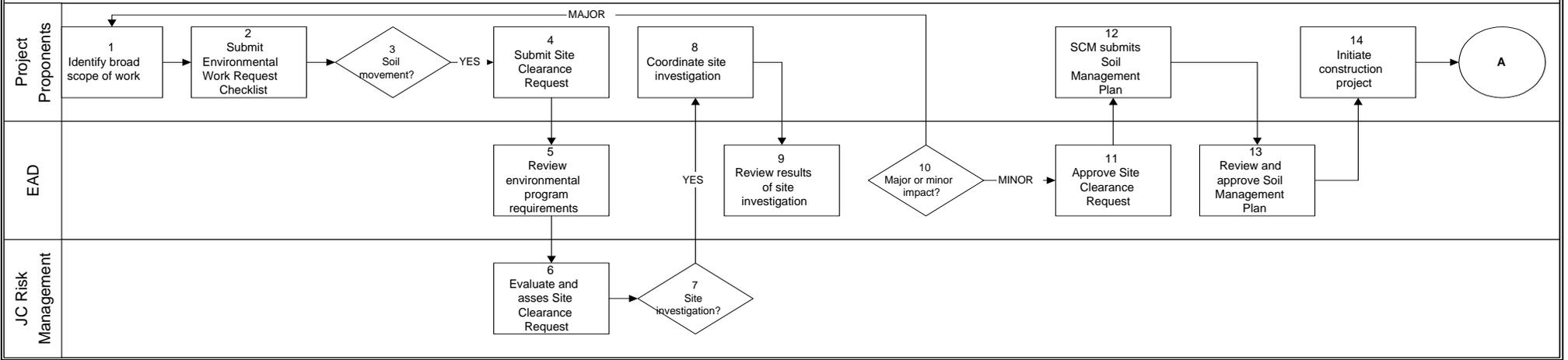
2. Visually Contaminated and/or Hazardous Soil:

Any soil, which is visually contaminated or characterized as “hazardous” must be transported offsite for disposal at an EPA approved disposal facility. The project manager must contact EAO representatives to coordinate the transportation and disposal process.

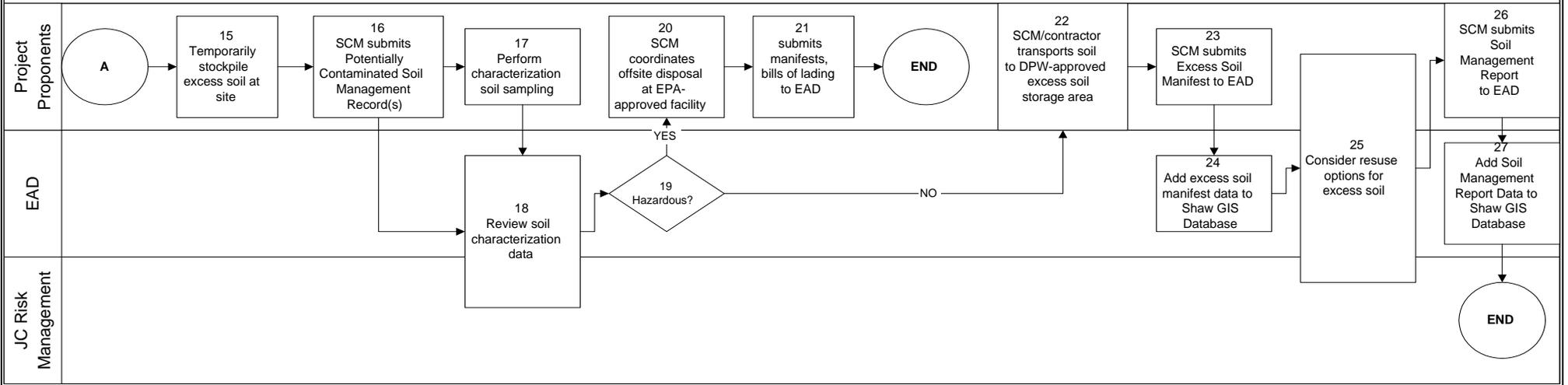
Waste disposal manifests should be obtained from an approved disposal facility. The site construction manager is required to submit copies of all completed manifests to the EAO. All hazardous soil must be removed for disposal within 90 days of generating the material.

**Have completed manifests been submitted to EAO personnel?
Yes___ No___**

Soil Management, Page 1 of 2



Soil Management, Page 2 of 2



Environmental Affairs Program Requirements Checklist
(Rev. June 26, 2003)

The purpose of this checklist is to ensure that all environmental requirements are identified during the project-planning phase for all new projects including construction, testing, CRADAs, licenses and leases. Accurate completion of this checklist will reduce project delays by providing sufficient time to perform environmental evaluations to determine the need for design changes and/or environmental permits. In many cases, environmental permits are needed before construction begins and due to the lengthy permit application process it is important that these environmental issues be addressed during the design phase.

Please answer the attached questionnaire. If the answer to any questions is “YES”, include an explanation in the space provided at the end of this questionnaire. Upon completion, return this checklist to Carol McLaughlin, AMSTA-AR-PSE, Building 319, or by electronic mail at cmclaugh@pica.army.mil.

Project Title:

Proponent Directorate:

Point of Contact (Name, Phone #):

Anticipated Project Start Date:

Briefly Describe the Project and the Building(s)/Area(s) That Will Be Affected.

ENVIRONMENTAL AFFAIRS OFFICE

PROGRAM REQUIREMENTS CHECKLIST

AIR PROGRAM: Any source operation that emits an air contaminant is regulated, regardless of size. It doesn't matter if the air emissions are emissions are emitted indoors or outdoors. Some new sources and modifications to existing sources will require pre-construction and operating permits. Replacement of existing equipment with identical, new equipment requires a pre-construction permit. Pre-construction permits must be obtained before the new equipment is purchased or the existing equipment is altered. Most of the time, permits will not be needed. However, all source operations that have air emissions must be registered with the Environmental Affairs Division for inventory and reporting purposes.

STORMWATER PROGRAM: Procedures for the outdoor storage of materials either during construction or normal operations must be addressed. Ensure that there will be no exposure, during and after storm events, of industrial materials, machinery, waste products or other source materials located at the building. At all times, outside storage is to be raised off the ground, covered with a tarp, or put under a shelter. No operation is to discharge through separate storm sewers to surface waters.

NOISE PROGRAM: If this project will involve the generation of outdoor sound levels exceeding 65 decibels (continuous) or 80 decibels (impulsive) please notify the Environmental

Office. The Environmental and Public Affairs Offices will determine the procedure to be followed in notifying the local police and residents in the surrounding area in order to avoid noise complaints.

SPILL PREVENTION, CONTROL, COUNTERMEASURE AND CLEANUP

PROGRAM: This program is to reduce the likelihood and impact of oil, hazardous materials, and hazardous wastes releases to the environment. The installation of any tank for the above storage is regulated under this program. This will require that the facility is designed IAW the standards in the regulations (tank secondary containment, transfer area secondary containment, high/low level alarms, SOPs), and that the facility operator receives the required training in the regulations. All tank installations have to be registered with the Environmental Office because new tanks need to be added to Picatinny's Spill Plan and because the operators have to receive the required training.

HAZARDOUS MATERIALS/HAZARDOUS WASTE PROGRAM: Any operation which utilizes hazardous materials, or may generate waste batteries or fluorescent light bulbs, regardless of the amounts, may be regulated under the hazardous waste regulations. Minor changes, even to current operations, may have significant impacts on facility permits. Notify the Environmental Affairs Office for all new operations or changes to existing operations when there is a possibility of generating a hazardous waste. When utilizing chemicals on base, all chemicals must be inventoried and accounted for at Picatinny's HAZMART. This is imperative for regulatory reporting on the use of chemicals at Picatinny. Also of note is to ensure chemicals, drums and containers are not stored outside if all possible.

DRINKING WATER PROGRAM: Any new drinking water lines or repairs to existing lines must be tested as safe prior to be placed in service.

OZONE DEPLETING CHEMICALS PROGRAM: Army installations have been directed to eliminate dependency on commercial availability of Class I Ozone Depleting Chemicals (ODCs) effective December 31, 2003. In addition, under the Clean Air Act Amendments, the EPA has been directed to establish standards and requirements regarding the use and disposal of Class I substances. These regulations include the requirement that reduce the use and emission of such substances to the lowest achievable level.

SEWER/WASTE WATER PROGRAM: All sanitary sewer water goes off-base to Rockaway Valley Regional Sewerage Authority (RVRSA). Any new discharges or increased flows into the sewer distribution system must first be approved by RVRSA and Picatinny Arsenal's licensed operator. Each discharge must adhere to the RVRSA permit requirements.

NATURAL RESOURCES PROGRAM (FLORA/FAUNA): A review and assessment of potential impacts to the physical terrain, its vegetative cover and use as wildlife habitat is necessary before any project is approved and undertaken. The proposed site and activity will be evaluated per known or likely occurrences of plants and animals. A site survey for specific plants and animals may be required in an appropriate season. Current policy for safeguarding the roosting and foraging habitats of the federally endangered Indiana Bat mandate that required tree felling or pruning be scheduled between 15 November and 1 April.

GENERAL CONSTRUCTION ACTIVITIES: Picatinny Arsenal is a Superfund site and has contaminated sections that present risk. In NJ, movement of soils is regulated. In order to comply with regulations and insure the safety of Arsenal personnel, it is imperative that any activities which involve soil disturbances, soil movement and new construction be coordinate through the Environmental Affairs Office.

NEPA PROGRAM: The NEPA process is the systematic examination of potential environmental impacts resulting from the implementation of a proposed action. Coordinating the NEPA process with Government action must occur at the earliest possible time to ensure informed decisions can be made based on the best available information. Early coordination helps to alleviate the possibility for delays later on in the project. All new projects must be assessed for NEPA applicability and compliance. Completion of this questionnaire will initiate the NEPA process.

Answer “YES” or “NO” to the following questions. For each “YES” answer, please explain in the space provided at the end of this checklist.

<i>WILL THIS PROJECT INVOLVE:</i>	YES/NO
1) The installation of any equipment that will emit an air contaminant?	_____
2) The modification of any existing air contaminant-emitting source?	_____
3) The replacement of any existing air contaminant emitting equipment with identical equipment?	_____
4) The reconfiguration of any existing air contaminant emitting exhaust stack (change in height, diameter, or location)?	_____
5) The installation of any fuel burning equipment such as boilers, hot water heaters, internal combustion engines or process heaters?	_____
6) The installation of any tanks for the storage of materials such as fuel oil, propane or any process raw material or waste material?	_____
7) The installation of any manufacturing equipment such as mixers, extruders, conveyors or kettles?	_____
8) The installation of any surface coating equipment such as spray booths or involve any type of surface coating process?	_____
9) The installation of any surface cleaning equipment such as spray or dip tank degreasers or involve any surface cleaning process?	_____
10) Any water or wastewater discharges?	_____
11) Putting anything into the sewer system besides domestic waste?	_____
12) The outside storage of any materials such as metals or drums?	_____
13) Any outdoor/exterior construction and/or additions?	_____
14) Any indoor construction or renovation?	_____
15) The generation of outdoor sound levels exceeding 65 decibels (continuous) or 80 decibels (impulsive)?	_____
16) The installation of any tanks for the storage of waste water or pink water?	_____
17) The use, storage or shipment of any chemicals or hazardous materials that require a Material Safety Data Sheet? If so, how will it be purchased?	_____
18) The generation of any waste chemicals, oils, paints, etc?	_____

- 19) The generation of any waste fluorescent light bulbs or batteries? _____
- 20) Any equipment containing halons, chlorofluorocarbons, hydrochlorofluorocarbons or solvents (carbon tetrachloride, methyl chloroform)? _____
- 21) The servicing of any refrigeration equipment? _____
- 22) The servicing of any comfort cooling systems? _____
- 23) Will this project involve contractors interacting with ODCs or ODC equipment? _____
- 24) The use of any potable or non-potable water sources? _____
- 25) Connecting to any existing potable or non-potable water sources (within or out side of the building)? _____
- 26) The installation of any wells? _____
- 27) Any water or waste water discharges (i.e. floor drains, fire sprinkler testing, cooling water, emergency eyewash/showers etc)? _____
- 28) The installation of any septic systems? _____
- 29) The installation of any water or wastewater treatment equipment? _____
- 30) The cutting of any trees or clearing of any land? _____
- 31) Any new or post construction landscaping (perennial ground covers, lawns, shrubs, trees, annual or biennial flowers, mulch, etc.)? _____
- 32) Any outdoor testing? _____
- 33) The disturbance of any soils, bringing on site or removal from the site of any soil or fill material? _____
- 34) Any trenching, digging, or drilling? _____
- 35) The installation of any temporary roads? _____
- 36) The covering of any land surface with materials such as asphalt or concrete? _____
- 37) The disturbance of any painted surface? _____
- 38) Any real estate transactions such as a lease? _____
- 39) A private company either under or not under contract with TACOM-ARDEC? _____
- 40) The exterior alteration of an existing building? _____

For each question above for which you answered “YES”, provide an explanation below.
Question # Explanation

Environmental Work Request for
Site Clearance/Soil Management
Site Restoration Program

- A. Name of Project:

- B.1. Proposed Location of Project (Map indicating footprint of Project):

- B.2. Size of Structure:

- C. Scope of Project concerning soil removal and/or depth of construction:

- D. Description of the Project:

- E. Description of how the soils and other wastes may be handled:

- F. Construction Schedule:

Date:

POC:

Phone number:

Organization:

POTENTIALLY CONTAMINATED
SOIL MANAGEMENT
Manifest and Record

PROJECT NAME:

DPW PM:
CORPS PM:
CONTRACTOR PM:

DATE:

LOCATION OF PROJECT: _____
LOCATION OF PILE: _____
PROJECTED/ACTUAL VOLUME OF PILE (TONS/YDS): _____
DATE PILE EXCAVATED: _____
DPW PM: _____ DATE: _____

SOIL HAS BEEN STORED AT: _____ DATE: _____
DPW PM: _____

MAP MUST BE ATTACHED _____

EAO POC: _____

ENVIRONMENTAL OFFICE – NOT FOR USE BY DEH OR CONTRACTOR

DATE SOIL MANIFEST SUBMITTED: _____
DATE PLAN APPROVED: _____
DATE SOIL SAMPLED: _____
DATE RESULTS MADE: _____
ANALYSIS #: _____
APPROVED EROSION CONTROL PLAN: YES _____ NO _____

SOIL IS CLEAN _____
SOIL IS SOLID WASTE _____
SOIL IS HAZARDOUS _____

DATE AND # DIRECTIVE SENT TO DPW _____

SOIL MANAGEMENT REPORT

PROJECT NAME:

DPW PM:
CORPS PM:
CONTRACTOR PM:

DATE:

LOCATION OF PROJECT: _____

SITE CLEARANCE #: _____

SOURCE OF FILL MATERIAL: _____

VOLUME OF MATERIAL: _____

LOCATION OF MATERIAL: _____

PLEASE ATTACH SITE MAP: _____

CLEAN FILL CERTIFICATION ATTACHED: YES _____ NO _____

BILL OF LADING ATTACHED: YES _____ NO _____

Attachment 6.

EXCESS SOIL MANAGEMENT
Manifest and Record

PROJECT NAME: _____

SITE CLEARANCE #: _____

DATE: _____

DPW PM: _____

CORPS PM: _____

CONTRACTOR PM: _____

LOCATION OF PROJECT _____

LOCATION OF EXCAVATION _____

PROJECTED/ACTUAL SIZE OF PILE _____

SOIL HAS BEEN STORED AT _____

LOCATION OF PILE _____

DATE _____

DPW PM _____

SOIL HAS BEEN TAKEN TO _____

LOCATION OF PILE _____

DATE _____

DPW PM _____

MAP MUST BE ATTACHED _____

SOIL IS CLEAN: YES _____ NO _____

SOIL IS SOLID WASTE: YES _____ NO _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
AND THE
UNITED STATES DEPARTMENT OF THE ARMY

IN THE MATTER OF:

The U.S. ARMY ARMAMENT RESEARCH)
DEVELOPMENT AND ENGINEERING)
CENTER: (also known as PICATINNY))
ARSENAL and formerly known as)
U.S. ARMY ARMAMENT R&D COMMAND))
Picatinny Arsenal, New Jersey)

FEDERAL FACILITY)
AGREEMENT UNDER)
CERCLA SECTION 120)
Administrative Docket)
Number: II-CERCLA-FFA-00104)

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

- SP1.4.10-26-94
(200-1c)

AR

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Attachment 1

Attachment 2

Acronyms/Abbreviations

ARAR	Applicable or Relevant and Appropriate Requirements
ARDEC	U.S. Army Armament Research Development and Engineering Center
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DERP	Defense Environmental Restoration Program
DOD	Department of Defense
DRC	Dispute Resolution Committee
EPA	Environmental Protection Agency
FS	Feasibility Study
HSWA	Hazardous and Solid Waste Amendments of 1984
IAG	Interagency Agreement
NCP	National Oil and Hazardous Substances Pollution Contingency Plan (National Contingency Plan)
NEPA	National Environmental Protection Act
NPL	National Priorities List
QA	Quality Assurance
QAPP	Quality Assurance Program Plan
QAPjP	Quality Assurance Project Plan
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RA	Remedial Action
RD	Remedial Design
RI	Remedial Investigation
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act of 1986

I.
Purpose

1.1 The general purposes of this Agreement are to:

- (a) Ensure that the environmental impacts associated with past and present activities at the Site are thoroughly investigated and appropriate remedial action taken as necessary to protect the public health, welfare and the environment;
- (b) Establish a procedural framework and schedule for developing, implementing and monitoring appropriate response actions at the Site in accordance with CERCLA, the NCP, Superfund guidance and policy, RCRA, RCRA guidance and policy; and,
- (c) Facilitate cooperation, exchange of information and participation of the Parties in such actions.

1.2 Specifically, the purposes of this Agreement are to:

- (a) Identify operable unit or removal action alternatives which are appropriate at the Site prior to the implementation of final remedial action(s) for the Site. Operable unit alternatives shall be identified and proposed to the Parties as early as possible prior to formal proposal of operable unit or removal actions to USEPA pursuant to CERCLA and applicable State law. This process is designed to promote cooperation among the Parties in identifying operable unit or removal action alternatives prior to selection of final remedial action(s);
- (b) Establish requirements for the performance of a Remedial Investigation (RI) to determine fully the nature and extent of the threat to the public health or welfare or the environment caused by the release and threatened release of hazardous substances, pollutants or contaminants at the Site and to establish requirements for the performance of a Feasibility Study (FS) for the Site to identify, evaluate, and select alternatives for the appropriate remedial action(s) to prevent, mitigate, or abate the release or threatened release of hazardous substances, pollutants or contaminants at the Site in accordance with CERCLA and applicable State law;
- (c) Identify the nature, objective and schedule of response actions to be taken at the Site. Response actions at the Site shall attain that degree of cleanup of hazardous substances, pollutants or contaminants mandated by CERCLA;
- (d) Implement the selected remedial action(s) in accordance with CERCLA and applicable State law and meet the requirements of Section 120(e)(2) of CERCLA for an interagency agreement between USEPA and the Army;
- (e) Assure compliance, through this Agreement, with applicable federal and state hazardous waste laws and regulations for matters covered herein;
- (f) Coordinate response actions at the Site with the mission and support activities at Picatinny Arsenal;

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

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

II.
Jurisdiction

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

(a) The U.S. Environmental Protection Agency (USEPA), Region II, enters into those portions of this Agreement that relate to the remedial investigation(s)/feasibility study(ies) (RI/FS) pursuant to Section 120(e)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §9620(e)(1), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Pub. L. 99-499 (hereinafter jointly referred to as CERCLA), and 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 referred to as RCRA) and Executive Order 12580;

(b) USEPA, Region II, enters into those portions of this Agreement that relate to operable units and final remedial actions pursuant to Section 120(e)(2) of CERCLA, Sections 6001, 3008(h) and 3004(u) and (v) of RCRA and Executive Order 12580;

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

(d) The Army enters into those portions of this Agreement that relate to operable units and final remedial actions pursuant to Section 120(e)(2) of CERCLA, §§6001, 3008(h) and 3004(u) and (v) of RCRA, Executive Order 12580 and the DERP.

III.
Definitions

Except as noted below, or otherwise explicitly stated, the definitions provided in CERCLA, RCRA and any regulations issued pursuant to CERCLA and RCRA shall control the meaning of terms used in this Agreement.

(a) "Agreement" shall refer to this document and shall include all Attachments to this document. All such Attachments shall be appended to and made an integral and enforceable part of this document.

(b) "ARARs" shall mean "legally applicable" or "relevant and appropriate" laws, standards, requirements, criteria, or limitations as those terms are used in CERCLA §121(d), 42 U.S.C. §9621(d).

(c) "Army" or "U.S. Army" shall mean U.S. Department of Army, Picatinny Arsenal in Morris County, New Jersey, their employees, agents, successors and assigns.

(d) "Authorized representative" of USEPA shall mean any agents, employees or contractors to the extent authorized by USEPA to perform some activity related to this Agreement.

(e) "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. L. 99-499.

(f) "Closure Requirements" or "RCRA Closure" shall mean the requirements under RCRA, 40 C.F.R. Part 264 or Part 265, as appropriate, and the EPA authorized New Jersey Program, NJAC 7:26 et seq., pursuant to Section 3006 of RCRA, 42 U.S.C. §6926.

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

(h) "Deadline" shall mean the time limitation applicable to a primary document or a discrete and significant portion of a primary document specifically established under the terms of this Agreement.

(i) "Documents" or "records" shall mean any documents, writings, correspondence and all other tangible things on which retrievable information has been stored which relates to this Agreement or to any activities to be undertaken relating to this Agreement.

(j) "Feasibility Study" or "FS" means those studies conducted by the Army which evaluate and develop remedial action alternatives to prevent, mitigate, or abate the release, threatened release, or migration of hazardous substances, pollutants and/or contaminants at the Site.

(k) "Hazardous substance" shall have the same meaning as provided in Section 101(14) of CERCLA, 42 U.S.C. 9601(14).

(l) "NJDEP" shall mean the New Jersey Department of Environmental Protection.

(m) "Picatinny Arsenal" shall mean the U.S. Army Armament Research Development and Engineering Center which is located in Morris County, New Jersey, which is presently operated by the Army and which occupies approximately 6491 acres of real property.

(n) "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300 et seq., and any amendments thereof.

(o) "Operable Unit" shall mean a discrete action that comprises an incremental step toward comprehensively addressing site problems. This discrete portion of a remedial response manages migration, or eliminates or mitigates a release, threat of a release, or pathway of exposure. The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with the site. Operable units may address geographical portions of a site, specific site problems, or initial phases of an action, or may consist of any set of actions performed over time or any actions that are concurrent but located in different parts of a site.

(p) "Parties" shall mean the United States Environmental Protection Agency ("USEPA") and the United States Department of the Army ("the Army").

(q) "Quality Assurance Program Plan" or "QAPP" shall mean a plan that indicates prime responsibilities and prescribes requirements for assuring the specific field investigations undertaken at the Site are planned and executed in a manner consistent with quality assurance objectives. The content and format of the QAPP shall be based on "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans - QAMS-005/80" by USEPA.

(r) "Quality Assurance Project Plan" or "QAPjP" shall mean a plan, similar in format to the QAPP; but the content should be uniquely relevant to a specific RI/FS Workplan.

(s) "Record(s) of Decision" shall be the public document(s) that explain(s) which cleanup alternative(s) will be implemented at the Site, and include(s) the bases for the selection of such remedy(ies). The bases include information and technical analyses generated during the Remedial Investigation and Feasibility Study and consideration of public comments and community concerns.

(t) "Remedial action" shall have the meaning of that term as defined in Section 101(24) of CERCLA, 42 U.S.C. §9601(24).

(u) "Remedial Investigation" or "RI" means those investigations conducted by the Army to fully determine the nature and extent of the release or threat of release of hazardous substances, pollutants or contaminants at the Site and to obtain all data needed to support the FS and the risk assessment.

(v) "Removal actions" or "removals" shall have the same meaning as provided in Section 101(23) of CERCLA, §42 U.S.C. 9601(23).

(w) "RCRA" shall mean the Resource Conservation and Recovery Act as codified at 42 U.S.C. §6901 et seq., as amended by the Hazardous and Solid Waste Amendments of 1984, Pub. L. 98-616.

(x) "Schedule" shall mean the time limitations established for the construction, implementation and completion of response actions at the Site.

(y) "Site" shall include Picatinny Arsenal and other areas contaminated by the migration of a hazardous substance, pollutant, or contaminant from sources on or at Picatinny Arsenal and all suitable areas in very close proximity to the contamination necessary for implementation of the response action.

(z) "Site Inspection" or "SI" shall mean an on-site investigation to determine whether there is a release or potential release and the nature of the associated threats. The purpose is to augment the data collected in the preliminary assessment and to generate, if necessary, sampling and other field data to determine if further action or investigation is appropriate.

(aa) "Submittal" shall mean every document, report, schedule, deliverable, work plan or any other item to be submitted by any Party to any other Party pursuant to this Agreement.

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

IV.
Parties

The Parties to this Agreement are USEPA and the Army. The terms of this Agreement shall be binding upon the Army, the USEPA, and their agents and assigns.

V. Findings

For the purposes of this Agreement, the following constitutes a summary of the facts upon which this Agreement is based.

5.1 Picatinny Arsenal is located in Morris County, New Jersey, is owned by the United States and operated by the Army (see Attachment 1).

5.2 The Arsenal was a major source of munitions for World Wars I and II, the Korean War and the Vietnam War. During those periods, Picatinny Arsenal was involved in the production of explosives, propellants, pyrotechnic signals and flares, fuses, and metal components. Currently, the primary mission of the Arsenal is research and development, and engineering of munitions and weapons.

5.3 In July, 1976, the Army Toxic and Hazardous Materials Agency (USATHAMA) initiated a study entitled "Initial Assessment of Picatinny." The purpose of this study was to estimate possible contamination by chemical, biological, and radiological material at the facility.

5.4 In November, 1976, the Army released the results of the Initial Assessment. The report cited 11 known or suspected hazardous waste disposal areas ("potentially contaminated areas") as well as numerous buildings and aboveground and underground tanks which were associated with hazardous waste activities. The report concluded that large sections of the Arsenal were contaminated or potentially contaminated by manufacturing wastes and unexploded ordinance (UXO). It was recommended that a ground water monitoring program be initiated.

5.5 A reassessment of Picatinny Arsenal was published by USATHAMA in July of 1983. The purpose of this report was to re-evaluate and update the original information contained in the November, 1976, report. Analytical results from ground water monitoring wells installed in 1980 indicated the presence of volatile organic compounds and other hazardous substances in the vicinity of Building 24 (where trichloroethylene [TCE] was detected at concentrations as high as 25 ppm), Building 95, and an old landfill area. Additionally, results indicated the presence of organic contaminants in several potable water supply wells.

5.6 Since 1982, the U.S. Geological Survey has been conducting studies on water quality at Picatinny Arsenal. Recent investigations have been limited to determining the rate and extent of ground water contamination emanating from now-inactive land disposal units near Buildings 24 and 95. Preliminary results show that the TCE contaminant plume emanating from the

Building 24 area is at least 1500 feet long and discharges into Green Pond Brook.

5.7 In February, 1987, NJDEP completed a RCRA Facility Assessment ("RFA") for Picatinny Arsenal. A total of 55 solid waste management units were identified at the facility, including 35 inactive units and 20 active units, 5 of which are RCRA-regulated. Many of these sites were first identified in the November, 1976, Installation Assessment Study.

5.8 During RCRA Compliance Evaluation Inspections ("CEI") in 1986 and 1987 at least 30 additional sites were found where waste is/was handled and/or stored. These are potentially contaminated areas.

5.9 In June, 1988, Picatinny Arsenal began field work on a Confirmation Study. The Study includes ground water and/or soil sampling at 35 known or potentially contaminated areas. The results from this Study are to be incorporated into a Scope of Work to address all known or potentially contaminated areas at Picatinny Arsenal.

5.10 Picatinny Arsenal has initiated a clean-up of the Building 24 plume of TCE contaminated ground water in accordance with a Record of Decision agreed upon by USEPA and the Army on September 28, 1989. Ground water will be pumped to a treatment unit which will treat the contaminated water to meet New Jersey and Federal discharge requirements. The treated water will then be discharged to Green Pond Brook.

5.11 Approximately 6000 civilians and 200 military personnel are employed at the Arsenal, all of whom rely on two reservoirs, Picatinny Lake, and ground water for their potable water supply.

5.12 Picatinny Arsenal overlies a sole source aquifer and is in the stream flow source zone of the Rockaway River Basin, the sole source of drinking water for numerous towns in Morris County. Ground water at the Site primarily flows towards Green Pond Brook, a tributary to the Rockaway River. However, a complete characterization of the flow and direction of ground water at the Site has not been accomplished. The Rockaway River flows into the Boonton Reservoir, the drinking water source for Jersey City.

5.13 This section contains Findings of Fact determined solely by the USEPA and shall not be used by any person related or unrelated to this Agreement in any action other than an action to enforce this Agreement.

VI.
Determinations

6.1 Picatinny Arsenal constitutes a "facility within the meaning of that term as defined in Section 101(9) of CERCLA, 42 U.S.C. §9601(9).

6.2 The Army is a "person" within the meaning of that term as defined in Section 101(21) of CERCLA, 42 U.S.C. §9601(21).

6.3 Picatinny Arsenal is also a "facility" pursuant to Section 6001 of RCRA, 42 U.S.C. Section 6961, and as such is subject to all Federal, State, interstate and local requirements, both substantive and procedural, respecting control and abatement of solid waste or hazardous waste disposal in the same manner, and to the same extent, as any "person" is subject to such requirements.

6.4 Chemicals and contaminants which are referred to in the Findings part above are "hazardous substances" within the meaning of that term as defined in Section 101(14) of CERCLA, 42 U.S.C. §9601(14).

6.5 Hazardous substances, pollutants or contaminants within the meaning of Sections 101(14) and 101(33) of CERCLA, respectively, 42 U.S.C. §§9601(14) and (33), have been disposed of at Picatinny Arsenal.

6.6 Releases of hazardous substances onto the soil and into the ground water at the Site (as noted in the Findings part above) are releases within the meaning of the term release as defined in Section 101(22) of CERCLA, 42 U.S.C. §6901(22).

6.7 The potential future migration of hazardous substances into the groundwater at and under Picatinny Arsenal constitutes a "threatened release of a hazardous substance from a facility" as that phrase is used in Section 106(a) of CERCLA, 42 U.S.C. §9606(a).

6.8 The Army is a responsible party within the meaning of Section 107 of CERCLA, 42 U.S.C. §9607, with respect to the releases and threatened releases of hazardous substances at Picatinny Arsenal.

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

6.10 The schedule for completing the actions required by this Agreement complies with the requirements of Section 120(e) of CERCLA, 42 U.S.C. §9620(e).

6.11 USEPA has determined that the Submittals, actions, and other elements of work to be performed by the Army pursuant to this Agreement are necessary to protect the public health and welfare, and/or the environment.

6.12 This section contains determinations of law made solely by USEPA and shall not be used by any person related or unrelated to this Agreement in any action other than an action to enforce this Agreement.

VII.

Statutory Compliance/RCRA-CERCLA Integration

7.1 The Parties intend to integrate the Army's CERCLA response obligations and RCRA corrective action obligations which relate to the release(s) of hazardous substances, hazardous wastes, pollutants or contaminants covered by this Agreement into this comprehensive Agreement. Therefore, the Parties intend that activities covered by this Agreement will achieve compliance with CERCLA, 42 U.S.C. §9601 et seq.; 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.

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

7.3 The Parties recognize that the requirement to obtain permits for response actions undertaken pursuant to this Agreement shall be as provided for in CERCLA and the NCP. The Parties further recognize that on-going hazardous waste management activities at Picatinny Arsenal may require the issuance of permits under Federal and State laws. This Agreement does not affect the requirements, if any, to obtain such permits. However, if a permit is issued to the Army for on-going hazardous waste management activities at the Site, USEPA shall reference and incorporate any appropriate provisions, including appropriate schedules (and the provision for extension of such schedules), of this Agreement into such permit. With respect to those portions of this Agreement incorporated by reference into permits, the Parties intend that judicial review of the incorporated portions shall, to the extent review is authorized by law, only occur under the provisions of CERCLA.

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

VIII.
Scope of Agreement

The Army agrees to perform all of the response actions set forth in this Part, Part IX (Removal Actions), and Part X (Records of Decisions), and in accord with the timetables and deadlines established in Attachment 2 and in the Deadlines part of this Agreement for all of the potentially contaminated areas on Picatinny Arsenal as delineated in the 1987 RCRA Facility Assessment, and the Scope of Work, a Primary Document as that term is defined in Part XIV, to be submitted by Picatinny Arsenal. These actions may consist of any or all of the following activities for any or all of the potentially contaminated areas:

(a) Operable Units - The Army agrees that it shall develop operable units necessary to protect human health, welfare, and the environment. After consultation with USEPA as described in Part XIV, the Army shall publish its proposed operable unit alternative(s) for public review and comment. Selection of operable unit alternatives shall proceed in the same manner as the remedy selection and implementation process described in Part X (Records of Decision) in this Agreement.

(b) Removal Actions - Any Removal Action conducted on the Site shall be conducted in a manner consistent with Part IX (Removal Actions) of this Agreement, CERCLA, and the NCP.

(c) Site Inspection - The Army agrees that it shall develop, implement and report upon an SI for the Site in accordance with CERCLA and the NCP. An SI shall be applicable for any area listed in the Scope of Work for which there is no previous background analytical data to confirm the presence of contamination. The purpose of the SI is to generate sampling and other field data to determine if further action or investigation is appropriate at a potentially contaminated area. The SI Workplan and Report are primary documents and shall be subject to the review and comment procedures described in Part XIV. The SI shall be conducted in accordance with the requirements and deadlines set forth in Attachment 2 and Part XI (Deadlines) of this Agreement.

(d) Remedial Investigation - The Army agrees it shall develop, implement and report upon RIs for the Site (including any Operable Unit). The RI documents shall be subject to the review and comment procedures described in Part XIV. The RIs shall be conducted in accordance with the requirements and time schedules set forth in Attachment 2 and Part XI (Deadlines) of this Agreement. The RIs shall meet the purposes set forth in Part I (Purpose) of this Agreement.

(e) Feasibility Study - The Army agrees it shall design, propose, undertake and report upon FSs for the Site (including any Operable Unit). The FS documents shall be subject to the review and comment procedures described in Part XIV. The FSs shall be conducted in accordance with the requirements and time schedules set forth in Attachment 2 and Part XI (Deadlines) of this Agreement. The FSs shall meet the purposes set forth in Part I (Purpose) of this Agreement.

(f) Remedial Action Selection and Implementation - Following completion of each RI and corresponding FS and in consultation with the USEPA as described in Part XIV, the Army shall publish its proposed remedial action alternative(s) (the Proposed Plan) for public comment in accordance with Part X of this Agreement, Section 117(a) of CERCLA, and applicable State laws and shall comply with all other applicable sections of Section 117 of CERCLA. Remedial selection and implementation shall proceed in accordance with Part X (Records of Decision) of this Agreement.

(g) RCRA Closure - Those areas which are subject to RCRA closure requirements under New Jersey Hazardous Waste Regulations, NJAC 7:26-9.8, shall be listed in the Scope of Work but shall not be subject to the terms of this Agreement unless:

- 1) following completion of RCRA closure requirements conducted pursuant to approved closure plan(s) and/or based on new information which was not considered in scoping and designing the RCRA closure plan(s), either EPA or Picatinny Arsenal determines that there is or has been a release or threat of release of a hazardous substance, pollutant, contaminant and/or hazardous waste at or from the area subject to closure, and additional response action may be necessary and appropriate to protect public health, welfare or the environment;

or

- 2) Both Picatinny and EPA determine that it is more appropriate to implement response actions, not inconsistent with the approved closure plans, at an area subject to RCRA closure before all RCRA closure requirements have been completed. If such a determination is made, the parties may propose such actions at anytime. EPA may determine that a delay in the submittal of an FS, Proposed Plan, and/or ROD is necessary so that these actions will not be inconsistent with RCRA closure requirements.

Twenty-one (21) days after any of the above determinations is made, the area(s) of concern shall be subject to the terms of this Agreement, and Picatinny Arsenal shall submit to EPA deadlines for primary documents, pursuant to Section XI, as appropriate.

Picatinny Arsenal shall submit to EPA the sampling and analysis results from closure activities at the same time these results are submitted to NJDEP.

IX.
Removal Actions

9.1 All removal actions conducted on Picatinny Arsenal shall be conducted in a manner consistent with this Agreement, CERCLA, and the NCP and shall contribute to the efficient performance of any long term remedial action with respect to the release(s) or threatened release(s) concerned.

9.2 For all removal actions except emergency removal actions, the Army shall give USEPA adequate opportunity for timely review and comment after the Army makes any proposal to carry out such removal actions and before the Army initiates any such response action. Such a proposal to undertake such action by the Army shall be submitted to USEPA and shall include:

- (a) Documentation of the actual or threatened release from the Site;
- (b) Documentation that the action(s) to be taken will abate the danger and threat which may be posed by release of hazardous substances from the Site;
- (c) Documentation that the action(s) will, to the extent practicable, contribute to the efficient performance of any long-term remedial action with respect to the release or threatened release concerned; and,
- (d) A workplan and schedule for the proposed action.

9.3 The opportunity for review and comment for proposed removal actions, as stated in Section 9.2 above, does not apply if the action is in the nature of an emergency removal taken because of an immediate, imminent and substantial endangerment to human health or the environment. In the case of an emergency removal action, the Army shall provide USEPA with oral notice as soon as possible and written notice within 48 hours after the Army determines that an emergency removal action is necessary. Promptly after initiating an emergency removal action, the Army shall provide USEPA with the written basis (factual, technical and scientific) for such action and any available documents supporting such action. Upon completion of an emergency removal action, the Army 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 this Section.

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

X.

Records of Decision and Plans for Remedial Action

10.1 For each operable unit, the Army shall submit the draft final RI/FS to USEPA for review and comment in accordance with Part XIV of this Agreement and within the time schedules set forth in Attachment 2 to this Agreement. With each Draft FS document, the Army shall include a presentation of the preferred remedial alternative(s) in the Proposed Plan. Following finalization of the proposed plan, a public comment period will be announced, and a public hearing will be held by the Army to receive comments on the FS and Proposed Plan for each operable unit. Copies of all written and oral public comments received will be provided to USEPA. Public review and comment shall be conducted in accordance with Section 117(a) of CERCLA. Following public comment, the Parties will determine if the FS or Proposed Plan should be modified based on the comments received. These modifications will be made by the Army and the modified documents will be reviewed by USEPA. Either of the Parties may recommend that additional public comment be solicited if modifications to the Proposed Plan substantially change the remedy originally proposed to the public.

10.2 Within 30 days of the close of the public comment period, the Army will submit to USEPA a draft Record of Decision for each operable unit. The draft Record of Decision will include a Responsiveness Summary in accordance with applicable USEPA guidance. The Parties shall have 30 days to attempt to jointly select a remedy following the Army's submission of a draft Record of Decision. If the Parties agree on the draft Record of Decision, USEPA shall co-sign the Record of Decision and the draft Record of Decision shall be adopted by USEPA and the Army. Within 10 days of receipt of the Record of Decision with USEPA's signature, the Army shall issue the final Record of Decision. If the Parties are unable to reach agreement on the draft Record of Decision, selection of a remedial action shall be made by the USEPA Administrator and USEPA shall then prepare the final Record of Decision. The selection of remedial action(s) by the USEPA Administrator shall be final and not subject to dispute by the Army. If a Record of Decision prepared by USEPA departs significantly from the Proposed Plan which was subject to public comment, then USEPA shall subject the new Proposed Plan to public comment.

10.3 Notice of the final Record of Decision shall be published by the Party preparing it and shall be made available to the public prior to commencement of the remedial action, in accordance with Section 117(b) of CERCLA.

10.4 Upon issuance of the final Record of Decision for the final remedial action as an operable unit pursuant to section

10.2 above, the RI/FS for that operable unit will be deemed completed.

10.5 Within 21 days of issuance of the final Record of Decision for an Operable Unit, the Army shall propose deadlines for completion of the Remedial Design and Remedial Action Workplan documents in accordance with Sections 11.2 and 11.4 (Deadlines) of this Agreement. Upon finalization, the final deadlines established pursuant to section 11.4 shall be published by USEPA.

10.6 The Remedial Design and the Remedial Action Workplan are primary documents subject to the review and comment process in Part XIV (Consultation). The Remedial Action Workplan shall, at a minimum, contain: (a) a project schedule for construction and implementation of the remedial action, (b) an operation and maintenance plan which shall cover both implementation and long term maintenance of the remedial action, (c) a construction quality assurance plan which shall ensure that a completed remedial action meets or exceeds all design criteria, plans and specifications, (d) a sampling and analysis plan, (e) a waste management plan, and (f) a contingency plan for a response to system malfunctions. The Army shall implement the Remedial Action Workplan immediately upon approval by USEPA and in accordance with the schedules established therein. The remedial action(s) for each operable unit shall meet the purposes set forth in Part I (Purpose) of this Agreement.

10.7 Upon approval by USEPA, all terms, conditions, timetables, deadlines, schedules, or proposed work relating to any interim or final remedial actions that are required by this Part shall be incorporated into this Agreement and become an enforceable part thereof.

XI.
Deadlines

11.1 Within twenty-one (21) days of the effective date of this Agreement, the Army shall propose deadlines for completion of the following draft primary documents:

1. Community Relations Plan
2. Scope of Work (RI Concept Plan)
3. Site Investigation (SI) Workplan(s)
4. RI/FS Workplans (each SI and RI/FS workplan shall include a sampling and analysis plan and QAPjP)
5. QAPP
6. Risk Assessment
7. SI Report(s)
8. RI Report(s)
9. Initial Screening of Alternatives
10. FS Report(s)
11. Proposed Plan(s)
12. Record(s) of Decision

11.2 Within fifteen (15) days of receipt, EPA shall review and provide comments to the Army regarding the proposed deadlines. Within fifteen (15) days following receipt of the comments the Army shall, as appropriate, make revisions and reissue the proposal. The Parties shall meet as necessary to discuss and finalize the proposed deadlines. If the Parties agree on proposed deadlines, the finalized deadlines shall be incorporated into the appropriate Work Plans. If the Parties fail to agree within thirty (30) days on the proposed deadlines, the matter shall immediately be submitted for dispute resolution pursuant to Part XVI of this Agreement. The final deadlines established pursuant to this Paragraph shall be published by USEPA.

11.3 If the Parties agree that any supplemental work or any treatability studies are to be undertaken pursuant to this Agreement, the Army shall provide target dates for submission of the secondary documents listed below within twenty-one (21) days of a written request by USEPA for such target dates:

1. Supplemental Workplans and Studies for completion of an FS.
2. Supplemental Reports
3. Treatability Studies

11.4 Within twenty-one (21) days of issuance of the Record of Decision, the Army shall propose deadlines for completion of the following draft primary documents:

1. Remedial Design
2. Remedial Action Workplan

These deadlines shall be proposed, finalized and published utilizing the same procedures set forth in Section 11.2 above.

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

XII. Project Managers

12.1 The Army and USEPA will designate Project Managers and their alternates, hereinafter referred to as Project Managers. The Project Managers for the Army and USEPA are identified in Part XIII (Notification). Any Party may change its designated Project Manager by notifying the other Party in writing, within five days of the change. To the maximum extent possible, communications between the Parties concerning the terms and conditions of this Agreement shall be directed through the Project Managers as set forth in Part XIII of this Agreement. Each Project Manager shall be responsible for assuring that all communications from the other Project Manager are appropriately disseminated and processed by the entities which the Project Managers represent.

12.2 Subject to the limitations set forth in Part XX (Site Access), Section 20.1, the USEPA Project Manager shall have the authority to: (1) take samples and/or obtain split samples of any Army samples collected at the site relating to this Agreement; (2) observe all activities performed pursuant to this Agreement, take photographs and make such other reports on the progress of the work as the Project Manager deems appropriate; (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 project.

12.3 At the request of the Army Project Manager, USEPA similarly shall allow the Army to take split or duplicate samples of samples collected by USEPA.

12.4 The Project Manager of any Party 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 project. Any minor field modifications proposed under this Part by any Party must be approved orally by Project Managers for the Army and EPA to be effective. If agreement cannot be reached between the Army and EPA on any proposed additional work or modification to work, the dispute resolution procedures as set forth in Part XVI may be used in addition to this Part.

12.5 Within ten (10) business days following an agreement for any minor field 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 Manager.

12.6 The Project Manager for the Army shall supervise all work performed at Picatinny Arsenal during implementation of the work performed pursuant to this Agreement. The Project Manager for the Army shall be reasonably available to USEPA Project Manager throughout the performance of all work required by this Agreement. The absence of the USEPA Project Manager from the Site shall not be cause for work stoppage.

12.7 The Project Managers shall meet formally approximately every 45 days pursuant to Section 14.5 of this Agreement to discuss issues relating to the performance of work under this Agreement. In addition, Project Managers may also meet informally as necessary.

XIII.
Notification

13.1 Unless otherwise specified, any report or submittal provided pursuant to a schedule or deadline identified in or developed under this Agreement shall be sent by certified mail or next day mail, return receipt requested or hand delivered. All time periods specified in Part XIV for review and/or comment of any Primary or Secondary document by any Party under this Agreement shall commence on the date any such document is received by that Party.

13.2 Notice to the individual Parties shall be provided under this Agreement to the following addresses:

- (a) For the Army (4 copies):
U.S. Army Armament Research, Development
and Engineering Center
ATTN: SMCAR-EA (Mr. Ted Gabel)
Picatinny Arsenal, New Jersey 07801-5000

- (b) For the USEPA (4 copies):
Mr. Jeffrey Gratz
Picatinny Arsenal Project Manager (ERRD-PSB)
U.S. Environmental Protection Agency, Region II
26 Federal Plaza
New York, New York 10278

Unless otherwise requested, all routine correspondences may be sent via regular mail to the above-named persons.

13.3 It is the responsibility of the Project Managers who are identified above to assure that all documents relating to this Agreement are disseminated to all relevant agents and employees of their respective agencies, as needed to facilitate the actions required by this Agreement.

13.4 Written notice by USEPA to the Project Manager for the Army will be deemed notification to the Army for any matters relating to this Agreement unless otherwise stated in this Agreement.

13.5 Written notice by the Army to the Project Manager for USEPA will be deemed notification to USEPA for any matters relating to this Agreement unless otherwise stated in this Agreement.

13.6 The alternate Project Manager for the Army is Ms. Andrea Pastuck, and for USEPA, Mr. Robert Wing.

XIV.

Consultation with USEPA: Review and Comment Process for Draft and Final Documents

14.1 Applicability:

The provisions of this Part establish the procedures that shall be used by the Army and USEPA to provide the Parties with appropriate notice, review, comment, and response to comments regarding RI/FS and RD/RA documents, specified herein as either primary or secondary documents. In accordance with Section 120 of CERCLA and 10 U.S.C. §2705, the Army will normally be responsible for issuing primary and secondary documents to USEPA. 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 Sections 14.2 through 14.10 below.

The designation of a document as "draft" or "final" is solely for purposes of consultation with USEPA 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.

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

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

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

14.3 Primary Reports:

(a) The Army shall complete and transmit draft reports for the following primary documents to USEPA for review and comment in accordance with the provisions of this Part:

1. Community Relations Plan
2. Scope of Work (RI Concept Plan)
3. Site Investigation (SI) Workplan(s)

4. RI/FS Workplans (each SI and RI/FS Workplan shall contain a sampling and analysis plan and QAPjP)
5. QAPP
6. Risk Assessment
7. SI Report(s)
8. RI Report(s)
9. Initial Screening of Alternatives
10. FS Report(s)
11. Proposed Plan
12. Record(s) of Decision
13. Remedial Design
14. Remedial Action Work Plan

(b) Only the draft final reports for the primary documents identified above shall be subject to dispute resolution. The Army shall complete and transmit draft primary documents in accordance with the timetable and deadlines established in Part XI of this Agreement.

14.4 Secondary Documents:

(a) The Army shall complete and transmit draft reports for the following secondary documents to USEPA for review and comment in accordance with the provisions of this Part:

1. Supplemental Workplans and Studies for completion of an FS.
2. Supplemental Reports
3. Treatability Studies

(b) Although USEPA 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 Section 14.2 hereof. Target dates shall be established for the completion and transmission of draft secondary reports pursuant to Part XI of this Agreement.

14.5 Meetings of the Project Managers on Development of Reports:

The Project Managers shall meet approximately every 45 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 Sections 14.3 and 14.4 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.

14.6 Identification and Determination of Potential ARARs:

(a) For those primary reports or secondary documents that consist of or include ARARs determinations, prior to the issuance of a draft report, the Project Managers shall meet to identify and propose, to the best of their ability, all potential ARARs

pertinent to the report being addressed. Draft ARARs determinations shall be prepared by the Army in accordance with Section 121(d)(2) of CERCLA, the NCP and pertinent guidance issued by USEPA, that is consistent with CERCLA and the NCP.

(b) 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 ARARs identification is necessarily an iterative process and that potential ARARs must be re-examined throughout the RI/FS process until a ROD is issued.

14.7 Review and Comment on Draft Reports:

(a) The Army shall complete and transmit each draft primary report to USEPA on or before the corresponding deadline established for the issuance of the report. The Army shall complete and transmit the draft secondary document in accordance with the target dates established for the issuance of such reports established pursuant to Part XI of this Agreement.

(b) 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 USEPA 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 issued by the USEPA. Comments by the USEPA shall be provided with adequate specificity so that the Army 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 Army, the USEPA shall provide a copy of the cited authority or reference. In cases involving complex or unusually lengthy reports, USEPA may extend the 45-day comment period for an additional 20 days by written notice to the Army prior to the end of the 45-day period. On or before the close of the comment period, USEPA shall transmit by next day mail their written comments to the Army.

(c) Representatives of the Army shall make themselves readily available to USEPA 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 Army on the close of the comment period.

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

(e) Following the close of the comment period for a draft report, the Army 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 Army shall transmit to USEPA its written response to comments received within the comment period. Within 30 days of the close of the comment period on a draft primary report, the Army shall transmit to USEPA a draft final primary report, which shall include the Army's response to all written comments, received within the comment period. While the resulting draft final report shall be the responsibility of the Army, it shall be the product of consensus to the maximum extent possible.

(f) The Army may extend the 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 notice to USEPA. In appropriate circumstances, this time period may be further extended in accordance with Part XV hereof.

14.8 Availability of Dispute Resolution for Draft Final Primary Documents:

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

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

14.9 Finalization of Reports:

The draft final primary report shall serve as the final primary report if no party invokes dispute resolution regarding the document or, if invoked, at completion of the dispute resolution process should the Army's position be sustained. If the Army's determination is not sustained in the dispute resolution process, the Army shall prepare, within not more than 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 Part XV (Extensions) hereof.

14.10 Subsequent Modifications of Final Reports:

Following finalization of any primary report pursuant to Section 14.9 above, USEPA or the Army may seek to modify the report, including seeking additional field work, pilot studies, computer modeling or other supporting technical work, only as provided in Paragraphs (a) and (b) below.

(a) USEPA or the Army 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. USEPA or the Army may seek such a modification by submitting a concise written request to the Project Manager of the other Party. The request shall specify

the nature of the requested modification and how the request is based on new information.

(b) In the event that a consensus is not reached by the Project Managers on the need for a modification, either USEPA or the Army may invoke dispute resolution to determine if such modification shall be conducted. Modification of a report shall be required only upon a showing that: 1) the requested modification is based on significant new information, and 2) the requested modification could be of significant assistance in evaluating impacts on the public health or the environment, in evaluating the selection of remedial alternatives, or in protecting human health and the environment.

(c) Nothing in this Section shall alter USEPA's ability to request the performance of additional work which was not contemplated by this Agreement. The Army's obligation to perform such work must be established by either a modification of a report or document or by amendment to this Agreement.

XV.
Extensions

15.1 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 Army shall be submitted in writing and shall specify:

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

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

- (a) An event of force majeure;
- (b) A delay caused by another party's failure to meet any requirement of this agreement;
- (c) A delay caused by the good faith invocation of dispute resolution or the initiation of judicial action;
- (d) A delay caused, or which is likely to be caused, by the grant of an extension in regard to another timetable and deadline or schedule; and
- (e) Any other event or series of events mutually agreed to by the Parties as constituting good cause.

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

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

15.5 If there is consensus among the Parties that the requested extension is warranted, the Army shall extend the affected timetable and deadline or schedule accordingly. If there is no consensus among the Parties as to whether all or part of the requested extension is warranted, the timetable and deadline or schedule shall not be extended except in accordance

with a determination resulting from the dispute resolution process.

15.6 Within seven (7) days of receipt of a statement of nonconcurrency with the requested extension, the Army may invoke dispute resolution.

15.7 A 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.

XVI.
Dispute Resolution

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

16.1 Within thirty (30) days after: (1) the issuance of a draft final primary document pursuant to Part XIV (Consultation) of this Agreement, or (2) any action which leads to or generates a dispute, the disputing Party shall submit to the Dispute Resolution Committee ("DRC") a written statement of dispute setting forth the nature of the dispute, the work affected by the dispute, the disputing Party's position with respect to the dispute and the technical, legal or factual information the disputing Party is relying upon to support its position.

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

16.3 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 one individual and an alternate to serve on the DRC. The individuals designated to serve on the DRC shall be employed at the policy level (SES or equivalent) or be delegated the authority to participate on the DRC for the purposes of dispute resolution under this Agreement. The USEPA representative on the DRC is the Emergency and Remedial Response Division Director of USEPA's Region II. The Army's designated member is the Commander, U.S. Army Armament Research, Development and Engineering Center. Written notice of any delegation of authority from a Party's designated representative on the DRC shall be provided to the other Party.

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

16.5 The SEC will serve as the forum for resolution of disputes for which agreement has not been reached by the DRC. The USEPA representative on the SEC is the Regional Administrator of USEPA's Region II. The Army's representative on the SEC is the Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health) OASA (I & L). 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, USEPA's Regional Administrator shall issue a written position on the dispute. The Army may, within twenty-one (21) days of the Regional Administrator's issuance of USEPA's position, issue a written notice elevating the dispute to the Administrator of USEPA for resolution in accordance with all applicable laws and procedures. In the event that the Army elects not to elevate the dispute to the Administrator within the designated twenty-one (21) day escalation period, the Army shall be deemed to have agreed with Regional Administrator's written position with respect to the dispute.

16.6 Upon escalation of a dispute to the Administrator of USEPA pursuant to Section 16.5, the Administrator will review and resolve the dispute within twenty-one (21) days. Upon request, and prior to resolving the dispute, the USEPA Administrator shall meet and confer with the Army's Secretariat Representative to discuss the issue(s) under dispute. Upon resolution, the Administrator shall provide the Army 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.

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

16.8 When dispute resolution is in progress, work affected by the dispute will immediately be discontinued if the Emergency and Remedial Response Division Director for USEPA's Region II requests, in writing, that work related to the dispute be stopped because, in USEPA's opinion, such work is inadequate or defective, and such inadequacy or defect is likely to yield an adverse effect on human health or the environment, or is likely to have a substantial adverse effect on the remedy selection or implementation process. To the extent possible, USEPA shall consult with the Army prior to initiating a work stoppage request. After stoppage of work, if the Army believes that the

work stoppage is inappropriate or may have potential significant adverse impacts, the Army may meet with the Division Director to discuss the work stoppage. Following this meeting, and further consideration of the issues, the Division Director will issue, in writing, a final decision with respect to the work stoppage. The final written decision of the 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 Army.

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

16.10 Resolution of a dispute pursuant to this Part 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 Part of this Agreement.

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

XVIII.
Enforceability

18.1 The Parties agree that:

(a) Upon the effective date of this Agreement, any standard, regulation, condition, requirement or order which has become effective under CERCLA and is incorporated into this Agreement is enforceable by any person pursuant to 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;

(b) 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;

(c) All terms and conditions of this Agreement which relate to operable unit or final remedial actions, including corresponding timetables, deadlines or schedules, and all work associated with the operable unit 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,

(d) Any final resolution of a dispute pursuant to Part XVI 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.

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

18.3 Nothing in this Agreement shall be construed as a restriction or waiver of any rights the USEPA may have under CERCLA, including but not limited to any rights under sections 113 and 310, 42 U.S.C §§9613 and 9659. The Department of Defense (DOD) does not waive any rights it may have under CERCLA section 120, SARA section 211 and Executive Order 12580.

18.4 The parties agree to exhaust their rights under Part XVI, Dispute Resolution, prior to exercising any rights to judicial review that they may have.

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

XIX.
Stipulated Penalties

19.1 In the event that the Army fails to submit a primary document to USEPA pursuant to the appropriate timetable or deadline in accordance with the requirements of this Agreement, or fails to comply with a term or condition of this Agreement which relates to an operable unit or final remedial action, USEPA may assess a stipulated penalty against the Army. 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.

19.2 Upon determining that the Army has failed in a manner set forth in Section 19.1, USEPA shall so notify the Army in writing. If the failure in question is not already subject to dispute resolution at the time such notice is received, the Army shall have fifteen (15) days after receipt of the notice to invoke dispute resolution on the question of whether the failure did in fact occur. The Army shall not be liable for the stipulated penalty assessed by USEPA 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.

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

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

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

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

19.6 This Part shall not affect the Army's ability to obtain an extension of a timetable, deadline or schedule pursuant to Part XV of this Agreement.

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

XX.
Site Access

20.1 The Army shall honor all reasonable requests for access by the USEPA to exercise its right of access pursuant to Section 20.2 below, conditioned only upon presentation of proper credentials to the Army. However, such access shall be obtained in conformance with Army security and safety regulations and in a manner minimizing interference with any military operations at Picatinny Arsenal. USEPA will give the Army notice prior to entering Picatinny Arsenal.

20.2 The Army will allow the USEPA, and/or its authorized representatives, to enter the Site at all reasonable times for the purposes of, among other things:

- (a) Inspecting records, operating logs, contracts and other documents relevant to implementation of this Agreement;
- (b) Reviewing the progress of the Army, its response action contractors or lessees in implementing this Agreement;
- (c) Conducting such tests as the Project Managers deem necessary;
- (d) Verifying the data submitted to the USEPA by the Army; and/or
- (e) Observing the performance of any or all sampling, testing, response action, removals, remedial actions, pilot studies and/or any other actions taken at Picatinny Arsenal pursuant to the terms of this Agreement.

20.3 The Army shall use its best efforts to gain access to all areas within the boundaries of Picatinny Arsenal occupied by non-government entities (including structures), for the purposes of performing all activities and implementing all other measures required by this Agreement.

20.4 The Army shall use its best efforts to gain access to all areas located outside the legal boundaries of Picatinny Arsenal onto which access is needed to perform all activities under this Agreement, including obtaining access for the Army and for USEPA onto all real property and structures which are not owned by the United States or the Army.

20.5 "Best efforts" for the purposes of paragraphs 20.3 and 20.4 shall include identifying and locating the owner(s) and lessees of areas, offering consideration to the owner(s) and/or lessees for access to areas, making attempts to obtain access agreements from the owners and/or lessees of all areas onto which access is needed under this Agreement and asserting all authority which the Army possesses under Section 104(e) of CERCLA, 42 U.S.C. §9601 et seq. and any other federal laws and regulations.

20.6 The Army shall ensure that all response measures, ground water rehabilitation measures and remedial actions of any kind which are undertaken pursuant to this Agreement on any areas which a) are presently owned by the United States and which are occupied by the Army or leased by the Army to any other entity or b) are in any manner under the control of the Army or any lessees or agents of the Army, shall not be impeded or impaired in any manner by any transfer of title or change in occupancy or any other change in circumstances of such areas.

20.7 With respect to non-Army property upon which monitoring wells, pumping wells, or other response actions are to be located, the access agreements shall also provide that no conveyance of title, easement, or other interest in the property shall be consummated for the duration of the access agreement without provisions for the continued right of entry.

20.8 The Army shall ensure that the USEPA and its authorized representatives shall be allowed to enter and move about all areas where any activities are to be or are being performed under this Agreement. The Army shall provide an escort whenever USEPA requires access to restricted areas for purposes consistent with this Agreement. USEPA shall provide reasonable notice to the Army Project Manager to request any escorts. USEPA and/or its authorized representatives shall not use any camera, sound recording or other electronic recording devices without permission of the Army Project Manager. However, the Army shall not unreasonably withhold such permission. When permission must be withheld, the Army shall be responsible for alternate arrangements for any work utilizing a camera, sound recording or other electronic device, if feasible. The Army shall provide, within 48 hours of withholding permission, written explanation of the reasons why such permission was withheld and why alternative arrangements are not feasible.

20.9 The Army shall provide the USEPA with at least thirty (30) days prior notice of any conveyance of title to or any transfer of an interest in real property which may affect this Agreement or any activities to be taken pursuant to it. The Army shall ensure that all activities or remedial measures to be undertaken pursuant to this Agreement will not be impeded or impaired by any transfer of title or any transfer of any other interest in real property relating to Picatinny Arsenal or any structures located thereon.

20.10 USEPA and the Army recognize that access to certain areas of the Site may be restricted based upon National Security concerns if so stipulated in an executive order issued by the President pursuant to Section 120(j)(1) of CERCLA, 42 U.S.C. §9620(j)(1).

XXI.

Sampling and Data/Document Availability

21.1 The Parties shall make available to each other quality assured results of sampling, tests or other data generated by any Party, or on their behalf, with respect to the implementation of this Agreement as soon as it becomes available but no later than ninety (90) days subsequent to the performance of such sampling event or test. If quality assurance is not completed within ninety (90) days, raw data or results shall be submitted within the ninety (90) day period and quality assured data or results shall be submitted as soon as they become available.

21.2 At the request of the USEPA Project Manager, the Army shall allow split or duplicate samples to be taken by the USEPA during sample collection conducted during the implementation of this Agreement. At the request of the Army, USEPA similarly shall allow the Army to take split or duplicate samples of samples collected by USEPA. The Project Manager of the Party intending to take samples shall endeavor to notify the Project Manager of the other Party not less than ten (10) business days in advance of any sample collection. If it is not possible to provide ten (10) business days prior notification, the Project Manager of the Party intending to collect samples shall notify the Project Manager of the other Party as soon as possible after becoming aware that samples will be collected.

XXII.

Quality Assurance

22.1 The Army shall develop an operable unit or element specific Quality Assurance Project Plan (QAPjP), as necessary, for review, comment and approval by USEPA as set forth in Section XIV. The QAPjP shall be prepared in accordance with EPA document QAMS-005/80 and other applicable guidance furnished by USEPA. A QAPjP shall include, but not be limited to, operable unit or element-specific sampling methodologies; sampling storage and shipping methods; documentation; sampling and chain-of-custody procedures; calibration procedures; laboratory quality control/quality assurance procedures and frequency; and data validation procedures and frequency. The QAPjP may be submitted separately or as an integral part of an RI Workplan. The Parties shall use Quality Assurance/Quality Control and chain-of-custody procedures during all field investigations, sample collection, and laboratory analysis which are in accord with USEPA guidance.

22.2 In order to provide quality assurance and maintain quality control regarding all samples collected pursuant to this Agreement, the Army shall submit, in the form of a Quality Assurance Program Plan (QAPP), the protocols to be used for sampling and analysis to USEPA for review, comment, and approval as set forth in Section XIV. The Army shall also ensure that any laboratory used for analysis is a participant in a quality assurance/quality control program acceptable to USEPA. The Army shall also ensure that appropriate USEPA personnel and their authorized representatives will be allowed access to any laboratory used by the Army in implementing this Agreement. Such access shall be for the purpose of validating sample analysis, protocols, and procedures required by the Remedial Investigation and QAPP.

XXIII.
Permits

23.1 The Army shall be responsible for obtaining all Federal, State and local permits which are necessary for the performance of all work under this Agreement.

23.2 The Parties recognize that under Sections 121(d) and 121(e)(1) of CERCLA, 42 U.S.C. §§ 9621(d) and 9621(e)(1), and the NCP, the response actions called for by this Agreement and conducted entirely on site are exempt from the procedural requirement to obtain Federal, State, or local permits. All such activities must, however, comply with all the applicable or relevant and appropriate federal and state standards, requirements, criteria, or limitations which would have been included in any such permit.

23.3 When the Army proposes a response action to be conducted entirely on Picatinny Arsenal, which in the absence of Section 121(e)(1) of CERCLA and the NCP would require a Federal or State permit, and for which the Army does not seek a permit, the Army shall include in the Submittal to USEPA:

- (a) Identification of each permit which would otherwise be required;
- (b) Identification of the standards, requirements, criteria, or limitations which would have had to have been met to obtain each such permit;
- (c) Explanation of how the response action proposed will meet the standards, requirements, criteria or limitations identified in (b) immediately above.

23.4 Section 23.2 above is not intended to relieve the Army from the requirement(s) of obtaining a permit or other authorization whenever it proposes a response action involving the shipment or movement off Picatinny Arsenal of a hazardous substance, or undertakes any activities not directly related to response actions pursuant to the terms of this Agreement.

23.5 The Army shall notify USEPA in writing of any permits required for any activities it plans to undertake outside Picatinny Arsenal as soon as it becomes aware of the requirement. The Army shall apply for all such permits and provide USEPA copies of all such permits.

23.6 During any appeal by any Party of any permit required to implement this Agreement or during review of any proposed modification(s), the Army shall continue to implement those portions of this Agreement which can be reasonably implemented independent of final resolution of the permit issue(s) under appeal. However, as to work which cannot be so implemented, any corresponding timetable, deadlines, and schedule will be subject to Part XV (Extensions) of this Agreement.

XXIV.
Reporting

Technical Review Committee ("TRC") Minutes: The Army shall submit to USEPA the minutes to TRC meetings the following:

- (a) Issues discussed at the TRC meeting;
- (b) The actions which the Army has taken subsequent to the previous TRC meeting to implement the requirements and time schedules of this Agreement;
- (c) A description of all actions scheduled for completion during that time period that were not completed, a statement indicating why such actions were not completed and an anticipated completion date for all such activities;
- (d) Identification of any anticipated delays in meeting future time schedules, the reason(s) for such delay(s) and actions taken or to be taken to prevent or mitigate the delay;
- (e) A description of the actions which are scheduled up until the next TRC meeting.

TRC minutes shall be submitted by the twentieth day following each TRC meeting. However, if a TRC meeting is not held within ninety (90) days of the previous TRC meeting, the Army shall submit a report by the one-hundredth and tenth (110) day which shall include, at a minimum, items (b) through (e) listed above.

XXV.
Five Year Review

25.1 The Army agrees that USEPA will review the remedial action(s) taken on the Site no less often than 5 years after the initiation of the final remedial action consistent with Section 121(c) of CERCLA, 42 U.S.C. §9621(c), if the selected remedial action(s) result(s) in any hazardous substance, pollutants or contaminants remaining at the Site.

25.2 If upon such review it is the conclusion of USEPA that additional action(s) or modification(s) to any remedial action(s) are appropriate pursuant to any provision under CERCLA, the Army shall implement such additional or modified action in accordance with Section 14.9 of Part XIV (Consultation). Any dispute of a determination under this Part shall be resolved under Part XVI (Dispute Resolution).

25.3 Any action or modification agreed upon pursuant to this Part shall be made a part of this Agreement.

XXVI.
Retention of Records

26.1 Each Party shall preserve for a minimum of ten (10) years after termination of this Agreement all records and documents in its possession or in the possession of its divisions, employees, agents, accountants, contractors or attorneys which relate in any way to the presence of hazardous substances, pollutants and contaminants at the Site or to activities taken pursuant to this Agreement. After this ten (10) year period, any Party wishing to destroy or dispose of any such records or documents shall notify the other Party to this Agreement at least ninety (90) days prior to destruction or disposal of any such documents or records. Upon request by any Party to this Agreement, the Party being notified shall make available any or all of such records or documents to the notifying Party at any time during the performance of the work under this Agreement and up to 10 years after the termination of this Agreement. Either Party to this Agreement shall allow the other Party to make copies of any or all records relating to the Agreement upon request.

26.2. All such records and documents shall be preserved for a period of ten (10) years following the termination of any judicial action regarding the work performed under CERCLA, which is the subject of this Agreement.

XXVII.
Reservation of Rights

27.1 Notwithstanding anything in this Agreement, USEPA may initiate any administrative, legal or equitable remedies available to it, including requiring additional response actions by the Army in the event that: (a) conditions previously unknown or undetected by USEPA arise or are discovered at the Site; or (b) USEPA receives additional information not available at the time this Agreement was reached; or (c) the implementation of the requirements of this Agreement are no longer protective of public health and the environment; or (d) USEPA discovers the presence of conditions on the Site which may constitute an imminent and substantial danger to the public health, welfare, or the environment; or (e) the Army fails to meet any of its obligations under this Agreement; or (f) the Army fails or refuses to comply with any applicable requirement of CERCLA or RCRA or related regulations.

27.2 This Agreement shall not affect any claim for natural resource damage assessments or for damages to natural resources.

XXVIII.
Transfer of Property

In the event the Army determines to enter into any contract for the sale or transfer of any portion of the Site, the Army will comply with the requirements of CERCLA §120(h), 42 U.S.C. §9620(h), in effectuating that sale or transfer, including all notice requirements. In addition, the Army shall include notice of this Agreement in any document transferring ownership or operation of the Site to any subsequent owner and/or operator of any portion of the Site and shall notify USEPA of any such sale or transfer and the provisions made for any additional remedial action measures, if required, at least ninety (90) days prior to such transfer.

XXIX.
Public Participation

29.1 The Parties agree that this Agreement and any subsequent proposed remedial action alternative and any subsequent plan for remedial action at the Site arising out of this Agreement shall comply with the administrative record and public participation requirements of Sections 113 and 117 of CERCLA, the NCP, USEPA guidance and regulations with respect to public participation, and all applicable State laws.

29.2 The Army shall develop and implement a Community Relations Plan (CRP) which responds to the need for an interactive relationship with all interested community elements, both on Picatinny Arsenal and off, regarding activities and elements of work undertaken by the Army. The Army agrees to develop and implement the CRP in a manner consistent with Section 117 of CERCLA, the NCP, USEPA guidelines set forth in USEPA's Community Relations Handbook, and any modifications thereto. The CRP is subject to the review and comment process set forth in Part XIV of this Agreement.

29.3 Except in emergencies, 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.

29.4 The Army agrees it shall establish and maintain an administrative record at or near Picatinny Arsenal in accordance with Section 113(k) of CERCLA. The administrative record shall be established and maintained in accordance with current and future USEPA regulations, policy and guidelines. A copy of each document placed in the administrative record after the effective date of this Agreement shall be provided to USEPA. The administrative record developed by the Army shall be updated on at least a quarterly basis. An index of documents in the administrative record will be supplied to USEPA with each update of the administrative record. The Army shall submit to USEPA, upon written request, any document listed on an index of documents that is not contained in the files of USEPA.

XXX.

Technical Review Committee

30.1 The Army shall continue to lead the Technical Review Committee (TRC). The purpose of the TRC is to afford a forum of cooperation between the Army and concerned local officials and citizens and provide a meaningful opportunity for members of the TRC to become informed and to express their opinion about the technical aspects of the RI/FS and the RD/RA. The TRC consists of representatives from the Army, USEPA, NJDEP, Township of Rockaway, Township of Jefferson, Township of Denville, the Borough of Rockaway, the Borough of Wharton, Morris County, the City of Dover and a citizen chosen by the TRC. The committee shall meet quarterly or as agreed upon as by the Project Managers to review progress of the RI/FS and RD/RA. Copies of all draft technical submissions shall be distributed for review and comment prior to the preparation of the final report. However, all Primary and Secondary documents, as defined and submitted pursuant to Part XIV of this Agreement, are subject to the deadlines (Part XI) and dispute resolution process (Part XVI) set forth in this Agreement. Minutes of the TRC meetings shall be written by the Army and distributed to the members of the TRC and USEPA and become part of the Administrative Record. The minutes shall be submitted pursuant to Part XXIV (Reporting) of this Agreement.

30.2 Copies of the minutes shall be made available to the public at the Morris County Library.

XXXI.
Public Comment

31.1 Within 15 days after the date the Regional Administrator of USEPA Region II executes this Agreement, USEPA shall announce the availability of this Agreement to the public for their review and comment. USEPA shall accept comments from the public for 45 days after such announcement. After the 45 day public comment period expires, the Parties shall review all such comments. Within 30 days after the expiration of the public comment period the Parties shall decide that either:

- (a) The Agreement shall be made effective without any modifications; or
- (b) The Agreement shall be modified prior to being made effective.

31.2 If the Parties decide that the Agreement shall be made effective without any modifications, USEPA shall transmit a copy of the signed Agreement to the Army and shall notify the Army in writing that the Agreement is effective. The effective date of the Agreement shall be the date of that letter from USEPA to the Army.

31.3 If the Parties agree that modifications are needed and agree upon the modifications and amend the Agreement by mutual consent within 60 days after the expiration of the public comment period, USEPA will determine whether the modified Agreement requires additional public notice and comment pursuant to any provision of CERCLA. If USEPA determines that no additional notice and comment are required, USEPA shall transmit a copy of the modified Agreement to the Army and shall notify the Army in writing that the modified Agreement is effective. The effective date of the Agreement shall be the date of that letter from USEPA to the Army. If the Parties amend the Agreement within this 60 day period and if USEPA concludes that such modifications require that the public receive additional opportunity for notice and comment, such additional notice and comment will be provided consistent with the provisions stated in Section 31.1 above. If the Parties agree, after such additional notice and comment has been provided, that the Agreement does not require any further modification, USEPA shall send a copy of the mutually agreed upon Agreement to the Army and shall notify the Army that the Agreement is effective. The effective date of the Agreement shall be the date of that letter from USEPA to the Army.

31.4 If, 30 days after the expiration of the 45 day comment period has expired, and the Parties have not reached agreement on either:

- (a) Whether modifications to the Agreement are needed; or
- (b) What modifications to the Agreement should be made; or

(c) Any language, any provisions, any deadlines, any work to be performed or any of the content of the Agreement or any attachments to the Agreement,

the Parties have the right to withdraw from negotiation of this Agreement after discussions between their SES-level or equivalent managers have taken place, and no agreement reached.

XXXII.

Amendment of Agreement

32.1 Any and all modifications to this Agreement must be in a writing which is executed by duly authorized official(s) of the Army and USEPA.

32.2 USEPA will be the last signatory to execute all modifications to this Agreement.

32.3 The effective date of every modification to this Agreement shall be the date on which each modification is mailed to the Army unless otherwise explicitly stated in each modification.

32.4 No written or oral advice, guidance, suggestions or informal comments by USEPA regarding reports, plans, specifications, schedules, any other writing submitted by the Army or on any other matter relating to this Agreement will be construed as modifying this Agreement or as relieving the Army any of its obligations under this Agreement, including the need to obtain approvals as may be required by this Agreement.

XXXIII.

Notice Of Completion

33.1 The provisions of this Agreement shall be deemed satisfied and terminated upon request by the Army of written notice by USEPA that the Army has demonstrated, to the satisfaction of USEPA, that all terms of this Agreement have been completed. The Army may propose in writing the termination of this Agreement upon a showing that the objectives of this Agreement have been satisfied.

33.2 If USEPA determines that the terms of this Agreement have not been satisfied, USEPA will respond to the Army in writing as to the reasons why that notice of completion has not been provided. The Army may invoke Dispute Resolution for 60 days following the Army's receipt of USEPA's written denial of completion.

XXXVI.
Funding

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

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

36.3 Any requirement for the payment or obligation of funds, including stipulated penalties, by the Army established by the terms of this Agreement shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. §1341. In cases where payment or obligation of funds would constitute a violation of the Anti-Deficiency Act, the dates established requiring the payment or obligation of such funds shall be appropriately adjusted. If appropriated funds are not available to fulfill the Army's obligations under this Agreement, USEPA reserves the right to initiate an action against any other person, or to take any response action, which would be appropriate absent this Agreement.

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

XXXVII.

Recovery of Expenses

The Parties agree to amend this Agreement at a later date in accordance with any subsequent national resolution of the issues of cost reimbursement.

XXXVIII.
Effective Date

This Agreement is effective upon issuance of a notice to the Army by USEPA in accordance with Part XXXI (Public Comment).

signed representative of a Party certifies that he or
fully authorized to enter into the terms and conditions of
Agreement and to legally bind such Party to this Agreement.

IT IS SO AGREED:

By: Lewis D. Walker 3/20/91
Lewis D. Walker Date
Deputy Assistant Secretary of the Army
U.S. Department of Army
(Environmental, Safety and Occupational Health)
OASA (I & L)

By: Constantine Sidamon-Eristoff 4/17/91
Constantine Sidamon-Eristoff Date
Regional Administrator
U.S. Environmental Protection Agency, Region II

By: William R. Holmes 3/26/91
Brigadier General William R. Holmes Date
Commander
U.S. Army Armament Research, Development and
Engineering Center