

ENVIRONMENTAL QUALITY

FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

ENGINEER REGULATION

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DEPARTMENT OF THE ARMY U.S. Army Corps of Engineers Washington, D.C. 20314-1000

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Regulation No. 200-1-4

29 August 2014

Environmental Quality FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

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Environmental Quality FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

- 1. <u>Purpose</u>. This regulation sets forth the U.S. Army Corps of Engineers (USACE) policy concerning the Corps' roles and responsibilities under the Formerly Utilized Sites Remedial Action Program (FUSRAP) in designating new sites, in determining the scope of its cleanup efforts, and in seeking cost recovery or contribution for its cleanup efforts, except as directed otherwise by Congress. The foundation of Corps of Engineers environmental work is the Environmental Operating Principles as specified in ER 200-1-5. These seven tenets serve as guides and must be applied in all Corps business lines as we strive to achieve a sustainable environment.
- 2. <u>Applicability</u>. This regulation applies to all HQUSACE elements and all USACE commands having responsibility for sites and vicinity properties (VPs) where USACE has lead federal agency responsibility for cleanup under FUSRAP subject to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This includes sites and substances added to the FUSRAP program by specific congressional action. Such sites are typically contaminated by hazardous substances with characteristics similar to FUSRAP-related radioactive and related chemical contamination.
- 3. Distribution Statement. Approved for public release, distribution is unlimited.

4. References.

- a. 42 U.S.C. §§ 9601 to 9675, Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended
- b. 42 U.S.C. §§ 2014, 2021, 2022, 2111, 2113, 2114, Atomic Energy Act of 1954, as amended
- c. 40 C.F.R. § 300, National Oil and Hazardous Substances Pollution Contingency Plan
 - d. Public Law 105-62, Energy and Water Development Appropriations Act, 1998

- e. Public Law 105-245, Energy and Water Development Appropriations Act, 1999
- f. Public Law 106-60, Energy and Water Development Appropriations Act, 2000
- g. H.R. Rep. No. 190, 105th Cong., 1st Sess., at 66 (1997)
- h. H.R. Conf. Rep. No. 271, 105th Cong., 1st Sess., at 37 (1997)
- i. Memorandum of Understanding Between the U.S. Department of Energy and the U.S. Army Corps of Engineers Regarding Program Administration and Execution of the Formerly Utilized Sites Remedial Action Program (FUSRAP), March 17, 1999
- j. Process for Transition of Uranium Mill Tailings Radiation Control Act Title II Disposal Sites to the U.S. Department of Energy Office of Legacy Management for Long-Term Surveillance and Maintenance, Department of Energy, March 2012
- k. DoD/EPA Joint Guidance on Streamlined Site Closeout and NPL Deletion Process for DoD Facilities, January 2006
- I. OSWER Directive 9320.2-22, Close Out Procedures for National Priorities List Sites, May 2011
- m. FUSRAP Management Requirements and Policies Manual, U.S. Department of Energy, Oak Ridge Operations, Revision 2, May 6, 1997
 - n. AR 25-400-2, The Army Records Information Management System (ARIMS)
 - o. ER 5-1-11, U.S. Army Corps of Engineers Business Process
- p. ER 200-1-5, Policy for Implementation and Integrated Application of U.S. Army Corps of Engineers Environmental Operating Principles and Doctrine
- q. EM 1110-35-1, Management Guidelines for Working with Radioactive and Mixed Waste
- 5. Background and Definitions.
 - a. <u>History</u>.
- (1) The Department of Energy (DOE) created FUSRAP in the 1970's to identify, investigate, and clean up or control residual contamination remaining at sites where work had been performed as part of the Nation's early atomic energy program. Generally, sites that became contaminated through uranium and thorium operations were decontaminated and released under the regulations in effect at the time. Since then, more stringent standards have been applied in some circumstances. FUSRAP partially funds the additional cleanup required to bring these sites into compliance with

today's environmental standards. Most of this remaining contamination consists of low specific activity contaminated soils.

(2) As of October 1997, DOE had completed remediation at 24 sites with some ongoing operation, maintenance and monitoring being undertaken by DOE. Remedial action was planned, underway, or pending final closeout at the remaining sites. In response to congressional direction, DOE also added some sites to FUSRAP that were not involved in the Nation's early atomic energy program, but were contaminated with materials similar to early atomic energy program materials.

b. Authority.

- (1) The Fiscal Year 1998 Energy and Water Development Appropriations Act, Pub. L. 105-62, transferred responsibility for the administration and execution of FUSRAP from DOE to USACE. Provisions in the Appropriations Acts for FY 1999 and FY 2000 (Pub. L. 105-245 and 106-60) clarified Congressional intent and required as a matter of law that USACE will conduct cleanup work at FUSRAP sites "subject to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. § 9601 et seq.), and the National Oil and Hazardous Substances Pollution Contingency Plan (40 C.F.R. Part 300)." See, e.g., Pub. L. 106-60, § 611(b).
- (2) DOE had independent authority under the Atomic Energy Act to clean up sites under its control or jurisdiction. Congress did not extend that authority to USACE when it transferred responsibility for FUSRAP cleanups, but the relevant committees made it clear in report language [See H. Rep. 105-190 at 66 (Jul 21, 1997) and H. Conf. Rep. 105-271 at 37 (Sep 26, 1997)] that USACE was to act, if possible, consistently with DOE's interpretations of its authority. In transferring the authority for FUSRAP execution to USACE, Congress did confer CERCLA lead agency authority on USACE for selection of remedies. This enables USACE to respond to FUSRAP sites where there is federal responsibility for the contamination on the FUSRAP site, as described in section 6. below. If there is no federal FUSRAP responsibility for the contamination, then consistent with DOE FUSRAP policy, the site is more appropriately referred to other federal or state cleanup programs.

c. Definitions.

(1) Active FUSRAP site: any eligible FUSRAP site which is undergoing or is programmed to undergo response actions by USACE under CERCLA, or which is determined to require initial or additional response action in accordance with the provisions of Article III of the MOU between USACE and DOE (Appendix A), or which was placed into FUSRAP pursuant to congressional direction. Response action includes, among other things, steps preliminary to actual cleanup, such as remedial investigations and feasibility studies. The results of these preliminary steps may result in a decision not to proceed with further cleanup.

- (2) Eligible FUSRAP site: any geographic area determined by DOE to be eligible. Among other considerations, the eligibility determination will be based on whether the area in question has been used for activities in support of the Nation's early atomic energy program (Appendix B more fully discusses DOE's eligibility determination, which is summarized in Appendix C) and those areas added by Congressional direction.
- (3) Vicinity property: a parcel of land, together with any improvements thereon, which is located outside the boundary of an eligible FUSRAP site, is adjacent to or near such a site (but not necessarily contiguous), and is known or suspected to be contaminated with radioactive and/or hazardous substance resulting from work performed as part of the nation's early atomic energy program.
- (4) Completed FUSRAP site: any of the 24 sites where response actions were completed by DOE and any site where all response actions under FUSRAP have been completed by USACE and publication of notice in accordance with CERCLA and the NCP has been made.

6. Policy.

- a. <u>Designation of an Active FUSRAP Site</u>. For USACE to designate an active FUSRAP site:
 - (1) Congress must mandate such action in legislation, or
- (2) All of the following conditions (a) through (d) must be met, consistent with the Memorandum of Understanding between DOE and USACE (including clarifying correspondence), Reference (a) (included as Appendix A).
- (a) DOE must find a site eligible for FUSRAP under Appendix D-1 to the FUSRAP Manual, "FUSRAP Summary Protocol" and "FUSRAP Designation/ Elimination Protocol Supplement No. 1 to FUSRAP Summary Protocol." DOE's eligibility determination indicates a belief that a site could be contaminated with the Nation's early atomic energy program material, based in whole or in part on evaluation of historical documents, and establishes DOE's authority to remediate the site. (Appendix B contains DOE FUSRAP Manual D-1, and Appendix C summarizes these criteria.);
- (b) USACE must verify site contamination with hazardous substances at a level sufficient to warrant a CERCLA response action (normally achieved through conduct of a Preliminary Assessment (PA) and a Site Inspection (SI) if necessary);
- (c) The hazardous substance contamination must have resulted from the Nation's early atomic energy program activities, [i.e., Manhattan Engineer District (MED) or Atomic Energy Commission (AEC) activities]; and

(d) USACE must have authority to respond under CERCLA. Accordingly, a preliminary legal analysis must show some Federal Government responsibility for the contamination. The analysis should determine whether a reasonable potential for CERCLA liability exists for cleanup of the contamination. The extent of the preliminary legal analysis should be sufficient to give rise to a reasonable certainty that a more wide-ranging evaluation would likely not alter the conclusion.

This preliminary legal analysis is an initial screening based on a limited review of available information and is intended only as an aid to deciding whether a reasonable basis exists for designating a site as an active FUSRAP site. A finding of a reasonable potential for liability does not constitute an admission of liability. Further detailed analysis of, for example, the nature of the materials or historical contracts controlling the work, will be conducted once the site is designated for cleanup and may dictate a result that differs from the preliminary result. If the preliminary legal analysis shows no potential for Federal Government responsibility, or if further detailed analysis (potentially occurring during the active FUSRAP site phase) shows no Federal Government liability for the contamination, the site should not be designated to be addressed under FUSRAP, and District, Division, and HQ should coordinate notification of appropriate agencies (e.g., DOE, EPA, NRC, state environmental regulator) and congressional interests to facilitate a response action under an appropriate program.

(3) The major subordinate command (MSC) responsible for the eligible FUSRAP site will recommend to HQUSACE Civil Works (CECW-I) whether or not the site should be designated as an active FUSRAP site. If HQUSACE Civil Works agrees with the recommended action, Congress will be notified through appropriate channels, as well as other appropriate federal and state agencies. Sites designated as active FUSRAP sites will be included in future FUSRAP budget requests.

b. Scope of FUSRAP Cleanup.

- (1) The scope of FUSRAP cleanup for sites added pursuant to para. 6.a.(1) above is determined from the specific legislative language adding the individual site to FUSRAP.
- (2) The scope of FUSRAP cleanup for sites added pursuant to para. 6.a.(2) above is:
- (a) Geographic Area. The DOE determination of the geographic area used for activities in support of the Nation's early atomic energy program forms the basis for any CERCLA response actions undertaken by USACE. The determination is based on historical research and/or other investigation. This geographic area may change based on information or investigations undertaken by USACE during response actions. Such changes will be appropriately documented in the site administrative record.
- (i) Vicinity properties (VPs) will be investigated and characterized in accordance with the process established under CERCLA and the NCP.

- (ii) The determination of eligibility of VPs will be made by the MSC Commander for the geographic area in which the active or completed FUSRAP site linked with the VP is located.
- (iii) No further action shall be undertaken at a VP if the PA/SI establishes that the contamination at the VP is unrelated to the FUSRAP material at the active or completed FUSRAP site, and has no impact on cleanup activities at the active FUSRAP site.
- (b) <u>Eligible Contaminants</u>. The DOE eligibility determination forms the basis for identification of the potential contaminants to be investigated at individual FUSRAP sites. The USACE district will verify the potential contaminants to be hazardous substances under CERCLA. The following types of hazardous substances will be considered within the scope of FUSRAP cleanup activities at FUSRAP sites and VPs:
- (i) Radioactive contamination (primarily uranium and thorium and associated radionuclides) resulting from the Nation's early atomic energy program activities, i.e., related to Manhattan Engineer District (MED) or Atomic Energy Commission (AEC) activities, and hazardous substances associated with these activities (e.g., chemical separation, purification, beryllium work, metallurgy);
- (ii) Other radioactive contamination or hazardous substances that are mixed or commingled with contamination from the early atomic energy program activities; and
- (iii) Any other hazardous substance found on property owned by the US Government, for which the US Government is liable under CERCLA, and is at sites transferred for action to USACE during the transfer of responsibility for execution of the program from DOE to USACE.

c. Inaccessible Contamination.

- (1) Inaccessible contamination is FUSRAP eligible contaminants, as defined by paragraph 6.b.(2)(b) of this regulation, that have been determined by USACE in coordination with the support agency and land owner, to be inaccessible because the contamination is located under an active road, bridge, building, rail line, utility line, permanent structure or other physical obstruction that prevents taking a response action at the present time.
- (2) FUSRAP sites shall include the area with inaccessible contamination as a part of the comprehensive CERCLA evaluation and remedy selection process for the entire FUSRAP site even though the inaccessible contamination will not be cleaned up at the present time. The potential risk to human health and the environment (baseline risk assessment), in conjunction with the nature and extent of contamination will be included in the remedial investigation (RI). The evaluation of remedial alternatives in the feasibility study (FS) will include the costs associated with cleaning up the inaccessible

contamination if it is determined to be above cleanup criteria for the FUSRAP site. The FS will include the additional costs associated with delaying a response action until the inaccessible contamination might become available under a change of site conditions. The FS, proposed plan (PP) and decision document (DD) must identify the necessary land use controls (LUCs) and long-term surveillance procedures and costs that must be performed to ensure human health and the environment are protected against any unacceptable risks from the inaccessible contamination. LUCs will likely be needed to eliminate or control risk from the inaccessible contamination.

- (3) Inaccessible contamination that is above cleanup criteria that becomes available prior to USACE achieving site closeout and completion of the two years of responsibility for surveillance, operation and maintenance shall be the responsibility of USACE to address. USACE shall consider the inaccessible contamination as a part of the active site as defined in Article I of the MOU between DOE and USACE. USACE will be responsible for performing the necessary response actions to address the now accessible contamination and will request any additional funding if necessary. The site will not be considered as achieving site closeout until the inaccessible contamination has been cleaned up or an appropriate remedy has been put into operation. The two-year period of USACE responsibility for surveillance, operation and maintenance shall start when the entire site (including the previously inaccessible contamination) has achieved site closeout in accordance with Articles I and III of the MOU between DOE and USACE.
- (4) If inaccessible contamination becomes available after DOE has taken responsibility for long-term surveillance, operation and maintenance, then the MOU between DOE and USACE establishes the necessary steps for DOE to take to change the status of the site from "completed site" to an "active site" in accordance with the MOU between DOE and USACE. DOE has agreed to notify USACE that the cleanup responsibility for the portion of the FUSRAP site, which includes the inaccessible contamination area, will be transferred back to USACE. USACE will proceed to take the necessary steps to complete the CERCLA response action for this portion of the FUSRAP site and to update and request any additional funding necessary to address the inaccessible contamination and to achieve site closeout. The site will have a new 2-year period established after close-out before DOE will assume responsibility for the site. USACE will be responsible for only the area of the FUSRAP site that is related to the inaccessible contamination and DOE will retain responsibility for all other areas of the original FUSRAP site.

d. Contamination Requiring HQUSACE Coordination.

(1) If HQUSACE, MSC, District, EM CX or Contractor determines that radioactive contamination at a FUSRAP site requires increased physical and/or information security to comply with Department of Defense, Army, or USACE regulations or orders, the MSC shall immediately coordinate with the HQUSACE National FUSRAP Execution Manager

to confirm the applicability of the requirements and to determine potential impacts to FUSRAP investigation and cleanup activities at the site. The potential impacts will be reported to HQUSACE Civil Works (CECW-I) by the HQUSACE National FUSRAP Execution Manager before additional site investigation or cleanup activities occur. The HQUSACE National FUSRAP Execution Manager will inform and coordinate any increased information or physical security requirements with the HQUSACE Information Security (CECO-I) and/or Physical Security (G2) offices.

- (2) If HQUSACE, MSC, District, EM CX or Contractor determines that cleanup of a FUSRAP site could cause a radioactive waste stream to be generated that does not have a viable commercial disposal option, the MSC shall immediately coordinate with the HQUSACE National FUSRAP Execution Manager to identify and obtain approval of disposal options, as needed. The need for any alternate disposal options will be reported to HQUSACE Civil Works by the HQUSACE National FUSRAP Execution Manager before initiation of additional activities.
- e. <u>Land Use Controls</u>. The process for evaluating, developing, establishing, and implementing Land Use Controls (LUCs) may present legal and technical issues that must be resolved on a site by site basis during the CERCLA process. There will be variations in state and local laws or regulations depending on where the FUSRAP site is located and this will require adjustments. The legal mechanisms for establishing LUCs are generally defined by state and local law and, USACE may lack the authority to establish some routine types of LUCs. Office of Counsel will determine the most appropriate office to take the lead in negotiating and documenting LUCs with regulators and local authorities.
 - f. Working With Potentially Responsible Parties.
 - (1) Contribution and Cost Recovery.
- (a) USACE is committed to the "polluter pays" principle (i.e., seeking contribution or cost recovery, as appropriate) from any viable Potentially Responsible Party (PRP) that may be legally liable.
- (b) Radioactive contamination and/or hazardous substances shall be investigated to identify any PRPs for recovering or contributing to costs.
- (c) FUSRAP schedules, budgets, and staff resource planning shall incorporate provision for the special requirements associated with such investigative actions. Moreover, consideration of possible PRP contribution or recovery opportunities shall be incorporated as a routine procedure in planning of project activities and schedules.
- (d) Pursuit of PRP cost recovery or participation initiatives where warranted requires that schedules be evaluated in light of PRP cost recovery or participation opportunities existing at a site and adjusted as appropriate in light of potential health, safety and

environmental risks. Initiating PRP actions late in the cleanup process increases the potential for the Government's cleanup contribution to exceed its fair share allocation for total site remediation costs and magnifies the complexity associated with resolving subsequent PRP actions.

- (e) Pursuit of PRP actions at FUSRAP sites will be initiated by the appropriate District Office of Counsel after consulting with the Division Office of Counsel and the Office of the Chief Counsel. In addition, District Counsel should consult with their client and the Environmental and Munitions Center of Expertise and consider all of the circumstances surrounding each particular case, with an emphasis on protecting health, safety, and the environment. When pursuit is initiated, the District Counsel will coordinate with the Environmental and Munitions Center of Expertise, and the appropriate Division Office of Counsel, which will, in turn, coordinate with the Office of the Chief Counsel. The Office of the Chief Counsel will inform the National FUSRAP Execution Manager, in writing, of significant events related to this Pursuit to include referral to the Department of Justice (DoJ), and actions taken by DoJ related to the referral.
 - (f) In all situations, appropriate records shall be maintained to support legal action.
 - (2) Cleanup Responsibility.
- (a) USACE should encourage responsible parties to adopt as much of the cleanup workload as possible, including preparation of CERCLA documents other than those required by law to be prepared by USACE as lead agency.
- (b) If private PRP liability is significant, and health, safety, and environmental concerns allow, the project should be halted after the PA (or other phase if the project has proceeded beyond the PA phase) and preliminary legal analysis and the PRP given the opportunity to conduct the cleanup where appropriate.
- (c) A private PRP can clean up early atomic energy program contaminants on active FUSRAP sites subject to USACE oversight as lead agency under a settlement agreement or a consent decree and court order where needed. Or, depending on government interests, the PRP can remediate subject to other agency oversight (e.g., state, EPA, NRC). If other agency jurisdiction is concurrent with USACE FUSRAP jurisdiction, a Memorandum of Understanding (MOU) or other applicable agreement should identify the terms by which the other agency executes its legal responsibilities without imposing duplicate requirements on the cleanup project. See, for example, the MOU between NRC and USACE, Appendix D. Such an MOU should be initiated at the appropriate level within USACE, e.g., MOUs at the national level should be initiated at HQ USACE.

g. Site Closeout.

- (1) This policy is necessary to ensure that site closeouts conducted in the FUSRAP program comply with applicable laws and regulations and are consistent among executing districts. It is also a means to promote full coordination with Federal, State and local regulatory agencies, stakeholders and DOE.
- (2) The site closeout report serves as documentation to DOE, NRC (as appropriate), site regulators and affected property owners that USACE met the remedial action goals set forth in the Record(s) of Decision(s) (ROD)(s).
- (3) It is noted that the role of EPA will differ in the closeout of sites on the National Priorities List (NPL) as opposed to those not on the NPL. As an initial matter, CERCLA, § 120(e)(2) [42 U.S.C. § 9620(e)(2) provides that federally owned sites on the NPL will be cleaned up in accordance with an interagency agreement pertaining to the site. Such an agreement will likely dictate closeout actions. Another place to look is the joint DoD/EPA guidance titled "Recommended Streamlined Site Close Out and NPL Deletion Process for DoD Facilities (Jan. 19, 2006). That guidance is not applicable to FUSRAP but may be helpful in the process of NPL site close out and delisting. Similarly, OSWER Directive 9320.2-22, Close Out Procedures for National Priorities List Sites (May 2011) describes a recommended process for accomplishing and documenting remedial action completion, construction completion, site completion, and site deletion for those sites that are on the National Priorities List (NPL). Note that this is only guidance and is not binding on EPA or, of course, on USACE, but it provides an indication of how EPA will proceed in the delisting process. Both documents may be helpful in the closeout process for sites not on the NPL as well.
 - h. Transfer of Completed Sites to DOE.
- (1) This policy is necessary to ensure the efficient transfer of completed sites to DOE.
 - (2) Appendix F provides the completed sites transmittal procedures.
 - i. FUSRAP Review and Approval Authority.
- (1) USACE Project Management Business Process (PMBP). The PMBP, as outlined in ER 5-1-11, is the fundamental method that USACE uses to deliver quality FUSRAP projects.
- (2) Roles and Responsibilities. FUSRAP has, and will continue to embrace the central PMBP tenet to assemble strong multi-disciplinary teams unconstrained by geography or organizational boundaries. EM 1110-35-1 contains guidance intended to assist Project Managers in the development of Project Management Plans and to

ensure that the Project Delivery Team (PDT) is established with the necessary disciplines and perspectives.

- (a) Major Subordinate Command (MSC). The MSC, as defined in the Review and Approval Matrix, is the Division, including the Districts making up the PDT, and the Regional Integration Team. The MSC is responsible for the development and execution of FUSRAP documents and has approval authority of the majority of documents. Eligible sites which are not located within civil or military boundaries of a current FUSRAP MSC (Great Lakes and Ohio River Division, Mississippi Valley Division, or North Atlantic Division) will be assigned to a MSC/District at the discretion of the Environmental Division, Chief in consultation with the National FUSRAP Execution Manager and the affected Regional Integration Teams.
- (b) Environmental and Munitions Center of Expertise (EM CX). The EM CX provides mandatory technical review of various FUSRAP documents.
- (c) Legal Community of Practice. The mandatory legal review responsibility is with the MSC. The EM CX counsel shall review all FUSRAP documents prior to HQ legal review and the MSC shall resolve all comments prior to the HQ review.
- (d) Headquarters, USACE (HQUSACE). The HQUSACE FUSRAP team, including the Civil Works National FUSRAP Business Line Manager and the Military Programs National FUSRAP Execution Manager, is responsible for mandatory policy review of various FUSRAP documents and approval authority on the addition or elimination of an eligible site from FUSRAP. HQUSACE is also the point of contact for FUSRAP for other federal agencies.
- (e) Department of Energy (DOE). DOE has the responsibilities outlined in the MOU with USACE included as Appendix A.
- (3) Review and Approval Matrix. Appendix G contains the approved FUSRAP document development, review, and approval authorities for the various members of the horizontal and vertical FUSRAP team described above.
- (a) Comment Resolution. The PDT and ultimately the PM are responsible for ensuring that all technical and legal comments have been responded to in writing and factored into each of the site documents impacted by the comments. Each commenter is required to ensure that their comments are appropriately addressed and that appropriate revisions were made in the document. The back check of comment incorporation should be limited to revisions to the document to the extent possible and new comments should be limited to significant technical quality or legal issues only. The MSC must provide justification for declining to accept significant recommendations of the EM CX or HQUSACE FUSRAP teams.

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- (b) Release of Documents to Outside Agencies. Documents to be provided to a State or Federal Agency outside of USACE shall be reviewed by HQUSACE and comments resolved prior to release of the document.
- (4) Community Relations. Districts should comply with the community relations requirements found in CERCLA and the NCP. They should work closely with their Public Affairs Office and their Office of Counsel regarding the creation of their Community Relations Plans. There is no specific Restoration Advisory Boards (RABs) authority for FUSRAP. There is authority specific to the Defense Environmental Remediation Program (DERP) provided in 10 U.S.C. § 2705(d). Among other things, that section provides that the Federal Advisory Committee Act (FACA) "shall not apply to a [RAB] established" pursuant to DERP. Since FUSRAP is not part of DERP, the authority provided by DERP is not relevant to FUSRAP cleanups. RABs are only funded pursuant to and authorized under DERP. FUSRAP Program Managers should consult their Office of Counsel regarding the establishment of any organization of public citizens or stakeholders. There are a number of legal issues related to such organizations including compliance with FACA.
- (5) Nuclear Regulatory Commission. For FUSRAP sites where the programmatic MOU with the Nuclear Regulatory Commission (NRC), Appendix D, is applicable, and at sites where an additional site-specific MOU between USACE and NRC has been entered into, the HQUSACE National FUSRAP Execution Manager shall be the primary point of contact with the NRC and the PM shall work with HQUSACE to engage NRC when necessary.
- (6) FUSRAP district project managers shall provide environmental liability information to the National FUSRAP Execution Manager in accordance with Appendix E of this ER.

7. Disclaimer.

- a. This document is intended solely as guidance. The statutory provisions and promulgated regulations described in this document contain legally binding requirements. This document is not a legally enforceable regulation itself, nor does it alter or substitute for those legal provisions and regulations it describes. Thus, it does not impose any legally binding requirements. This guidance does not confer legal rights or impose legal obligations upon any member of the public.
- b. While every effort has been made to ensure the accuracy of the discussion in this document, the obligations of the regulated community are determined by statutes, regulations, or other legally binding requirements. In the event of a conflict between the discussion in this document and any applicable statute or regulation, this document would not be controlling.

- c. This document may not apply to a particular situation based upon site-specific circumstances. USACE retains the discretion to adopt approaches on a case-by-case basis that differ from those described in this guidance where appropriate and legally consistent.
 - e. This document may be revised periodically without public notice.

FOR THE COMMANDER:

7 Appendices (See Table of Contents)

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APPENDIX A

Memorandum of Understanding Between the U.S. Department of Energy and the U.S. Army Corps of Engineers Regarding Program Administration and Execution of the Formerly Utilized Sites Remedial Action Program (FUSRAP), March 17, 1999

MEMORANDUM OF UNDERSTANDING BETWEEN THE U.S. DEPARTMENT OF ENERGY AND

THE U.S. ARMY CORPS OF ENGINEERS REGARDING PROGRAM ADMINISTRATION AND EXECUTION OF THE FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM (FUSRAP)

ARTICLE I - PURPOSE AND AUTHORITY

- A. This Memorandum of Understanding (MOU) is entered into by and between the U.S. Department of Energy (DOE) and the U.S. Army Corps of Engineers (USACE), ("The Parties") for the purpose of delineating administration and execution responsibilities of each of the parties for the Formerly Utilized Sites Remedial Action Program (FUSRAP).
- B. USACE is administering and executing cleanup at eligible FUSRAP sites pursuant to the provisions of the Energy and Water Development Appropriations Act, 1998, (Title I, Public Law 105-62, 111 Stat. 1320, 1326), the Energy and Water Development Appropriations Act, 1999, (Title I, Public Law 105-245, 112 Stat. 1838,1843), and in accordance with, and subject to regulation under, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. 9601 et seq., and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R., Chapter 1, Part 300.
- C. DOE and USACE acknowledge that DOE does not have regulatory responsibility or control over the FUSRAP activities of USACE or USACE contractors.
- D. This MOU addresses the responsibilities of the parties with regard to the 25 completed sites, listed in Attachment "A" hereto, where response actions were completed by DOE as of October 13, 1997, and the 21 active sites listed in Attachment "B" hereto, where response actions were not completed by DOE as of October 13, 1997.
- E. This MOU also addresses the responsibilities of the parties for determining the eligibility of any new sites and vicinity properties for response actions under FUSRAP, determining the extent of response actions necessary at any eligible site, and dealing with other matters necessary to carry out this Program.

F. USE OF TERMS.

- 1. The term "accountability" in regards to real property refers to the obligation imposed by law or regulation to keep an accurate record of real property, regardless of whether the person or agency charged with this obligation has actual possession of the real property, or any control over activities occurring on the real property.
- 2. The term "active site" means any "eligible FUSRAP site" which is undergoing or is programmed to undergo response actions by USACE, or which is determined to require initial or additional response action in accordance with the provisions of Article III, below.
- 3. The term "cleanup" means all response actions performed under FUSRAP.
- 4. The term "closeout" means the completion of cleanup and publication of notice in accordance with the provisions of CERCLA, the NCP and USACE procedures.
- 5. The term "completed site" means any site listed in Attachment "A", or any site closed out by USACE as defined in paragraph 4, above.
- 6. The term "completion of FUSRAP activities" means the conclusion of USACE responsibilities at active sites in accordance with the provisions of this MOU.
- 7. The term "eligible FUSRAP site" means any geographic area determined by DOE to have been used for activities in support of the Nation's early atomic energy program, or placed into FUSRAP pursuant to Congressional direction. (See Article III, section D, for designation of sites not part of FUSRAP on October 13, 1997).
- 8. The term "management" in regards to real property means the safeguarding of the Government's interest in property, in an efficient and economical manner consistent with the best business practices, including administering applicable National Pollutant Discharge Elimination System (NPDES) permits, National Emissions Standards for Hazardous Air Pollutants (NESHAPS) reports, and other applicable administrative environmental requirements.
- 9. The term "protection" in regards to real property means the provision of adequate measures for prevention and extinguishment of fires, special inspections to determine and eliminate fire and other hazards, and necessary guards to protect property against thievery, vandalism, and unauthorized entry.
- 10. The term "response" shall have the same meaning as in CERCLA at 42 U.S.C. § 9601(25).

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- 11. The term "vicinity properties" means properties adjacent to or near eligible FUSRAP sites which have been contaminated by radioactive and/or chemical waste materials attributable to activities which supported the nation's early atomic energy program.
- 12. For purposes of this MOU, "active sites" become "completed sites" upon USACE determination that completion of FUSRAP activities has occurred with necessary regulatory approvals under CERCLA and the NCP.
- 13. For purposes of this MOU, "completed sites" become "active sites" upon USACE determination that further response action is necessary in accordance with Article III of this MOU.

ARTICLE II - INTERAGENCY COMMUNICATION

To provide for consistent and effective communication between DOE and USACE, each shall appoint a Principal Representative to serve as its headquarters-level point of contact on matters relating to this MOU.

ARTICLE III - RESPONSIBILITIES

A. PROGRAM MANAGEMENT AND FUNDING.

- 1. USACE shall manage all activities and prepare program estimates, funding requirements, and budget justifications for all FUSRAP activities for which it is responsible under the terms of this MOU. USACE shall request FUSRAP appropriations in the annual Energy and Water Development Appropriations Act for these activities. USACE shall respond to inquiries from public officials, Congressional interests, stakeholders, and members of the press regarding USACE activities under FUSRAP. Except as otherwise provided in this MOU, USACE is responsible for all response action activities at FUSRAP sites until two years after closeout.
- 2. DOE shall use resources appropriated to it to meet its responsibilities under the terms of this MOU. Except as otherwise provided in this MOU, DOE is responsible for any required activities at FUSRAP sites beginning two years after closeout.

B. COMPLETED SITES.

1. DOE:

- a. Shall be responsible for: surveillance, operation and maintenance, including monitoring and enforcement of any institutional controls which have been imposed on a site or vicinity properties; management, protection, and accountability of federally-owned property and interests therein; and any other federal responsibilities, including claims and litigation, for those sites identified as completed in Attachment "A". Should it be necessary to undertake further administrative actions to finalize the completion of those sites in Attachment "A", DOE will identify the administrative actions to be taken, coordinate funding requirements for those actions with USACE, and upon receipt of funds from USACE, complete the necessary administrative actions to finalize completion of those sites;
- b. Shall request USACE to conduct additional FUSRAP cleanup in a manner consistent with those procedures described in Article III section D, FUSRAP ELIGIBILITY (NEW SITES);
- c. Shall be successor to USACE in Federal Facility Agreements for long-term surveillance, operation and maintenance, for which DOE is responsible under the provisions of this MOU;
- d. Shall be responsible for administration of payments in lieu of taxes for any federallyowned lands held in connection with FUSRAP; and
- e. Upon completion of FUSRAP activities by USACE, shall be responsible for: surveillance, operation and maintenance, including monitoring and enforcement of any institutional controls which have been imposed on a site or vicinity properties; management, protection and accountability of federally-owned property and interests therein; and any other federal responsibilities, including claims and litigation, not directly arising from USACE FUSRAP response actions.

2. USACE:

- a. Shall assume no responsibility for the completed sites listed in Attachment "A" unless additional response actions are determined to be necessary under the provisions of Article III paragraph B.1.a., and Article III section D; and
- b. In accordance with Article III section B.1.a., will provide funding to DOE for administrative actions required to finalize completion of the sites in Attachment "A".

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Such funding will be requested in USACE FUSRAP budget requests, or provided through Congressionally-approved reprogramming actions.

C. ACTIVE SITES.

1. DOE:

- a. Upon request from USACE, shall provide USACE with site designation decision documents and reports, contractual documents, program administration files, technical records, and documents related to federally-owned property, including associated financial records, cost estimates, schedules of program activities, and supporting data;
- b. Hereby provides USACE with authorization for access to such lands or interests in land for which DOE has administrative accountability or to which DOE otherwise is authorized to provide access pursuant to statute, permit, license or similar agreement, to the extent that it may do so under the terms of any such agreements;
- c. Upon request from USACE, to the extent permitted by law, shall acquire, using funds appropriated for FUSRAP activities, such additional real property and interests therein as may be required by USACE to execute the program, if USACE cannot otherwise accomplish the acquisition under its own authority;
- d. To the extent permitted by law, hereby agrees to provide such authorization to USACE as may be required to terminate any existing leases, licenses, permits, or other agreements for access to, and the use of, land or facilities which USACE determines are no longer required to execute FUSRAP;
- e. Beginning two years after closeout, shall be responsible for long-term surveillance, operation and maintenance, including monitoring and enforcement of any institutional controls which have been imposed on a site or vicinity properties, and, upon closeout, shall accept the transfer of federally-owned real property and interests therein, acquired by USACE for FUSRAP execution;
- f. Shall be responsible for administration of payments in lieu of taxes for any federallyowned lands held by either USACE or DOE in connection with FUSRAP;
- g. Shall be responsible, only after a determination of liability by a court of competent jurisdiction and exhaustion of applicable appeal rights, for payment of claims by property owners for damages to property and personal injuries due to DOE's actions prior to October 13, 1997, provided that:

- i. This MOU does not alter or diminish the right of DOE to raise any defenses available under law, including sovereign immunity, in the case of any third party claims, whether in an administrative or a judicial proceeding; and
- ii. Nothing in this agreement shall be interpreted to require any obligation or payment of funds in violation of the Anti-Deficiency Act (31 U.S.C. § 1341);
- h. Shall have accountability for federally-owned real property interests acquired by or transferred to DOE, including inventory reporting to the General Services Administration as may be required by that agency; and
- i. To the extent permitted by law, hereby agrees to make such outgrants on federally owned real property interests, referred to in paragraph h. above, as may be requested by USACE in connection with the relocation of utilities and facilities or to otherwise facilitate FUSRAP execution.

2. USACE:

- a. Shall be responsible for property management and response action activities at active FUSRAP sites, except for DOE's inventory reporting of federally owned real property interests related to FUSRAP under Article III paragraph C. 1.h. and as otherwise provided in this section;
- b. Shall be responsible for site cleanup in accordance with its obligation to administer and execute FUSRAP imposed by Public Law 105-62; Public Law 105-245; any subsequent laws specifically relating to FUSRAP; CERCLA; and the NCP;
- c. Shall accordingly be responsible for site closeout in accordance with CERCLA, the NCP, and USACE procedures;
- d. During cleanup operations and for the first two years after site closeout, shall be responsible for surveillance, operation and maintenance, as required, and for management and protection of federally-owned real property in connection with FUSRAP;
- e. Shall establish cleanup standards in consultation with federal, State and local regulatory agencies;
- f. Within its authorities, may acquire real property and interests therein required for FUSRAP execution;

- g. Shall maintain accountability for real property and interests therein which USACE acquires under its authorities for FUSRAP execution, until such time as such real property and interests therein are transferred to DOE;
- h. Shall be responsible, in cooperation with the Department of Justice, for identifying and for seeking recovery from Potentially Responsible Parties (PRPs) under CERCLA for response actions performed at eligible FUSRAP sites;
- Shall accept responsibility as DOE's successor for all response actions required by Federal Facility Agreements executed between DOE and EPA at eligible FUSRAP sites;
- j. Shall determine the need for response actions under FUSRAP of any vicinity property;
- k. Shall conduct a technical review of the adequacy of USACE-selected remedies on the fifth anniversary of site closeout where necessary;
- I. Shall execute and sign new FFA's and permits required for FUSRAP activities;
- m. Shall coordinate with DOE as appropriate on issues relating to activities on:
 - i. DOE's inventory reporting of federally-owned real property referred to in Article III paragraph C. 1.h., above;
 - ii. Any DOE outgrants on federally-owned real property interests referred to in Article III paragraph C.1.i., above; and
 - iii. Changes to existing FFA provisions or to new provisions that relate to long-term surveillance, operation and maintenance by DOE referred to in Article III paragraphs C.2.i. and I. above;
- n. Shall be responsible, only after a determination of liability by a court of competent jurisdiction and exhaustion of applicable appeal rights, for damages due to the fault or negligence of USACE or its contractors, and shall hold and save harmless DOE free from all damages arising from USACE FUSRAP activities to the extent allowable by law, provided that:
 - i. This MOU does not alter or diminish the right of USACE to raise any defenses available under law, including sovereign immunity, in the case of any third party claims, whether in an administrative or a judicial proceeding; and

- ii. Nothing in this agreement shall be interpreted to require any obligation or payment of funds in violation of the Anti-Deficiency Act (31 U.S.C. § 1341);
- o. Upon completion of FUSRAP activities, shall provide a copy of surveys, findings, decision documents, and access agreements for property not owned by the government, as well as close out documents, to DOE for the historical record. This includes all sites determined eligible, whether or not any response action was taken.

D. FUSRAP ELIGIBILITY (NEW SITES).

1. DOE:

- a. Shall perform historical research and provide a FUSRAP eligibility determination, with historical references, as to whether a site was used for activities which supported the Nation's early atomic energy program;
- b. Shall provide USACE with the determination, a description of the type of processes involved in the historical activities at the site, the geographic boundaries of those activities. (as reflected by documentation available to DOE), and the potential radioactive and/or chemical contaminants at the site; and
- c. Shall maintain records of determination of eligibility and other files, documents and records associated with the site.

2. USACE:

- a. Upon receipt of DOE's determination and its description of the type of processes involved in the historical activities at the site and potential radioactive and/or chemical contaminants, shall conduct necessary field surveys and prepare a preliminary assessment in accordance with CERCLA and the NCP;
- b. Shall determine the extent of FUSRAP-related contamination at the eligible site, at vicinity properties, and at other locations where contamination originated from the eligible site;
- c. Shall determine if the contamination is a threat to human health or the environment;
- d. Shall consult with DOE if USACE surveys, investigations, and data analyses are inconsistent with the DOE description of the potential radioactive and/or chemical contaminants and processes involved in the historical activities at the site;
- e. Shall determine the extent to which response action under CERCLA is required to address FUSRAP-related contamination at the site; and

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f. Upon completion of FUSRAP activities, shall provide a copy of surveys, findings, decision documents, and access agreements for property not owned by the government, as well as close out documents, to DOE for the historical record. This includes all sites determined eligible, whether or not any response action was taken.

ARTICLE IV - FURTHER ASSISTANCE

DOE and USACE shall provide such information, execute and deliver any agreements, instruments and documents, and take such other actions, to include DOE assistance with technical and waste disposal matters, as may be reasonably necessary or required, which are not inconsistent with the provisions of this MOU, in order to give full effect to this MOU and to carry out its intent.

ARTICLE V - DISPUTE RESOLUTION

- A. Every effort will be made to resolve issues between USACE and DOE by the staff directly involved in the activities at issue, through consultation and communication or other forms of non-binding alternative dispute resolution mutually acceptable to the parties. If a mutually acceptable resolution cannot be reached, the dispute will be elevated to successively higher levels of management up to, and including, the Secretary of Defense and the Secretary of Energy.
- B. In the event such measures fail to resolve the dispute, the parties shall refer the matter to the Office of Management and Budget (OMB) for resolution, unless the dispute involves questions of law, which shall be referred to the Office of Legal Counsel of the Department of Justice pursuant to Executive Order 12146.

ARTICLE VI - AMENDMENT AND TERMINATION

This MOU may be modified or amended in writing by the mutual agreement of the parties. Either party may terminate the MOU by providing written notice to the other party. The termination shall be effective sixty (60) days following notice, unless a later date is agreed to by the parties.

ARTICLE VII - EFFECTIVE DATE

This MOU shall become effective when signed by authorized officials of DOE and USACE.

U.S. Department of Energy

James M. Owendoff
Acting Assistant Secretary

For Environmental Management

Date: <u>3/17/99</u>

Attachments:

A. List of Completed Sites

B. List of Active Sites

Russell L. Fuhrman Major General, U.S. Army Director of Civil Works

Date: 16 Mm 99

Attachment A Completed FUSRAP Sites

Site Name

Kellex/Pierpont Acid/Pueblo Canyon Bayo Canyon University of California Chupadera Mesa

Middlesex Municipal Landfill Niagara Falls Storage Site Vicinity Properties University of Chicago National Guard Armory Albany Research Center Elza Gate Seymour Specialty Wire

Baker & Williams Warehouses Granite City Steel Aliquippa Forge C.H. Schnoor Pennsylvania

Alba Craft Laboratory
HHM Safe Company
Associate Aircraft
B & T Metals
Baker Brothers
General Motors
Chapman Valve

Ventron

New Brunswick Laboratory

City and State

Jersey City, New Jersey
Los Alamos, New Mexico
Los Alamos, New Mexico
Berkley, California
White Sands Missile Range,
New Mexico
Middlesex, New Jersey

Lewiston, New York Chicago, Illinois Chicago, Illinois Albany, Oregon Oak Ridge, Tennessee Seymour, Connecticut New York, New York Granite City, Illinois Aliquippa, Pennsylvania Springdale,

Oxford, Ohio
Hamilton, Ohio
Fairfield, Ohio
Columbus, Ohio
Toledo, Ohio
Adrian, Michigan
Indian Orchard, Massachusetts
Beverly, Massachusetts
New Brunswick, New Jersey

Attachment B Active FUSRAP Sites

Site Name

City and State

Latty Ave. Properties St. Louis Airport Vicinity Properties St. Louis Downtown Site

DuPont Maywood Wayne

Middlesex Sampling Plant

Ashland 1 Ashland 2

Seaway Industrial Park Linde Air Products

Niagara Falls Storage Site

Colonie

Bliss & Laughlin Steel

Luckey Painesville CE Site Madison

Shpack Landfill W.R. Grace

Hazelwood, Missouri St. Louis, Missouri

Hazelwood & Berkley, Missouri

St. Louis, Missouri Deepwater, New Jersey Maywood, New Jersey Wayne, New Jersey Middlesex, New Jersey Tonawanda, New York Tonawanda. New York Tonawanda, New York Tonawanda, New York Lewiston, New York Colonie, New York Buffalo, New York Luckey, Ohio Painesville, Ohio Windsor, Connecticut Madison, Illinois

Norton, Massachusetts Curtis Bay, Maryland

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APPENDIX B

Appendix D-1 to the DOE FUSRAP Manual, "FUSRAP Summary Protocol" and "FUSRAP Designation /Elimination Protocol – Supplement No. 1 to FUSRAP Summary Protocol," Dated January 1986

APPENDIX D-1 FUSRAP SUMMARY PROTOCOL



Department of Energy

Oak Ridge Operations P. O. Box E Oak Ridge, Tennessee 37831

March 24, 1986

Mr. Joseph F. Nemec Program Manager - FUSRAP Bechtel National, Inc. P.O. Box 350 Oak Ridge, TN 37831

Dear Mr. Nemec:

FUSRAP PROTOCOLS

Enclosed for your information and use is one copy each of the current revisions of the FUSRAP summary protocol, the FUSRAP designation/elimination protocol, and the FUSRAP verification and certification protocol. These documents, in combination with the latest revision of the Energy Systems Acquisition Project Plan for FUSRAP, detail procedures, requirements, and responsibilities for each phase of the remedial action program effort.

If there are any questions, please call me.

Sincerely,

E. L. Keller E. L. Keller, Director

Technical Services Division

CE-53: Keller

Enclosures: As stated cc w/encls.:

P. Merry-Libby, ANL W. Latham, AD-421

FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

SUMMARY PROTOCOL

IDENTIFICATION - CHARACTERIZATION DESIGNATION - REMEDIAL ACTION - CERTIFICATION

JANUARY 1986

U.S. DEPARTMENT OF ENERGY

OFFICE OF NUCLEAR ENERGY DIVISION OF FACILITY AND SITE DECOMMISSIONING PROJECTS

FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

SUMMARY PROTOCOL

IDENTIFICATION - CHARACTERIZATION DESIGNATION - REMEDIAL ACTION - CERTIFICATION

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SUMMARY PROTOCOL IDENTIFICATION - DESIGNATION REMEDIAL ACTION - CERTIFICATION

INTRODUCTION

This summary protocol describes those activities necessary for accomplishing the Formerly Utilized Sites Remedial Action Program objective, which is to ensure that sites formerly used by the Manhattan Engineer District and the Atomic Energy Commission are not contaminated with radioactive residues that may present a radiological hazard to the general public. This summary protocol is presented in four phases: Preliminary Analyses (identifying potentially contaminated sites), Radiological Evaluation and Designation (evaluating the radiological condition of the site and determining, if remedial action is needed), Engineering and Remedial Action* (site characterization and planning, selecting, engineering, and implementing the action), and Certification of Site Conditions (verifying site conditions and archiving the records that document the results of remedial action). Additional guidance is provided on the first two phases and the fourth phase respectively in two supplements to this protocol entitled FUSRAP Designation/Elimination Protocol (Supplement No. 1) and the FUSRAP Verification and Certification Protocol (Supplement No. 2). Additional details regarding implementation of the third phase of the program are provided in the report Energy Systems Acquisition Project Plan-FUSRAP (Revision 1)" April 1985, and subsequent revisions.

^{*}Remedial action may involve decontamination or stabilization and restricted use through institutional control or physical modifications.

Appendix A is a flow diagram with decision points and assignment of responsibilities for specific program activities. All phases except the Engineering and Remedial Action Phase are outlined in some detail and covered in the enclosed flow charts. Only a brief discussion of the Engineering and Remedial Action Phase is contained in this protocol (see "Energy Systems Acquisition Project Plan--Formerly Utilized Sites Remedial Action Program, Revision 1," Steps 3 through 7, April 1985).

This protocol places the primary emphasis on contaminated sites or potentially contaminated sites for which there is existing authority that will permit DOE to perform remedial action at the site. However, the section on the first phase of this protocol also discusses the actions taken with regard to sites for which DOE is unable to establish remedial action authority. In the interest of efficiency and economy of operation, this protocol limits the amount of radiological survey data collected during the first two phases of the protocol to the minimum needed to determine if a site should be included in the program or eliminated from it. Any additional radiological data needed for project engineering will be accomplished during the engineering and remedial action phase of the operation. Similar guidance is provided for engineering of the remedial action to ensure that the magnitude and cost of the engineering, planning, and environmental reviews do not exceed the worth or the beneficial effect of the action. Throughout this process, the professional judgment of the radiological survey personnel and the engineering and project management personnel is utilized, with guidance from the DOE Division of Facility and Site Decommissioning Projects (DFSD) to determine the level of survey, engineering, and/or environmental work required to achieve the associated goals.

In order to ensure that any remedial action completed is preformed to comply with and meet appropriate standards and guidelines, the last phase, Certification Phase, includes a verification activity. The

goal of this phase is also to ensure through proper documentation that each remedial action is adequately documented and archived so that a permanent record of its final radiological condition will always be available.

SUMMARY PROTOCOL-

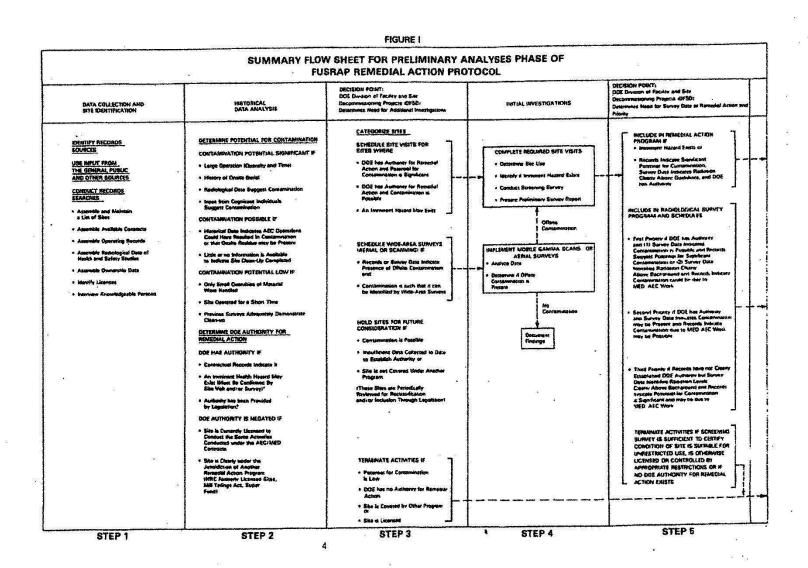
The following narrative was prepared, along with Figure I—Preliminary Analyses, Figure II—Radiological Evaluation and Designation and Figure III—Engineering and Remedial Action and Certification of Site Condition (attached), to describe DOE protocols for determining if a site warrants consideration for remedial action. The narrative is subdivided to follow these figures. As can be noted in Figures I, II, and III, the decision point that is the transition from one phase to the next is repeated on these figures but is discussed in the narrative in the earlier of the two phases.

PRELIMINARY ANALYSES PHASE

During this phase of the program, sites are identified and evaluated to determine if they can be designated (included in) or eliminated from the remedial action program, or if a radiological survey of the site is required to more clearly define the radiological condition of the site to support this decision. This phase has five steps that include two decision points. This phase of the program is conducted by DOE-DFSD with assistance from a technical support contractor, a radiological survey contractor, and an aerial survey contractor as appropriate.

Step 1 - Data Collection and Site Identification

During this step, information sources are identified and investigated by the DOE-DFSD Technical Support Contractor. These sources include input from individuals or organizations and historical



records. While input from individuals and organizations is actively sought and has provided much useful data, MED/AEC operating records provide, by far, the more usable data. Records associated with MED and AEC operations stored at various DOE and contractor records centers, the National and Regional Archives, and other agency records centers (such as NRC license records) located throughout the country, are scanned to determine if they are pertinent to the FUSRAP investigations. Records groups identified as possible sources of data are reviewed and available contracts, operating records, and records of previous radiological surveys are assembled. The level or detail of the reviews for specific groups of records depends on the importance of the records to the program. The more likely that new or additional data will be found in a specific set or group of records the more detailed the review of the records will be. Information from these sources is used to develop a list of potential FUSRAP sites that is updated as new data is collected. Ownership data are collected, wherever possible, especially for those sites determined to be highly probable candidates for FUSRAP.

In some cases, copies of pertinent materials are made and maintained for the record; in other cases, the location and a general description of the records are recorded. A data management system is utilized to keep track of records reviewed, identified, and collected.

Step 2 - Historical Data Analysis

During this step, site-specific data collected during records searches and investigations are reviewed and analyzed by the contractor to determine the potential for contamination and DOE authority to conduct remedial action at the site. Potential for contamination is considered significant if the records indicated that: (1) the MED/AEC onsite operations were large, that is conducted over many years and/or the contractor processed large quantities of material; (2) the site had a history of onsite burial of radioactive

material; or (3) radiological data suggests the site is contaminated and/or input from cognizant individuals suggests that the site is contaminated. Contamination is considered possible if the historical data indicates AEC operations could have resulted in the site being contaminated and there is little or no data to indicate the site was ever decontaminated. Potential for contamination is considered low or improbable if only small quantities of radioactive materials were handled, work on the site for MED/AEC for a very short period of time, and/or previous surveys adequately demonstrate decontamination was accomplished. Experience suggests that, for the most part, the potential for contamination is somewhat proportional to the quantities of data or records identified for a specific site, i.e. the more material processed at a site the more records were generated during shipping, billing, processing, etc. As a result, unless there is evidence to suggest otherwise, if only small amounts of information can be identified on a specific site, it is normally assumed that the site only operated for a short period of time or used small quantities of active material.

Generally, only sites in the first two categories will be considered for radiological survey or the remedial action program. Those sites having low potential for contamination will normally be eliminated from the program.

The contractor will also review and analyze the records and assemble materials that provide information regarding DOE authority for remedial action. The contractor will interface with DOE General Counsel to obtain guidance regarding pertinent material needed to determine if authority exists and will provide available records to the General Counsel's office to obtain preliminary findings to be used in the contractor's recommendation for inclusion. The recommendation report will include a brief description of the former activities conducted at the site and those data used as a basis for the recommendations provided in the report. Those recommendations or

findings of the contractor will indicate the potential for residual radioactive material being found at the site and if DOE has existing authority to conduct remedial action at the site. Sites for which there is potential for contamination but no DOE authority has been established are handled in several ways or categories. The first category of sites are those for which it is clear that DOE has no existing authority or that it is unlikely that additional records review will identify any information to provide such authority. The states and or other Federal agencies, as appropriate, are provided information on the sites in this category so that they can take appropriate actions. These sites are eliminated from FUSRAP. The other group includes those sites for which continuing records reviews may provide additional data on which to base an authority determination. Sites in this category are held until there is sufficient data to provide authority or until the likelihood of identifying additional pertinent records is sufficiently low that the site is placed in the first group. The contractor will also search records to determine if a needed action should be covered by programs other than FUSRAP.

Step 3 - Decision Point: DOE Division of Facility and Site Decommissioning Projects (DFSD) Determines Need for Additional Investigation

During this step, DOE-DFSD staff utilize the information assembled and developed by the Technical Support Contractor to determine if the site should be visited and a preliminary onsite survey and/or mobile gamma scan or aerial survey conducted, if activities regarding the site should be terminated, or if the site should be held for future consideration.

Site visits and preliminary surveys will be conducted at sites that could be contaminated with material from MED/AEC operations and for which DOE has authority to conduct remedial action if it is determined to be necessary and/or where an imminent hazard may exist.

Wide area surveys (aerial or mobile gamma scans) will be conducted at sites where records or survey data indicate offsite areas may have been affected and the potential contamination is such that wide area surveys will detect it. Sites are handled as discussed above if contamination is possible but DOE has no authority for remedial action.

DOE may terminate investigations and close files on a site if the potential for contamination is low or the site is clearly under the jurisdiction of a program other than FUSRAP. Similarly, if the site is currently licensed for the same activities conducted under MED/AEC and contamination resulting from licensed work is indistinguishable from that caused by MED/AEC, DOE activities relating to the site will be terminated.

If during this step DOE determines that initial radiological investigations are required, the Technical Support Contractor is tasked to identify the current site owner and a site contact if the information is not already available. DOE selects and assigns a survey contractor(s) to conduct the required onsite investigations, then notifies the owner and makes arrangements for site visits. For sites in the Hold for Future Consideration or Terminate Activity categories, no owner contact will be needed unless the owner was previously made aware of the investigations. Sites in the Hold for Future Considerations category will be assessed as more data are available and recategorized as appropriate.

Step 4 - Initial Radiological Investigations

This step involves site visits and wide area surveys at the sites identified in Step 3 that require additional investigation. These activities are necessary to assemble data required to include or eliminate the site from the program or to determine the need for a more comprehensive radiological evaluation of the site, and to

determine if there is offsite contamination. Site visits are conducted to determine current site use, to determine if an imminent hazard exists, to obtain a preliminary assessment of the radiological condition of the site, and collect data that will be used by DOE to determine if the site can be eliminated from or included in the program without implementing a more comprehensive survey.

The site visit is a multipurpose operation conducted by the assigned survey contractor and, in some cases, a DOE representative. During this visit, the owners or lessees are provided a brief description of the program and the purpose of the investigation. The survey team determines the current use of the site and any expected changes in use. A cursory walk over survey is performed to aid DOE in determining if further activity is needed at the site to ensure that the health and safety of the public is protected, and to ensure that there is no imminent hazard resulting from former MED/AEC operations. The cursory survey may involve gamma, alpha, and/or beta-gamma measurements and some air, water, or soil sampling if felt necessary by onsite survey personnel. The survey contractor should collect sufficient data to provide descriptions of the facility's physical and radiological condition to support a survey plan (if DOE determines that a radiological evaluation survey is needed) or a designation for remedial action (if it is appropriate). This effort should be limited to 1 day or less if possible. Following the visit, the survey contractor will be responsible for providing a draft preliminary survey report to DOE within 1 month (unless otherwise directed) after the visit. The report should contain the contractor's suggestions regarding need for additional surveys.

For those areas determined to need wide area surveying to determine if offsite surveys are needed, two types of surveys may be utilized, aerial and mobile gamma scanning. The aerial survey is conducted using a helicopter or fixed wing aircraft and covers very large areas and identifies the general area(s) of contamination. The

gamma scan is a mobile-based survey conducted along streets, alleys, and other accessible roadways throughout the area. Individual properties having radiological anomalies can be identified using mobile gamma scanning techniques. Following completion of wide area surveys, the survey contractor will prepare a report providing the results of the survey and recommendations concerning the potential for offsite contamination. If there is no indication of offsite contamination, the aerial and/or mobile gamma survey reports may suffice to document the findings and offsite survey efforts will be terminated. If the wide area surveys provide positive indications of the presence of offsite contamination potentially due to DOE predecessor activities, DOE will determine if further radiological characterization is required, or if the area can be designated on the basis of wide area survey data alone. Where additional offsite investigations are required the survey contractor or technical assistance contractor, as appropriate, will be tasked by DOE to identify owners of the properties involved. DOE will notify the owner of the findings and proposed actions if necessary.

Step 5 - Decision Point: DOE Division of Facility and Site Decommissioning (DFSD) Projects Determines Need for Survey Data or Remedial Action

Upon receipt of the site visit and preliminary survey report, DOE reviews the report and recommendations, and, giving due consideration to those data provided by the records searches, will categorize each site either for inclusion in the radiological survey program, or direct inclusion in the remedial action program, or elimination from the program.

Sites will be included for remedial action if DOE has authority for remedial action and data indicate that the potential for contamination is significant and the preliminary survey demonstrates that the contamination is clearly above guidelines. In this case, any additional survey work will be performed during the engineering phase of the task.

If DOE-DFSD determines the site visit and preliminary survey results, along with the historical data are sufficient to verify that the radiological condition of the site is within appropriate guidelines or that the site conditions are controlled by license or appropriate restrictions, the site is eliminated from the program. Sites in this category are processed for elimination and the findings that the radiological condition of the site is acceptable for unrestricted use or, as necessary, for controlled use, are documented and archived.

Sites that can neither be included or eliminated from the remedial action program are scheduled for preinclusion site radiological evaluation surveys to better characterize their radiological condition. When DOE-DFSD assigns a radiological survey contractor to complete the survey, DOE-DFSD will provide the contractor a survey priority for the subject site. Three categories are proposed for assigning survey priorities to sites. First priority sites (those to be scheduled for survey first) are sites for which DOE has authority (through the Atomic Energy Act or Congressional mandate) for remedial action and:

- Preliminary survey data indicate that the site may be contaminated and records suggest the potential for contamination from MED/AEC operations is significant; or
- Survey data identify radiation clearly above background and records indicate it resulted from MED/AEC operations.

Second priority is assigned to sites for which DOE has authority and preliminary survey data indicate contamination is related to MED/AEC work and may be present in quantities that can exceed guidelines.

Third priority is assigned to those sites where that the preliminary data indicate radiation levels are clearly above background; but it is not clear from the data collected that the

radioactivity is from former MED/AEC operations; that is, DOE authority to conduct remedial action is not clear cut. Surveys at third priority sites will be conducted to confirm authority as well as to determine the need for remedial action. If authority is confirmed, the site will be forwarded to the next appropriate step. If the site is contaminated and authority is not confirmed, DOE activities will be terminated, and the appropriate State or Federal agency having jurisdiction will be notified.

RADIOLOGICAL EVALUATION AND DESIGNATION PHASE

The purpose of this phase is to further evaluate the radiological conditions of the site by more comprehensive surveys, to compare the conditions to applicable guidelines and standards, to determine the potential for exposure and, ultimately, to determine if there is a need for remedial action.

During this phase, the radiological surveys are conducted at sites where those data collected during the Preliminary Analysis Phase are not sufficient to include or eliminate sites from the program. As with previous activities, every effort is made to conduct only as much survey work as is necessary to obtain sufficient data to make a designation determination. Determining the extent of survey activity is the responsibility of the radiological survey team leader. In addition, an engineering contractor representative(s) may work with the survey contractor(s) both before and during the survey(s) to ensure the data collected will be of use for engineering work that may be needed. In some cases, where agreed upon between DOE-DFSD and the DOE Oak Ridge Operations Office Technical Services Division (OR-TSD), the comprehensive survey will be thorough enough to provide the basis for the engineering bid request for remedial action.

The radiological evaluation and designation phase of the program contains two steps: the Radiological Evaluation Survey for

Designation and the Decision Point (see Figure II, Step 1 and Step 2). However, the radiological evaluation survey is further divided into two subelements.

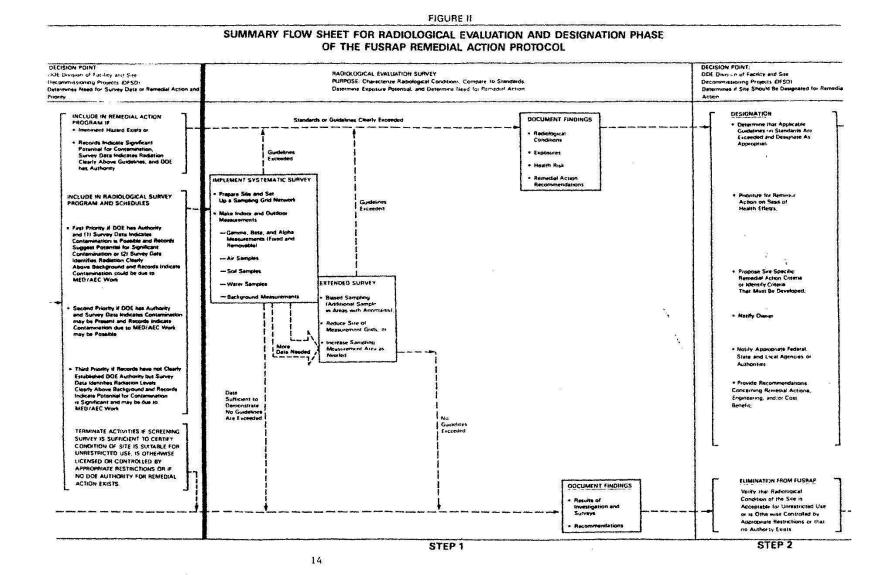
Step 1 - Radiological Evaluation Survey for Designation

The radiological evaluation survey is subdivided into

- (1) Systematic and Extended Survey, the onsite survey effort; and
- (2) Document Findings, the report preparation effort. The onsite survey effort is organized in stages that increase in complexity as they proceed from left to right on the flow chart (Figure II). Each stage represents a part of the survey program and, if conducted, are conducted as part of the same onsite survey. The radiological survey team leader is responsible for the decision to implement more comprehensive stages of the survey activity. This responsibility includes the decision to conduct the extended survey (i.e., biased measurements) in selected areas of the site or to remove minor contamination as part of the survey.

<u>Systematic</u> and <u>Extended Survey</u>. The systematic stage of the survey is, as its name implies, a radiological survey involving systematic and preplanned sampling and direct radiation measurements over a predesigned grid network. These surveys may be of structures or outside areas. The measurements taken can include:

- Gamma, beta, and alpha scans and grid point measurements (fixed and removable); (grounds, buildings, and/or equipment)
- Air samples and analyses (Grab samples);
- o Soil samples and analyses; (surface and subsurface)
- o Water samples and analyses; (surface and ground water) and
- o Background measurements.



While the survey may include all or any combination of these measurements, it will primarily be the judgment of the radiological survey team leader to determine which and how many measurements are needed. The survey team leader will interact with the engineering contractor representative* as required in planning the survey and will provide a survey plan to DOE-DFSD prior to the survey. This plan will document the measurements to be performed during the systematic survey and briefly indicate under what conditions the extended effort (biased sampling) will be completed. Whenever possible, survey results will be forwarded for final analysis and recommendations as to inclusion or elimination based on the results of the systematic stage of the survey. This decision will be based on or guided by pre-established criteria approved by DOE-DFSD (Appendix B). For isotopes other than radium-226 and thorium isotopes, the soil concentration limits must be calculated (Appendix B). This calculation is done by the radiological support contractor with the assistance of the criteria development contractor (ANL). At some future time, EPA is expected to issue quidelines or standards for residual radioactive materials in the environment. These guidelines will be applied as appropriate.

Where systematic surveys do not provide sufficient data to support this decision, based on indicated action levels, the survey will be extended. The decision whether or not to subject the property to more comprehensive data collection (biased sampling) is made in the field by the radiological survey team leader. These judgments by the radiological survey team leader are important to the success of this approach to the survey process and require the presence of a well-qualified survey team leader.

^{*}Engineering contractor is the Formerly Utilized Sites Remedial Action Program Management Contractor (PMC).

As indicated, the survey is extended to include more detailed measurement techniques only when the systematic effort cannot provide sufficient data to determine if the site exceeds applicable guidelines. The extended survey may include:

- Additional gamma and beta-gamma measurements over a smaller grid to more clearly identify the extent of the contamination;
- o Alpha measurements (fixed and removable) of floors and walls and, in some cases, ceilings to define contamination in or on building materials to provide information regarding surface contamination;
- Sampling of building material to assist in defining the source of the contamination and in determining if it is derived from MED/AEC activities;
- Radon and radon daughter monitoring or sampling for other radionuclides in the air over several days to determine if action levels are exceeded;
- Additional soil sampling and subsurface sampling in areas where anomalies may exist;
- o Surface and ground water sampling on and/or off the site; and
- o Air sampling on and off the site.

It is essential that the extended survey be detailed enough to determine if the condition of the site can be certified to meet guidelines or if the site must be included in the remedial action program.

Document Findings. If, after the evaluation survey the survey contractor believes the site radiological conditions meet established criteria for the site, the contractor should document its findings, including the results of the survey and the description of any material removed from the site. The report should include the survey contractor's recommendations regarding additional DOE or government involvement at the site. The survey contractor will similarly document the results of the surveys for the sites that contain

radioactive residues that exceed appropriate guidelines or standards. In addition to documenting the sites radiological condition and remedial action recommendations, these reports should briefly assess the potential for human exposure and associated health effects or risks.

Step 2 - Decision Point: DOE-Division of Facility and Site Decommissioning (DFSD) Projects Determines if Site Should Be Designated for Remedial Action

During this step, DOE-DFSD staff will review all the data collected on each site and determine whether the site should be included or eliminated from the remedial action program.

If DOE-DFSD determines that radiation levels at the site exceed applicable guidelines or standards, the site will be designated for remedial action by notification from the Director of the Office of Remedial Action and Waste Technology to the Manager of Oak Ridge Operations Office. This designation provides the FUSRAP office in Oak Ridge (OR-TSD) the authority to proceed with the remedial action process. Remedial measures to be considered for a designated site will include restricted use and stabilization on site as well as decontamination of the site. As part of the designation provided to OR-TSD, DOE-DFSD will assign a remedial action priority to the site.* Other guidance will be provided by DOE-DFSD to OR-TSD with the site

^{*}Headquarters will assign each designated site a high, medium, or low priority for remedial action. (see Appendix C) These priorities are assigned considering the potential for public exposure to radiation (dose), the potential for migration of the contaminants, and property use. The final remedial action scheduling priorities determined by OR-TSD with approval from DOE-DFSD take into account the designation priorities as well as other factors including but not limited to: Congressional mandates, availability of a disposal site, coincidence (proximity of projects), available funding and so forth.

designation as may be appropriate; e.g., criteria for remedial action, remedial action options to be considered, and cost/benefit considerations. Simultaneous with designation of the site, DOE-DFSD will notify the owner of the site and appropriate state, local, and Federal agencies and authorities of the findings and plans. In all cases the Department will notify the Environmental Protection Agency of designation actions.

If DOE-DFSD determines from review of the survey data that the site meets the applicable guidelines the findings will be documented and archived according to this protocol. If the site does not meet the DOE criteria but for one of the reasons stated above cannot be included in FUSRAP, the appropriate Federal or state agency will be notified to insure that proper consideration will be given to the site under other assessment efforts.

ENGINEERING AND REMEDIAL ACTION PHASE

The Engineering and Remedial Action Phase of this protocol encompasses conceptual and preliminary engineering activities as well as other activities necessary for the completion of the remedial action and establishment of the disposal site. The activities are to:

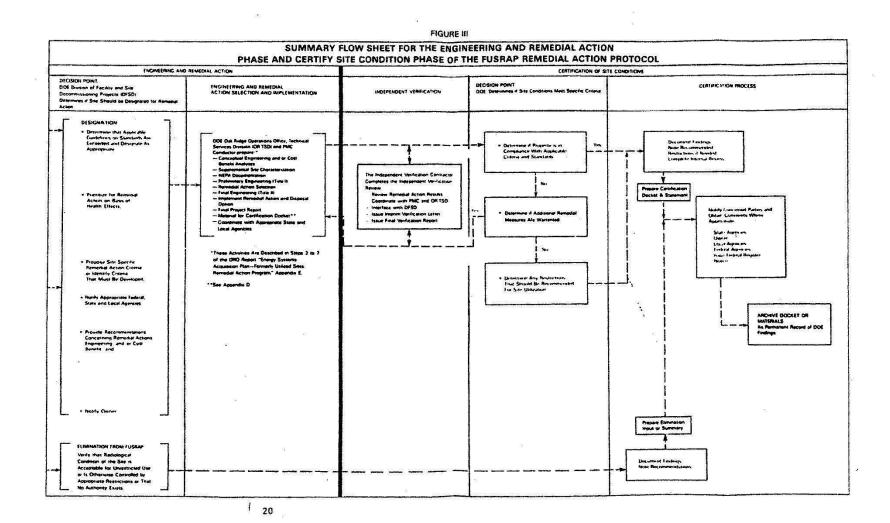
- o Define and evaluate options for remedial action:
- Obtain required site-specific environmental and radiological characterization data;
- Select the preferred and alternative remedial actions to be assessed during the National Environmental Policy Act (NEPA) analysis;
- Identify environmental impacts and mitigating measures to be assessed during the NEPA analysis;
- Select the preferred remedial action option;
- o Prepare the final engineering design (Title II) of the options;

- o Implement the selected remedial action and waste disposal action; and
- o Prepare the final report and assemble material for the certification docket (see Appendix D).

Implementation of this phase (Figure III) is the responsibility of the OR-TSD, the FUSRAP Project Management Contractor (PMC), and the FUSRAP NEPA Process Contractor. More detail is presented in the OR report, "Energy Acquisition Project Plan - Formerly Utilized Sites Remedial Action Program." The general flow chart of activities associated with this phase are shown in Appendix E (steps 3 through 7). The need for and level of preremedial action analyses and preliminary engineering is dependent on many factors including institutional and other nontechnical factors that may dictate the final selection of remedial action options. In such cases, the preparation of certain documents and/or such things as geological investigations may not be required. Decisions regarding the level and need for site-specific studies will be made by OR-TSD with input as needed from DFSD. OR-TSD will provide DOE-DFSD a site-specific project completion report for each remedial action project and prepare a certification docket* for the site.

OR-TSD will interface with DOE-DFSD on all key decisions such as remedial action selection and will supply periodic program status reports. Accomplishment of site decontamination to meet unrestricted use criteria or the achievement of site restrictions and adequate institutional control of residual contamination is the responsibility of OR-TSD.

^{*}The contents of the certification docket are discussed in Appendix D and in the FUSRAP Certification/Verification Supplemented Protocol.



CERTIFICATION OF SITE CONDITION PHASE

The Certification Phase is the responsibility of DOE-DFSD and OR-TSD. It utilizes data from the Remedial Action Phase as well as the other phases of the protocol especially the post-remedial action report or project completion report and involves three interrelated steps:

- o Independent verification of the remedial action
- Decision on the adequacy of the remedial action
- o Certification process
 - Notification of concerned parties and the issuing of a Federal Register Notice and
 - Completion of the Certification Docket and archiving of the docket

These activities are described in detail in the Verification and Certification Protocol (Supplement 2 to this Protocol).

Step 1 - Independent Verification

An Independent Verification Contractor (IVC) contracted by DFSD, reviews the remedial action activities and conducts verification surveys as necessary to confirm the adequacy of the remedial action and/or the procedures used by the PMC to certify the site's condition. The IVC coordinates with the PMC and OR-TSD during the verification activity, but, is managed and contracted by DFSD to maintain independence and insure no conflict of interest. An interim verification letter is provided by the contractor to OR-TSD and DFSD upon completion of the initial analysis of the remedial action at a specific site within four weeks after completion of the remedial action. The final verification report is submitted sometime thereafter.

Step 2 - Decision Point: DOE Determines If Site Conditions Meet Specific Criteria for the Remedial Action

On the basis of the data provided during and after the remedial action by the PMC including the Post-Remedial Action Report and the information provided by the IVC, OR-TSD, with approval from DFSD, determines if the site was adequately decontaminated and meets DOE guidelines. This decision point is actually a continuous process that is conducted in conjunction with the verification activity and the certification process steps. DOE interacts regularly with the PMC and the IVC during the conduct of the remedial action and the post-remedial action and verification reviews and surveys. This interaction is necessary to insure that any conflicts or discrepencies that are identified are expeditiously resolved. The preparation of the certification docket, certification statement and associated draft Federal Register notice is conducted during the decision process. Any changes required in these documents as a result of the decision are implemented as part of the certification process step.

If the remedial action was accomplished adequately, the site certification process is completed. If the remedial action did not bring the site in compliance with criteria, DOE will determine whether further remedial action is needed or warranted and will provide appropriate direction to the PMC.

Step 3 - Certification Process

As soon as possible after the determination is made that the site will be certified (the remedial action is complete), OR-TSD provides the owner of the site with interim notification that the remedial action is complete and that a certification package is being prepared. In general, the notification of the concerned parties is the responsibility of OR-TSD as is the preparation of the certification statement (required to officially approve the remedial

action) and the draft Federal Register notice. Once approved by the DOE Oak Ridge Chief Counsel's Office and DOE Headquarters (the Office of Management and Administration (MA) and DFSD) the Federal Register notice is issued through DFSD in Washington.

The Certification Docket (Appendix D) is prepared by OR-TSD and the certification statement is signed at the Oak Ridge Field Office. Final approval is required through DFSD. DFSD will arrange to archive the Certification Docket and supporting data as a permanent record of the DOE findings and radiological condition of the site. DFSD will also have the information placed in the DOE Public Reading Room in Washington, D.C., for general availability to the public. Distribution of the dockets to other agencies (Federal, state, or local) as necessary, is made by OR-TSD. The Verification and Certification Protocol (Supplement No. 2 to this protocol) and Appendix F (Public Availability and Archiving of FUSRAP Records) provide additional information.

BIBLIOGRAPHY OF DOE SUPPORTING GUIDANCE DOCUMENTS

Formerly Utilized Sites Remedial Action Program, Designation/Elimination Protocol--Supplement No. 1 to the FUSRAP Summary Protocol, November 1985.

Formerly Utilized Sites Remedial Action Program, Verification and Certification Protocol--Supplement No. 2 to the FUSRAP Summary Protocol, January 1986.

U.S. DOE Energy Acquisition Project Plan (ESAPP), Formerly Utilize MED/AEC Sites Remedial Action Program (FUSRAP) (Revision 1), April 1985, and subsequent revisions.

APPENDIX C. DOE FUSRAP PROCEDURE FOR ASSIGNING SITE PRIORITIES

The assessment of potential health effects and the ranking of contaminated sites are complex and must take into account many influencing factors. The major hazard due to radiological contaminants is their potential to increase either the long or short term risk of cancer. The nature of these contaminants must be clearly defined. Furthermore, the risk from all pathways to an exposed individual or population group, as well as such exposure parameters as occupancy factors associated with the contaminated living or working areas and the population density around a contaminated site must be evaluated. Potential for migration of contaminants to the surrounding environs either through the air, water, soil, and the ecosystem and ultimately to man is of major importance.

Analyses to date have identified no site under current use conditions where there is an immediate health hazard; however, over the long term, the potential for accumulated exposure and unacceptable increases in risk do exist. (a) It should be noted, however, that dose and risk estimates completed as part of the assigning of priorities procedure are not absolute estimates. These estimates are

⁽a) An unacceptable increase has been tentatively defined as an annual increased risk of getting a fatal cancer in excess of 5 chances in 100,000 per year of exposure. The values represent the approximate increase in risk of contracting a fatal cancer as a result of continuous exposure to the recommended guidelines (500 mrem/y) value for short term exposure (DOE-85) using a dose risk conversion factor of 10-7 effects/mrem of dose (ICRP-26). Because this procedure assumes risk to be proportional to dose, the equivalent whole body dose calculated as the sum of weighted internal and external doses (recommendation ICRP-26) can be directly compared to the 500 mrem limit to determine a priority. The short term guideline is appropriate rather than the long term guideline of 100 mrem/year because the implementation of remedial actions to remove material causing the potential exposures are expected to begin in a short period (about 5 years or less following designation).

relative comparisons of the potential for exposure at the specific sites and are intended to be compared to estimates at other designated sites for the purpose of assigning a remedial action priority. The health effects or dose estimates are not intended or necessarily applicable for other uses.

The Department is using a three-category system for ranking contaminated sites based on health effects (see Figure C-1). The categories are:

- High o Ranking a site as a high priority indicates that the site is contaminated above guidelines, and
 - there is potential for individuals at a site under present use conditions to receive an unacceptable increase in cancer risk, (a) or
 - there is significant potential for a larger group of individuals not directly associated with a site to be exposed to levels of radiation that could increase the number of expected cancers to an unacceptable level, (b) or

⁽a) See Note (a) on previous page

⁽b) An unacceptable increase to a group of individuals has been tentatively defined as an annual increased risk of getting a fatal cancer in excess of 1 in 100,000. This value, as the similar one defined for individual risk, is preliminary; it is based on the increased risk that would occur if a group of persons were exposed to the standard for large groups (100 mrem/y, FRC* 1960) over their entire lives. This is the approximate annual risk estimated using the 100 mrem/y standard and a dose risk conversion factor of 10-/ effects/mrem of dose from ICRP-26. Because the procedure assumes risk to be proportional to dose, the equivalent whole body dose calculated as recommended in ICRP-26 (the sum of weight internal and external doses) can be directly compared to the 170 mrem dose limit to determine priorities.

^{*}Recommendations of the Federal Radiation Counsel.

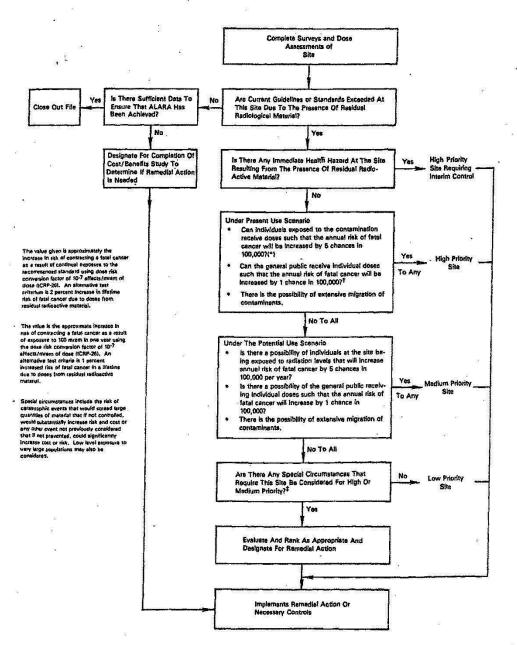


Figure C-1. DOE Prioritization Procedure

 there is extensive migration or there is significant potential for extensive migration of the contamination into the surrounding environs.

Medium o Ranking a site as medium priority indicates the site is contaminated above guidelines, and

- there is no immediate hazard to individuals at a site under current use conditions, but there is potential (due to possible change in use or occupancy) for individuals to be exposed to levels of radiation that may increase the risk of cancer above an acceptable level. (a) or
- there is potential for a site to be exposed to levels of radiation that could increase the number of cancers to an unacceptable level^(b) if the present use conditions of the site were to change, or
- there is a moderate possibility that contamination may migrate offsite and result in exposure to individuals around the site.

Low o Ranking a site as low priority indicates that the site is contaminated above guidelines; however,

- the exposure level is very close to the level where no discernible increase in cancer risk to individuals under current or near term (10 year period) future use of the site is expected, or

- there is no foreseeable chance of the surrounding population being exposed to levels of radiation that would increase their risk of cancer, or
- there is little or no chance of, or little significance in, migration of contamination from the site.

Dose/Health effects based priorities are only one factor in determining a sites remedial action priority. Other factors (discussed in the text of the protocol) will be assessed by the OR/TSD and DFSD after designation and are used along with health effects priorities to provide the overall remedial action priorities. It is also important to note that the dose/health effects calculations are used in determining priorities but designations are base on comparison of the site to DOE guidelines.

REFERENCES

DOE-85, U.S. Department of Energy Guidelines for Residual Radioactivity at Formerly Utilized Sites Remedial Action Program and Remote Surplus Facilities Management Program Sites, Rev. 1, July 1985.

ICRP-26, Annuals of the ICRP Report, November 26, January 7, 1977.

APPENDIX D. CERTIFICATION DOCKET

The purpose of the Certification Docket is to provide a consolidated and permanent record of DOE activities at the specific site and of this site's radiological condition at the time of certification. This record will be placed in the DOE Public Reading Room in Washington, D.C., and subsequently will be microfilmed for Federal Archives. The certification package will contain a summary of DOE (and predecessor agencies) activities at the site, the supporting documentation, and a bibliography of relevant documents that are not included in the docket. The outline for the final docket is:

- (A) Introduction to the Docket
 - (1) Purpose and Contents of the Docket
 - (2) Property Identification (general description and drawings of property being certified)
- (B) Exhibit I Summary of Activities at the Specific Site
 - Site History (MED/AEC use; ownership history and use; and FUSRAP activities at site)
 - (2) Site Description (past and current)
 - (3) Radiological History and Status (survey and monitoring information, and criteria for determining need for remedial action)
 - (4) Selection of Remedial Action (option selected; criteria for the remedial action; cost-benefit analysis; and health effects evaluation)
 - (5) Summary of Remedial Action (what was done; waste volume and waste types; costs; and occupational and public exposures)

(C) Exhibit II - Documents Supporting the Certification of the Site

These include but are not limited to:

- (1) Decontamination or Stabilization Criteria
- (2) NEPA Documents
- (3) Agreements (with owner, state, and so forth)
- (4) Post Remedial Action Survey and Monitoring Data
- (5) State, County, and Local Comments On Adequacy of Remedial Action (and others as appropriate)
- (6) Recommended Restrictions and Actions Taken to Implement
- (7) Federal Register Notice
- (8) Approved Certification Statement
- (D) Exhibit III Diagrams and/or Figures or Tables Supporting the Certification
- (E) List of Relevant Documents

The Certification Docket shall be prepared by OR-TSD for each completed remedial action and will include state, county, and local comments (as appropriate), Federal Register notice, and Approved Certification Statement. The certification statement is signed at DOE Oak Ridge Operations and is approved at Headquarters. OR-TSD drafts and obtains the required concurrences for the Federal Register notice which is issued by Headquarters.

PROGRAM (FUSRAP ESAPP, APRIL 1985) DENTIFY SITE AND DETERMINE AUTHORITY FOR REMEDIAL ACTION NO FURTHER ACTION REDURED IMDER FUSAAP AUTHORITY GNIFIES DOE DECISIONS ARREES
RADIOLOGICAL
CONDITION & DETERM
MEED/PRIDGITY
FOR REMEDIAL
ACTION ACTION PRELIMINARY ENGINEERING EVALUATIONS NO REMEDIAL ACTION DESIGN ENGINEERING DISPOSAL SITE PREPARATION AND MAINTENANCE REMEDIAL ACTION AND MONITORING CERTIFY AND RECORD

APPENDIX E. BASIC STEPS INVOLVED IN THE REMEDIAL ACTION PROGRAM (FUSRAP ESAPP, APRIL 1985)

E-1

APPENDIX F. PUBLIC AVAILABILITY AND ARCHIVING OF FUSRAP RECORDS

Introduction

Documentation on all FUSRAP site investigations and activities (for eliminated as well as certified sites) will be prepared and archived by the Department of Energy as permanent records of the program. This activity is required by this protocol for the purpose of ensuring that investigations completed under FUSRAP do not have to be repeated at some future date. It is DFSD's responsibility to ensure that actions are taken to permanently preserve these records.

Throughout the FUSRAP project DFSD, with its technical assistance contractors and the FUSRAP project office (OR-TSD), will maintain records that document program activities including site identification, characterization, designation or elimination, and site remedial action planning, implementation, and certification. DFSD and the Technical Assistance Contractor will maintain these records documenting site identification, characterization, and designation or elimination activities. DFSD and the FUSRAP Project Office (OR-TSD) will maintain those records documenting remedial action planning, implementation, and certification activities at each site. The certification dockets assembled by OR-TSD as described in Appendix D will be the primary record for those sites designated for remedial action. Elimination reports, including authority reviews and supporting documentation, assembled by the DFSD Technical Support Contractor will be the primary record for sites identified but not included in the remedial action program. In addition, the primary record file will include general information regarding program policy, decisions, and other pertinent information required to reflect as complete as possible history or chronology of activities associated with each FUSRAP site.

Temporary Public Access

The Certification Dockets, major FUSRAP announcements, press releases and, where appropriate, elimination reports will be made available at the Department of Energy Public Reading Room in Washington, D.C. Upon receipt of the primary records assembled by OR-TSD and/or the Technical Assistance Contractor, DFSD will transfer copies of the subject documents to the reading room through a memorandum to the Department's Public Information Office (MA-232.1). The official record copies will be maintained by DFSD or the program office until they are archived. The memorandum will request that MA-232.1 make the copies of the documents available to the public at the reading room for a period from 3 to 5 years, after which time they will be destroyed.

Permanent Archiving of FUSRAP Records

At the termination of FUSRAP, or at an appropriate interval to be determined, DFSD will assemble and prepare these records in accordance with pertinent records management procedures for transfer to the National Archives for permanent retention. The Office of Nuclear Energy Records Liaison Office (NE-73), at the request of DFSD, will coordinate with the Department Records Officer (MA-232.3) to have the records identified for permanent retention by the National Archives. The records will then be available to interested parties through the National Archives.

APPENDIX D-2

FUSRAP DESIGNATION/ELIMINATION PROCESS

FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

DESIGNATION/ELIMINATION PROTOCOL--SUPPLEMENT NO. 1 TO THE FUSRAP SUMMARY PROTOCOL

January 1986

Division of Facility and Site Decontamination Projects
Office of Nuclear Energy
U.S. Department of Energy

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FUSRAP DESIGNATION/ELIMINATION PROTOCOL SUPPLEMENT TO THE FUSRAP SUMMARY PROTOCOL

INTRODUCTION

This supplement to the Formerly Utilized Sites Remedial Action Program (FUSRAP) Summary Protocol provides additional detail regarding the designation/elimination process. It is intended as an amplification of the information provided in the FUSRAP Summary Protocol and relates to those activities conducted prior to Step 2, Figure II, of that document (the final decision for designation into or elimination from FUSRAP). This supplement is to be used along with the guidance provided in the summary protocol and not in place of it.

The primary objective of the designation/elimination activity is to determine if specific sites are in need of and eligible for remedial action under FUSRAP. Basically, the investigations must provide evidence that a site is contaminated above the current FUSRAP guidelines with radioactive material that resulted from past DOE predecessor activities and that there is authority under the Atomic Energy Act of 1954 as amended (AEA) to conduct remedial action at the site. If these criteria are met, the site is included in FUSRAP. The activities involved in making this determination and the criteria used for the determination are explained in this protocol. A brief discussion of the data collection activities that precede the preparation of the designation or elimination report is also included. The initiation of the designation/elimination activity for a given site is totally dependent on the data collection process.

DESIGNATION/ELIMINATION PROTOCOL

Data Collection

Data to support the designation or elimination activities are derived from several sources. Historical information required to support findings related to the potential for contamination of the site (characterize the radiological condition of the site) and to establish if the Department has authority under the AEA to conduct any necessary remedial actions at a site, is primarily obtained through records searches and also through interviews with cognizant individuals (such as former facility or Atomic Energy Commission employees). In addition, as required and appropriate, new radiological data and/or site specific information are collected through site visits or surveys or contacts with owners.

Records Searches and Interviews. There are essentially two types of records searches that are employed to support the designation/

elimination activity. The first is the systematic review. The Department as part of its site identification and characterization effort has investigated the Manhattan Engineer District (MED) and Atomic Energy Commission (AEC) records stored at various records centers and records storage locations to identify records that are or may be pertinent to FUSRAP. The investigations involve several stages of screening to identify records that require detailed review. As part of the systematic reviews, the pertinent records are examined to determine their subject area, the sites they address, and to obtain copies of material that would support the designation/elimination reviews. The material is reviewed and copied as appropriate for all sites addressed. In addition, notes are taken on the particular records reviewed so that if materials that are not needed for designation/elimination actions are later necessary for other purposes (litigation or Freedom of Information Act responses) their location is easily determined and the required records can be easily retrieved. The systematic approach is the most efficient and cost effective because, the records need only be reviewed once. However, the method does not allow easy or accurate scheduling of results. Because the records are not well categorized and are not generally filed by site [records are in most cases stored by date (FY43 and so forth)], there is no way of determining when or if enough information will be assembled on any one site until enough material has been collected or all the records have been reviewed.

The second type of search is the site specific review. Under this type of review all the records identified that may contain material on a selected site are screened to attempt to locate those records that probably contain information on that site. These high probability records are then scanned to identify site specific records and only the site specific records are reviewed for designation/elimination information. This search method produces relatively fast site specific results with reasonable probability that all the important facts pertaining to a specific site are identified. Searches completed in this manner can also be scheduled somewhat more precisely than can the results of systematic searches. However, the site specific reviews produce useful information for only one site at a time and result in a more costly and less effective review because the same records groups have to be visited and reviewed several times to extract all the useful data from them.

Though it has the scheduling drawbacks the systematic search is generally the favored approach for the site identification and characterization effort. The site specific searches are only conducted when there are priority requirements to complete investigations on a specific site.

Interviews are generally conducted toward the end of an investigation on a specific site or when it appears that the records will not

be sufficient on their own to support a designation or elimination. As a result, most interviews are site or subject specific; however, at the time of the interview the cognizant individuals are also interrogated for information on other sites or subject for future reference.

Site Visits and Preliminary Surveys. Visits or preliminary surveys are normally only conducted when there is significant probability of residual contamination being present at a site and if there is authority to conduct remedial action at the site if the radiological conditions are found to be unacceptable. The primary purpose of the visits or surveys is to obtain information needed for the site designation or elimination which can not be obtained through the records search activity.

Additional details regarding the implementation of the site visit and survey activities and the records search actions are provided in the Preliminary Analyses Phase section of the general FUSRAP protocol.

Designation/Elimination Analyses

The designation or elimination analyses are completed in two parallel analyses. The site data are reviewed (1) to determine if the sites are contaminated above DOE guidelines or if there is potential contamination on the site due to DOE predecessor operations and (2) to determine if the Department has authority to correct any unacceptable radiological conditions that might be identified at the site. The two analyses are different and require somewhat different supporting data; however, much of the analyses is interdependent and as a result, the reviews are implemented in a manner that requires significant interaction.

A positive determination must be made on both reviews for a site to be included or designated into FUSRAP; the site must be potentially contaminated above guidelines with residual material resulting from DOE predecessor operations and there must be authority for DOE to conduct any required remedial actions. If either of the reviews produce a negative finding (no authority or no potential for contamination) the site is eliminated from consideration for inclusion in FUSRAP. Figure 1 and Figure 2 outline the decision tree for the designation/elimination process. Figure 1 shows the paths and options in a case where the authority is determined first, while Figure 2 represents the case where the potential for contamination (or site characterization) is determined first.

The potential for contamination is determined through the review of the operating history of the site and considers such things as type of operation, length of time the facility operated under AEC contract, quantity of material processed, methods of disposal of wastes, radiological data and so forth. It has been found that sites at which

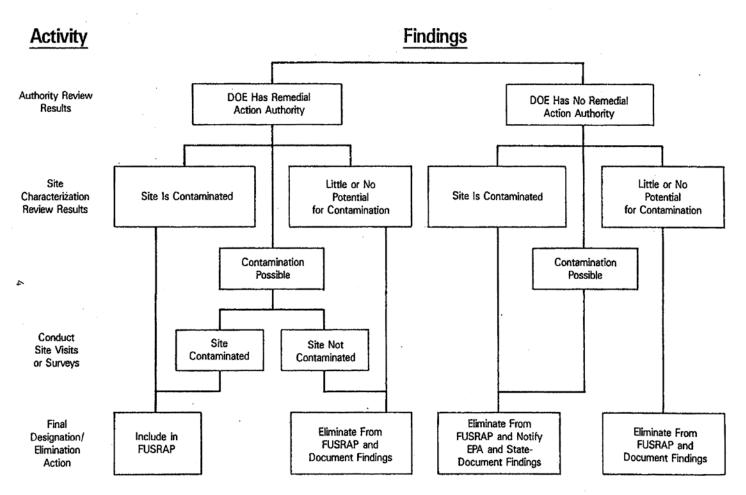


Figure 1. Decision Tree for the Designation/Elimination Process —
Alternative 1 — Authority Review Completed First

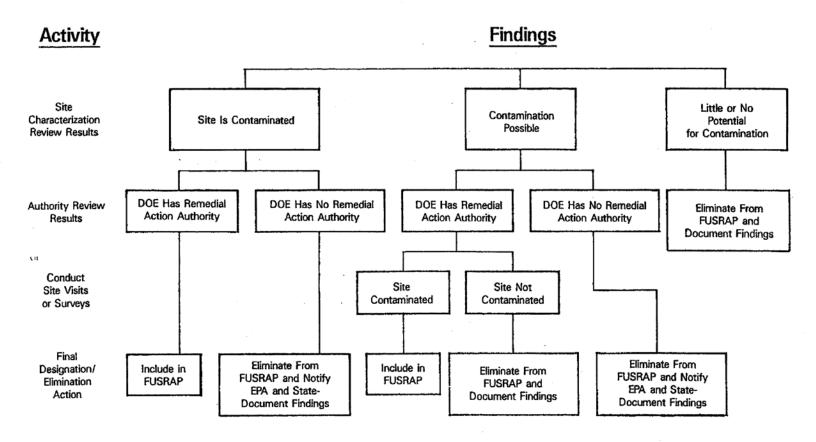


Figure 2. Decision Tree for the Designation/Elimination Process —
Alternative 2 — Site Characterization Review Completed First

little work or only small quantities of material were handled, in general, have fewer records in the files and the larger facilities handling significant amounts of radioactive materials are referenced frequently in the records. Therefore, the frequency of reference in the old records is also used as an indicator of potential for contamination.

The authority review considers the contractual agreements and final close-out information, the DOE predecessors involvement in the facility and its operation, and health and safety responsibilities. Other important factors considered, include the license status of the site, types and amounts of commercial or other governmental work conducted at the site and current site activities. The types of records or information used in each of the authority and site characterization analyses are outlined in Figure 3 along with some of the references normally sought during the records searches.

The criteria for determining if DOE will have authority to conduct remedial action at a given site are a series of questions derived by Division of Facility and Site Decommissioning Projects (DFSD) and the Office of General Counsel. The site specific answers to these five generic questions and the supporting reference material are used as the basis to determine if there is DOE authority for remedial action and if the site needs to be considered for FUSRAP. The five questions are listed in Figure 4. The first two questions are generally answered solely on the basis of historical data. The last three questions, however, assume that there is contamination on the site. Therefore, the review of radiological conditions must be completed before the final responses to the authority questions can be developed and the final designation decision made. Initially, if the review or evaluation of radiological condition is not complete, the last three questions are answered tentatively, assuming the site was contaminated with materials associated with past AEC/MED operations. Then a preliminary authority determination is made with the condition that it would have to be shown that the site was contaminated with residues from DOE predecessor operations before a final decision supporting authority can be made. A negative authority finding at the initial stage (prior to a final determination regarding site contamination) will generally result in the site being eliminated from the program. However, if on the basis of this draft authority review the answers to the questions indicate that DOE might have authority for remedial action at the site, additional investigations which may include site visits and/or surveys and contacts with the owner, are implemented as required to provide additional material to support the review. The final authority determination is then made on the basis of the final answers developed using the additional information.

The authority review is an iterative process. Ideally, the authority determination is done with the minimal amount of records review as is possible and practical. As soon as there appears to be

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Site Description
          -- Location (address and maps)
         -- Facility size
Entire site
MED/AEC portion
                Area around the site (population and environs)
0
         Contractual information (MED/AEC)
         -- Size of contract
                                                          -- Areas utilized for contractual activities
                                                          - Health and safety provisions
- Closeout provisions
- Special provisions
- Contracting Division or organization
         -- Length of contract
-- Type of contract
-- Products
         Contractual information (non-DOE predecessors).
         -- Same as above including estimates of fraction of facility and work that was not MED/AEC related
        License information
         -- Type of license -- Violations
-- Length of license -- Current status
-- Areas and work covered under license
        History of MED/AEC operations
        -- Type of operation (materials processed, quantities, waste disposal practices and so forth)
        -- DOE predecessor control and involvement at the site
Ownership of lands, buildings, or equipment
Personnel stationed at the site
Frequency of visits to monitor or manage operations
Health and safety inspections and so forth
-- Periods of operations and stand-by status
-- Size of staff (production, research, engineering, health
and safety and so forth) and portion of time spent on
non-MED/AEC operations
-- Final closeout
         -- Final closeout
              Surveys
Property Transfer
Status and final releases
        Current status of site
        -- Radiological status
-- Current and planned or future uses
-- Proximity of active areas and summary of operations
        Typical References
        -- Contracts
        -- Processing records
-- Surveys and health and safety reports
-- Correspondence with MED/AEC managers on pertinent issues
        -- Closeout records
-- Licenses and inspections
-- Interviews
```

Figure 3. Information Collected and Utilized in the Designation/Elimination Process

Five Questions Used to Evaluate Authority for Remedial Action

- Was the site/operation owned by a DOE predecessor or did a DOE predecessor have significant control over the operations or site?
- Was a DOE predecessor agency responsible for maintaining or ensuring the health, safety, and environment of the site (i.e., were they responsible for cleanup)?
- 3. Is the waste, residual, or radioactive material on the site the result of DOE predecessor related operations?
- 4. Is the site in need of further cleanup and was the site left in unacceptable condition as a result of DOE predecessor related activities?
- 5. Did the present owner accept responsibility for the site with knowledge of its contaminated condition and that additional remedial measures are necessary before the site is acceptable for unrestricted use by the general public?

Figure 4. Factors Considered in Authority Reviews

sufficient data to answer the five questions (at least tentatively) and to make a determination, a draft authority review package is prepared and submitted to the Office of General Counsel (GC). The authority review package contains:

- A summary of the site's operation,
- 2. Available information on the current condition of the site,
- 3. Specific answers to the questions in Figure 4; and
- 4. Copies of pertinent documents supporting the answers.

If GC recommends that there is insufficient data to make a determination, efforts are made to identify and collect the required materials. However, if the searches prove unsuccessful and it is unlikely that any additional useful information will be derived from future records searches the authority review and determination are completed on the basis of the available information. In general, insufficient data will result in a no authority determination.

If GC recommends that the data provided is sufficient to make an authority determination, then the authority finding is made, the authority review is finalized and the next step in the process is implemented. The next step depends on the status of the site radiological evaluation effort. If the potential for contamination has been established through historical data or survey data then the elimination or designation package is prepared. If it has not, then additional investigations are conducted.

If the finding is for no authority and there is, or is potential for, contamination at the site, an elimination report is issued. The site owner, appropriate state agencies, EPA, and other appropriate Federal agencies are notified that there is (or is potential for) contamination at the site and that DOE has no authority under the AEA to conduct any remedial actions at the particular site if they are found necessary. The elimination report is made available to the owner, state agencies, EPA, and the other appropriate Federal agencies. The report is placed in the DOE Public Reading Room for at least a 2-year period and is permanently archived by DOE in accordance with procedures described in Appendix F of the FUSRAP Summay Protocol.

If the finding is for authority, the radiological and operating data are summarized to determine if additional radiological characterizations are needed to determine if the site should be considered for remedial action. If additional data are needed the site survey is planned and implemented and a designation package (or elimination package as appropriate) is prepared after the survey is completed. If adequate information is already available, then the designation or elimination package is prepared. The owner and the

appropriate state agencies are notified of the designation of the site for remedial action.

In those situations where the potential for contamination is low or non-existent, the sites are eliminated from the program irrespective of the DOE authority. If the authority issue has not been resolved at the time that the determination of no potential for remedial action is made, then the authority review is terminated.

Designation/Elimination Reports. Designation/elimination reports are prepared to document the analysis and to summarize the data available on a specific site. The draft designation report and supporting material is used as the basis for the designation determination. In order for a site to be included in FUSRAP the report must indicate that:

- o The site is potentially contaminated (above FUSRAP criteria) with radioactive residues that resulted from DOE predecessor operations, and
- O DOE has authority to conduct remedial action at the site.

The site will not be included in FUSRAP if it is already included under some other remedial action program or is under NRC or state license.

The contents of the designation reports vary slightly from site to site and may include the following types of materials:

- A summary which discusses the past operations at the site, the current status of the site, disposal practices, radiological history and so forth.
- A description of the current status of the site and its location and size.
- 3. A summary of the authority review completed on the site.
- 4. An analysis of potential doses that might be received by members of the general public as a result of exposure to contamination on the site (using available radiological data).
- A comparison of the levels of residual radioactive material on the site and potential doses to guidelines and standards.
- 6. A preliminary ranking of the site on the basis of potential health effects using the DOE/FUSRAP prioritization procedure (only for those sites that are designated), and
- 7. References and supporting data.

Elimination reports may also contain similar information, however, depending on circumstances will generally be much briefer. The elimination may be based on a finding from historical records of little potential for contamination or that the site is covered under another remedial action program and so forth. In cases where the authority review is completed first and the finding is that DOE has no authority, the authority review may be used in place of the elimination report.

Activities Following Designation/Elimination

Designated Sites. Once a determination is made that a site qualifies for designation under FUSRAP, the DOE Oak Ridge Operations Office Manager and the Technical Services Division (OR-TSD) Director are notified by the Director of the Office of Remedial Action and Waste Technology (the superior office for DFSD) that remedial action is authorized under FUSRAP. OR-TSD (the FUSRAP project office) is then responsible for taking appropriate steps to complete any necessary characterization of the site and remedial actions determined to be required. The remedial action process is outlined in more detail in the FUSRAP Summary Protocol. Following completion of the remedial action the site is certified in accordance with procedures also outlined in the FUSRAP Summary Protocol and Supplement No. 2 to the FUSRAP Summary Protocol (verification/certification) November 1985.

<u>Eliminated Sites</u>. Sites eliminated from consideration for FUSRAP are in two general categories:

- Sites that have little or no potential for being contaminated with radioactive residues for which DOE either does or does not have authority for remedial action.
- Sites for which DOE has no authority for remedial action that are or are potentially contaminated with radioactive residues or material.

For a site in the first category, the elimination report is issued and filed and the information on the site is updated in the FUSRAP sites data base. At the end of each year a summary report documenting the status of all the sites reviewed during the past year is prepared. This report along with the supporting elimination information are eventually archived to ensure that a record of the investigations will be permanently available.

Similar reports are prepared for the sites in the second category, and the information is documented in a similar manner. However, in order to ensure the attention of appropriate government agencies to conditions that may impact negatively on the general public or the environment, DOE notifies EPA and other appropriate Federal and/or state agencies of the findings and potential hazards associated with

the site. DOE is available to assist these agencies in the state in interpreting results or in assessing data on the sites; however, unless DOE is provided authority for the site through another mechanism (such as a legislative mandate) all activities excepting assistance to other agencies are terminated.

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APPENDIX C

Summary of DOE FUSRAP Site Eligibility Determination Process

ER 200-1-4 29 Aug 14

This appendix summarizes the DOE site eligibility determination process described in the DOE FUSRAP Manual (Appendix B). In the event of a conflict between this summary and Appendix B, the DOE FUSRAP Manual shall prevail.

- 1. For DOE to find a site eligible for further investigation by USACE, contamination must be the result of Federal Government activity during the Nation's early atomic energy program, not private or commercial activity. Generally speaking, the contamination should be the result of activities occurring roughly in the 1940 to 1974 time frame, and should consist mostly of thorium and uranium residues resulting from ore processing, or similar low activity radioactive materials. Private or commercial materials commingled with FUSRAP materials will not disqualify the site from consideration. The site eligibility determination distinguishes potential FUSRAP sites from the universe of other contaminated sites, such as those eligible for cleanup under other federal or state programs such as NRC decommissioning or EPA Superfund.
- 2. Additionally, DOE determines if any factors require excluding the site from FUSRAP, and then it determines whether it has authority under the AEA to clean up the site. DOE should not declare a site eligible if the site is:
 - a. licensed by the NRC or a state

The site will not be included in FUSRAP if it is already included under some other remedial action program or is under NRC or state license. (DOE FUSRAP Manual, Appendix D-2, FUSRAP Designation/Elimination Protocol, page 10);

b. under the jurisdiction of a remedial action program other than FUSRAP

DOE may terminate investigations and close files on a site if the ... site is clearly under the jurisdiction of a program other than FUSRAP. (DOE FUSRAP Manual, Appendix D-1, FUSRAP Summary Protocol/, Page 8);

c. controlled by appropriate restrictions, i.e., "institutional controls"

If DOE . . . determines the site visit and preliminary survey results, along with the historical data are sufficient to verify that the radiological condition of the site is within appropriate guidelines or that the site conditions are controlled by the license or appropriate restrictions, the site is eliminated from the program. (DOE FUSRAP Manual, Appendix D-1, FUSRAP Summary Protocol, page 10); or

d. If commercial and government-related activities occurred on a site, and the materials cannot be reliably attributed to either activity

[I]f the site is currently licensed for the same activities conducted under MED/AEC and contamination resulting from licensed work is indistinguishable for that caused by MED/AEC, DOE activities relating to the site will be terminated. (DOE FUSRAP Manual Appendix D-1, FUSRAP Summary Protocol, page 8.)

- 3. If the site is not subject to the above controls or licenses, authority is established by answers to the following questions. (DOE FUSRAP Manual, Appendix D-2, FUSRAP Designation/Elimination Protocol, page 6 and Figure 4.)
 - a. Was the site/operation owned by a DOE predecessor or did a DOE predecessor have significant control of the operations or site? (The answer must be Yes for DOE to have authority.)
 - b. Was a DOE predecessor agency responsible for maintaining or ensuring the health, safety, and environment of the site (i.e., were they responsible for cleanup)? (The answer must be Yes for DOE to have authority.)
 - c. Is the waste, residual, or radioactive material on the site the result of DOE predecessor related operations? (The answer must be Yes for DOE to have authority.)
 - d. Is the site in need of further cleanup and was the site left in unacceptable condition as a result of DOE predecessor related activities? (The answer must be Yes for DOE to have authority.)
 - e. Did the present owner accept responsibility for the site with knowledge of its contaminated condition and that additional remedial measures are necessary before the site is acceptable for unrestricted use by the general public? (If the answer is Yes, DOE has no authority.)

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APPENDIX D

Memorandum of Understanding Between the U.S. Nuclear Regulatory Commission and the U.S. Army Corps of Engineers for Coordination on Cleanup & Decommissioning of the Formerly Utilized Sites Remedial Action Program (FUSRAP) Sites With NRC-Licensed Facilities, July 5, 2001

MEMORANDUM OF UNDERSTANDING BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND

THE U.S. ARMY CORPS OF ENGINEERS
FOR COORDINATION ON CLEANUP & DECOMMISSIONING OF THE FORMERLY
UTILIZED SITES REMEDIAL ACTION PROGRAM (FUSRAP) SITES WITH NRCLICENSED FACILITIES

ARTICLE I - PURPOSE AND AUTHORITY

A. This Memorandum of Understanding (MOU) is entered into by and between the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Army Corps of Engineers (USACE), ("The Parties") for the purpose of minimizing dual regulation and duplication of regulatory requirements at FUSRAP sites with NRC-licensed facilities. For activities where a potential for dual regulation could exist, the two agencies agree to cooperate, share information, and/or coordinate activities in their respective programs. This MOU applies to USACE response actions meeting the decommissioning requirements of 10 C.F.R. 20.1402, "Radiological Criteria for Unrestricted Use." USACE Response actions meeting the restricted release requirements of 10 C.F.R. 20.1403, are outside the scope of this MOU.

- B. The NRC has the statutory responsibility for the protection of the public health and safety related to the possession and use of source, byproduct, and special nuclear material under the Atomic Energy Act of 1954, as amended (Public Law 83-703, 68 Stat. 919). This includes ensuring the decommissioning of the nuclear facilities that it licenses. The Commission's licenses and regulations set out conditions to provide for the protection of the public health and safety and the environment. To terminate such licenses, NRC must ensure that licensees meet the Commission's decommissioning requirements including the provisions of 10 CFR 20 Subpart E Radiation Criteria for License Termination.
- C. USACE is administering and executing cleanup at FUSRAP sites pursuant to a March 1999, MOU with the Department of Energy and the provisions of the Energy and Water Development Appropriations Acts for Fiscal Years 1998-2001 (Public Laws 105-62, 105-245, 106-60 and 106-377, respectively). Section 611 of Pub. L. 106-60 requires the USACE to remediate FUSRAP sites, in accordance with, and subject to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. 9601 et seq., and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R., Chapter 1, Part 300. Section 611 also confers lead agency status on the USACE for remedy selection. USACE, as provided for in section 121(e) of CERCLA and 40 C.F.R. 300.400(e), is not required to obtain a NRC license for its on-site remediation activities conducted under its CERCLA

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authority. However, if a response action is required, CERCLA requires the remedy to be protective of human health and the environment.

- D. This MOU describes how the two agencies will work together to meet their existing statutory responsibilities. It neither creates nor removes any agency responsibility or authority. This MOU is not an admission of responsibility or liability on the part of the United States with regard to any hazardous substances or operations at a licensed site; does not relieve a license holder of its responsibilities and liabilities under any law; and does not create rights in any third party against USACE, NRC, or the United States.
- E. CERCLA obligations imposed on the USACE may duplicate the obligations established by NRC regulations and licenses, resulting in duplicate regulatory requirements at NRC-licensed FUSRAP sites that will impose an added regulatory burden without an added safety benefit. To avoid unnecessary duplication of regulatory requirements and effort, this MOU sets out the conditions, consistent with the protection of the public health and safety, that will permit NRC to exercise its discretion to suspend NRC issued licenses at FUSRAP sites so that NRC requirements do not hinder USACE in its remediation of sites under CERCLA.
- F. Each agency will bear its own costs for actions consistent with this MOU, but this does not preclude each agency from recovering costs, based on it's statutory authority, from the licensee or responsible parties.

G. USE OF TERMS.

- The term "response action" means response actions as defined in CERCLA at 42 U.S.C. 9601(25) including removal and remedial actions and related CERCLA enforcement actions.
- 2. The term "closeout" means that all construction activities and reports are complete, the cleanup goals specified in the final ROD are achieved, coordination with regulatory agencies, and publication of notice in accordance with the provisions of CERCLA, the National Contingency Plan (NCP) and USACE procedures have been completed.
- 3. The term "completed response action" means that all construction activities are complete; for components other than ground or surface water, the cleanup goals specified in the ROD are achieved; any ground and/or surface water restoration remedies are operating as designed; and a remedial or removal action report is complete.
- 4. The term "FUSRAP site" means any geographic area certified by the Department of Energy (DOE) to have been used for activities in support of the Nation's early atomic energy program, and determined by USACE to require a response action pursuant to CERCLA or placed into the FUSRAP program pursuant to Congressional direction. A FUSRAP site may overlap all, or any part, of an NRC-licensed site.
- 5. The term "possession" means physical control of the property or materials for purposes of environmental restoration and protection of the health and safety of the

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public. Possession does not require ownership nor is USACE assuming responsibility for the operations and activities of the NRC licensee or owner of the materials. The USACE will take control only of the FUSRAP-related materials on the licensed site as provided in paragraph III. B.. Non-FUSRAP materials, unless the responsibility of the USACE under CERCLA, remain under control of the licensee.

6. The term "licensed site" means that a NRC license has been issued, and remains active or suspended, to possess and use material licensed under the Atomic Energy Act at the site.

ARTICLE II - INTERAGENCY COMMUNICATION

To provide for consistent and effective communication between NRC and USACE, each agency shall appoint a Principal Representative to serve as its headquarters-level point of contact on matters relating to this MOU. Written notices required by the MOU shall be sent to the USACE's and NRC's Principal representatives. The Principal Representatives are:

Chief, Decommissioning Branch
Division of Waste Management
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Chief, Environmental Division Directorate of Military Programs U.S. Army Corps of Engineers 441 G Street, N.W. Washington, D.C. 20314-1000

ARTICLE III - AGREEMENT

A. At the request of USACE, NRC will initiate action for the suspension of the NRC license or portions of the license for a FUSRAP site to be remediated by USACE under CERCLA authority contingent upon USACE notifying the NRC in writing that:

- 1) USACE is prepared to take physical possession of all or part of the licensed site for purposes of control of radiation from FUSRAP materials subject to NRC jurisdiction and be responsible for the protection of the public health and safety from those materials consistent with 10 CFR Part 20 "Standards For Protection Against Radiation" and other requirements consistent with CERCLA;
- USACE will conduct a response action at the licensed site under its FUSRAP and CERCLA authority, with regard to FUSRAP materials subject to NRC

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jurisdiction, to meet at least the standards required under 10 C.F.R. 20.1402, and

3) USACE has no objection to, and will facilitate, NRC observing USACE inprocess remediation activities.

Such written notification to the NRC should be provided after the final Record of Decision (ROD), or its equivalent, is issued, if one is prepared, and at least 90 calendar days prior to USACE's expected date of initiation of a site response action so that the NRC can initiate the process for suspension of the license. Prior to submitting the notification, USACE will make a reasonable attempt to obtain the licensee's consent to USACE's proposed action and document the results of this effort in the notification.

- B. Depending on the extent of FUSRAP materials and their separability from other hazardous substances on the site, USACE's responsibility may encompass the entire site, portions of the site, all the radioactive materials or just the FUSRAP and commingled materials, as specified in the final ROD. USACE will notify NRC of its findings regarding the type and extent of hazardous substance on a licensed site prior to requesting license suspension. Prior to USACE submitting a request for license suspension on a site where the NRC license suspension will not encompass the entire site, USACE and NRC will meet to agree on the scope of the suspension. The licensee may be involved in these discussions.
- C. NRC licensing action for the suspension of the license, or portions of the license, will be effective, subject to:
 - 1) written notification from USACE to the NRC that USACE has taken physical possession of the licensed site for purposes of radiation control and is now responsible for the protection of the public health and safety consistent with the requirements of 10 CFR Part 20 and
 - 2) the effectiveness rules of the NRC hearing process pursuant to 10 CFR Part 2, "Rules Of Practice For Domestic Licensing Proceedings And Issuance Of Orders."

Prior to license suspension, the licensee retains responsibility for meeting the Commission's requirements for protecting the environment and the health and safety of the public.

- D. NRC may observe, as it deems warranted, remediation activities being conducted by USACE. For the purpose of scheduling in-process activity observation, USACE shall provide the NRC with the schedule of major activities, regular progress reports on sites' activities, studies, and/or remediation, and planned work stoppages.
- E. The NRC shall keep USACE apprised in writing of questions, comments or concerns arising from any NRC observations of USACE response action activities and shall

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immediately notify the USACE of any conditions having a potential to adversely affect the environment or the health and safety of the public.

- F. USACE shall be responsible for the protection of the health and safety of the public consistent with the requirements of CERCLA and 10 CFR Part 20 during the time it is in physical possession of the licensed site or portions thereof which are suspended in accordance with the agreement at the time of license suspension.
- G. USACE shall remediate the licensed site to meet at least the requirements of CERCLA and of 10 CFR 20.1402. The Applicable or Relevant and Appropriate Requirement (ARAR) in the final executed ROD will include 10 CFR 20.1402 or a more stringent requirement.
- H. USACE shall manage all activities and prepare program estimates, funding requirements, and budget justifications for all FUSRAP activities for which it has been given responsibility as provided by the annual Energy and Water Development Appropriations Act, and the terms of this MOU. USACE shall request FUSRAP appropriations in the annual Energy and Water Development Appropriations Act for these activities. USACE shall respond to inquiries from public officials, Congressional interests, stakeholders, and members of the press regarding USACE activities under FUSRAP.
- I. USACE shall consult with NRC if USACE surveys, investigations, and data analyses are inconsistent with the NRC description of the potential radioactive and/or chemical contaminants and processes involved in the historical activities at a licensed site at which the USACE is conducting a FUSRAP investigation or response action under CERCLA. USACE shall immediately notify NRC if, as a result of its Preliminary Assessments, Remedial Investigations, or other surveys prior to production of a ROD, conditions warrant a time-critical removal action, and the agencies will identify an appropriate response that protects the environment and the health and safety of the public.
- J. USACE shall notify NRC in writing if there is a need for a radiological response action under FUSRAP on any property not covered by the license suspended or to be suspended (whether or not owned by the licensee) as a result of radioactive contamination from a licensed site undergoing a FUSRAP investigation or response action.
- K. Following completion of the response action at a FUSRAP site with an NRC-licensed facility, USACE shall provide the NRC with a copy of the CERCLA Administrative Record for the NRC historical public record. At the time of close out USACE will provide NRC with copies of any additional information that has been placed in the CERCLA Administrative Record.
- L. USACE shall notify the NRC in writing if there are NRC-licensed facilities on FUSRAP sites that may require coordination with the NRC in addition to the four known sites:

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Maywood Site (Stepan), Maywood, NJ; CE-Windsor Site, Windsor, CT; St. Louis Downtown Site (Mallinkrodt), St. Louis, MO; and the Shallow Land Disposal Area, Parks Township, PA.

- M. USACE shall keep NRC apprised in writing of progress toward completion of Preliminary Assessments and/or Site Investigations at licensed sites to determine:
 - 1) Whether FUSRAP and commingled materials at the site are a threat or potential threat to public health and safety or the environment as a result of the licensed materials there; and
 - 2) Whether the release requires a response under CERCLA.
- N. The NRC will reinstate the license or portions of the license put into suspension due to USACE's remediation if USACE:
 - 1) is no longer controlling the FUSRAP-related portion of the licensed site for radiation protection purposes,
 - 2) is no longer proceeding with a response action at the licensed site under CERCLA, or
 - 3) has otherwise completed its response action.

At least 90 calendar days prior to USACE terminating its physical possession of the licensed site for purpose of control of radiation, USACE will notify the NRC in writing so that the NRC can initiate the process for reinstating the license. USACE shall promptly notify NRC in writing if annual funding for the FUSRAP response action at an NRC-licensed site does not appear to be sufficient to complete the response action.

- O. NRC shall be responsible for appropriate regulatory action, including requiring any further decommissioning if necessary, following license reinstatement.
- P. As may be necessary, NRC and USACE will develop working procedures to implement this MOU. Such procedures will be approved by the Principal Representatives.

ARTICLE IV - FURTHER ASSISTANCE

NRC and USACE shall provide such information as may be reasonably necessary or required, which are not inconsistent with applicable laws and regulations, and the provisions of this MOU, in order to give full effect to this MOU and to carry out its intent.

Page 7 of 8

ARTICLE V- DISPUTE RESOLUTION

Every effort will be made to resolve issues between NRC and USACE by the staff directly involved in the activities at issue, through consultation and communication. If a mutually acceptable resolution cannot be reached, the dispute will be elevated to successively higher levels of management up to the signers of this MOU. If resolution cannot be reached, NRC may in its discretion reinstate the licenses involved after providing a written 30 calendar day advance notice to the USACE. Upon license reinstatement, USACE's obligations under this MOU for the particular site shall cease and the licensee becomes responsible for control of radioactive materials on the licensed site, as well as protecting the environment and the health and safety of the public, subject to NRC regulation and other applicable law. Upon determining that the licensee has established control of the site and hazardous substances, USACE will relinquish possession of the site and hazardous substances, will cease remediation activities, and will vacate the site. License reinstatement constitutes notice of the shift in responsibility for control of the site and its hazardous substances.

ARTICLE VI- AMENDMENT AND TERMINATION

This MOU may be modified or amended in writing by the mutual agreement of the parties. Either party may terminate the MOU by providing written notice to the other party. The termination shall be effective 60 calendar days following notice, unless the parties agree to a later date. Termination of this MOU does not relieve USACE of its statutory responsibility for protecting the environment or the health and safety of the public until NRC has reinstated the license and the licensee has taken control of the site and its hazardous substances.

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ARTICLE VII - EFFECTIVE DATE

This MOU shall become effective when signed by authorized officials of NRC and USACE.

U.S. Nuclear Regulatory Commission

U.S. Army Corps of Engineers

Martin J. Virgilio

Director,

Office of Nuclear Materials Safety

and Safeguards

U.S. Nuclear Regulatory Commission

Date: _

M.G. Hans A. Van Winkle

Major General, U.S. Army Director, Civil Works

U.S. Army Corps of Engineers

Signature

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APPENDIX E Environmental Liability Reporting



DEPARTMENT OF THE ARMY U.S. ARMY CORPS OF ENGINEERS 441 G STREET NW WASHINGTON, D.C. 20314-1000

SEP 2 4 2008

CECW-I

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Formerly Utilized Sites Remedial Action Program (FUSRAP) Environmental Liabilities Estimating and Reporting Procedures

 Introduction: This document presents FUSRAP's procedures for estimating and reporting environmental liabilities for inclusion into the Civil Works financial statements.

2. Background:

- 2.1 Under Public Law 101-576, "Chief Financial Officers Act of 1990" (hereinafter "the CFO Act"), each executive agency shall prepare and submit to the Director of the Office of Management and Budget (OMB) a financial statement for the preceding fiscal year. The CFO Act requires financial statements prepared by an agency be audited by the Inspector General in accordance with applicable generally acceptable government auditing standards and further requires the Inspector General to submit a report to the head of the auditing agency.
- 2.2 Environmental liabilities are reported in Note 14, "Environmental Liabilities and Environmental Disposal Liabilities," of the Department of Defense (DoD)-wide and the individual Service-wide balance sheets. Contingent liabilities are reported as part of Note 16, "Commitments and Contingencies."
- 2.3 In 2004, during an Army Audit Agency (AAA) audit of the Civil Works financial statements, it was determined that FUSRAP liabilities should be reported in the USACE Civil Works financial statements because USACE has the responsibility to program, budget, and execute the cleanup of eligible FUSRAP sites even though these sites are subsequently returned to the Department of Energy (DOE) for long-term stewardship. The audit concluded that cost estimates for environmental remediation based on site-specific studies, such as an engineering evaluation/cost analysis (EE/CA) or a remedial investigation/feasibility study (RI/FS), should be included in the financial statement Note 14, while rough order of magnitude estimates that are not based on site-specific data should be included in Note 16. It was further observed, that site-specific data may not be available for all FUSRAP sites from which a reliable total programmatic cost estimate can be developed. Therefore, it may be proper to disclose the existence of the program, the number of sites, the potential range of costs and the cost for characterization efforts needed to develop site specific data in Note 16. As future costs become reasonably estimable, the reported liability should migrate from Note 16 to Note 14.
- 2.4 Starting in fiscal year 2005, the FUSRAP National Execution Manager began to develop procedures to consistently and accurately report environmental liabilities. As part of this effort, the program worked with personnel in the finance and accounting branch and carefully reviewed all applicable guidance, particularly the Federal Financial Accounting and Auditing Policy Committee's Technical Release 2 entitled: "Determining Probable and Reasonably Estimable for Environmental Liabilities in the Federal Government." (Enclosure 1) This memorandum is the result of this review and lessons learned with the field in developing and reporting liabilities. The procedures documented in this memorandum will be the official process for developing and reporting liabilities for the FUSRAP.

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3. <u>Definition of Terms:</u> Relevant definitions can be found in DoD 70000.14-R, Vol. 4, Chapter 13, "ENVIRONMENTAL AND NONENVIROMENTAL LIABILITIES." A summary of terms important to the FUSRAP environmental liability estimating and reporting process is included below.

- 3.1 <u>Current Liabilities</u> are liabilities for which the entity expects to outlay the resources within one year of the reporting date. For FUSRAP this is calculated by estimating the yearly expenditures for each project which will include as appropriate, expenditures of any carry-over funds plus the expenditures of current year dollars. It does not include any carry over of obligated or unobligated funds allocated to the project.
- 3.2 Environmental Liabilities include the estimated amounts for future cleanup of contamination resulting from waste disposal methods, leaks, spills, and other past activities that have created a public health or environmental risk. Neither budget activities nor the availability of funding is a determining factor in recognizing environmental liability. Environmental liability estimates and reporting are mandatory regardless of whether the liability appears in budgets or requires future funding.
- 3.3 A Measurable Liability is a liability that can be quantified in monetary units that is reasonably estimable with sufficient reliability. It exists when a dollar value can be estimated for the cleanup costs.
- 3.4 Noncurrent Liabilities are liabilities of an entity for which the outlay of resources (for FUSRAP this means expenditures) will occur beyond one year of the reporting date.
- 3.5 <u>Recognition</u> means the reporting of a dollar amount on the face of the basic financial statements.
- 4. FUSRAP Environmental Liability Recognition, Estimating and Reporting Process:
- 4.1 Environmental Liability Recognition: FUSRAP recognizes an environmental liability for a site after it has been formally added to the Corps FUSRAP cleanup program. This occurs 30 days after the Assistant Secretary of the Army for Civil Works [ASA(CW)] has sent notification through the OMB to Congress that USACE intends to add the specific site to our program for budgeting and execution.
- 4.2 When a site is added to the program, the responsible district will provide the FUSRAP National Execution Manager and National Account Manager with the estimated cost of all studies (Remedial Investigation [RI] through the signing of the Record of Decision [ROD]). This estimate should include all costs, both in-house and contractual, to reach the ROD. These estimates will be developed based on professional judgment and use standard cost estimating practices, similar to developing an independent government estimate for contracting purposes, and will be reviewed by either the District's FUSRAP program manager or cost estimator's supervisor in accordance with standard district practice. This amount represents both the total estimated cost of the project to reach a ROD and the government's total reasonably estimable environmental liability. Remaining liability will be calculated by subtracting expenditures from the estimate of total liability.
- 4.3 Should it become obvious to the district project manager that a time-critical or non-time critical removal is required; the district will provide the National FUSRAP Execution Manager and National FUSRAP Account Manager an estimate to prepare the EE/CA report and the Action Memorandum. The estimate will be based on professional judgment and use standard cost estimating practices, similar to developing an independent government estimate for contracting purposes, and will be reviewed by either the FUSRAP program manager or cost estimator's supervisor in accordance with standard district practice. The estimated cost of the removal action will be based on engineering cost estimates developed by the district's cost estimators and will be reported as an environmental liability when the draft EE/CA is released to the regulators for comment. Preparation, review and approval of the

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removal action estimate needs to be documented. Any changes to the project's remaining cost to complete should be reported immediately to the National FUSRAP Execution Manager and the National FUSRAP Account Manager.

- 4.4 The estimated cost to perform any required remedial action will be developed by the district during the development of the Feasibility Study (FS). The FS evaluates different remedial scenarios and estimates the costs associated with each. The estimated cost of each scenario shall include both the contractual and in-house costs for the remedial design, remedial action, any required long-term management, and those costs required to return records to DOE and fiscally close out project. These estimates should be engineering estimates prepared by the district's cost estimators. Preparation, review and approval of the removal action estimate needs to be documented. Although the cost of the remedial action in the FS may include long-term management costs associated with the project until the remedy is complete, any long-term management costs that will be incurred after the site is returned to the Department of Energy, should be subtracted out of the total project cost estimate because these costs are not part of the Corps' environmental liability.
- 4.5 The Corps will recognize the liability for any potential remedial action when it becomes reasonably estimable. For FUSRAP this means the following:
- * When the draft FS is released to regulators or public for comment remedial action liability will be recognized as a range and the reported liability will be equal to the low end of the range since at this point no remedy is better than any other.
- * When the Proposed Plan (PP) is released to the regulators or public for comment remedial action liability will be recognized as a range and the reported liability will be equal to the preferred alternative minus any future DOE costs.
- * When the ROD is signed by the Division Commander the remedial action liability will be recognized as the estimated cost of the selected remedy minus any future DOE costs.
- 4.6 Quarterly updates to remaining FUSRAP environmental liability will be prepared by the National FUSRAP Execution Manager by subtracting the expenditures to date from the district verified environmental liability estimate. The resulting remaining liability estimate will be forwarded to the district project managers by email who will verify the resulting number is correct, identify any new or updated estimates they have for the project based on current site conditions and prices, and send an email back to the National FUSRAP Execution Manager either concurring or providing revisions with comments. The National FUSRAP Execution Manager will then compile the resulting remaining environmental liabilities and submit them to the USACE Directorate of Resource Management point of contact. Enclosure 2 contains the typical spreadsheet used to report the environmental liabilities to the districts and the USACE Directorate of Resource Management point of contact.
- 4.7 Yearly updates will occur in the December to January timeframe concurrent with the preparation of the Civil Works Budget Justification Sheets. As a minimum, the yearly update must consist of a review of all cost estimates of remaining environmental liability. The cost estimate must be updated or indexed to yield an estimate in current year dollars. The review and update must be documented. The revised estimate should be verified to the National FUSRAP Execution Manager during the second quarter environmental liabilities submission, but in no case later than the third quarter submission.
- 4.8 Significant changes in the remaining environmental liability due to scope growth, changed field conditions, or prices shall be reported to the National FUSRAP Execution Manager and National FUSRAP Account Manager immediately. These changes will be verified by the district and submitted as part of the next quarterly report submission.

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5. Roles & Responsibilities:

- 5.1 The district project manager is responsible for ensuring estimates are provided when required, proper approvals are obtained and documented, and documentation can be found. The district project manager will also be the primary spokesperson for audits and questions related to project specific environmental liability estimates.
- 5.2 The National FUSRAP Execution Manager is responsible for ensuring division and district FUSRAP personnel are familiar and comply with environmental liability estimating and reporting. The National FUSRAP Execution Manager will initiate the quarterly reporting, obtain responses back from all districts, compile the resulting information and provide the information to the USACE Directorate of Resource Management point of contact in a timely manner. The National Execution Manager will participate in any outside audits of a district's environmental liability estimating and reporting.
- 6. Recordkeeping: All estimates and reports of FUSRAP environmental liability will be kept for 6 years - 3 months. Project specific estimates and documentation of reviews and approvals will be kept at the district. Program submissions by the National FUSRAP Execution Manager will be kept at HQUSACE.
- 7. Questions or comments on this policy memorandum can be directed to the National FUSRAP Execution Manager, Ms. Suzanne Beauchamp at (202) 761-4998.

FOR THE COMMANDER:

Chief, Programs Integration Division Director of Civil Works

2 Encl

- 1 Federal Financial Accounting and Auditing Technical Release 2
- 2 USACE Future FUSRAP Contingent Environmental Liabilities Worksheet

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ENCLOSURE 1

DETERMINING PROBABLE AND REASONABLY ESTIMABLE

FOR

ENVIRONMENTAL LIABILITIES IN THE

FEDERAL GOVERNMENT

FEDERAL FINANCIAL ACCOUNTING AND AUDITING

TECHNICAL RELEASE NUMBER 2

The Accounting and Auditing Policy Committee (AAPC) was organized in May 1997 by the Office of Management and Budget (OMB), the General Accounting Office (GAO), Treasury, the Chief Financial Officers' Council (CFO), and the President's Council on Integrity and Efficiency (PCIE), as a new body to research accounting and auditing issues requiring guidance.

The AAPC serves as a permanent committee sponsored by the Federal Accounting Standards Advisory Board (FASAB). The mission of the FASAB is to recommend accounting standards to the FASAB principals after considering the financial and budgetary information needs of congressional oversight groups, executive agencies, and the needs of other users of Federal financial information.

The AAPC is intended to address issues which arise in implementation which are not specifically or fully discussed in FASAB standards, interpretations of FASAB standards, OMB's Form and Content Bulletin or OMB's Audit Bulletin. The AAPC's guidance on accounting will be cleared by FASAB before a recommendation is forwarded to OMB for publication. The AAPC's guidance on audit issues will be cleared by OMB and GAO before being published by OMB.

The mission of the AAPC is to assist the Federal government in improving financial reporting through the timely identification, discussion, and recommendation of solutions to accounting and auditing issues within the framework of existing authoritative literature.

INTRODUCTION

Federal agencies are required to recognize a liability when a future outflow or other sacrifice of resources as a result of past transactions or events is "probable" and "reasonably estimable." This technical release is intended to assist federal agencies in determining probable and reasonably estimable liabilities related to their environmental cleanup responsibilities.

Agencies that must deal with environmental contamination should first refer to the hierarchy of accounting standards contained in the current Office of Management and Budget (OMB) Bulletin on "Form and Content of Agency Financial Statements" for guidance. Standards issued by General Accounting Office (GAO) and OMB have precedence over other authoritative guidance for federal entities. This technical release supplements the relevant federal standards, but is not a substitute for and does not take precedence over the standards.

This technical release includes two sections and an appendix. Section 1 will help an agency determine whether its environmental contamination meets the definition of probable (i.e., a future outflow of resources will be required to clean up the containment). Section 2 offers guidance in quantifying an agency's liability for cleanup. Appendix I lists key laws and regulations relating to environmental contamination.

SCOPE

This technical release offers guidance based on Statements of Federal Financial Accounting Standards (SFFAS), and draws on information from other literature. The applicable federal standards are:

SFFAS No. 6, Accounting for Property, Plant, and Equipment SFFAS No. 5, Accounting for Liabilities of the Federal Government

SFFAS No. 6¹ addresses cleanup costs from federal operations known to result in hazardous waste. SFFAS No. 6 provides guidance when cleanup occurs at the end of the useful life of the property, plant, and equipment (PP&E) or at regular intervals (scheduled phase cleanup) during that life.

SFFAS No. 5, Accounting for Liabilities of the Federal Government, applies to all environmental liabilities not specifically covered in SFFAS # 6, including cleanup resulting from accidents or where cleanup is an ongoing part of operations².

 ¹The recognition and measurement provided in SFFAS #6 are subject to the criteria for recognition of liabilities included in SFFAS #5.
 That is, liabilities shall be recognized when the following conditions are met:

 a past transaction or event has occurred,
 a future outflow or other sacrifice of resources is probable, and

a future outflow or other sacrifice of resources is probable, an
 the future outflow or sacrifice of resources is measurable.

In the case of cleanup as an ongoing part of operations [i.e., the operation or activity generates hazardous waste that is cleaned up as it is created (e.g., hospitals regularly dispose of hazardous materials)], a liability may not need to be recognized if the need to cleanup and the full cleanup occur in the same reporting period. However, the total cost of cleanup should be recognized in the period the cleanup need arises. Refer to footnote 15 for further information.

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Section 1

Determining "Probable" Environmental Liabilities

Description of Issue

An agency is required to recognize a liability for environmental cleanup costs as a result of past transactions or events when a future outflow or other sacrifice of resources is probable and reasonably estimable. Concerns have been raised about *when* costs associated with environmental damage meet the probable and reasonably estimable criteria. Probable is related to whether a future outflow will be required. This section addresses only the "probable" part of this requirement; reasonably estimable will be addressed in Section 2.

Key Determinants and Positions

Various key factors (tests) must be considered in determining whether a future outflow of resources from a federal agency for environmental cleanup is probable. The factors are:

- 1. Likely Contamination,
- 2. Government Related and Legally Liable,
- 3. Government Acknowledged Financial Responsibility,
- 3a. Monies Appropriated/Transaction Occurred, and
- 4. No Known Remediation Technology Exists.

Diagram 1.1 illustrates the above tests. These tests for probability assume that a past transaction or event has occurred (i.e., past or present operation, contribution and/or transportation of waste), and apply to both active and closed sites. A narrative discussion of each of these tests for probability follows on Diagram 1.1.

³This Release generally discusses "sites" or "contamination" when referring to environmental contamination. However, property, plant and equipment that requires cleanup (because of damaging the environment when being used or at time of disposal) is included in the scope. A further discussion of issues related to PP&E, including recognizing a liability for PP&E already in service, is included in Section 2 under the heading "Guidance for Active Sites."

^a This Release uses SFFAS No. 5's definition of "probable," which is "more-likely-than-not" (see par. 33 of SFFAS No. 5). This Release applies the contingent liability criteria (i.e., probable, reasonably possible, and remote) from SFFAS No. 5 to all environmental liability estimates, whether or not they meet the criteria (see par. 36 of SFFAS No. 5).

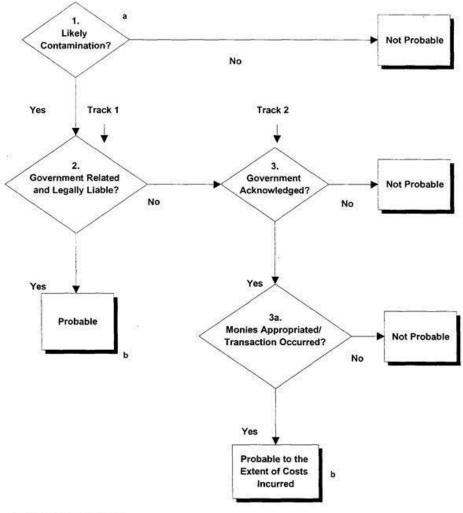


Diagram 1.1: Determination of Probable Environmental Liabilities

a See discussion on "due care".

b If no known technology exists, then it would be probable to the extent of any required study costs, costs associated with containment, or any other monies obligated or spent. However, given that the actual remediation is not feasible, the actual remediation costs would not meet the probable criteria.

Diagram 1.1 shows that there are two primary tracks for determining whether a federal agency's environmental responsibilities meet the probable criterion. The first track is when contamination is known, is related to federal government operations, and represents a legal liability. The second track is when the federal government knows of contamination, and although the contamination is not government related and the government is not legally liable, the government acknowledges financial responsibility for cleanup. For both tracks, if no known technology exists, then the probability criterion is met only to the extent of likely expenditures (e.g., for study costs and containment). A more detailed discussion of the various components of Diagram 1.1 follows.

Likely Contamination: If the agency has exercised due care in determining the presence of
contamination and as a result, believes it is unlikely that contamination (for which it is responsible)
exists, then the probability criterion is not met. However, if the relevant agency is aware of
contamination, having used the due care criteria (see below), then the agency must determine
whether the contamination is government related and the federal government (i.e., the agency) is
legally liable.

Due care refers to a reasonable effort to identify the presence or likely presence of contamination. Due care is considered to be exercised if an agency has effective policies and procedures in place to routinely attempt to identify contamination and forward that information to the responsible agency official. Procedures that are evidence of the exercise of due care may include, but are not limited to, the following:

- review of recorded chain-of-title documents (including restrictions, covenants and any possible liens) and good faith inquiry and investigation into prior uses of the property;
- investigation of aerial photographs that are available through government agencies that may reflect prior uses;
- analyses to estimate the existence of uninvestigated sites based on information from known sites;
- inquiry into records that are available from federal, state, and/or local jurisdictions that show whether there has been a release or potential release of hazardous substances on the property (and adjacent property, if suspected contaminators exist);
- visual site inspection of any portions of the property where environmental contamination is likely or suspected, and
- investigation of complaints regarding abnormal health conditions.

- 2. Government Related and Legally Liable⁵: As it relates to environmental damage/contamination, government related events are those where a governmental entity either caused contamination (i.e., contribution of waste) or is otherwise related to it in such a way that it is legally liable to clean up the contamination. If the agency believes it is more likely than not that it will be legally liable, then the probability criterion is met.⁶
- Government Acknowledged Financial Responsibility: If environmental contamination is not
 government related, then the agency, under its statutory programmatic authority, must determine
 whether it is authorized to formally accept financial responsibility for cleanup.⁷ If the government
 does not accept financial responsibility, then the probability criterion is not met.
- 3a. Monies Appropriated/Transaction Occurred: If an agency accepts financial responsibility under No. 3 above, then the agency determines the extent of probability based on appropriation or authorization legislation and whether a transaction has occurred causing another party to expect payment (e.g., contractor has performed cleanup of a site). For example, if the federal government has acknowledged responsibility for cleaning up a site, the cost of which is at \$10 million, and \$2 million has been appropriated but only \$1 million in services have been rendered, probable is only met to the extent of \$1 million. In the case of government acknowledged events, both conditions (i.e., appropriations or authorization and transaction executed) must exist for the probability criterion to be met.
- 4. No Known Remediation Technology Exists: In the case of a government related event, where there is no known technology to clean up a particular site, then known costs, for which the entity is responsible, such as a remedial investigation/feasibility study (RI/FS) and/or costs to contain the contamination, meet the probability test. With no known remediation technology, actual remediation is not feasible and therefore the outflow of resources for remediation is not probable.

⁵Legally liable is defined, generally, as any duty, obligation or responsibility established by a statute, regulation, or court decision, or where the agency has agreed, in an interagency agreement, settlement agreement, or similar legally binding document, to assume responsibility for cleanup costs. Legal liability should be determined in consultation with the entity's legal counsel. [See American Bar Association's (ABA) Statement of Policy Regarding Lawyers Responses to Auditors' Request for Information (December 1975). Also see American Institute of Certified Public Accountants (AICPA) Professional Standards, Auditing Standards (AU) Section 337C — source SAS No. 12.]

⁶Federal entities should consider the Environmental Protection Agency's (EPA) National Priorities List [which identifies "potentially responsible parties" (PRP)] when determining probability.

⁷ "The Federal government has broad responsibility to provide for the public's general welfare. The Federal government has established programs to fulfill many of the general needs of the public and often assumes responsibilities for which it has no prior legal obligation." Statement of Federal Financial Accounting Standards No. 5, ¶ 30.

⁶ This Release does not propose a position regarding environmental contamination caused by natural disasters which may become the responsibility of the Federal Emergency Management Agency's (FEMA).

SECTION 2

Determining "Reasonably Estimable" Environmental Liabilities

Description of Issue

An agency is required to recognize a liability for environmental cleanup costs resulting from past transactions or events when a future outflow or other sacrifice of resources is probable and reasonably estimable. Concerns have been raised about when costs associated with environmental damage meets the probable and reasonably estimable criteria. Reasonably estimable relates to the ability to reliably quantify in monetary terms the outflow of resources that will be required. This section addresses only the "reasonably estimable" part of this requirement; probable was addressed in Section 1.9

Key Determinants and Positions

Various key factors (tests) should be considered in determining whether future outflows of resources can be reasonably estimated. The factors are:

- Completion of a Remedial Investigation/Feasibility Study (RI/FS)10 or other Study, 1.
- 2. Experience with Similar Site and/or Conditions, and
- 3. Availability of Remediation Technology.

These tests for reasonably estimable are applied after a transaction or event has occurred that meets the definition of "probable" as discussed in Section 1; tests apply to both active and closed sites. The analysis should consider all significant sites, with the information rolled up into an entitywide estimate. Cost estimates should be based on current technology. Diagram 2.1 on page 7 illustrates the application of these tests. A discussion of each of the three tests follows Diagram 2.1. The discussion concludes with issues related to quantification of the estimate and guidance for active sites. Overall, it must be emphasized that every effort should be made to develop an estimate.

Disclosure requirements when the criteria for reasonably estimable are not met are as follows:
 the nature of the environmental damage and
 an estimate of the possible liability, an estimate of the range of the possible liability, or a statement that such an estimate cannot be made.

¹⁰ A remedial investigation/feasibility study (RI/FS) is a comprehensive environmental data collection and site characterization study (RI) that evaluates alternative cleanup actions and recommends one (FS).

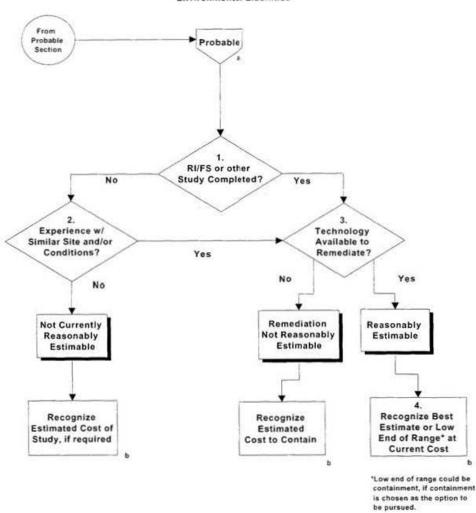


Diagram 2.1: Determination and Quantification of Reasonably Estimable Environmental Liabilities

a Probable refers to track 1 (government related) which is found in Section 1, Track 2 (government acknowledged) is not applicable.

b With all tracks, see SFFAS #6 par. 107-111 and SFFAS #5 par. 40-42 for disclosure requirements.

Diagram 2.1 begins with the assumption that costs associated with environmental damage has already met the test for probable. This is a direct continuation of the left-side track of Diagram 1.1 on the definition of probable (i.e., the agency has met probable under government related and is legally liable; see Section 1). As it relates to the "probable" second track (i.e., government acknowledged), probable is only met to the extent that monies have been appropriated or authorized (through authorization legislation) and costs have been incurred (e.g., services rendered). In these situations, a definitive dollar figure has already been determined and an estimate is not required. Therefore, the following discussion refers to determining whether something is "reasonably estimable" only as it relates to government related and legally liable.

Completion of RI/FS or other Study: The first test in determining whether costs are reasonably
estimable is to ascertain whether there is a completed study upon which to base an estimate. For
example, if a remedial investigation/ feasibility study (RI/FS) has been completed for a particular
site, the RI/FS would form the basis upon which to begin estimating the liability.

The fact that an agency does not have a *departmentwide* comprehensive study completed does not exempt an agency from making its best effort to estimate a liability for financial statement purposes, or for recognizing a liability for that portion of its obligation that can be estimated.

If the results of the study indicate that no contamination exists, then probability is not met and the decision process of Diagram 2.1 should be considered complete.

2. Experience With Similar Site and/or Conditions: If no study has been completed, the next test is to determine whether a site appears to be similar to any other site or condition where experience has been gained through either a completed study or actual remediation. Similar sites or conditions could be related to other federal entities or private sector corporations. A "site" is defined as a physical place where contamination has occurred. A "location" can be composed of many sites; a site can contain many "conditions." It may be practical for an agency to combine similar conditions or sites into one large site or location.

If there is a similar site or condition with experience gained (through actual cleanup and/or a completed study to compare), the estimate for recognizing a liability for a site could be based on the similar experience or conditions. In addition, the estimated cost of a future study (if required) should be recognized. Future studies could result in improved estimates.

If there is no comparable site and/or condition, remediation costs for a site would not be considered reasonably estimable at that time, but the agency would recognize the anticipated cost of conducting a future study, if required, plus any other identifiable costs.

3. Availability of Remediation Technology: Assuming a study has been completed, or an agency or other entity has experience with a similar site and/or condition as noted above, the next test is whether there is technology available to remediate a site. If no remediation technology exists, then remediation costs would not be reasonably estimable, but the agency would be required to recognize the costs to contain the contamination and any other relevant costs, such as costs of future studies.

If technology is available, then remediation costs are reasonably estimable, and the agency would

recognize the best estimate at current cost. If no amount within a range of estimates is a better estimate than any other amount, the minimum amount in the range would be recognized. If the estimate is based on similar site criteria, the agency would also recognize the anticipated cost of its own RI/FS or other study, if required.

In certain instances, the RI/FS or other study may conclude that even though technology *does* exist to remediate, containment should be considered as one of the options by the agency. If the agency has yet to make a decision and they may in fact choose containment rather than remediation, and assuming containment is not precluded by other involved parties (i.e., by EPA, individual states and/or local jurisdictions), the agency would consider the estimated cost of containment when calculating the estimated costs to be recognized or disclosed. The agency would calculate an amount to be recognized based on the type and length of containment required.

If the agency has yet to make a decision and they may in fact choose containment rather than remediate, by EPA, individual states and/or local jurisdictions), the agency would consider the estimated cost of containment when calculating the estimated costs to be recognized or disclosed. The agency would calculate an amount to be recognized based on the type and length of containment required.

If management has not determined what remedial action should be taken for a contaminated active site, the cost of containment at the end of the facility's useful life, plus the cost of a study, if not yet done, should be considered as the low end of the range of future estimated cleanup costs.

4. Quantification of the Estimate: According to paragraph 39 of the SFFAS No. 5 on contingent liabilities, the estimated liability may be a specific amount or a range of amounts.¹² If some amount within the range is a better estimate than any other amount within the range, that amount is recognized. If no amount within the range is a better estimate than any other amount, the minimum amount in the range is recognized. According to SFFAS No. 6, ¶ 95, estimated costs should be based on the cleanup plan, assuming current technology and current cost.

Changes in environmental liability estimates related to PP&E should be accounted for in accordance with SFFAS No. 6. For general PP&E, SFFAS No. 6 requires that the portion of the re-estimate related to current and prior periods be recognized as an expense in the period of the change. For stewardship PP&E, SFFAS No. 6 requires that the change in estimate be expensed for the incremental costs identified in the reestimate and the liability adjusted in the period of the change.

Where an agency is one of several potentially responsible parties (PRP's) under CERCLA and management has determined that more likely than not the agency is legally liable, the agency should include an estimated liability for its:

(1) allocable share of the liability for a specific site, and

¹¹RCRA (Resource Conservation and Recovery Act) regulations require owners of hazardous waste disposal facilities to implement post-closure maintenance and monitoring activities for a minimum of 30 years. When developing estimates of these operation and maintenance (O&M) costs, EPA generally assumes that O&M activities will be required for 30 years. In most instances, containment costs should be determined on the basis of a minimum of 30 years. It would be expected that in the case of nuclear contamination, different tri-party agreements, technical problems, or other circumstances may lead to the use of a substantially longer time frame than for typical RCRA or CERCLA (Comprehensive Environmental Response Compensation and Liability Act of 1980) sites.

¹ This Release uses SFFAS No. 5's definition of "probable," which is "more-likely-than-not" (see par. 33 of SFFAS No. 5). This Release applies the contingent liability criteria (i.e., probable, reasonably possible, and remote) from SFFAS No. 5 to all environmental liability estimates, whether or not they meet the criteria (see par. 36 of SFFAS No. 5).

(2) share of amounts related to the site that will not be paid by other PRP's. 13

If an agency shares responsibility with nongovernmental PRP's for a government related event, the agency should recognize the share that management believes it is more likely than not the agency is legally liable for. ¹⁴ Where the federal government shares responsibility with nongovernmental PRP's and agency management has decided to accept the nongovernmental PRP's share of the responsibility for the damage (i.e., a government acknowledged event), the agency would *also* recognize a liability for the PRP's share once the criteria of appropriation or authorization legislation and a transaction have occurred, causing another party to expect payment (e.g., contractor has performed site cleanup).

¹³ AICPA Statement of Position (SOP) 96-1, Environmental Remediation Liabilities, page 43 par. 6.2.

¹⁴ If management determines that an agency should assume responsibility for a portion of another PRP's share of the liability, the agency may recognize a receivable from the other PRP when the federal entity establishes a claim to cash or other assets against the other PRP based on the related legal provisions (i.e., a legal instrument, such as a settlement agreement, or other objective, verifiable information). Losses on receivables should be recognized when it is more likely than not that the receivables will not be collected in total.

Guidance for Active Sites

Thus far, this technical release has dealt with costs for *past* environmental contamination of property, plant, and equipment (PP&E) related to active and closed sites. In addition, SFFAS No. 6 outlines accounting treatment for *future* environmental contamination of PP&E at active sites. The following shows how environmental cleanup costs¹⁵ for active sites should be recognized for general and stewardship PP&E under SFFAS No. 6.

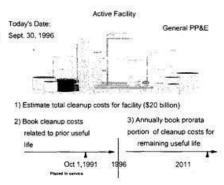
General PP&E

There are two implementation methods for general PP&E in service at the effective date of the standard. Under the first method, the agency would estimate the total cleanup costs (based on current cost to perform the cleanup¹⁶) that will be required at the end of the PP&E's useful life. The agency would recognize the estimated cost as a prior period adjustment for the portion of the total estimated cleanup costs related to that portion of the PP&E's useful life that has already expired.

To illustrate, assume implementation of SFFAS No. 6 on October 1, 1996. Using the illustration to the right, and assuming a facility was placed in service at the beginning of fiscal year 1992 with a 20-year useful life, the agency would first estimate the total costs (based on current cost) required to clean up the

contaminated facility at the presumed plant closure at the end of fiscal year 2011 (\$20 billion). From that estimate (as of October 1, 1996), the amount that relates to that portion of the PP&E's useful life that has already expired (4/20 of \$20 billion, or \$4 billion) would be charged to net position and the fiscal year 1996 prorata portion would be charged to expense.

Beginning with fiscal year 1997, the agency would annually recognize a prorata portion of the estimated total cleanup costs based on the remaining useful life of the subject PP&E. In our example, for fiscal year 1997, for this plant (with an estimated remaining useful life of 15 years), the agency would recognize 1/15 of the total estimated remaining cleanup cost of \$15 billion, or \$1 billion. The probable criterion was met under Diagram 1.1 once the PP&E was placed in service. The reasonably estimable criterion was met



with the agency's development of an overall estimate of total cleanup costs using the process indicated in Diagram 2.1. Consequently, each years' allocation of cleanup costs is both probable and reasonably estimable, thus requiring the agency to recognize a liability. The allocation method used for cleanup costs, as described above, is similar to depreciation of general PP&E.

¹⁵Costs referred to in this section are for decontamination and decommissioning (D&D) only, not operating costs. D&D costs are those incurred after plants or equipment become inactive and require cleanup. Operating costs are period costs that flow through the Statement of Operations and Changes in Net Position. A liability is not recognized for operating costs.

¹⁶Current cost should be based on existing laws, technology and management plans (SFFAS No.6, paragraph 188).

ENCLOSURE 2 - EXAMPLE WORKSHEET

Fiscal Year: 2008 -- 2nd Quarter USACE Future FUSRAP Contingent Environmental Liabilities Environmental Event Checklist Ledger

	Classifica	ition									
"" Remote	*Probable	"Reasonably Estimable	Project Site	State	Estimated Remaining Liability as of f Oct 2007 In 1,000	FY 2008 thru 31 Mar 2009 Expenditures in 1,990	Remeining Liability as of 31 Mar 2008 in 1,400	Estimated Remaining Current Liability as of 1 Oct 2007 in 1,000	Remaining Current Liability as of 31 Mar 2008 in 1,009	Completion Date	Remarks
	×	×	Ashlanc 1 Site Hemediation	NY	\$447.5	\$2.0	5447 5	\$5C.0	\$50.0	8	
	×	D. 1925	Colonie Interim Storage See Groundwaler Remediation	NY	TBO	- 1			- 1	NA.	
	×	× -	Colorio Interim Storage Site Groundwaler Study	NY	\$7,287.2	\$41.9	57,242 3	1500.0	\$435	-	
- 3	×	Ŷ	Colonia Initiatr Storage Sale Soils Remediation	NY	\$1,990.5	\$600.0	\$1,1769	\$1,980.5	\$1,176.9		Linexpended corny in
x			Combustion Engineering 5 le Remediation	CT	NA NA					NA.	Site is now being remadiated by landowne No program costs ared panel
	*	×	Combustor Engineering Sile Study	CT	\$82.8	\$12.4	370.4	\$10.0	-52 4		Romaking estimate for project oversigns of closeout after fundowner's remediation wo verified via ernal from M. Ols dated 9/27/
	×	-	Dupont Chumbers Works Sile Remediation	W	TBC		278 MEL 1			NA	
		×	Duponi Chambers Works Sile Strey	W	\$1,435.5	\$491.5	3954 1	\$1,000.0	\$515.2		
_	×	- 20	Guien Specialty Steel Site Remediation	NY	180		22.25			NA	A see 122 see
	× .	×	Green Specially Steet Site Study	NY	\$7,425.3	\$1,688.6	\$5,736.7	\$3,125.0	\$1 436 4		
	×		Harshaw Chemics Co Site Remediation	OH.	TBO	- E 17		History I		NA	
S - 1	×	×	Harshaw Chemical Co Site Study	OH	\$3,518.1	\$500.2	\$2.912.9	\$2,496.0	\$1 88C 8		
- 58	х .		lows Army Ammunison Plant FUSRAP Site Remediation	MO	TBO	- 1	0 10	8	8	NA.	
	×	x	Iowa Army Ammunison Plani PUSRAP Site Study	MO	\$2,213.3	\$356.0	\$1,856.7	\$700.0	\$3/2.4		- 1555 Y
×	1	•	Jesyin Manufactoring	IN	NA.			5		NA.	_ R1665 658
	×	x	Lutty Avenue Properties Site Remediation	NO	3103,716.7	\$7,5343	306.182 4	\$15,000.0	\$7,486.7	1000	-73
- 3	×	×	Unide Air Products Sile Ground Water Remed alion	NY	\$3.0	50.7	\$0.0	COMMON TO	5 12	Jan-07	No Action Required IROD Signed
ě	*	×	Linde Air Products Sile Studies	NY	\$129.3	\$834	\$40.9	\$129.3	\$45.9		No Action PP for Tonawands Lincillians Costs for ROC, contract closeout and records reviewhelinh Remaining sability vented by email J Karsten 1011107
-	×	×	Linde Air Products Sale So is Remediation	NY	\$56,100.0	\$10,647.2	\$45,452.6	\$31,024.0	\$20,376.5	5	-0.00
- 3	Ŷ	×	Luckey Site Ground Water Remediation	Сн	\$50.0		\$50.0		-	NA:	Vondoring for two years. ROD is in dra
	×	×	Luckey See Ground Water Study	110	5549.3	\$125.5	\$423.8	\$400.0	\$276 5		
- 9	×	×	Luckey Site Solis Remediation	OH	\$41,907.3	4150	341,907.3	5			
T.	x	a. <i>1</i> 0 o	Maywood Sile Groundwater Remediation	Į NJ	\$8,956.0		\$8,952.0	A WELL	7 17	NA	From P ^{to} released to regulators dated See 2007
10	×	×	Maywood Site Groundwaler Study	KJ .	\$750.0	\$59.5	\$690 5	\$400 0	\$340.5	3/1/	Cost for remediation inadvertantly blaced of this line item previously.
	x	X	Maywood See Solls Ressectation	NJ	\$140,743.4	\$12,713.1	\$543,000.0	\$29,500 0	\$16,866.9		Now estimate based upon current held
	×	7010000	Middlesex Sampling Plant Groundwater Remediation	NJ	TBD					NA.	
59	*	*	Middlesex Sampling Plant Groundwater Study	NJ	\$1,000.0	1166.7	\$833.3	\$750.0	\$580.0	7	Now estimate based on current field conditions and project status. From J. Ma 10/11/2007. Written estimate from A. Roor solid 5 Nov 67
	x	x	Militates Sampling Plant Soils Rewestebur	NU	\$10,090.0	35,738 >	\$4,261.5	\$10,000.0	\$4.26°.5		New asimple based on current field conditions (increased soil volumes) and project alease. From J. Moore 10/11/2007 Antien estimate from A. Roos called 5 No. 07
- 9	×		Negora Palls Intorin Storage Site Remediation	NY	TBD	-			9	145	

- Remole	* Prohable	** Reasonably Estimable	Project Site	State	Estimated Remaining Liability as of 1 Out 2007 in 1,000	FY 2008 thru 31 Mar 2008 Expenditures in 1,000	Remaining Liability as of 31 Mar 2008 In 1,000	Liability as of 1 Oct 2007 In 1,000	in 1,060	Completion Date	Remarks
	×	- (#)	Printes ville Size Hinnediskon	I DH	\$6 103.6	54 835 6	523 267 4	\$9.103.0	\$7,267.4		New estimate basis on bure is ficili- curdians. Increasers due to micreasist sit- olumes to be cleaned up. In process of reprogramming monities for this year. Email from Keisten dated 46508 and phone call 410008.
X.	0) 10000	line Steelints	Scieto Laborasory	OH.	NA.					VA.	Paper work being prepared to exclude project from program - 4/2/05
	x		Seeway Industrial Park Site Remediation	100	\$30,000.0	0.5000	930 000.0		100	NA	Updated amount based or draft FS responses. Exhalt from Karsten dated 2 Nov 67
-	x	3 3 3 3	Seeway Industrial Park Side Study	ter	\$642.9	\$14S.6	\$403.3	\$400.0	\$250.4	5,2636	
	×		Shallow Land Discosal Area (SLCA; Remediation	PA.	\$50,820.0		\$50,820.0		500		NEW ESTIMATE IN DEC 2007
	x	×	Shallow Land (Paposal Area (SLICA) Study	PA	\$1,250.0	1382.8	\$867.2	\$1,250.0	\$867.2	5	NEW ESTIMATE IN DEC 2007
	×	×	Sirpack Landfel Seo Remodulion	MA	\$25,824.0	\$4,275.3	\$21,548.7	\$10,000.0	\$5,724.7		New estimate based on c. ment field conditions and increased volume of son to removed, 25,820. Empt from M. DLs, 907,078, 111(07)
	X	×	SLAPS Vigney Properties See Remediation	MO	\$58,505.3	\$3,221.7	\$55,343.5	\$7,000.0	\$3,778.3		
	x	×	St Louis Airport Site (SLAPS) Site Romediation	MO	\$8,946.1	5296.1	\$5,650.0	\$500.0	\$203.9	Real Management	
TWO TAXA	×	x	St. Louis Downtown Site (SEDS) Accessible Soils (Ramediaton	MO	\$50,499.4	\$6.765.7	\$59,733.7	\$17.696.6	\$10.924.0		
	x		St. Louis Cowntown Site (SLCS) (naccessible Soils Remediation	MO	Teb				G.5	NA.	1730 02
17000	x	×	St. Lotar Downlown Side (SLDS) Inscreeking North Study	MO	\$2,940.0	\$39.4	\$2,900.5	\$300.4	\$279 0		20 PF 1878
	×	- Non-	Superior Size Size - Remediation	PA	NA:			0.000		HA	
	î	×	Superior Stee, Sile - Study	PA	NA:		57,225.0			NA.	Site lamply added to program in Feb 2009
	-		Sylvania Corring Plani Site Remediation	WY	IBO		CEPTURE			NA	
	×	x	Sylvania Corring Plani Site Herritosation Sylvania Corring Plani Site Study	NY	\$14,825.6	\$866.2	\$10,969.4	\$1,506.0	3633.6	-	New astimace to include astimated cost the
		75501		532	33333	- 576) SWEST	2000		ROD from A. Regs dated 5 Nov 37
Sixely	x	X	WR Grace Curtis Buy Building 23 Site Remodation	MD	\$3,330.0	SEVER THE	\$3,3300	CONTRACT OF	E 85		A STATE OF THE STA
	×		WR Grace Curts Bay Site Redicactive Waste Disposel Area Romediation	MD	TEC	00000 =0		300000	17	NA.	
	×	x	WR Grace Curtis Say Site Radioactive Waste Disposal Area	MO	\$957.4	\$210.9	\$746.5	\$750.3	\$5301		MAX WARE
5 577			St. 21	- 15	0 5				75707	845	5 7
	-				2			-		- 32	
83	2 8		l:	Total	\$637,672.1	\$62,019.9	\$1,043,965,6	\$149,326.8	\$89.706.9		

	Classification	Defined	Tests				
•	Probable	able A future outflow at resources is required.	Likaky Contamination. Government Related and logistly Libite. Government Acknowledged Financial Responsibility. Monites Appropriated 11 manadions Occurred No Noman Remodation Technology Exists				
•	Reasonably Estimable	Ability to reliably quantify monetarily the outflow of resources required.	Completion of a Remedial Investigation / Feasibility Study or other study. Eaglerience with Seniar Site and cr Conditions. Availability of Remediation Fechnology				
***	Remote	Little or no chance of future outflow of resources	Determined by Probable and Reasonable estimatable rests.				

NOTE: Further transactive con the found in the FAS/8 Textures Robusts in order 2 which can be found at the televing weigh

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APPENDIX F Transfer of Completed FUSRAP Sites to DOE

Transfer of Completed FUSRAP Sites to DOE

This appendix outlines the procedures for transmitting Completed FUSRAP sites to the Department of Energy. It applies to all USACE commands involved with the execution of FUSRAP. These activities will be performed in accordance with the MOU in Appendix A.

PROCEDURES

<u>Transmittals</u>: All official transmittals to DOE will require a receipt of acceptance. All transmittal letters will be included as part of the Administrative Record. The executing district shall send the transmittals directly to DOE, with signed copies of the transmittals (without enclosures) sent to Division and HQ.

Record of Decision (ROD). After the ROD is signed and regulators have concurred, then a copy of the ROD with a transmittal letter will be sent to DOE. ROD transmittals are to be addressed to the current U.S. Department of Energy point of contact available from the HQUSACE National FUSRAP Execution Manager. The transmittal letter will include the following information:

- a. General description of site and remedial action goals;
- b. Estimated Remedial Action Schedule Projected start and completion dates;
- c. Anticipated land use controls;
- d. Anticipated Operations and Maintenance requirements;
- e. Location of Administrative Record; and
- f. Enclosures. Enclosures to be included in the transmittal at the time of final ROD distribution are:
 - (1) ROD; and
 - (2) Responsibility Matrix.

<u>Site Closeout</u>. Refer to site closeout requirements in paragraph 6.g. of this ER for necessary submittals from the executing district and division to HQUSACE. After site closure report is complete and declaration of remedial action complete has been signed, a copy of site closure report will be submitted to DOE. Site closeout transmittals shall be addressed to the current U.S. Department of Energy point of contact available from the HQUSACE National FUSRAP Execution Manager. The site closeout transmittal letter will include the following:

- a. General description of response action taken;
- b. General description of remedial goals and ROD requirements;
- c. General description of long term stewardship requirements (e.g. O&M, monitoring, land use controls, inaccessible soils);
- d. Date that the two-year period begins and ends thereby transferring responsibility for the site to DOE:
 - e. Any estimated out-year cost requirements;
 - f. Location of Administrative Record;
 - g. Enclosures. Enclosures to be included in the closeout transmittal are:
 - Site Closeout Report;
 - (2) Letter(s) from appropriate regulators that the remedial goals have been met;
 - (3) Letter of site closeout notification to non-federal landowner; and
 - (4) Responsibility Matrix.

Site Transfer—Transfer of Site to DOE from USACE. At the end of the two-year maintenance period specified in the close out letter to DOE, USACE will transfer the responsibility for the site to DOE. During the two-year maintenance period, the executing district should routinely coordinate with DOE to ensure that all necessary issues are being addressed. Reference j. herein and the Site Transition Framework attached to it, though not directly applicable to FUSRAP sites provide DOE policy outlining issues common to all site transitions to DOE Legacy Management. Ninety days prior to this two-year transfer date, the executing district shall send a transfer letter to DOE notifying them of the date of transfer. Site transfer transmittals shall be addressed to the current U.S. Department of Energy point of contact available from the HQUSACE National FUSRAP Execution Manager. USACE will provide a letter to DOE including the following:

- a. Transfer of responsibility to DOE on specified date;
- b. A statement describing that USACE no longer will be responsible for site;
- c. A brief history of the site remedial actions and cleanup goals;
- d. Any long-term actions required by DOE;
- e. Actual two-year costs for O&M or LUCs;

ER 200-1-4 29 Aug 14

- f. POC at USACE for future questions including office responsible for FUSRAP at HQ;
- g. Current status of property;
- h. Documents included in the transmittal will include:
- (1) Complete copy of Administrative Record;
- (2) Operations and Maintenance Plan and/or scope of work from existing O&M contract;
 - (3) Operations and Maintenance Reports; and
 - (4) Responsibility Matrix.

<u>Project Files</u>. Project files will be retired to the appropriate National Archives and Records Administration (NARA) administered records center facility in accordance with AR 25-400-2.

APPENDIX G

Revised Mandatory Review Requirements for the Formerly Utilized Sites Remedial Action Program



DEPARTMENT OF THE ARMY U.S. ARMY CORPS OF ENGINEERS 441 G STREET NW WASHINGTON, D.C. 20314-1000

CECW-ZA

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MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Revised Mandatory Review Requirements for the Formerly Utilized Sites Remedial Action Program (FUSRAP)

1. References

- a. Memorandum ASA(CW), 21 Jul 1998, Subject: Delegation of Authority for Approval and Signature of Decision Documents, Including Records of Decision (RODs) and Agreements, for the Formerly Utilized Sites Remedial Action Program (FUSRAP)
- b. Memorandum HQUSACE, CECW-BA, dated 19 November 2001, Subject: Revised Delegation of Approval Authorities Under the Formerly Utilized Sites Remedial Action Program
- 2. The purpose of this memorandum is to advise you that a change has been made to the Mandatory Review and Approval Authority Matrix for FUSRAP. The responsibility for the mandatory legal review is now delegated to MSCs rather than the Hazardous, Toxic, and Radioactive Waste Center of Expertise (HTRW-CX). This change allows the Legal Community of Practice to utilize all of its resources while still ensuring a quality product in a timely manner. Document approval and signature authorities remain unchanged.
- Although the responsibility for conducting the mandatory legal review is transferred from the HTRW-CX to the MSCs, the MSCs still have the option to utilize the HTRW-CX or other resources to perform the legal review as the MSC Counsel deems appropriate.
- 4. The attached matrix has been revised to show an "RT" for mandatory technical review, an "RL" for a mandatory legal review, and an "RP" for a mandatory policy review. The RT, RL, and RP are the mandatory review responsibility for the HTRW-CX, the MSCs, and HQ respectively.
- 5. I commend your effective use of the horizontal and vertical project management teams in the past and encourage you to continue this practice. I remind you that Districts must provide justification if they decline to accept significant recommendations of the HTRW-CX or HQUSACE FUSRAP teams.
- 6. The change in the approval matrix mandatory legal review responsibilities is effective immediately.

Encl

Major General, US Army Director of Civil Works

CECW-ZA

SUBJECT: Revised Mandatory Review Requirements for the Formerly Utilized Sites Remedial Action Program (FUSRAP)

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CDR, USACE, ATTN: CEMP-CE (Beauchamp/Gregg)
CDR, USACE, ATTN: CECW-MVD (Huston)
CDR, USACE, ATTN: CECW-LRD (Koontz)
CDR, USACE, ATTN: CECW-NAD (Singh)
CDR, USACE, ATTN: CEMVD-DE (Crear)
CDR, USACE, ATTN: CELRD-DE (Berwick)
CDR, USACE, ATTN: CENAD-DE (Semonite)
CDR, USACE, ATTN: CENWD-DE (Martin/Kobler)
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CDR, US ARMY ENGR & SUPPORT CENTER, ATTN: CENWO-HX (Wright)
CDR, US ARMY ENGR & SUPPORT CENTER, ATTN: CENWO-HX -S (Hines)
CDR, US ARMY ENGR DIV, MISSISSIPPI VALLEY, ATTN: CEMVS-OC (Levins/Wunsch/Bonstead)
CDR, US ARMY ENGR DIV, NORTH ATLANTIC, ATTN: CECC-NAD (Cox/Falcigno)
CDR, US ARMY ENGR DIV, GREAT LAKES & OHIO RIVER, ATTN: CELRB-OC (Barczak)
CDR, US ARMY ENGR & SUPPORT CENTER, ATTN: CEHNC-OC (Simmons)
CDR, US ARMY ENGR DIV, MISSISSIPPI VALLEY, ATTN: CECC-MV (Barnett/Merritt)
CDR, US ARMY ENGR DIV, NORTH ATLANTIC, ATTN: CECC-NAD (Cox/Falcigno)
CDR, US ARMY ENGR DIV, GREAT LAKES & OHIO RIVER, ATTN: CECC-LRD (Budzynski)
CDR, US ARMY ENGR DIV, GREAT LAKES & OHIO RIVER, ATTN:
CELRD-PDM (Church)
CDR, US ARMY ENGR DIV, MISSISSIPPI VALLEY, ATTN: CEMVD-RB-M (Sandles)
CDR, US ARMY ENGR DIV, NORTH ATLANTIC, ATTN: CENAD-MT (Orgel)
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10 Aug 07

FUSRAP REVIEW AND APPROVAL AUTHORITY MATRIX

Document/Activity	MSC	HTRW-CX Technical	HTRW-CX Legal	HQ	DOE
Determination of Site Eligibility			9		D
Addition/Elimination of Eligible Site to/from FUSRAP	D	I	I	A	I
Determination and Designation of Vicinity Property	D, A	I	I	I	
Preliminary Assessment/Site Inspection	D, A, RL	RT	I	I	
Remedial Investigation	D, A, RL	RT	I	I	
Non-Time Critical Removal (EE/CA) Documents:					
- \$5M and less	D, A, RL	RT	I		
- Over \$5M	D, A, RL	RT	I	RP	
Time Critical Removal Document	D, A, RL	RT	I	I	
Feasibility Study	D, A, RL	RT	Ĭ	RP	
Proposed Plan	D, A, RL	RT	I	RP	8
Record of Decision/Decision Document	D, A, RL	RT	Ī	RP	I
Disposal Strategy	D, A, RL	RT	I		
Land Use Implementation Plan	D,A, RL	RT	I	RP	I
Federal Facility Agreement	D, A, RL	RT	I	RP	
Declaration of Response Complete	D, A, RL	RT	I	I	I
Site Closeout Report	D, A, RL	RT	I	RP	1
No Further Action (NOFA)	D, A, RL	RT	I	RP	· I
Regulatory Manifests	D, A				
Grants and Cooperative Agreements	D, A		1	I	
Operation and Maintenance (O&M) Plan	D, A, RL	RT		I	I
O&M Records/Reports:					
- First 2 Year O&M	D, A				
- Year 3 and On	I				D
- 5 Year Reviews before Transfer to DOE	D, A	RT	I	I	R
- Second 5 Year Review and On					D
Project Coordination/Transmittals to DOE	D,A	I	I	I	I

Concept: FUSRAP functions with vertical and horizontal teams. This table identifies responsibilities of vertical team members and assumes that the HQ, MSC and HTRW-CX are involved throughout the process with the district during project execution and the development of documents. The MSC may delegate the mandatory legal review to the HTRW-CX or other appropriate legal resource, but the MSC remains responsible ensuring for the legal review is accomplished and for the quality of the overall document.

Legend:

A - Approval/Signature

D - Develop/Execute

I - Information Copy

RT - Mandatory Technical Review; RL - Mandatory Legal Review; and RP: Mandatory Policy Review. FUSRAP - Formerly Utilized Sites Remedial Action Program

MSC - Major Subordinate Command (included the Regional Integration Team and the districts)

HTRW-CX - Hazardous, Toxic and Radioactive Center of Expertise

HQ-HQUSACE

DOE - Department of Energy



U.S. ARMY CORPS OF ENGINEERS WASHINGTON DC 20314-1000

CECC-E

17 Jan 2011

MEMORANDUM FOR CENAD-OC, CELRD-OC, CEMVD-OC

SUBJECT: FUSRAP Approval Authority Matrix

The latest FUSRAP Approval Authority Matrix (Enclosure 1, dated 4 Sep 07) was changed to delegate the responsibility for Mandatory Legal Reviews to the MSCs rather than to the CX. That change was made due to a lack of counsel resources at the HTRW-OC. The memo provides that the change "allow[ed] the Legal Community of Practice to utilize all of its resources while still ensuring a quality product in a timely manner."

I retain the focus on ensuring a quality product in a timely manner, however, since that Matrix was adopted, the HTRW-CX was merged with another CX and reformed as the Environmental and Munitions Center of Expertise (EM CX) under the management of the Huntsville Center. This new CX has a new charter and substantial legal resources dedicated to it. FUSRAP is a core part of that charter. I want to ensure that we fully exploit the benefit of the expertise currently present at the fully staffed CEHNC-CX. Therefore, and consistent with the prior Approval Authority Matrix (Enclosure 2, dated 19 Nov 2001), while the responsibility for the Mandatory Legál Reviews remains with the MSCs per the 2007 matrix, CEHNC-CX-OC should review all FUSRAP documents prior to HQ Legal review and MSCs should resolve all comments prior to that HQ review.

Divisions are to ensure that adequate funds are provided to the EM CX to accommodate this review and this memorandum has been coordinated with both CEMP-IS (Ms. D'Arcy) and CECW-IN (Ms. DaCosta-Chisley). Although this review is not focused on monetary considerations, I note that review by the EM CX will result in greater efficiency by ensuring all FUSRAP documents are reviewed by the same lawyer.

I can be reached at (202) 761-8538 for questions and/or comments.

Christopher Carey

Assistant Counsel for Law and Regulatory Programs

Enclosure As stated

Cc: CEMP-IS (Ms. D'Arcy) CECW-IN (Ms. DaCosta-Chisley) CEHNC-CX-OC (Mr. Roberts) THIS PAGE INTENTIONALLY LEFT BLANK