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

SEP 18 2017



Ms. Mary McDaniel, Manager
Quality and Contractor Assurance
Nuclear Waste Partnership LLC
P.O. Box 2078
Carlsbad, NM 88221-2078

Subject: Surveillance Report S-17-23, NWP Mine Ventilation Program

Dear Ms. McDaniel:

The Carlsbad Field Office (CBFO) conducted Surveillance S-17-23 of the Nuclear Waste Partnership LLC (NWP) Mine Ventilation Program. The surveillance was conducted September 5 – 7, 2017 at the Waste Isolation Pilot Plant.

The team concluded that the NWP program requirements and associated implementing procedures are satisfactorily implemented and effective.

One Recommendation was offered to NWP management during the surveillance and is documented in the surveillance report.

If you have any questions concerning the surveillance, please contact me at (575) 234 7483.

Sincerely,

Martin P. Navarrete
Senior Quality Assurance Specialist

Enclosure

cc: w/enclosure

J. Carswell, CBFO	*ED	T. Peake, EPA	ED
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CBFO SURVEILLANCE REPORT

Surveillance Number: S-17-23 **Date of Surveillance:** 9/5 – 7/2017

Surveillance Title: NWP Mine Ventilation Surveillance

Organization: Nuclear Waste Partnership LLC (NWP)

Surveillance Team:

Martin Navarrete	Carlsbad Field Office (CBFO) Quality Assurance Representative
Greg Knox	Surveillance Team Leader, CBFO Technical Assistance Contractor (CTAC)
Kirk Kirkes	Surveillance Team Member, CTAC

Surveillance Scope:

Surveillance S-17-23 evaluated the planning and execution of the NWP Mine Ventilation program to Title 30 CFR §57.8520, *Ventilation Planning* and the *New Mexico Mine Safety Code for All Mines*.

Surveillance Results:

Activities Evaluated:

On Tuesday, September 5, the surveillance team went into the underground with the initial entry team to verify implementation of underground air flow volume readings. WP 04-VU1611, *Pressurization of U/G Bulkhead 74-B-309*, was performed to start the 309 bulkhead fans, and the calibration of the magnehelic gage was verified. Per WP 04-VU1614, *U/G Air Flow Volume Readings*, a calibrated anemometer was used, to verify air flows at the following locations: bulkhead 308 (20,517 cfm), E140/S1950 (95,985 cfm), and W170/S2520 (70,133 cfm). It was noted that auxiliary fans #74-B-040 and #74-B-80 were turned off prior to testing at the Bulkhead 308 location. NWP offered no procedural requirement to turn off the fans before testing. (See CBFO CAR 17-056). The team then went to the north end of the mine at N1400/E50 and used a smoke tube to calculate a reading of 16,421 cfm. All air readings were documented on the appropriate forms and peer checked for accuracy. The team verified WP 04-VU1612, *WIPP Mine Ventilation Rate Monitoring, attachment 4 – Underground Active Disposal Room and Regulator 74-B-308 Ventilation Rate Log Sheet*, was completed and faxed to the Central Monitoring Room (CMR) as required. Bump certificates were reviewed for the MX6 iBrid Multi-Gas Monitors located in the U/G Facility Services office. All were complete and included peer check signatures.

On Wednesday, September 6, the surveillance team again went underground with current mine maps of bulkhead locations and numbers. The team started at bulkhead 504 located in 0E/N150 and traversed south into W30 down to the

W30/S1950 intersection, noting all bulkheads and registers. One bulkhead 74-B-476, located at W30/S1600, had been recently installed and was not yet incorporated onto the mine map. It was later verified in the mine engineering group that this new bulkhead was in an Engineering Change Notice (ECN) file to be incorporated onto the mine map during the next revision. The team crossed into E140/S1950 and headed back north to the hoist station while verifying bulkhead locations and numbers against the current map. The mine evacuation map was also checked at various locations in the mine to ensure the current revision was present. Once on surface, the team entered the CMR to verify remote operations of bulkhead regulators and doors in the underground. While the activity was not actually performed, the operator described the operation and displayed the computer screen where door position indicators would change as underground personnel opened and closed the bulkhead doors. It was noted that remote operation of regulators and doors in the underground would be performed only on very special circumstances.

The surface surveillance team interviewed the Mine Ventilation Cognizant Engineer. This individual has been recently assigned the COG Engineering responsibilities, and his completed COG training was verified and relevant experience reviewed. The current Ventilation COG was involved in the 2016 annual COG walk-down of the ventilation subsystems and provided the schedule for the 2017 COG walk-down. The team was provided documentation of the Ventilation subsystem turn over from the previous COG Engineer. The COG engineer was able to demonstrate an up-to-date knowledge of the configuration of the Mine Ventilation system. In the event of an emergency, the current Mine map can be accessed on the ECN database and all relevant ECNs are displayed for evaluation. The team also discussed the role for Mine Ventilation Services (MVS), a business unit of SRK Consulting with the COG engineer. He provided documentation showing that MVS provides two services to NWP as a qualified suppliers list approved subcontractor. First, they provide personnel to support NWP in the performance of Testing and Balancing activities performed to NWP technical procedure WP 04-VU2004, *Interim Ventilation System Testing and Balancing*. Second, using their own equipment and procedures, they evaluate the mine and author an annual *Mine Ventilation Test and Balance* report. The last annual report was performed in September 2016 on the Interim Ventilation System (IVS) and the next report will be performed on the total Underground Ventilation System (UVS). The team also interviewed the NWP Engineering Manager. Review of his resume shows approximately 30 years of relevant DOE Work Control and Management project experience.

On Thursday, September 7, the surveillance team went into the underground to verify the location of a mine evacuation map and to ensure it was current and matched the other maps in the mine (Revision 2). The team verified calibration of the above ground IVS differential pressure gauges and flow meters. The training records of two Facility Shift Engineers and one Control Room Operator (who were interviewed and observed during the surveillance), were reviewed and found current.

Corrective Actions:

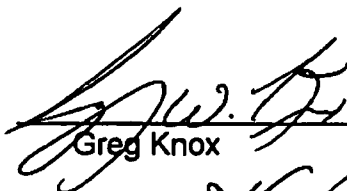
CBFO CAR 17-056

*"During Surveillance #S-17-23 NWP Mine Ventilation Program review it was observed while performing the U/G airflow volume readings that the underground facility services operator shutoff electrical power to (2) two auxiliary/booster fans #74-B-040 & #74-B-080 @Bulkhead 308 location prior to taking airflow readings, which is not a step in the current WP 04-VU1614 REV 1 approved procedure. It was explained to the surveillance team that shutting down these fans would allow accurate flow readings for this location." **WP 04-vu1614 REV 1 procedures were found lacking in detail in which to perform this step of shutting off the auxiliary booster fans which is not incorporated in the current approved procedure revision. It was also explained to the surveillance team the UG personnel are trained (skill of craft) to perform this step of shutting off the auxiliary booster fans. Neither the training documentation guide nor the steps from the training guide are referenced in the WP 04-VU1614 REV 1 for this step to be completed to shut off electrical power for the external/booster fans prior to taking air flow readings to obtain an accurate and safe reading as required by this procedure.*

Conclusion:

With the exception of CBFO CAR 17-056, The NWP Mine Ventilation Program adequately reflects the requirements of Title 30 CFR §57.8520, *Ventilation Planning* and the *New Mexico Mine Safety Code for All Mines* with respect to mine ventilation planning, execution, testing and balancing as well as change control. Equipment is maintained as required and properly calibrated and Technical Safety Requirement surveillances are being performed.

Surveillance Team Leader:


Greg Knox

Date: 18567 2017

CBFO QA Director Approval:


Michael R. Brown

Date: 9/18/2017