



SOUTHWEST RESEARCH AND INFORMATION CENTER

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Air and Radiation Docket and Information Center
Environmental Protection Agency
Mailcode: 6102T
1200 Pennsylvania Ave. NW.
Washington, DC 20460.

Dear People,

Following are initial comments from Southwest Research and Information Center (SRIC) regarding completeness and accuracy of the Compliance Recertification Application (CRA-2014) submitted by the U.S. Department of Energy (DOE) that was received by the Environmental Protection Agency (EPA) on March 26, 2014. SRIC has been involved with many aspects of the Waste Isolation Pilot Plant (WIPP) for decades, including the certification and recertification processes of the EPA.

SRIC fully expects that EPA will fulfill its commitments to provide additional opportunities, including meetings in New Mexico, for public comment before the agency makes a completeness determination. Continuing public comment also must be provided when DOE re-submits or supplements the currently incomplete and inaccurate CRA.

As a basic matter, EPA regulations require: "Information provided to the Administrator in support of any compliance application shall be complete and accurate." 40 CFR 191.11. The CRA does not meet either the "complete" or "accurate" requirements. Following are a few of the incomplete and inaccurate matters in the CRA.

1. The CRA-2014 was incomplete when it was submitted.

On February 14, 2014, the only operating underground continuous air monitor at WIPP alarmed, indicating a release of radioactivity. Subsequent information, including EPA's own inspection report, determined that a radiological release took place "that led to the release of a small but measurable amount of radioactive material to the environment." (<http://www.epa.gov/radiation/docs/wipp/Subpart-A-Inspection-Report-Response-Incident-February2014.pdf>.) SRIC believes that event should have been included in the CRA, despite the fact that it occurred after the December 31, 2012 data cutoff date. DOE made no statement in the CRA about the event or its relevance – or



the lack thereof, if that is what DOE believes – which itself makes the document incomplete, since it was a known event at the time the CRA was submitted.

Because the cause(s) of the radiological release remain unknown more than eight months after the event, exactly how the event affects continuing compliance with the certification is uncertain. But it is certain that the event does affect continuing compliance. Among the many parts of the CRA that could be affected are 40 CFR sections 4, 8, 14, 15, 22, 23, 24, 34, 46, and 55.

For example, the waste characterization requirements of 40 CFR 191.24 may not have been met or violations of those requirements may have occurred that contributed to the release. Current DOE speculation is that the radiological release occurred because of inadequate waste characterization at the Los Alamos National Laboratory (LANL). The CRA certainly does not demonstrate that the waste characterization requirements were met for all waste involved in the radiation release.

Further, if the cause(s) of the release relate to inadequate quality assurance, the requirements of 40 CFR 191.22 were likely not met. The CRA certainly does not demonstrate that waste characterization has been adequately executed pursuant to the quality assurance requirements for the radioactive waste that was released.

As another example, 40 CFR 191.46 requires “that removal of waste from the disposal system is feasible.” That feasibility now is in doubt regarding some or all of the waste in Panel 7, since DOE has no plans to remove any of that waste, including for the purpose of trying to determine the cause(s) of the release. The CRA certainly does not address the issue of removing breached waste container(s) nor demonstrate that the waste can and will be removed from the contaminated areas.

When the cause(s) are established, DOE should be required to re-submit or supplement the CRA to address the effects of the radiological release and revise the relevant sections of the CRA.

2. Subsequent events have shown the CRA is be incomplete.

On July 16, 2014, DOE-WIPP suspended the LANL characterization and certification for the S3000 Summary Group and for all waste activities at the Waste Characterization, Reduction, and Repackaging Facility.

(<http://www.nmenv.state.nm.us/NMED/Issues/documents/DOEMemotoLANL.pdf>). That suspension also should have implications for CRA Section 8, but there is no discussion of that suspension or its effects in the CRA.

On July 30, 2014, DOE informed the New Mexico Environment Department (NMED) that 368 containers at WIPP had been give the D001 RCRA code for ignitable waste (<http://www.nmenv.state.nm.us/NMED/Issues/documents/WIPPNoticeofApplicationofWasteNumbers.pdf>). Although that action does not directly relate to EPA’s radiation protection standards, it clearly reveals the inadequacy of several RCRA-related

processes. At a minimum, DOE should be required to demonstrate that there are no CRA-related effects of changing waste designations.

These, and subsequent known, events should be described and resulting changes affecting the CRA should be provided in a re-submitted or supplemented application.

3. The WIPP Recovery Plan shows that the CRA is incomplete.

On September 30, 2014, DOE released the WIPP Recovery Plan (<http://www.wipp.energy.gov/Special/WIPP%20Recovery%20Plan.pdf>). SRIC considers the Plan to be incomplete and inaccurate, but it does include information that appears to be contrary to parts of the CRA.

For example, the CRA Executive Summary states: "Repository Reconfiguration - On August 30, 2011, the DOE submitted to the EPA a PCR for the reconfiguration of Panels 9 and 10 within the WIPP repository footprint. The proposed change replaces the use of the north-south access drifts as future Panels 9 and 10 with two new panels mined to the south of Panels 4 and 5. This proposed change continues to be important to the DOE, even though it is only mentioned briefly in a few sections" (p. EXECSUM-3, see also Section 15, p. 19). However, the Recovery Plan states: "To increase the capacity and efficiency of the underground, it is envisioned that waste could be disposed of in the drifts between Panels 1 through 8" (p. 3, see also p. 12). Thus, the DOE position now has changed so that it intends to use Panels 9 and 10, and the CRA is incomplete and inaccurate regarding repository reconfiguration.

Another example is that the Recovery Plan states: "to restore WIPP to full operations, two capital asset project line items are required: (1) a new permanent ventilation system, with an estimated cost range of \$65 million–\$261 million, and (2) supporting exhaust shaft, with an estimated cost range of \$12 million–\$48 million" (p. v and elsewhere). The new exhaust shaft is not discussed in the CRA, despite the fact that it would be a significant change to the repository. Further, the new ventilation system and exhaust shaft will necessarily require new underground drifts. That information must be provided in the CRA.

Thus, the CRA must be re-submitted or supplemented to address the changes proposed in the Recovery Plan.

4. The WIPP Recovery Plan mis-states the CRA process and schedule.

The Recovery Plan states: "Any recovery activities that affect long-term performance of the WIPP repository will be coordinated with the EPA and be factored into their ongoing review of the WIPP Recertification Application, a five year review that must be completed by March 2015 in order for WIPP to operate" (p. 16). Clearly, if there is any public process and a comprehensive technical review of the CRA, the recertification decision cannot be made by March 2015. When SRIC raised the concern on October 7, EPA stated that the Recovery Plan was mistaken. However, the Recovery Plan has not been revised, so that statement apparently is still operative from the DOE perspective. In addition to a correction being required in the Recovery Plan, the CRA should be

revised to address the fact that DOE agrees that recertification is not on such a schedule. Further, EPA should inform DOE that it cannot resume waste handling activities at WIPP until the recertification determination has been issued.

5. The CRA contains major errors regarding remote-handled (RH) waste volumes.

CRA, Section 15 states: "The DOE used the ATWIR-2012 data for the CRA-2014 inventory, after it was scaled for PA. The scaled inventory was documented in the Performance Assessment Inventory Report - 2012 (Van Soest 2012)" (p. 15-20). CRA, Section 24 states: "The TRU waste inventory used in the CRA-2014 is based on the unscaled ATWIR-2012 (U.S. DOE 2012a; data as of December 31, 2011, the cutoff for inclusion in the CRA-2014 PA), which is then scaled to a disposal inventory in the PAIR-2012 (Van Soest 2012) that supports PA calculations" (p. 24-34).

The ATWIR-2012 states: "As of December 31, 2011, WIPP had received 10,244 shipments of TRU waste (9,708 CH shipments and 536 RH shipments)" (p. 48). As of that date, the WIPP Waste Information System (WWIS – now the WIPP Data System (WDS)) included that same number of shipments and calculated 79,385.12 cubic meters of contact-handled (CH) and 268.56 cubic meters of RH waste were emplaced in the underground. However, the WWIS showed that of the 536 RH shipments, 533 RH canisters were emplaced underground. Since each canister has a volume of 0.89 cubic meters, the correct calculation of RH waste on that date was $533 \times 0.89 = 474.37$ cubic meters. Thus, the correct calculation is 205.81 cubic meters or 43 percent more than is in the Inventory.

Among the consequences of that inaccurate volume amount, is that through its RH scaling, the CRA includes at least 205 cubic meters of RH waste above the legal limit. Given the likely similar inaccurate counting of the "WIPP-bound" RH waste in the Inventory, the actual amount of RH waste above the legal limit is likely much in excess of 205 cubic meters. The 3.67 scaling factor in the PAIR-2012 for RH waste results in the amount of RH waste substantially exceeding of the legal capacity limit. It is inappropriate for DOE to propose emplacing more RH waste at WIPP than the legal limit. EPA must again state that it will not allow violation of the WIPP LWA requirements. But EPA also must require DOE to revise the CRA to accurately calculate the amount of RH waste emplaced – based on the canister volume of 0.89 cubic meters.

Further, the inaccurate calculation of RH waste volume in the CRA is particularly unacceptable because the accurate calculation is well known to DOE. NMED has previously corrected the calculation. For example, on August 8, 2011, DOE submitted a class 1 permit modification to incorporate into the permit the final volume amounts emplaced in Panel 5 ([http://www.wipp.energy.gov/library/Information Repository A/Class 1 Permit Modifications/Class 1 Revision of Table 4.1.1 and Table G1.pdf](http://www.wipp.energy.gov/library/Information%20Repository%20A/Class%201%20Permit%20Modifications/Class%201%20Revision%20of%20Table%204.1.1%20and%20Table%20G1.pdf)). The modification request, using WWIS data that are used in the CRA ATWIR-2012 and PAIR-2012, calculated the RH volume in Panel 5 to be 153 cubic meters (p. A-4). NMED specifically rejected that calculation and corrected the RH volume in Panel 5 to be 235 cubic meters ([http://www.wipp.energy.gov/library/Information Repository A/Class 1 Permit Modifications/Class 1 Revision of Table 4.1.1 and Table G1.pdf](http://www.wipp.energy.gov/library/Information%20Repository%20A/Class%201%20Permit%20Modifications/Class%201%20Revision%20of%20Table%204.1.1%20and%20Table%20G1.pdf)).

ations/Class 1 Revision of Table 4.1.1 and Table G1.pdf). On February 6, 2014, when DOE submitted the class 1 permit modification to incorporate the final volume amounts for the waste emplaced in Panel 6, it maintained the accurate calculation for RH waste of 235 cubic meters in Panel 5 and used the accurate calculation of 214 cubic meters of RH waste in Panel 6

([http://www.wipp.energy.gov/library/Information Repository A/Class 1 Permit Modifications/14-1411 Attachment RES 14-100 Attachment Class 1 PMR FINAL%2001-29-14.pdf](http://www.wipp.energy.gov/library/Information%20Repository/A/Class%201%20Permit%20Modifications/14-1411%20Attachment%20RES%2014-100%20Attachment%20Class%201%20PMR%20FINAL%202001-29-14.pdf)). Thus, according to the WIPP permit, the RH volume in Panels 4, 5, and 6 is 625 cubic meters. The WDS, used in the CRA, continues to inaccurately calculate the RH waste volume as 350.6 cubic meters

(<http://www.wipp.energy.gov/general/GenerateWippStatusReport.pdf>).

If EPA does not require the correct RH calculation, the inaccurate count problem continually increases substantially. With Panel 6 being filled, the inaccurate count has increased to 274 cubic meters. EPA must require the CRA to be revised to correctly count RH volume, including emplaced volumes and “WIPP-bound” waste in the CRA and in reference documents – Annual Inventory and PAIR – published in the future.

Additionally, there is not sufficient space in the underground to emplace the legal limit of RH waste. Even if panels 7 and 8 were filled to the permitted capacity, panels 1 to 8 would contain 1,925 m³ of RH waste, rather than the permitted capacity of 2,635 m³. If non-existent panels 9 and 10 were filled to permitted capacity, the total amount of RH waste would be 3,225 or less than 46% of the legal limit. Of course, Panel 7 will not be filled, as apparently 18 canisters (16 cubic meters) that are now emplaced will be the total amount of RH waste emplaced, as the Recovery Plan includes no discussion of any more RH waste being emplaced in contaminated Panel 7. If no more RH waste is emplaced in Panel 7, Panels 1 to 7 would contain 641 cubic meters of RH waste, compared with permitted capacity of 1,985 cubic meters. SRIC has called this matter to DOE’s attention on numerous occasions. The DOE Inspector General also has identified the deficiency in its May 2013 report

(<http://energy.gov/sites/prod/files/2013/05/f1/OAS-L-13-09.pdf>).

In the re-submitted or supplemented CRA, DOE should be required to explain what RH wastes that it actually intends to dispose in WIPP and in what locations and configurations.

6. A re-submitted or supplemented CRA must include new performance assessments. Given the substantial incompleteness related to the radiological release, changes included in the Recovery Plan, and significant inaccuracies related to RH waste, new performance assessments must be completed when complete and accurate information is developed.

In summary, the CRA is grossly incomplete and inaccurate. DOE should not have submitted the CRA in that form since it knew about the radiological release in February 2014. Allowing consideration of the 2014 radiological event and Recovery Plan to not be considered until the next recertification application in 2020 (or later timeframe) would be

totally inappropriate and contrary to the regulations. The CRA as submitted also contains what DOE knew was grossly inaccurate information about RH waste volumes.

Thus, the CRA does not approximate the "complete and accurate" information that 40 CFR 191.11 requires. EPA must either require a total resubmission of the CRA, which SRIC believes is warranted, or require a very substantial supplement to provide a complete application. Additional public comment time must be provided when DOE re-submits or supplements the CRA. Continuing public comment must be provided when DOE submits a complete and accurate CRA.

Thank you for your consideration of these comments.

A handwritten signature in black ink, appearing to read "Don Hancock". The signature is written in a cursive style with a large initial "D".

Don Hancock