

### Nuclear Waste Partnership, LLC/ Waste Isolation Pilot Plant

Report from the Department of Energy Voluntary Protection Program Onsite Merit Review January 14-23, 2020





Office of Environment, Health, Safety, and Security

U.S. Department of Energy Office of Environment, Health, Safety and Security Office of Health and Safety Office of Worker Safety and Health Assistance Washington, DC 20585 Department of Energy Voluntary Protection Program Merit Onsite Review of Nuclear Waste Partnership, LLC Waste Isolation Pilot Plant Carlsbad, New Mexico January 14-23, 2020

#### **Summary:**

This addendum to the March 2015 Transition onsite review report of Nuclear Waste Partnership, LLC (NWP) provides the results of the January 2020 Annual Merit onsite review by the Department of Energy's (DOE) Voluntary Protection Program (VPP) Team (Team) from the Office of Environment, Health, Safety and Security, and updates NWP'S actions to address the previously identified Merit goals. This report also contains some new opportunities for improvement that NWP can use to help continue its recent improvements (see attachment 2). As documented in the March 2019 Merit onsite review addendum, NWP needed to convince the workforce that improvements started in 2018 were permanent. This current Merit onsite review focused on the continuance of those improvements. The Team also needed to consider the results from an ongoing investigation by the Office of Enterprise Assessments (EA) regarding air quality concerns. Safety improvements that began in 2018 have matured and NWP has demonstrated its commitment to making those improvements permanent and earned the workers' trust. The Team recommends that NWP at the Waste Isolation Pilot Plant (WIPP) continue to participate in DOE-VPP and be elevated from Merit to Star level.

#### **Background:**

WIPP is a deep geologic repository established by DOE for the permanent disposal of transuranic (TRU) radioactive waste, currently in temporary storage at DOE sites across the country, which must be isolated to protect public health and the environment. Authorized by Congress in 1979 and operational since March 1999, WIPP has received more than 12,000 waste shipments, disposing of more than 65,000 cubic meters of TRU waste in the repository.

The WIPP facility includes surface support, waste receiving and preparation, and underground operations. Underground activities, conducted nearly one-half mile below the surface and referred to as "the underground," include salt mining and hauling operations, ground control maintenance (i.e., keeping the salt from encroaching into the mined areas), equipment maintenance, and waste emplacement. An armed protective force provides security 24 hours a day, seven days a week.

In October 2012, DOE awarded the WIPP managing and operating contract to NWP. NWP currently employs approximately 1,000 people. There are two unions at the site. The United Government Security Officers of America represents the guard force, and the United Steel Workers (USW) represents the mine-related workers.

WIPP was a DOE-VPP Star site under the previous contractors from 1994 through 2012. In November 2012, NWP requested to continue participating in VPP under the Transitional Star program. DOE's former Office of Health, Safety, and Security agreed with that request, and

NWP continued DOE-VPP participation. Per the DOE-VPP Technical Standard 1232-2019, *U.S. Department of Energy Voluntary Protection Program Volume 1-4*, NWP had up to 24 months to evaluate the existing program, work with employees to identify changes, and submit a revised application.

In February 2014, before NWP could submit its application, two events occurred in the underground. First, a fire involving a salt haul truck on February 5, and then a radiological release from one or more waste drums occurred nine days later. The investigations into these events revealed vulnerabilities and deterioration in some facility systems and operations that had developed over several years. The urgency to correct the problems and resume waste receipt and emplacement created tension between NWP workers and managers. Managers did not effectively include workers in many of the changes to procedures, processes, and programs; and workers perceived NWP was unresponsive to their concerns.

In 2015, NWP began to repair relations with workers, but needed more time to restore workers' trust. NWP was working to upgrade WIPP systems, establish better controls of combustible materials in the underground, and train workers. Although NWP demonstrated a commitment to excellence that warranted continued participation in DOE-VPP, the improved programs and processes needed time to mature and demonstrate the excellence that warranted recognition at the Star level. In March 2015, DOE completed a transition onsite review and admitted NWP into DOE-VPP as a new participant at the Merit level. The 2015 transition onsite review identified 12 Opportunities for Improvement with three specific recommendations, i.e., Merit goals that NWP needed to address to attain Star level. Merit participation requires annual onsite reviews, but the DOE-VPP Team agreed that it would delay these reviews until after NWP resumed waste receipt.

After the 2015 transition onsite review, the relationship between NWP and key leaders in the workforce deteriorated. Workers perceived that NWP had not demonstrated open and honest communications. Workers and managers alike were frustrated at their inability to effect meaningful changes and build trust. A large population of the workforce wanted to fix this condition and believed DOE-VPP participation provided workers with an avenue to address issues and build partnerships.

NWP resumed receiving waste shipments in April 2017, and per the previous agreement, DOE conducted a Merit onsite review in January 2018 to assess NWP's progress toward the Merit goals. The 2018 Merit onsite review identified that NWP had achieved the previous Merit goals, but established five new Merit goals to improve relationships between managers and workers, improve communications, and build trust.

The next DOE-VPP Merit onsite review, conducted in March 2019, concluded that progress on all the previously identified Merit goals had been substantial, but the most effective actions addressing the relationship between NWP and the USW had only been in place since November 2018. While NWP had improved its relationship with the workforce, some NWP managers still needed to demonstrate their willingness to reach out to workers, be visible in the work areas, and understand workers' concerns. In addition, NWP needed to convince the workforce that the improvements were permanent. Activities initiated in 2018 needed time to mature and establish the new normal for WIPP before NWP could attain Star status.

#### Results

2018 Merit goals: NWP needs to continue building credibility with the workforce regarding its ability to address mine safety issues in combination with the nuclear safety issues.

## NWP needs to continue reinforcing its corporate philosophy that it values safety as a means to accomplish its mission and demonstrate that commitment daily through visible support and a willingness to pause or stop work when conditions warrant.

In 2019, NWP eased its previous emphasis on placement of waste in the underground as workers and managers regained confidence and proficiency operating in a nuclear safety culture. NWP had been encouraging workers and managers to think more strategically about the WIPP mission. Although manager presence in the workplace had increased, some managers still did not frequent the underground. NWP had replaced its Deputy Project Manager/Chief Operating Officer (COO) with a manager who had worked at WIPP after the 2014 fire and radiological release and had built a strong relationship with many of the workers. NWP was also trying to address workers' concerns about air quality, air monitoring instrument issues, radiological control issues, and managers' credibility with the workforce.

NWP has continued the improvements initiated in 2018, and is successfully establishing the balance between nuclear safety and mine safety in the underground. NWP is currently averaging about 10 shipments per week and eventually hopes to receive 17-20 shipments per week. However, NWP is not allowing that ambition to create pressures on the workforce as demonstrated by occasionally restricting operations and halting the receipt of shipments when issues arise.

In November 2019, NWP identified a noncompliant drum and temporarily stopped receiving waste while it evaluated the condition and potential for other drums to have the same issue. During the current onsite DOE-VPP review, NWP identified a problem with a 10-drum overpack it had just received from a DOE site. NWP entered into the appropriate limiting condition for operations and placed other containers in a safe condition while it addressed the issue with the overpack. In addition, NWP turned back two shipments that were in transit to WIPP because the shipments would require actions that NWP would be unable to conduct due to the limiting operating condition it had just entered. The actions to immediately enter into limiting conditions and turn back waste shipments demonstrated NWP's commitment towards safe operations at WIPP.

NWP has established a balance between waste handling and mining operations to prepare Panel 8 for waste acceptance. NWP is performing more ground control activities while handling and emplacing waste, making ventilation system improvements, and mining in Panel 8. Workers had previously believed that NWP was ignoring ground control concerns in the underground in order to resume waste handling. Workers were also previously concerned that ground control work was being delayed or ignored in order to complete mining in Panel 8. The workers want Panel 7, where the radioactive release occurred in 2014, closed. Closure of Panel 7 is contingent on opening Panel 8. However, air quality issues associated with reduced ventilation are limiting the pace of mining in Panel 8. NWP currently expects to complete mining in Panel 8 in time to coordinate the opening of Panel 8 with the closing of Panel 7. Workers recognize this action will allow more efficient waste handling by eliminating current radiological hazards associated with Panel 7. NWP's actions to address air quality issues, train miners, replace equipment, and address ground control have helped it balance the competing priorities.

NWP has continued the strategic planning approach it started in 2018 with its safety strategic plan, and is expanding that to a 5-year strategic plan that achieves production targets based on safe operations. NWP intentionally expanded its strategic planning vision beyond the current contract, recognizing its responsibility to position WIPP for the current mission expectation that it will remain open until 2050. The willingness to create a strategic plan that extends beyond the current contract demonstrates NWP's commitment to long term success based on safe operation.

The improved culture, willingness to pause or stop work, and employ a deliberate, cautious approach to all tasks has resulted in a significant reduction in both total recordable case (TRC), and days away, restricted or transferred (DART) rates. NWP is also tracking industrial hygiene (IH) monitoring and MSHA compliance citations as leading safety and health performance indicators, and rates itself as good or excellent in these categories.

A few months prior to this DOE-VPP onsite review, NWP replaced the President/Project Manager again, making this the fourth President/Project Manager in 6 years. Unlike previous senior management changes, this time NWP hired a person with significant experience at WIPP who understands the competing issues, and was already recognized and respected by the workforce.

The Deputy Project Manager/COO who was well respected and admired by the workers, left just prior to this DOE-VPP onsite review for personal reasons. NWP filled the vacated Deputy Project Manager/COO position with a manager from within the NWP organization. Workers recommended the selected individual because of his experience with WIPP and the workforce.

The new President/Project Manager reorganized NWP to better align the organization with the strategic mission. All underground operations, including waste handling, facility operations, and mining, now report up to the Deputy Project Manager/COO. NWP also put a new Operations Manager in place and hired an individual to be the Underground Manager. That individual had previously been a miner at WIPP and a DOE Facility Representative. In previous onsite reviews, workers had frequently brought issues and concerns to this individual, demonstrating their trust and respect for him. His appointment as the Underground Manager has increased workers' trust that they can raise issues, and managers will address those issues. This individual spends nearly all his time in the underground, helping workers, communicating priorities, and listening to concerns.

Other managers are also spending more time underground in response to the new President/Project Manager's expectation that "if you have people working in the underground, you need to be in the underground." The Deputy Project Manager/COO is in the underground several hours per week, and all the workers he encounters recognize him. Workers eagerly discuss their concerns, frustrations, issues, and successes with him. All managers encountered by the Team recognized the value of manager's presence at the worksite.

NWP is continuing the actions identified in previous DOE-VPP reviews that build credibility with the workforce, demonstrate its commitment to safety, demonstrate its willingness to pause or stop work when conditions merit, and has met these Merit goals.

# 2018 Merit goal: NWP needs to become more adept at implementing change management, including consideration for the workers affected by the change, and ensure managers use the [change management] process.

In 2019, NWP had added a "mission excellence" manager to its staff with an extensive background in the Navy's Nuclear Propulsion Program. He is also a certified ProSci<sup>®</sup> change management specialist in the ADKAR<sup>®</sup> model (Awareness, Desire, Knowledge, Ability, and Reinforcement<sup>TM</sup>), a proprietary goal-oriented change management model that guides individual and organizational change. Since 2019, NWP has sent several other individuals for training and certification in change management by ProSci<sup>®</sup>. Despite the appointment and training of additional individuals, NWP has not yet incorporated its change management strategy into its operations. During this DOE-VPP review, NWP identified changes it was planning to the site-access training program and the lockout/tagout procedure. However, the managers responsible for implementing those changes had not considered using the ProSci<sup>®</sup> approach.

The pace of program and procedure change has slowed at WIPP as processes and procedures mature, and workers adapt to the new expectations. The slowdown in change has reduced the urgency to implement a standardized change management approach. NWP should continue looking for changes as an opportunity to use the ProSci<sup>®</sup> approach and gain proficiency in introducing and managing changes. NWP should train senior managers to recognize changes and ask for assistance from the certified personnel to work through the ADKAR<sup>®</sup> process, in order to gain proficiency at using the process for future changes.

**Opportunity for Improvement:** NWP should continue looking for changes as an opportunity to use the ProSci<sup>®</sup> approach and gain proficiency in introducing and managing changes. It should train senior managers to recognize changes and ask for assistance from the certified personnel to work through the ADKAR<sup>®</sup> process.

NWP has increased the number of people trained in change management. The reduction in urgency for change management warrants removal of this improvement as a Merit goal, but continued pursuit as an opportunity for improvement.

### 2018 Merit goal: NWP needs to maintain the current level of safety committee activity over the coming months to ensure these committees become fully established.

The 2019 annual Merit onsite review identified that most of the NWP safety committees, numbered by zone, had matured and flourished. However, The Zone 11 Safety Committee, which represents backshift and underground workers, was struggling to gain members.

During this Merit onsite review, Zone Safety Committee meetings demonstrated strong employee involvement, both in numbers of participants, and participation by the members. The Zone Safety Committee chairs relayed their zone's concerns to senior managers during the Operations Safety Team meeting. Improvements were also noted with the Zone 11 Safety Committee. The committee has selected a chair and co-chair and is recruiting new members. The Zone 11 Safety Committee meeting observed by the Team was well organized, and all attendees were involved in the discussions. The Zone 11 Safety Committee is still working to become a reliable forum for workers to raise and address issues. During the review of this Merit goal, the Team identified an issue regarding information flow with the backshift. Backshift workers expressed concern they are still experiencing communication difficulties. Some backshift workers are not getting important information during shift turnovers or daily start work briefings. There are approximately 40 workers on backshift, including miners, maintenance workers, radiation technicians, and waste handlers. The workgroup supervisors meet daily with their dayshift counterparts during shift turnover meetings, but the information relayed by the supervisors to the workers during their prejob briefings varied between the groups. Backshift waste handlers receive a structured prejob/shift turnover briefing when their activities include materials or waste transfer to the underground. The miners and radiation technicians may only receive a call from a supervisor telling them to perform whichever task is on the schedule, without a specific prejob meeting. NWP does not have a coordinated shift turnover briefing for workers to ensure all relevant information gets to the backshift workers. The inconsistent shift turnover briefings created a potential concern during this review when several workers were unaware of an electric cart brake failure that occurred during the day shift. NWP suspended use of all electric carts pending inspections of the brake systems, but that information did not make it to many backshift workers until later in their shift. Backshift supervisors recognized that NWP should improve the shift turnover process. NWP should engage the Zone 11 Safety Committee and the backshift supervisors to identify a reliable turnover process that ensures backshift workers receive accurate and timely information regarding facility conditions or issues.

**Opportunity for Improvement:** NWP should engage the Zone 11 Safety Committee and the backshift supervisors to identify a reliable shift turnover process that ensures backshift workers receive accurate and timely information regarding facility conditions or issues.

In 2020, NWP created the Zone 12 Safety Committee, called the Capital Infrastructure Group, which includes the two subcontractors performing capital construction at the site. The committee met for the first time during this DOE-VPP review and had good participation and active involvement from the attendees. The initial meeting focused on organizing the committee's purpose and how best to communicate the represented workers' concerns. The committee also discussed how subcontract personnel could participate in the various WIPP safety processes, such as zone safety committees.

NWP has increased the level of safety committee activity, helped fully establish those committees, and has achieved this Merit goal.

## 2018 Merit goal: NWP needs to take a broad suite of actions to repair its relationship with the United Steel Workers (USW) local that opens communication, demonstrates managers' willingness to listen, and restore trust between NWP and USW.

In 2019, NWP's President/Project Manager was reaching out to the USW president via regular coordination meetings and conducting weekly VPP walk-downs of site operations. These VPP walks increased visibility of the NWP President/Project manager and helped NWP begin to regain some workers' trust. The new NWP President/Project Manager has not continued these weekly walks, but meets often with the USW President for open discussions and is gaining the

USW's trust. Union leaders spoke positively regarding their relationship and communications with NWP senior managers. NWP managers are treating union leaders as partners in many respects and are listening to union concerns. Although NWP and USW are currently in contract negotiations, neither party demonstrated any desire or intent to use DOE-VPP participation as a bargaining chip.

NWP continues the training programs for managers and supervisors identified during the 2019 DOE-VPP review. Training now includes the National Training Center's TLP-150 and TLP-100 safety culture classes. These classes train workers, front line leaders, and middle managers to apply the tools, concepts, and resources that foster a trusting work environment, cultivate a questioning attitude, and secure the willingness of workers to raise concerns without fear of retaliation or retribution in accordance with DOE expectations.

As discussed earlier, managers are present and visible in the workspaces, are communicating with workers, and addressing workers' issues. The reorganization and new management appointments that put all underground work under the responsibility of the Deputy Project Manager/COO have helped workers gain trust in the senior management chain, and reduced conflicting direction and priorities. NWP's willingness to pause or halt operations rather than push through when questions arise has reduced workers' apprehension about raising questions or concerns.

To understand the overall workforce culture and the extent of condition of workers' distrust, NWP had Oak Ridge Associated Universities (ORAU) perform a safety culture assessment in 2019. The ORAU safety culture assessment used a proven method that includes a combination of surveys, individual interviews, and focus group interviews to gauge employee perceptions. Although the NWP results are not final, preliminary results showed the workforce was "cautiously optimistic" regarding NWP managers' commitment to safety. The survey will also provide a baseline for future assessments. This is another indicator that NWP's actions to reach out to workers, be visible in the workplace, and respond effectively to safety issues are improving the relationship between workers and managers.

NWP has continued and expanded the actions it began prior to the 2019 annual Merit onsite review. USW leaders are working cooperatively with NWP while still advocating for their members. NWP and the USW now trust each other at a level that demonstrates NWP has achieved this Merit goal.

#### Air Quality and Office of Enterprise Assessments Investigation

Apart from the DOE VPP process, after resuming waste handling in 2017, workers at the WIPP facility began raising questions about air quality both on the surface in the waste handling areas and in the underground. Restricted ventilation, due to residual radiological contamination from the release incident, coupled with continued use of diesel equipment in mining operations put NWP out of compliance with new, more stringent air quality standards established by the American Council of Government Industrial Hygienists (ACGIH). NWP was working with the unions, DOE, Mine Safety and Health Administration (MSHA), and the Defense Nuclear Facilities Safety Board to resolve those air quality concerns. Because workplace air quality is a major health and safety issue, the Team needed to consider the status of agreements and actions between all concerned parties before it could support a recommendation to elevate NWP to the DOE-VPP Star level.

NWP has made many improvements in its radiological controls and IH programs since the 2019 annual Merit onsite review. These improvements have been in response to both the EA investigation, and the annual Merit onsite reviews.

In 2019, DOE's Office of Enterprise Assessments (EA) began an investigation of air quality issues and potential overexposures of workers in the underground to volatile organic compounds (VOC), diesel exhaust particulates, and other potential hazards. EA was in the early stages of the investigation, so its conclusions were not available for consideration in the 2019 annual Merit onsite review. The DOE-VPP Technical Standard requires the Team to consider the nature and validity of any complaints received by DOE and the resolution of those problems. The Team needed to consider the results of the EA investigation, including any identified corrective actions, before it could make a recommendation to elevate NWP to Star status.

Since the 2014 radiological release, air sampling in the underground has shown decreasing contamination levels primarily due to the enclosure of the contaminated area in Panel 7. Air sample results in the active area of Panel 7 showed levels below the threshold requiring respirators, and NWP down-posted the areas for nonintrusive activities, such as waste emplacement. Workers understand that respirators are no longer required, but most workers continue to use them. NWP supports this voluntary use of respirators. The radiological control technicians (RCT) interviewed by the Team were comfortable with radioactive contamination in the underground, although some RCTs had changed jobs because they were not comfortable with the decision to reduce personal protective equipment requirements.

Using Health Hazard Assessments (HHA), delineated in 12-IH.02-1, *WIPP Industrial Hygiene Program–Health Hazard Assessment*, NWP collects necessary information for a facility, project, or task in order to identify and characterize existing or potentially hazardous agents. Once identified, analyzed and characterized, an industrial hygienist determines employee risk, prioritizes sampling, and makes recommendations regarding hazard control measures or hazard abatement. Data from HHAs identified nitrogen dioxide (NO<sub>2</sub>) and sulfur dioxide as chemicals of concern for underground operations and VOCs for aboveground cask unloading operations.

NWP created sampling plans for both aboveground contact-handled waste operations, and below-ground waste emplacement activities. NWP performs sampling and monitoring during processing operations to validate that the engineered controls to keep exposures as low as practical and below regulatory limits. The sampling plans document the sampling and monitoring protocols and methods based on accepted industry and regulatory practices.

The Team had previously recommended NWP use the waste manifest as a source of information for industrial hygiene exposure assessments. NWP makes limited use of waste shipment manifests to identify potential exposure concerns from waste-handling activities. Opening and unloading Transuranic Package Transporter (TRUPACT) containers potentially exposes workers to chemical vapors or radiological contamination from waste packages. Waste manifests satisfy Environmental Protection Administration and the Department of Transportation's shipping requirements and do contain some industrial hygiene (IH) data, but that is not their intended purpose. Because the waste containers inside the TRUPACT vent for months or years prior to shipment, the data developed when the containers were packed is no longer valid for evaluating potential exposure to VOCs when managing the TRUPACTs at WIPP. Waste manifests do provide information that could identify new, previously unprocessed waste streams that might have greater levels of concern. Cross-referencing data from these new waste streams with WIPP processing experience might help NWP compare new hazards with previous experience. NWP has collected a large volume of data from work area and breathing zone air monitoring during cask unloading operations. NWP uses local ventilation, personnel air monitoring, and written procedures to control hazards from chemical vapors from the waste. Waste handlers also use historical knowledge based on the originator of the waste shipment to establish informal risk categories.

The NWP IH manager position is vacant, which is contributing to some confusion among the IH staff regarding program direction and structure. During this Merit onsite review, NWP had an acting IH manager, but NWP had not made a final decision regarding a permanent selection. NWP is attempting to fill the position, which should ensure the IH program has clear leadership, and reestablish the chain of command.

In 2019, workers had lost confidence in MX-4 air monitors used to detect VOC emissions during waste handling and NO<sub>2</sub> from diesel exhaust due to repeated alarms and equipment failures. In May 2019, NWP decided to replace the MX-4 air monitors with ToxiRAE<sup>®</sup> three-gas monitors. Unfortunately, NWP's environment, safety, and health managers and IH subject matter experts did not apply adequate rigor in the acquisition and implementation of the IH instruments. NWP IH technicians subsequently made errors when switching to the new instruments, including selecting the wrong calibration gas. NWP identified the correct calibration gas and procedures, communicated the error to the workforce, and demonstrated to workers that the new monitors accurately measure the chemicals of concern. Workers now demonstrate more faith in the ToxiRAE<sup>®</sup> monitors.

NWP now has a DOE-approved multi-year abatement plan to address NO<sub>2</sub> exposures from diesel exhaust and to meet the new ACGIH exposure limits. While NWP continues to implement that plan, workers are more adept at avoiding exposures by not idling equipment in low airflow areas, standing upwind of exhaust points, using supplemental fans, and attaching temporary exhaust trunks to keep exhaust downwind of work areas. NWP is collecting large volumes of exposure data that it will use to develop and implement additional abatement strategies. As workers become more aware of how exposures occur and avoid those situations, the number of air monitor alarms is dropping and worker confidence is improving.

NWP is improving how it provides air-sampling data to workers. Prior to the 2019 onsite review, NWP posted air-sampling results on bulletin boards, but workers were uncomfortable interpreting the information provided. NWP acknowledged this concern and began providing additional information during training and one-on-one encounters. During this Merit onsite review, workers expressed increased comfort in understanding of the information provided and conveyed appreciation for the additional effort.

As of January 2020, NWP, DOE's Carlsbad Field Office, DOE's Office of Environmental Management, and EA had all agreed that EA would issue a consent order to NWP for the employee overexposures in lieu of issuing fines. The consent order will acknowledge NWP's actions to address the air quality hazards, and provide time for NWP to achieve compliance with the more restrictive air quality standards. These actions resolve the air quality issues and provide adequate protection for workers while NWP makes the necessary improvements.

#### Conclusions

NWP has successfully demonstrated its commitment and ability to continue those actions addressing the Merit goals established in the previous onsite reviews. The relationship between USW and NWP managers has improved, and workers believe NWP is appropriately addressing their concerns in the underground. NWP has reached an agreement with the various regulators on actions to abate the air quality hazards. NWP now meets all the expectations for DOE-VPP participation at the Star level. The Team did not identify any additional programmatic noncompliances. The Team recommends that NWP continue to participate in DOE-VPP and be elevated to the Star level.

#### Attachment 1

#### **INJURY INCIDENCE CASE RATES**

Injury Incidence Case Rates - Contractor Employees (NWP WIPP – CAIRS* Org [See note below])							
Calendar	Hours	Total	TRC Incidence	Days Away, Restricted	DART Case		
Year	Worked	Recordable	Rate per 200,000	or Transferred (DART)	Rate per		
		Cases (TRC)	hours	Cases	200,000 hours		
2017	1,644,632	15	1.8	9	1.1		
2018	1,550,494	9	1.2	2	0.3		
2019	1,870,643	3	0.3	1	0.1		
3-Year Totals	5,065,769	27	1.1	12	0.5		
Bureau of Labor Statistics (BLS-2018) average for NAICS** 562211 Hazardous Waste and Treatment Disposal			2.0		0.8		
Injury Incidence Case Rates - Subcontractors (NWP WIPP – CAIRS* Org [See note below])							
Calendar	Hours	TRC	TRC Incidence	DART Cases	DART Case		
Year	Worked		Rate per 200,000		Rate per		
			hours		200,000 hours		
2017	284,356	0	0.0	0	0.0		
2018	270,142	1	0.7	0	0.0		
2019	377,564	0	0.0	0	0.0		
3-Year Totals	932,062	1	0.2	0	0.0		
Bureau of average for Hazardous Disposal	Labor Statisti NAICS** 5 Waste and T	cs (BLS-2018) 62211 reatment	2.0		0.8		

\*Computerized Accident and Incident Reporting System

\*\*North American Industry Classification System

**Note**: The following are the CAIRS Organization codes used to generate the Injury Incidence Case Rate Table:

Site Contractors	Site Subcontractors
0703104 Washington TRU Solution, LLC -	0703114 NWP Subcontractors
WIPP (Other)	
0703109 WIPP Security	

#### Discussion

NWP employs approximately 875 workers and 145 service subcontractors. For the 3 years prior to this Merit onsite review (2017 to 2019), NWP experienced 27 recordable cases resulting in a 3-year TRC rate of 1.1. During the same period, NWP had only 12 DART cases resulting in a DART rate of 0.5. Employees do not fear reprisal for reporting an injury and acknowledge managers encourage the reporting of an injury, incidence, or first-aid case. The TRC and DART rates show a distinct downward trend over the past 3 years.

The site maintains complete and accurate recordkeeping logs, including the Occupational Safety and Health Administration (OSHA) 300 Log and 300A Summary. The 300 summary meets the requirements of the recordkeeping standard, is accessible to all personnel, and available throughout the calendar year. The recordkeeper documents all injuries in the DOE CAIRS database. Personnel maintaining recordkeeping case files are well versed in recordkeeping, OSHA 300 logs, and CAIRS requirements. NWP TRC/DART rates are 45 and 37.5 percent respectively, less than the BLS comparison industry average for its NAICS code, and meet the expectations for continued VPP participation.

#### Attachment 2

#### **OPPORTUNITIES FOR IMPROVEMENT**

<b>Opportunity for Improvement</b>	Page
NWP should continue looking for changes as an opportunity to use the ProSci <sup>®</sup> approach and gain proficiency in introducing and managing changes. It should train senior managers to recognize changes and ask for assistance from the certified personnel to work through the ADKAR <sup>®</sup> process.	6
NWP should engage the Zone 11 Safety Committee and the backshift supervisors to identify a reliable shift turnover process that ensures backshift workers receive accurate and timely information regarding facility conditions or issues.	7