

DOCUMENTING COMPLETION OF ENVIRONMENTALLY CONTAMINATED SITES THROUGH CERTIFICATION DOCKETS

Tonia Vassilowitch
Department of Energy

ABSTRACT

The Environmental Management Office of the U.S. Department of Energy (DOE) is responsible for remediation at sites that became contaminated by the DOE or a DOE predecessor agency. When a site is cleaned a Certification Docket, originally intended for the public audience, is compiled to document successful completion and to release the site with or without restrictions. Over several years, the formats of these Dockets have varied and with the transfer of the Formerly Utilized Sites Remedial Action Program, for which several Dockets have been completed, from the DOE to the U.S. Army Corps of Engineers as well as with the establishment of the Office of Long Term Stewardship, it became necessary to reevaluate the role of the Certification Dockets as part of EM site closure. Five Dockets were examined and interviews were done with those who compiled the Dockets or those who were a potential audience. Through this process, it is clear that the needs of the audiences have changed and so to efficiently obtain as much information as possible, supporting documents should be bound in a second volume and greater detail of the hazards of the radiological contaminants should be provided. Independent Verification, an essential aspect to both LTS and the public, should be summarized in the Docket and the final report should be included in the second bound volume.

INTRODUCTION

The early predecessors of the United States Department of Energy were the U.S. Army Corps of Engineers Manhattan Engineering District (MED) and the Atomic Energy Commission (AEC). The MED, established in 1942, managed the development of nuclear weapons during World War II, and the AEC, created by Congress in 1946, further advanced the possibilities of and regulated nuclear activities, as well as provided civilian control of atomic energy. Because the government lacked enough federal sites and infrastructure to perform the development of nuclear energy, much of the work was performed at private facilities. Many steps in the development of nuclear activities yield radioactive contamination and waste and while most sites that were contaminated by these activities were cleaned under the guidelines that existed at the time, residual radioactive materials still remained.

Congress, at the urging of President Carter, established the Department of Energy in 1977; as the Cold War ended and the nuclear arms race ebbed, the environmental contamination resulting from these activities became a greater priority. In 1989 the Office of Environmental Management (EM) was created to be responsible for the stabilization of nuclear facilities, managing wastes, supporting nuclear nonproliferation policies, and environmental restoration (1). The latter responsibility includes a variety of remedial actions such as treating soil and groundwater, as well as decontaminating and decommissioning the nuclear facilities, themselves.

Site cleanups can be a monumental task that involves initial surveys, remedial action plans, carrying out the cleanup, independent verification, and final closeout reports. When remedial action has been completed at a particular site, a Certification Docket is assembled, the purpose which is to document the successful decontamination of the site and to release the property for reuse. It also asserts that the current radiological conditions are in compliance with DOE standards and affirms that planned or contemplated future use of the properties will not result in any radiological hazard.

To date, several of the Certification Dockets compiled have been for the Formerly Utilized Sites Remedial Action Program (FUSRAP), established by the AEC in 1974 to clean up privately owned sites that were contaminated during activities for the MED or AEC. FUSRAP performed remedial action at 25 sites under the Department of Energy before Congress transferred the program to the Army Corps of Engineers in October 1997. Under a Memorandum of Understanding (MOU) signed in March 1999, the Corps is given the responsibility of performing remedial action at the last 21 sites. The DOE, under this Memorandum, is responsible for any further monitoring or maintenance on the 25 completed sites as well as any other such long-term surveillance activities on sites cleaned by the Corps beginning two years after the remedial action has been completed (2). In 1999, the DOE Environmental Management Office established the Office of Long Term Stewardship to be responsible for these and other future surveillance activities necessary to ensure health and safety (3).

The Department of Energy is also given authority to perform remedial action on a site under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, often known as Superfund. CERCLA authorizes two types of remedial action on sites listed on the Environmental Protection Agency's National Priorities List. The first is "Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response" (4). And secondly, "Long-term remedial response actions, that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening" (4).

Since remedial action efforts began, many different groups have assembled the Certification Dockets in varying formats. In 1985 the DOE Office of Nuclear Energy issued a protocol, Verification and Certification Protocol—Supplement No. 2 to the FUSRAP Summary Protocol, that explicitly describes the certification process and also includes an outline of the necessary contents of a Certification Docket (5). The Corps has also recently issued a draft of a FUSRAP Site Closeout Policy for the sites they clean and certify. Included in the draft is an outline for the Site Closeout Document, equivalent to a Certification Docket, the format of which is much different from that of the DOE Protocol (6). Other EM offices that have performed cleanup, as well, have compiled Dockets, such as those completed for Energy Technology Engineering Center, that are arranged differently from any of those in FUSRAP. And finally, the Office of Long Term Stewardship, which is ultimately responsible for many of the sites that have undergone remedial action, has its own needs and uses for the Dockets. After so much change, and the involvement of so many other offices, it has become necessary to reexamine the Certification Dockets and determine if their purpose and intent has changed, as well, and should be updated.

CERTIFICATION DOCKET EXAMINATION

Certification Dockets were examined for five sites, ranging in date from 1989 to 2001: Middlesex Municipal Landfill (7), Alba Craft Laboratory and Vicinity Properties (8), B&T Metals (9), Building 028 at Energy Technology Engineering Center (10), and Building 029 at Energy Technology Engineering Center (11). The former three of these were FUSRAP sites, the most recent of which was cleaned by the DOE though the Corps provided funds for the DOE to complete certification. The latter two were DOE-owned surplus nuclear facilities at Energy Technology Engineering Center buildings located on leased land from Boeing (formerly, Rockwell). After studying these Dockets, several notable issues arose.

The first issue became apparent when comparing the Docket for Middlesex Municipal Landfill to that for B&T Metals, both belonging in FUSRAP. On one end of the spectrum, the MML Docket follows the 1985 Protocol closely, is very descriptive, and includes all necessary supporting documents in the Docket, itself. On the other end, the Docket for B&T Metals loosely follows the Protocol and is very short, referencing all supporting documents rather than including them. In addition, examining the Docket for Alba Craft Laboratories, also a FUSRAP site, introduces yet another possibility: including the shorter documents, while simply referencing the longer supporting documents.

There are benefits and drawbacks to each option. By referencing the supporting documents, the Docket will be shorter and easier to manage and for an audience simply looking for an accurate summary of the remedial action, this would be sufficient. However, by referencing documents, they will be filed separately from the Docket, itself, and could very easily be misplaced or destroyed. By including all of the supporting documents, they would always be easy to locate, but the Docket becomes voluminous and more difficult to manage and copy.

Another issue is introduced when comparing the FUSRAP Dockets to those done for ETEC: the formats are markedly different. Whether including or referencing supporting documents, the FUSRAP Dockets generally all adhere to the 1985 Protocol. The Dockets for ETEC were assembled in a much different manner, consisting mostly of internal and external memorandums and decontamination final reports. Furthermore, the draft of the format the Army Corps of Engineers will be using for the Certification Dockets for future FUSRAP sites varies from both the 1985 Protocol as well as the ETEC format.

Upon studying these three individual protocols, it is apparent that some of the content is very similar, while much of it differs. All include, in some manner: site descriptions, radiological survey summaries, cost information, summaries of the remedial action, and waste disposal information. However, a good deal of the information included is distinct to one or two of the formats. While both DOE FUSRAP and ETEC include an independent verification final report—either referenced or included—the Corps protocol gives a section of “Demonstration of Cleanup Activity Quality Assurance/Quality Control.” While the Corps draft seems to consist mostly of summaries, the DOE FUSRAP and ETEC formats include many supporting documents, such as the “Designation or Authorization Documentation” and the “*Federal Register* Notice of Certification.” The Corps is distinct, also, in the inclusion of a section on “Summary of Operation and Maintenance,” a section devoted to a “Five-Year Review,” and a

summary outlining the responsibilities of Long Term Stewardship. ETEC Dockets have been distinct by including several reports, such as the "Safety Review Report" and the Decontamination and Decommissioning Final Report, which were completed for FUSRAP under the DOE, but were not included in the Dockets.

The presentation of the information also differs, especially in the case of the ETEC Dockets. The Corps and the DOE 1985 Protocol open with an introduction and follow with background information about the site and the remedial action performed there. In contrast, ETEC begins with a forward and immediately follows with documents supporting certification, rather than providing the basic site information, which is not given until much later in the Docket.

Many questions arose after studying these Dockets. How were these Dockets compiled? What needs are met by the information included and what aspects are most important? Should supporting documents be included or referenced? What does the Office of Long Term Stewardship need from these Dockets? To answer these questions, it was necessary to interview the very people who assembled or used the Certification Dockets.

INTERVIEWS

The first issue addressed through interviews was determining why the Dockets examined were compiled in the manner they were. With respect to the DOE FUSRAP Dockets, personal interviews were conducted with Alexander Williams, Designation and Certification Manager for FUSRAP while the program was under the DOE, and Liz Rudek, from Bechtel National Inc, a contractor that compiles Certification Dockets. Regarding the new format the Corps drafted, an interview was conducted with Tomiann McDaniel, the FUSRAP team leader for the U.S. Army Corps of Engineers. With respect to the ETEC Dockets, Don Williams, former Headquarters Program Manager for ETEC, was interviewed.

As stated before, there are obvious differences between the MML Certification Docket completed in 1989 and that for B&T Metals, completed in 2001. In fact, the differences between these Dockets are representative of a trend to shorten them in order to reduce some of the redundancy. According to Alexander Williams, the older Dockets contained, for example, a narrative description of the site in the Docket summary as well as in the supporting documents such as the post-remedial action report, the independent verification report, and the documents supporting designation. To lessen the repetition, the narrative in the Docket became shorter and therefore there was more reliance on the supporting documents.^a Liz Rudek supported the importance of the shortening trend, believing that if too much information is included, it will distract from the information that is intended to be highlighted, which is that the site is cleaned and poses no radiological threat.^b However, when both Williams and Rudek were asked for their opinions about the issue of referencing supporting documents as attachments, using the B&T Metals Docket as an example, they disagreed. While Williams felt that referenced attachments were easier to handle, especially for making copies,^c Rudek would have preferred to bind the attachments separately as a second volume to the Docket in order to keep the attachments from being misplaced in the future.^d Both, however, expressed their opinion in the importance of the Certification Dockets for reference in the future and because, as Rudek stated, it "puts a stamp of completion on [the site]."^e

After learning how FUSRAP Certification Dockets were done in the past, Tomiann McDaniel, FUSRAP team leader for the Army Corps of Engineers, was interviewed in order to understand how they would be prepared in the future. According to her, the Corps will not be following the DOE procedures for closing out a site, but will be adhering to procedures used by the Environmental Protection Agency for CERCLA sites, the requirements of which are very specific.^f The first phase in the remedial action under CERCLA is a Remedial Investigation/Feasibility Study (RI/FS) that reviews the extent of contamination and hazards and develops several cleanup options. After a remedial action is decided upon and public comment is considered, a Record of Decision (ROD) documents the site background, the chosen remedy, and why it was selected. The cleanup is then designed, carried out and, following that, the operation and maintenance, similar to Long Term Stewardship, begins (12). The Closeout Reports under CERCLA include a summary of site conditions, remedial action planning activities, remedial construction activities, and demonstration of Quality Assurance/Quality Control (QA/QC) of cleanup activities (13). About the protocol, McDaniel states, "Basically, the Closeout Report pulls all the Remedial Action Reports for an entire site together in a summary fashion."^g When asked about the inclusion of supporting documents that are included in the DOE FUSRAP Protocol but not mentioned on the Corps's outline, she replied that the supporting documents, such as the RI/FS and the ROD would be referenced. Although the format style is different, McDaniel feels that most of the detail from the DOE 1985 Protocol is present in their Closeout Report in one form or another.

There are, however, two notable differences. First, when the site is closed, the Corps will be placing a notice in a local paper rather than the *Federal Register*, as was done by the DOE; and second, there is no certainty that the Corps will be completing an independent verification of the site. According to McDaniel, "The Corps intent is to have a finding from the regulator that our cleanup meets the requirements of the ROD. This might or might not include an IVC [Independent Verification Contractor] as DOE defines it. As policy, the Corps uses its QA/QC process to meet the intent of an IVC. This works better with our contracting and oversight methods."^h

In addition to studying the FUSRAP Certification Dockets, Don Williams was also interviewed about the Dockets for the ETEC sites. While the land these sites are on were owned by the contractor Rocketdyne, the buildings, themselves, were owned by the Department of Energy, and therefore the information that needed to be included in the Dockets varied from the DOE FUSRAP Protocol. According to Don Williams, "the FUSRAP protocol required modification for applicability to ETEC since the surplus nuclear facilities were owned by DOE and were located on property leased from the contractor. The process of modification involved the review and integration of CERCLA cleanup and RCRA closure requirements, DOE Order 4300.1 and 5400.5 requirements, EM-44 IV protocol, NRC guidance on License Termination, and other applicable guidance or directives in effect at the time. The modified FUSRAP protocol was then used as the basis for documenting the cleanup and release of the 'orphaned facilities' (facilities which had been decontaminated & decommissioned years prior to DOE release). A DOE/ETEC Facility Release Working Group was chartered by DOE HQ to review all orphaned facilities project documents and project planning documents for facilities undergoing or planned for D&D to ensure that documentation necessary to support successful closure and release according to the modified protocol. It should be noted that some of the orphaned facility project documents had

been lost and had to be reconstructed from field notes supplemented by additional fieldwork and independent verification. As a consequence, the ETEC documents published for the orphaned facilities include limited documentation which focus on key decision points from NEPA compliance, initial radiological survey, development of authorized limits, decontamination, verification, independent verification, final project report, and certification for release. These Dockets did not contain information such as project costs and schedule reporting, lessons learned in decontamination that could be transferred to other projects, and other data requirements which had been identified in the modified protocol.”ⁱ

Upon speaking to those who compiled the Certification Dockets, it became necessary to define the intended audience – those to whom the information is most useful and important. Once the Dockets are complete, the closeout is reported in the *Federal Register* or local newspaper. In addition, copies are sent to various places: the property owner, to a library or public reading room at a nearby location, and to reading rooms at Oak Ridge, Tennessee and the DOE Forrestal Building in Washington, DC. The initial intended audience is clearly the public, who needs to be informed that the site was cleaned and no longer poses a radiological hazard. The Office of Long Term Stewardship also became a prominent audience when it was established in 1999. After determining the audiences for the Certification Dockets, it was necessary to discern their needs and interests. In regard to the public, Paul Dyster, a councilman for Niagara Falls who has recently been confronted with significant public inquiry in the remedial action performed in that area was interviewed and in regard to the LTS Office, Michael Barainca, senior engineer for LTS, was interviewed. Lynn Pavelka-Zarkesh, Technical and Remediation Contractor Records Leader from the Grand Junction office in Colorado, was interviewed, along with Art Kleinrath, LTS Program Manager for the Grand Junction Project Office.

The public audience for Certification Dockets most often consists of property owners at or near the remediated site, those who once worked at a site, and environmental activists. According to Paul Dyster, most of the public wants to be able to find as much information as possible; the remedial action performed deals with radioactive contamination which is a subject that elicits a great deal of concern.^j Many people fear for the health of themselves or their family as well as their property values, and so it is reassuring to obtain an abundance of information certifying the site. Most questions that have been posed to him by the public have been inquiries about the actions that took place at the site, the contaminants involved, and the hazards of living near the site. They also want to know about the remediation process, especially concerning the timeline so they can know if they lived near or worked at a site before remedial action began. Dyster agreed that the independent verification is extremely important and that including it in the Docket is necessary because such information would be difficult to find otherwise, especially if the contractor doesn't exist any longer.^k

The needs and interests of the Long Term Stewardship Office are extensive and complicated. About the 1985 DOE Protocol, Lynn Pavelka-Zarkesh at the Grand Junction Office in Colorado says that there is “...a disconnect between what is needed to certify that a site is ‘clean’ compared to what is needed for continued maintenance and management of a site in perpetuity.”^l She states that the custodian for the site will need “...sufficient data 1) to trace environmental/health problems if annual surveillance and monitoring show an increase in contaminants; 2) to maintain any systems/structures/institutional controls remaining for a site; to

maintain permits, MOUs, and access agreements; and 3) to address any stakeholder issues.^{'''m} Michael Barainca also believes that the LTS Office needs complete and accurate information about the contaminants at the site and their characteristics, the environmental settings, and monitoring data to make sure that contaminants are not going anywhere. He believes other important information would be performance/risk assessments as well as an analysis of how the engineering features of the remedies in place at the site are going to perform over time.ⁿ Certain pieces of information that would be most important to the LTS Office, according to Art Kleinrath, would be the promises about the site that were made, such as the limits of radiation, and to whom, and contact information for reporting data and in case of emergency.^o

CONCLUSIONS

Through examining the Certification Dockets and interviewing those who have compiled them and those who are, or are involved with, the audiences for them, I was able to gain an insight into many of the problems. The purpose of the Docket remains to be documentation that a radioactively contaminated site was successfully remediated and no longer poses a hazard to public health or the environment and can be released with or without restrictions. Although this aspect has not changed, the audiences and needs for the Docket have, altering how its purpose should be fulfilled.

Having reviewed the needs of the public and LTS, the audiences for a Certification Docket, I believe that the different formats used for FUSRAP sites under DOE, FUSRAP sites under the Corps, and ETEC sites generally include all of the necessary information and fulfill the purpose of the Docket. After speaking to Paul Dyster about the inquiries that he has encountered, it seems that most of the information that is of concern to the public is present in all of the formats. There is, as suggested by all those I interviewed from Long Term Stewardship, a divide between the information LTS needs and that that is included in the Docket. But because LTS is now a key audience, does not mean that the Certification Docket should be expected to incorporate all of the information they will need: that is simply not its purpose. But some of the information essential to the LTS Office would also be of interest to the public audience, such as Memorandums of Understanding (MOU) and access agreements. More detailed information about the remedial engineering features and performance/risk assessments, if present, would also be of public interest, as well, and should be provided.

Despite the fact that much of the necessary information is present in all of the formats, there are still issues that must be resolved. Foremost is the question of whether to include or reference supporting documents. On this issue, I believe that both the public and the LTS office have the same interest: to obtain as much information about the site and remedial action taken there in the most efficient manner. Consequently, neither referencing nor including the supporting documents in the Docket, itself, is an acceptable option. Because while it is inefficient to search, perhaps in vain, for referenced files that have been misplaced, it is also inefficient to search through an enormous document that is often repetitive in order to find particular information that will be difficult to copy from the voluminous Docket. Therefore, I believe that it is most effective to compile a Certification Docket with separate volume: Volume 1, containing all of the necessary summaries and references for the supporting documents, and Volume 2, including all of the supporting documents to be filed along with Volume 1 of the Certification Docket.

A second issue that needs to be addressed is that of the need for an independent verification. Important to both audiences, especially the public is a confirmation that the site is indeed clean; both the ETEC sites and the sites cleaned while FUSRAP was a DOE program satisfied this interest through a verification performed by an independent contractor. The Corps, as stated earlier, may not necessarily be carrying out an independent verification and instead may complete this aspect of the certification process through quality assessment and quality control. But the question remains, is this sufficient to fulfill the purpose of the Certification Docket and satisfy the interests of the audiences?

According to Art Kleinrath of the Office of Long Term Stewardship, it is. He believes that the Department of Energy or Army Corps of Engineers, whichever organization is responsible for the remedial action, is proficient enough to verify that the site is clean, rather than contracting an independent company to do it.^p On the contrary, Mike Barainca, also of LTS, states that an independent verification is a critical and essential step that should be taken before a site is transferred to Long Term Stewardship. This is especially important if multiple federal agencies were involved in the cleanup, as in the FUSRAP sites that the DOE had started to clean, but were completed by the Corps.^q Liz Rudek believes that the independent verification is also vital from a public standpoint because "it adds a level of assurance that things are going to be carried out appropriately."^r Therefore, because verification of a site is believed to be necessary and it is in the public interest to have it performed by an independent contractor, all future Certification Dockets, including those compiled by the Corps, should provide an independent verification final report in the proposed Volume 2 of the Certification Docket.

Third, there still remains the issue of a consistent format because, although all formats meet most of the needs of the audiences, the information should be presented in a uniform and efficient manner. The format for the ETEC Certification Dockets was carefully constructed to fulfill several requirements, as indicated by Don Williams. And though it successfully served its purpose for these specific sites, it lacks a level of organization that the general public, who may initially know nothing about the site or the cleanup, needs in order to understand the actions taken. The 1985 DOE Protocol is more ordered for a public audience, as is the draft for the Corps Closeout Reports, which is based on the format used for closing out CERLA sites. Though the DOE Protocol is very structured and includes sections pertaining to all of the necessary information, I believe the change to the draft that the Corps of Engineers intends to use for their Closeout Reports is warranted. The newer draft is, in fact, more extensive than the older protocol and includes documents such as the RI/FS and ROD or equivalent decision documents that are important to the Long Term Stewardship Office as well as the public. This draft also includes a section outlining the responsibilities of LTS and a section describing the lessons learned, which is important for future projects, as Don Williams suggested. Consequently, I believe that the Closeout Report drafted by the U.S. Army Corps of Engineers, based on the CERCLA format, should be used for all Certification Dockets in the future. That is, with the

inclusion of the recommendations that I have already made: to bind supporting documents as a separate volume, to expand upon the aforementioned information of interest to both the public and LTS, and to perform and include in the second volume, the final independent verification report.

Performing remedial action and closing out a site is an extremely complex and involved process of which a Certification Docket is an essential part. And, of course, the process of compiling a Docket, itself, can be equally complicated, especially as the organizations involved with it change over time. But I believe that the purpose of a Certification Docket is to document that the site is clean and closed, posing no further radiological threat and can be release with or without restrictions. This will most likely remain constant, even as the agencies that govern the remedial action programs and the needs of the audiences for the closeout documents will not. The only way to resolve issues and internal confusion that may develop because of this is to perform a reevaluation, as I have done, regularly and to report findings and make recommendations for improvement.

**Appendix A:
Department of Energy 1985 Protocol
Certification Docket for FUSRAP**

(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, where appropriate)
- (5) Summary of Remedial Action (what was done; how it was done; waste volume and waste types; disposal location; cost breakdown; and occupational and public exposures)

(C) Exhibit II – Documents Supporting the Certification Site

These include but are not limited to:

- (1) Decontamination or Stabilization Criteria
- (2) Designation or Authorization Documentation
- (3) Characterization Report
- (4) NEPA Documents
- (5) Agreements (with owner, state, and so forth)
- (6) Post Remedial Action Survey and Monitoring Report
- (7) Verification report and interim verification letter to the owner
- (8) State, County, and Local Comments On Remedial Action (and others as appropriate)
- (9) Recommended Restrictions and Actions Taken to Implements Them
- (10) Federal Register Notice
- (11) Approved Certification Statement

(D) Exhibit III – Diagrams and/or Figures or Tables Supporting the Certification

(E) Relevant Documents

**Appendix B:
DRAFT
U.S. Army Corps of Engineers: FUSRAP SITE CLOSEOUT
DOCUMENT OUTLINE**

I. Introduction

- A. Executive Summary

II. Summary of Site Conditions

- A. Site background
- B. Previous actions taken prior to USACE execution
- C. Summary of removal actions performed
- D. Summary of remedial investigation/feasibility study results
- E. Summary of ROD(s) findings
- F. Summary of Remedial action goals
 - 1. Applicable or relevant and appropriate requirements (ARAR's)
 - 2. Regulatory guide/derived concentration guideline levels (RG's/DCGL's) for chemical specific contaminants
- G. Summary of design Criteria
- H. Summary of cleanup activities performed
- I. Waste Transportation and Disposal Summary
- J. Summary of community involvement activities performed
- K. Current and reasonably anticipated future use

III. Demonstration of Cleanup Activity Quality Assurance/Quality Control (QA/QC)

- A. Summary of QA/QC protocol followed.
- B. Summary of sampling and analysis protocol followed
Results of final inspection

IV. Monitoring Results

- A. Summary of final status surveys
- B. Summary of USACE QA of Final Status Surveys
- C. Monitoring data of non-rad constituents to demonstrate cleanup level in ROD

V. Summary of Operation and Maintenance (O&M)

- A. Description of required O&M activities
- B. Assurance that O&M plans are in place and are sufficient to maintain the protectiveness of the remedy
- C. Assurance that O&M activities will be performed
- D. Assurance that all necessary Land Use Controls are in place

VI. Summary of Remediation Costs

- A. ROD estimate of capital costs and annual O&M costs
- B. Construction contract award amount
- C. Total remedial action construction costs
- D. Current estimated annual O&M costs

VII. Five –Year Review

- A. Necessity of five-year Review
- B. Summary of any five-year reviews completed.

VIII. Site Summary

- A. Achievement of ROD Remedial Action Goals (Protectiveness)
- B. Materials left in place
- C. Long Term Stewardship Responsibilities and Requirements
- D. NPL Status (de-listing, partial de-listing, non-NPL)
- E. NRC License Status
- F. Lessons Learned
- G. Conclusion

Appendices

- A. Declaration of Response Complete
- B. Land Use Control Implementation Plan and annual data reports (if applicable)
- C. Operations and Maintenance plan and annual data reports (if applicable)
- D. Regulatory correspondence regarding achievement of ROD remedial action goals

Appendix C
Energy Technology Engineering Center
Certification Docket Format

Exhibit I: Documents Supporting the Certification for the Unrestricted use of [site] at the Energy Technology Engineering Center

- a) Memorandums for Release
 - 1. Internal Coordination
 - 2. External Coordination
- b) Statement of Certification documents
- c) *Federal Register* notice

Exhibit II: Sitewide Release Criteria for Remediation of Facilities at Santa Susanna Field Laboratory (Includes Energy Technology Engineering Center) And Associated Documentation

- a) Memorandums stating criteria (approved by DOE Oakland Operations Office, State of California Dept. of Health Services)
- b) Safety Review Report

Exhibit III: Independent Verification Documentation of the Radiological Condition of [site] at Energy Technology Engineering Center After Decontamination and Decommissioning

- a) Independent Verification Final Report

Exhibit IV: Decontamination and Decommissioning Final Report

- a) Final Report **or** Documents Supporting D&D

Exhibit V: Final Radiological Survey Report of [site]

Exhibit VI: National Environmental Policy Act Documentation for Decontamination and Decommissioning of [site] at Energy Technology Engineering Center

FOOTNOTES

- ^a Williams, Alexander. Personal interview. 20 July 2001.
- ^b Rudek, Elizabeth. Telephone interview. 20 July 2001.
- ^c Williams, Alexander. Personal interview. 20 July 2001.
- ^d Rudek, Elizabeth. Telephone interview. 20 July 2001.
- ^e Rudek, Elizabeth. Telephone interview. 20 July 2001.
- ^f McDaniel, Tomiann. "RE: USACE Closeout Criteria—FUSRAP." E-mail to author. 24 July 2001.
- ^g McDaniel, Tomiann. "USACE Closeout Criteria—FUSRAP." E-mail to author. 12 July 2001.
- ^h McDaniel, Tomiann. "RE: USACE Closeout Criteria—FUSRAP." E-mail to author. 24 July 2001.
- ⁱ Williams, Donald. "Comments on your Certification Docket Paper." E-mail to author. 8 Aug. 2001.
- ^j Dyster, Paul. Telephone interview. 31 July 2001.
- ^k Dyster, Paul. Telephone interview. 31 July 2001.
- ^l Pavelka-Zarkesh, Lynn. "Re:RE:RE: tag—you're it" (LTS and Dockets). E-mail to author. 17 July 2001.
- ^m Pavelka-Zarkesh, Lynn. "Re:RE:RE: tag—you're it" (LTS needs). E-mail to author. 9 July 2001.
- ⁿ Barainca, Michael. Personal interview. 2 July 2001.
- ^o Kleinrath, Art. Telephone interview. 26 July 2001.
- ^p Kleinrath, Art. Telephone interview. 26 July 2001.
- ^q Barainca, Michael. Personal interview. 31 July 2001.
- ^r Rudek, Elizabeth. Telephone interview. 20 July 2001.

REFERENCES

1. U.S. Department of Energy. Closing the Circle on the Splitting of the Atom: The Environmental Legacy of Nuclear Weapons Production in the United States and What the Department of Energy is Doing About It. Jan. 1995.
2. U.S. Department of Energy and Army Corps of Engineers. Memorandum of Understanding Between the U.S. Department of Energy and the U.S. Corps of Engineers Regarding Program Administration and Execution of the Formerly Utilized Sites Remedial Action Program (FUSRAP). March 1999.
3. U.S. Department of Energy. A Report to Congress on Long-Term Stewardship. Volume 1—Summary Report. DOE/EM-0563. Jan. 2001.
4. "CERCLA Overview." Superfund. Environmental Protection Agency. 28 March 2001. Available at: <http://www.epa.gov/superfund/action/law/cercla.htm>. Accessed 16 July 2001.
5. U.S. Department of Energy. Verification and Certification Protocol—Supplement No. 2 to the FUSRAP Summary Protocol. Revision 1. Nov. 1985.
6. U.S. Army Corps of Engineers. Site Closeout Policy for the Formerly Utilized Sites Remedial Action Program (FUSRAP) DRAFT. July 2001.
7. U.S. Department of Energy. Certification Docket for the Remedial Action Performed at the Middlesex Municipal Landfill in Middlesex, New Jersey in 1984 and 1986. May 1989.

8. U.S. Department of Energy. Certification Docket for the Remedial Action Performed at the Alba Craft Laboratory and Vicinity Properties Site in Oxford, Ohio. Jan. 1997.
9. U.S. Department of Energy. Certification Docket for the Remedial Action Performed at the B&T Metals Site in Columbus, Ohio. June 2001.
10. U.S. Department of Energy. Certification Docket for the Release of Building 028 at The Energy Technology Engineering Center. Apr. 1997.
11. U.S. Department of Energy. Certification Docket for the Release of Building 029 at The Energy Technology Engineering Center. Apr. 1997.
12. U.S. Department of Energy. EM Environmental Laws and Regulations. 1994.
13. U.S. Department of Energy. Memorandum: Independent Verification for Northwest Area Programs Environmental Restoration Activities; Attachment 3: "Federal Verification Activities Under CERLA." July 1992.

Documenting Completion of Environmentally Contaminated Sites Through Certification Dockets



Tonia Vassilowitch
University of Connecticut
(formerly with Department of Energy)



I. Introduction

- Department of Energy's EM Office
 - Established 1989
 - Responsibilities: stabilization of nuclear facilities, managing wastes, supporting nuclear nonproliferation policies, and environmental restoration



I. Introduction

Environmental Restoration of Sites

- Formerly Utilized Sites Remedial Action Program (FUSRAP)
 - Transfer from DOE to U.S. Army Corps of Engineers (1999)
- Office of Long Term Stewardship
 - Responsible for long term surveillance
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)



I. Introduction

Certification Dockets

- Original purpose
 - Document successful completion of site
 - Assert radiological conditions are in compliance with DOE standards
 - Release the site for reuse
- New questions
 - Amount of information to be included
 - Format of docket
 - New audience



II. Certification Docket Examination

Information can either be included or referenced –

■ Include

- All information is readily available (+)
- Docket becomes voluminous and difficult to handle (-)
- Example: Middlesex Municipal Landfill

■ Reference

- Docket is easy to handle and copy (+)
- Supporting documents may be misplaced or destroyed (-)
- Example: Alba Craft Laboratory and vicinity properties

II. Certification Docket Examination

1985 DOE Protocol	ETEC Format	USACE Draft Format
Site descriptions	Memorandum for release	Site descriptions
Summary of remedial action	Statement of certification	Summary of remedial action
Decontamination criteria	<i>Federal Register</i> notice	Summary of ROD
Agreements (with owner, state, etc.)	Memorandum stating criteria	Waste transportation and disposal
Post-remedial action survey and monitoring report	Safety review report	Summary of QA/QC
Verification report	Independent verification final report	Summary of final status surveys
Recommended restrictions	Final report or documents supporting D&D	Descriptions and assurance of O&M
<i>Federal Register</i> notice	Final radiological survey	Summary of 5 year review necessity or completion
Approved certification statement	NEPA documentation for D&D	Site summary (includes LTS responsibilities, lessons learned)



III. Interviews

- FUSRAP under DOE
 - Former designation and certification manager for DOE FUSRAP:
 - Referencing supporting documents shortens dockets, reduces repetition
 - Representative from DOE's FUSRAP contractor:
 - Referencing supporting documents highlights the most important information; supporting documents should be bound in separate document
 - Certification Dockets put a stamp of completion on the site



III. Interviews

■ USACE Draft Format

- FUSRAP team leader for USACE:
 - Draft format adheres to CERCLA closeout criteria
 - Draft format contains all pertinent information in a different fashion
 - Note in local paper rather than *Federal Register*
 - Unsure of Independent Verification; uses QA/QC

■ ETEC Format

- Former headquarters program manager:
 - ETEC buildings owned by DOE on leased land
 - Some original documents missing, reconstructed
 - Documentation limited, and docket is based on CERCLA, RCRA, DOE Order 4300.1, and other such criteria



III. Interviews

- Intended Audience: Office of LTS
 - Technical and remediation contractor records leader, Grand Junction:
 - LTS needs sufficient data to trace environmental health problems, maintain any systems/structures in place, maintain permits & MOUs, address stakeholder issues
 - Senior engineer for LTS:
 - LTS needs all contaminant information, environmental setting information, monitoring data
 - LTS program manager for Grand Junction:
 - LTS needs to know the promises made about the site (e.g., limits of radiation), contact information



III. Interviews

- Intended Audience: Public
 - Councilman in State of New York:
 - Homeowners, workers from site, activists
 - People want as much information as possible
 - Independent verification very important



IV. Conclusions

- Original purpose of Certification Docket remains
- Author recommends that summaries and references be in one bound Docket, with supporting documents bound in second volume
- Independent verification is very important
- USACE draft format is comprehensive and organized
- Dockets need to be reevaluated regularly



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