

WP 15-GM.02

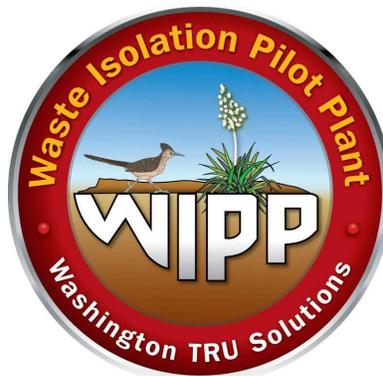
Revision 3

# Worker Safety and Health Program Description

Cognizant Section: Safety Programs

Approved by: Signature approval by Pat Yokum on file  
Farok Sharif, General Manager, WTS

Approved by: Signature approval on file  
Dave Moody, Manager, CBFO



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**ABBREVIATIONS AND ACRONYMS**

ACGIH	American Conference of Governmental Industrial Hygienists
AHJ	authority having jurisdiction
AMTWP	Advanced Mixed Waste Treatment Project
ANL-E	Argonne National Laboratory-East
CAIRS	Computerized Accident Incident Reporting System
CBDPP	(DOE) Chronic Beryllium Disease Prevention Program
CBFO	Carlsbad Field Office
CBRN	chemical, biological, radiological, and nuclear
CCP	Central Characterization Project
CFR	<i>Code of Federal Regulations</i>
CH	contact-handled
CWI	CH2M-WG Idaho, LLC
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EAP	Employee Assistance Program
FHA	fire hazards analysis
FPP	fire protection program
FA	fire analysis
ft	feet
GET	General Employee Training
GSA	General Services Administration
ICRP	International Commission on Radiological Protection
INL	Idaho National Laboratory
ISM	integrated safety management
ISMS	integrated safety management system
LANL	Los Alamos National Laboratory
LANS	Los Alamos National Security, LLC
M&O	management and operating
MSHA	Mine Safety and Health Act
MOU	memorandum of understanding
NDA	nondestructive assay
NDE	nondestructive examination
NFPA	National Fire Protection Association
NIOSH	National Institute Occupational Safety and Health
NTS	Nevada Test Site

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ORNL	Oak Ridge National Laboratory
OSHA	Occupational Safety and Health Administration
PAAA	Price Anderson Amendments Act
PCB	polychlorinated biphenyls
RFAR	radio fire alarm receiver
RH	remote-handled
SMP	safety management program
SNL	Sandia National Laboratories
SRS	Savannah River Site
SWB	Skeen Whitlock Building
TLV	threshold limit value
TRAMPAC	Transuranic Waste Authorized Methods for Payload Control
TRU	transuranic
VE	visual exam
VPP	Voluntary Protection Program
WHB	Waste Handling Building
WIPP	Waste Isolation Pilot Plant
WSHPD	WTS Worker Safety and Health Program Description
WTS	Washington TRU Solutions LLC
yr	year

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**1.0 INTRODUCTION**

In December 2002, Congress directed the U.S. Department of Energy (DOE) to promulgate regulations on worker safety and health requirements to cover contractors with Price-Anderson Amendments Act (PAAA) indemnification agreements in their contracts. The result of that directive is Title 10, *Energy. Code of Federal Regulations* (CFR), Part 851, "Worker Safety and Health Program" (the 851 Rule), published on February 9, 2006, as effective February 9, 2007. The final rule was built on existing contract practices and processes to achieve safe and healthful workplaces. The rule was intended to be complementary to integrated safety management (ISM). As such, it was expected that contractors not establish redundant worker protection programs to comply with the rule, but that the final rule established an effective worker safety and health program. The program is expected to reduce or prevent injuries, illnesses, and accidental losses by providing DOE contractors and their workers with a safe and healthful workplace that integrates current safety and health programs and processes. Hazards are to be abated, controlled, or otherwise mitigated in a manner that provides reasonable assurance that workers are adequately protected.

Washington TRU Solutions LLC (WTS) is under contract with DOE Carlsbad Field Office (CBFO) for the management and operation of the Waste Isolation Pilot Plant (WIPP). WTS systematically integrates safety and environmental stewardship into management and work practices to accomplish the WIPP mission of disposing of defense generated transuranic (TRU) and TRU mixed waste while protecting the worker, the public, and the environment. The scope includes characterization activities at several generator sites to ensure consistent delivery of waste for disposal to meet the nation's cleanup goals. The scopes for the generator site characterization activities are defined in the primary CBFO Contract DE-AC29-01AL66444, in generator site memorandums of understanding (MOUs) interface agreements, or in subcontracts.

**2.0 PURPOSE**

This WTS Worker Safety and Health Program Description (WTS WSHPD) identifies the elements, methods, and processes by which WTS meets the requirements in the 851 Rule while integrating with the Integrated Safety Management System Description (WP 15-GM.03) (the ISMS Description), and the WTS Voluntary Protection Program (VPP). This document provides no new safety or health requirements. Instead, it serves as a program description of the WTS safety programs, associated policies, requirements, processes, methods and procedures, providing compliance with the requirements of 10 CFR Part 851. The ISMS Description is the means by which worker safety and health requirements described by this WTS WSHPD are integrated into mission work activities performed by WTS. The purpose of the WTS safety program is to establish safety and health requirements that provide workers with a safe and healthful workplace in which hazards are abated, controlled, or otherwise mitigated.

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### **3.0 WASTE ISOLATION PILOT PLANT DESCRIPTION**

WIPP is located in southeastern New Mexico in Eddy County approximately 26 miles east of Carlsbad. The WIPP site is designed to permanently dispose of TRU waste from United States nuclear weapons research and production programs. WIPP is a mined repository located 2,150 feet underground in a stable ancient salt formation. Site facilities include structures, buildings, and underground excavations.

Contact-handled (CH)-TRU waste disposal operations began March 26, 1999, and remote-handled (RH) waste operations began in 2007. Operations began after the successful demonstration of compliance with applicable state and federal laws and applicable regulations, and completion of the operational readiness reviews. Operations start-up initiated after approvals were received as required in the EPA Compliance Certification, and the Hazardous Waste Facility Permit.

### **4.0 COORDINATION WITH OTHER SITE CONTRACTORS**

Title 10 CFR §851.11 states that contractors are to coordinate with the other contractors responsible for work at the covered workplaces to ensure that there are clear roles, responsibilities and procedures to ensure the safety and health of workers at multi-contractor workplaces. Therefore, the WTS WSHPD is not only applicable to WIPP site activities, but includes the roles and responsibilities of host sites referencing the Host Site 851 Plans (hereinafter Host Site Plan[s]) to serve as a roadmap for the specific host site procedures that apply to WTS activities.

#### **4.1 Central Characterization Project**

Under the auspices of the Retrieval, Characterization Transportation organization, WTS also manages and operates the Central Characterization Project (CCP), which provides a standardized characterization and certification capability to certify TRU waste for disposal at the WIPP. The CCP was established to provide cost effective TRU waste characterization, confirmation, and certification, including generation-level and project-level data validation and verification in accordance with programmatic compliance documents. The CCP is structured to use mobile/modular units deployed to waste generator sites. The National TRU Program uses the CCP to assist small quantity sites that have limited or no TRU waste characterization and certification capability, and to supplement the capability of the large quantity sites. The CCP uses WTS and subcontractor personnel to accomplish these objectives.

WTS addresses safety and health considerations for host site operations through an interface agreement between each host facility and WTS. The interface agreement specifies the respective responsibilities of WTS and the host facility regarding provision of facilities, utilities, maintenance support, safety support, and environmental support, and operational responsibilities. Division of operational responsibilities between WTS and host sites are described in the interface agreement for each site. CCP operations conducted at the host site must comply with applicable requirements with the host site and WTS. These requirements, as related to 10 CFR Part 851 implementation, are defined in interface documents, and are included in the WTS WSHPD by facility. WTS

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provides periodic review of host sites to ensure that responsibilities for worker protection are being met.

#### **4.2 Other Companies Conducting Work at WIPP**

The WTS WSHPD is applicable to WTS subcontractors providing services at any covered workplace. DOE laboratories (Los Alamos National Laboratory [LANL] and Sandia National Laboratories [SNL]), Carlsbad Field Office Technical Assistance Contractor, and other DOE direct contracts, whether conducting research or working specific projects on the WIPP site, are directly contracted to the DOE and thus, are responsible for their own 851 Plan, or are covered under their parent company 851 Plan. Additional interfaces and responsibilities for DOE direct contracts as related to safety aspects at WIPP governed by WTS are defined further in WP 02-EC.12, Site Users Guide for Organizations, Personnel, or Companies that Perform Work on U.S. DOE Property or Rights of Way on or Around the Waste Isolation Pilot Plant Site.

#### **5.0 SCOPE AND APPLICABILITY**

Title 10 CFR §851.11, states that if a contractor is responsible for more than one covered workplace at a DOE site, the contractor must establish and maintain a single worker safety and health program for the covered workplaces for which the contractor is responsible. The Rule and, therefore, the WTS WSHPD, apply to the conduct of WTS activities at WIPP, Idaho National Laboratory (INL), Argonne National Laboratory-East (ANL-E), Savannah River Site (SRS), Oak Ridge National Laboratory (ORNL), Los Alamos National Laboratory (LANL), and the Hanford Site.

The WTS WSHPD also describes how WTS complies with the requirements set forth in Subpart C that are applicable to the covered workplace(s) with the referenced policies and procedures providing the actual methods of implementation.

#### **5.1 WIPP Site**

##### **5.1.1 WTS**

WTS is the managing and operating contractor for the WIPP site. The WIPP site is located in an area of low population density. There are no industrial, commercial, institutional, recreational or residential structures within the WIPP site boundary. The WIPP surface structures accommodate the personnel, equipment, and support services required for the receipt, preparation, and transfer of TRU waste from the surface to the underground.

The primary surface operations at the WIPP are conducted in the Waste Handling Building (WHB), which is divided into the CH waste handling area, the RH waste handling area, and support areas. The waste disposal area is in a 100-acre area on a horizon located 2,150 feet beneath the surface in a deep, bedded salt formation. Waste is transferred from the surface to the disposal horizon through the waste shaft using a hoist and conveyance.

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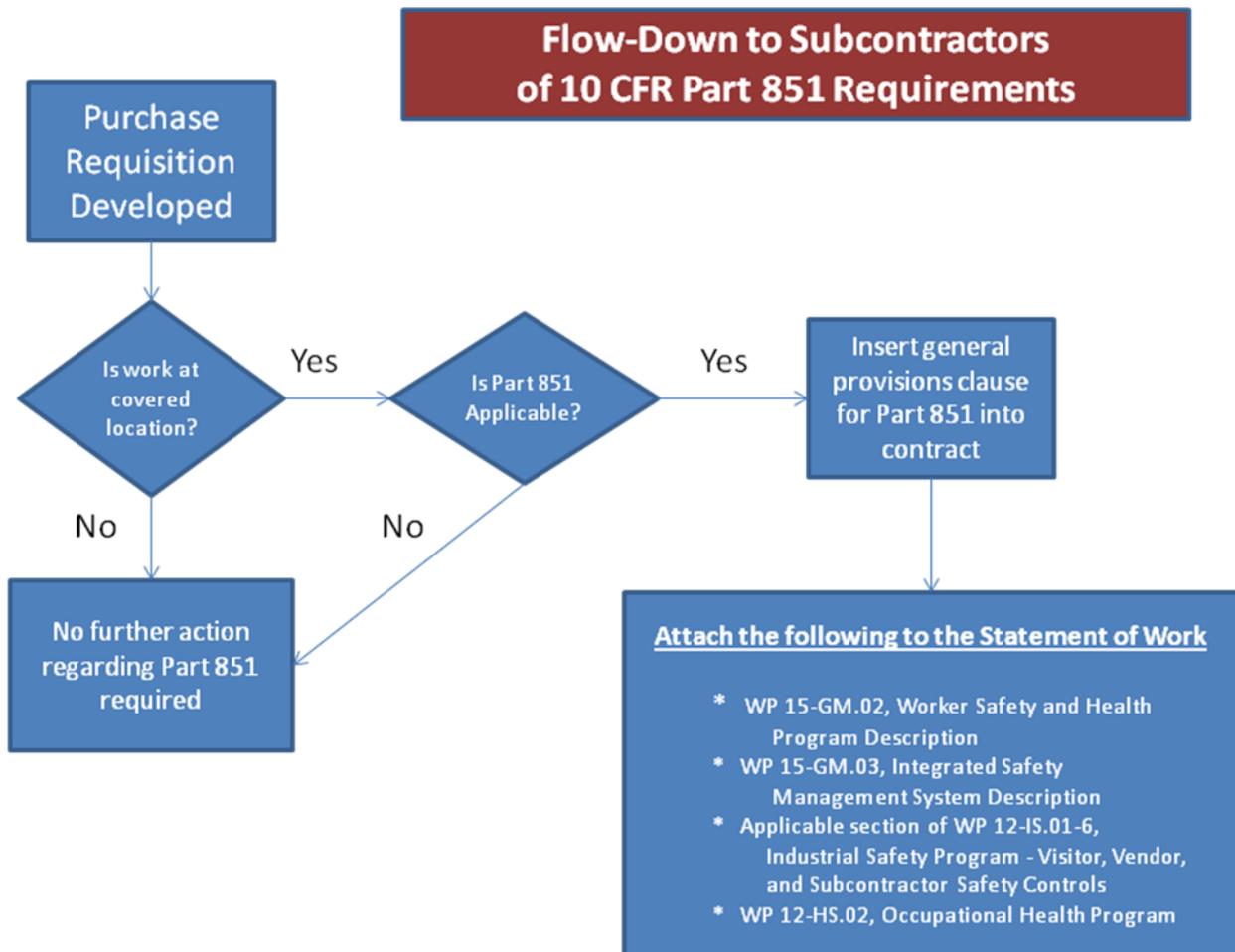
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Waste arrives to the WIPP in drum assemblies, standard waste boxes, ten-drum overpacks, or canisters. The principal operations at the WIPP involve the receipt and disposal of TRU mixed waste.

Hazards associated with normal WIPP operations include mining dangers, rotating machinery, high voltage, compressed gases, confined spaces, radiological and nonradiological hazardous materials, nonionizing radiation, high noise levels, mechanical and moving equipment dangers, working at heights, construction, outdoor temperature extremes, and material handling dangers. Waste handling operations at WIPP do not involve high temperature and pressure systems, or electromagnetic fields.

### 5.1.2 Subcontractors

WTS has implemented a process to assure that the requirements of 10 CFR Part 851 are appropriately flowed down to subcontractors performing work at WTS covered sites in accordance with the following flowchart.



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The process includes specific procurement clauses for subcontractors to work under the applicable requirements of the WTS WSHPD, as well as work control requirements, safety reviews, occupational medical requirements and others to ensure effective implementation of 10 CFR Part 851. WTS is responsible for flowing down worker protection requirements to subcontractors at any tier to the extent necessary to ensure compliance with these requirements. These requirements become part of the terms and conditions of agreement in each subcontract before commencing work at the WIPP or CCP sites. WTS and the subcontractors coordinate in accordance with WP 12-IS.01-6, Industrial Safety Program - Visitor, Vendor, and Subcontractor Safety Controls, to ensure clear roles, responsibilities and procedures to achieve an integrated approach to ensuring the safety and health of the worker consistent with 10 CFR §851.11(a)(2)(ii).

## **5.2 Generator Sites**

WTS and WTS subcontractor personnel work at a number of DOE generator sites where WTS has no direct contractual authority of overall site operations. WTS has therefore negotiated interface agreements with the respective generator site's management and operating (M&O) contractor. These interface agreements define WTS and generator site responsibilities regarding safety oversight and safety support for generator site operations. WTS fully expects each generator site's M&O contractor to proactively address their safety commitments to CCP operations at those sites. WTS also understands that the safety and health of WTS personnel and WTS subcontractor personnel, remains the responsibility of WTS, regardless of location. WTS management commitment for generator site personnel is further delineated in the applicable sections of this program description. Specific activities at each site includes providing nondestructive examination (NDE), nondestructive radioassay (NDA), and visual exam (VE). At each of the sites, some sampling is conducted, such as flammable gas per TRAMPAC requirements, and suma gas sampling. Suma sampling analysis is only conducted at INL. There are components based on management commitment and the fact that WTS always retains corporate responsibility for the protection of their workers that are further delineated in the applicable sections of this program description.

### **5.2.1 SRS**

The Interfaces and Responsibilities regarding the overall scope of work conducted by WTS at SRS are defined in CCP-PO-004, CCP/SRS Interface Document. This includes the fact that the host site has primary responsibility for assuring that requirements for safety (specifically including radiological control, emergency management, industrial safety, industrial hygiene, security, safety basis, and environmental permits) are met. The scope of work conducted by WTS and its subcontractors at SRS is based on the responsibilities for the characterization of CH and RH waste.

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**5.2.2 ORNL**

The Interfaces and Responsibilities regarding the overall scope of work conducted by WTS at the Oak Ridge Reservation TRU Waste Processing Center are defined in CCP-PO-027, CCP/ORNL Interface Document. The TRU Waste Processing Center has primary responsibility for assuring that requirements for safety (specifically including radiological control, emergency management, industrial safety, industrial hygiene, security, safety basis, and environmental permits) are met.

**5.2.3 LANL**

The Interfaces and Responsibilities regarding the overall scope of work conducted by WTS at LANL are defined in CCP-PO-012, CCP/LANL Interface Document. This includes the fact that the host site, LANL has primary responsibility for assuring that requirements for safety (specifically including radiological control, emergency management, industrial safety, industrial hygiene, security, safety basis, and environmental permits) are met.

**5.2.4 INL**

The interfaces and responsibilities regarding the overall scope of work conducted by WTS at INL are defined in CCP-PO-024, CCP/INL Interface Document; CCP-PO-501, CCP/INL RH TRU Waste Interface Document; and CCP-PO-505, CCP/INL RH TRU Waste Authorized Methods for Payload Control (CCP RH-TRAMPAC). This includes the fact that the host sites Advanced Mixed Waste Treatment Project (AMWTP), and CH2M-WG Idaho, LLC (CWI) have primary responsibility for assuring that requirements for safety (specifically including radiological control, emergency management, industrial safety, industrial hygiene, security, safety basis, and environmental permits) are met. These same responsibilities apply to the additional scope of work at INL for transportation of CH and RH TRU waste. However, there are components based on management commitment and the fact that WTS always retains corporate responsibility for the protection of their workers that are further delineated in the applicable sections of this program description.

**5.2.5 ANL-E**

The Interfaces and Responsibilities regarding the overall scope of work conducted by WTS at ANL-E are defined in CCP-PO-500, CCP/ANL RH-TRU Waste Interface Document. This includes the fact that the UChicago Argonne, LLC, as the host site's managing operator, has primary responsibility for assuring that requirements for safety (specifically including radiological control, emergency management, industrial safety, industrial hygiene, security, safety basis, and environmental permits) are met.

**5.2.6 Hanford Site**

The interfaces and responsibilities regarding the overall scope of work conducted by WTS at Hanford are defined in CCP-PO-011, CCP/CH2M Hill Plateau Remediation Company Interface Document; and MOA-CHPRCC-CCP-2009, Hanford TRU Waste

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Characterization and Certification. The host site has primary responsibility for assuring that requirements for safety (specifically including radiological control, emergency management, industrial safety, industrial hygiene, security, safety basis, and environmental permits) are met. The scope of work conducted by WTS and its subcontractors at the Hanford Site is based on the responsibilities for the characterization of CH waste.

## **6.0 COVERED WORKPLACES/ACTIVITIES**

Per 10 CFR §851.3, a covered workplace is a place at a DOE site where a contractor is responsible for performing work in furtherance of a DOE mission. Therefore, the following are considered covered workplaces/activities applicable to this WTS WSHPD.

### **6.1 WIPP Site**

The WIPP site includes the area within the Land Withdrawal Act defined area, surface and underground.

The overall WIPP safety program per the ISMS Description applies to everyone that enters the WIPP site as they are provided a level of protection in accordance with VPP STAR status level. Per DOE guidance on who must comply with the 851 Rule, the following companies, agencies, and groups are specifically excluded from the WTS WSHPD.

Though afforded safety protection per ISM, groups excluded from the 851 Rule include the following:

- Emergency response groups such as off-site municipal fire departments, mine rescue teams from area mines,
- Various university groups, laboratories and other research entities conducting research, if the research being conducted is non-DOE-funded/scope research,
- State and municipal departments that may be maintaining highways, conducting audits, etc., and
- General public or companies passing through the Land Withdrawal area for recreational purposes or conducting work that is non-DOE-funded scope.

### **6.2 Carlsbad Buildings**

#### Skeen Whitlock Building (SWB)

This is a covered worksite for WTS employees and their subcontractors. The Skeen-Whitlock Building is a General Services Administration (GSA) building. GSA services provided are not covered in the WTS WSHPD.

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315 N. Canal

This is a covered worksite for WTS employees and their subcontractors. This is a GSA building. GSA services provided are not covered in the WTS WSHPD.

WIPP Records Center

This is a covered worksite for WTS subcontractors.

**6.3 CCP Sites**

Characterization activities work scope conducted at CCP sites by WTS and its subcontractors is considered covered work scope. Therefore, if it is a DOE site, it is also a covered workplace. The following are current covered workplaces/activities.

**6.3.1 INL**

Characterization activities work scope conducted at the DOE INL by WTS and its subcontractors will be addressed in the specific sections below based on interface agreements, contract scopes of work, the Host Sites' Plans, and this WTS WSHPD. At INL there are four different work scopes described in actual statements of work to include characterization activities related to CH Waste at AMWTP, and CH and RH Waste for CWI, and transportation for INL.

**6.3.2 ORNL**

Characterization activities work scope conducted at the DOE Oak Ridge facility by WTS and its subcontractors will be addressed in the specific sections below based on interface agreements, contract scopes of work, the Oak Ridge TRU Waste Processing Center 851 Plan, and this WTS WSHPD.

**6.3.3 LANL**

Characterization activities work scope conducted at the DOE LANL facility by WTS and its subcontractors are addressed in the specific sections below based on interface agreements, contract scopes of work, the LANS 851 Plan, and this WTS WSHPD.

**6.3.4 SRS**

Characterization activities work scope conducted at the DOE SRS by WTS and its subcontractors are addressed in the specific sections below based on interface agreements, contract scopes of work, the SRS 851 Plan, SRNS-RP-2008-00001, and this WTS WSHPD.

**6.3.5 ANL-E**

Characterization activities work scope conducted at the DOE INL by WTS and its subcontractors are addressed in the specific sections below based on interface agreements, contract scopes of work, the UChicago Argonne, LLC, 851 Plan, and this

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WTS WSHPD. The CH characterization activities at ANL-E have been completed, and RH characterization activities are in progress.

### **6.3.6 Hanford Site**

Characterization activities work scope conducted at the DOE Hanford Site by WTS and its subcontractors will be addressed in the specific sections below based on interface agreements, memoranda of understanding, the PRC-MP-SH-32219, 10 CFR CHPRC Worker Safety and Health Program Description, and this WTS WSHPD.

## **7.0 EXCLUSIONS**

### **7.1 Scopes Not Covered**

In accordance with 10 CFR §851.2(c), the WTS WSHPD does not apply to transportation to or from a DOE site. Therefore, the WTS WSHPD is not applicable to transportation subcontracts such as the WIPP bus subcontract; nor is it applicable to incidents/accidents off the DOE sites involving employees, or General Services Administration vehicles. Incidents will be investigated and Occurrence Reporting requirements will be met, though transportation issues will not be considered issues applicable to the 851 Rule.

In accordance with 10 CFR §851.2(b), the WTS WSHPD does not apply to radiological hazards or nuclear explosives operations to the extent regulated by 10 CFR Parts 20, 820, 830, or 835. Though related components may be referenced due to inclusion in overall ISMS or VPP, they are not applicable to 10 CFR Part 851.

Specific related areas excluded based on the fact that the scope of work, though located on the WIPP site, is not DOE-funded includes research by various university groups, laboratories and other research entities conducting research in the underground research/experimental area of the WIPP. This exclusion also includes any public use of land withdrawal act area based on the fact that it is not DOE-funded work. However, personnel conducting work within the property protection area that is not DOE scope are still protected by the ISM and VPP programs. Personnel conducting non-DOE funded work within the LWA area are also protected as they are required to implement WP 02-EC.12, with preapprovals of job hazards analyses (JHAs), safety plans and implementing documentation that not only protects those entities, but ensures that appropriate risks have been identified for them and for support work scope provided by WTS personnel or subcontractors.

Additionally, DOE Guidance and language in the rule states that merely providing supplies does not fall within the scope of Part 851. Also, such services will not be tracked for Occupational Safety and Health Administration (OSHA) reporting. Thus, this program plan does not apply to companies and agencies providing services to WIPP that are supply-focused, such as the following:

- Vending machine suppliers, copy machine maintenance

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- Delivery personnel such as UPS or office supplies delivery
- Utilities personnel serving areas such as power and communication lines

The occupational medicine portion of this WTS WSHPD does not apply to subcontractors that work at one of the covered workplaces/activities for less than 30 days in a 12-month period and are not required to be enrolled in a medical or exposure monitoring program, due to lack of potential for exposure.

## **7.2 Carlsbad Areas Not Covered**

Laboratory work conducted by WTS employees at Carlsbad Environmental Monitoring and Research Center (CEMRC) is not covered, since CEMRC is not a DOE site.

## **7.3 Other Locations Not Covered**

The WTS WSHPD is not applicable to the following:

- Office workers who are not located at DOE sites. Though conducting DOE work, office personnel at Albuquerque, New Mexico; Denver, Colorado; and Tacoma, Washington, for example, are not working at a DOE site, and thus do not fall under the auspices of the WTS WSHPD.
- Work conducted in the field that is not on a DOE site, such as training presented to emergency responders on shipping routes, emergency response at a non-DOE site (such as mine rescue), and competitions and conferences held off-site.

## **8.0 GENERAL REQUIREMENTS (SUBPART B - PROGRAM REQUIREMENTS, 10 CFR §851.10, GENERAL REQUIREMENTS)**

The WTS overall safety program is based on ISMS, the DOE VPP, and this WSHPD providing an integrated forum for safe compliant operations, focus on continuous improvement, and the expectations for a proactive safety culture. This foundation meets the requirements of §851.10 (a) and (b) providing a place of employment that is free from recognized hazards that are causing or have the potential to cause death or serious physical harm to workers; and ensures that work is performed in accordance with applicable requirements of Part 851, and with the worker safety and health program for WTS covered workplaces. The written worker safety and health program consists of the WTS WSHPD and the referenced programs, policies, and procedures. The WTS WSHPD describes how WTS complies with the requirements set forth in Subpart C that are applicable to the hazards associated with WTS scope of work; and how WTS complies with any compliance orders issued by the Secretary pursuant to §851.4.

The only direct VPP program inclusion for purposes of meeting 851 Rule expectations through this WTS WSHPD is Management Policy (MP) 1.12, Worker Protection Policy.

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**9.0 ADMINISTRATION OF THE WORKER SAFETY & HEALTH PROGRAM  
(10 CFR §851.11[b], [c]) (10 CFR §851.12, AND 10 CFR §851.13)**

The WTS WSHPD is maintained by the WTS Safety and Health Department Manager with updates submitted for approval by the CBFO Manager as the Head of DOE Field Element. A copy of the approved program is maintained in the Quality and Manufacturing Integrated System (Q&MIS) and in the CCP controlled document system to ensure access by affected workers and their designated representatives.

The initial WTS WSHPD's effective implementation date was May 24, 2007. Though approved by the CBFO before that date, implementation was not considered as complete until May 24, 2007. Since the WTS WSHPD aligns with and references responsibilities in various host site's 851 Plans, full implementation was delayed until May 24, 2007, to allow sufficient time for host site plans to be fully in place, so that implementation date was the same date for all covered workplaces and work scopes within the WTS WSHPD. Therefore, the annual review of this program are submitted per contract-scheduled dates each year.

Reviews are conducted and any subsequently required updates of the WTS WSHPD are submitted whenever a significant change or addition to the program is made, including a change of WIPP M&O contractors, or prime contractors at the generator sites under which WTS conducts characterization activities.

An annual review is conducted, including provision to the DOE of either an updated worker safety and health program for approval, or a letter stating that no changes are necessary in the currently approved worker safety and health program.

Revisions/updates include incorporation in the worker safety and health program of any changes, conditions, or workplace safety and health standards directed by the DOE consistent with the requirements of the 851 Rule, the DOE Acquisition Regulation 970.5204-2, Laws, Regulations and DOE Directives and associated contract clauses.

Updates go through the WTS review process, with concurrence by the CBFO before subsequent implementation. The WIPP Bargaining Unit is also notified of any updates upon receipt of CBFO approval of those updates pursuant to §851.11(d). WTS Human Resources ensures that WSHP requirements changes that affect the labor agreement are appropriately addressed with the Bargaining Unit consistent with the federal labor laws. There are no affected bargaining units with WTS characterization activities. Subcontractors employing Bargaining Unit personnel are responsible for conducting their own notifications.

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## **10.0 NEW WORK SCOPES**

New work scope at WIPP will be incorporated under the current WTS WSHPD. New work scope involving CCP activities at the generator sites and related Part 851 responsibilities will be aligned in interface agreements as follows:

- Management Responsibilities and Worker Rights and Responsibilities – Joint Responsibilities under the Host Site's Plan and WTS WSHPD.
- Hazard Identification and Assessment – Responsibility of the host site per their 851 Plan.
- Hazard Prevention and Abatement – Joint Responsibilities under the Host Site's Plan and the WTS WSHPD.
- Compliance with Safety and Health Standards – Host site, per their 851 Plan for beryllium program per 10 CFR Part 850, including beryllium medical surveillance, 29 CFR Part 1910, and National Fire Protection Association (NFPA) standards. Joint responsibility for 29 CFR Part 1904, "Recording and Reporting Occupational Injuries," and Illnesses and the rest is anticipated to not be applicable.
- Construction Safety may be applicable. Though construction will not be part of the work scope, if construction is being conducted in close proximity, the hazards will be identified and controls placed to ensure appropriate worker protection. This is the responsibility of the host site per their 851 Plan.
- Explosives Safety, Firearms Safety, and Biological Safety are anticipated to not be applicable.
- Fire Protection, Pressure Safety, and Industrial Hygiene – Host site, per their 851 Plan.
- Occupational Medical – WTS WSHPD, with local facility emergency response per Host Site Plan.

If the interface agreement for the new work scope aligns with the above responsibilities, the new work scope can be added to the WTS WSHPD with the next scheduled annual update. If the responsibilities vary from the above list, the WTS WSHPD must be changed accordingly.

A proposed addition to the RH process includes the use of neutron shielded canisters as an augmentation of the 72-B waste canister. The neutron-shielded canister incorporates internal neutron shielding components that provide two levels of supplemental shielding for approximately 15- and 30-gallon inner containers (drums), respectively. The additional neutron shielding is necessary precaution in case of transportation accidents, not on-site use. As the canister is also an NRC regulated container, 10 CFR Part 851 does not apply. However, it is an additional level of

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protection for employees at host sites and at WIPP. The host sites may have some resultant process changes that impact their 851 Plan. These will be evaluated as they occur to determine whether resultant changes are needed in this document. No process changes are anticipated at WIPP for receipt processing.

**11.0 MANAGEMENT RESPONSIBILITIES (SUBPART C, §851.20([a]))**

WTS is committed to the safety and health of their workforce. This section is applicable to WTS facilities and work scopes, including subcontractors working at the covered workplaces in accordance with their statement of work. This commitment is specifically demonstrated in the following documents reflecting appropriate Part 851 implementation:

1. Establishment of written policy, goals, and objectives for the worker safety and health program is achieved through the implementation of steps in the WTS Integrated Safety Management System Description, through the CBFO interface and budget/contract process, as well as through MP 1.29, Mission, Goals, and Responsibilities.
2. As reflected in MP 1.12, WTS uses qualified worker safety and health staff, to direct and manage the safety program. This same staff provides subcontractor safety oversight and interface with host site worker safety and health staff to ensure appropriate safety oversight of characterization activities at the host sites.
3. WTS assigns worker safety and health program responsibilities, evaluates personnel performance, and holds personnel accountable for worker safety and health performance. The formal process for this activity is further described in management policies MP 1.7, Employee Performance Appraisal and Development, and MP 1.12. Safety assessments of subcontractors working at WTS covered worksites are conducted in accordance with the Contractor Assurance Program.
4. WTS provides mechanisms to involve workers and their elected representatives in the development of the worker safety and health program goals, objectives, and performance measures and in the identification and control of hazards in the workplace. At the WIPP site, this is done through a variety of mechanisms as described in MP 1.12, including the use of Safety Committees. Subcontractors are invited to participate in safety committees and other safety activities at WIPP such as safety fairs, awareness activities, etc. For characterization activities, WTS personnel and subcontractors are encouraged to volunteer and join the various host site safety committees and activities, as well as being involved in the development of CCP specific goals, and participating in tasks to identify and control hazards in their work areas. WTS worksites activities include participation in WIPP Safety Campaigns (including contests, submission of ideas for safety goals, receiving periodic packages of wellness information, home safety campaign handouts and others. CCP

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personnel and subcontractors have the additional benefit of participating in activities at the host site, based on the host site employee involvement program. For example, several employees at host sites are currently participating in Human Performance Improvement initiatives.

5. WTS provides workers and subcontractors working at covered workplaces with access to information relevant to the worker safety and health program including Porcelain Press, pre-job briefings, and others as committed to in MP 1.12.
6. WTS establishes procedures for workers to report without reprisal job-related fatalities, injuries, illnesses, incidents, and hazards and make recommendations about ways to control those hazards. These processes include MP 1.12 and WP 12-IS.01, Industrial Safety Program - Structure and Management.
7. In WP 12-IS.01, WTS provides for prompt response to such reports and recommendations.
8. MP 1.12 provides for regular communication with workers about workplace safety and health matters.
9. MP 1.2, Work Suspension and Stop-Work Direction, establishes the process to permit workers including subcontractors to stop work or decline to perform an assigned task because of a reasonable belief that the task poses an imminent risk of death, serious physical harm, or other serious hazard to workers, in circumstances where the workers believe there is insufficient time to use normal hazard reporting and abatement procedures.
10. MP 1.12 and WP 12-IS.01 contain the methods used to inform workers of their rights and responsibility by appropriate means, including posting the DOE-designated worker protection poster in the workplace where it is accessible to workers, including subcontractors.

**12.0 WORKER RIGHTS AND RESPONSIBILITIES (SUBPART C, §851.20[b])**

This section is applicable to WTS covered workplaces and work scopes. Knowledge and support of Worker's Rights and Responsibilities is central to the WTS safety culture. These are unique in several aspects. For example, the Mine Safety and Health Act (MSHA) formally requires a "miner's representative" to ensure the miners feel free to present issues to mine inspectors. Very early in the WIPP Project, management supported the unique position of allowing each person to be their own "miner's representative." In later years, a bargaining unit formed, but remained committed to individual rights and responsibilities for safety as the tradition had already been established in MSHA implementation and VPP program, through open door policies, WIPP Forms, and other such forums that demonstrated the expectations key to our excellent safety culture. Employees are made aware of their rights and responsibilities as workers starting with New Employee Orientation and General Employee Training (GET). The rights and responsibilities specified in 10 CFR Part 851 as follows are

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implemented through posting of the DOE VPP Rights on WTS Human Resource Bulletin Boards at covered workplaces, and through implementation of the following WTS policies and procedures: WP 12- IS.01; WP 12-IH.02, Industrial Hygiene Program; MP 1.2; MP 1.12; and MP 1.28, Integrated Safety Management. These rights and responsibilities are presented in GET in the Employee Safety Programs Handbook, which each employee receives and are also included in MP 1.12. They include:

1. Participate in activities described in this section on official time.
2. Have access to DOE safety and health publications; the worker safety and health program for the covered workplace; the standards, controls, and procedures applicable to the covered workplace; the safety and health poster that informs the worker of relevant rights and responsibilities; and limited information on any recordkeeping log (OSHA Form 300). Access is subject to the Freedom of Information Act requirements and restrictions, and the DOE Form 5484.3 (the DOE equivalent to OSHA Form 301) that contains the employee's name as the injured or ill worker.
3. The right to be notified when monitoring results indicate the worker was overexposed to hazardous materials.
4. The right to observe monitoring or measuring of hazardous agents and have the results of their own exposure monitoring.
5. Any employee is allowed to accompany any management, auditors, inspectors, etc., during physical inspections of the workplace for the purpose of aiding the inspection. As appropriate, employees are consulted on matters of worker safety and health.
6. It is a DOE VPP right and thus formally posted on the DOE VPP rights posters in the HR bulletin board areas that employees may request and receive results of inspections and accident investigations.
7. Express concerns related to worker safety and health.
8. Decline to perform an assigned task because of a reasonable belief that, under the circumstances, the task poses an imminent risk of death or serious physical harm to the worker coupled with a reasonable belief that there is insufficient time to seek effective redress through normal hazard reporting and abatement procedures.
9. MP 1.2 implements the worker right and responsibility to stop work when the worker discovers employee exposures to imminently dangerous conditions or other serious hazards; provided that any stop work authority must be exercised in a justifiable and responsible manner in accordance with procedures established in the approved worker safety and health program.

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**13.0 HAZARD IDENTIFICATION AND ASSESSMENT (SUBPART C, §851.21)**

WTS has established procedures to identify existing and potential workplace hazards and assess the risk of associated workers injury and illness. Procedures include methods to:

1. Assess worker exposure to chemical, physical, biological, or safety workplace hazards through appropriate workplace monitoring.

WIPP

At the WIPP site, in accordance with WP 12-IH.02 and WP 12-IH.02-1, WIPP Industrial Hygiene - Hazard Assessment, initial or baseline surveys of work areas or operations are conducted to identify and evaluate potential worker health risks. Baseline hazard analysis and the emergency management hazards surveys are conducted as part of the hazards assessments. The Biennial Status Report and Assessment Strategy provides a periodic baseline of potential hazards on a systemic, sitewide basis, in accordance with DOE G 440.1-3, *Occupational Exposure Assessment*. Safety monitoring is conducted in accordance with WP 12-IS.01. Hazard identification methods used also support the WIPP FHA. Continuous workplace monitoring includes analysis of potential hazards such as heat stress in WP 12-IS.01-5, Industrial Safety Program - Hazardous Locations and Working Surfaces. Monitoring and controls include work within the Land Withdrawal Act area, such as chemical exposures for vegetation-related work through the material safety data sheet (MSDS) program.

Characterization Sites

Per the interface documents, workplace monitoring is conducted by the host site under the Host Site's Plan.

2. Document assessment for chemical, physical, biological, and safety workplace hazards using recognized exposure assessment and testing methodologies and using of accredited and certified laboratories.

WIPP

In accordance with WP 12-IH.02-1, documentation of exposure assessments for chemical, physical, and biological agents and ergonomic stressors is conducted using National Institute for Occupational Safety and Health (NIOSH) or OSHA exposure assessment methodologies, as applicable and available, and use of American Industrial Hygiene Association accredited industrial hygiene laboratories is mandated.

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Characterization Sites

Per the interface documents, use of appropriate exposure assessment and testing methodologies and laboratories is conducted by the host site under the Host Site's Plan, and is not the responsibility of WTS.

3. Record observations, testing, and monitoring results.

WIPP

Observations, testing, and monitoring results are recorded in accordance with the requirements listed in WP 13-1.

Characterization Sites

Per the interface documents, recording of observations, testing, and monitoring results are conducted under the Host Site's Plan.

4. Analyze designs of new facilities and modifications and repairs to existing facilities and equipment for potential workplace hazards.

WIPP

At WIPP, this requirement is implemented through WP 09, Engineering Conduct of Operations.

Characterization Sites

The host facility is responsible for new facilities and modifications and repairs to existing facilities, as that is not within the WTS characterization scope. Any modifications to WTS equipment is controlled to ensure implementation of this requirement through CCP-CM-001, Equipment Change Authorization and Documentation. Plans for installation of new equipment or modifications of existing equipment are submitted to the host site for their safety review.

5. Evaluate operations, procedures, and facilities to identify workplace hazards.

WIPP

At WIPP, this requirement is implemented through integrated assessments such as the Emergency Planning Hazards Survey conducted in accordance with DOE O 151.1C, the worker protection team walkdowns, and the inspections conducted implementing MP 5.16, Landlord Program. Daily workplace evaluations by workers and management include inspections of tools and equipment, including forklifts, cranes, slings, and PPE, as well as overall workplace conditions, in accordance with the WTS ISM Description. Hazard identification processes used at WIPP include WP 04-AD3011, Equipment Lockout/Tagout; and WP 12-IS.01-2, Industrial Safety Program -

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Lockout/Tagout and Nonelectrical Energy Hazards, for stored energy sources. Heavy loads, rigging and hoisting, are addressed in WP 10-AD3007, Use and Control of Rigging Components; WP 12-IS.01-3, Industrial Safety Program - Equipment and Tools; WIPP OPS-402, Incidental Rigger Qualification Card; and M-24, Mobile Crane Operator Qualification Card. Fall protection, scaffolding, and ladders are addressed in WP 12-IS.01-5. Subcontractor controls for each of the above areas are contained in WP 12-IS.01-6. Evaluation of hazards includes chemical and particulate hazards in WP 12-IH.02-12, WIPP Industrial Hygiene Program - Cryogenics, Refrigerants, and Process Gasses; WP 12-IH.02-11, WIPP Industrial Hygiene Program - Polychlorinated Biphenyls (PCBs); WP 12-IH.02-1, for diesel emissions; and WP 12-IH.02-4, which includes the MSDS program and recent program improvements. Confined spaces are addressed in WP 12-IH.02-2.

Characterization Sites

This is a shared responsibility with the host facility. The host facility is responsible for facility hazards, though WTS holds employees and subcontractors responsible for identifying workplace hazards, including facility hazards as required in the ISM Description. WTS operating procedures are evaluated for workplace hazards as part of the formal document review process in accordance with CCP-QP-010, CCP Document Preparation, Approval, & Control.

6. Perform routine job activity-level hazard analyses:

WIPP

At the WIPP site, job activity-level hazard analyses are developed in accordance with WP 12-IS3002, Job Hazard Analysis Development, which includes program updates with subcontractor requirements in WP 12-IS.01-6.

Characterization Sites

Job hazard analyses are fully incorporated in specific CCP Health & Safety Plans as delineated in CCP-QP-002, CCP Training and Qualification Plan; and CCP-QP-009, Work Control Process. In most cases, the JHAs are actually developed by the host site, and are not the responsibility of WTS.

7. Review site safety and health experience information:

WIPP

At the WIPP site, safety and health experience information is reviewed in site safety statistical reports, through WP 13-1 trending; WP 15-MD3100, Operating Experience Program; and the qualitative safety performance measures from the WTS Integrated Safety Management System Description. Lessons learned are developed, screened, distributed, and implemented with feedback provided

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as part of the Operating Experience Program in accordance with DOE O 210.2, *Corporate Operating Experience Program*. The program analyzes events, occurrences, issue trends, causal factors, and related areas to identify WTS learning organization needs to ensure continuous improvement.

Characterization Sites

This is a shared responsibility with the host facility and is done through the Host Site's Plan, CCP-QP-014, CCP Data Analysis and Trending; and the lessons learned program implemented through CCP-QP-025, Lessons Learned Program Management.

8. Consider interaction between workplace hazards and other hazards such as radiological hazards.

WIPP

WIPP-007, Hazard Identification Summary Report for WIPP and Carlsbad, NM, Operations, evaluates the combinations of hazards identified at WIPP and Carlsbad facilities. The controls are specific to the hazards and combinations of controls are chosen for the appropriate hazards that exist in any one location. Workplace hazards and other hazards such as radiological hazards are analyzed in the Documented Safety Analysis Safety Management Program (SMP) Chapters 6 through 17, as well as the implementation direction provided in WP 12-IS.01 procedures.

Characterization Sites

Since the radiological programs are under the cognizance of the host site, this function is accomplished by the host site in accordance with the Host Site's 851 Plan.

WTS does not have any oversight of any closure facilities at this time; therefore, the section of Part 851 pertinent to that area is not part of the WTS WSHPD.

**14.0 HAZARD PREVENTION AND ABATEMENT (SUBPART C, §851.22)**

WTS establishes and implements a hazard prevention and abatement process to ensure that identified and potential hazards are prevented or abated in a timely manner. That process is applicable to WTS work scope and is incorporated in WIPP documents - WP 12-FP.01, WIPP Fire Protection Program; MP 1.12; WP 12-IS.01; MP 1.2; WP 15-PC3609, Preparation of Purchase Requisitions; and WP 12-IS.01-6.

1. For hazards identified either in the facility design or during the development of procedures, controls must be incorporated in the appropriate facility design or procedure.

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2. For existing hazards identified in the workplace, contractors must:
  - (i) Prioritize and implement abatement actions according to the risk to workers;
  - (ii) Implement interim protective measures pending final abatement; and
  - (iii) Protect workers from dangerous safety and health conditions;

WTS selects hazard controls described in the WTS ISMS Description based on the following hierarchy.

1. Elimination or substitution of the hazards where feasible and appropriate
2. Engineered controls where feasible and appropriate
3. Work practices and administrative controls that limit worker exposures
4. Personal protective equipment

WTS addresses hazards when selecting or purchasing equipment, products, and services using a graded approach at the WIPP site in accordance with WP 09-CN3005, Graded Approach to Application of QA Controls, and for the characterization activities at the host sites in accordance with CCP-QP-001, Graded Approach. The process of using a graded approach applies controls to items and activities that affect quality and safety at WIPP, based on the importance of the item or activity and the impact should it fail. The controls for safety provide hazard prevention and abatement through controls such as required safety reviews and approvals of related work orders, training requirements, and implementation of codes, standards, and other requirements.

Current WTS programs exist that provide controls must be used (e.g., qualification and training, work control, or calibration).

### **15.0 SAFETY AND HEALTH STANDARDS (SUBPART C, §851.23)**

WTS complies with the following safety and health standards, which are applicable to the hazards at the WIPP site and the characterization activities host sites, per WP 12-IS.01 and the applicable Host Site Plan.

1. Title 10 CFR Part 850, "Chronic Beryllium Disease Prevention Program," (CBDPP) operations at WIPP, LANL, SRS, ORNL, NTS, INL, and ANL-E, and Hanford Site are potentially within the scope of 10 CFR Part 850. At the host sites it is the responsibility of the host site. There is some possibility that beryllium exposure might occur at WIPP. Accordingly, CBDPP programs are in place at WIPP and at the host sites (per the host site plan) to address potential incidents or releases. WIPP has developed and implemented a CBFO-reviewed and approved beryllium exposure prevention program in conformance

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with 10 CFR Part 850, WP 12-IH.02-9, WIPP Industrial Hygiene Program - Beryllium Exposure Prevention Program.

TRU waste containing beryllium is received at WIPP, but is packaged in DOT specification containers that are sealed, vented, and filtered per the WIPP Waste Acceptance Criteria. Personnel trained in hazardous waste, emergency response, and contamination control operations that may involve TRU waste receive periodic training on beryllium hazards and the requirements of the WIPP beryllium exposure prevention program.

WTS does have personnel performing oversight duties at generator sites where there may be a potential for beryllium exposure. Those personnel are enrolled in and work under the requirements of the host site's beryllium exposure prevention program.

The possibility of beryllium exposure at WIPP during an event such as a drum breach is also addressed in WP 12-IH.02-9. WP 12-IH.02 provides requirements for compliance with the 10 CFR Part 850 worker protection and surveillance requirements for recovery from such an event. WIPP-007 includes further discussion of potential hazards.

2. Title 29 CFR §§1904.4-1904.11; 29 CFR §§1904.29-1904.33; 29 CFR §1904.44 and §1904.46, "Recording and Reporting Occupational Injuries and Illnesses," are applicable to WTS covered workplaces, and are covered under the WTS WSHPD for WTS employees. Subcontractors at the WIPP site report through WTS, and subcontractors at host sites do dual reporting, with the host site responsible for the total site reporting.
3. Title 29 CFR Part 1910, "Occupational Safety and Health Standards," excluding 29 CFR §1910.1096, "Ionizing Radiation," is applicable at the WIPP site surface areas, it is not applicable to the mine, which is covered by MSHA standard. At the host sites, this responsibility falls to the host site as the cognizant operator of the facility and based on the interface agreements for safety responsibilities.
4. Title 29 CFR Part 1926, "Safety and Health Regulations for Construction," is applicable only to the WIPP site, as the characterization activities work scopes do not involve any construction activities. This requirement is implemented at the WIPP in the industrial safety program as referenced above in conjunction with WP 09-DC.01, Construction Management Program.
5. Title 30 CFR Parts 47, 48, 49, 57, and 62, "Safety and Health Standards-Underground Metal and Nonmetal Mines." Though applied for worker protection and consistency throughout the WIPP site, for purposes of Part 851, this standard applies only to the WIPP site underground area and related surface structures including all shaft collars, hoist houses, and the operation of all WIPP hoists, including the waste hoist operating station. This includes worker protection programs required by MSHA, such as diesel

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particulate personal air sampling and other occupational exposure assessments conducted per WP 12-IH.02-1.

6. American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices," (2005) when the ACGIH Threshold Limit Values (TLVs) are lower (more protective) than permissible exposure limits in 29 CFR Part 1910. When the ACGIH TLVs are used as exposure limits, contractors must nonetheless comply with the other provisions of any applicable expanded health standard found in 29 CFR Part 1910. The WIPP Industrial Hygiene Program (WP 12-IH.02) is compliant with this requirement.
7. American National Standards Institute (ANSI) Z88.2, *American National Standard for Respiratory Protection*, 2004 is fully implemented in WP 12-IH-02-6, Respiratory Protection. Characterization activities at the host sites fall under the direction of the host site's respiratory protection program per their 851 Plan. Note: This standard was cancelled due to the OSHA 29 CFR §1910.134 update to the OSHA Respiratory Protection Standard. WTS continued to meet this standard at the WIPP site; however, the host sites may or may not. Characterization activities at the host sites will continue to fall under the direction of the host site's respiratory protection program.
8. The ANSI Z136.1, *Safe Use of Lasers* (2000) standard is applicable; however, Class 3b or Class 4 laser or laser systems are not in use at WIPP nor are they in use in characterization activities at the host sites. WP 12-IH.02-7, Industrial Hygiene Program - Lasers, Lighting, Pest Control, Sanitation, and Temperature procedure defines control mechanisms for introduction of new laser or laser systems to implement appropriate requirements if a Class 3b or Class 4 laser is purchased.
9. ANSI Z49.1, *Safety in Welding, Cutting and Allied Processes*, sections 4.3 and E4.3 (1999) is only applicable at the WIPP site because off-site characterization activities work scope does not include any welding, cutting, or allied processes. For WIPP, this portion of the standard on personal protective equipment is implemented through WP 12-IS.01-4, Emergency and Personal Protective Equipment.
10. NFPA 70, "National Electrical Code" (2005) this standard is applicable to new facilities, and modifications and repairs to existing facilities. As such it will be appropriately incorporated at that time based on WP-09, Engineering Conduct of Operations, requirements for the identification of applicable standards. This standard is applicable to WTS work scope for characterization activities at the host sites. However, WTS does not do any electrical work at the host sites as electrical services are provided by the host sites.
11. NFPA 70E, "Standard for Electrical Safety in the Workplace (2009). This standard is applicable. At the host sites, the electrical safety program, including

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lockout/tagout is under the cognizance of the host site per their 851 Plan. For WIPP and Carlsbad covered locations, this standard is implemented through WP12-IS.01-7, Industrial Safety Program - General Electrical Safety, and WP12-IS.01-7HV, Industrial Safety Program - Craft Manual - Electrical Safety.

The following standards listed in §851.23, are not applicable to the WTS WSHPD plan because they are not applicable to any work scopes currently being conducted at any of the covered workplaces.

- Title 29 CFR Part 1915, "Shipyard Employment"
- Title 29 CFR Part 1917, "Marine Terminals"
- Title 29 CFR Part 1918, "Safety and Health Regulations for Longshoring"
- Title 29 CFR Part 1928, "Occupational Safety and Health Standards for Agriculture"

Additional standards in use at WIPP, though not applicable to the WTS WSHPD plan, include International Commission on Radiological Protection (ICRP) 60, ICRP 68, and ICRP 74, which are incorporated by reference in the DOE/WIPP-95-2054, *WIPP Radiation Protection Program*.

## **16.0 FUNCTIONAL AREAS (SUBPART C, §851.24)**

WTS has a structured approach to our worker safety and health program which includes provisions for the following functional areas at applicable locations.

### **1. Construction Safety (Appendix A.1)**

The construction safety functional area is only applicable at the WIPP site. WTS subcontracts construction work scope as needed. WTS subcontractors are required to comply with local, state, and federal safety, health, and environmental regulations. Each subcontract has a designated subcontractor technical representative (STR) to monitor the work practices of the subcontractor. The implementing procedures for construction safety are WP 15-PC3609; WP 15-PC3605, Proposal, Competition, Identification, Selection, Evaluation, and Award; WP 12-IS.01-6; and WP 09-DC.01. These documents include the following requirements:

- A. For each definable construction activity:
  1. Prepare and have approved by the construction manager an activity hazard analysis prior to commencement of affected work. Such analyses must:
    - (i) Identify foreseeable hazards and planned protective measures;

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- (ii) Address further hazards revealed by supplemental site information (e.g., site characterization data, as-built drawings) provided by the construction manager;
  - (iii) Provide drawings and/or other documentation of protective measures for which applicable OSHA standards require preparation by a Professional Engineer or other qualified professional, and
  - (iv) Identify competent persons required for workplace inspections of the construction activity, where required by OSHA standards.
- 2. Ensure workers are aware of foreseeable hazards and the protective measures described within the activity analysis prior to beginning work on the affected activity.
- 3. Require that workers acknowledge being informed of the hazards and protective measures associated with assigned work activities. Those workers failing to use appropriate protective measures must be subject to the construction contractor's disciplinary process.
- B. During periods of active construction (i.e., excluding weekends, weather delays, or other periods of work inactivity), the construction contractor must have a designated representative on the construction worksite who is knowledgeable of the project's hazards and has full authority to act on behalf of the construction contractor. The contractor's designated representative must make frequent and regular inspections of the construction worksite to identify and correct any instances of noncompliance with project safety and health requirements.
- C. Workers are instructed to report hazards not previously identified or evaluated to the STR or Central Monitoring Room . If immediate corrective action is not possible or the hazard falls outside of project scope, the construction worker must immediately notify affected workers, post appropriate warning signs, implement needed interim control measures, and notify the construction manager of the action taken. The contractor or the designated representative must stop work in the affected area until appropriate protective measures are established.

The construction contractor must prepare a written construction project safety and health plan. The plan must reflect appropriate implementation of this section of the WTS WSHPD construction requirements, and the specifics required in WP 12-IS.01-6. The safety and health plan must be approved by the WTS STR and WTS Safety and Health prior to beginning work. In the contractors safety and health plan, the contractor must designate the individual(s) responsible for on-site implementation of

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the WTS WSHPD, specify qualifications for those individuals, and provide a list of those project activities for which subsequent hazard analyses are to be performed. The level of detail within the construction project safety and health plan should be commensurate with the size, the complexity, and risk level of the construction project.

**2. Fire Protection (Appendix A.2)**

The fire protection functional area is applicable at the WIPP site and the host organization is responsible for the fire protection functions at the other WTS work sites. Though some pieces of equipment used in characterization activities at the host sites include fire suppression related designs, which undergo WIPP reviews. The final equipment is signed off in accordance with the host site's fire protection program (FPP).

The WIPP FPP, as described in WP 12-FP.01, WIPP Fire Protection Program, meets the requirements of DOE Order 420.1B guidance and other DOE orders, directives, and guidance documents related to fire safety, for programmatic and design criteria. WTS implements a comprehensive fire safety and emergency response program to protect workers commensurate with the nature of the work that is performed. WP 12-FP.01 identifies the various activities, regulations, and personnel responsibilities necessary for assuring fire safety. WP 12-FP.01 incorporates other applicable NFPA codes, standards, and fire protection requirements.

The fire hazard analyses (FHAs) (see WIPP-023, Fire Hazards Analysis for the Waste Isolation Pilot Plant) and building fire assessments (FAs) periodically review the building fire protection infrastructure and procedures, and evaluate any risk to property and life. Deficiencies are noted and correction action initiated.

WTS has implemented a comprehensive fire safety and emergency response program that minimizes the impact of emergency events on the health and safety of workers. The WIPP emergency response procedures include WP 12-9, Emergency Management Program; WP 12-ER4908, Surface Fire Response; and WP 12-ER4911, Underground Fire Response.

- A. WTS has implemented a comprehensive fire and emergency response program described in WP 12-9 to protect workers commensurate with the nature of the work that is performed. This includes appropriate facility and sitewide fire protection, fire alarm notification and egress features, and access to a fully staffed, trained, and equipped emergency response organization that is capable of responding in a timely and effective manner to site emergencies. Response capabilities and staffing were significantly increased this year in accordance with the Baseline Needs Assessment, assuring a fully staffed WIPP Fire Brigade 24 hours a day, seven days a week. Other improvements included upgraded pre-

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fire plans to include wye connection information for first responders and a continuing review process that includes final approvals by the FPE.

- B. WTS has implemented a comprehensive FPP in WP 12-FP.01, WIPP Fire Protection Plan. The fire protection program includes those fire protection criteria and procedures, analyses, hardware and systems, apparatus and equipment, and personnel which ensure that the objective in (A) of this section is met. The FPP includes meeting applicable building codes and NFPA codes and standards.

**3. Explosives Safety--Not Applicable (Appendix A.3)**

None of the WTS work scope involves the use of explosives. Therefore, this section of the rule is considered inapplicable.

**4. Pressure Safety (Appendix A.4)**

This section is not applicable to the characterization work scopes. Portions of the standards referenced are applicable at WIPP.

- A. Contractors must establish safety policies and procedures to ensure that pressure systems are designed, fabricated, tested, inspected, maintained, repaired, and operated by trained and qualified personnel in accordance with applicable and sound engineering principles. The implementing language of this requirement is in WP-09 and WP 13-1.
- B. Contractors must ensure that pressure vessels, boilers, air receivers, and supporting piping systems conform to:
  - 1. The applicable American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (2004); sections I through section XII including applicable Code Cases (incorporated by reference, see §851.27)
  - 2. The WIPP facility design was based on federal and state codes in effect at the time of the site's construction as documented in the System Design Description General Plant Design Description (SDD GPDD). However, modifications to the facility should be made using the current edition of the applicable codes and/or standards as determined by the approved engineering change. Use of the ASME B31 (Code for Pressure Piping) standards at WIPP is as indicated below per the pressure vessels section of the SDD-GPDD; and or as indicated in paragraph (b)(3) of this section:
    - (i) B31.1—2001—Power Piping, and B31.1a—2002—Addenda to ASME B31.1—2001 (incorporated by reference, see § 851.27); is not applicable.

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- (ii) B31.2—1968—Fuel Gas Piping (incorporated by reference, see §851.27); is not applicable.
  - (iii) B31.3—2002—Process Piping (incorporated by reference, see §851.27); is applicable.
  - (iv) B31.4—2002—Pipeline Transportation, Systems for Liquid Hydrocarbons and Other Liquids (incorporated by reference, see §851.27); is not applicable.
  - (v) B31.5—2001—Refrigeration Piping and Heat Transfer Components, and B31.5a—is not applicable.
  - (vi) 2004, Addenda to ASME B31.5—2001 (incorporated by reference, see §851.27); is not applicable.
  - (vii) B31.8—2003—Gas Transmission and Distribution Piping Systems (incorporated by reference, see §851.27); is not applicable.
  - (viii) B31.8S—2001—Managing System Integrity of Gas Pipelines (incorporated by reference, see §851.27); is not applicable.
  - (ix) B31.9—1996—Building Services Piping (incorporated by reference, see §851.27); is applicable.
  - (x) B31.11—2002—Slurry Transportation Piping Systems (incorporated by reference, see §851.27); and (x) is not applicable.
  - (xi) B31G—1991—Manual for Determining Remaining Strength of Corroded Pipelines (incorporated by reference, see §851.27) is not applicable.
3. The strictest applicable state and local codes.

When national consensus codes are not applicable (because of pressure range, vessel geometry, use of special materials, etc.), contractors must implement measures to provide equivalent protection and ensure a level of safety greater than or equal to the level of protection afforded by the ASME or applicable state or local code. Measures must include the following:

- (i) Design drawings, sketches, and calculations must be reviewed and approved materials, in-process fabrications, nondestructive tests, and acceptance test.

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- (ii) Qualified personnel must be used to perform examinations and inspections of materials, in-process fabrications, nondestructive tests, and acceptance tests per WP 13-1.
- (iii) Documentation, traceability, and accountability must be maintained for each pressure vessel or system, including descriptions of design, pressure conditions, testing, inspection, operation, repair, and maintenance.

The requirements for this section are implemented through WP 09 and the SDD GPDD.

**5. Firearms Safety (Appendix A. 5)**

This section is only applicable to the WTS WIPP facility as security services are not part of the WTS work scope at the other facilities. The security services subcontract at WIPP does involve the use of firearms. Therefore, firearms safety policies and procedures for security operations, and training to ensure proper accident prevention controls are in place. These are part of the WIPP Firearms Procedural Manual, including FAP-001 through FAP-008; which address safety and storage of DOE weapons, firearms cleaning, armory operations, firearms safety, weapons qualification, live fire range administrative safety requirements, and other applicable areas. Written procedures address firearms safety, engineering, administrative controls, and personal protective equipment requirements.

A. Procedures are established for:

1. Storage, handling, cleaning, inventory, and maintenance of firearms and associated ammunition. These procedures include FAP-001 (storage), FAP-007 (cleaning), FAP-004 (inventory, maintenance firearms/ammunition).
2. Activities such as loading, unloading, and exchanging firearms. These activities are addressed in FAP-004 (loading, unloading , containment devices).
3. Use and storage of pyrotechnics, explosives, and/or explosive projectiles. This portion is not applicable. WIPP does not allow such devices on-site.
4. Handling misfires, duds, and unauthorized discharges is addressed in procedures FAP-006 (misfires, duds), FAP-005 (discharges), Firearms Procedural Manual, Section 5.0 of General section (Emergency Information).

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5. Live fire training, qualification, and evaluation activities are conducted in accordance with Operations, and FAP-002 (Live Fire Range Operations), FAP-003 (Qualifications).
  6. Training and exercises using engagement simulation systems at WIPP are conducted as force-on-force exercises. Each annual force-on-force exercise is based on an individual approved plan in compliance with DOE O 470.4-3A, Chapter 2, Section 11. Approval for implementation is given by signature approval from the CBFO, WTS, and Security Walls prior to any implementation.
  7. Medical response at firearms training facilities is conducted in accordance with WIPP Firearms Procedural Manual Section 5.2, (Emergency Information) General Section, PFO-005.
  8. WTS and the security subcontractor through mutual agreement use the Eddy County Sheriff's range. No control or provisions are made to exercise control over the use of the firing range by personnel other than DOE or DOE contractor protective forces personnel. The range has been evaluated to ensure compliance with DOE STD 1091-96, Live Fire Range Operations. A Hazard Analysis showing mitigation for areas not in compliance has been signed and approved by the CBFO. As added personnel protection, WIPP protective forces personnel will not co-occupy the range with anyone other than DOE WIPP personnel.
- B. Personnel responsible for the direction and operation of the firearms safety program are professionally qualified and have sufficient time and authority to implement the related procedures. This is demonstrated in the WIPP Firearms Procedural Manual Section 5.1, which defines minimum staffing along with qualification for firearms range operations.
- C. Firearms instructors and armorers have been certified by the Safeguards and Security National Training Center to conduct the level of activity provided. Personnel are not allowed to conduct activities for which they have not been certified. The WIPP Site Security Plan Section 4.2 defines and ensures that qualified personnel are used and certifications are met.
- D. Formal appraisals assessing implementation of procedures, personnel responsibilities, and duty assignments to ensure overall policy objectives and performance criteria are being met by qualified personnel. These activities are ensured following guidance stated in Section 9.3, Security Evaluations, of the WIPP Site Security Plan.

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- E. Implement procedures related to firearms training, live fire range safety, qualification, and evaluation activities, including procedures requiring that:
1. Personnel must successfully complete initial firearms safety training before being issued any firearms. Authorization to remain in armed status will continue only if the employee demonstrates the technical and practical knowledge of firearms safety semiannually per FAP-003, Weapons Qualification.
  2. Authorized armed personnel must demonstrate through documented limited scope performance tests both technical and practical knowledge of firearms handling and safety on a semiannual basis per FAP-003.
  3. Firearms training lesson plans must incorporate safety for all aspects of firearms training task performance standards. The lesson plans must follow the standards set forth by the Safeguards and Security Central Training Academy's standard training programs per the Site Security Plan, Section 4.2, Security Staff Training.
  4. Firearms safety briefings must immediately precede training, qualifications, and evaluation activities involving live fire and/or engagement simulation systems per the WIPP Firearms Procedural Manual, Section 5.0 General Safety Requirements.
  5. A safety analysis was approved by the CBFO and developed for the facilities and operation of each live fire range prior to the re-arming of the guard initiative. In the future, it will be reviewed, updated, and approved before the implementation of any new training, qualification, or evaluation activity. Results of these analyses are incorporated into procedures, lesson plans, exercise plans, and limited scope performance tests per the WIPP Security Safety Manual.
  6. Firing range safety procedures are conspicuously posted at all range facilities in accordance with PFO-005, Range Operations, Section 5.1.
  7. Live fire ranges, approved by the Head of DOE Field Element, must be properly sited to protect personnel on the range, as well as personnel and property not associated with the range. WTS/Security Walls uses the Eddy County sheriff's range by agreement with the county. A hazards assessment was conducted to ensure compliance. The CBFO Security manager signed and approved the hazard analysis along with any mitigation activities prior to use of the range.

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- F. WTS ensures that the transportation, handling, placarding, and storage of munitions conform to the applicable DOE requirements per FAP-008, Transportation of DOE Weapons and Ammunition.

**6. Industrial Hygiene (Appendix A.6)**

Based on interface agreements, Industrial Hygiene at the host sites is under the Host Site's Plan with the hosts providing the industrial hygiene program and services in support of the characterization activities at their site. WTS provides oversight of baseline surveys and other host-provided services in accordance with WP 15-GM1000, Management Assessments, to assure that WTS employees and subcontractors are appropriately protected. WTS has implemented a comprehensive industrial hygiene program that includes at least the following elements:

- A. Initial or baseline surveys and periodic resurveys and/or exposure monitoring as appropriate of work areas or operations to identify and evaluate potential worker health risks:
- WP 12-IH.02 addresses WIPP facility WTS employees and subcontracts.
  - Exposure monitoring for carbon tetrachloride is conducted per WP 12-IH1022, Sampling for Carbon Tetrachloride in the WIPP Underground.
- B. Coordination with planning and design personnel to anticipate and control health hazards that proposed facilities and operations would introduce:
- WP 09-CN3018, Design Verification, implements the process for this at the WIPP site.
  - For characterization activities, CCP-CM-001 ensures that the appropriate host support services are incorporated.
- C. Coordination with cognizant occupational medical, environmental, health physics, and work planning professionals is implemented at the WIPP in conjunction with the 12-IH series of procedures. Coordination at the host sites for characterization activities is defined in the interface agreements.
- D. The requirements for policies and procedures to mitigate the risk from identified and potential occupational carcinogens are implemented. WP 12-IH.02-1 addresses how chemical hazards are addressed for WIPP operations. The characterization activities are conducted under the host site's carcinogen program as part of their 851 Plan.

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- E. The requirement for professionally and technically qualified industrial hygienists to manage and implement the industrial hygiene program; is implemented through WP 12-IH.02. This requirement for the host sites is implemented through their 851 Plans whereby the hosts provide the industrial hygiene program, and the qualified industrial hygienists.
- F. The requirement related to use of respiratory protection equipment tested under the DOE Respirator Acceptance Program for Supplied-Air Suits (DOE-Technical Standard 1167–2003) is not applicable to any WTS work scope. National Institute for Occupational Safety and Health-approved respiratory protection exists for the applicable DOE assigned, WTS related tasks.

**7. Biological Safety (Appendix A.7)**

None of the WTS work scope at any covered workplaces includes work involving biological etiologic agents. Therefore this section of the rule is not considered applicable.

**8. Occupational Medicine (Appendix A.8)**

The occupational medicine program is implemented through WP 15-HS.02, Occupational Medical Program, for WTS activities. Management of subcontractors in accordance with this requirement is done on a case by case basis as coordinated with WTS Occupational Health Services and may include direct participation by subcontractors in the WTS occupational medicine program, participation in the host sites' occupational medical program, or requirement for their company to meet the occupational medical requirements in 10 CFR Part 851 as part of their contract with WTS. Previously, subcontractors did not participate in the occupational medical program. With the changes in expectations related to 10 CFR Part 851, determinations of an effective path forward involved having to interpret some potentially ambiguous requirements. The occupational medical program includes oversight by a physician licensed in the state of New Mexico. Though WTS has employees and subcontractors in several states based on characterization activities, the primary medical director will be licensed in New Mexico where the primary facility is located. Lists of hazards, and expectations regarding preemployment evaluations, will be given to subcontractors, and they may choose their own physician to provide those services. Exposure related physicals (such as respiratory) may be provided by the subcontractor's physician in accordance with WTS occupational health program, or by the host facility. The WTS wellness program as shared with subcontractors will consist primarily of educational materials as the subcontractors are working multiple locations across the country. WTS interprets the requirements for a termination physical evaluation to be based on termination from the contract/DOE complex versus leaving a specific facility. WTS characterization activities subcontractors frequently move from site to site throughout the DOE complex while operating

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to the same contracts. The occupational medical provider as listed to meet the 10 CFR Part 851 requirements may mean the physician subcontracted to provide services, or in the case of review of corporate level Employee Assistance Programs (EAPs), may mean the WTS Occupational Health Services staff directing the WTS occupational health program.

- A. WP 15-HS.02 is the implementing document establishing how WTS provides or requires comprehensive occupational medical services to workers employed at a covered work place who:
  - 1. Work on a DOE site for more than 30 days in a 12-month period; or
  - 2. Are enrolled for any length of time in a medical or exposure monitoring program required by 10 CFR Part 851 and/or any other applicable federal, state, or local regulation, or other obligation.
- B. The WTS Occupational Medical Services are under the direction of a graduate of a school of medicine or osteopathy who is licensed for the practice of medicine in the state of New Mexico, which is the home office for WTS and where WIPP is located.
- C. Occupational medical physicians, occupational health nurses, physician's assistants, nurse practitioners, psychologists, employee assistance counselors, and other occupational health personnel providing occupational medical services are licensed, registered, or certified as required by federal or state law as required.
- D. WTS provides the occupational medical providers access to hazard information by promoting its communication, coordination, and sharing among operating and environment, safety, and health protection organizations.

WTS and subcontractors provide the occupational medical providers with access to information on the following:

- 1. Current information about actual or potential work-related site hazards (chemical, radiological, physical, biological, or ergonomic).
- 2. Employee job-task and hazard analysis information, including essential job functions.
- 3. Actual or potential work-site exposures of each employee.
- 4. Personnel actions resulting in a change of job functions, hazards or exposures.

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5. WTS managers notify WIPP Occupational Health Services when an employee has been absent because of an injury or illness for more than five consecutive workdays (or an equivalent time period for those individuals on an alternative work schedule).
  6. WTS provides the occupational medical provider information on, and the opportunity to participate in, worker safety and health team meetings and committees.
  7. WTS provides occupational medical providers access to the workplace for evaluation of job conditions and issues relating to workers' health.
- E. WTS designates an occupational medical provider who is required in accordance with WP 15-HS.02 and 10 CFR Part 851 to:
1. Plan and implement the occupation medical services.
  2. Participate in worker protection teams to build and maintain necessary partnerships among workers, their representatives, managers, and safety and health protection specialists in establishing and maintaining a safe and healthful workplace.
- F. A record, containing any medical, health history, exposure history, and demographic data collected for the occupational medical purposes, is developed and maintained by WTS Occupational Health Services for each employee for whom medical services are provided. Occupational medical records are maintained in accordance with Executive Order 13335, *Incentives for the Use of Health Information Technology*.
1. Employee medical, psychological, and EAP records are kept confidential, protected from unauthorized access, and stored under conditions that ensure their long-term preservation. Psychological records are maintained separately from medical records and in the custody of the designated psychologist in accordance with 10 CFR §712.38(b)(2).
  2. Access to these records is provided in accordance with DOE regulations implementing the Privacy Act and the Energy Employees Occupational Illness Compensation Program Act.

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- G. The occupational medical services provider determines the content of the worker health evaluations, which are conducted under the direction of a licensed physician, in accordance with current sound and acceptable medical practices and pertinent statutory and regulatory requirements, such as the Americans with Disabilities Act.
  - 1. Workers are informed of the purpose and nature of the medical evaluations and tests offered by the occupational medical provider.
    - (i) The purpose, nature and results of evaluations and tests are clearly communicated verbally and in writing to each worker provided testing.
    - (ii) The communication is documented in the worker's medical record.
  - 2. The following health evaluations are conducted when determined necessary by the occupational medical provider for the purpose of providing initial and continuing assessment of employee fitness for duty.
    - (i) At the time of employment entrance or transfer to a job with new functions and hazards, a medical placement evaluation of the individual's general health and physical and psychological capacity to perform work establishes a baseline record of physical condition and assures fitness for duty.
    - (ii) Periodic, hazard-based medical monitoring or qualification-based fitness for duty evaluations required by regulations and standards, or as recommended by the occupational medical services provider, are provided on the frequency required.
    - (iii) Diagnostic examinations evaluate employee's injuries and illnesses to determine work-relatedness, the applicability of medical restrictions, and referral for definitive care, as appropriate.
    - (iv) After a work-related injury or illness or an absence due to any injury or illness lasting five or more consecutive workdays (or an equivalent time period for those individuals on an alternative work schedule), a return to work evaluation determines the individual's physical and psychological capacity to perform work and return to duty.

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- (v) At the time of separation from employment, individuals are offered a general health evaluation to establish a record of physical condition.
  
- H. The occupational medical provider monitors ill and injured workers to facilitate their rehabilitation and safe return to work and to minimize lost time and its associated costs.
  - 1. In accordance with WP 12-HS.02 and the occupational medical provider's contract, the occupational medical provider is required to place an individual under medical restrictions when health evaluations indicate that the worker should not perform certain job tasks. The occupational medical provider must notify the worker and contractor management when employee work restrictions are imposed or removed.
  
- I. Occupational medical provider physician and medical staff, promptly communicate the results of health evaluations to management and safety and health protection specialists to facilitate the mitigation of work site hazards.
  
- J. The occupational medical services provider includes measures to identify and manage the principal preventable causes of premature morbidity and mortality affecting worker health and productivity.
  - 1. WTS includes programs to prevent and manage these causes of morbidity when evaluations demonstrate their cost effectiveness.
  - 2. WTS makes available to the occupational medical provider appropriate access to information from health, disability, and other insurance plans (with individual personal information removed to protect employee privacy) in order to facilitate this process.
  
- K. The occupational medical services provider reviews and approves the medical and behavioral aspects of employee counseling and health promotional programs, including the following types:
  - 1. WTS-sponsored or supported EAPs.
  - 2. WTS-sponsored or supported alcohol and other substance abuse rehabilitation programs.
  - 3. WTS-sponsored or supported wellness programs.
  
- L. The occupational medical services provider reviews the medical aspects of immunization programs, blood-borne pathogens programs, and bio-hazardous waste programs to evaluate their conformance to applicable guidelines.

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- M. The occupational medical services provider periodically reviews medical emergency response procedures included in site emergency and disaster preparedness plans. The medical emergency responses integrate with nearby community emergency and disaster plans.

**9. Motor Vehicle Safety (Appendix A.9)**

This section is applicable to the WIPP site and is implemented by WP 12-IS.01-8, Industrial Safety Program - Vehicle Safety. It is also applicable to subcontractors who drive WIPP provided vehicles. For the characterization activities at the host facilities, the portions related to powered industrial equipment fall within the programmatic oversight of the host facility in providing programmatic aspects such as training requirements, road signs, and site speed limits. Safe driving awareness campaigns are conducted. The WIPP site incorporated several improvements in the Motor Vehicle Safety program to address the Judgments of Need identified in a 2009 DOE Type B Investigation. Changes in the Motor Vehicle Safety program became applicable under 10 CFR Part 851 in accordance with the schedule approved in the formal Type B Corrective Action Plan. Continuous improvement efforts for the motor vehicle safety program are currently focused on the implementation of ANSI/ITSDF B56.1, "Safety Standard for Low-Lift and High-Lift Trucks."

- A. WTS implements a motor vehicle safety program to protect the safety and health of drivers and passengers in Government-owned or -leased motor vehicles and powered industrial equipment (i.e., fork trucks, tractors, platform lift trucks, and other similar specialized equipment powered by an electric motor or an internal combustion engine, including electric carts).
- B. The WTS motor vehicle safety program is tailored to the individual DOE site or facility, based on an analysis of the needs of that particular site or facility.
- C. The motor vehicle safety program addresses the following as applicable to that portion of the WTS work scope or operations.
  - 1. Minimum licensing requirements (including appropriate testing and medical qualification) for personnel operating motor vehicles and powered industrial equipment.
  - 2. Qualifications for electric cart drivers will include the manufacturer's recommendations and ANSI B56.8-2006.
  - 3. Requirements for the use of seat belts and provision of other safety devices.
  - 4. Training for specialty vehicle operators.

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5. Requirements for motor vehicle maintenance and inspection for electric carts at the WIPP site. This includes preventive maintenance items performed according to the manufacturer's recommendations.
6. Uniform traffic and pedestrian control devices and road signs.
7. On-site speed limits and other traffic rules.
8. Awareness campaigns and incentive programs to encourage safe driving.
9. Enforcement provisions.

**10. Electrical Safety (Appendix A.10)**

This section is applicable only to the WIPP site, including WTS employees and subcontractors at the WIPP site. The characterization activities at other locations fall under the electrical safety programmatic direction of the host site. WTS implements a comprehensive electrical safety program initiated through WP 12-IS.01-7 and WP 12-IS.01-7HV at the WIPP site. The program meets the applicable electrical safety codes and standards referenced in §851.23.

**11. Nanotechnology Safety—Reserved (Appendix A.11)**

The DOE reserved this section in the 10 CFR Part 851 since policy and procedures for nanotechnology safety are currently being developed. Once these policies and procedures have been approved, the rule will be amended to include them through a rulemaking consistent with the Administrative Procedure Act. In the interim, any research conducted at the WIPP site related to nanotechnology will undergo thorough safety review with preplanned controls to ensure meeting the WTS commitment for defense in depth protection for workers.

**12. Workplace Violence Prevention— (Appendix A.12)**

(Reserved)

The DOE reserved this section in the 10 CFR Part 851 since the policy and procedures for workplace violence prevention are currently being developed. Once these policies and procedures have been approved, the rule will be amended to include them through a rulemaking consistent with the Administrative Procedure Act. Once the rule is amended, the WTS implementing actions and documents will be included accordingly.

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**17.0 TRAINING AND INFORMATION (§851.25)**

The requirements in this section are applicable to WTS work scope, including joint responsibility related to characterization activities and subcontracts in accordance with WP 14-TR.01, WIPP Training Program; and CCP-QP-002. In addition, characterization personnel also meet the training requirements of the applicable host site based on that site's 851 Plan.

1. WTS has developed and implemented a worker safety and health training and information program to ensure that workers exposed or potentially exposed to hazards are provided with the training and information on that hazard in order to perform their duties in a safe and healthful manner.
2. WTS ensures that the following are provided:
  - (i) Training and information for new workers, before or at the time of initial assignment to a job involving exposure to a hazard, including information per the hazard communication program, as described in WP 12-IH.02-4.
  - (ii) Periodic training as often as necessary to ensure that workers are adequately trained and informed.
  - (iii) Additional training when safety and health information or a change in workplace conditions indicates that a new or increased hazard exists.
3. WTS provides training and information to workers who have worker safety and health program responsibilities as is necessary for them to carry out those responsibilities.

**18.0 RECORDKEEPING AND REPORTING (§851.26)**

This function is a shared function with the host sites for characterization activities as described below.

1. Recordkeeping
  - (i) WTS has established and maintains complete and accurate records of hazard inventory information, hazard assessments, exposure measurements, and exposure controls. For the WIPP site, records are maintained in accordance with the WP 12-IH series of procedures, and according to records management requirements in WP 13-1. For the characterization activities that WTS and WTS subcontractors have responsibility for per the interface agreements, records are maintained in accordance with CCP-QP-008, CCP Records Management Program. The majority of hazard and exposure records (including IH and Radiological Program records) are maintained by the host site according to the requirements of their 851 Plan.

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- (ii) WTS ensures that the work-related injuries and illnesses of its workers and subcontractor workers are recorded and reported accurately and consistent with DOE Manual 231.1-1A, *Environment, Safety and Health Reporting Manual*, September 9, 2004. This is a joint function, with reporting into systems such as Computerized Accident/Incident Reporting System, Occurrence Reporting Processing System. The host facility M&O has the primary responsibility for reporting for their facility. However, WTS maintains additional records for work scope at host facilities based on management commitment to ensure reporting is accurate and has occurred in a timely fashion. Work related injuries and illnesses of workers and subcontractor workers are recorded and reported in accordance with DOE Manual 231.1-1A, as implemented in WP 12-ES3918, Reporting in Accordance with DOE O 231.1A.
- (iii) Comply with the applicable occupational injury and illness recordkeeping and reporting workplace safety and health standards in §851.23 at their site, unless otherwise directed in DOE Manual 231.1-1A. As discussed in the referenced §851.23, these standards are complied with for WTS covered workplaces.
- (iv) Not conceal nor destroy any information concerning noncompliance or potential noncompliance with the requirements of this part. This requirement is implemented through WP 13-1.

2. Reporting and Investigation

- (i) WTS reports and investigates accidents, injuries and illnesses. This function is shared with the host sites, with the host site having the primary lead for any investigations occurring on their site in accordance with the interface agreements. For WIPP, this requirement is implemented through WP 12-SA3130, Occupational Injuries, Illnesses, and Close Calls; and WP 15-MD3102, Event Investigation, which includes investigation, determining violations, root cause analysis, and determining corrective actions to prevent recurrence.
- (ii) WTS analyzes data for trends and for lessons learned. At the WIPP site, safety and health experience information is reviewed in monthly site safety statistical reports, through WP 13-1 trending requirements, and as documented in WP 15-MD3100, Operating Experience Program. Qualitative safety performance measures are monitored in accordance with DOE/CBFO-98-2276, *Integrated Safety Management System Description*.
- (iii) The DOE has established reporting thresholds for reporting worker safety and health noncompliance above a certain level of significance into the noncompliance tracking system. WTS uses an internal tracking system to track applicable noncompliances below the reporting

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threshold. Determinations as to whether a violation of a requirement, has occurred, for determining the nature and extent of any such violation, and for imposing an appropriate remedy is addressed through the WIPP Form process as defined by WP 04-IM1000.

**19.0 VARIANCES (SUBPART D)**

Variations provide relief from safety and health standards for worker safety. Variations are submitted to the CBFO for review and, if the CBFO concurs, the variance is forwarded to the Cognizant Secretarial Officer for approval. Deviations from standards and codes applicable for property protection are reviewed and approved by the authority having jurisdiction (AHJ) process as provided in DOE O 420-1B.

There were four NFPA exemptions previously approved by the CBFO. The CBFO notified WTS of rescission per CBFO letter number CBFO:OSH:GS:MAG:09-0402. Correction actions are complete. One NFPA equivalency remains in effect for the Central Monitoring System.

**20.0 PROGRAM REVIEW AND CONTINUOUS IMPROVEMENT**

The WTS WSHPD will be reviewed annually as discussed in the program administration section. In addition, an evaluation of the effectiveness of the WTS WSHPD will be conducted during the annual ISM assessment. This is in keeping with the WTS ISMS Description requirements for feedback and continuous improvement in safety.

**21.0 COMPLIANCE REFERENCE LIST**

This is the list of documents that effectively implement 10 CFR Part 851 as referenced throughout the plan.

- ANSI/ITSDF B56.1, "Safety Standard for Low-Lift and High-Lift Trucks"
- ANSI/ITSDF B56.6, "Rough Terrain Fork Lift Trucks"
- ANSI/UL 558, Industrial Trucks, Internal Combustion Engine-Powered
- ANSI/UL 583, Electric-Battery-Powered Industrial Trucks
- CCP-CM-001, Equipment Change Authorization and Documentation
- CCP-PO-004, CCP/SRS Interface Document
- CCP-PO-011, CCP/CH2M Hill Plateau Remediation Company Interface Document
- CCP-PO-012, CCP/LANL Interface Document
- CCP-PO-024, CCP/INL Interface Document

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- CCP-PO-027, CCP/ORNL Interface Document
- CCP-PO-404, CCP/NTS Roles and Responsibilities
- CCP-PO-500, CCP/ANL RH-TRU Waste Interface Document
- CCP-QP-001, Graded Approach
- CCP-QP-002, CCP Training and Qualification Plan
- CCP-QP-008, CCP Records Management Program
- CCP-QP-009, Work Control Process
- CCP-QP-010, CCP Document Preparation, Approval, and Control
- CCP-QP-014, CCP Data Analysis and Trending
- CCP-QP-025, Lessons Learned Program Management
- CWI, LLC 851 Plan
- EnergX 851 Plan, CM-A-IS-001, TRU Waste Processing Center, Worker Health and Safety Program
- Executive Order 13335, *Incentives for the Use of Health Information Technology*
- FAP-001 through FAP-008, WIPP Firearms Procedure Manual
- LANS 851 Plan
- UChicago Argonne, LLC 851 Plan
- DOE/CBFO-98-2276, *Integrated Safety Management System Description*
- DOE/WTS 01-3181, *Authorization Agreement for the Waste Isolation Plant*
- M-24 Mobile Crane Operator Qualification Card
- MOA-CHPRCC-CCP-2009, Hanford TRU Waste Characterization and Certification
- MP 1.12, Worker Protection Policy
- MP 1.2, Work Suspension and Stop-Work Direction
- MP 1.29, Mission, Goals, and Responsibilities
- MP 1.7, Employee Performance Appraisal and Development

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- MP 5.16, Landlord Program
- SDD GPDD, System Design Description General Plant Design Description
- WIPP-023, Fire Hazards Analysis for the Waste Isolation Pilot Plant
- WIPP-007, Hazard Identification Summary Report for WIPP and Carlsbad, NM, Operations
- WIPP OPS-402 Incidental Rigger Qualification Card
- WP 02-EC.12, Site Users Guide for Organizations, Personnel, or Companies that Perform Work on U.S. DOE Property or Rights of Way on or Around the Waste Isolation Pilot Plant Site
- WP 04-AD3011, Equipment Lockout/Tagout
- WP 04-IM1000, Issues Management Program Processing of WIPP Forms
- WP 09, Engineering Conduct of Operations
- WP 09-CN3005, Graded Approach to Application of QA Controls
- WP 09-CN3018, Design Verification
- WP 09-DC.01, Construction Management Program
- WP 10-AD3007, Use and Control of Rigging Components
- WP 12-ER4908, Surface Fire Response
- WP 12-ER4911, Underground Fire Response
- WP 12-ES3918, Reporting in Accordance with DOE O 231.1A.
- WP 12-FP.01, WIPP Fire Protection Program
- WP 12-IH.02, WIPP Industrial Hygiene Program Manual
- WP 12-IH.02-1, WIPP Industrial Hygiene Program - Hazard Assessment
- WP 12-IH.02-2, WIPP Industrial Hygiene Program - Confined Spaces
- WP 12-IH.02-4, WIPP Industrial Hygiene Program - Hazard Communication and Hazardous Materials Management Plan
- WP 12-IH.02-6, WIPP Industrial Hygiene Program - Respiratory Protection
- WP 12-IH.02-7, WIPP Industrial Hygiene Program - Lasers, Lighting, Pest Control, Sanitation, and Temperature

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- WP 12-IH.02-9, WIPP Industrial Hygiene Program - Beryllium Exposure Prevention Program
- WP 12-IH.02-11, WIPP Industrial Hygiene Program - Polychlorinated Biphenyls (PCBs)
- WP 12-IH.02-12, WIPP Industrial Hygiene Program – Cryogenics, Refrigerants, and Process Gasses
- WP 12-IS.01, Industrial Safety Program - Structure and Management
- WP 12-IS.01-1, Industrial Safety Program - Postings, Warnings, & Hazard Identification
- WP 12-IS.01-2, Industrial Safety Program - Lockout/Tagout and Nonelectrical Energy Hazards
- WP 12-IS.01-3, Industrial Safety Program - Equipment and Tools
- WP 12-IS.01-4, Industrial Safety Program - Emergency and Personal Protective Equipment
- WP 12-IS.01-5, Industrial Safety Program – Hazardous Locations and Working Surfaces
- WP 12-IS.01-6, Industrial Safety Program - Visitor, Vendor, and Subcontractor Safety Controls
- WP 12-IS.01-7, Industrial Safety Program - General Electrical Safety
- WP 12-IS.01-7HV, Industrial Safety Program - Craft Manual-Electrical Safety
- WP 12-IS.01-8, Industrial Safety Program - Vehicle Safety
- WP 12-IS3002, Job Hazard Analysis Development
- WP 12-SA3130, Occupational Injuries, Illnesses and Close Calls
- WP 12-9, Emergency Management Program
- WP 13-1, Washington TRU Solutions LLC Quality Assurance Program Description
- WP 14-TR.01, WIPP Training Program
- WP 15-GM.03, Integrated Safety Management System Description
- WP 15-GM1000, Management Assessments

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- WP 15-HS.02, Occupational Medical Program
- WP 15-MD3100, Operating Experience Program
- WP 15-MD3102, Event Investigation
- WP 15-PC3605, Proposal Competition, Identification, Selection, Evaluation, and Award
- WP 15-PC3609, Preparation of Purchase Requisitions