



**Department of Energy**  
Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221  
December 13, 2021

Mr. Dennis Ivey, Manager  
Quality Assurance  
Nuclear Waste Partnership LLC  
P.O. Box 2078  
Carlsbad, NM 88221-2078

Subject: Report for CBFO Surveillance S-22-07, Evaluation of Nuclear Waste Partnership LLC, Environmental National Emission Standards for Hazardous Air Pollutants

Dear Mr. Ivey:

Enclosed is the report for Carlsbad Field Office (CBFO) Surveillance S-22-07, Evaluation of Nuclear Waste Partnership LLC (NWP), Environmental National Emission Standards for Hazardous Air Pollutants (NESHAP). The surveillance was conducted November 16, 2021 through November 18, 2021, at the Waste Isolation Pilot Plant near Carlsbad, New Mexico and at the Cascades facility in Carlsbad, NM.

No concerns were identified during the surveillance.

If you have questions, please contact Mr. Joe Lopez, CBFO Quality Assurance Division at (575) 200-0716. For all other questions, please contact myself at (575) 361-0008.

Sincerely,

*Wendy Bauer*

Wendy Bauer  
Contracting Officer  
Carlsbad Field Office

Enclosure (1)

cc: w/enclosure

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# CBFO SURVEILLANCE REPORT

**Surveillance Number:** S-22-07 **Date of Surveillance:** November 16 - 18, 2021

**Surveillance Title:** NWP Environmental National Emission Standards for Hazardous Air Pollutants (NESHAP)

**Organization:** Nuclear Waste Partnership LLC (NWP)

<b>Surveillance Team:</b>	Joe Lopez	Carlsbad Field Office (CBFO) Quality Assurance Representative
	Paul Gomez	Surveillance Team Leader, CBFO Technical Assistance Contract (CTAC)
	Jim Oliver	Team Member, CTAC
	Paul Gilbert	Team Member, CTAC

## **SURVEILLANCE SCOPE:**

Surveillance S-22-07 was conducted to verify the adequacy and implementation of the NWP Quality Assurance (QA) Program with respect to sampling, data compilation, and reporting to maintain compliance with CBFO and federal requirements for NESHAP reporting activities in accordance with CBFO documents. The surveillance also evaluated and validated the implementation and effectiveness of applicable NWP implementing procedures.

## **SURVEILLANCE RESULTS:**

The surveillance team conducted interviews with responsible personnel and reviewed prepared sampling records/forms to determine the degree to which the NWP environmental NESHAP reporting activities are implemented and effective.

## **Governing Documents/Requirements:**

### Upper-tier documents:

- 40 CFR Part 61, Subpart H, *National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities*
- DOE/WIPP-97-2238, *Periodic Confirmatory Measurement Protocol for the Waste Isolation Pilot Plant*
- DOE/WIPP-16-3526, *Waste Isolation Pilot Plant Biennial Environmental Compliance Report*
- DOE/WIPP-99-2194, *Waste Isolation Pilot Plant Environmental Monitoring Plan*

- DOE-WIPP-16-3572, *Waste Isolation Pilot Plant Annual Site Environmental Report for 2015*
- DOE/WIPP-99-2286, *Waste Isolation Pilot Plant Environmental Notification /Reporting Implementation Guidance Document*
- DOE/WIPP 04-3310, *Waste Isolation Pilot Plant Environmental Policy Statement*
- DOE/CBFO-94-1012, *Quality Assurance Program Document (CBFO QAPD)*
- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*

NWP implementing procedures:

- WP 12-RE3004, *Periodic Confirmatory Analysis, Reporting, and Compliance Activities*
- WP 16-2, *Software Screening and Control*

**ACTIVITIES EVALUATED:**

The surveillance team evaluated documentation (procedures and records) pertaining to NWP NESHAP activities. The surveillance interviewed NWP and contractor personnel regarding sampling, data compilation, and reporting of radiological and hazardous emissions to the air at the Waste Isolation Pilot Plant (WIPP).

The surveillance team verified compliance of WP 12-RC.01, *Quality Assurance Program Plan for Sampling Emissions of Radionuclides to the Ambient Air at the Waste Isolation Pilot Plant*, with Title 40 Code of Federal Regulations (CFR) Part 61, Subpart H, *National Emission Standards for Emissions of Radionuclides Other than Radon from Department of Energy Facilities*. This included surveillance of NWP activities at the WIPP. The procedures reviewed are adequately established for compliance with the upper-tier requirements.

Processes evaluated included, but were not limited to, the following:

- Sampling
- Data Compilation
- Reporting
- Software

Sample Collection and Chain of Custody

The surveillance team interviewed trained and qualified personnel and verified through observation of the sample custody process that they followed WP 12-RE3004, Rev. 8, *Periodic Confirmatory Analysis, Reporting, and Compliance Activities*, and samples were collected at the filtration A, B, C, and H monitoring stations with NESHAP custody forms.

The surveillance team met the sampling team from Regulatory and Environmental Services (RES) who put together the chain of custody for the monitoring samples. The

team traveled to Station B (Building 364), then next to Station C (Building 365). The team observed Station H supporting sampling of the 700C fans. The team was escorted to the plenum area above the Waste Handling Building (WHB) for another set of sample collections using FAS-013 (411-IP-008-001) pulling at 0.5 standard cubic feet per minute (scfm) and was within calibration range. The team asked that the oxygen sensor be monitored for calibration soon.

The surveillance team conducted interviews with responsible personnel and reviewed the following procedure: WP 12-RE3004, *Periodic Confirmatory Analysis, Reporting, and Compliance Activities*.

The surveillance team reviewed RES Chain of Custody (COC) process and interviewed responsible personnel of analysis and reporting results of Particulate Air Samples for Airborne radioactivity. The surveillance team verified data was documented on the Air Sample Report and NESHAP Filter Samples submitted to WIPP Laboratory utilizing the appropriate COC procedure.

The surveillance team verified NESHAP Filter Data Compilation and reviewed documentation for collection of NESHAP Filter and Data package receipts from the WIPP Laboratory, preparation of composite filter samples for NESHAP Isotopic analysis, and results of composite sample analysis.

The surveillance team verified the annual periodic confirmatory measurement compliance reports (NESHAP reports) for calendar years 2019 and 2020 were prepared and submitted to the United States Environmental Protection Agency (EPA).

Overall, the surveillance team verified that the procedures were adequate, correctly followed, and effective in meeting the requirements of the NESHAP program.

#### Validation and Verification of U.S. Environmental Protection Agency's (EPA) National Emission Standards on Hazardous Air Pollutants (NESHAP) program data

The surveillance team conducted interviews with qualified personnel from Regulatory and Environmental Services (RES) who compile NESHAP filter data packages from qualified laboratories and the preparation of composite filter samples for isotopic analysis. The data compiled support annual reports submitted to the EPA.

The surveillance team specifically reviewed the calendar year (CY) 2019 and 2020 NESHAP Reports and all referenced enclosures for technical adequacy and compliance with requirements documents. The dose assessment from airborne emissions was performed using the CAP88-PC, Version 4.0.1.17 (for the CY 2019 report) and Version 4.1 (for the CY 2020 report). The surveillance team focused on how changes at the WIPP Site (construction, operation, location of non-monitored individuals, etc.) could impact the dose assessments and whether the modeling was being updated to take into account these changes.

The surveillance team noted that the maximally exposed resident off-site individual (MEOSI) remained the residents at the Smith Ranch some 8.85 kilometers from the WIPP, while the non-WIPP business workspace was modeled at 300m in CY 2019 but moved back to 812m in CY 2020. These changes were made to account for physical changes in the layout of the construction area immediately outside the WIPP exclusive use fenced area.

The surveillance team interviewed RES staff to verify that truly independent data validation is performed. The team verified that two entirely independent modeling efforts are performed and the results then compared to identify any errors or invalid data results. The data validation process was performed successfully in both CY 2019 and 2020.

### **Software Quality Assurance**

DOE/CBFO-94-1012, *Quality Assurance Program Document*, Rev. 13, was reviewed by the surveillance team focusing on Software Quality Assurance (SQA), specifically section 6.0 of the QAPD. The flow-down of DOE/CBFO-94-1012, Rev. 13, to NWP is as follows:

- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*, Rev. 37
- WP 16-2, *Software Screening and Control*
- WP 16-IT1004, *Waste Isolation Pilot Plant Technology Action Request Process (TARP) for the Acquisition of Information Technology (IT) Resources*

The surveillance team evaluated the implementation of NWP's SQA program and focused on software used by RES personnel in conjunction with the NESHAP Reporting Program. The surveillance team identified the following software applications used in the NESHAP Reporting Program.

<b>Software Name</b>	<b>Procedure</b>
CAP88-PC	DOE/WIPP-16-3526, <i>Waste Isolation Pilot Plant Biennial Environmental Compliance Report</i>
Spreadsheet	WP 12-RE3004, <i>Periodic Confirmatory Analysis, Reporting, and Compliance Activities</i>

The surveillance team conducted interviews and verified information for the application of SQA controls for the NESHAP Reporting Program. All of the software identified for the NESHAP Reporting Program is controlled per WP 13-1 and WP 16-2. CAP88-PC is controlled software and was identified on the Controlled Software Log. The spreadsheet software associated with WP 12-RE3004 is uncontrolled software, yet was verified by the surveillance team to be on the uncontrolled software log. The software associated with the NESHAP Reporting Program has been documented correctly per WP 13-1 and WP 16-2. The surveillance team verified that all of the software associated with the NESHAP Reporting Program is on a software inventory.

