

Proposed Changes to Simplify Review of the Next WIPP Compliance Recertification Application - 8138

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ABSTRACT

The amended Waste Isolation Pilot Plant (WIPP) Land Withdrawal Act (LWA) of 1996, P. L. 104-201, 110 Stat. 2422 [1], requires the U.S. Department of Energy (DOE) to prepare and submit documentation demonstrating continued compliance with the Environmental Protection Agency's (EPA's) radioactive waste disposal standard 40 CFR Part 191 [2] every five years starting after first waste receipt in accordance with the criteria of 40 CFR 194 [3]. The DOE submitted the WIPP Compliance Certification Application (CCA) [4] to EPA in 1996 and it was approved by EPA in 1998. The first shipment of waste was received for disposal at WIPP on March 26, 1999. Subsequently, the first Compliance Recertification Application (CRA) [5] was submitted to EPA on March 26, 2004. Reflecting on lessons learned from the previous applications, the DOE is proposing a change in the format for the next CRA due on March 26, 2009.

The DOE has an objective to communicate plans, schedules and recertification methodology as early as possible to EPA and stakeholders. With that objective in mind, the DOE began communicating the proposed new application strategy to the EPA in mid-2006. For the 2009 CRA submittal, the DOE is proposing to align the document's format to match each section to the requirements of the WIPP compliance criteria at 40 CFR Part 194 [3] and the EPA recertification support documents.

The benefits of the revised format include improved integration of all regulatory, operational, and programmatic activities; easier access to historical information and decisions; a decreased level of effort for DOE, EPA and Stakeholder review; enhancing the likelihood of a quicker recertification decision; and potentially reducing DOE's post-submittal CRA tasks.

This paper will provide insight to those wishing to understand and be kept abreast of changes in the WIPP's certification process.

INTRODUCTION

The amended Waste Isolation Pilot Plant (WIPP) Land Withdrawal Act (LWA) of 1996, P. L. 104-201, 110 Stat. 2422 [1], requires the U.S. Department of Energy (DOE) to prepare and submit documentation demonstrating continued compliance with the

Environmental Protection Agency's (EPA's) radioactive waste disposal standard 40 CFR Part 191 [2] every five years starting after first waste receipt in accordance with the criteria of 40 CFR 194 [3]. The DOE submitted the WIPP Compliance Certification Application (CCA) [4] to EPA in 1996 and it was approved by EPA in 1998. The first shipment of waste was received for disposal at WIPP on March 26, 1999. Subsequently, the first Compliance Recertification Application (CRA) [5] was submitted to EPA on March 26, 2004. The CCA and CRA format consisted of nine chapters and several appendices, attachments and reference documents. The CCA was submitted to EPA and approved in 20 months, while the CRA was submitted to EPA and approved in 24 months after several follow-up interactions by both parties. Reflecting on lessons learned from the previous applications, the DOE is proposing a change in the format for the next CRA due on March 26, 2009.

THE PLANNING PHASE

The process for defining the format and content of the CRA that is due for submittal on March 26, 2009, began shortly after the submittal of the CRA-2004. Representatives from each of the contributing organizations met to capture and share work practices and experiences. This group was composed of personnel from the Department of Energy (DOE) Carlsbad Field Office (CBFO), Washington TRU Solutions (WTS), Washington Regulatory and Environmental Services (WRES), Sandia National Laboratories (SNL) and Los Alamos National Laboratory-Carlsbad Operations (LANL-CO). They identified good work practices that may be adopted and adverse work practices to be avoided. In addition, the group identified innovative approaches recommended for the preparation of future CRAs. A report [1] of the group's research was issued.

The development of the first CRA was guided by the Recertification Project Plan [6]. This plan sets the overall direction for a complex and interdependent set of tasks that is repeated every five years and culminates in EPA certification that the WIPP facility demonstrates continued compliance with Title 40 Code of Federal Regulations (CFR) Part 191, "Environmental Radiation Protection Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes," pursuant to the LWA paragraphs 8(d)(1) and 8(f). In addition, this plan establishes the institutional roles and responsibilities of WIPP project participants in the recertification effort and lays out a high-level schedule for producing a CRA at five-year intervals. Woven throughout this plan are elements of guidance and direction gained from written correspondence and technical exchanges with EPA managers and staff that occurred during the first recertification. Information from the Lessons Learned [7] report was used to revise the Recertification Project Plan [6].

Two years expired between the submittal of the first CRA and EPA's formal approval. EPA and DOE are anxious to identify system improvements to decrease the EPA review time of the next CRA. Early on, EPA identified an informal goal of completing the review and approval process in 12 months.

The DOE shares the same goal. To meet that target, DOE determined that a “new” recertification format and content would be required and early EPA and stakeholder “buy-in” to the recertification methodology was needed.

With that objective in mind, the DOE began communicating its proposed new application strategy to the EPA in mid-2006. For the 2009 CRA submittal, the DOE is proposing to align the document’s format to match each section to the requirements of the WIPP compliance criteria at 40 CFR Part 194 [3] and the EPA recertification support documents. These newly proposed sections 194.8-194.55 (CRA-2009) will replace the previous application’s Volume 1, chapters 1-9 (CCA/CRA-2004). Specific guidance for implementing the document strategy was contained in the format & content guide and annotated outline. The feasibility of this guidance was tested by drafting text for one of the newly proposed sections.

The proposed format followed regulatory decision documents used by the EPA in previous certification decisions i.e., the CCA and the CRA-2004. Those regulatory documents included Compliance Application Review Documents (CARDs) and Technical Support Documents (TSDs). The format proposed included the following elements:

- Citation of 40 CFR 194 requirements [3];
- Historical and background information relating to the section’s EPA requirements;
- Any related changes that have occurred over the five-year period as captured in 40 CFR §194.4(b)(4) Annual Change Reports from July 2003 to June 2007;
- A synopsis and evaluation of all new related and relevant data;
- DOE’s position that demonstrates compliance with this section’s EPA requirements;
- EPA’s compliance position from applicable EPA CARDs and TSDs.

The initial planning assumption is that the context, structure, and names of the current application’s appendices will not change. However, as text is drafted in the new format that assumption was relaxed to allow for some changes to the structure of appendices.

The benefits of the revised format include improved integration of all regulatory, operational, and programmatic activities; easier access to historical information and decisions; a decreased level of effort for DOE, EPA and Stakeholder review; enhancing the likelihood of a quicker recertification decision; and potentially reducing DOE’s post-submittal CRA tasks.

A comprehensive schedule, with predecessor logic was prepared to define the document preparation process for twenty three sections, numerous appendices, and multiple stand alone CRA-2009 references,

EARLY FEEDBACK

Gaining consensus from all stakeholders was of paramount importance prior to writing the CRA-2009. Stakeholders include WIPP participant organizations and external

organizations. WIPP participants include DOE Headquarters and the Carlsbad Field Office, SNL, LANL, WTS and WRES. External organizations include the EPA and several New Mexico stakeholders such as Concern Citizens for Nuclear Safety, Southwest Research and Information Center, Nuclear Watch, PECOS Management Services, Inc., and Citizens for Alternatives to Radioactive Dumping.

Solicitation of input on the proposed new format ranged from telephone calls to face-to-face presentations. Discussions started with conceptual ideas and evolved to draft products. EPA staff and stakeholders were provided copies of the annotated outline and a sample of new text format to the specifications previously discussed. All EPA and stakeholder feedback was provided to WIPP participants verbally during face-to-face interactions.

EXECUTION

As previously mentioned, a comprehensive schedule was prepared to define the document preparation process. Based on experience gained in the preparation of the last CRA, the logic for developing each portion of the application was defined from the initial draft to the final document. The schedule not only includes details on document development; but also includes scheduled public and EPA interactions. Additional actions included the development of background information; technical, legal and DOE Headquarters reviews; and submittal to the EPA Administrator.

A format and content guide was developed and approved by the CRA team. The format and content guide is designed to be a tool for authors as they prepare text. As authors draft new text, modifications were made to the format and content guide to accommodate needed changes.

The process includes initial preparation by the lead author and numerous contributing authors, as appropriate. Once the initial draft is complete, it is reviewed internally by the author's organization. At this point, the advances in document management software are brought to bear. The draft document is placed in an electronic library that can be checked out to reviewers, who can provide comments in a cumulative manner. That is, each successive reviewer can view all previous comments made in a "track changes" mode and add their comments to the previously reviewed text.

After all reviewers have had a chance to comment, they meet and resolve comments. Electronic technology is again applied with the availability of MS "Live Meeting" to allow remote participants to engage real time in the resolution process.

The above process provides the mechanisms for all interested elements of the DOE to have the maximum available review time and to actively participate in document reviews. This should have the effect of reducing the number of drafts that have to be written before a final product is prepared. This concept is especially important for remote reviewers from DOE Headquarters and other ancillary subcontractor staff.

CHALLENGES

Feedback from stakeholders and direction from the EPA present some interesting challenges for completing the CRA to meet all regulatory requirements in 40 CFR 194 [3] and additional expectations. Some of the challenges encountered so far, or that are known to exist are described below.

As provided by 40 CFR Part 194.12, the CRA-2009 will be submitted to EPA electronically. In the electronic version of Volume 1 (Chapters 1-9) of the CRA-2004, hyperlinks were used to take the reader to a specific Appendix or to a reference. The EPA requested that the CRA-2009 that hyperlinks point not just to the Appendix or reference but rather to a specific page and if possible to a specific paragraph. This presents a significant challenge because as presently scheduled the CRA-2009 document will be provided to DOE-HQ for a final sixty day review in November of 2008. The document must be written, reviewed and all hyperlinks included before the November 2008 date, and then revised and hyperlinks re-checked after HQ review and before submittal to the EPA in 2009.

One potential stumbling block that the DOE may encounter is obtaining the required signature (per LWA, Section 8(f)(1) [1], in March of 2009, of a political appointee right after a presidential election. It is quite possible that the election will result in new individuals filling positions of the Secretary of Energy and the EPA Administrator.

For the CRA-2004, a document management subcontractor was used to provide technical editing of the application. Numerous challenges were encountered with a cost that exceeded \$1 million. The contractual scope of work will be modified to improve the timeliness of technical editing activities and to provide the extensive hyperlinks requested by the EPA to link citations to other portions of the application and references.

In order to produce a final product that can be submitted in March 2009, the text of the application must be finished by early September 2008. There are some technical activities and decisions that will be completed after September 2008 that will not be included in the CRA. For example, a new inventory is scheduled to be available in October 2008. A planned change request submitted to the EPA in November 2007 that would allow DOE to emplace some RH waste streams in shielded containers will likely not be approved until late in 2008, or later. Exclusion of these activities make the document appear incomplete or outdated.

CONCLUSION

The proposed changes to the next WIPP CRA will simplify the review for EPA, stakeholders, and DOE. The new format will integrate WIPP project activities and make it easier to track historical information. As the CRA-2009 draft text is developed, the

format and content will evolve so that the application is complete and the review time is minimal.

Benefits to the proposed format such as a decreased level of effort for review, the likelihood of a quicker recertification decision, and the reduction of DOE's post-submittal CRA tasks are some reasons DOE is embarking on such a significant endeavor. Capturing PCR updates and including extensive hyperlinks are some challenges DOE is facing. However, DOE is aware of these challenges and will continue to plan for and track such items in the CRA schedule.

Overall, the proposed changes to the next application will result in a document that is easier to review and update future CRA information.

REFERENCES

1. Waste Isolation Pilot Plant Land Withdrawal Act, Public Law 102-579, 106 Stat. 4777, as amended by Public Law 104-201, 110 Stat. 2422, 102nd U.S. Congress (1992).
2. 40 CFR § 191, Environmental Radiation Protection Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes, Office of the Federal Register, National Archives and Records Administration, Washington, D.C.
3. 40 CFR Part 194, Criteria for the Certification and Re-Certification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations, Office of the Federal Register, National Archives and Records Administration, Washington, D.C.
4. Title 40 CFR Part 191 Compliance Certification Application for the Waste Isolation Pilot Plant, DOE/CAO 1996-2184, U.S. Department of Energy, Carlsbad Area Office (1996).
5. Title 40 CFR Part 191 Subparts B and C Compliance Recertification Application 2004, DOE/WIPP 04-3231, U.S. Department of Energy, Carlsbad Field Office (2004).
6. Recertification Project Plan, DOE/WIPP 01-3199 Revision 3, U.S. Department of Energy (2007).
7. Lessons Learned from the Preparation of the First Compliance Recertification Application, U.S. Department of Energy (2006).