

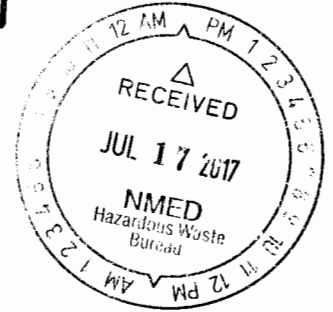


**Department of Energy**  
 Carlsbad Field Office  
 P. O. Box 3090  
 Carlsbad, New Mexico 88221



**ENTERED**

**JUL 13 2017**



Mr. John Kieling, Bureau Chief  
 Hazardous Waste Bureau  
 New Mexico Environment Department  
 2905 E. Rodeo Park Dr. Bldg. 1  
 Santa Fe, New Mexico 87505-6303

**Subject:** Submittal of New Mexico Registered Professional Engineer Certification of Modification to the Underground Ventilation System

**Reference:** DOE Letter CBFO:EPD:GTB:MN:15-1448:UFC 5487.00 from Mr. J. R. Franco and Mr. R. L. McQuinn to Mr. John Kieling, dated April 22, 2015, subject: Notification of Planned Change to the Permitted Facility, Hazardous Waste Facility Permit Number: NM4890139088-TSDF

Dear Mr. Kieling:

The purpose of this letter is to transmit a New Mexico registered Professional Engineer (PE) certification that the Waste Isolation Pilot Plant (WIPP) facility has been modified in compliance with the Hazardous Waste Facility Permit by completing a modification to the Underground Ventilation System (UVS) referred to as the Supplemental Ventilation System (SVS).

In the above referenced letter, the Hazardous Waste Bureau was notified of planned changes to support the addition of the SVS. We have enclosed a letter from a New Mexico registered PE certifying that the facility has been modified to incorporate these changes to the UVS. The enclosed PE certification letter, along with our signatures below, constitutes compliance with WIPP Hazardous Waste Facility Permit, Part 1, *General Permit Conditions*, Section 1.7.11.2.i.

We certify under penalty of law that this document and all attachments were prepared under our direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on our inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of our knowledge and belief, true, accurate and complete. We are aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

If you have any question, please contact Mr. George T. Basabilvazo at (575) 234-7488.

Sincerely,

Todd Shrader, Manager  
 Carlsbad Field Office

Bruce C. Covert, Project Manager  
 Nuclear Waste Partnership LL

Enclosure

cc:  
 R. Maestas, NMED \* ED  
 D. Biswell, NMED ED  
 CBFO M&RC  
 \*ED denotes electronic distribution

CBFO:OEP:GTB:AC:17-1054:UFC 5486.00

170716



June 22, 2017

Mr. Michael Furner  
Construction Manager  
Nuclear Waste Partnership, LLC  
P.O. Box 2078  
Carlsbad, NM 88220

**Subject:** MODIFICATION OF UNDERGROUND VENTILATION SYSTEM

Dear Mr. Furner:

**1. Introduction**

1.1 This letter is the New Mexico professional engineer's determination required by Permit Part 1, Section 1.7.11.2.i. that the modifications to the facility system known as the Underground Ventilation System (UVS) were designed, constructed and functionally tested in a manner such that it can be operated in compliance with the conditions of the Waste Isolation Pilot Plant Hazardous Waste Facility Permit (Permit) revised June 14, 2017. The modification to the UVS is an additional fan system referred to as the Supplemental Ventilation System (SVS).

1.2 The following documents were reviewed:

- A. Waste Isolation Pilot Plant Hazardous Waste Facility Permit, Permit Number: NM4890139088-TSDF, effective October 19, 2016, as modified by the Permittees on June 14, 2017.
- B. Letter to Mr. John Kieling, Chief, Hazardous Waste Bureau, New Mexico Environment Department, Notification of Planned Change to the Permitted Facility, dated April 22, 2015.
- C. Letter to Mr. John Kieling, Chief, Hazardous Waste Bureau, New Mexico Environment Department, Notice of Class 1 Permit Modifications, dated June 14, 2017.
- D. Applicable System Design Documents

a. Engineering Drawings

53-Z-014-W1	Title Page
53-Z-014-W2*	V&ID
53-Z-014-W3*	Instrument List
53-Z-014-W4*	I/O List
53-Z-014-W5*	Schematic, Power & Comms
53-Z-014-W6*	Schematic, AI Module 2
53-Z-014-W7*	Schematic, AI Module 3
53-Z-014-W8*	Schematic, AI Module 4

53-Z-014-W9*	Schematic, TI Module 5
53-Z-014-W10*	Schematic, TI Module 6
53-Z-014-W11*	Schematic, DI Module 7
53-Z-014-W12*	Schematic, DO Module 8
53-Z-014-W13*	Main Panel Layout & BOM
53-Z-014-W14*	Cable Routing Layout
53-Z-014-W15*	Cable List
53-Z-014-W16*	Network Architecture
53-Z-014-W17*	One-Line Diagram
53-Z-014-W18*	Fan Panel Layout & BOM
53-Z-014-W19*	Loop Diagram 534-FE-200-001
53-Z-014-W20*	Logic Diagram
53-Z-014-W21*	Cable Routing Details
53-Z-014-W22*	Alarm List

\* Indicates redlined, as-built drawing

b. Factory and Functional Testing Results

c. Specification from RFP

1.3 In addition to the document reviews, a site visit was conducted during SVS testing the week of May 1-5, 2017 to inspect the constructed SVS system.

## 2. Identification of the Process and Facilities Being Confirmed as Compliant

2.1 The systems, structures, and components being confirmed as compliant are the modifications to the Underground Ventilation System known as the Supplemental Ventilation System (SVS). These modifications are required in order to provide increased airflow through the underground portion of the site. In conjunction with existing surface fans, the SVS fan will ventilate uncontaminated areas in the North and Construction Circuits. When the SVS fan is operating, the Salt Shaft will serve as an unfiltered exhaust shaft for the North and Construction Circuits. A portion of the airflow provided by the SVS to the Construction Circuit can also be used to provide fresh air to the Disposal Circuit, if needed. In this case, the air from the Disposal Circuit will continue to be exhausted through the existing HEPA filtration system. The SVS is comprised of one vane-axial fan with associated ductwork, control and power equipment as shown on the drawings.

## 3. General Description of Confirmation Process

3.1 The construction and functional testing of the SVS was performed using the appropriate WIPP procedures and processes. Applicable documentation, work packages and test results are maintained according to WIPP procedures.

3.2 Design: The designs were performed and/or overseen by State of New Mexico registered professional engineers who reviewed and approved the design documents. This is evidenced by the professional engineer seals on the design documents. Appropriate Quality Assurance documentation reviews were also completed.

- 3.3 Construction: Materials used in construction received the proper quality assurance identification and receipt inspection through the site-established procurement process. Appropriate material controls were provided through the site Quality Assurance and Warehouse inventory control procedures.
- 3.4 Functional Testing: The completed installation was tested to assure proper system integrity and operation, and test reports were provided for review. The actual test was witnessed directly by this New Mexico Professional Engineer's representative. However, the test results were reviewed by this New Mexico Professional Engineer as a function of the engineering evaluation.
- 3.5 As-built documentation: The installation was reviewed and compared with the design documents.

**4. System Inspection**

- 4.1 Physical inspection of the installed system included verification of ductwork, supports, electrical installations including motors, instrument installation, and identification of system components (tagging).
- 4.2 Compliance - The modified system is in compliance with current electrical, building, structural, and DOE standards.

Some design documents have not been updated at the time of this writing. NWP provided redline markups to show the as-built conditions of the system. The markups were field verified against the actual installed system. Configuration control requires that upon completion of startup the drawings are updated to accurately reflect the as-built conditions, and are maintained at the WIPP facility.

**5. Statement of Confirmation**

I confirm under penalty of law that this statement of confirmation was prepared under my supervision for NWP LLC. Based on my personal observations, as well as discussion with, and inquiries of those persons directly involved, the information in this certification is, to the best of my knowledge and belief, true, accurate, and complete. I therefore certify that the modification to the Underground Ventilation System was constructed in compliance with the Permit.

Very truly yours,



Thomas R. Gilmartin, P.E.  
Principal Engineer  
RJR Engineering, P.C.  
New Mexico Certificate No. 23144, Expires 2017-12-31



2017-06-22