DEPARTMENT OF THE ARMY ER 200-1-4
CECW-B U.S. Army Corps of Engineers
CEMP-R Washington, D.C. 20314-1000
CECC-E

Regulation 30 August 2003
No. 200-1-4

Environmental Quality

FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM (FUSRAP)– SITE DESIGNATION, REMEDIATION SCOPE, AND RECOVERING COSTS

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FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM (FUSRAP)– SITE DESIGNATION, REMEDIATION SCOPE, AND RECOVERING COSTS

1. Purpose. This regulation sets forth the U.S. Army Corps of Engineers (USACE) policy concerning the Corps' roles and responsibilities under 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.

2. Applicability. 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 added to the FUSRAP program by congressional action and 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. 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.

b. FUSRAP Management Requirements and Policies Manual, U.S. Department of Energy, Oak Ridge Operations, Revision 2, May 6, 1997.

This regulation supersedes **EC 200-1-2**, **App E** Policy on Eligibility of Vicinity Properties (VPs) Under the Formerly Utilized Sites Remedial Action Program (FUSRAP); **App H** Potentially Responsible Party (PRP) Contribution and Cost Recovery Initiatives Under the Formerly Utilized Sites Remedial Action Program (FUSRAP); **App J** MOU Between the U.S. DOE and the USACE Regarding Program Administrative and Execution of FUSRAP, and **EC 200-2-2** Formerly Utilized Sites Remedial Action Program (FUSRAP) - Policy on Site Remediation of Radioactive and Chemical Contamination

5. Background and Definitions

a. History. 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.

In response to later congressional direction, DOE also added some sites to FUSRAP that were not involved in the Nation's atomic energy program, but were contaminated with materials similar to early atomic energy program materials. 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 22 sites.

b. Authority. In fiscal year 1998, the 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 FY1999 and FY2000 (Pub. L. 105-245 and 106-60) clarified Congressional intent that USACE should 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)."

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 it 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 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 have been used for activities in support of the Nation's early atomic energy program and which meets DOE determination of Atomic Energy Act authority. USACE may also be evaluating the site, following notification of eligibility, to determine if there is CERCLA authority for a response action.

(3) Vicinity property: a parcel of land, together with any improvements thereon, which is located outside the boundary of an active FUSRAP site, is adjacent to or near such a site, and is known or suspected to be contaminated with radioactive and/or hazardous material from an active FUSRAP site.

6. Policy

a. Designation of an Active FUSRAP Site. 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. l 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., related to 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 for FUSRAP cleanup, 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 HQ Civil Works Program Management Division (CECW-B) whether or not the site should be designated as an active FUSRAP site. If CECW-B 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) 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.

(a) Vicinity properties (VPs) will be investigated and characterized in accordance with the process established under CERCLA and the NCP. If a VP is determined to be eligible, appropriate action will be taken under FUSRAP as part of the active site.

(b) The determination of eligibility of VPs will be made by the MSC Commander for the geographic area in which the active FUSRAP site is located.

(c) The determination of eligibility will be based on a Preliminary Assessment/Site Inspection (PA/SI) of the property which documents the source, nature and extent of any hazardous substance contamination, and includes relevant information from historical records. The VP is eligible for inclusion in FUSRAP if the PA/SI establishes that hazardous substances from the active FUSRAP site contaminated the property and

that the nature and extent of the contamination is such that response under CERCLA is required.

(d) If the VP is determined to be eligible, the MSC will revise the project cost estimate and schedule for the active FUSRAP site to reflect any additional time or cost for the planned activities at the VP. Copies of the approved revisions shall be furnished by the MSC to HQUSACE.

(e) No further action shall be undertaken at a VP if the PA/SI establishes that the contamination at the VP is unrelated to and not commingled with FUSRAP material at the active FUSRAP site, and has no impact on cleanup activities at the active FUSRAP site.

(2) Eligible Contaminants. 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:

(a) 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, to include hazardous substances associated with these activities (e.g., chemical separation, purification);

(b) Other radioactive contamination or hazardous substances that are mixed or commingled with contamination from the early atomic energy program activities, and

(c) At federally owned FUSRAP sites, all radioactive contamination or hazardous substances are within the scope of the FUSRAP response action. However, on VPs associated with federally owned sites, any proposed remediation of radioactive contamination or hazardous substances not a result of early atomic energy program activities and not mixed or commingled with such contamination must first be approved by HQUSACE.

(d) Other substances may be included where directed by Congress.

(3) Materials not listed in paragraphs 6.b.(2)(a) – (d) above are excluded from the scope of a FUSRAP cleanup.

c. Working With Potentially Responsible Parties

(1) Contribution and Cost Recovery.

(a) USACE is committed to recovering costs (i.e., seeking contribution or cost recovery, as appropriate) from any viable Potentially Responsible Party (PRP) that may

be legally liable for cleanup of any contaminants under FUSRAP, consistent with CERCLA.

(b) Radioactive contamination or hazardous substances remediated by USACE shall be investigated to identify any PRPs for recovering or contributing to costs related to cleanup.

(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) Schedules established by DOE prior to program transfer to USACE did not include provision for PRP initiatives. In general, USACE opted not to pursue PRP issues at the time of transfer that would delay cleanup activities in progress.

(e) Pursuit of PRP initiatives where warranted requires that schedules be evaluated in light of PRP 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.

(f) The timing for pursuit of PRP initiatives at FUSRAP sites is a Division Commander's decision that will depend upon the circumstances surrounding each particular case, with an emphasis on protecting health, safety, and the environment, and should include consultation with counsel. The Division will inform the HQ FUSRAP Program Manager of this decision through a memorandum.

(g) In situations where a PRP refuses to contribute or participate in the remediation process, additional steps are needed to insure the appropriate records are 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 qualified 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 each agency executes its legal responsibilities without imposing duplicate requirements on the cleanup project. See, for example, the MOU between NRC and USACE, Appendix C. 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.

FOR THE COMMANDER:

MICHAEL J. WALSH
Colonel, Corps of Engineers
Chief of Staff

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

(including April 8, 2002 memo from Jessie Roberson, DOE to BG Griffin, Corps of Engineers and December 4, 2001 memo from BG Griffin to Jessie Roberson)

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).

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 federally-owned 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".

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 federally-owned 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;

i. 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;

l. 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 l. 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

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

James M. Owendoff
Acting Assistant Secretary
For Environmental Management

Date: 3/17/99

U.S. Army Corps of Engineers

Russell L. Fuhrman

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

Date: 16 Mar 99

Attachments:
A. List of Completed Sites
B. List of Active Sites

Attachment A
Completed FUSRAP Sites

Site Name	City and State
Kellex/Pierpont	Jersey City, New Jersey
Acid/Pueblo Canyon	Los Alamos, New Mexico
Bayo Canyon	Los Alamos, New Mexico
University of California	Berkley, California
Chupadera Mesa	White Sands Missile Range, New Mexico
Middlesex Municipal Landfill	Middlesex, New Jersey
Niagara Falls Storage Site Vicinity Properties	Lewiston, New York
University of Chicago	Chicago, Illinois
National Guard Armory	Chicago, Illinois
Albany Research Center	Albany, Oregon
Elza Gate	Oak Ridge, Tennessee
Seymour Specialty Wire	Seymour, Connecticut
Baker & Williams Warehouses	New York, New York
Granite City Steel	Granite City, Illinois
Aliquippa Forge	Aliquippa, Pennsylvania
C.H. Schnoor	Springdale, Pennsylvania
Alba Craft Laboratory	Oxford, Ohio
HHM Safe Company	Hamilton, Ohio
Associate Aircraft	Fairfield, Ohio
B & T Metals	Columbus, Ohio
Baker Brothers	Toledo, Ohio
General Motors	Adrian, Michigan
Chapman Valve	Indian Orchard, Massachusetts
Ventron	Beverly, Massachusetts
New Brunswick Laboratory	New Brunswick, New Jersey

Attachment B
Active FUSRAP Sites

Site Name	City and State
Latty Ave. Properties	Hazelwood, Missouri
St. Louis Airport	St. Louis, Missouri
Vicinity Properties	Hazelwood & Berkley, Missouri
St. Louis Downtown Site	St. Louis, Missouri
DuPont	Deepwater, New Jersey
Maywood	Maywood, New Jersey
Wayne	Wayne, New Jersey
Middlesex Sampling Plant	Middlesex, New Jersey
Ashland 1	Tonawanda, New York
Ashland 2	Tonawanda, New York
Seaway Industrial Park	Tonawanda, New York
Linde Air Products	Tonawanda, New York
Niagara Falls Storage Site	Lewiston, New York
Colonie	Colonie, New York
Bliss & Laughlin Steel	Buffalo, New York
Luckey	Luckey, Ohio
Painesville	Painesville, Ohio
CE Site	Windsor, Connecticut
Madison	Madison, Illinois
Shpack Landfill	Norton, Massachusetts
W.R. Grace	Curtis Bay, Maryland

Mackenzie

Department of Energy

Washington, DC 20585

April 8, 2002

Brigadier General Robert H. Griffin
Director of Civil Works
U.S. Army Corps of Engineers
Department of the Army
Washington, D.C. 20314-1000

Dear General Griffin:

This is in response to your December 4, 2001, letter concerning procedures to be followed to meet our respective responsibilities under the Memorandum of Understanding (MOU) signed by the Department of Energy (DOE) and the U.S. Army Corps of Engineers (USACE) in March 1999. The MOU delineates the responsibilities of DOE and the USACE regarding program administration and execution of the Formerly Utilized Sites Remedial Action Program (FUSRAP). This letter summarizes the position of the Department regarding certain procedures that we propose to be followed regarding the addition of new sites to FUSRAP and the transfer of completed sites for long-term stewardship.

1. **Addition of New Sites to FUSRAP:**

   The Department will evaluate the eligibility of sites for possible inclusion as new sites in FUSRAP against the criteria in the FUSRAP Summary Protocol-Identification-Characterization-Designation-Remedial Action-Certification dated January 1986. This summary protocol is referenced and summarized in the DOE FUSRAP Management Requirements and Policies Manual dated May 5, 1997. Any site identified as a potential new site for FUSRAP will be referred to the USACE for further evaluation.

   My staff will continue their practice of immediately notifying your staff of any inquiry that would result in an eligibility review. Typically, an eligibility review is undertaken based on several inquiries or new pieces of information regarding a site, rather than a single specific request. To ensure that the USACE is aware of inquiries into sites that are being considered for eligibility for inclusion in FUSRAP, it has been my staff's practice for the past year to meet monthly with your staff and discuss FUSRAP activities. A portion of these meetings has been, and will continue to be, devoted to a discussion of any inquiries DOE or the USACE has received regarding FUSRAP.

Printed with soy ink on recycled paper

2. Transfer of Completed Sites:

For privately owned FUSRAP sites where the long-term stewardship responsibility will be limited to record keeping, we support the three step transfer process outlined in your December 4 letter. For the number of sites that are currently Federally-owned, DOE would like to continue to work together with USACE at the staff level to facilitate the transfer of title to those properties to private or local government ownership, or to transfer the real property interests to other Federal agencies, as appropriate. Our two agencies have successfully coordinated the transfer of the New Brunswick FUSRAP site and the same procedure may be applicable for the remaining Federally-owned FUSRAP sites.

In addition, we will arrange a meeting so that our staffs have an opportunity to further discuss the 1999 MOU between our two agencies. I have designated Mr. James Owendoff, Deputy Assistant Secretary for Science and Technology as my representative for this effort.

If you have any further questions, please contact me at (202) 586-7710, or contact Jim Owendoff at (202) 586-6832.

Sincerely,

Jessie Hill Roberson
Assistant Secretary for
Environmental Management

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

REPLY TO
ATTENTION OF:

DEC -4 2001

Programs Management Division
Directorate of Civil Works

Jessie Roberson
Assistant Secretary for Environmental Management
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Ms. Roberson:

The Memorandum of Understanding (MOU), signed by the Department of Energy (DOE) and the U.S. Army Corps of Engineers in March 1999, defines the roles and responsibilities of both agencies in the management and execution of the Formerly Utilized Sites Remedial Action Program (FUSRAP). It also establishes a framework for the execution of FUSRAP. It does not specify the procedures that each agency shall follow to meet its responsibilities. The Corps and DOE have identified two areas where agreement on the procedures to be followed is needed in order to address issues currently facing both agencies. These two areas are the addition of new sites to FUSRAP and the transfer of completed sites to long term stewardship. This letter summarizes the understandings regarding procedures in these two areas that the Corps has reached with your staff.

Addition of new sites to FUSRAP. Corps authority for the cleanup of radiologically contaminated sites is limited to the authorities provided under the Energy and Water Development Appropriations Acts, 1998, 1999 and 2000 for the Corps to serve as the lead agency for the cleanup of FUSRAP sites under the Comprehensive Environmental Response, Liability and Compensation Act (CERCLA). In addition, we do not believe Congress intended to increase the scope of FUSRAP to include sites that did not meet DOE criteria when it transferred responsibility for the administration and execution of FUSRAP to the Corps. Accordingly, we request that DOE evaluate potential new sites against the criteria in the DOE FUSRAP Management Requirements and Policies Manual (MRPM), dated May 5, 1997, and refer to the Corps for evaluation only sites meeting the DOE eligibility criteria.

Generally speaking, these are sites where there is a potential for radiological contamination (i.e., releases of radioactive material into the environment in amounts unacceptable when measured against federal or state standards, permits or licenses) and where DOE has liability for radiological contamination through predecessor operations in support of the Manhattan Project or early Atomic Energy Commission activities. Sites where remaining radioactive material is not due to DOE predecessor operations in support of the Manhattan Project or early Atomic Energy Commission activities, or where another

governmental organization is responsible for the radiological material (as would be the case if the material were subject to a Nuclear Regulatory Commission (NRC) license), or where the material is being addressed under another remedial action program are not eligible.

We also request that DOE coordinate its new site designation activities with the Corps to ensure that there is a smooth transition with minimal duplication of effort or lost time. Specifically DOE would notify the Corps as soon as an event occurs, a letter of inquiry for example, that could result in an eligibility review and a referral to the Corps, and provide the Corps with copies of all documentation and historical records pertinent to its eligibility determination at the earliest opportunity.

Transfer of completed sites. In accordance with the general process in the MOU, the Corps will employ a three-step process for transfer of completed sites, beginning when the Record of Decision (ROD) is signed. The Corps will provide DOE with a copy of the ROD, a separate general description of the site and remedial action goals, estimated remedial action schedule, and anticipated land use controls and operations and maintenance requirements.

The second step will occur after the site closure report is complete and a declaration of completed action has been signed. At that time, in addition to a copy of the site closure report and declaration, the Corps will provide DOE with letters from regulators acknowledging that remedial action goals have been met, as well as operations and maintenance, and land use control implementation plans, as required and available. The Corps will also advise DOE of the dates when short-term maintenance starts and ends and provide an estimate of annual out-year cost requirement, and general description of the remedial goals and any restrictions remaining on the property.

The third step will occur when the Corps has completed all remedial activities at the site and ninety days before the end of the two-year short-term operations and maintenance for which the Corps is responsible. At that time the Corps will notify DOE of the effective date of transfer to DOE for long-term operations and maintenance. Accompanying this notification will be a complete copy of the administrative record, the operations and maintenance plans and the actual costs of operations and maintenance for the first two years, and a description of the long-term actions required by DOE.

In addition the Corps will provide DOE with informational copies of draft site specific land use controls and implementation plans being coordinated with regulators and other stakeholders, and keep DOE informed of changes in completion schedules and other events/issues that might impact DOE's future responsibilities at a site. Corps regional FUSRAP program managers have been encouraged to invite DOE to participate in public meetings, especially at sites that will require significant long-term operation and maintenance activities, and/or the maintenance of land use controls.

If the procedures described above are acceptable to the DOE, please notify me in writing. Once in place, these procedures will facilitate each agency's meeting its continuing FUSRAP responsibilities.

Sincerely,

Robert H. Griffin
Brigadier General, U.S. Army
Director of Civil Works

APPENDIX B

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

APPENDIX D-1

FUSRAP SUMMARY PROTOCOL

35692

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

35692

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

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SUMMARY PROTOCOL

IDENTIFICATION - CHARACTERIZATION - DESIGNATION - REMEDIAL ACTION - CERTIFICATION

CONTENTS

LIST OF FIGURES

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.

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*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

Figure 1

SUMMARY FLOW SHEET FOR PRELIMINARY ANALYSES PHASE OF FUSRAP REMEDIAL ACTION PROTOCOL

STEP 1 — DATA COLLECTION AND SITE IDENTIFICATION

IDENTIFY RECORDS SOURCES

USE INPUT FROM THE GENERAL PUBLIC AND OTHER SOURCES

CONDUCT RECORDS SEARCHES

- Assemble and Maintain a List of Sites
- Assemble Available Contracts
- Assemble Operating Records
- Assemble Radiological Data of Health and Safety Studies
- Assemble Ownership Data
- Identify Licenses
- Interview Knowledgeable Persons

STEP 2 — HISTORICAL DATA ANALYSIS

DETERMINE POTENTIAL FOR CONTAMINATION

CONTAMINATION POTENTIAL SIGNIFICANT IF

- Large Operation (Quantity and Time)
- History of Onsite Burial
- Radiological Data Suggest Contamination
- Input from Cognizant Individuals Suggest Contamination

CONTAMINATION POSSIBLE IF

- Historical Data Indicates AEC Operations Could Have Resulted in Contamination or that Onsite Residue may be Present
- Little or no Information is Available to Indicate Site Clean-Up Completed

CONTAMINATION POTENTIAL LOW IF

- Only Small Quantities of Material Were Handled
- Site Operated for a Short Time
- Previous Surveys Adequately Demonstrate Clean-up

DETERMINE DOE AUTHORITY FOR REMEDIAL ACTION

DOE HAS AUTHORITY IF

- Contractual Records Indicate It
- An Imminent Health Hazard May Exist (Must Be Confirmed By Site Visit and/or Survey)*
- Authority has been Provided by Legislation*

DOE AUTHORITY IS NEGATED IF

- Site is Currently Licensed to Conduct the Same Activities Conducted under the AEC/MED Contracts
- Site is Clearly under the Jurisidiction of Another Remedial Action Program (NRC Formerly Licensed Sites, Mill Tailings Act, Super Fund)

STEP 3 — DECISION POINT: DOE Division of Facility and Site Decommissioning Projects (DFSD) Determines Need for Additional Investigations

CATEGORIZE SITES

SCHEDULE SITE VISITS FOR SITES WHERE

- DOE has Authority for Remedial Action and Potential for Contamination is Significant
- DOE has Authority for Remedial Action and Contamination is Possible
- An Imminent Hazard May Exist

SCHEDULE WIDE AREA SURVEYS (AERIAL OR SCANNING) IF

- Records or Survey Data Indicate Presence of Offsite Contamination and
- Contamination is such that it can be Identified by Wide Area Surveys

HOLD SITES FOR FUTURE CONSIDERATION IF

- Contamination is Possible
- Insufficient Data Collected to Date to Establish Authority or
- Site Is not Covered Under Another Program

(These Sites are Periodically Reviewed for Reclassification and/or Inclusion Through Legislation)

TERMINATE ACTIVITIES IF

- Potential for Contamination is Low
- DOE has no Authority for Remedial Action
- Site is Covered by Other Program or
- Site is Licensed

STEP 4 — INITIAL INVESTIGATIONS

COMPLETE REQUIRED SITE VISITS

- Determine Site Use
- Identify if Imminent Hazard Exists
- Conduct Screening Survey
- Prepare Preliminary Survey Report

Offsite Contamination

IMPLEMENT MOBILE GAMMA SCANS OR AERIAL SURVEYS

- Analyze Data
- Determine if Offsite Contamination is Present

No Contamination

Document Findings

STEP 5 — DECISION POINT: DOE Division of Facility and Site Decommissioning Projects (DFSD) Determines Need for Survey Data or Remedial Action and Priority

INCLUDE IN REMEDIAL ACTION PROGRAM IF

- Imminent Hazard Exists or
- Records Indicate Significant Potential for Contamination, Survey Data Indicates Radiation Clearly Above Guidelines, and DOE has Authority

INCLUDE IN RADIOLOGICAL SURVEY PROGRAM AND SCHEDULES

- First Priority if DOE has Authority and (1) Survey Data Indicates Contamination is Possible and Records Suggest Potential for Significant Contamination or (2) Survey Data Identifies Radiation Clearly Above Background and Records Indicate Contamination could be due to MED AEC Work
- Second Priority if DOE has Authority and Survey Data Indicates Contamination may be Present and Records Indicate Contamination due to MED AEC Work may be Possible
- Third Priority if Records have not Clearly Established DOE Authority but Survey Data Identifies Radiation Levels Clearly Above Background and Records Indicate Potential for Contamination is Significant and may be due to MED AEC Work

TERMINATE ACTIVITIES IF SCREENING SURVEY IS SUFFICIENT TO CERTIFY CONDITION OF SITE IS SUITABLE FOR UNRESTRICTED USE, IS OTHERWISE LICENSED OR CONTROLLED BY APPROPRIATE RESTRICTIONS OR IF NO DOE AUTHORITY FOR REMEDIAL ACTION EXISTS

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

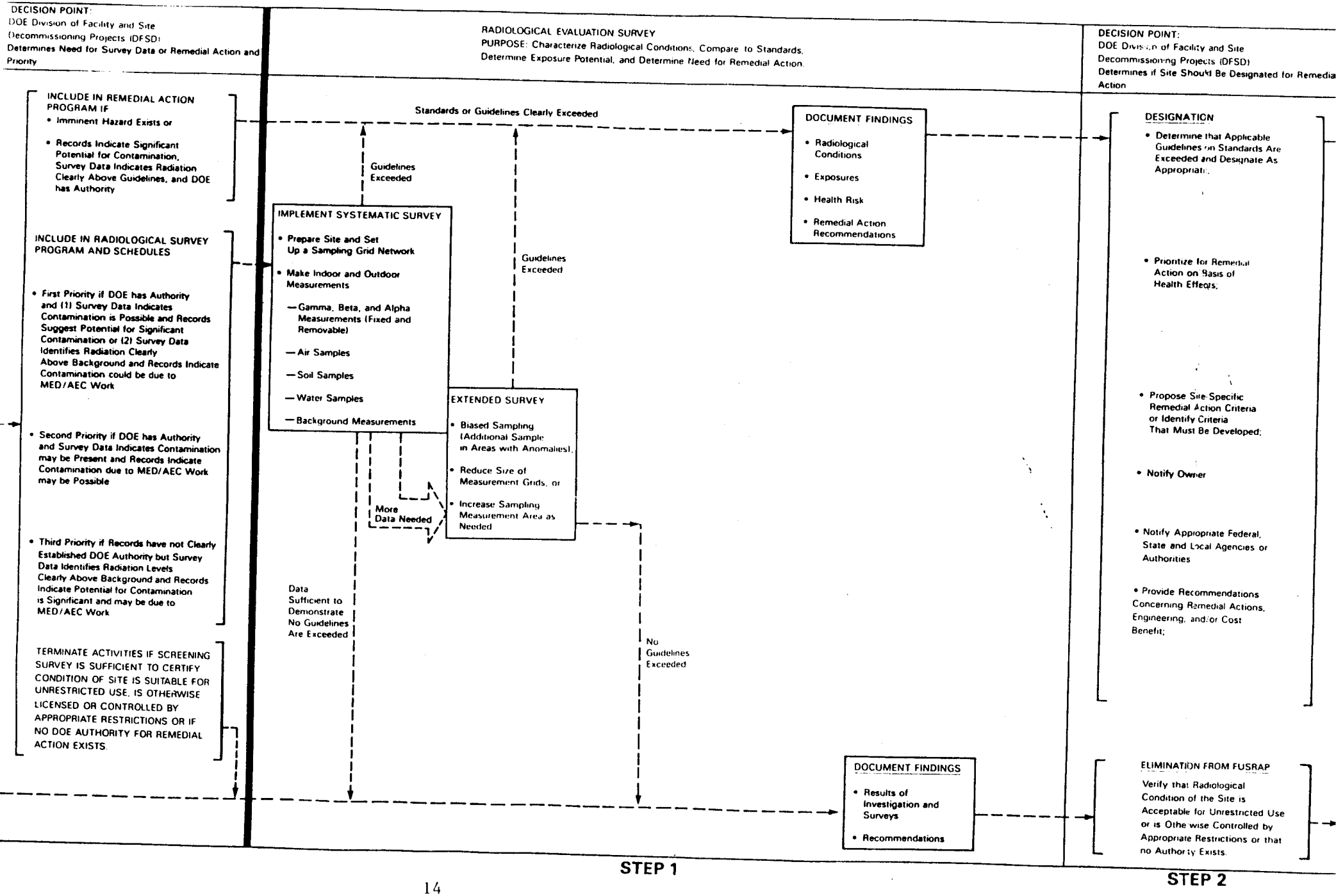
The radiological evaluation survey is subdivided into (1) Systematic and Extended Survey, the onsite survey effort; and (2) Document Findings, the report preparation effort. The onsite survey effort is organized in stages that increase in complexity as they proceed from left to right on the flow chart (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.

Systematic and Extended Survey. 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);
- Soil samples and analyses; (surface and subsurface)
- Water samples and analyses; (surface and ground water)and
- Background measurements.

FIGURE II

SUMMARY FLOW SHEET FOR RADIOLOGICAL EVALUATION AND DESIGNATION PHASE OF THE FUSRAP REMEDIAL ACTION PROTOCOL



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 guidelines 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;
- 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;
- Surface and ground water sampling on and/or off the site; and
- 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:

- 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;
- Prepare the final engineering design (Title II) of the options;

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

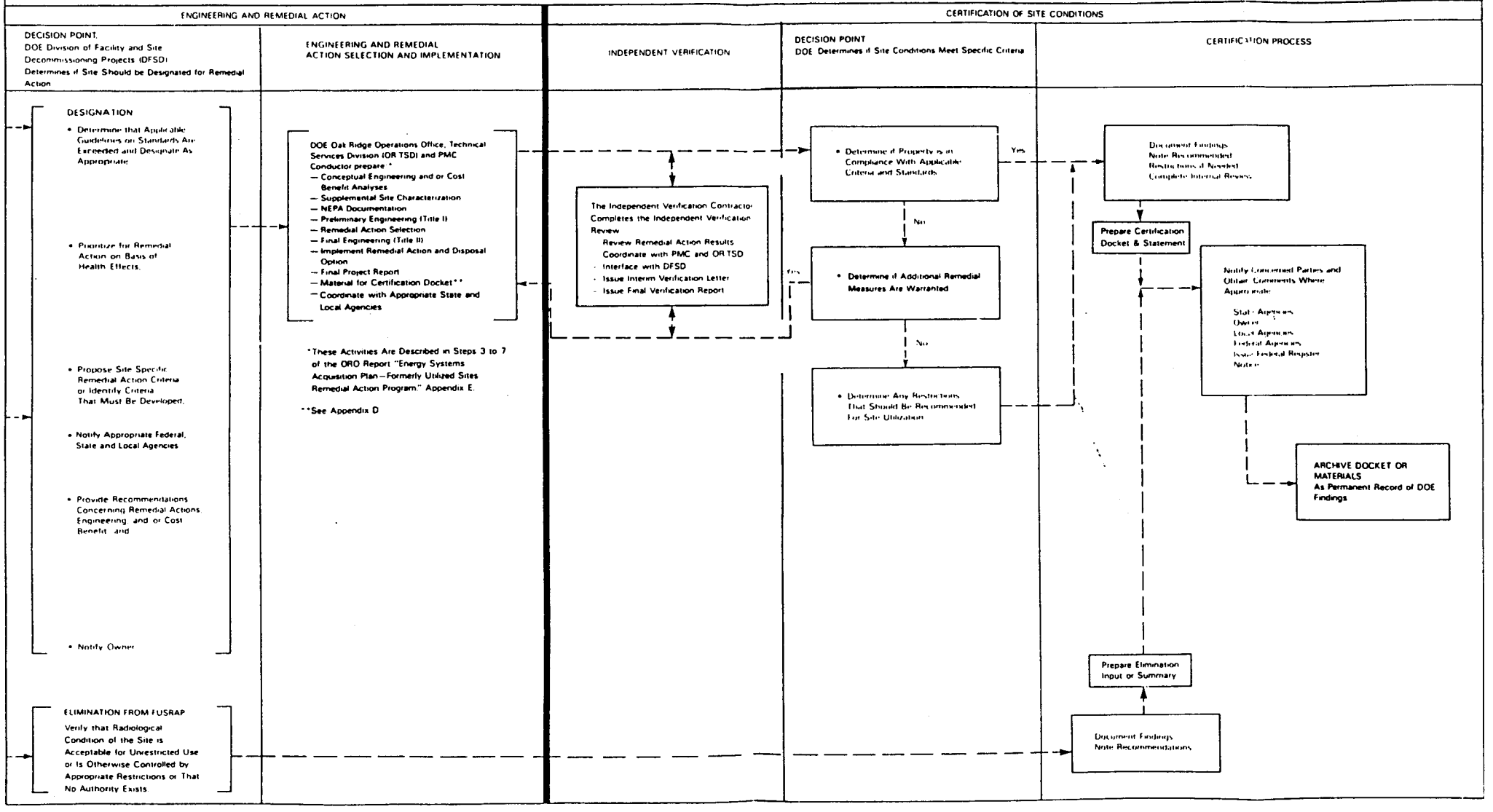
Implementation of this phase (Figure III) is the responsibility of the OR-TSD, the FUSRAP Project Management Contractor (PMC), and the FUSRAP NEPA Process Contractor. More detail is presented in the OR report, "Energy Acquisition Project Plan - Formerly Utilized Sites Remedial Action Program." The general 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.

FIGURE III

SUMMARY FLOW SHEET FOR THE ENGINEERING AND REMEDIAL ACTION PHASE AND CERTIFY SITE CONDITION PHASE OF THE FUSRAP REMEDIAL ACTION 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
- o 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:

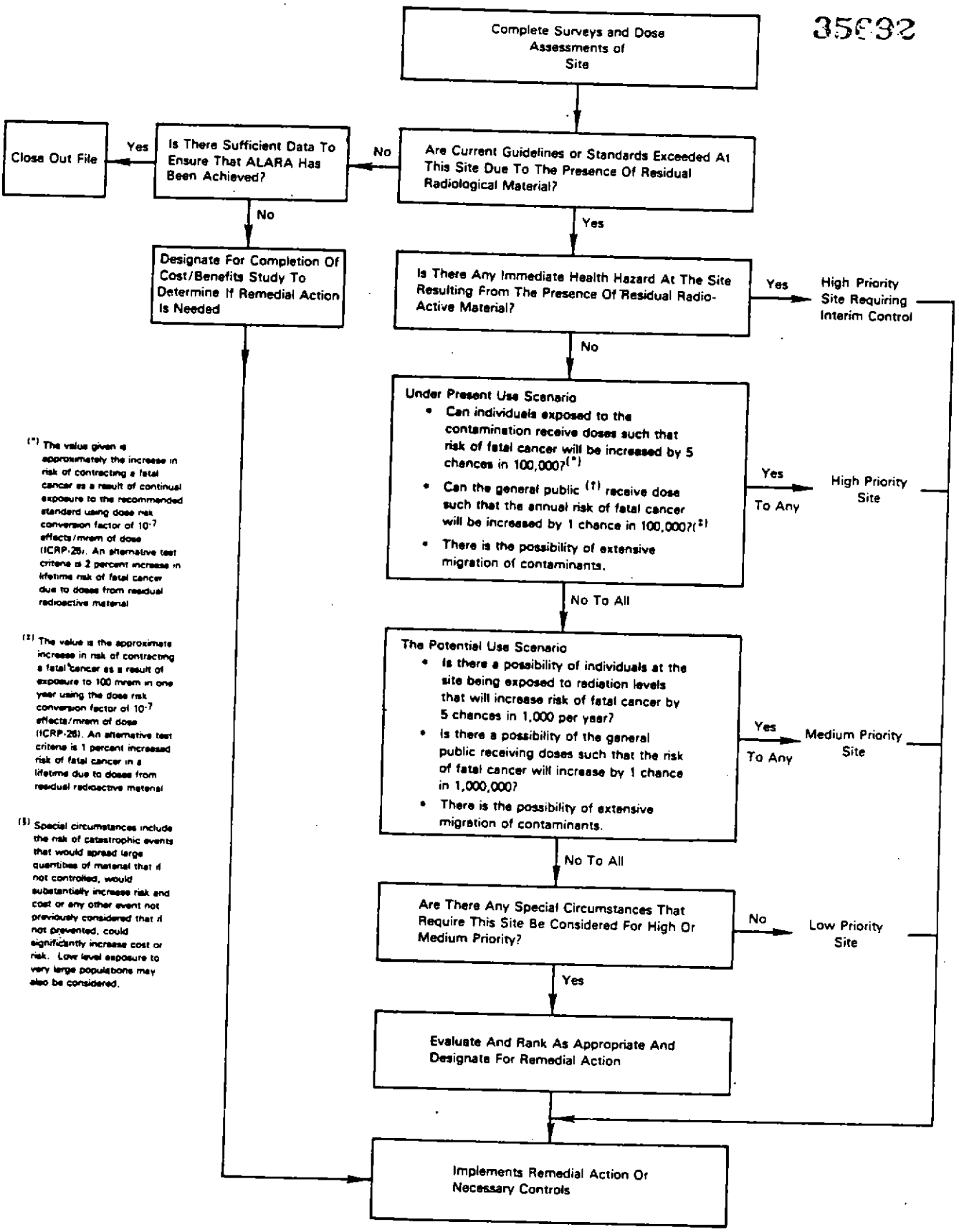
High

- 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^{-7} 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.



(*) The value given is approximately the increase in risk of contracting a fatal cancer as a result of continual exposure to the recommended standard using dose risk conversion factor of 10^{-7} effects/mrem of dose (ICRP-26). An alternative test criteria is 2 percent increase in lifetime risk of fatal cancer due to doses from residual radioactive material

(‡) The value is the approximate increase in risk of contracting a fatal cancer as a result of exposure to 100 mrem in one year using the dose risk conversion factor of 10^{-7} effects/mrem of dose (ICRP-26). An alternative test criteria is 1 percent increased risk of fatal cancer in a lifetime due to doses from residual radioactive material

(§) Special circumstances include the risk of catastrophic events that would spread large quantities of material that if not controlled, would substantially increase risk and cost or any other event not previously considered that if not prevented, could significantly increase cost or risk. Low level exposure to very large populations may also be considered.

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 OFSD 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

  (1) 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

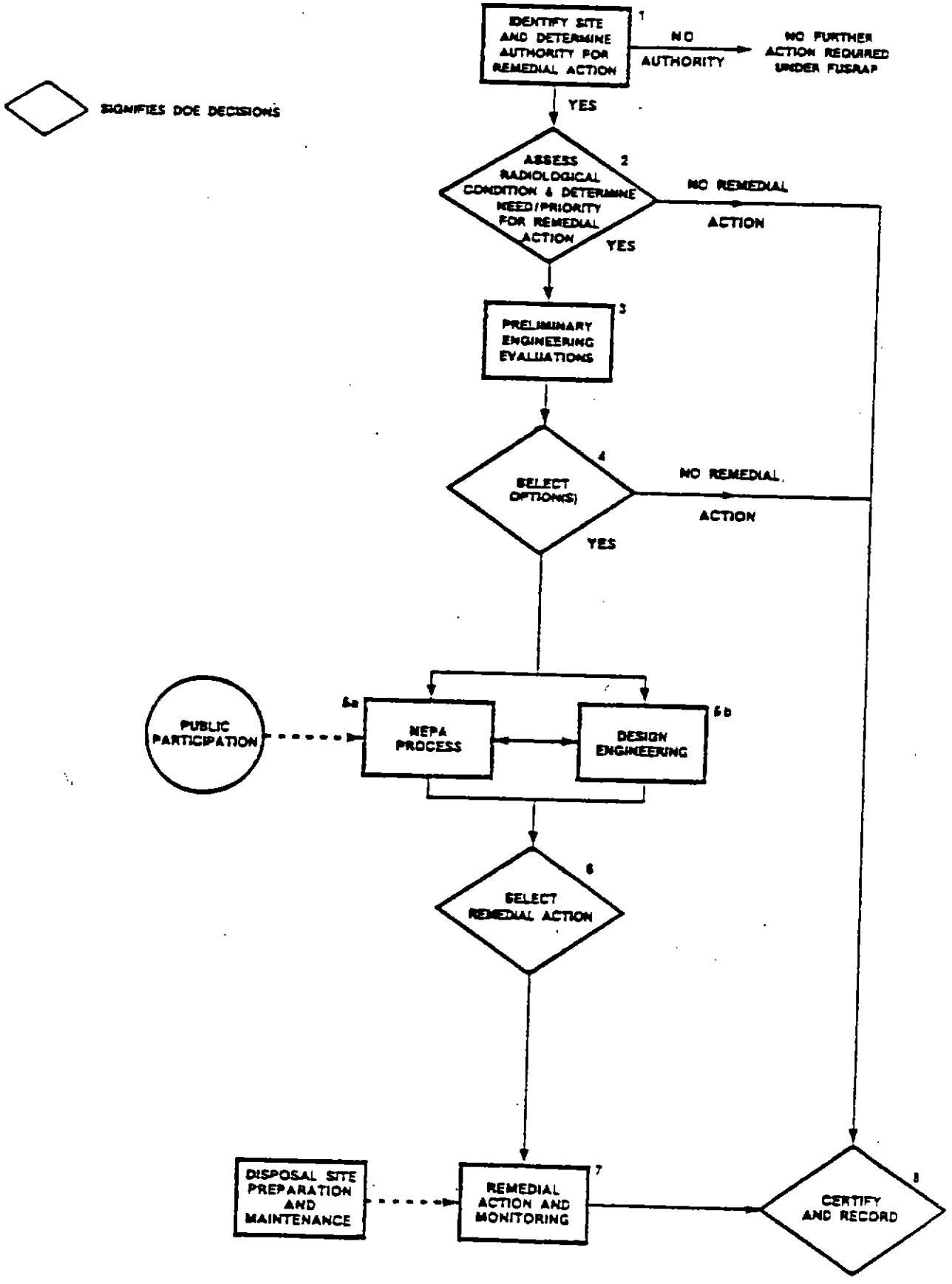
(8) Approved Certification Statement

(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.

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



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

35692

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

CONTENTS

FIGURES

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) and by departmental division (Feed Materials Division 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

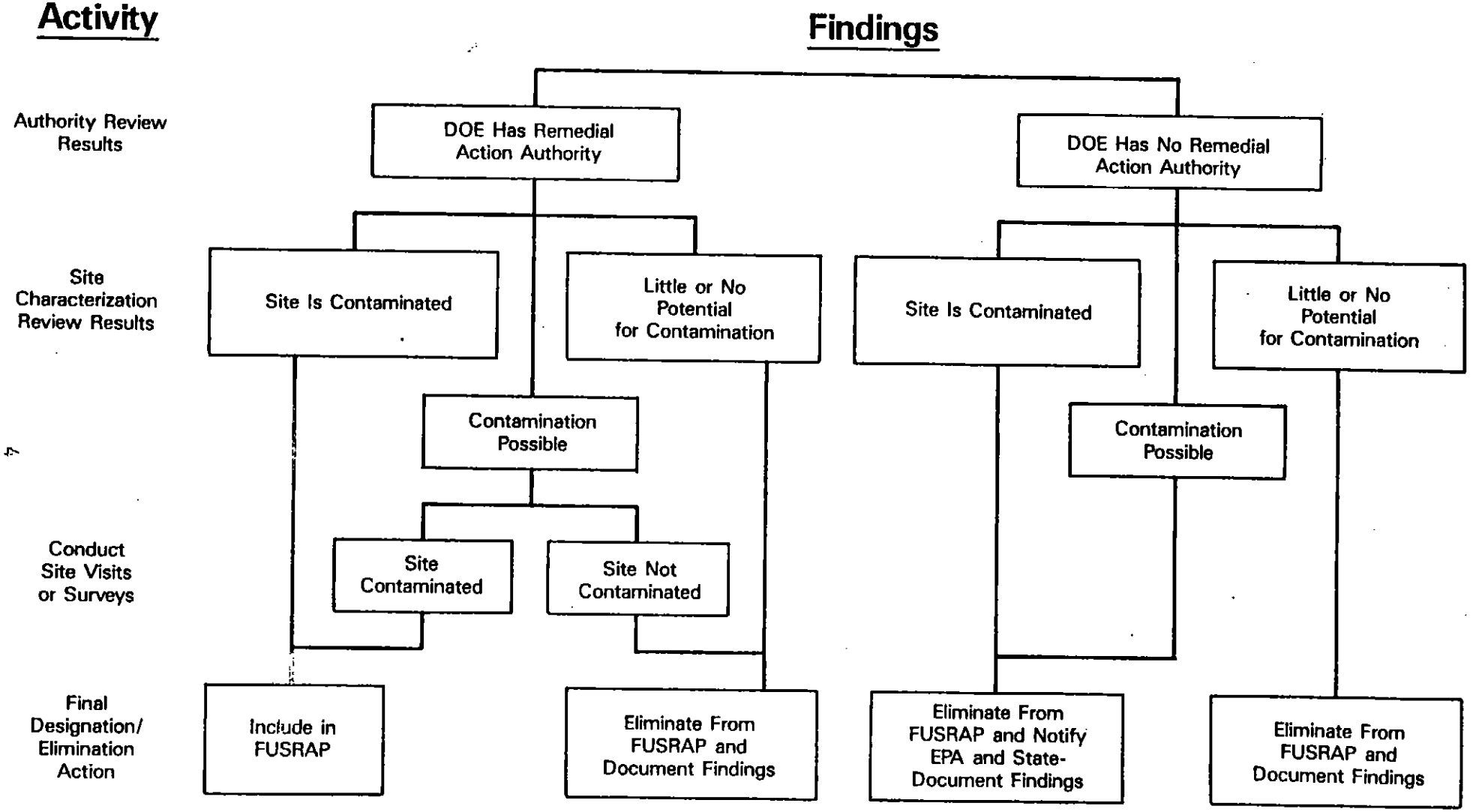


Figure 1. Decision Tree for the Designation/Elimination Process — Alternative 1 — Authority Review Completed First

35682

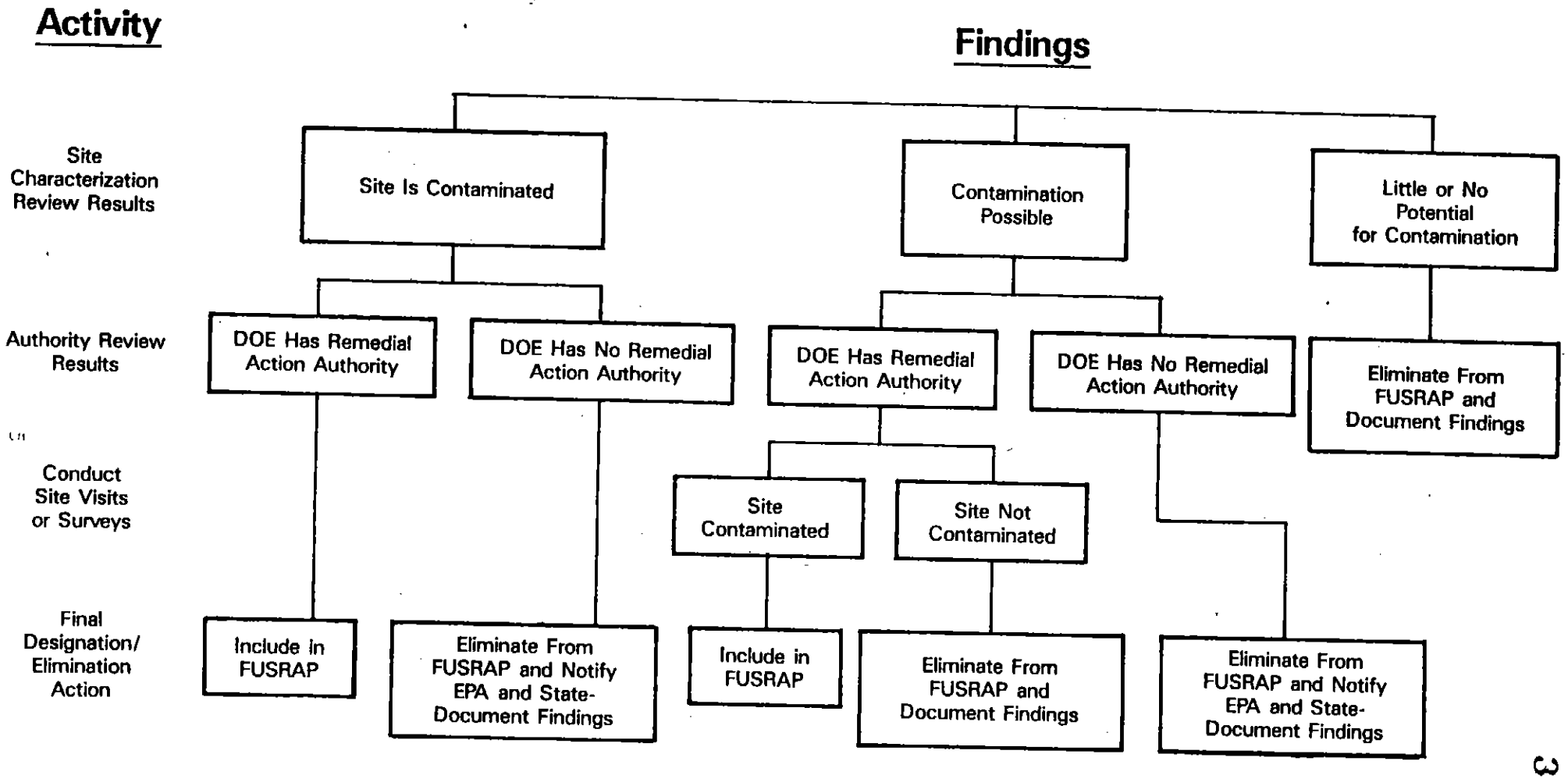


Figure 2. Decision Tree for the Designation/Elimination Process — Alternative 2 — Site Characterization Review Completed First

26352

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

- Site Description
  - -- Location (address and maps)
  - -- Facility size
    - Entire site
    - MED/AEC portion
    - Area around the site (population and environs)
- Contractual information (MED/AEC)
  - -- Size of contract
  - -- Length of contract
  - -- Type of contract
  - -- Products
  - -- Areas utilized for contractual activities
  - -- Health and safety provisions
  - -- Closeout provisions
  - -- Special provisions
  - -- Contracting Division or organization
- 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
  - -- Length of license
  - -- Areas and work covered under license
  - -- Violations
  - -- Current status
- 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
    - 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

1. Was the site/operation owned by a DOE predecessor or did a DOE predecessor have significant control over the operations or site?

2. 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:

1. 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:

- The site is potentially contaminated (above FUSRAP criteria) with radioactive residues that resulted from DOE predecessor operations, and
- 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:

1. A summary which discusses the past operations at the site, the current status of the site, disposal practices, radiological history and so forth.
2. 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).
5. 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.

Eliminated Sites. Sites eliminated from consideration for FUSRAP are in two general categories:

1. 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.

2. 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.

APPENDIX C

Summary of DOE FUSRAP Site Eligibility Determination Process

APPENDIX C

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 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.)

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 NRC-LICENSED 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

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.

1. 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

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 cf 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;

2) USACE will conduct a response action at the licensed site under its FUSRAP and CERCLA authority, with regard to FUSRAP materials subject to NRC

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 in-process 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

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:

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.

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.

ARTICLE VII - EFFECTIVE DATE

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

U.S. Nuclear Regulatory Commission

Martin J. Virgilio
Director,
Office of Nuclear Materials Safety
and Safeguards
U.S. Nuclear Regulatory Commission

Signature

Date: 7/2/01

U.S. Army Corps of Engineers

M.G. Hans A. Van Winkle
Major General, U.S. Army
Director, Civil Works
U.S. Army Corps of Engineers

Signature

Date: 5 Jul 01