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FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

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

January 1986

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

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FUSRAP DESIGNATION/ELIMINATION PROTOCOL
SUPPLEMENT TO THE FUSRAP SUMMARY PROTOCOL

INTRODUCTION

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

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

DESIGNATION/ELIMINATION PROTOCOL

Data Collection

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

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

elimination activity. The first is the systematic review. The Department as part of its site identification and characterization effort has investigated the Manhattan Engineer District (MED) and Atomic Energy Commission (AEC) records stored at various records centers and records storage locations to identify records that are or may be pertinent to FUSRAP. The investigations involve several stages of screening to identify records that require detailed review. As part of the systematic reviews, the pertinent records are examined to determine their subject area, the sites they address, and to obtain copies of material that would support the designation/elimination reviews. The material is reviewed and copied as appropriate for all sites addressed. In addition, notes are taken on the particular records reviewed so that if materials that are not needed for designation/elimination actions are later necessary for other purposes (litigation or Freedom of Information Act responses) their location is easily determined and the required records can be easily retrieved. The systematic approach is the most efficient and cost effective because, the records need only be reviewed once. However, the method does not allow easy or accurate scheduling of results. Because the records are not well categorized and are not generally filed by site [records are in most cases stored by date (FY43 and so forth) 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

Activity

Findings

Authority Review Results

DOE Has Remedial Action Authority

DOE Has No Remedial Action Authority

Site Characterization Review Results

Site Is Contaminated

Little or No Potential for Contamination

Site Is Contaminated

Little or No Potential for Contamination

Conduct Site Visits or Surveys

Contamination Possible

Site Contaminated

Site Not Contaminated

Contamination Possible

Final Designation/ Elimination Action

Include in FUSRAP

Eliminate From FUSRAP and Document Findings

Eliminate From FUSRAP and Notify EPA and State- Document Findings

Eliminate From FUSRAP and Document Findings

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

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Activity

Findings

Site Characterization Review Results

Site Is Contaminated

Contamination Possible

Little or No Potential for Contamination

Authority Review Results

DOE Has Remedial Action Authority

DOE Has No Remedial Action Authority

DOE Has Remedial Action Authority

DOE Has No Remedial Action Authority

Eliminate From FUSRAP and Document Findings

Conduct Site Visits or Surveys

Site Contaminated

Site Not Contaminated

Final Designation/ Elimination Action

Include in FUSRAP

Eliminate From FUSRAP and Notify EPA and State- Document Findings

Include in FUSRAP

Eliminate From FUSRAP and Document Findings

Eliminate From FUSRAP and Notify EPA and State- Document Findings

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

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

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

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

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

- o Site Description
 - Location (address and maps)
 - Facility size
 - Entire site
 - MED/AEC portion
 - Area around the site (population and environs)
- o Contractual information (MED/AEC)
 - Size of contract -- Areas utilized for contractual activities
 - Length of contract -- Health and safety provisions
 - Type of contract -- Closeout provisions
 - Products -- Special provisions
 - Contracting Division or organization
- o Contractual information (non-DOE predecessors)
 - Same as above including estimates of fraction of facility and work that was not MED/AEC related
- o License information
 - Type of license -- Violations
 - Length of license -- Current status
 - Areas and work covered under license
- o 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
- o Current status of site
 - Radiological status
 - Current and planned or future uses
 - Proximity of active areas and summary of operations
- o 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 Summary Protocol.

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

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

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

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

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

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

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

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.