ISSUED

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WP 15-GM.03
Revision 9

Integrated Safety Management System Description

Cognizant Section: Environmental, Safety and Health

Approved by: Signature on File / 11/16/15
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NWP
Nuclear Waste Partnership LLC

An AECOM-led partnership with B&W and AREVA

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CHANGE HISTORY SUMMARY

REVISION NUMBER	DATE ISSUED	DESCRIPTION OF CHANGES
5	09/21/12	• Clarification on roll-down to subcontractors. • Replacement of Safety Culture Elements with new Safety Culture Focus Areas and related attributes in accordance with new DOE guidance. • Changes to Guiding Principle and Core Function Attributes in accordance with new DOE guidance. • Changes to Core Function section location in ISMSD to new format in accordance with new DOE guidance. • Revision of integration section to meet new DOE guidance. • Updating of implementing document references.
6	03/07/13	• Editorial revision to add table to attachment 1 and update document in accordance with MD 1.1.
7	10/04/13	• Updated reference document numbers and titles throughout. • Added/modified wording in subsections 6.1.6, 6.2.2, 6.2.3, and 6.2.5 to clarify the function of WCDs and the JHA process. • Added paragraph in section 6.3 detailing elements of safety culture as defined by DOE and WIPP. • Added section 8.1 to discuss ISM enhancements, including HPI and HRO principles. • Deleted table in attachment 1, added note that new POMCs will be listed in next revision when approved by CBFO.
8	02/24/15	• Added/modified wording throughout document to reflect ongoing recovery efforts related to the February 2014 incidents. • Updated reference document numbers and titles throughout document. • Added references to new temporary safety basis documents and the NWP Nuclear Safety Culture Improvement Plan. • Updated table in attachment 1 to reflect new FY2015 POMCs.

9	12/01/15	• Updated CAS section. • Updated POMC. • Updated Nuclear Safety Culture to Safety Culture per EM direction. Other associated plans noted to become “Safety Culture Sustainment Plans.” • Updated Section 4.3 Management Expectations with Core Values and Expectations. • Updated References.

ABBREVIATIONS AND ACRONYMS

AA	Authorization Agreement
AJHA	Automated Job Hazard Analysis
ALARA	As Low as Reasonably Achievable
CAS	Contractor Assurance System
CBFO	Carlsbad Field Office
CCE	Continuing Core Expectation
CCP	Central Characterization Project
CERVLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
CH	Contact-Handled
CHP	Certified Health Physicist
CIH	Certified Industrial Hygienist
CSP	Certified Safety Professional
DEAR	Department of Energy Acquisition Regulation
DOE	U.S. Department of Energy
DOE-EM	DOE Office of Environmental Management
DSA	Documented Safety Analysis
EDMS	Electronic document management system
EMS	Environmental Management System
EPA	Environmental Protection Agency
ES&H	Environmental, Safety and Health
ESS	Evaluation of the Safety of the Situation
FSM	Facility Shift Manager
GET	General Employee Training
GHA	General hazard analysis
HRO	High Reliability Organization
HuP	Human Performance
HWFP	Hazardous Waste Facility Permit
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
ISMSD	Integrated Safety Management System Description
JHA	Job Hazard Analysis
MC	Management Charter
MP	Management Policy
MSHA	Mine Safety and Health Administration

NEPA	National Environmental Policy Act
NWP	Nuclear Waste Partnership LLC
ORPS	Occurrence Reporting and Processing System
OSHA	Occupational Safety and Health Administration
PE	Professional Engineer
POD	Plan of the Day
POMCs	Performance Objectives, Measures, and Commitments
POW	Plan of the Week
PPE	Personal protective equipment
PAAA	Price Anderson Amendments Act
QA	Quality Assurance
QAPD	Quality Assurance Program Description
RCRA	Resource Conservation and Recovery Act
RH	Remote-Handled
SCWE	Safety-Conscious Work Environment
S/RID	Standards/Requirements Identification Document
SSM	Safeguards and Security Management
TRU	Transuranic
TSR	Technical Safety Requirements
USQ	Unreviewed safety question
VPP	Voluntary Protection Program
WCD	Work Control Document
WIPP	Waste Isolation Pilot Plant
WSHPD	Worker Safety and Health Program Description

EXECUTIVE SUMMARY

This Integrated Safety Management (ISM) System (ISMS) Description (ISMSD) defines how Nuclear Waste Partnership LLC (NWP) systematically integrates safety into management and work practices at all levels so that missions are accomplished while protecting the public, the worker, and the environment. A significant number of improvements in ISM implementation are in progress with appropriate mitigating controls in place in the interim. These improvements ensure the effective integration of environment, safety, and health management into all facets of work planning and execution described in the appropriate sections of this ISMSD. This ISMSD is applicable to and serves as an integral part of the company's business processes and includes all work conducted by NWP employees at any location, and for NWP employees and subcontractors working at the Waste Isolation Pilot Plant (WIPP) and other covered workplaces per WP 15-GM.02, *Worker Safety and Health Program Description* (WSHPD). In addition, this ISMSD flows down directly to the subcontractors in conjunction with WP 15-GM.02, and WP 12-IS.01-6, *Industrial Safety Program – Visitor, Vendor, User, Tenant, and Subcontractor Safety Controls,* as applicable. WP 12-IS.01-6 is applicable at Carlsbad facilities. Separate ISMSDs are not required from the subcontractors.

Safety-the requirement/expectation/demand-to ensure we all go home as healthy as we arrived.

This ISMSD explains NWP safety values, objectives, and approach for ensuring protection of the public, the worker, and the environment, consistent with U.S. Department of Energy (DOE) P 450.4A, *Integrated Safety Management Policy, and DOE Acquisition Regulation* (DEAR) Clause at 48 *Code of Federal Regulations* (CFR) 970.5223-1, “Integration of ES&H into Work Planning and Execution.” The ISMSD describes how NWP conducts work following the seven ISM Guiding Principles, the five ISM Core Functions, and the three Safety Culture Focus Areas. Finally, this document describes how NWP is improving compliance with the expectations of the DOE Carlsbad Field Office (CBFO) for establishing and maintaining an open and collaborative safety-conscious work environment throughout the organization.

The CBFO safety expectations for work performed by NWP include the following:

- Safety is the dominant characteristic and value. The ability to perform a job safely will not be compromised by production, budget, or schedule priorities. If a job cannot be performed safely, it will not be performed until the proper hazard controls are put in place.

- Safety drives how we do business. The DOE ISMS is a systematic approach for selecting and incorporating the appropriate safety standards, necessary work controls, and expectation of continuous feedback/improvement. NWP employees will not accept shortcuts that circumvent safety or yield less than quality results. This systematic approach motivates a culture of personal responsibility by and for each employee.

The WIPP mission is to provide safe, compliant, and efficient characterization, transportation, and disposal of defense-generated Transuranic (TRU) waste. However, at this time due to the February 2014 events, the mission focus is on the recovery of WIPP. NWP is under contract DE-EM0001971 with the CBFO for management and operation of the WIPP, and related characterization and transportation activities at several generator sites. NWP systematically integrates safety and environmental stewardship into management and work practices at all levels of the organization to accomplish the WIPP recovery mission while protecting the worker, the public, and the environment.

The management of NWP is committed to ensuring that we each go home as healthy as we arrived, by providing exemplary safety and health programs, demanding and maintaining the highest safety performance, and promoting employee involvement in the successful continuation of these programs.

NWP expects all departments to embrace a strong safety culture where safe performance of work and involvement of workers in all aspects of work performance are core values that are deeply, strongly, and consistently held by managers and workers.

The NWP Safety Culture is founded on the ISM Safety Culture Focus Areas of Leadership, Employee/Worker Engagement, and Organizational Learning, and additional principles and values which were incorporated into the 2015 NWP Nuclear Safety Culture Program Plan document. Key elements of this document will be incorporated into a single NWP Safety Culture Sustainment Plan per DOE direction.

NWP offers a work environment that fosters and encourages an open exchange of ideas. This includes raising safety concerns of differing opinions without fear of retaliation. It is fully expected that each NWP employee will raise safety issues and provide feedback for improving work processes.

NWP employees are expected to protect themselves and others against accidents. All accidents and incidents are considered preventable with an appropriate level of pre-planning. It is recognized that an accident/event-free workplace is achieved through careful planning, close attention to hazard controls, worker involvement in task planning, and stopping work in the face of uncertainty. NWP management is expected to demonstrate continued improvement by promoting and enforcing safety expectations throughout the work environment.

1.0 INTRODUCTION

NWP is under contract with the CBFO for the management and operation of WIPP. The scope includes coordinating waste characterization activities at the respective generator sites to ensure consistent delivery of waste for disposal to meet the nation's clean-up goals. The scopes for the generator site characterization activities are defined in Prime Contract DE-EM0001971, in generator site memorandums of understanding and interface agreements, and, in some cases, subcontracts. Robust worker protection programs have been established at the sites to establish an effective worker safety and health program that will reduce or prevent injuries, illnesses, and accidental losses by providing workers and subcontractors with a safe and healthful workplace.

In February, 2014, two separate events occurred at the WIPP facility: an underground mine fire involving a Salt Haul Truck, and an incident in the WIPP underground repository that resulted in a radiological release. The resultant DOE Accident Investigation Boards revealed weaknesses in our worker protection program, and in our nuclear safety culture. However, it is still NWP's goal that NWP safety and health programs and processes ensure hazards are abated, controlled, or otherwise mitigated in a manner that provides assurance that workers are adequately protected from identified hazards. Improvements to ensure that goal is met are in progress. The coordination of worker protection functions with the host sites is addressed in WP 15-GM.02, which is specific to defining the processes to achieve safe and healthful workplaces per Title 10 CFR Part 851, "Worker Safety and Health Program." This document, the ISMSD, focuses on the management systems that ensure that safety is integrated in all aspects of work from planning to field activities in compliance with the statutes enacted by Congress for the protection of workers, the public, and the environment. This document describes the NWP processes to fulfill this commitment in accordance with the five ISM Core Functions, the seven ISM Guiding Principles, and the three Safety Culture Focus Areas that have been deemed vital for ensuring the safe conduct of work.

This ISMSD has four areas of focus: (1) defines the NWP management systems to identify ISM execution; (2) identifies safety culture focus areas, (3) describes how relevant safety goals and objectives are established, documented, and implemented: and (4) describes how NWP measures ISM effectiveness and ensures continuous improvement.

2.0 PURPOSE AND OBJECTIVES

NWP views this ISMSD as the primary, over-arching document for accomplishing work in a safe and environmentally sound manner. This ISMSD defines the integral role of safety in NWP management control systems. NWP integrated Quality Assurance (QA) and the Environmental Management System (EMS) into the ISMS, as delineated in DOE O 414.1D, *Quality Assurance*. (Note: In ISM, the term safety encompasses environment, safety and health, including pollution prevention and waste minimization; and the term employees includes subcontractor employees. This ISMSD also describes NWP responsibilities for, and the approach to, implementing the ISMS Objective, Core Functions, and Guiding Principles established in DOE P 450.4A, *Integrated Safety*

Management Policy, in all aspects of work. These implementing mechanisms encompass the system of policies, plans, and procedures that establish the NWP responsibilities and methods for implementing each ISMS Guiding Principle and Core Function.

The objective of the NWP ISMS is to systematically integrate safety into management and work practices at all levels, so that recovery and the mission are accomplished while protecting the public, the workers, and the environment. NWP accomplishes this objective through effective integration of safety management into all facets of work planning and execution. Effective management of safety functions and activities is an integral NWP expectation of recovery and mission accomplishment.

3.0 ISMS OVERVIEW

The objective of ISM is to integrate safety into management and work practices at all levels, addressing all types of work and all types of hazards to ensure safety for workers, the public, and the environment. To achieve this objective, DOE P 450.4A established DOE's expectations for ISM implementation through guiding principles, and core functions, and safety culture focus areas. These key expectations are consistent with those used in implementing safety management throughout the DOE complex and are described in the following sections.

3.1 Safety Management Guiding Principles

The following Guiding Principles are fundamental policies that guide NWP actions, from development of plans and procedures to the conduct of work:

1. Line Management Responsibility for Safety: Line Management is directly responsible for protection of the worker, the public, and the environment. Line management includes those NWP and subcontractors managing or supervising employees performing work.

2. Clear Roles and Responsibilities: Clear and unambiguous lines of authority and responsibility for ensuring that safety are established and maintained at all organizational levels.

3. Competence Commensurate with Responsibilities: Personnel possess the experience, knowledge, skills, and abilities necessary to discharge their responsibilities.

4. Balanced Priorities: Resources are effectively allocated to address safety, programmatic, and operational considerations. Protecting the workers, the public, and the environment is a priority whenever activities are planned and performed.

5. Identification of Safety Standards and Requirements: Before work is performed, the associated hazards are evaluated, and an agreed-upon set of safety standards and requirements is established and properly implemented, that provide adequate assurance that the workers, the public, and the environment are protected from adverse consequences.

6. Hazard Controls Tailored to Work Being Performed: Administrative and engineering controls to prevent and mitigate hazards are tailored to the work being performed and associated hazards. Emphasis is placed on designing the work and/or controls to reduce or eliminate the hazards and to prevent accidents and unplanned releases and exposures.

7. Operations Authorization: The conditions and requirements to be satisfied for operations to be initiated and conducted are clearly established and agreed upon. The extent of documentation and level of authority for agreement are tailored to the complexity and hazards associated with the work and at the contract level are included in CBFO's ISM Description. For NWP internal operation's authorization, the Facility Shift Manager (FSM) is the authority that releases (authorizes) Work Control Documents (WCDs) to be conducted and recurring work is authorized through the approved document control process and approvals.

3.2 Safety Management Core Functions

The five ISM Core Functions established in DOE P 450.4A provide the necessary structure for any work activity that could potentially affect the workers, the public, and the environment. The functions are applied as a continual cycle, with the degree of rigor appropriate to address the type of work activity and the hazards involved. The five Core Functions upon which the NWP ISMS is developed are:

1. Define the Scope of Work: Missions are translated into work, expectations are set; tasks are identified and prioritized; and resources are allocated.

2. Analyze the Hazards: Hazards associated with the work are identified, analyzed, and categorized.

3. Develop and Implement Hazard Controls: Applicable standards and requirements are identified and agreed upon; controls to prevent or mitigate hazards are identified; the safety envelope is established; and controls are implemented.

4. Perform Work within Controls: Readiness is confirmed and work is performed safely.

5. Provide Feedback and Continuous Improvement: Feedback information on the adequacy of controls is gathered; opportunities for improving the definition and planning of work are identified and implemented.

3.3 Safety Culture Focus Areas

A positive safety culture is an integral aspect of an effective ISMS. The expectation expressed in DOE P 450.4A states that DOE "expects all organizations to embrace a strong safety culture where safe performance of work and involvement of workers in all aspects of work performance are core values of managers and workers, encouraging a questioning attitude by all employees and a work environment that fosters such attitude". The DOE guidance includes the definition of safety culture used by NWP. Safety culture is an organization's values and behaviors modeled by its leaders and internalized by its members, which serve to make safe performance of work the overriding priority to protect the workers, public, and the environment. The DOE has established the following three Safety Culture Focus Areas to be used in concert with ISM Guiding Principles to enhance the effective implementation of ISMS. The February, 2014 events reflected challenges in WIPP's nuclear safety culture. NWP continues to implement extensive improvements related to the attributes of these Safety Culture Focus Areas accordingly.

1. Leadership

2. Employee/Worker Engagement

3. Organizational Learning

Further discussion on implementing attributes is in section 6.0. In addition, NWP has Nuclear Safety Culture Sustainment, Improvement and Program Plan documents that have been approved. These documents will be combined into a single Safety Culture Sustainment Plan by the end of Calendar Year 2015 and the 2016 goals are in development.

4.0 NWP MANAGEMENT COMMITMENTS AND EXPECTATIONS

The management of NWP is committed to ensuring that we each go home as healthy as we arrived, focusing on continuous improvement to safety and health programs, and safety performance, while promoting employee involvement in the successful improvement of these programs. Continuing assessment of the safety significance of events and issues is part of the NWP expectations in this area. NWP recognizes that the success in meeting this commitment is contingent upon a strong safety culture.

4.1 Management Commitments

With the commitment to provide exemplary safety and health programs, extensive corrective actions have been completed in connection with the February, 2014 events and preparations for the restart of waste operations are in progress. Management commitment also includes improving and requiring a high level of safety performance at all levels, including subcontractors and sub-tier subcontractors. In conjunction with the commitment, the NWP management focuses on controlling hazards accordingly by:

- Leading by example, placing safety first at all times to achieve an open and collaborative safety-conscious work environment and incident-free workplace.

- Recognizing that safety is a collective responsibility and each manager must create an atmosphere where each worker has a personal responsibility for improving work processes.

- Establishing written policies, goals, and performance objectives for the worker safety and health program.

- Monitoring performance measures to ensure that objectives and goals are met.

- Using qualified worker safety and health staff to direct and manage the safety programs. This same staff provides subcontractor safety oversight and interfaces with host site worker safety and health staff to ensure appropriate safety oversight of characterization activities at the host sites.

- Assigning worker safety and health program responsibilities, evaluating personnel performance, and holding personnel accountable for worker safety and health performance.

- Establishing procedures and processes for workers to report without retribution job-related safety issues and providing support for the Stop Work Policy which permits workers, including subcontractors to pause or stop work to get clarification of requirements or because of a reasonable belief that the task poses an imminent risk to safety of personnel.

- Maintaining an ISMS that ensures compliance with 10 CFR Part 851, with improvements necessary for a safety culture strong enough to achieve the Voluntary Protection Program (VPP) STAR level.

- Supporting key attributes essential for Human Performance (HuP) focus, consideration and improvement.

- Supporting key attributes demonstrating a High Reliability Organization (HRO).

- Monitoring and assessing safety performance, and requiring the completion of corrective actions in a timely manner.

- Maintaining excellence in the Operating Experience Program (lessons learned) to ensure that the program provides appropriate lessons learned and input for continuous improvement as a learning organization.

- Supporting employee rights per 10 CFR Part 851, and DOE VPP sites rights, as discussed in section 4.2.

4.2 Management Expectations

Management expectations of each employee are associated with the NWP Core Values that have been developed and are implemented and recognized through established processes such as goal setting, performance reviews and recognition programs. The Core Values and associated expectations are updated and communicated through formal communication programs and updates as necessary of policies, processes and procedures. The following are management Core Values and Expectations for each employee.

Integrity
- Tell the truth, all the time
- Meet your requirements

Safety
- Take your safety and the safety of your co-worker personally 24/7
- Conduct all activities in a designated manner
- Use Time-Out or Stop Work when things aren't right
- Support safety programs and activities

Accountability
- Admit and own your mistakes
- Take responsibility for your actions
- Hold yourself and others accountable
- Give your best every day

Teamwork
- Help each other achieve all project goals
- Show flexibility in meeting goals and commitments
- Recognize co-workers for exceptional performance

Leadership
- Actively listen
- Be open to the fact you may be wrong
- Express opinions without attacking others
- Treat others as you would like to be treated

Continuous Improvement

- Learn from mistakes and successes - yours and others
- Demonstrate a questioning attitude
- Eliminate non-value added tasks
- Have a bias for action fix problems

4.2.1 Programs, policies and processes at NWP further describe the expectations as follows:

- To demonstrate NWP values through exemplifying behaviors consistent with a strong Safety Culture.

- To maintain a questioning and inquisitive attitude

- To have a willingness to pause, ask questions, gather additional data, and obtain answers, rather than proceed in the face of uncertainty

- To raise concerns and issues directly to management and/or the safety department, or submit a written description of the issue in the appropriate issues management process

- To assist in achieving excellence by following procedures and not be complacent with meeting minimally compliant standards

- To implement the worker right and responsibility for a time-out to stop work when the worker discovers potential exposures to imminently dangerous conditions

- To know their rights, which include;

  — The right to participate in activities described in this section on official time;

  — Have access to:

    ▸ DOE safety and health publications;

    ▸ The worker safety and health program for the covered workplaces

    ▸ The standards, controls, and procedures applicable to the covered workplace

- Limited information on any recordkeeping log (Occupational Safety and Health Administration [OSHA] Form 300). Access is subject to Freedom of Information Act and DOE O 231.1B, *Environment, Safety, and Health Reporting,* requirements and restrictions

- Limited information from the DOE Form 5484.3 (the DOE equivalent to OSHA Form 301)

— Be notified when monitoring results indicate the worker was overexposed to hazardous materials;

— Observe monitoring or measuring of hazardous agents and have the results of their own exposure monitoring;

— Request and receive results of inspections and accident investigations;

— Express concerns related to worker safety and health;

— 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; and

— Stop work when the worker discovers employee exposure 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.

— Be aware of VPP Rights as you are working at a DOE VPP Merit–site. These include:

- To file a notice of hazardous condition with management without fear of retribution.

- To receive a timely response to any notice of hazard filed.

- To exercise their duties in the Safety and Health program with protection from any form of discrimination including harassment.

- To have access to results of self-audits, appraisals, and accident investigations (in no way diminishes employee's right to file a complaint with DOE at anytime over any unresolved issues or unsafe conditions).

5.0 ROLES AND RESPONSIBILITIES

As the management and operating contractor for the CBFO, NWP is responsible for the timely execution of recovery and the WIPP mission. While accomplishing recovery and the mission, protection of the environment, the public, and the safety and health of employees is the number one priority for the conduct of operations. NWP is focused on improvements in conducting nuclear safety, industrial safety, occupational health, environmental protection, and emergency management activities in compliance with the requirements and intent of applicable federal, state, and local regulations and procedures. Among the drivers are requirements of the DOE, the OSHA, the Mine Safety and Health Administration (MSHA), the U.S. Environmental Protection Agency (EPA), and the New Mexico Environment Department. Policies, programs, and procedures flow from these drivers.

NWP safety programs protect the worker, the public, and the environment while providing flexibility to meet business needs. NWP emphasizes, through policy and training, the individual responsibility of all employees to perform work in a safe, efficient, and environmentally responsible manner.

NWP is committed to the safety and health of their workforce. The NWP safety management responsibilities are clearly defined in the NWP Management Policy (MP) 1.28, *Integrated Safety Management*; and section 6.0 of this ISMSD. Additional safety management responsibilities, including responsibilities shared with host sites for NWP characterization activities, are further defined in WP 15 GM.02 in accordance with 10 CFR Part 851. These safety management responsibilities include, but are not limited to, the following:

5.1 President and Project Manager

- Assuring that managers are responsible for NWP implementation of ISMS.
- Assuring that department managers understand their roles and responsibilities in implementing procedures that implement safety standards and requirements, and are held accountable accordingly.
- Communicating routinely with department managers to identify barriers to achieving safety standards and requirements, and taking corrective actions to remove barriers.
- Driving focus on achieving excellence in the WIPP safety culture.
- Instilling a continuous improvement mindset to meet ISMS Core Functions & Guiding Principles.
- Meeting the commitments in the Safety Culture Sustainment Plan.
- Meeting and demonstrating NWP Core Values and Expectations

5.2 Department Managers/Deputy Managers

- Assuring that line managers understand their roles and responsibilities in implementing procedures that implement safety standards and requirements, and being held accountable accordingly.

- Communicating routinely with line managers to identify barriers to achieving safety standards and requirements, and taking corrective actions to remove barriers.

- Performing field observations and communicating directly with employees to assess the effectiveness of the line managers in applying safety standards and requirements.

5.3 Environmental, Safety and Health (ES&H) Manager

- Overseeing the ES&H integration into all aspects of work planning and execution through the ISMS.

- Determining annually the effectiveness of the WIPP ISMS.

- Maintaining the ISMSD.

- Developing, implementing, and maintaining the WIPP Safety Culture Sustainment Plan, to ensure long-term continuous improvement in safety culture.

- Measuring and monitoring safety in work results to assess the effectiveness of safety procedures and their implementation in achieving anticipated results.

5.4 Line Managers

- Ensuring that employees possess the experience, knowledge, skills, and abilities to perform the work.

- Ensure employee, procedure compliance with applicable safety standards and requirements.

- Communicating routinely with employees, providing them with the opportunity to identify barriers to implementing safety standards and requirements, and taking corrective actions to remove these barriers.

- Performing management/field observations to assess the adequacy of safety-related actions in approved procedures.

- Providing appropriate acknowledgement, recognition, and reward as appropriate for demonstrated safe, responsible behavior.

5.5 Subcontract Technical Representatives

- Ensuring that ES&H requirements pertinent to the work scope in the requests for proposal are clearly specified including the 10 CFR Part 851 implementation requirements in WP 15-GM.02, this ISMSD, and WP 12-IS.01-6.

- Ensuring that safety and environmental professionals review and approve all safety aspects before the start of any project.

- Ensuring that the subcontractors providing work on the WIPP site and covered workplaces are conducting work in accordance with NWP specific safety procedures and their subcontract's scope of work.

- Providing oversight of the subcontractor or vendor performance of work, as delineated in WP 15-PC3608, *Subcontract Technical Representative Responsibilities*.

5.6 Site Advisor, Point of Contact

- Serves as the NWP interface and oversight for users and tenants in accordance with WP 02-EC and, WP 12-IS.01-9.

5.7 Each NWP Employee

- Understanding and complying with approved procedures that implement safety standards and requirements for nuclear, industrial, and occupational health and safety, environmental protection, and emergency management.

- Identifying conditions that may impede implementing safety aspects of approved procedures.

- Initiating actions to correct these conditions, including pausing or stopping the work, if necessary.

- Possessing the experience, knowledge, skills, and abilities to discharge responsibilities.

Additional safety program expectations include the following cultural controls that are each employee's responsibility.

- Employees have the responsibility to try to assure that they go home as healthy as they arrived, and that coworkers do too.

- Arrive ready for work and fit for duty.

- Review work area for hazards.

- Conduct appropriate pre-use equipment inspections.
- Know the hazards and controls for assigned tasks.
- Exercise authority to pause or stop work when the situation arises.
- Use a questioning attitude as the error-prevention tool it is; the employee is the first line of defense.
- Expect to work safety
- Follow safety rules
- Do not commit unsafe acts, take shortcuts, etc.
- Report concerns/issues by contacting their manager or the Central Monitoring Room, reporting to the Safety Hotline, or using the Issues Management Reporting or employee concerns process (including reporting first aids, incidents, close calls, etc.). This can prevent it from happening again with worse consequences.
- Follow administrative controls (procedures, processes, etc.); and other work control documents being used.
- Use disciplined operations, adhering to Conduct of Operations requirements.
- Keep training current.
- Check personal protective equipment (PPE) before use.
- Watch out for others.
- Think before you act.

6.0 IMPLEMENTATION OF ISM

This ISMSD provides the mechanisms NWP employs to manage and oversee the systematic integration of safety into management and work practices in all facets of work planning and execution so that missions are accomplished while protecting the worker, the public, and the environment. This results in the overall management of safety functions and activities becoming an integral part of mission accomplishment.

6.1 ISM Guiding Principles

The benefit of the ISM Guiding Principles, the Core Functions, and the Safety Culture Focus Areas is improved safety awareness and corporate operations. The Guiding Principles establish an expected set of behaviors and disciplines for eliminating unsafe practices and accidents. This section describes the NWP implementation, the management systems used to execute the desired safety integration, the expected organizational attributes and outcomes, and the implementing policies and procedures.

The NWP implementation of the management systems are the primary instruments for incorporating the Guiding Principles at the facility and work activity levels. The management systems (also referred to as programs, policies and plans) define the practices, techniques, and tools used by NWP to meet the project requirements. The NWP management systems are progressive. The systems are adjusted over time to accommodate new requirements, lessons learned, and feedback for improvement. As such, the systems discussed in this section are being continuously enhanced.

6.1.1 Guiding Principle 1: Line Management Responsibility for Safety

Line management is directly responsible for the protection of the public, the workers, and the environment. NWP develops and implements effective management systems to assure line management is held directly accountable and understand and accept safety responsibilities for the, protection of the public, the workers, and the environment. Safety performance elements are incorporated into performance plans and evaluations for managers, safety professionals and others. Overall safety performance is monitored, assessed, and reported to senior management in monthly reviews.

Objectives

NWP Managers/Deputy Managers:

- Lead by example and understand and accept their safety responsibilities.
- Demonstrate a commitment to safety, maintaining a strong focus on the safe conduct of work activities.
- Are visible in the work areas.

NWP Managers:

- Have a clear understanding of work activities and objectives.
- Practice visible leadership by coaching, mentoring, conducting or managing regular safety meetings, performing safety reviews and reinforcing standards.
- Participate in regular reviews with senior NWP management to maintain corporate awareness.

Attributes

- Line management personnel (from the contractor senior manager to the front-line worker) understand and accept their safety responsibilities inherent in mission accomplishment. Line managers do not depend on supporting organizations to build safety into line management work activities.

- Line managers have a clear understanding of their work activities and their performance objectives, and how they will conduct their work activities safely to accomplish their performance objectives.

- Line managers demonstrate their commitment to safety. Top-level line managers are the leading advocates of safety and demonstrate their commitment in both word and action. Line managers periodically take steps to reinforce safety, including personal visits and walkthroughs to verify that their expectations are being met.

- Line managers spend time on the floor. Line managers practice visible leadership in the field by placing "eyes on the problem," coaching, mentoring, and reinforcing standards and positive behaviors. Deviations from expectations are corrected promptly and, when appropriate, analyzed to understand why the behaviors occurred.

- Line managers maintain a strong focus on the safe conduct of work activities. Line managers maintain awareness of key performance indicators related to safe work accomplishment, watch carefully for adverse trends or indications, and take prompt action to understand adverse trends and anomalies.

- Line managers throughout the organization set an example for safety through their direct involvement in continuous learning by themselves and their staffs on topics related to technical understanding and safety improvement.

- Line managers are skilled in responding to employee questions in an open, honest manner. They encourage and appreciate the reporting of safety issues and errors. They do not discipline employees for reporting errors. They encourage a vigorous questioning attitude toward safety, as well as constructive dialogues and discussions on safety matters.

- Line managers reinforce values of trust, credibility, and attentiveness. The organization is just - the line managers strive to create an organization that learns from mistakes and supports continuous improvement. Demonstrate an understanding that humans are fallible and when mistakes are made, the organization seeks first to learn rather than to blame. The system of recognition or corrective actions is aligned with strong safety policies and reinforcement of desired behaviors and outcomes.

System Policies, Procedures, and Other Implementing Documents

- DOE/WIPP-04-3310, *WIPP Environmental Policy Statement*
- DOE/WIPP-05-3318, *WIPP Environmental Management System Description*
- DOE/WIPP-06-3335, *WIPP Nuclear Maintenance Management Program*
- DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*
- DOE/WIPP-07-3373, *WIPP Technical Safety Requirements*
- CCP-HSP-014, *Health and Safety Program Plan for CCP*
- CCP-PO-005, *CCP Conduct of Operations*
- CCP-QP-018, *CCP Management Assessments*
- MP 1.12, *Worker Protection Policy*
- MP 1.20, *Management Assessments*
- MP 1.21, *Management Responsibility and Accountability*
- MP 1.28, *Integrated Safety Management*
- MP 1.52, *Just Culture Management Policy*
- WP 02-EC.12*, Site Users and Tenants Guide for Organizations, Personnel, or Companies That Perform Work on U.S. Department of Energy Property or Rights-of-Way on or Around the Waste Isolation Pilot Plant Site*
- WP 04-CO.01, *Conduct of Operations*
- WP 04-CO.01-1, *Conduct of Operations Program, Operations Organization and Administration*
- WP 10-WC3011, *Work Control Process*
- WP 12-2, *WIPP ALARA Program Manual*
- WP 12-5, *WIPP Radiation Safety Manual*
- WP 12-9, *WIPP Emergency Management Program*
- WP 12-FP.01, *WIPP Fire Protection Program*

- WP 12-IH.02, *WIPP Industrial Hygiene Program Manual*
- WP 12-IS.01, *Industrial Safety Program - Structure and Management*
- WP 12-IS.01-8, *Industrial Safety Program - Vehicle Safety*
- WP 12-IS3002, *Job Hazard Analysis Performance and Development*
- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*
- WP 15-GM.02, *Worker Safety and Health Program Description*
- WP 15-HS.02, *Occupational Health Program*
- WP 15-GM.08, *Project Management Plan*

6.1.2 Guiding Principle 2: Clear Roles and Responsibilities

Clear and unambiguous lines of authority and responsibility for ensuring safety are established and maintained at all organizational levels within the company. Requirements to establish clear roles and responsibilities are flowed down to subcontractors. Clearly defined roles and responsibilities are required components for all procedures, processes and management systems in NWP.

Attributes

- The lines of authority and responsibility for safety are defined and clearly understood as an integral part of performing work.
- Organizational safety responsibilities are sufficiently comprehensive to address the work activities and hazards involved.
- Ownership boundaries and authorities are clearly defined at the institutional, facility, activity, and individual contributor levels. Each position is designated in writing and understood by the incumbent. Interface issues are actively managed.
- Reporting relationships, positional authority, staffing levels and capability, organizational processes and infrastructure, and financial resources are commensurate with and support fulfillment of assigned or delegated safety responsibilities.
- Employees understand the importance of adhering to standards.
- Line managers provide ongoing reviews of performance of assigned roles and responsibilities to reinforce expectations and ensure that key safety responsibilities and expectations are being met.

- Personnel at all levels of the organization are held accountable for shortfalls in meeting standards and expectations related to fulfilling safety responsibilities. Accountability is demonstrated both by recognition of excellent safety performers and by identification of less-than-adequate performers. In holding people accountable, in the context of a just culture, managers consider individual intentions and the organizational factors that may have contributed.

System Policies, Procedures, and Other Implementing Documents

- DOE/WIPP-04-3310, *WIPP Environmental Policy Statement*
- DOE/WIPP-05-3318, *WIPP Environmental Management System Description*
- DOE/WIPP-06-3335, *WIPP Nuclear Maintenance Management Program*
- DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*
- DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements*
- DOE/WIPP 95-2054, *Waste Isolation Pilot Plant Radiation Protection Program*
- Prime Contract No. DE-EM0001971 for Management and Operation of the Waste Isolation Pilot Plant
- Work authorization documents and statements of work
- CCP-HSP-014, *Health and Safety Plan for CCP*
- CCP-PO-005, *CCP Conduct of Operations*
- MP 1.12, *Worker Protection Policy*
- MP 1.21, *Management Responsibility and Accountability*
- MP 1.28, *Integrated Safety Management*
- MP 1.29, *Mission, Goals, and Responsibilities*
- WP 02-EC.12, *Site Users and Tenants Guide for Organizations, Personnel, or Companies That Perform Work on U.S. Department of Energy Property or Rights-of-Way on or Around the Waste Isolation Pilot Plant Site*
- WP 04-CO.01, *Conduct of Operations*
- WP 09, *Conduct of Engineering*

- WP 10-WC3011, *Work Control Process*
- WP 12-5, *WIPP Radiation Safety Manual*
- WP 12-9, *WIPP Emergency Management Program*
- WP 12-FP.01, *WIPP Fire Protection Program*
- WP 12-HP3600, *Radiological Work Permits*
- WP 12-IH.02, *WIPP Industrial Hygiene Program Manual*
- WP 12-IS.01, *Industrial Safety Program - Structure and Management*
- WP 12-IS.01-6, *Industrial Safety Program - Visitor, Vendor, User, Tenant, and Subcontractor Safety Controls*
- WP 12-IS3002, *Job Hazard Analysis Performance and Development*
- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*
- WP 14-TR.01, *WIPP Training Program*
- WP 15-GM1002, *Issues Management Processing of WIPP Forms*
- WP 15-GM1003, *Stop Work Process*
- WP 15-HS.01, *OSHA Bloodborne Pathogens Exposure Control Plan*

6.1.3 Guiding Principle 3: Competence Commensurate with Responsibilities

Personnel possess the experience, knowledge, skill, and abilities necessary to discharge their responsibilities.

NWP employs professionals in industrial safety, industrial hygiene and nuclear safety on the staff, including Certified Safety Professionals (CSPs), Certified Industrial Hygienists (CIHs), Certified Health Physicists (CHPs), and Professional Engineers (PEs). These professionals ensure that work processes, policies, and procedures are built on a defensible foundation. They prepare policy, determine requirements, review and approve work plans and packages, and perform oversight inspections.

NWP provides resources for staff development. NWP has processes to ensure that personnel are qualified in their areas of responsibilities. NWP managers delegate authority based on competence. To ensure that personnel possess the experience, knowledge, skills, and abilities necessary to discharge their responsibilities, NWP has implemented effective human resource management systems which identify needed

skills, evaluate the employees' skills, identify skill gaps, and arrange for training to eliminate the gaps. NWP encourages professional certification and supports education and certification fees that include, but are not limited to CSPs, CIHs, CHPs, and PEs.

Training for all personnel is recognized as a vital requirement to incorporate safety into all aspects of work. Formal training programs including on-the-job training tasks overseen by a subject matter expert, are conducted under the auspices of the NWP Technical Training Program meeting DOE O 426.2, *Personnel Selection, Training, Qualification, and Certification Requirements for DOE Nuclear Facilities*, requirements to ensure the safety of the workers, public, and the environment. Accordingly, managers are required to ensure that employees' training and qualifications are maintained at all times in accordance with the Training Implementation Matrix and the Hazardous Waste Facility Permit (HWFP). Safety is an integral part of that training and qualification.

Attributes

- NWP recognizes that employees' professional capabilities, experiences, and values are the organization's most valuable assets. Accordingly leaders place a high personal priority and time commitment on recruiting, selecting, and retaining an excellent technical staff.

- NWP maintains a highly knowledgeable workforce to support a broad spectrum of operational and technical decisions. Technical and safety expertise is embedded in the organization. Outside expertise is employed when necessary.

- Individuals have an in-depth understanding of the safety and technical aspects of their jobs. Technical qualifications standards are defined and personnel are trained accordingly. Technical support personnel have expert-level technical understanding. Managers have strong technical backgrounds in their area of responsibility.

- Assignments of safety responsibilities and delegations of associated authorities are made to individuals with the necessary technical experience and expertise. In rare cases, if this is not possible, corrective and compensatory actions are taken.

- The organization values and practices continuous learning, requires employees to participate in recurrent and relevant training, and encourages educational experiences to improve knowledge, skills, and abilities, Professional and technical growth is formally supported and tracked to build organizational capability.

- Training to broaden individual capabilities and to support organizational learning is available and encouraged in order to appreciate the potential for unexpected conditions; to recognize and respond to a variety of problems and anomalies; to understand complex technologies and develop capabilities to respond to complex events; to develop flexibility in applying existing knowledge and skills in new situations; to improve communications; and to learn from significant industry and DOE events.

- Models, practices, and procedures are updated and refreshed based on new information and new understanding. Training effectively upholds management's standards and expectations. Beyond teaching knowledge and skills, trainers are adept at reinforcing requisite safety values and beliefs.

- Managers set an example for safety by their personal commitment to continuous learning and by their direct involvement in high-quality training that consistently reinforces expected worker behaviors.

System Policies, Procedures, and Other Implementing Documents

- CCP-QP-002, *CCP Training and Qualification Plan*
- MP 1.40, *Management and Supervisor Training Qualifications*
- WP 04-CO.01-5, *Conduct of Operations Program, Control of On-Shift Training*
- WP 09, *Conduct of Engineering*
- WP 12-5, *WIPP Radiation Safety Manual*
- WP 12-9, *WIPP Emergency Management Program*
- WP 12-IS.01-9, *Industrial Safety Program - Responsibilities for the Oversight of Visitors, Vendors, Users, Tenants, and Subcontractors*
- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*
- WP 14-TR.01, *WIPP Training Program*
- WP 14-TR3008, *Analysis and Design*
- WP 14-TR3301, *Administrative Review Board*
- WP 14-TR3307, *Qualification Programs*
- WP 14-TR3308, *On-the-Job Training*

6.1.4 Guiding Principle 4: Balanced Priorities

Resources are appropriately allocated to address safety, programmatic, and operational considerations. Protecting the public, workers, and the environment shall be a priority when work activities are planned and performed.

NWP follows the priorities set in contract negotiations and is directly involved in the annual budget preparation to acquire and allocate the necessary funds to implement its mission and ensure safety. The top priority is the conduct of compliant and safe operations. The CBFO both sets priorities and communicates them to NWP senior management. The CBFO annually reviews the WIPP mission needs and adjusts to the budget management concerns and safety priorities affecting the program. NWP works with the CBFO counterparts to ensure appropriate allocation of resources to address safety, programmatic, and operational considerations. NWP participates in the CBFOs monthly and quarterly project and program reviews to assess technical, cost, schedule, and safety performances. Safety and quality requirements are incorporated into acquisitions. NWP management ensures that the technical reviews of capital projects with the CBFO consider safety requirements and conditions. NWP annually reviews the WIPP program needs and requests adjustments to the budget as necessary to address concerns and safety priorities affecting the program. Activities needed to protect the public, workers, and the environment are funded as top priorities.

Attributes

- NWP managers frequently and consistently communicate the safety message, both as an integral part of the mission and as a stand-alone theme.

- NWP managers recognize that aggressive mission and production goals can appear to send mixed signals on the importance of safety. Managers are sensitive to detect and avoid these misunderstandings, or to deal with them effectively if they arise.

- NWP demonstrates a strong sense of mission and operational goals, including a commitment to highly reliable operations, both in safety and production. Safety and productivity are both highly valued.

- Safety, productivity, and quality concerns receive balanced consideration in funding allocations and schedule decisions. Resource allocations are adequate to address safety. If funding is not adequate to ensure safety, operations are discontinued.

- Staffing levels and capabilities are consistent with the expectation of maintaining safe and reliable operations.

- Staffing provides sufficient depth and redundancy to ensure that necessary safety functions are adequately performed.

- The organization is able to build and sustain a flexible, robust technical staff and staffing capacity. Pockets of resilience are established through redundant resources so that resources remain adequate to address emergent issues. The organization develops sufficient resources to cope with and respond to unexpected changes.

- Key technical officials are assigned for long terms of service to provide institutional continuity and consistency regarding safety requirements and expectations. Organizational knowledge is valued, and efforts are made to preserve it when key players move on.

- Systems of checks and balances are in place and effective at all levels of the organization to make sure that safety considerations are adequately weighed and prioritized.

- Safety and QA positions have adequate organizational influence.

- Adequate resources are allocated for safety upgrades and repairs to aging infrastructure. Modern infrastructure and new facility construction are pursued to improve safety and performance over the long term.

System Policies, Procedures, and Other Implementing Documents

- DOE/WIPP-05-3318, *WIPP Environmental Management System Description*

- DOE/WIPP-06-3335, *WIPP Nuclear Maintenance Management Program*

- DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements*

- CCP-QP-001, *CCP Graded Approach*

- DOE/WIPP-04-3297, *Carlsbad Field Office and Nuclear Waste Partnership LLC Executive Safety Committee Charter*

- MC 3.1, *Environmental, Safety and Health Department*

- MP 1.29, *Mission Goals & Responsibilities*

- WP 04-AD.07, *WIPP Site Infrastructure Revitalization Program PXP*

- WP 04-CO.01, *Conduct of Operations*

- WP 09-CN3005, *Graded Approach to Application of QA Controls*

- WP 09-CN3023, *Functional Classification Determination for Design*

- WP 09-CN3024, *Configuration Management Board/Engineering Change Proposal*
- WP 10 WC3011, *Work Control Process*
- WP 12-IS.01-12, *Industrial Safety Program - Hoisting and Rigging*
- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*
- WP 15-2, *Nuclear Waste Partnership LLC Management Control System*
- WP 15-3, *NWP Program Execution Plan*
- WP 15-FC.01, *Nuclear Waste Partnership LLC Programmatic Change Control Process*
- WP 15-GM1002, *Issues Management Processing of WIPP Forms*

6.1.5 Guiding Principle 5: Identification of Safety Standards and Requirements

An effective safety management system requires that before work is performed, associated hazards are evaluated, and safety standards and requirements are established. Safety standards and requirements shall provide adequate assurance that if they are properly implemented, the public, workers, and environment will be protected from adverse consequences.

The CBFO communicates to NWP applicable DOE directives, including the DOE Office of Environmental Management (DOE-EM) supplements as needed, through the contract process. This includes the identification of safety standards and requirements as contained in the DOE directives contained as List B. The NWP contract does not include a specific "List A" of other regulatory drivers. NWP is expected to comply with all applicable laws and regulations. NWP meets 10 CFR Part 851 by incorporated and referenced safety standards and requirements. In addition, maintains a Requirements Management process for the additional identification and implementation of safety requirements.

NWP performs safety reviews/self-assessments and gap analyses to ensure compliance with the requirements of 10 CFR Part 851, the MSHA safety standards, the U.S. EPA regulations, and the OSHA standards, as well as other regulatory compliance assessments, including the DOE directives related to safety. NWP maintains metrics to monitor safety and other performance and to provide feedback for continuous feedback.

NWP responds to additional safety requirements to manage critical safety functions as identified and works with the CBFO to establish the safety basis. Appropriate safety standards and requirements are incorporated in subcontractor statements of work,

specifically 10 CFR Part 851 safety requirements for subcontractor work performed in covered workplaces.

Attributes

- Facilities are designed, constructed, operated, maintained, and decommissioned using consensus industry codes and standards, where available and applicable, to protect workers, the public, and the environment.

- Applicable requirements from laws, statutes, rules and regulations are identified and captured so that compliance can be planned, expected, demonstrated, and verified.

- A clearly defined set of safety requirements and standards is invoked in the contract, and in the interface agreements for Central Characterization Project (CCP) scope of work. An accepted process is used for identification of the appropriate set of requirements and standards. This set of requirements is comprehensive and includes robust QA, safety, and radiological and environmental protection requirements.

- Implementing plans, procedures, and protocols are in place to translate requirements into action.

- Technical and operational safety requirements control the safe operating envelope. The safety envelope is clearly specified and communicated to individuals performing operational activities.

- Exemptions from applicable safety requirements are both rare and specific, provide an equivalent level of safety, have a compelling technical basis, and are approved at an appropriate organizational level.

- Compliance with applicable safety and technical requirements is expected and verified.

- Willful violations of requirements are rare, and personnel and organizations are held strictly accountable in the context of a just culture. Unintended failures to follow requirements are promptly reported, and personnel and organizations are given credit for self-identification and reporting of errors.

- NWP actively seeks continuous improvement to safety standards and requirements through identification and sharing of effective practices, lessons learned, and applicable safety research. NWP is committed to continuously rising standards of excellence.

System Policies, Procedures, and Other Implementing Documents

- Hazardous Waste Facility Permit, EPA Identification Number NM4890139088
- DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the WIPP*
- DOE/WIPP-05-3318, *WIPP Environmental Management System Description*
- DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*
- DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements*
- MC 9.8, *Configuration Management Board*
- CCP-HSP-014, *Health and Safety Program Plan for CCP*
- WP 02-EC.08, *National Environmental Policy Act Compliance Plan*
- WP 09-11, *NWP Configuration Management Plan*
- WP 09-CN3007, *Engineering and Design Document Preparation and Change Control*
- WP 09-CN3018, *Design Verification*
- WP 09-CN3024, *Configuration Management Board/Engineering Change Proposal*
- WP 09-CN3035, *CMS Software Configuration*
- WP 10-WC3011, *Work Control Process*
- WP 12-5, *WIPP Radiation Safety Manual*
- WP 12-IH.02, *WIPP Industrial Hygiene Program Manual*
- WP 12-IS.01, *Industrial Safety Program - Structure and Management*
- WP 12-IS.01-6, *Industrial Safety Program - Visitor, Vendor, User, Tenant, and Subcontractor Safety Controls*
- WP 12-IS.03, *Electrical Safety Program Manual*
- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*

- WP 15-GM.02, *Worker Safety and Health Program Description*
- WP 15-PA1002, *Requirements Management*
- WP 15-PA1000, *Regulatory Requirements Impact Assessment Process*

6.1.6 Guiding Principle 6: Hazard Controls Tailored to Work Being Performed

Administrative and engineering controls designed and utilized to prevent and mitigate hazards for the work being performed and the associated hazards.

NWP has a rigorous hazard identification program led by Industrial Safety and Health that starts with training as early as General Employee Training (GET) in areas of hazard identification and use of controls, and is continued in safety culture activities such as Safety Management Programs Employee Handbook with requirements and responsibilities for hazard identification. These expectations are continued formally in programs such as the Job Hazard Analysis Program, and programs to address specific hazards such as the Electrical Safety Program. Hazard Identification and Control includes the industrial hygiene baseline monitoring and continuous surveys. The focus on hazard identification and controls is heavily integrated. Examples include:

- Nuclear Safety that includes providing a basis for hazard surveys used for safety analysis, emergency planning, and work planning. This principle was evident in all aspects of evaluation and work performed for the Safety Basis that includes the Documented Safety Analysis and other temporary safety basis documents used to support the Recovery effort.
- The hierarchy of defense-in-depth is also part of the NWP VPP program, which is strictly maintained in all safety program policies and procedures.
- The environmental management program at WIPP includes a pollution prevention program focused on minimizing and reducing possible exposure to toxic or hazardous substances and works closely with the industrial hygiene program accordingly.

Hazard controls are embedded in all aspects of NWP operations. The CCP activities at the host sites include not only the hazard controls for that specific site, and also additional controls such as engineering, administrative work controls, and PPE specific to the TRU waste handling process. These management systems are based on ISM principles starting with a clear work scope, defining responsibilities for host sites and for NWP, engineering designs meeting applicable standards such as Nuclear Regulatory Commission for packaging, and a certified process for administrative controls.
At the WIPP site, engineering controls are designed in the equipment and processes. Administrative controls include WCDs, training, oversight, and safety rules. Focus is also placed on PPE and on employees recognizing hazards and knowing when to pause or stop work if controls are not adequately in place. In working with the human error attribute of this principle, NWP has continued the initiative for HuP improvement,

including identifying error-likely situations, precursors, and barriers accordingly to ensure continuous improvement in implementing this Principle.

Attributes

- Work hazards are identified and controlled to prevent or mitigate accidents, with particular attention to high-consequence events with unacceptable consequences. Workers understand hazards and controls before beginning work activities.

- The selection of hazard controls considers the type of hazard, the magnitude of the hazard, the type of work being performed, and the life-cycle of the facility. Controls are designed and implemented commensurate with the inherent level and type of hazard.

- Safety analyses identifying work hazards are comprehensive and based on sound engineering judgment and data.

- Defense-in-depth is designed into high-hazard operations and activities, and includes independent, redundant, and diverse safety systems, where possible. Defense-in-depth controls include engineering controls, administrative processes, and personnel staffing and capabilities.

- Emphasis is placed on designing the work and/or controls to reduce or eliminate the hazards and to prevent accidents and unplanned releases and exposures.

- The following hierarchy of defense-in-depth is recognized and applied: (1) elimination or substitution of the hazard, (2) engineering controls, (3) work practices and administrative controls, and (4) PPE. Inherently safe designs are preferred over requiring engineering controls. Prevention is emphasized in design and operations to minimize the use of, and thereby possible exposure to, toxic or hazardous substances.

- Equipment is consistently maintained so that it meets design requirements.

- Safety margins are rigorously maintained. Design and operating margins are carefully guarded and changed only with great thought and care. Special attention is placed on maintaining defense-in-depth.

- NWP implements hazard controls in a consistent and reliable manner. Safety is embedded in processes and procedures through a functioning formal ISMS. Facility activities are governed by comprehensive, efficient, high-quality processes and procedures.

- Hazard controls are designed with an understanding of the potential for human error. Error-likely situations are identified, eliminated, or mitigated. Existence of known error-likely situations is communicated to workers prior to commencing work, along with planned mechanisms to ensure their safety.

System Policies, Procedures, and Other Implementing Documents

- Hazardous Waste Facility Permit, EPA Identification Number NM48901399088
- DOE/WIPP-05-3318, *WIPP Environmental Management System Description*
- DOE/WIPP-06-3335, *WIPP Nuclear Maintenance Management Program*
- DOE/WIPP-02-3212, *Ground Control Annual Plan for the WIPP*
- DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*
- DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements*
- DOE/WIPP-08-3378, *Waste Isolation Pilot Plant Emergency Planning Hazards Assessment*
- DOE/NWP 01-3181, *Authorization Agreement for the Waste Isolation Pilot Plant*
- MC 1.12, *Hazard Review Team*
- MP 1.12, *Worker Protection Policy*
- MP 1.28, *Integrated Safety Management*
- WP 02-EC.05, *QAPP for WIPP Site-Generated Waste Characterization Sampling*
- WP 02-RP.02, *Hazard Analysis Results Report for Remote Handled Waste*
- WP 04-AD3005, *Administrative Control of System Lineups*
- WP 04-AD3011, *Equipment Lockout/Tagout*
- WP 04-AD3013, *Underground Access Control*
- WP 04-AD3032, *Senior Management Review Board*
- WP 04-CO.01-8, *Conduct of Operations Program, Control of Equipment and System Status*
- WP 04-CO.01-9, *Conduct of Operations Program, Lockout/Tagout*

- WP 04-CO.01-10, *Conduct of Operations Program, Independent Verification*
- WP 04 series, WIPP Mining Operations Normal Operations documents
- WP 04-HO series, WIPP Hoisting Operations Normal Operations documents
- WP 05-WH series, WIPP Waste Handling Operations Normal Operations documents
- WP 07-1, *WIPP Geotechnical Engineering Program Plan*
- WP 08-PT3007, *Design Control for Type B Packaging*
- WP 09, *Conduct of Engineering*
- WP 10-WC3011, *Work Control Process*
- WP 10-AD3007, *Use and Control of Rigging Components*
- WP 12-2, *WIPP ALARA Program Manual*
- WP 12-3, *Dosimetry Program*
- WP 12-5, *WIPP Radiation Safety Manual*
- WP 12-9, *WIPP Emergency Management Program*
- WP 12-FP.01, *WIPP Fire Protection Program*
- WP 12-FP3002, *Hot Work Permit*
- WP 12-HP3000, *Radiological Control Administration*
- WP 12-HP3300, *Radiation Exposure Control*
- WP 12-HP3400, *Contamination Control*
- WP 12-HP3600, *Radiological Work Permits*
- WP 12-IH.01, *WIPP Chemical Hygiene Plan*
- WP 12-IH.02, *WIPP Industrial Hygiene Program Manual*
- WP 12-IH.02-1, *WIPP Industrial Hygiene Program - Health Hazard Assessment*
- WP 12-IH.02-2, *WIPP Industrial Hygiene Program - Confined Spaces*

- WP 12-IH.02-3, *WIPP Industrial Hygiene Program- Hazardous Waste Operations and Emergency Response*
- WP 12-IH.02-4, *WIPP Industrial Hygiene Program - Hazard Communication and Hazardous Materials Management Plan*
- WP 12-IH.02-5, *WIPP Industrial Hygiene Program - Hearing Conservation*
- WP 12-IH.02-6, *WIPP Industrial Hygiene Program - Respiratory Protection*
- WP 12-IH.02-7, *WIPP Industrial Hygiene Program - Lasers, Lighting, and Pest Control, Sanitation, and Temperature*
- WP 12-IH.02-8, *WIPP Industrial Hygiene Program - Office and Industrial Ergonomics*
- 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 Gases*
- WP 12-IH.02-13, *WIPP Industrial Hygiene Program - Approved Plastic Suit, Airline Respirator*
- WP 12-IH.02-14, *WIPP Industrial Hygiene Program - Approved Plastic Hood, Airline Respirator with Disconnect*
- WP 12-IS.01, *Industrial Safety Program - Structure and Management*
- WP 12-IS.01-1, *Industrial Safety Program - Barricades and Barriers*
- WP 12-IS.01-3, *Industrial Safety Program - Power and Hand Tools*
- WP 12-IS.01-4, *Industrial Safety Program - Personal Protective Equipment*
- WP 12-IS.01-5, *Industrial Safety Program - Walking and Working Surfaces and Ladders*
- WP 12-IS.01-6, *Industrial Safety Program - Visitor, Vendor, User, Tenant, 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-IS.01-9, *Industrial Safety Program - Responsibilities for the Oversight of Visitors, Vendors, Users, Tenants, and Subcontractors*
- WP 12-IS.01-10*, Industrial Safety Program – Fall Protection*
- WP 12-IS.01-11*, Industrial Safety Program – Compressed Gases*
- WP 12-IS.01-12, *Industrial Safety Program - Hoisting and Rigging*
- WP 12-IS.01-13, *Industrial Safety Program - Excavations*
- WP 12-IS.03, *Electrical Safety Program Manual*
- WP 12-IS3002, *Job Hazard Analysis Performance and Development*
- WP 12-NS.02, *Fire Hazard Analysis Updates*
- WP 12-NS.03, *Hazard Analysis Guidance*
- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*
- WP 15-GM1002, *Issues Management Processing of WIPP Forms*
- WP 15-HS.01, *OSHA Bloodborne Pathogens Exposure Control Plan*
- WP 15-HS.02, *Occupational Health Program*
- WP 15-PA1002, *Directives Management*

6.1.7 Guiding Principle 7: Operations Authorization

The conditions and requirements that must be satisfied for operations to begin and continue are clearly established and agreed on.

The ISMS is a process to confirm adequate preparation (including adequacy of controls), prior to authorizing work (including nuclear and non-nuclear), to begin at the facility, project, or activity level. DEAR 970.5223-1(b) (7) requires that the DOE and the contractor establish and agree upon the conditions and requirements to be satisfied for operations to be initiated and conducted. These conditions and requirements are included in the contract. The formality and rigor of the review process and the extent of documentation and level of authority for agreement is based on the hazards and complexity of the work being performed. The process ensures that programs

addressing all applicable functional areas are adequately implemented to support safe performance of the work.

Current NWP activities involving the handling, storage, and disposal of radioactive materials at WIPP are conducted in accordance with the terms and conditions of a signed AA, based on the authorization basis. New processes such as the recovery process are included in the AA scope before work begins as part of the authorization process, or in separate specific plans approved by CBFO. The AA summarizes, in one concise document, the terms and conditions binding on NWP for safe operation of the facility. This includes compliance with the requirements and conditions imposed by the certification and recertification as well as the HWFP. The AA is a supplement to the CBFO-NWP contract and is amended when the scope of work or the authorization basis changes. Responsibilities, inputs, terms and conditions, and the generation, review, approval, and control of the AA are controlled in accordance with MP 1.31, Authorization Agreement. The Operations Authorization for characterization activities at the generator sites is authorized per joint agreements and related certification reviews for readiness.

Attributes

- Formal facility AAs are in place and maintained between the DOE and NWP.
- Readiness at the facility level is verified before hazardous operations commence. Preoperational reviews confirm that controls are in place for known hazards.
- Facility operations personnel maintain awareness of all facility activities to ensure compliance with the established safety envelope.
- Work authorization is defined at the activity level. The work authorization process verifies that adequate preparations have been completed so that work can be performed safely. These preparations include verifying that work methods and requirements are understood; verifying that work conditions will be as expected and not introduce unexpected hazards, and verifying that necessary controls are implemented.
- The extent of documentation and level of authority for work authorization is based on the complexity and hazards associated with the work.

System Policies, Procedures, and Other Implementing Documents

- Prime Contract No. DE-EM0001971
- Hazardous Waste Facility Permit, EPA Identification Number NM4890139088
- DOE/WIPP-01-3181, *Authorization Agreement for the Waste Isolation Pilot Plant*
- DOE/WIPP-02-3122, *Transuranic Waste Acceptance Criteria for the WIPP*

- DOE/WIPP-06-3335, *WIPP Nuclear Maintenance Management Program*
- DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*
- DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements*
- DOE/WIPP-11-3466, *TRUPACT III Disposal Operations Contractor Readiness Assessment Plan of Action*
- MP 1.31, *Authorization Agreement*
- CCP-PO-005, *CCP Conduct of Operations*
- WP 04-AD3031, *Monitoring Operational Activities*
- WP 04-CO.01-2, *Conduct of Operations Program, Shift Routines and Operating Practices*
- WP 04-CO.01-8, *Conduct of Operations Program, Control of Equipment and System Status*
- WP 09-SU.01, *WIPP Start-Up Test Program*
- WP 10-WC3011, *Work Control Process*
- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*
- WP 15-IF series, Integrated Facility Check-out Plans
- WP 15-MD3101, *Verification of Readiness to Startup Restart WIPP*
- WP 15-PC.02, *NWP Work Authorization Process*
- Work authorization documents and statements of work

6.2 Implementation of the Five Core Functions

DOE P 450.4A lists the five core safety management functions that provide the necessary structure for any work activity that could potentially affect the public, the workers, and the environment. The functions are applied as a continuous cycle with the degree of rigor appropriate to address the type of work activity and the hazards involved.

The following sections summarize the NWP management approach for each core function.

6.2.1 Core Function 1: Define Scope of Work

Missions are translated into work, expectations are set, tasks are identified and prioritized, and resources are allocated.

In accordance with DOE O 135.1A, *Budget Execution Funds Distribution and Control*, the Validation and Program Planning Cycle Guidance Document (the Guidance Document) is transmitted by the CBFO to NWP before the start of each fiscal year. Summary level scope of work, funding, and schedule information is provided. The Guidance Document controls the process for integrating upcoming fiscal year budget validation with out-year strategic planning and budget formulation.

Based on the assumptions stated in the Guidance Document, control account managers, in consultation with line managers, define detailed activities. Control account managers prepare cost estimates and schedules for accomplishing the scope of work. Detailed information regarding technical requirements, drivers, documents, and specifications, as well as reports and deliverables, is presented in Bases of Estimates or Activity Based Costing tables. As evidenced by a notation on the final budget worksheets, environmental issues are specifically considered during the development of budget worksheets.

NWP and the CBFO management use a prioritization process to identify which activities will be completed with available funding. Mechanisms for setting expectations for upcoming fiscal year work are the budget validation and contract definition processes. These iterative processes result in a document that contractually establishes scope of work and resources for the upcoming budget year. In addition, performance based incentives are established by the DOE to ensure that the DOE expectation of safe performance is achieved.

Authorization to execute the scope of work is obtained through the DOE execution and issuance of a Fiscal Year Contract Modification. Following contract execution, all changes are controlled through WP 15-FC.01, *Nuclear Waste Partnership LLC Programmatic Change Control Process*.

The concepts and procedures used for preparing the detailed information (schedules, budgets, and methods of performance measurement) to support upcoming fiscal year budget validation and the long-term budget formulation are contained in WP 15-2, *Nuclear Waste Partnership LLC Management Control System Description*. WP 15-2 provides a systematic, risk-based graded approach for determining the level of control necessary to ensure that projects are completed as planned and within the approved budget and schedule. Proper implementation of the concepts discussed in the ISMSD, and using the budget change control process described in WP 15-FC.01, ensures that a clear understanding of the resource requirements achieve safe performance of authorized activities.

The enhanced implementation expectations for defining the scope of work require an accurately defined scope of work to be written in one of the following documents:

- Job Hazard Analysis
- A program plan document for the whole process or function, or
- A WCD can define the scope at the task level.

In this manner, the safety envelope for the scope of work can be appropriately identified based on an accurately defined scope of work.

Attributes

- Scopes of programs, projects, and work activities are defined with sufficient specificity to enable the identification of hazards and implementation of hazard controls.
- Expectations flow to subcontractors, the individual facility, the process, or the work task as appropriate.
- ISM is applied to all types of work and addresses all types of hazards.
- The approved task identification, prioritization, and funding are subject to configuration management processes to ensure formal change control.
- Task prioritization and funding allocation clearly address both ES&H and programmatic needs.
- Line management provides input and approval of task prioritization and funding allocation.
- Task prioritization and funding allocation clearly address commitments to and agreements with DOE and stakeholders.
- Funding allocation provides resources to adequately analyze hazards associated with the work.
- Funding allocation provides resources for implementation of hazard controls for activities being funded.

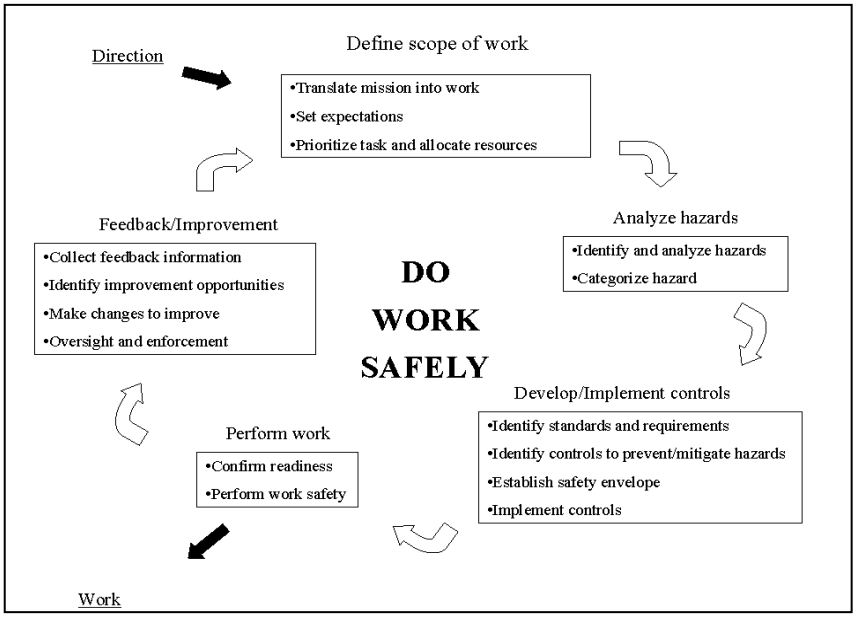

Figure 1 – Safety Management Functions

6.2.2 Core Function 2: Analysis of Hazards

Hazards associated with work are identified, analyzed, and categorized.

The objective of hazard analysis is to develop an understanding of the potential for the hazard to affect the health and safety of the worker, the public, and the environment. Hazard controls are then established based on this understanding and other factors related to the work. The analysis includes two steps: (1) identifying and categorizing the hazard and (2) analyzing accident scenarios related to hazardous work. In identifying hazards at the task/activity level, workers are a valuable resource for their knowledge of the process and its hazards. Categorization may address the character of the work (nuclear, chemical, thermal, electrical, and kinetic) and the magnitude of the hazard. For example, during work design, or in the early project planning stages, hazards may be identified and evaluated using broad, simple tools that delineate hazards and assess the potential magnitude of the harm. At this stage, a simple hazard analysis can be sufficient as a tool for design evaluation and design improvement. Identification, analysis, and categorization of hazards are subjects of the implementing documents described below.

The Waste Isolation Pilot Plant Disposal Phase Final Supplemental Environmental Impact Statement (DOE/EIS-0026-S-2) assesses whether to dispose of TRU waste at WIPP. This document also assesses reasonable options for transportation and other activities associated with disposal, as well as reasonable alternatives concerning quantities, sources, and treatment of TRU waste before disposal.

The analysis of nuclear hazards associated with contact-handled (CH) TRU waste operations is contained in DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis* (DSA), and respective generator host site DSAs and Technical Safety

Requirements (TSRs). The analysis of hazards associated with remote-handled (RH) TRU waste operations is also contained in DOE/WIPP-07-3372. The development of hazards analyses reflected in the DSA results from evaluation of facility changes, new proposed processes, or waste form additions proposed for the repository. The processes for evaluating and documenting major scope and design changes are described in WP 02-EC3801, *Environmental Compliance Review and National Environmental Policy Act (NEPA) Screening;* WP 09, *Conduct of Engineering*; and WP 10-2, *Maintenance Instruction Manual*.

In accordance with the requirements of 10 CFR §830.204, "Documented Safety Analysis," the DSA documents the safety analyses that develop and evaluate the adequacy of the safety bases. The safety bases are defined by 10 CFR §830.3, "Definitions," as "The documented safety analysis and hazard controls that provide reasonable assurance that a DOE nuclear facility can be operated safely in a manner that protects workers, the public, and the environment." These controls include the temporary safety basis documents for recovery aspects.

The DSA establishes and evaluates the adequacy of the WIPP safety bases in response to plant normal and abnormal operations, and postulated accident conditions. The WIPP safety basis analyzed include:

(1) The adequacy of the design basis of WIPP structures, systems, or components, and the application of appropriate engineering codes, standards, and QA requirements.

(2) The selection of principal design and safety criteria.

(3) The assignment of TSRs.

(4) The management, conduct of operations, and institutional dimensions of safety assurance.

Under provisions of WP 10-WC3011, *Work Control Process*, work planning is an iterative function that includes Work Scope Development, Job Hazard Identification and Analysis, and WCD preparation and approval as major processes. It is expected that portions of all three processes will be performed simultaneously in preparing a WCD. An initial categorization of the type of work is conducted during the screening process to determine the need for planning and development of a Type 1, Type 2 or Type 3 WCD. That categorization is refined based on the completion of the scoping and Job Hazard Analysis (JHA) processes.

All work performed will be analyzed for hazards. WP 12-IS3002, *Job Hazard Analysis Performance and Development,* provides instructions for performing a JHA and developing the JHA documentation using the Job Hazard Analysis (JHA) procedure and checklist tool or through use of the Hazard Identification Summary or Work Order Summary Sheet.

WP 12-IS3002 is applicable to activities of NWP personnel and embedded NWP subcontractor personnel for work to be performed at the WIPP and other WIPP-related work places covered by Title 10 CFR 851 and over which NWP has contractual responsibility. Subcontractors without access to JHA tools or processes, and those, whose activities are managed through the Approval Request/Verification Request process, will provide their own JHA's to the Safety and Health Department for approval, as required by NWP procurement procedures. Scientific experimentation or other groups operating under WP 02-EC.12 also will provide their own JHAs for NWP ES&H approval. The JHA Administrator provides a copy of the latest hazard checklist upon request.

The WIPP has defined the process for identifying general hazard analysis (GHA) and job-specific work hazard analysis and the associated controls to protect personnel. GHAs cover a wide variety of routine and repetitive tasks where the hazards have been well defined and the general safety training and general PPE are adequate controls to protect the worker. JHA's are documented, specific to a task with hazards identified and controls specified, and developed by a work planning team in accordance with WP 12-IS3002 and WP 10-WC3011.

Attributes

- All types of hazards (e.g., nuclear, chemical, industrial, fire, external events, construction, and environmental impact) are addressed.

- The identification process is tailored to the type of hazard (e.g., walkthroughs for industrial hazards), the type of work (e.g., design, construction, operation, maintenance, decontamination and decommissioning), and the magnitude of the hazard's risk.

- DOE and other regulatory requirements are implemented as appropriate to the work, the type of hazard identified, and the magnitude of its risk.

- Hazard analysis methods are applied to all types and stages of work (e.g., design, construction, normal operations, surveillance, deactivation, maintenance, facility modification).

- The hazard analysis method, level of detail, and resultant controls are appropriate to the hazard category.

6.2.3 Core Function 3: Develop and Implement Hazard Controls

Applicable standards and requirements are identified and agreed on, controls to prevent or mitigate hazards are identified; the safety envelope is established; and controls are implemented.

An integrated hazard assessment that is verified and reviewed is fundamental to the NWP approach to develop and implement hazard controls. Before work is performed,

the associated hazards are evaluated and a set of environment, safety and health requirements are agreed upon. These requirements, if properly implemented, provide adequate assurance that the public, the workers, and the environment are protected for all nuclear and non-nuclear work activities are agreed upon.

The AA contains key terms and conditions (controls and commitments) under which NWP is authorized to perform work. Any changes to these terms and conditions require the CBFO approval. The authorization basis (or safety basis) consists of the facility design basis and operational requirements that the CBFO relies on to authorize operation, and is described in documents such as the DSA, TSR, temporary safety basis documents (i.e., Evaluations of Safety Situation [ESS] and Interim Safety Basis documents), hazard classification documents, other safety analyses, and other facility specific commitments made to ensure compliance with the DOE Orders, rules, or policies.

The TSR is an important authorization basis document that defines the conditions, safe boundaries, and the management or administrative controls necessary to ensure the safe operation of the WIPP, which is a Hazard Category 2 nuclear facility. TSR controls are also designed to reduce potential risk to workers and the public from uncontrolled releases of radioactive materials or from radiation exposures due to inadvertent criticality. The TSR includes safety limits, operating limits, surveillance requirements, administrative controls, use and application instructions, and their basis, in support of the DSA.

Unreviewed Safety Question (USQ) evaluations are important in maintaining the integrity of safety basis documents. A USQ exists if one or more of the following conditions result:

(1) The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the DSA could be increased;

(2) The possibility for an accident or malfunction of a different type than any previously evaluated in the DSA could be created; or

(3) Any margin of safety as defined in the basis of the TSR could be reduced.

The NWP USQ program ensures that the authorization basis approved by the DOE remains current and provides an adequate level of protection to workers, the public, and the environment.

NWP has programs and procedures that define how operational, safety, radiological, and environmental controls are implemented at the WIPP. This includes controls to avoid hazards and enhance prevention such as pollution prevention strategies. The controls also include immediate protective actions in MP 1.2, *Stop-Work Policy* document (the Stop Work Policy), as well as overall programmatic controls in MP 1.12, *Worker Protection Policy*.

Whether by procedure or work package, work is performed after hazards are identified and controls are agreed upon, as described in the WIPP's ISMS Description. Using the JHA documentation, hazards are identified and controls are established for disposition into a WCD used by maintenance personnel or subcontractors, or through procedures used by other WIPP sections and organizations.

Attributes

- NWP identifies, selects, and approves ES&H standards and requirements by means of a process that ensures adequate protection to the public, the workers, and the environment.
- NWP obtains DOE concurrence with the identified ES&H standards and requirements or the work scope is verified to fall within previous approval, before operations commence or work is authorized.
- The identified ES&H standards conform to applicable laws, statutes, Federal rules, and DOE directives.
- DOE reviews, verifies, and approves in the NWP ISMSD.
- Controls are tailored to the hazards associated with the work or operations to be authorized.
- Hazard prevention programs appropriate to the facility's life cycle are implemented.
- Controls are addressed for the hazards of all activities (e.g., construction, normal operations, surveillance, maintenance work, facility modifications).
- Controls are addressed for all aspects of the work (e.g., initiation, review, authorization, and execution).
- Controls are addressed for all applicable hazards and requirements (e.g., radiation protection, pollution prevention, Resource Conservation and Recovery Act (RCRA), and Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).
- A process or mechanism is provided that recognizes the control hierarchy and integrates those controls.
- Identified controls are agreed upon and approved before operations commence or work is authorized.
- Hazard controls are reviewed and approved by DOE as appropriate to the work.

- Safety boundaries for the work are established and maintained.

- Appropriate controls, conditions, and requirements (e.g., technical safety requirements, operational safety requirements, OSHA, MSHA, and EPA regulations) that constitute the safety boundaries are identified.

- Procedures define the processes for development, approval, and maintenance of work authorization documentation.

- Safety controls are established using the control hierarchy (engineered controls, administrative controls, PPE).

- Engineered controls, administrative controls, safety controls, safety programs, and other conditions that affect the work to be performed are implemented.

- Personnel are trained on the purpose and use of the controls and are qualified (e.g., by means of a personnel training and qualification program) to discharge their responsibilities satisfactorily.

6.2.4 Core Function 4: Perform Work within Controls

Readiness is confirmed and work is performed safely.

The basis for performing work in the WIPP program is formed on expectations of strict compliance with procedures which flow from the AA and the HWFP. Personnel are held responsible and accountable for performance of work in accordance with the procedures.

DOE/WIPP-05-3318, *WIPP Environmental Management System Description*, provides a narrative of how this ISMS function is implemented for environmental protection. Environmental Management is thoroughly integrated with the ISM, including all NWP processes as work activities are done by procedure instead of work packages. Sampling is a repetitive process with hazard analyzed and procedures reviewed and approved in accordance with the document control process. Work activities are coordinated in the Work Control process including Plan of the Day (POD) and Plan of the Week (POW) integration and integrated work schedule. Environmental Management performance targets and objectives are often included in the ISM Performance Objectives, Measures, and Commitments. These are a few examples of the many integrated activities.

WP 12-IS.01-6, *Industrial Safety Program — Visitor, Vendor, User, Tenant, and Subcontractor Safety Controls* is included in contracts and implemented by ES&H.

WP 13-1, *NWP Quality Assurance Program Description* (QAPD), supports efficient conduct of work that ensures protection of workers, the public, and environment, taking into account the work to be performed and the associated hazards.

NWP work is performed in compliance with the myriad of work procedures, which are maintained in the site electronic document management system (EDMS). Additional work instructions are prepared as needed. Subcontractor work is performed according to contractual agreements that require compliance with applicable NWP procedures and approved job hazard analyses, per WP 12-IS.01-6. Operations personnel are responsible for surface, underground, and waste handling operations, as activities resume during recovery. Surface, underground, and waste handling personnel use the administrative and technical procedures in the WP 04 and WP 05 series, available in the EDMS.

Operations personnel are also responsible for maintenance operations. During pre-job briefings, maintenance craft are provided with approved WCDs. WCDs, procedures, as well as standing orders have been approved by cognizant engineers and take into account the results of hazard analyses and recommended mitigating actions.

Oversight of the preparation of WCDs and coordination with plant operations is conducted in accordance with the work control process. The NWP stop work authority places responsibility and authority on every NWP employee and every NWP subcontractor employee and site user to use work pauses or stop work to halt immediately, without the fear of retribution, when they are convinced a situation exists that places them, their coworkers, or the environment in danger. Work pauses are used for clarifications. "Stop Work" means stopping the specific task or activity that poses danger to human health and/or the environment.

Expectations for this core function require work to be performed in accordance with a written procedure, a work package, or a formally-controlled approach that includes a program level document defining scope of work controls, and a related JHA.

Attributes

- Readiness is assured by verifying that controls are adequate to mitigate the identified hazards and that the controls are implemented prior to commencement of work.

- Personnel qualifications and training are verified prior to performing work.

- Implementation of controls is verified adequate to ensure safe work performance and to prevent accidents, uncontrolled releases, or unacceptable exposures to hazardous materials.

- The necessary safety support functions and interfaces (e.g. training, maintenance, radiological protection) are established.

- The operability of the necessary facility or process systems required for safe operation is verified in accordance with the basis established in appropriate authorization agreements.

- Operations at the individual facility or process level are authorized by means of a conduct of operations process appropriate to the work.

- Authorizations are complete before work commences.

- Work control processes during the performance of work include continuous identification of hazards, stopping work to re-evaluate hazards and controls, and initializing WCD changes in the field.

- Personnel are responsible and accountable for performing work in accordance with the established controls.

- Performance measures and indicators are in place to evaluate how safely the work is being performed.

- Performance measures and indicators are clearly linked to performance objectives and expectations.

6.2.5 Core Function 5: Provide Feedback and Continuous Improvement

Feedback information on the adequacy of controls is gathered, opportunities for improving the definition and planning of work are identified and implemented, line and independent oversight is conducted, and, if necessary, regulatory and enforcement actions occur.

The ISMS at WIPP stresses pre-work analysis and planning to establish the safety controls that are to be integrated into work processes. This approach is the described approach of integrated safety management envisioned by the Defense Nuclear Facilities Safety Board in its recommendation 95-2 and in DOE P 450.4A.

NWP uses the feedback function to collect information and make changes to improve its overall ISMS, including environmental protection. Significant improvements in the Contractor Assurance System have occurred and are in progress. This includes WP 15-CA1001, *Independent Safety Management Program Evaluation*, which will identify areas for improving the Safety Management Programs that implement ISM. Metrics have been developed and are reviewed monthly by the Executive Safety & Quality Review Board (Charter MC 1.13).

Feedback and continuous improvement flow from many of the NWP procedures and other controlled documents. The following documents are a representative sample of administrative and technical methods for assessing and evaluating activities and developing corrective actions for issues identified as part of normal operations. MP 1.20, *Management Assessments*; and CCP-QP-018, *CCP Management Assessment;* require managers at every level to assess the performance of their organization to determine the effectiveness of the organization key functions to meet customer requirements and expectations.

WP 15-GM1000, *Management Assessments*, and CCP-QP-018 implement the management assessment program. Required management assessments are performed at least annually, by management, to identify good management practices and potential obstacles within the NWP organization that may hinder the organization from achieving its objectives. Processes to be assessed may include organizational interfaces, cost control, performance indicators, staff training and qualifications, objectives, management systems, demonstration of continuous improvement, and supervisory oversight and support. Managers are encouraged to use a graded approach in planning assessments.

The scope, frequency, and documentation are commensurate with the risk of the activity to the worker, the environment, and the health and safety of the general public. All deficiencies identified in management and independent assessments are reported and tracked to closure via the appropriate site tracking system (e.g., Commitment Tracking System, WIPP Form, Nonconformance Report).

WP 12-ES3918, *Reporting Occurrences in Accordance with DOE O 232.2*, is the implementing document for DOE O 232.2, *Occurrence Reporting and Processing of Operations Information*. The procedure establishes a system for reporting events to the Facility Shift Manager (FSM) or the Facility Manager designee for categorization and reporting. It applies to all departments and activities at WIPP and at all the DOE controlled facilities in Carlsbad. Similar procedures are implemented at generator host sites where NWP performs characterization work with the host facility reporting occurrences coordinating with NWP. In addition, it applies to occurrences resulting from activities performed by subcontractors at these facilities. If the event falls within the Occurrence Reporting and Processing System (ORPS) thresholds, the Facility Manager or Facility Manager Designee initiates the collection of information pertaining to the event, with the assistance of the Facility Shift Manager and the responsible manager. Feedback is derived from an investigation that is initiated as required by WP 15-MD3102, *Event Investigation*; and WP 15-GM1001, *Root Cause Analysis*. These procedures provide instructions for conducting investigations, generating root cause analysis reports, and developing corrective action plans.

Since feedback and improvement avenues for nuclear safety are provided through the Price Anderson Amendments Act (PAAA) provisions of WP 15-GM1001, the groundwork is in place for continued exercise of this function for industrial safety under the promulgated 10 CFR Part 851.

Results of the investigation are disseminated to others in the company as applicable through the WIPP Operating Experience/Lessons Learned Program. In addition, the information is made available throughout the DOE complex by uploading the report to the ORPS database. If the event falls below the ORPS reporting thresholds, the responsible manager reviews the event and, at his/her discretion, initiates an internal investigation in accordance with WP 15-MD3102. The manager may still request a documented investigation. If the event was not a significant condition that warranted a documented investigation, the manager assesses the event to determine if personnel training or personnel notification are needed to prevent future recurrence and takes the appropriate action.

WP 13-1, *NWP QAPD*, is the company level document that describes how operational audits and assessments are completed. The associated procedures describe the mechanisms for completing operational system audits and developing and tracking corrective actions.

The requirements and guidance contained in the QAPD are based on the Principle that work will be planned, documented, performed under controlled conditions, and periodically assessed to establish work item quality and process effectiveness and to promote improvement. Additional feedback and improvement details are collected when consistent with guidance in the QAPD; departments perform functional area assessments specified in applicable regulations and the DOE Orders.

As written and implemented at WIPP, DOE/WIPP 05-3318 provides a narrative of how this ISMS function is implemented under the EMS.

WP 02-EC.13, *Environmental Compliance Walk Around and Assessment Plan*, describes how environmental assessments are performed to ensure compliance with all environmental requirements. It is also designed to assess adherence to environmental stewardship practices as part of the ISMS. The plan supports the feedback and improvement function of the ISMS.

WP 15-GM1002, *Issues Management Processing of WIPP Forms*, establishes the WIPP Issues Management Program. The WIPP Form is a tool used to report, track, schedule, and resolve issues at WIPP. The scope may include issues of both high and low significance. This scope also includes conditions adverse to quality that require reporting by the QA program or other reporting entities, such as the DOE and the U.S. EPA.

All NWP personnel are responsible for the identification of issues that may require correction, improvement, or management attention and submitting them on a WIPP Form. A "no-fault" attitude is fostered by managers to encourage employees to report issues and allow management to prioritize and focus resources in a manner that addresses the issues that have the greatest potential for:

- Posing adverse risks to the environment and human health
- Adversely impacting the quality, safety, and reliability of waste operations
- Affecting the ability to meet quality requirements

NWP has chartered groups to give employees chances to identify improvement opportunities, make improvements to NWP operations, and provide feedback.

Management Charters (MCs) describe each group's functions and activities. Examples of the groups are the Electrical Safety Committee, the Surface Management Council, the Radiological As Low As Reasonably Achievable (ALARA) Committee, the Lessons Learned Working Group, and the Safety Awareness Committee. Further improvements

in implementing this section are anticipated as the newer Performance Assurance group further develops their programs and initiatives for continuous improvement.

The Work Control process outlines the WCD feedback and post review process that ensures actions are taken on feedback received.

Attributes

- Feedback on the effectiveness of the ISM and the adequacy of controls is gathered.
- Extent of condition reviews are conducted using a graded approach.
- Opportunities for improving work execution and planning are identified and implemented.
- Line and independent oversight is conducted at all levels.
- Oversight and assessment activities verify that work is performed within adequate and agreed upon controls.
- Performance measures or indicators and performance objectives are developed in coordination with DOE.
- Line managers use performance measures and indicators as part of the self-assessment process.
- Feedback (including worker input) and lessons learned are managed to improve safety and work performance.
- Oversight or assessment results are managed to ensure that lessons are learned and applied throughout the site.
- Issues are identified (including worker input) and managed to resolution.
- Fundamental causes are determined, and effective corrective action plans are developed and implemented.
- Corrective action effectiveness reviews are conducted using a graded approach.
- Regulatory compliance and enforcement as required by rules, laws, and permits, such as the Price-Anderson Amendments Act (PAAA), NEPA, RCRA, CERCLA, and 10 CFR 851, *Worker Safety and Health Program*, are ensured.

6.3 Safety Culture Focus Areas

DOE defines safety culture as "an organization's values and behaviors modeled by its leaders and internalized by its members, which serve to make safe performance of work the overriding priority to protect the workers, public, and the environment." A Safety-Conscious Work Environment (SCWE) is "a work environment in which employees feel free to raise safety concerns to management (and/or a regulator) without fear of retaliation." In the attributes below, those that have been identified by DOE as being SCWE attributes are noted accordingly. However, WIPP expects its personnel to adopt a broader safety culture that goes above and beyond, incorporating all attributes of the Safety Culture Focus Areas below. WIPP's open and collaborative Safety Culture is characterized by "a Safety-Conscious Work Environment plus a team approach, caring about each other and a focus on continuous improvement and excellence in establishing safety priorities." WIPP's safety culture includes the same expectations for subcontractors in order to ensure that the safety culture prevails through all work, protecting employees accordingly. To assist in strengthening NWP SCWE, MP 1.27, *Resolution of Employee Safety Concerns,* was implemented. Other actions are discussed in the 2014-2015 nuclear safety culture plans. A nuclear safety culture program plan was developed that included both an initial 2014 plan and an updated 2015 improvement plan. These plans were submitted to CBFO on April 27, 2015 as part of the "NWP Nuclear Safety Culture Program Plan" Document number CO:15:02940 UFCL 4250.00. These efforts significantly improved implementation of the attributes of the safety culture focus areas. A joint CBFO/NWP update to the WIPP Safety Culture Sustainment Plan is in progress and will be utilized starting in FY 2016. The original plan Safety Culture Sustainment Plan for WIPP, CBFO:OOM:RZ:MAD:14-0067:UFC:3790.00, was submitted on October 14, 2015 and was approved for NWP FY 2015 by DOE EM-40. Areas of continuing improvement are listed below. Consistent with EM's current position, the term Safety Culture will be used going forward rather than Nuclear Safety Culture.

6.3.1 Safety Culture Focus Area: Leadership

Attributes

- Demonstrated Safety Leadership (Safety-Conscious Work Environment [SCWE] Attribute)
    - — Line managers understand and accept their safety responsibilities as integral to mission accomplishment.
    - — Line managers enhance work activities, procedures and processes with safety practices and policies.
    - — Leaders acknowledge and address external influences that may impose changes that could result in safety concerns.

- Line managers clearly understand their work activities and performance objectives, and how to safely conduct their work activities to accomplish their performance objectives.

- Line managers demonstrate their commitment to safety through their actions and behaviors, and support the organization in successfully implementing safety culture attributes, by conducting walk-throughs, personal visits, and verifying that their expectations are met.

- The organizational mission and operational goals clearly identify that production and safety goals are intertwined, demonstrating commitments consistent with highly reliable organizations.

- Risk-informed, conservative decision-making

  - Line managers support and reinforce conservative decisions based on available information and risks. Managers and employees are systematic and rigorous in making informed decisions that support safe, reliable operations. Employees are expected, authorized and supported by managers to take conservative actions when faced with unexpected or uncertain conditions.

  - Managers and employees are intolerant of conditions or behaviors that have the potential to reduce operating or design margins. Anomalies are thoroughly investigated, promptly mitigated, and periodically analyzed. The bias is set on proving that work activities are safe before proceeding, rather than proving them unsafe before halting. Personnel do not proceed, and do not allow others to proceed, when safety is uncertain and management is supportive of these decisions.

- Management engagement and time in field (SCWE Attribute)

  - Maintaining operational awareness is a priority. Line managers are in close contact with the front-line employees. Line managers listen and act on real-time operational information. Line managers identify critical performance elements and monitor them closely.

  - Line managers spend time on the floor and in employee work areas. Line managers practice visible leadership by placing "eyes on the work", asking questions, coaching, mentoring, and reinforcing standards and positive behaviors. Deviations from expectations are corrected promptly and, when appropriate, collectively analyzed to understand why the behaviors occurred.

  - Managers set an example for safety through their personal commitment to continuous learning and by direct involvement in high-quality training that consistently reinforces expected employee behaviors.

- Staff recruitment, selection, retention, and development

  — People and their professional capabilities, experiences, and values are regarded as the organization's most valuable assets. Organizational leaders place a high personal priority and time commitment on recruiting, selecting, and retaining an excellent technical staff.

  — The organization maintains a highly knowledgeable workforce to support a broad spectrum of operational and technical decisions. Technical and safety expertise is embedded in the organization. Outside expertise is employed when necessary.

  — The organization is able to build and sustain a flexible, resilient, robust technical staff and staffing capacity. Staffing is sufficient to ensure adequate resources exist to ensure redundancy in coverage as well as cope with and respond to unexpected changes in a timely manner.

  — The organization values and practices continuous learning. Professional and technical growth is formally supported and tracked to build organizational capability. Employees are required to improve knowledge, skills, and abilities by participating in recurrent and relevant training and strongly encouraged to pursue educational opportunities.

  — Line managers encourage and make training available to broaden individual skills and improve organizational performance. Training should include the ability to appreciate the potential for unexpected conditions; to recognize and respond to a variety of problems and anomalies; to understand complex technologies and capabilities to respond to complex events; to develop flexibility at applying existing knowledge and skills in new situations; to improve communications; and to learn from significant industry and DOE events.

- Open communication and fostering an environment free from retribution (SCWE Attribute)

  — A high level of trust is established in the organization.

  — Reporting individual errors is encouraged and valued. Individuals feel safe from retaliation when reporting errors and incidents.

  — Individuals at all levels of the organization promptly report errors and incidents and offer suggestions for improvements.

  — A variety of methods are available for personnel to raise safety issues and line managers promptly and effectively respond to personnel who raise safety issues.

- Leaders are responsible for establishing systems for acknowledgement, prioritization, tracking and timely resolution of issues reported to them by their employees.

- Leaders proactively detect situations that could result in retaliation and take effective action to prevent a chilling effect.

- The organization addresses disciplinary actions in a consistent manner; disciplinary actions are reviewed to ensure fair and consistent treatment of employees at all levels of the organization.

- Clear expectations and accountability (SCWE Attribute)

  - Line managers provide ongoing performance reviews of assigned roles and responsibilities reinforcing expectations and ensuring key safety responsibilities and expectations are being met.

  - Personnel at all organizational levels are held accountable for standards and expectations. Accountability is demonstrated both by recognizing excellent performance as well as identifying less-than-adequate performance. Accountability considers intent and organizational factors that may contribute to undesirable outcomes.

  - Willful violations of requirements and performance norms are rare. Individuals and organizations are held accountable in the context of a just culture. Unintended failures to follow requirements are promptly reported, and personnel and organizations are acknowledged for self-identification and reporting errors.

<u>System Policies, Procedures, and Other Implementing Documents</u>

- Management Safety Responsibilities Training (VPP 101)
- CCP-QP-018, *CCP Management Assessment*
- MP 1.12, *Worker Protection Policy*
- MP 1.2, *Stop-Work Policy*
- MP 1.27, *Resolution of Employee Safety Concerns*
- MP 1.28, *Integrated Safety Management*
- MP 1.29, *Mission, Goals, and Responsibilities*
- MP 1.52, *Just Culture Management Policy*
- WP 04-AD3031, *Monitoring Operational Activitie*s
- WP 14-TR.01, *WIPP Training Program*
- WP 15-PA.01, *Operating Experience/Lessons Learned Program*
- WP 15-GM.02, *Worker Safety and Health Program Description*
- WP 15-GM1000, *Management Assessments*
- NWP Human Resources Employee Handbook

6.3.2 Safety Culture Focus Area: Employee/Worker Engagement

Attributes

- Personal commitment to everyone's safety
    - — Responsibility and authority for safety are well defined and clearly understood as an integral part of performing work.
    - — The line of authority and responsibility for safety is defined from the senior manager to the individual contributor. Roles and responsibilities, authorities and accountabilities are clearly defined in writing and are understood by each individual.
    - — Individuals understand and demonstrate responsibility for safety. Safety and its ownership are apparent in everyone's actions and deeds.
    - — Individuals outside of the organization (including subcontractors, temporary employees, visiting researchers, vendor representatives, etc.) understand their safety responsibilities.
    - — The organization knows the expertise of its personnel. Line managers defer to qualified individuals with relevant expertise during operational upset conditions. Qualified and capable people closest to operational upsets are empowered to make important decisions, and are held accountable justly.
- Teamwork and mutual respect (SCWE Attribute)
    - — Open communications and teamwork are the norm.
    - — Individuals at all levels of the organization listen to each other and effectively engage in crucial conversations to ensure meaning, intent and viewpoints are understood; and that differing points of view are acknowledged.
    - — Discussion on issues focus on problem solving rather than on individuals.
    - — Good news and bad news are both valued and shared.
- Participation in work planning and improvement
    - — Individuals are actively involved in identification, planning, and improvement of work and work practices.
    - — Individuals follow approved work practices and procedures.

- Individuals at all levels can pause or stop unsafe work or work during unexpected conditions.

- Design, analysis and continuous improvement of work practices and processes are valued as core organizational competencies; expertise in these competencies is evaluated and rewarded.

- Mindful of hazards and controls

  - Organizational safety responsibilities are sufficiently comprehensive to address the work activities and hazards involved.

  - Work hazards are identified and controlled to prevent or mitigate accidents, with particular attention to high consequence events with unacceptable consequences.

  - Individuals understand and proactively identify hazards and controls before beginning work activities.

  - Individuals are mindful of the potential impact of equipment and process failures, demonstrate constructive skepticism and are sensitive to the potential of faulty assumptions and errors. They appreciate that mindfulness requires effort.

System Policies, Procedures, and Other Implementing Documents

- General Employee Training
- MP 1.12, *Worker Protection Policy*
- MP 1.2, *Stop-Work Policy*
- MP 1.52, *Just Culture Management Policy*
- MP 1.53, *Differing Professional Opinions*
- WP 10-WC3011, *Work Control Process*
- WP 12-IS.01, *Industrial Safety Program, Structure and Management*
- WP 12-IS.01-6, *Industrial Safety Program - Visitor, Vendor, User, Tenant, and Subcontractor Safety Controls*
- WP 12-IS3002, J*ob Hazard Analysis Performance & Development*
- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*
- WP 15-GM.07, *Resolution of Differing Professional Opinions*

6.3.3 Safety Culture Focus Area: Organizational Learning

NWP provides systems and processes to foster a culture and performance of safety excellence including continuous improvement through organizational learning. This includes:

- Training for management and workers including Leadership Training for all first line supervisors.

- Performance is shared by using tracking and trending tools which help maintain safe operations and progress.

- Lessons Learned incorporation into daily activities.

- NWP holds its personnel to high standards of performance and uses their expertise to ensure appropriate levels of review, analysis, and decision making.

- NWP provides extensive performance assurance through the QA program, the contractor assurance system, inspections, management assessments, safety reviews, issues management, corrective action program, root cause analysis, and the many key components for assuring continuous improvement and effective performance.

- Sharing of information on the NWP use of the ORPS, Computerized Accident/Incident Reporting System, and the Noncompliance Tracking System, which provides timely reporting of occurrences and ensures that appropriate action, is taken.

- Periodic reports detail progress and any problems in project performance. Independent oversight is carried out by qualified NWP personnel to review documentation and conduct field surveillances, assessments, and audits of operations. Problems are discovered early in the process so that interventions can be taken to prevent further damage and to apply lessons learned to other ongoing projects. NWP safety and engineering professionals provide expertise to field activities to assist in technical issues and to measure progress.

- The annual review of the ISMS identifies program strengths and weaknesses and tracks corrective actions to timely completion. Continued implementation of the HuP improvement program and focus on safety culture will result in additional strengths in implementation of this focus area.

<u>Attributes</u>

- Credibility, trust and reporting errors and problems (SCWE Attribute)

    — Credibility and trust are present and continuously nurtured so that a high level of trust is established in the organization.

- Organizations, managers and line supervisors provide accurate, relevant and timely information to employees. Line managers are skilled in responding to employee questions in an open, honest manner.

- Reporting individual errors is encouraged and valued. Individuals are recognized and rewarded for self-identification of errors.

- Line managers encourage and appreciate safety issue and error reporting.

- Managers and line supervisors demonstrate integrity and adhere to ethical values and practices to foster trust.

- Managers and line supervisors demonstrate consistency in approach and a commitment to the vision, mission, values and success of the organization as well as the individuals (people).

- Mistakes are used for opportunities to learn rather than blame.

- Individuals are recognized and rewarded for demonstrating behaviors consistent with the safety culture principles.

• Effective resolution of reported problems (SCWE Attribute)

- Vigorous corrective and improvement action programs are established and effectively implemented, providing both transparency and traceability of all corrective actions. Corrective action programs effectively prioritize issues, enabling rapid response to imminent problems while closing minor issues in a timely manner to prevent them from escalating into major issues.

- Results from performance assurance activities are effectively integrated into the performance improvement processes, such that they receive adequate and timely attention. Linkages with other performance monitoring inputs are examined, high-quality causal analyses are conducted, as needed, and corrective actions are tracked to closure with effectiveness verified to prevent future occurrences.

- Processes identify, examine and communicate latent organizational weaknesses that can aggravate relatively minor events if not corrected. Organizational trends are examined and communicated.

- Organizational systems and processes are designed to provide layers of defenses, recognizing that people are fallible. Lessons learned are shared frequently; prevention and mitigation measures are used to preclude errors from occurring or propagating. Error-likely situations are sought out and corrected, and recurrent errors are carefully examined as indicators of latent organizational weaknesses.

- Incident reviews are conducted promptly after an incident to ensure data quality and to identify improvement opportunities. Causal analysis expertise is applied effectively to examine events and improve safety work performance. High-quality causal analysis using multi-discipline analytical perspectives is the norm. Causal analysis is performed on a graded approach for major and minor incidents, and near-misses, to identify causes and follow-up actions. Even small failures are viewed as windows into the system that can spur learning.

- Performance improvement processes require direct worker participation. Individuals are encouraged, recognized and rewarded for offering innovative ideas to improve performance and to solve problems.

- Performance monitoring through multiple means (SCWE Attribute)

  - Line managers maintain a strong focus on the safe conduct of work activities. Line managers maintain awareness of key performance indicators related to safe work accomplishment, watch carefully for adverse trends or indications, and take prompt action to understand adverse trends and anomalies. Management employs processes and special expertise to be vigilant for organizational drift.

  - Performance assurance consists of robust, frequent, and independent oversight conducted at all levels of the organization. Performance assurance includes independent evaluation of performance indicators and trend analysis.

  - Line managers throughout the organization set an example for safety through their direct involvement in oversight activities and associated performance improvement.

  - The organization actively and systematically monitors performance through multiple means, including leader walkarounds, issue reporting, performance indicators, trend analysis, benchmarking, industry experience reviews, self-assessments, peer reviews, and performance assessments.

  - The organization demonstrates continuous improvement by integrating the information obtained from performance monitoring to improve systems, structures, processes, and procedures.

  - Line managers are actively involved in all phases of performance monitoring, problem analysis, solution planning, and solution implementation to resolve safety issues.

  - The organization maintains an awareness of its safety culture maturity. It actively and formally monitors and assesses its safety culture on a periodic basis.

- Use of operational experience

  — Operating experience is highly valued and the capacity to learn from experience is well developed. The organization regularly examines and learns from operating experiences, both internal and in related industries.

  — Organization members convene to swiftly uncover lessons and learn from mistakes and successes.

  — The organization embraces feedback from peer reviews, independent oversight, and other external sources.

  — The organization documents and shares operating experiences (lessons learned and best practices) within the organization and with industry.

- Questioning attitude (SCWE Attribute)

  — Line managers encourage a vigorous questioning attitude toward safety, and foster constructive dialogues and discussions on safety matters.

  — Individuals cultivate a constructive, questioning attitude and healthy skepticism when it comes to safety. Individuals question deviations, and avoid complacency or arrogance based on past successes. Team members support one another through both awareness of each other's actions and constructive feedback when necessary.

  — Individuals pay keen attention to current operations and focus on identifying situations where conditions and/or actions are diverging from what was assumed, expected, or planned. Individuals and leaders act to resolve these deviations early before issues escalate and consequences become large.

<u>System Policies, Procedures, and Other Implementing Documents</u>

- General Employee Training
- CCP-PO-005, *CCP Conduct of Operations*
- MP 1.2, *Stop-Work Policy*
- MP 1.28, *Integrated Safety Management*
- MP 1.29, *Mission, Goals, and Responsibilities*
- MP 1.52, *Just Culture Management Policy*
- WP 04-AD3031, *Monitoring Operational Activities*

- WP 04-CO.01, *Conduct of Operations series*
- WP 10-WC3011, *Work Control Process*
- WP 13-1,*Nuclear Waste Partnership LLC Quality Assurance Program Description*
- WP 15-GM.02, *Worker Safety and Health Program Description*
- CCP-QP-014, *CCP Quality Assurance Trend Analysis and Reporting*
- CCP-QP-018, *CCP Management Assessment*
- MC 1.16, *Corrective Action Review Board*
- WP 15-PA1002, *Requirements Management*
- WP 02-EC.13, *Environmental Compliance Walk Around Assessment Plan*
- WP 12-IS.01, *Industrial Safety Program - Structure and Management*
- WP 13-1, *Nuclear Waste Partnership LLC Quality Assurance Program Description*
- WP 13-QA.03, *Quality Assurance Independent Assessment Program*
- WP 13-QA3006, *Data Analysis and Trending*
- WP 15-FC.03, *EVMS Surveillance Plan*
- WP 15-GM.01, *NWP Project Execution Plans*
- WP 15-GM.02, *Worker Safety and Health Program Description*
- WP 15-GM1000, *Management Assessments*
- WP 15-GM1001, *Root Cause Analysis*
- WP 15-GM1002, *Issues Management Processing of WIPP Forms*
- WP15-MD3102, *Event Investigation*
- WP 15-PA.01, *Operating Experience/Lessons Learned Program*
- WP 15-PA2000, *Lessons Learned Bulletin Development*

- WP 15-PA4000, *Self-Assessments*

- WP 15-RA.01, *Nuclear Safety and Worker Safety and Health Compliance Program*

7.0 INTEGRATING PROGRAMS

Documented procedures and practices do not inherently produce the integration that is expected by the DEAR ISM clause. A number of mechanisms are incorporated into the NWP ISMS to facilitate integration. These include business procedures and practices that allocate resources and prioritize work, as well as WCDs intended to protect the public, worker, and environment. Integration includes regularly scheduled meetings that start with oversight of the ISM and integrating programs by the Executive Safety Council which is a joint CBFO/NWP council, all the way down to include the POD, POW meetings, various safety committee meetings, quarterly safety meetings, and others on a more informal basis.

An example of formal mechanisms of integration include implementing DOE-STD-1120-2005, *Integration of ES&H into Facility Disposition Activities*, for integrating planning, hazard analysis, and controls. Other activities integrated include engineering support, fire protection, emergency preparedness, maintenance, environmental protection, waste management, industrial hygiene, occupational safety, chemical safety, radiological protection, training, and conduct of operations. Other integration components focus on integration of ES&H in the business processes for work planning, budgeting, authorization, execution, and change control. Integration also includes the flow-down of requirements to subcontractors, and the controls and safety oversight of visitors, vendors, and tenants. The development of procedures and practices for prioritization of both programmatic and site-wide work activities important to safety is an important integration activity that has received recent improvement focus as part of the work control improvements. A proposed procedure and process for change management will be piloted in FY 2016.

Some components are discussed in sections below, while others though not discussed in this section (such as work planning, emergency management, budget process), are discussed in other sections in this ISMSD.

7.1 Environmental Management System

To implement sound stewardship practices that protect the air, water, and land, NWP maintains the responsibilities and requirements for the work performed per contract DE-EM0001971, which includes work performed by NWP subcontractors. The EMS is implemented to ensure that environmental protection actions and measures are integrated into all work planning and performance. This is accomplished effectively by integrating EMS requirements into the ISMS.

The EMS is part of the overall NWP ISMS approach for achieving workplace safety and environmental protection. The EMS provides a systematic management process for identifying and addressing environmental consequences of any NWP action. Processes within the EMS encompass a continuous cycle of planning, implementing, and evaluating to ensure the safety of the workers and public and protection of the environment. This has been proven effective with continued ISO 14001 certification.

Programmatic components of EMS include:

- Permit Management
- Pollution Prevention
- Environmental Compliance
- Environmental Oversight
- NEPA Analysis
- Radiation Protection and Radioactive Waste Management
- Watershed Management
- Cultural Resource Management

Through the implementation of the EMS, NWP joins with the CBFO to ensure that environmental management considerations are fundamental and integral components of the WIPP Project.

7.2 Quality Assurance

NWP is committed to building the quality principles of accuracy and repeatability into all mission processes and results. The QAPD describes the method by which QA is implemented into the ISMS and the overall work processes.

NWP is committed to achieving quality in accordance with the "Quality Assurance Rule" (10 CFR Part 830, Subpart A, "Quality Assurance Requirements") and DOE O 414.1D by having a comprehensive QAPD in place. The QAPD identifies those requirements and actions that are implemented to achieve this result.

The QAPD is the company-level document that describes how operational audits and assessments are completed. The associated procedures describe the mechanisms for completing operational system audits and developing and tracking corrective actions.

The requirements and guidance contained in the QAPD are based on the Principle that work will be planned, documented, performed under controlled conditions, and periodically assessed to establish work item quality process effectiveness, and to promote improvement. Additional feedback and improvement details are collected when consistent with guidance in the QAPD; departments perform functional area assessments specified in applicable regulations and the DOE Orders.

7.3 Safeguards and Security Management

The Safeguards and Security Management (SSM) implements the sustained execution of security expectations at the WIPP. The ISM and SSM are complementary management systems based upon the same principles and core functions. When possible, infrastructures are shared, such as the processes for creating, issuing, and communicating requirements and expectations.

In managing and operating WIPP, NWP supports the program by ensuring that management of safeguards and security functions and activities become an integral and visible part of work planning and execution processes.
The purpose of DOE P 470.1A, *Safeguards and Security Program*, is to formalize a Safeguards and Security Management framework. Safeguards and security management systems provide a formal, organized process for planning, performing, assessing, and improving the secure conduct of work in accordance *with* risk-based protection strategies. These systems are institutionalized through the DOE directives and flowed down into contracts as appropriate.

The objective of the SSM Program at the WIPP is to systematically integrate safeguards and security into management and work practices at all levels so that missions are accomplished securely. This provides the necessary and appropriate protection for nuclear material, information, personnel, and property. Operational security at WIPP is managed under and evaluated for effectiveness in the following sub programs:

- Program Management
- Information Security
- Materials Control and Accountability
- Personnel Security
- Cyber security
- Assessment Programs

7.4 Title 10 CFR Part 851

The NWP plan developed to demonstrate implementation of the requirements of 10 CFR Part 851 is WP 15-GM.02. The NWP WSHPD, the VPP, the Worker Protection Policy (MP 1.12), and the implementation of safety and health programs are integrated in the ISMS, forming the overall foundation for the NWP safety program.

7.5 Communications and Training Plan

ISMS training is communicated to workers as an integral part of the required GET and the required annual GET refresher class for the CBFO and contractor employees. As DOE directives, rules and policies are amended, the GET material is updated and employees are notified of the changes. The Safety Programs Handbook is provided to new employees as part of their initial GET class. This provides an overview of the basic premise of ISMS, 10 CFR Part 851, VPP, and their rights, roles, and responsibilities related to safety. The Safety Programs Handbook includes the Safety Management Commitment and the Safety Policy to place continued focus at the individual level to enhance the Safety.

8.0 OTHER SAFETY-RELATED INITIATIVES

NWP has implemented the principles and functions of a variety of processes and initiatives aimed at improving organizational and individual performance. A number of tools, processes, or approaches have been adapted to complement ISMS. They share many common principles that affect organizational and individual worker, supervisor, and management behavior and performance. Further information on the safety culture improvement initiatives, including leadership effectiveness and organizational and operational effectiveness components are currently discussed in the Nuclear Safety Culture Improvement Plan and the Nuclear Safety Culture Program Plan. Going forward this information will be included in the bi-annual Safety Culture Sustainment Plan.

8.1 ISMS Enhancements

Human Performance Improvement (HuP) HRO principles complement ISMS and serve to extend and clarify the program's principles and methods. HPI, and the related safety culture expectations are described below.

8.1.1 Human Performance (HuP)

An important principle of HuP is that people are fallible, and even the best make mistakes. For this reason, NWP focuses on organizational areas to identify weaknesses so that human errors do not cause major incidents. HuP organizational principles recognize that:

- Error-likely situations are predictable, manageable, and preventable.
- Individual behavior is influenced by organizational processes and values.
- People achieve high levels of performance based largely on the encouragement and reinforcement received from leaders, peers, and subordinates.
- Events can be avoided by understanding the reasons mistakes occur and applying the lessons learned from past events.

Components of NWP's HuP program that support safety culture include a focus on a just culture, encouraging reporting, and on use of a culpability matrix to help identify when an employee error was due to an organizational weakness. HPI portions that are a current improvement focus include management of the 3 C's: commitment, competence, and cognizance.

8.1.2 High Reliability Organization (HRO)

An HRO is an organization that has succeeded in avoiding catastrophes in an environment where normal accidents can be expected due to risk factors and complexity. Such an organization works hard to avoid failure while preparing for the inevitable to minimize the impact of failure. A key component of an HRO is the ability to continuously improve itself, being comfortable and adept at quickly building creative, innovative improvements and responses for planning and recovery when such needs arise. This culture-based mindfulness keeps an HRO working well when facing unexpected situations, allows for rapid improvements and planning proficiency as elements such as work scope change, and encourages focus on continuous improvement.

Though many HRO tenets have already been ingrained in WIPP's culture success, NWP, in an effort to focus on future improvement, has decided to formally focus on enhancing its ISMS program by formally incorporating HRO -related principles and concepts. NWP will focus on the principles listed below, which when taken together, help to produce organizational mindfulness:

- Preoccupation with lessons learned
- Commitment to perform problem causal analysis and resolution
- Sensitivity to operations
- Commitment to resilience
- Deference to expertise

DOE has extended these principles into a basic concept: "Increase mindfulness to notice and mitigate risk thus minimizing errors while maximizing defense and control effectiveness and addressing the work perception gap (work as imagined versus work as done) and bolstering resilience will lead to no consequential events."

8.2 VPP Merit Status

The WIPP site was a VPP STAR site since 1994. Focus is currently placed on strengthening the foundational components of the VPP program. The VPP STAR status was lost after the February, 2014 events. While the gravity WIPP is working to attain a STAR level of excellence to assist in providing the strong safety culture base to meet NWP management expectations for improvement. Safety-related initiatives for continuous improvement include maintaining continued focus and awareness on safety and effective change management. Conduct of Operations and nuclear safety culture improvement projects related to newer DOE direction will help to improve the safety

consciousness of the work force, while providing programmatic support for safety excellence.

9.0 ANNUAL ISM MAINTENANCE AND CONTINUOUS IMPROVEMENT PROCESSES

9.1 Management Focus

Management will continue to focus on the activity level implementation of ISM in the DSA safety management programs and other areas identified in the various assessments after the February, 2014 events. In addition, the safety culture initiatives will be a primary focus and will include continuing in the processes of mentoring, encouraging employee involvement, establishing teams to develop improvement initiatives, responding to employee concerns, and championing any identified changes to enhance the safety culture.

9.2 ISMS Description Maintenance and Continuous Improvement

The ISMSD is a requirement of DEAR 970.5204-2 and satisfies DEAR 970.5215-3, which requires NWP to develop and implement an ISMS approved by the DOE. The ES&H Manager/Deputy Manager is responsible for preparing the ISMSD, coordinating reviews, and obtaining general approvals. NWP will update the ISMSD basing content and intent on the expectations expressed in the CBFO ISMSD. The update will be submitted to the CBFO for approvals for any changes other than editorial changes which do not require the DOE approval. It is recognized that NWP will add, delete, and modify requirements in the ISMSD as various regulations, directives, standards, and best practices change.

NWP reviews these aspects annually against the then current DOE Safety Management System expectations and takes one of the following actions:

- Submits a complete revision of the ISMSD for the CBFO approval
- Submits page revisions of editorial changes to the CBFO for information
- Submits a letter to the CBFO indicating no change to the ISMSD.

Annual performance objectives, measures, and commitments will be considered as attachment 1, Performance Measures, Objectives, and Commitments to the ISMSD. Attachment 1 changes will be made as an editorial change since they are jointly determined by the CBFO and NWP in accordance with DOE EM Guidance apart from the ISMSD annual update process.

NWP will continue to monitor the ISMS processes for adequacy, implementation, and effectiveness in line with both the CBFO and NWP expectations. The core function of "Feedback and Improvement" and the ISM Safety Culture Focus Area of "Organizational Learning" will continue to drive ISMS improvements. Many sources of

feedback information for improvement are currently available to NWP, including (but not limited to):

- Operational Awareness through Senior Supervisory Watch, work observations, and ongoing interactions.
- Worker Feedback including pre-job briefings, job hazard walk-downs, employee concerns program, safety committees, and bargaining unit input.
- Operating Experience including lessons learned, benchmarking, and best practices from workshops.
- Assurance Systems including issues management, QA assessments, self-assessments, safety oversight assessments, and management assessments.
- Tracking and Trending through monthly indicators and the NWP Performance Dashboard.
- Tracking and trending will be used for identification of performance strengths and weaknesses; integration across programs and feedback processes to identify major areas for attention, and development of Safety POMCs with the approved of CBFO.

9.3 ISMS Annual Effectiveness Review

The NWP ISMS annual effectiveness review aligns with the following directives and documents:

- DOE P 450.4A, *Integrated Safety Management Policy*
- DOE G 450.4-1C, *Integrated Safety Management System Guide*

The annual ISM effectiveness review process uses these documents and guidance from the DOE-EM and the CBFO is as essential element of ISM implementation that allows for evaluating implementation and making necessary adjustments. The annual ISM effectiveness review is a qualitative review that encompasses multiple elements, including review of self-assessments, oversight review results, integrated reviews, performance against established performance objectives, measures, and commitments, and other feedback and performance information. Elements of this review may either be completed together as one major annual audit or, ideally, should be ongoing throughout the year culminating in a review report that is based on an annual summary evaluation. The purpose of the annual ISM effectiveness review is to:

- Determine the effectiveness of the ISMS in:
    - complying with requirements
    - integrating safety into work performance

- supporting the safe performance of work
- improving safety performance

- Identify strengths of ISMS implementation for sharing with other DOE elements to aid improvements at other locations.

- Identify weaknesses of ISMS implementation to focus attention on corrective and improvement actions.

- Identify opportunities for improvement in efficiency or effectiveness of the ISMS, and identify actions for continuous improvement.

NWP ISM assessments are performed in consonance with the directives listed above, with a view toward the effective interface and integration between the CBFO ISMS and the NWP ISMS. Assessments are executed throughout the year by a series of planned management assessments of the WIPP operational and administrative processes. In judging effectiveness, both process measures and outcome measures are considered. Examples of process measures include, but are not limited to:

- Implementation of each ISM function and each ISM Principle

- Integration of ISM with other management systems

- Completion of ISM commitments

- Identification of weaknesses and improvement activities

- Satisfactory performance on process-based performance measures

- Positive feedback from oversight reviews

Examples of outcome measures include satisfactory performance on outcome-based performance measures, including those related to safe identification of work activities. The actual criteria to be used to determine effectiveness will be based on the DOE directives that specify criteria review and approach documents, any guidance issued by the DOE, including the CBFO, and best practices established within the DOE complex. In addition, the following Continuing Core Expectations (CCEs) from the DOE ISM Directives are used to guide annual effectiveness reviews.

- CCE-1. The contractor updates the safety performance objectives, performance measures, and commitments, in response to the DOE direction and guidance, so that they reflect and promote continual improvement and address major mission changes, as required. The ISMSD is updated and submitted for approval as scheduled by the contracting officer.

- CCE-2. System effectiveness, evaluated as described in the NWP ISMSD is satisfactory. Safety performance objectives, measures, and commitments are met or exceeded, and they are revised as appropriate for the next year.

- CCE-3. Work activities reflect effective implementation of the functions of the ISMS. Work is defined. Hazards are identified. Actions to prevent or eliminate the hazards are taken. Controls are developed and effectively translated into work instructions or procedures and implemented. Work is properly authorized. Work is accomplished within controls. Appropriate worker involvement is a priority.

- CCE-4. NWP implementing mechanisms are established and implemented to provide an effective environment for ISM implementation, as embodied in the ISM guiding principles and Safety Culture-Focus Areas, Roles and responsibilities are clear. Line management is responsible for safety. Required competence is commensurate with responsibilities and the technical and safety system knowledge of managers and staff continues to improve.

- CCE-5. NWP budget processes ensure that priorities are balanced. Budget development and change control processes ensure that safety is balanced with production. Facility procedures ensure that production is balanced with safety.

- CCE-6. An effective feedback and improvement process using progressively more demanding criteria is functioning at each level of the organization from the worker and individual activities through the facilities and the sites. Issues management is effective so that issues are identified, evaluated, and closed. Issues identified in the annual ISM effectiveness reviews and ISMS verifications are effectively addressed.

- CCE-7. List A/List B is reviewed and updated, as necessary, and concurrent with the budget cycle. The process for effecting changes to the standards and requirements identified in the Contract per DEAR List A and List B is being used and is effective. AAs and Authorization Basis documents are maintained current. Changes in agreed upon standards and requirements are included to reflect mission changes. An effective, dynamic process to keep standards and requirements current is apparent.

- CCE-8. Relevant performance records reflect an improving ISMS. Records include routine NWP assessment reports, independent and focused assessment reports, incident investigations, occurrence reports, DOE enforcement action reports, and reports from internal and external stakeholders and regulators, and other relevant documentation that provides evidence as to the status of implementation, integration, and effectiveness of the ISMS. Feedback, improvement and change control processes cited in the contractor ISMSD are in place and effective.

The ISM review report should include a summary of the overall review process, a conclusion regarding the effectiveness of the ISM, the basis for conclusions, the strength and weaknesses, identification of areas of improvement, and the corrective and improvement-focused planned actions as well as schedules for completion.

Improvements in the NWP Contractor Assurance System include independent assessments of safety management programs to identify areas for improving the Safety Management Programs that implement ISM.

9.4 Annual Safety Performance Objectives, Measures, and Commitments (POMCs) Process

The annual Safety POMCs are determined by the CBFO and NWP counterparts and are established to drive improvement in safety performance and ISMS effectiveness. This approach ensures that NWP remains responsible to the DOE program and budget execution guidance while maintaining the integrity of the ISMS. The objectives are used to support the DOE expectation for (1) NWP personnel behaviors and attitudes in the conduct of their daily work activities, and (2) operational performance regarding worker injuries and illnesses, regulatory enforcement actions, and environmental releases.

NWP is committed to work such that:

- NWP processes and procedures have clear safety expectations and requirements consistent with a zero accident workplace.

- NWP flows down safety expectations and requirements (including 10 CFR Part 851, safety standards, procedures, etc.) to subcontractors at any tier. The flow down of safety expectations and requirements includes vendors which also operate under a subcontract, though 10 CFR 851 requirements vary.

- Work being done at the WIPP site not under direct contract with NWP is controlled by a contractual vehicle or other written arrangement to meet the safety expectations set forth in WP 02-EC.12 and per their own 10 CFR Part 851 plan as applicable (WP 15-GM.02). These are activities under contract with CBFO, or are site users or tenants based on various governmental agreements, such as scientific studies, international mentoring projects, and others.

- NWP safety personnel will provide effective safety oversight of NWP and NWP subcontractor work.

- The ISMSD will be maintained in accordance with requirements and best practices to afford a foundational level sufficient to ensure safety excellence.

- NWP is able to achieve the Safety POMC agreed upon with the CBFO in the annual contract process.

DOE's ultimate safety goal is zero accidents, work-related injuries and illnesses, regulatory enforcement actions, and reportable environmental releases. DOE expects this goal to be pursued through a systematic and concerted process of continuous performance improvements using performance measurement, safety goals, and metrics established in accordance with DOE direction. New POMCs are determined based on guidance received from DOE as well as through the evaluation of prior-year performance with meeting objectives. This ISMSD is then submitted with the new POMCs to be approved by the CBFO. New POMCs are outlined in Attachment 1.

9.5 Annual Declaration Process

Per DOE O 450.2, *Integrated Safety Management*, an ISM declaration is a determination regarding whether the organization is in full conformance with the requirements and expectations for an effective ISMS. The ISM declaration must be based on the results after the ISM effectiveness review. DOE O 450.2 also requires DOE line management to establish the need for frequency of ISM declarations. Until guidance is modified, NWP will continue with annual declarations per contract DE-EM0001971. Based on all the reviews and assessments conducted during the year, including the annual effectiveness review, NWP determines the state of NWP ISM effectiveness: (1) "Effective Performance - ISM is being effectively implemented;" (2) "Needs Improvement - ISM is being effectively implemented, but noteworthy weaknesses need to be addressed;" or (3) "Significant Weakness - ISM is not being effectively implemented." The basis for this summary evaluation is to be included in the NWP "Declaration" Letter/Report to the CBFO. The declaration should include any immediate corrective or compensatory actions that must or have been taken. It should also include a response to any specific guidance for the declaration received from U.S. DOE Office of Independent Oversight, DOE-EM, or the CBFO.

The declaration report should include a summary of relevant activities and assessments that were completed during the report period and provide a determination of the overall effectiveness of implementation of ISM, the basis for the determination, a discussion of potential site vulnerabilities to provide an opportunity to develop and implement risk management options and strategies, a safety significant related directive, exemptions or changes in the contract during the report period, DOE regulatory enforcement activities history, and any additional information required based on guidance received from DOE.

10.0 COMPLIANCE REFERENCE LIST

These directives require specific integration of management systems with safety programs providing the overall direction for this ISMSD.

DOE O 210.2A, *Corporate Operating Experience Program*

DOE O 231.1B, *Environment, Safety, and Health Reporting*

DOE Order 232.2, Occurrence Reporting and Processing of Operations Information

DOE O 414.1D, *Quality Assurance*

DOE O 450.2, *Integrated Safety Management*

DOE P 450.4A, *Integrated Safety Management Policy*

DOE G 450.4-1C, *Integrated Safety Management System Guide*

DOE P 470.1A, *Safeguards and Security Program*

DOE/CBFO-09-3442, *CBFO Integrated Safety Management System Description*

Attachment 1 – Performance Objectives, Measures, and Commitments (POMCs)

Each Fiscal Year, the POMCs are included in this attachment. The POMCs are to be developed per the annual DOE-EM guidance. If the guidance is not received by September 1, the annual POMCs are to be developed and submitted to CBFO with this document for review and approval by September 30 using the most current guidance and the following;

- using DOE G 450.4-1C, Attachment 13, Safety Performance Objectives, Measures, and Commitments,
- based on discussions with CBFO,
- based on ISM improvement areas identified throughout the year to focus attention on corrective and improvement actions,
- using known areas of interest or improvement initiatives in the DOE complex.

NUCLEAR WASTE PARTNERSHIP
INTEGRATED SAFETY MANAGEMENT AND SAFETY CULTURE SUSTAINABILITY
2016 PERFORMANCE OBJECTIVES, MEASURES & COMMITMENTS

NWP developed FY2016 Safety Performance Objectives, Measures, and Commitments (POMCs) by developing POMCs based on the most recent ISMS/QA guidance from DOE-EM,FY2014 Annual, dated October 20, 2014, and using DOE G 450.4-1C, Attachment 13*, Safety Performance Objectives, Measures, and Commitments*.

Performance Objective	Performance Measurement/Commitment
Management Leadership- 1. Senior Steering Team named and trained 2. Safety Culture Monitoring Panel Team named and trained 3. Pilot Change Management Procedure 4. Model core values and expectations 5. Management will perform Management Observations 6. Effectiveness Review of CAS 7. Safety Culture Sustainment Plan *FY 2014 EM Guidance 2b,3,4a,4b,4c; DOEG 450.4-1C Attachment 10*	1. Team Charter, Training Rosters Team Quarterly Meeting Minutes 2. Team Charter, Minutes for Metrics and Information Reviewed, Quarterly Report to SST 3. Change Management Pilot Report 4. List of Activities done with Core Values 5. Metrics tracking Management Observations 6. Assessment report on CAS effectiveness 7. Submitted Plan and communications on plan and actions
Employee Involvement: 1. Implement Discovery and Event Clocks to measure, Track and Trend Progress. 2. Create workmanlike behaviors of finding and fixing gaps 3. Implement Change Management plans	1. List of Safety Team Charters 2. List of Discovery/Event clocks and use 3. List of accomplishments and/or gaps fixed per Safety Team 4. List of employees participating in change management initiatives

Attachment 1 – Performance Objectives, Measures, and Commitments (POMCs)

Performance Objective	Performance Measurement/Commitment
DOE G 450.4-1C Attachment 10	
Learning Organization: 1. Continue the Leadership Academy 2. Perform Quarterly continuing Education for Cadre members 3. Develop and Present Leader Forum 4. Deliver Employee HuP training 5. Track Lessons Learned , internal and external produced and/or used 6. Continue to track Mentoring Moments DOE G 450.4-1C Attachment 10	1. Track # of Leaders trained 2. Copy of continuing training materials 3. Track # of Leaders trained 4. Rosters and training materials 5. Listing of Lessons Learned produced and distributed 6. 20 topic areas shared with at least 50 managers, supervisors, key staff
Other Safety Culture objectives	• Roll-up Safety gaps closed and annual accomplishments to be shared with NWP and CBFO
Establish and sustain a robust safety culture consistent with ISMS principles. (*Sources: DOE G 450.4-1C, Attachments 8, 10 and 13)*	Conduct Safety Culture training for new employees, including reinforcing Core Value expectations. Develop/deliver safety culture why, how and what campaign materials. Finish implement of actions in the 2015 Nuclear Safety Culture Improvement Plan including those actions from the 2015 External, Safety Culture assist Visit. Perform related assessments on the effectiveness of the safety culture improvements.