

# Waste Isolation Pilot Plant Environmental Management System Description

U. S. Department of Energy

Revision 6



This document supersedes DOE/WIPP-05-3318, Rev. 5.

# Waste Isolation Pilot Plant Environmental Management System Description

U.S. Department of Energy

Revision 6

Approved by: //signature on file// **6/09/16**  
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**CHANGE HISTORY SUMMARY**

<b>REVISION NUMBER</b>	<b>DATE ISSUED</b>	<b>DESCRIPTION OF CHANGES</b>
6		<ul style="list-style-type: none"> <li>• Editorial modifications to address recommendations from surveillance of CBFO portion of EMS in 2015 and recommendations from recent NWP internal audit of NWP portion of system.</li> <li>• Replaced EO 13423 and EO 13514 with superseding EO 13693.</li> <li>• Definitions – Deleted definition for nanomaterials, which the DOE Order no longer requires to be specifically addressed in the EMS.</li> <li>• Sections 3.0, 4.5, and 4.9, replaced references to <i>Vendor Safety Briefing</i> with <i>Visitor and New Employee Guide</i>, now used to communicate Environmental Policy to visitors and vendors.</li> <li>• Updated figures 2 and 3.</li> <li>• Deleted references to the following documents no longer in use: <ul style="list-style-type: none"> <li>— NWP MP 1.45, Regulatory Requirements Impacts Assessments (Section 4.2).</li> <li>— DOE/CBFO-09-3437, CBFO Emergency Management Plan (WP 12-9 is now a joint CBFO/NWP plan) (Section 4.10).</li> <li>— NWP MP 1.24, Commitment Tracking System (Section 4.12).</li> </ul> </li> <li>• Replaced WP 10-AD3029 with WP 10-AD.01, now the higher-level document for calibration and control of monitoring equipment.</li> <li>• Section 4.8, removed reference to the CBFO FRAM, which does not cover EMS.</li> <li>• Section 4.12, added 15-CA.01, Contractor Assurance System Program Description, the governing document for assessing compliance with DOE directives.</li> <li>• Section 4.13, updated to reflect revisions in implementing procedure.</li> <li>• Section 4.15, revised to reflect 3-year internal audit schedule of CBFO and MOC systems and eliminate MOC surveillance audits in intervening years.</li> <li>• Minor editorial clarifications in multiple sections.</li> <li>• Updated implementing document titles.</li> <li>• Section 5.0, EMS Roles and Responsibilities: <ul style="list-style-type: none"> <li>— 5.2, Reordered bullets.</li> <li>— 5.3, Updated department names.</li> <li>— 5.3, Added Site Infrastructure.</li> </ul> </li> <li>• References Table: <ul style="list-style-type: none"> <li>— Added references to all public laws included in Section 4.2.</li> <li>— Updated references as noted in prior bullets.</li> </ul> </li> <li>• Updated document titles.</li> </ul>

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**ACRONYMS/ABBREVIATIONS**

CBFO	Carlsbad Field Office
CFR	Code of Federal Regulations
CTS	Commitment Tracking System
DOE	U.S. Department of Energy
EMS	Environmental Management System
EO	Executive Order
GET	General Employee Training
ISO	International Organization for Standardization
ISMS	Integrated Safety Management System
LANL	Los Alamos National Laboratory
LLC	Limited Liability Company
MOC	Management and Operating Contractor (Nuclear Waste Partnership LLC)
MP	management procedure/policy
NEPA	National Environmental Policy Act
NWP	Nuclear Waste Partnership LLC
P2	pollution prevention
POD	Plan of the Day
POW	Plan of the Week
Q&MIS	Quality and Manufacturing Integrated System
QA	quality assurance
QAPD	Quality Assurance Program Description
RES	Regulatory Environmental Services
SNL	Sandia National Laboratories
SSP	Site Sustainability Plan
TRU	transuranic
WIPP	Waste Isolation Pilot Plant
WP	WIPP document designator

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**DEFINITIONS**

Unless otherwise noted, definitions are from ISO 14001:2004(E)

**Continuous Improvement** – recurring process of enhancing the environmental management system (EMS) in order to achieve improvements in overall environmental performance in line with the organization's environmental policy.

**Corrective Action** – action to eliminate the cause of a detected nonconformity.

**Environment** – surroundings in which an organization operates, including air, water, land, natural resources, flora, fauna, and humans, and their interrelation.

**Environmental Aspect** – element of an organization's activities, products, or services that can interact with the environment.

**Environmental Impact** – any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organization's aspects (activities, products, or services).

**Environmental Management System (EMS)** – part of an organizations management system used to develop and implement its environmental policy and manage its environmental aspects. A management system includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources.

**Environmental Objective** – overall environmental goal, consistent with the environmental policy that an organization sets itself to achieve.

**Environmental Performance** – measurable results of an organization's management of its environmental aspects. In the context of EMSs results can be measured against environmental policy, environmental objectives and/or targets and other environmental performance requirements.

**Environmental Policy** – overall intentions and direction of an organization related to its environmental performance as formally expressed by management (the policy provides a framework for action and for setting environmental objectives and targets).

**Environmental Target** – detailed environmental performance requirement, applicable to the organization or parts thereof, that arises from the environmental objectives and which needs to be set and met to achieve those objectives.

**Integrated Safety Management System** – A U.S. Department of Energy (DOE) safety management system that systematically integrates safety into management and work practices at all levels so that missions are accomplished efficiently while protecting the workers, public, and environment. (Source: DOE Order 450.2, *Integrated Safety Management System*)

**International Standard** – ISO 14001:2004(E), *Environmental management systems – Requirements with guidance for use*

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**Nonconformity** – Non-fulfillment of a requirement.

**Preventive Action** – Action to eliminate the cause of a potential nonconformity.

**Procedure** – In the context of the ISO14001 Standard and this system, procedures are the written, unwritten, formal, and/or informal descriptions of how certain activities are conducted. (Source: ISO 14001) For WIPP, these can include policies, plans, processes, and other types of instructions. Processes described in this document satisfy ISO 14001 requirements to establish EMS-related procedures. This definition differs from that used in the CBFO Quality Assurance Program Document and the MOC Quality Assurance Program Description. (Source: defined by this EMS)

**Record** – Document stating results achieved or providing evidence of activities performed.

**Sustainable Practices/Goals** – The practices and resulting goals that are required to be addressed and managed through the EMS by EO 13693, *Planning for Federal Sustainability in the Next Decade*. These include energy efficiency, reduction in greenhouse gases, use of renewable energy, reduced water consumption intensity, acquisition of green products and services, pollution prevention (P2) (cost-effective waste prevention, recycling, diversion of solid wastes), sustainable design/high performance buildings, reduction in petroleum consumption, and electronics stewardship. (Based on EO content and DOE Order 436.1, *Departmental Sustainability*)

**Sustainable Products** – Products or services that are energy-efficient, water-efficient, bio-based, environmentally preferable, non-ozone depleting, contain recycled content, or are non-toxic or less toxic alternatives where products meet agency performance requirements. (Based on EO's content and DOE Order 436.1)

**Top Management** – The Carlsbad Field Office (CBFO) Manager or Deputy Manager and the Management and Operating Contractor (MOC) President & Project Manager or Designee. (Source: defined by this EMS)

**WIPP Managers or Management** – Both CBFO and MOC functional managers.

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## **1.0 INTRODUCTION**

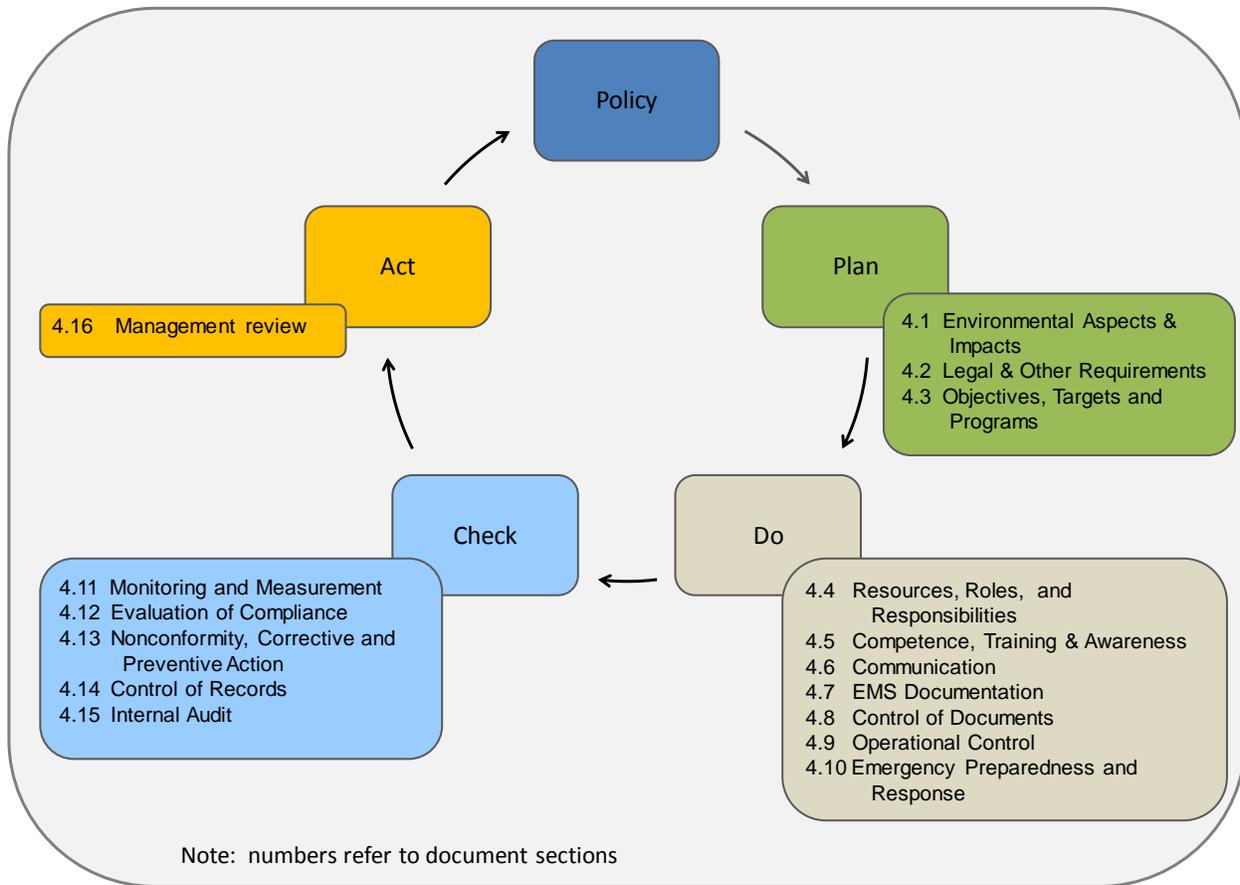
The Waste Isolation Pilot Plant (WIPP) mission is to provide safe, compliant, and efficient characterization, transportation, and disposal of defense transuranic (TRU) waste. WIPP is committed to maintain high standards of environmental quality, strive to continually improve environmental performance, and provide a safe and healthful workplace for its employees, contractors, and the surrounding communities while completing our mission, as noted in the *WIPP Environmental Policy* (DOE/WIPP-04-3310). The U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) and the WIPP management and operating contractor (MOC), Nuclear Waste Partnership LLC (NWP), have implemented the environmental management system (EMS) to ensure that these commitments are met.

The WIPP EMS is designed to meet the requirements of DOE Order 436.1, *Departmental Sustainability*. The WIPP EMS is integrated into the site's Integrated Safety Management System (ISMS) as "safety" includes the environment as defined in DOE P 450.4A, *Integrated Safety Management Policy*. The ISMS guiding principles and core functions are applicable to protection of the environment and employee and public health.

The EMS also conforms to International Organization for Standardization (ISO) 14001:2004, *Environmental Management Systems – Requirements with Guidance for Use* (international standard). The CBFO and MOC have chosen to maintain certification to this standard via an independent third-party certification body.

The EMS is based on the Continuous Improvement cycle of Plan – Do – Check – Act (analogous to ISMS core functions). Within each of these phases of the cycle, there are actions that the CBFO and MOC perform to ensure operations are conducted in accordance with the WIPP Environmental Policy. For the EMS, the actions are grouped by the "elements" defined in the international standard. In this document, the continuous improvement cycle, the elements, and their corresponding sections (i.e., sections 4.2, 4.3) are illustrated in figure 1.

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**Figure 1, EMS Continuous Improvement Cycle with Supporting Elements**

The remainder of this document describes the WIPP EMS. Each element of the EMS contains the following subsections and contents:

- **ISO 14001 Requirement(s)** – summary of the international standard’s requirements. These are highlighted by the use of italics.
- **DOE Requirement(s)** – summary of additional requirements relative to each element if specified in DOE Order 436.1; also highlighted by the use of italics.
- **WIPP System** – brief description of how the element is implemented.
- **Implementing Documents** – list of implementing documents. These may include CBFO and/or MOC policies, programs, plans or procedures. In general, the highest level documents (policies, program documents) are listed with sub-tier supporting documents (procedures) being listed only in few instances. In some cases, the system is fully contained in this EMS description, and thus there may be no further documents referenced.
- **ISMS Integration** – related ISMS Core Function(s) and Guiding Principle(s) (inclusive of ISMS culture descriptors).

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### 2.0 EMS SCOPE

This EMS applies to the environmental aspects of WIPP operations and activities at the WIPP site and the supporting facilities in Carlsbad, New Mexico, conducted by the CBFO and MOC and their subcontractors.

Sandia National Laboratories (SNL) and Los Alamos National Laboratory (LANL) are not within the scope of this EMS as they are required by the DOE to have their own EMS. When performing work for WIPP, SNL and LANL are expected to conduct their activities under their own EMS, consistent with DOE Order 436.1 requirements.

### 3.0 ENVIRONMENTAL POLICY

#### ISO 14001 Requirements

*Top management shall define the organization's environmental policy and ensure that, within the defined scope of its environmental management system, it (a) is appropriate to the nature, scale and environmental impacts of its activities, products and services; (b) includes a commitment to continual improvement and pollution prevention; (c) includes a commitment to comply with applicable legal requirements, and with other requirements to which the organization subscribes which relate to its environmental aspects; (d) provides the framework for setting and reviewing environmental objectives and targets; (e) is documented, implemented, and maintained; (f) is communicated to all persons working for or on behalf of the organization; and (g) is available to the public.*

#### WIPP System

The WIPP Environmental Policy is jointly issued by CBFO and MOC top managers. It is the foundation of the WIPP EMS and communicates management's commitment to maintaining the highest standard of environmental performance. The policy references the EMS as the mechanism for achieving environmental goals and contains commitments to comply with applicable environmental requirements; implement pollution prevention through safe, responsible, cost-effective methods; and continuously improve WIPP environmental performance. The policy provides the framework for setting and reviewing WIPP's annual environmental objectives and targets.

The policy is maintained and updated in accordance with the WIPP document control system or is updated as otherwise deemed appropriate (e.g., management review). The policy is communicated to WIPP employees through initial and annual refresher General Employee Training (GET). The policy is communicated to visitors (including vendors) through the Visitor and New Employee Guide and/or with their access badges. In addition, CBFO and MOC may choose to use other mechanisms to communicate policy including posters, badge cards, or internal communications.

The WIPP Environmental Policy Statement is available to the public by calling the WIPP Information Center at 1-800-336-9477, or from the "Documents" menu at the top of the WIPP Internet Homepage at [www.wipp.energy.gov](http://www.wipp.energy.gov).

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**Implementing Documents**

DOE/WIPP-04-3310	<i>WIPP Environmental Policy Statement</i>
NWP MP 1.28	<i>Integrated Safety Management</i>
Unnumbered	<i>Visitor and New Employee Guide</i>

**ISMS Integration**

Core Function(s)	Define Scope of Work
Guiding Principle(s)	Line Management Responsibility for Safety

**4.0 EMS ELEMENTS**

**4.1 Environmental Aspects and Impacts**

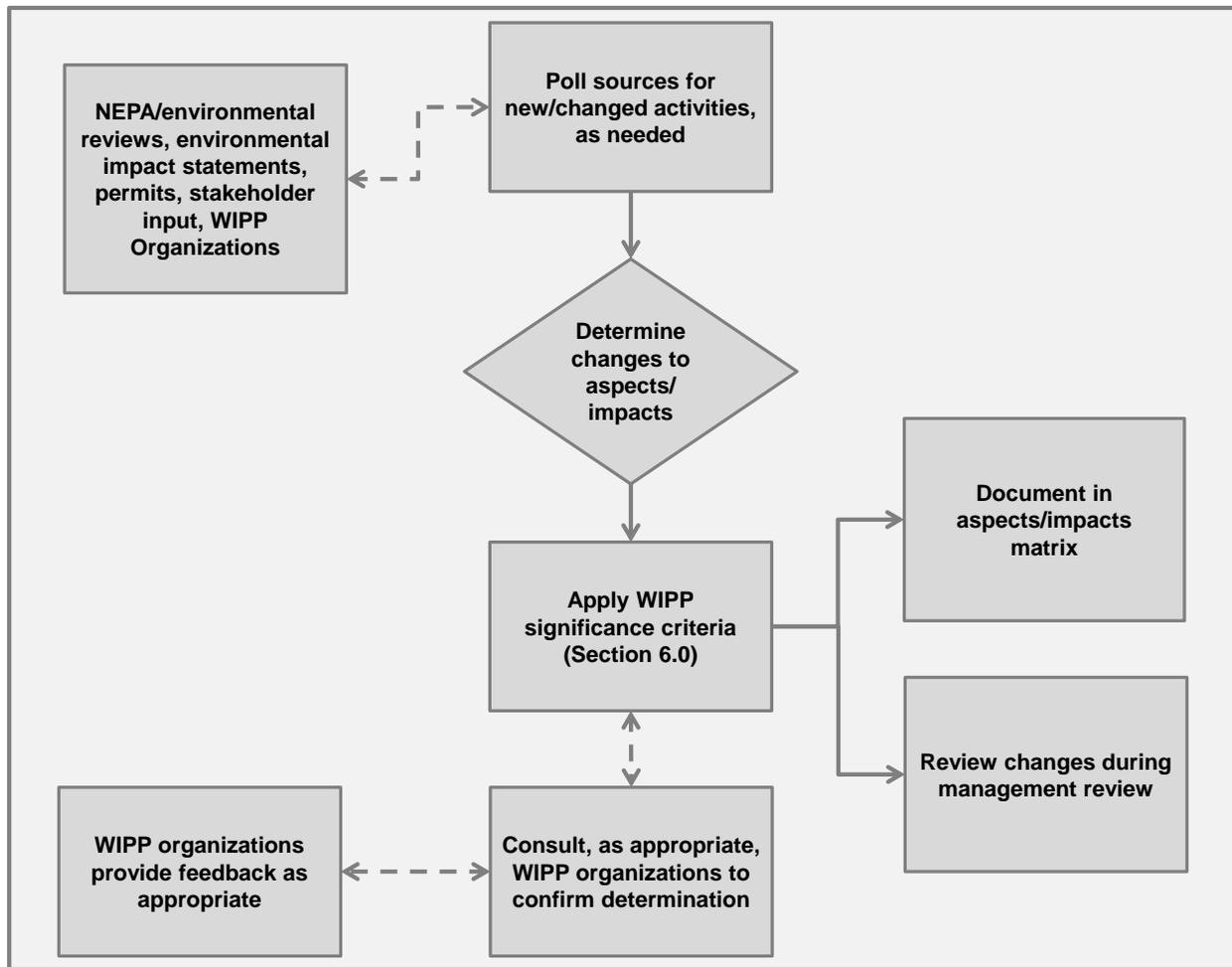
**ISO Requirements**

*The organization shall establish, implement and maintain a procedure(s) to (a) identify the environmental aspects of its activities, products, and services within the defined scope of the environmental management system that it can control and that it can influence taking into account planned or new developments, or new or modified activities, products and services, and (b) determine those aspects that have or can have significant impact(s) on the environment (i.e., significant environmental aspects). The organization shall document this information and keep it up to date. The organization shall ensure that the significant environmental aspects are taken into account in establishing, implementing and maintaining its environmental management system.*

**WIPP System**

The CBFO and MOC procedure for identifying environmental aspects and determining their significance is outlined in figure 2. This process is facilitated by the MOC EMS Coordinator.

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**Figure 2, Procedure for Determining Significant Aspects and Impacts**

The CBFO and MOC apply the criteria outlined in Section 6.0 to determine significance. Aspects and Impacts are documented and maintained in the Environmental Aspects and Impacts Matrix. A working copy of the matrix is posted on the internal EMS website.

The CBFO and MOC ensure that environmental aspects are taken into account in implementing and maintaining the EMS through implementation of the remaining EMS elements (e.g., objectives, targets and programs, operational controls, competence, awareness and training; resources, roles, and responsibilities).

### **Implementing Documents**

DOE/WIPP-05-3318	<i>EMS Description, sections 4.1, 5.0, 6.0</i>
CBFO MP 4.12	<i>NEPA Compliance</i>
WP 02-EC.08	<i>NEPA Compliance Plan</i>
WP 02-EC3801	<i>Environmental Compliance Review and NEPA Screening</i>
Unnumbered	<i>WIPP Aspects and Impacts Matrix</i>

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**ISMS Integration**

Core Function(s): Analyze Hazards  
Guiding Principle(s): Identification of Safety Standards and Requirements

**4.2 Legal and Other Requirements****ISO Requirements**

*The organization shall establish, implement, and maintain a procedure(s) (a) to identify and have access to the applicable legal requirements and other requirements to which the organization subscribes related to its environmental aspects, and (b) to determine how these requirements apply to its environmental aspects. The organization shall ensure that these applicable requirements are taken into account in establishing, implementing and maintaining its environmental management system.*

**DOE Requirements**

*DOE sites must comply with the sustainability requirements contained in the following documents through implementation of a Site Sustainability Plan (SSP):*

- DOE Order 436.1, *Departmental Sustainability*
- EO 13693, *Planning for Federal Sustainability in the Next Decade*
- *National Energy Conservation Policy Act*
- *Energy Policy Acts of 1992 and 2005*
- *Energy Independence and Security Act of 2007*
- *Inventory and reporting requirements of section 301 through 313 of the Emergency Planning and Community Right to Know Act*
- *Pollution Prevention Act of 1990*

In addition, the WIPP project must comply with DOE Order 430.1B, *Real Property Asset Management*, which requires that land use planning and stewardship responsibilities be implemented consistent with the principles of ecosystem management and sustainable development.

**WIPP System**

Access to legal requirements is provided through CyberRegs<sup>®</sup> and intranet access to state and federal websites containing regulations and other requirements documents (e.g., DOE Directives).

Four procedures are used at WIPP to identify legal and other requirements related to environmental aspects and determine their impacts. The first procedure provides the

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process used by Regulatory Environmental Services (RES) staff to perform regular reviews of the *Federal Register* and other publications to identify and evaluate changes in regulations, DOE Directives, or other requirements, such as the ISO standard. Review findings are provided to the CBFO as a contract deliverable. In addition, two Performance Assurance procedures are used by WIPP environmental staff to identify and determine the impact of new or revised requirements from DOE Directives. As identified through implementation of these three procedures, requirements that may impact the WIPP are routed, as appropriate, to subject matter experts for analysis and impact determinations. Subsequently, policies, plans, procedures, targets, etc., are revised to include new or revised requirements as necessary.

The fourth procedure is the CBFO Directives Compliance Program procedure used to determine applicability of new or revised DOE Directives, such as orders, notices, policies, guides, and technical standards, and to initiate implementation and proper flow-down of directives into support contracts as appropriate.

The CBFO and MOC voluntarily subscribe to the ISO requirements.

Legal requirements and compliance status are reported in the *WIPP Biennial Environmental Compliance Report*.

### **Implementing Documents**

CBFO MP 5.4	<i>Directives Compliance Program</i>
WP 15-PA1000	<i>Regulatory Requirements Impact Assessment Process</i>
WP 15-PA1002	<i>Directives Management</i>

### **ISMS Integration**

Core Function(s):	Analyze Hazards
Guiding Principles:	Identification of Safety Standards and Requirements Hazard Controls Tailored to Work Being Performed

## **4.3 Objectives, Targets, and Programs**

### **ISO Requirements**

*The organization shall establish, implement and maintain documented environmental objectives and targets, at relevant functions and levels within the organization. The objectives and targets shall be measurable, where practicable, and consistent with the environmental policy, including the commitments to prevention of pollution, to compliance with applicable legal and "other" requirements and to continual improvement. When establishing and reviewing its objectives and targets, an organization shall take into account legal and "other" requirements, and its significant environmental aspects. It shall also consider its technological options, its financial, operational, and business requirements, and the views of interested parties. The organization shall establish, implement and maintain a program(s) for achieving its objectives and targets. Program(s) shall include (a) designation of responsibility for*

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*achieving objectives and targets at relevant functions and levels of the organization, and (b) the means and time-frame by which they are to be achieved.*

### **DOE Requirements**

*Each DOE site must develop and implement an annual SSP that identifies its respective contribution toward meeting the DOE's sustainability goals. The SSP must also commit appropriate resources and an appropriate financing plan, and establish a timeline for execution coupled with specific performance measures and deliverables. Objectives and measurable targets that contribute to the DOE meeting its sustainability goals must be implemented through the EMS.*

### **WIPP System**

The WIPP environmental objectives and targets are not typically related to maintaining compliance as compliance is the baseline expectation for environmental performance. Managers ensure compliance with legal and other requirements is included as long- and short-term (annual) budgets are prepared. Compliance programs are implemented via formal project schedules, other work schedules or programmatic actions as appropriate to the complexity of the compliance requirement.

Environmental objectives and targets may be focused on improvements in one or more of the following areas:

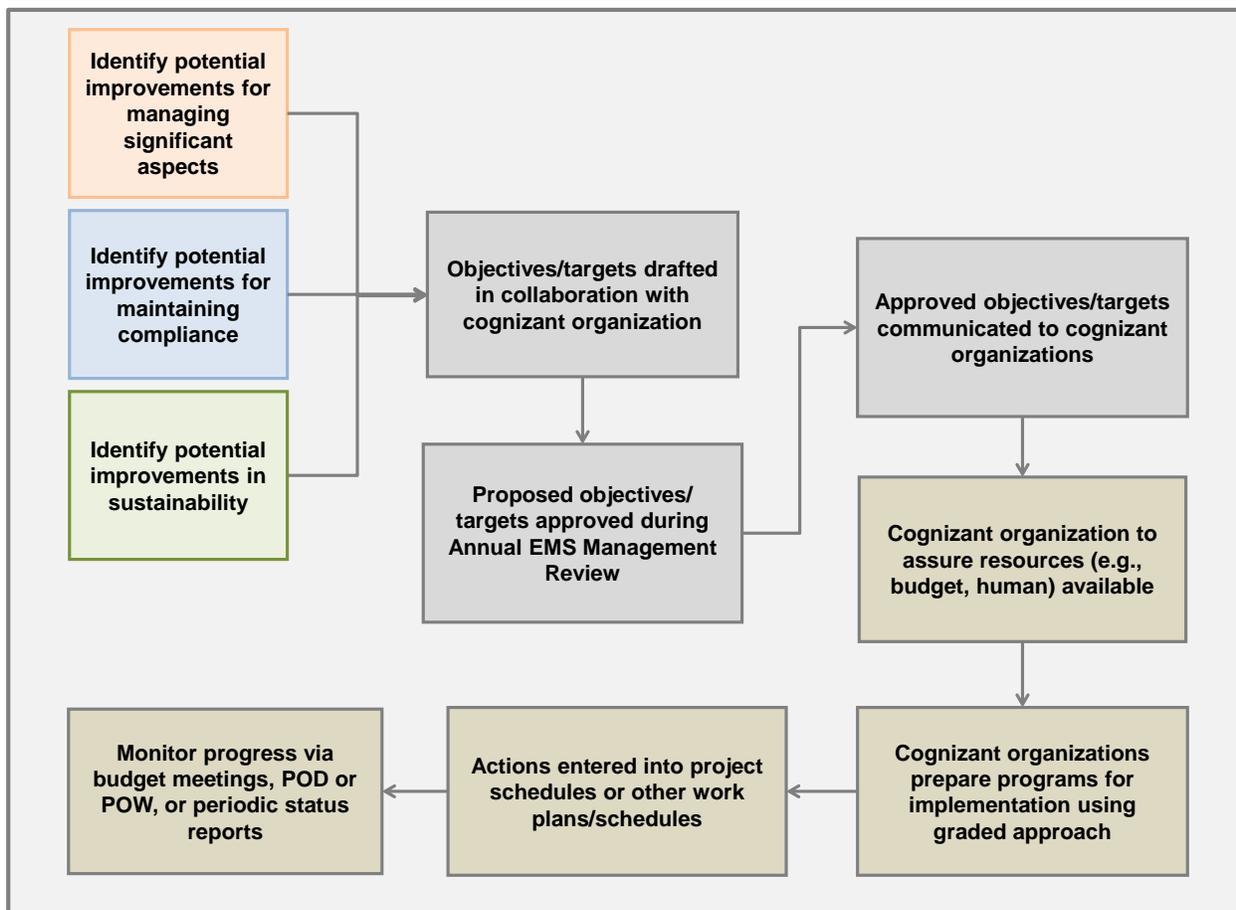
- Management of significant aspects and impacts.
- Methods used to maintain compliance.
- Sustainability, inclusive of the traditional pollution prevention arena.

Development of potential environmental objectives and targets is facilitated by the EMS Coordinators based on interaction with relevant departments, consideration of opportunities for improvements in management of significant aspects and the WIPP Site Sustainability Plan. Technological options and financial, operational, and business requirements are factored into the determination and/or implementation of the objectives and targets.

Proposed targets are reviewed, adjusted as deemed necessary, and approved by WIPP top-level management during management reviews. Once approved, the targets are published to the entire organization, and the responsible departments and individuals are notified that the appropriate level of budget and program plan must be in place and followed to ensure the target is achieved.

Targets may be tracked through formal or informal project schedules, Plan of the Week/Day (POW/POD) schedules, Commitment Tracking System (CTS) actions, or via status reports. Figure 3 illustrates the development of objectives, targets, and associated program planning.

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**Figure 3, Objectives, Targets, Planning Process**

**Implementing Documents**

Unnumbered	WIPP Site Sustainability Plan
DOE/WIPP-04-3300	<i>WIPP Project Control System Description</i>
NWP MP 1.29	<i>Mission, Goals, and Responsibilities</i>
WP 15-2	<i>NWP Management Control System Description</i>
WIPP Environmental Targets	<i>Current year list accessible from internal EMS website</i>

**ISMS Integration**

Core Function(s):	Analyze Hazards, Develop and Implement Hazard Controls
Guiding Principle(s)	Balanced Priorities, Identification of Safety Standards and Requirements

**4.4 Resources, Roles, and Responsibilities**

**ISO Requirements**

*Management shall ensure the availability of resources essential to establish, implement, maintain and improve the environmental management system. Resources include human resources and specialized skills, organizational infrastructure, technology and*

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*financial resources. Roles, responsibilities and authorities shall be defined, documented and communicated in order to facilitate effective environmental management.*

*The organization's top management shall appoint a specific management representative(s) who, irrespective of other responsibilities, shall have defined roles, responsibilities and authority for (a) ensuring that an environmental management system is established, implemented and maintained in accordance with the requirements of this International Standard, (b) reporting to top management on the performance of the environmental management system for review, including recommendations for improvement.*

### **WIPP System**

WIPP management ensures resources are available for implementing and improving the EMS through the annual and long-term (out-year) budget setting processes as described in section 4.3 and the implementing documents for this element.

Roles and responsibilities for the EMS are defined and documented in section 5.0. The general roles and responsibilities of each employee are communicated to WIPP personnel through GET. They may also be communicated through other appropriate venues such as articles in WIPP internal newsletters, the EMS website, or special awareness training. Responsibilities related to specific programs or procedures are established within implementing document(s).

Appointed CBFO and MOC EMS coordinators have the responsibility and authority to ensure that EMS requirements are established, implemented, and maintained. These individuals also report on the performance of the EMS and facilitate management review of the EMS.

### **Implementing Documents**

NWP MP 1.21	<i>Management Responsibility and Accountability</i>
NWP MP 1.29	<i>Mission, Goals, and Responsibilities</i>

### **ISMS Integration**

Core Functions:	Develop and Implement Hazard Controls
Guiding Principles:	Clear Roles and Responsibilities, Individual Attitude and Responsibility for Safety

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#### **4.5 Competence, Training, and Awareness**

##### **ISO Requirements**

*The organization shall ensure that any person(s) performing tasks for it or on its behalf that have the potential to cause a significant environmental impact(s) identified by the organization is(are) competent on the basis of appropriate education, training or experience, and shall retain associated records. The organization shall identify training needs associated with its environmental aspects and its environmental management system. It shall provide training or take other action to meet these needs, and shall retain associated records.*

*The organization shall establish, implement and maintain a procedure(s) to make persons working for it or on its behalf aware of a) the importance of conformity with the environmental policy and procedures and with the requirements of the environmental management system, b) the significant environmental aspects and related actual or potential impacts associated with their work, and the environmental benefits of improved personal performance, c) their roles and responsibilities in achieving conformity with the requirements of the environmental management system, and d) the potential consequences of departure from specified procedures.*

##### **WIPP System**

Competence of employees performing work that could cause a significant environmental impact is ensured through satisfactory completion of specific training requirements and/or qualification standards. This is accomplished through the WIPP comprehensive training program, administered by the Technical Training Department. The training program uses a DOE-approved methodology of Tabletop Job and Needs Analysis, and Tabletop Training Program Design to determine training content based on defined job requirements. Workers who will perform waste handling, TRU and hazardous waste management, mining, maintenance, and other waste management and compliance tasks must successfully complete required training and, in many cases, the necessary qualifications, before they may begin unsupervised work in those areas.

Employees are made aware of requirements and expectations related to the EMS as follows:

- GET (EMS and Conduct of Operations sections)
- EMS content in Hazardous Waste Worker, Hazardous Waste Supervisor, Hazardous Waste Responder, and Radiation Worker training modules
- Other EMS Awareness Training provided on an as-needed basis
- Internal communications (e.g., TRU TeamWorks, 2150)
- Employee Handbook (Rules of Conduct and Progressive Discipline section)

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Other personnel working for or on the behalf of the WIPP are made aware of EMS requirements through contractual terms, completion of GET, and/or provision of the Visitor and New Employee Guide.

**Implementing Documents**

GET-21X	<i>General Employee Training, initial and refresher</i>
WP 14-TR.01	<i>WIPP Training Program</i>
Unnumbered	<i>NWP Employee Handbook</i>
Unnumbered	<i>Visitor and New Employee Guide</i>

**ISMS Integration**

Core Function(s):	Develop & Implement Hazard Controls
Guiding Principles(s):	Competence Commensurate with Responsibilities

**4.6 Communication**

**ISO Requirements**

*With regard to its environmental aspects and environmental management system, the organization shall establish, implement and maintain a procedure(s) for a) internal communication among the various levels and functions of the organization, b) receiving, documenting and responding to relevant communication from interested parties.*

*The organization shall decide whether to communicate externally about its significant environmental aspects, and shall document its decision. If the decision is to communicate, the organization shall establish and implement a method(s) for this external communication.*

**WIPP System**

Internal communications regarding the WIPP environmental aspects and EMS are integrated with overall internal communications mechanisms. The mechanisms include, but are not limited, to:

- GET
- Documented policies, programs, plans, and procedures that address activities that could have significant environmental aspects and their impacts
- Meetings (e.g., T-0 schedule, POD, POW, weekly integration, staff, and all hands)
- WIPP internal EMS website
- Electronic and paper communications (e.g., *TRU TeamWorks*, 2150, sustainability/pollution prevention newsletters)

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- Suggestion and conflict resolution systems, as well as mechanisms for addressing employee issues and concerns (e.g., employee concerns and issues management programs)

Relevant communications from interested parties, for purposes of this EMS element, are concerns communicated to the CBFO and/or MOC in writing, excluding those expressed via a defined regulatory process (e.g., permitting or compliance recertification), which are related to environmentally safe disposal of TRU waste, environmental justice, current or long term environmental impact of WIPP operations or the EMS.

The WIPP procedure for receiving and responding to these communications is to provide either a verbal or written response as determined to be appropriate by cognizant WIPP personnel. Cognizant individuals responding to relevant communications notify CBFO and/or MOC EMS Coordinator(s) for documentation of the communication and response.

The CBFO and MOC communicate externally about significant environmental aspects and impacts using the following mechanisms:

- The National Environmental Policy Act (NEPA) process - ensures public involvement should new activities be undertaken by the WIPP that may have significant environmental impacts as defined in the NEPA regulations.
- Annual Site Environmental Report - communicates environmental performance. These reports are available via the WIPP public website.
- Comprehensive public involvement efforts, which may include meetings with stakeholders, permit hearings, press releases to the news media, the WIPP information repository and a toll-free information line at 1-800-336-WIPP (extension 9477).

### **Implementing Documents**

DOE/WIPP 02-3197	<i>Employee Concerns Program</i>
NWP MP 1.4	<i>Release of Information to the Public</i>
NWP MP 1.41	<i>Issues Management WIPP Form</i>
NWP MP 4.2	<i>Employee Concerns</i>
NWP MP 4.3	<i>Employee Communications</i>
WP 02-EC.08	<i>NEPA Compliance Plan</i>
WP 02-RC3111	<i>Information Repository</i>

### **ISMS Integration**

Core Function(s):	Develop & Implement Hazard Controls
Guiding Principle(s):	Hazard Controls Tailored to Work Being Performed, Operational Excellence

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#### **4.7 EMS Documentation**

##### **ISO Requirements**

*The environmental management system documentation shall include (a) the environmental policy, objectives and targets, (b) description of the scope of the EMS, (c) description of the main elements of the EMS and their interaction, and reference to related documents, (d) documents, including records, required by this International Standard, and (e) documents, including records, determined by the organization to be necessary to ensure the effective planning, operation and control of processes that relate to its significant environmental aspects.*

##### **WIPP System**

The environmental policy is maintained in the WIPP electronic document management system (Quality and Manufacturing Integrated System [Q&MIS]).

Objectives and targets are documented in the record of the EMS annual management review and are accessible from the internal WIPP EMS website (WIPPNet.)

This EMS description document describes the scope of the EMS (section 2.0), the main elements and references to related documents (sections 3.0 and 4.0).

Documents governing the operation and control of processes that relate to significant environmental aspects are plans and procedures. Records generated from these processes are designated in relevant procedures.

The integration of ISMS and the EMS is described in this document as well as in the CBFO and MOC ISMS descriptions. The ISMS description may include interrelated environmental documents when they affect core functions of the ISMS.

##### **Implementing Documents**

DOE/WIPP 04-3310	<i>WIPP Environmental Policy</i>
DOE/WIPP 05-3318	<i>WIPP Environmental Management System Description</i>
DOE/CBFO 09-3442	<i>CBFO Integrated Safety Management System Description</i>
WP 15-GM.03	<i>Integrated Safety Management System Description</i>

##### **ISMS Integration**

Core Function(s):	Develop & Implement Hazard Controls
Guiding Principle(s):	Hazard Controls Tailored to Work Being Performed

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## **4.8 Control of Documents**

### **ISO Requirements**

*Documents required by the EMS and by this International Standard shall be controlled. Records are a special type of document and shall be controlled in accordance with the requirements given in Control of Records element (Section 4.14). The organization shall establish, implement and maintain a procedure(s) to a) approve documents for adequacy prior to issue, b) review and update as necessary and re-approve documents, c) ensure that changes and the current revision status of documents are identified, d) ensure that relevant versions of applicable documents are available at points of use, e) ensure that documents remain legible and readily identifiable, f) ensure that documents of external origin determined by the organization to be necessary for the planning and operation of the EMS are identified and their distribution controlled, and g) prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose.*

### **WIPP System**

WIPP EMS policies, procedures, and other programmatic documents are developed, revised, maintained, and distribution controlled in accordance with CBFO and MOC Quality Assurance (QA) and document control programs and procedures.

### **Implementing Documents**

DOE/CBFO-94-1012	<i>CBFO Quality Assurance Program Document</i>
CBFO MP 4.1	<i>Preparation and Maintenance of CBFO Procedures</i>
CBFO MP 4.2	<i>Document Review</i>
CBFO MP 4.4	<i>Document Preparation and Control</i>
WP 13-1	<i>NWP LLC Quality Assurance Program Description</i>
WP 15-PS.2	<i>Procedure Writers Guide</i>
WP 15-PS3002	<i>Controlled Document Processing</i>
WP 15-PS3103	<i>Document Distribution</i>

### **ISMS Integration**

Core Function(s):	Develop & Implement Hazard Controls
Guiding Principle(s):	Hazard Controls Tailored to Work Being Performed, Operational Excellence

## **4.9 Operational Control**

### **ISO Requirements**

*The organization shall identify and plan those operations that are associated with the identified significant environmental aspects consistent with its environmental policy, objectives and targets, in order to ensure that they are carried out under specified conditions, by (a) establishing, implementing and maintaining a documented procedure(s) to control situations where their absence could lead to deviation from the*

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*environmental policy and targets, and (b) stipulating the operating criteria in the procedure(s), and (c) establishing, implementing, and maintaining procedures related to the identified significant environmental aspects of goods and services used by the organization and communicating applicable procedures and requirements to suppliers, including contractors.*

**WIPP System**

Organizations responsible for implementing controls relative to significant environmental aspects and impacts are listed in the WIPP EMS Aspects and Impacts Matrix. Controls include, but are not limited to, engineered controls, programs, procedures, work instructions, preventive maintenance orders, scheduling, etc. Controls are established in accordance with WIPP conduct of operations programs. These programs are integral to implementation of this EMS and the WIPP ISMS and ensure operations are consistent with environmental policies, objectives and targets.

The conduct of operations programs ensure WIPP operations are planned and executed in a formal, disciplined manner that protects people and the environment. They are implemented through controlled project design and documentation, development and implementation of thorough and clear procedures, clear definition of roles and responsibilities, assurance of competence and qualification of personnel and ensuring that mechanical systems remain functional and perform as required. Procedures are implemented and establish operating criteria, where appropriate, so there is no deviation from environmental policy and targets.

QA programs also provide an integral function supporting operational control, including control related to environmental aspects. Comprehensive CBFO and MOC QA programs have been implemented to ensure that all work is performed in a manner that meets or exceeds quality requirements. The programs are tailored for activities associated with the receipt of TRU waste, including operational safety, environmental compliance, and performance assessment.

The WIPP multi-faceted mechanisms listed below communicate applicable procedures/requirements related to significant environmental aspects of goods and services to suppliers, including contractors.

- |                       |   |
|-----------------------|---|
| Contractual           | <ul style="list-style-type: none"> <li>• Specific statements of work and contracts when appropriate.</li> <li>• MOC General Terms and Provisions for subcontracts for commercial items, firm fixed price construction, firm fixed price orders and cost reimbursement.</li> </ul> |
| Training<br>Oversight | <ul style="list-style-type: none"> <li>• Completion of GET prior to working onsite.</li> <li>• Oversight of contractors/service providers by the Subcontract Technical Representative and Person in Charge.</li> </ul>  |

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**Implementing Documents**

CBFO MP 4.12	<i>NEPA Compliance</i>
DOE/CBFO-04-3299	<i>Contractor Oversight Plan</i>
DOE/CBFO-94-1012	<i>Quality Assurance Program Document</i>
DOE/WIPP-00-3121	<i>Implementation Plan for 40 CFR 191, Subpart A</i>
DOE/WIPP-06-3339	<i>WIPP Groundwater Protection Program Plan</i>
DOE/WIPP-93-004	<i>WIPP Land Management Plan</i>
WP MP 1.34	<i>NWP Contracts and Procurement Program</i>
WP MP 1.54	<i>Conduct of Operations Policy</i>
WP 02-EC.08	<i>NEPA Compliance Plan</i>
WP 02-EC.11	<i>WIPP Pollution Prevention Program Plan</i>
WP 02-EC3801	<i>Environmental Compliance Review and NEPA Screening</i>
WP 02-PC.02	<i>Delaware Basin Drilling Surveillance Plan</i>
WP 04-CO.01	<i>Conduct of Operations</i>
WP 04-CO.01-x – CO.02	<i>Conduct of Operations Series (x = series number)</i>
WP 09	<i>Conduct of Engineering</i>
WP 13-1	<i>NWP Quality Assurance Program Description</i>
WP 15-2	<i>NWP Management Control System Description for Operations Activities</i>
GET-21X	<i>General Employee Training</i>
Unnumbered	<i>WIPP Site Sustainability Plan</i>

**ISMS Integration**

Core Function(s):	Develop and Implement Hazard Controls, Perform Work within Controls
Guiding Principle(s):	Hazard Controls Tailored to Work Being Performed, Operational Excellence

**4.10 Emergency Preparedness and Response**

**ISO Requirements**

*The organization shall (1) establish, implement and maintain a procedure(s) to identify potential emergency situations and potential accidents that can have an impact(s) on the environment and how it will respond to them, (2) respond to actual emergency situations and accidents and prevent or mitigate associated adverse environmental impacts, (3) periodically review and, where necessary, revise its emergency preparedness and response procedures, in particular, after the occurrence of accidents or emergency situations, (4) periodically test such procedures where practicable.*

**WIPP System**

The CBFO and MOC have a comprehensive emergency management program for properly identifying and addressing emergency events including radiological accident, non-radiological accident, and environmental events. Environmental incidents are managed in accordance with the WIPP Emergency Management Program, which includes formal exercises to validate program elements. Validation is performed by

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simulation of realistic emergency events or conditions in a manner that, as nearly possible, replicates an integrated emergency response. Some smaller response elements may be validated in larger scope drills or exercises as practicable. Corrective actions identified from events, drills or exercises are documented and processed in accordance with the WIPP Issues Management Program (including, but not limited to, appropriate updates to program documents and procedures).

### **Implementing Documents**

DOE/WIPP-08-3378	<i>WIPP Emergency Planning Hazards Assessment</i>
WP 12-9	<i>WIPP Emergency Management Program</i>
WP 12-11	<i>Development and Maintenance of an Emergency Planning Hazards Survey</i>
WP 12-12	<i>Development and Maintenance of an Emergency Planning Hazards Assessment</i>
WP 12-13	<i>Development and Maintenance of Emergency Action Levels</i>
WP 12-RP.01	<i>WIPP Emergency Planning Hazards Survey Report</i>

### **ISMS Integration**

Core Function(s):	Develop and Implement Hazard Controls, Perform Work within Controls
Guiding Principles(s):	Hazard Controls Tailored to Work Being Performed, Operational Excellence, Organizational Learning for Performance Improvement

## **4.11 Monitoring and Measurement**

### **ISO Requirements**

*The organization shall establish, implement and maintain a procedure(s) to monitor and measure, on a regular basis, the key characteristics of its operations that can have a significant environmental impact. The procedure(s) shall include the documenting of information to monitor performance, applicable operational controls and conformity with the organizations environmental objectives and targets. The organization shall ensure that calibrated or verified monitoring and measurement equipment is used and maintained and shall retain associated records.*

### **WIPP System**

The WIPP comprehensive environmental monitoring program established baseline environmental conditions and continues to monitor key characteristics of operations (e.g., disposal of TRU waste, mining salt) that can have significant environmental impacts. The program includes environmental monitoring and surveillance activities and related QA/quality control activities. Supporting programs and procedures address monitoring for environmental impact to groundwater, soil/sediment, air quality, flora, fauna, and humans on and around the WIPP site.

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Results of the environmental monitoring program are reported in the Annual Site Environmental Report.

Progress toward targets that support DOE sustainability goals is monitored and reported in the status report posted on the WIPP internal EMS website, in the annual update to the WIPP Site Sustainability Plan (SSP), and in the annual management review.

Measuring and monitoring equipment is calibrated or verified through implementation of the WIPP Metrology Program and the implementing procedure for calibration and control of monitoring and data collection equipment or as specified in procedures for monitoring of specific media.

### **Implementing Documents**

DOE/WIPP-99-2194	<i>WIPP Environmental Monitoring Plan</i>
WP 02-1	<i>Groundwater Monitoring Program Plan</i>
WP 02-2	<i>WIPP Discharge Permit 831 Monitoring Plan</i>
WP 10-AD.01	<i>Metrology Program</i>
WP 12-VC.01	<i>Volatile Organic Compound Monitoring Plan</i>
WP 12-VC.03	<i>Hydrogen and Methane Monitoring Plan</i>

### **ISMS Integration**

Core Function(s):	Provide Feedback and Continuous Improvement
Guiding Principle(s):	Line Management Responsibility for Safety, Organizational Learning for Performance Improvement

## **4.12 Evaluation of Compliance**

### **ISO Requirements**

*Consistent with its commitment to compliance, the organization shall establish, implement and maintain a procedure(s) for periodically evaluating compliance with applicable legal requirements and for evaluation of compliance with "other" requirements. The organization shall keep records of the results of the periodic evaluations.*

### **WIPP System**

Compliance with legal requirements is evaluated through maintenance and implementation of the CBFO contractor oversight process and assessments performed under the MOC programs for QA independent assessments, contractor assurance, and environmental compliance walkaround and assessment.

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**Implementing Documents**

DOE/CBFO-04-3299	<i>CBFO Contractor Oversight Plan</i>
CBFO MP 10.3	<i>Audits</i>
CBFO OP 10.4	<i>Surveillances</i>
WP 02-EC.13	<i>Environmental Compliance Walk Around and Assessment Plan</i>
WP 13-QA.03	<i>QA Independent Assessment Program</i>
WP 15-PA1002	<i>Requirements Management</i>
WP 15-CA.01	<i>Contractor Assurance System Program Description</i>

**ISMS Integration**

Core Function(s):	Provide Feedback and Continuous Improvement
Guiding Principle(s):	Balanced Priorities, Oversight for Performance Assurance, Organizational Learning for Performance Improvement

**4.13 Nonconformity Corrective and Preventive Action**

**ISO Requirements**

*The organization shall establish, implement, and maintain a procedure(s) for dealing with actual and potential nonconformity(ies) and for taking corrective action and preventive action. The procedure(s) shall define requirements for (a) identifying and correcting nonconformity(ies) and taking action(s) to mitigate their environmental impacts; (b) investigating nonconformity(ies), determining their cause(s) and taking actions in order to avoid their recurrence; (c) evaluating the need for action(s) to prevent nonconformity(ies) and implementing appropriate actions designed to avoid their occurrence; (d) recording the results of corrective action(s) and preventive action(s) taken; and (e) reviewing the effectiveness of corrective action(s) and preventive action(s) taken. Actions taken shall be appropriate to the magnitude of the problems and the environmental impacts encountered. The organization shall ensure that any necessary changes are made to EMS documentation.*

**WIPP System**

WIPP has implemented several programs with procedures that address the requirements related to nonconformities (non-fulfillment of a requirement). These programs are summarized in the following paragraphs.

The CBFO corrective action procedure establishes responsibilities and defines the method for initiating and processing corrective action reports (CARs) issued by the CBFO which may include CARs resulting from other external entities (e.g., regulators, DOE Headquarters). This procedure provides for verification of the completed correction action.

The MOC CBFO Quality Assurance Corrective Action Coordination procedure assures that CARs issued by the CBFO are addressed. NWP implementation of actions to address CARs is tracked via the CTS.

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The WIPP Contractor Assurance Program includes the WIPP Issues Management Program, which is the MOC's formal process to capture, evaluate, and track the resolution of issues, deficiencies, and associated actions excluding those identified via CBFO-issued CARs. Issues may include those identified by any employee in any organization by an external entity or through assessments (audits/surveillances). Implementation of actions is tracked through the Issues Management Processing System (IMPS) or the work control process. Determination of effectiveness of these actions is accomplished through review by the issues management committee. In addition, the next regularly scheduled audit by the MOC QA department that covers the area where the corrective actions were implemented includes a review of implementation of the corrective actions, and the MOC QA department may conduct an unscheduled follow-up assessment or audit to verify effectiveness of the actions.

The WIPP procedure for nonconformance is specific to items and materials that are determined to have an unacceptable characteristic or record that renders them unable to perform their intended function. These items or materials are recorded on nonconformance reports and their corrective action(s) are tracked via the CTS. Corrective actions for programmatic issues related to nonconformances, including multiple occurrences of similar nonconforming conditions, are also addressed through the WIPP Issues Management Program.

Each of these programs and procedures use a graded approach (appropriate to magnitude and impact) to determine root and contributing causes and corrective or preventive actions. These systems are also used as the basis for providing status of actions to senior management.

### **Implementing Documents**

CBFO MP 3.1	<i>Corrective Action Reports</i>
NWP MP 1.41	<i>Issues Management – WIPP Forms</i>
WP 04-CO.01-6	<i>Conduct of Operations Program – Investigation of Abnormal Events, Conditions, and Trends</i>
WP 13-QA.51	<i>Commitment Tracking System User's Manual</i>
WP 13-QA3004	<i>Nonconformance Report</i>
WP 13-QA3007	<i>CBFO Quality Assurance Corrective Action Coordination</i>
WP 15-CA.01	<i>Contractor Assurance System Program Description</i>
WP 15-GM1001	<i>Root Cause Analysis</i>
WP 15-GM1002	<i>Issues Management Processing of WIPP Forms</i>
WP 15-MD3102	<i>Event Investigation</i>

### **ISMS Integration**

Core Function(s):	Provide Feedback and Continuous Improvement
Guiding Principle(s):	Oversight for Performance Assurance, Organizational Learning for Performance Improvement

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#### **4.14 Control of Records**

##### **ISO Requirements**

*The organization shall establish and maintain records as necessary to demonstrate conformity to the requirements of its environmental management system and of this International Standard, and the results achieved. The organization shall establish, implement and maintain a procedure(s) for the identification, storage, protection, retrieval, retention and disposal of records. Records shall be and remain legible, identifiable and traceable.*

##### **WIPP System**

The following records demonstrate conformity to this EMS and the international standard; and the results achieved from implementing the WIPP EMS.

- Environmental Aspects and Impacts Matrix
- Reports for EMS audits and surveillances performed under the CBFO assessment and MOC QA independent assessment programs and those performed by the international standard registrar
- Records of corrective actions associated with the EMS audits and surveillances
- Records of the EMS annual management review
- Declaration(s) of conformance with DOE Order 436.1

Records, including environmental records, are identified and managed according to the WIPP Records Management Program and procedures. The program establishes the actions that assure records are identified, stored, protected, retrievable, retained and disposed in accordance with requirements. The procedures also establish that records remain legible, identifiable, and traceable.

##### **Implementing Documents**

CBFO MP 4.5	<i>Generating, Receiving, Storing, and Controlling Active CBFO Program Records</i>
CBFO MP 4.9	<i>Quality Assurance Records</i>
WP 15-RM	<i>WIPP Records Management Program</i>

##### **ISMS Integration**

Core Function(s):	Provide Feedback and Continuous Improvement
Guiding Principle(s)	Balanced Priorities, Operational Excellence

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#### **4.15 Internal Audit**

##### **ISO 14001 Requirements**

*Internal audits of the EMS must be conducted at planned intervals to determine whether the system conforms to the ISO 14001 standard and has been properly implemented and maintained. Information on the results of audits must be provided to management. Audit programs must be planned, established, implemented, and maintained, and must include defining the responsibilities and requirements for planning and conducting audits, reporting results, retaining associated records, and determining audit criteria, scope, frequency, and methods. Selection of auditors and conduct of audits shall ensure objectivity and impartiality of the audit process.*

##### **WIPP System**

Internal audits of the WIPP EMS for conformance to the ISO 14001 standard and implementation of the system may be performed under one or more of the CBFO assessment programs and/or the MOC QA independent assessment program. The CBFO and MOC program includes an audit of the full system once every three years.

##### **Implementing Documents**

DOE-CBFO-94-1012 WP 13-QA.03	<i>CBFO Quality Assurance Program Document, Section 3 QA Independent Assessment Program</i>
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##### **ISMS Integration**

Core Function(s): Guiding Principle(s):	Provide Feedback and Continuous Improvement Oversight for Performance Assurance, Organizational Learning for Performance Improvement
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#### **4.16 Management Review**

##### **ISO 14001 Requirements**

*Top management must review the EMS at planned intervals, to ensure its continuing suitability, adequacy, and effectiveness. Reviews shall assess opportunities for improvement, and the need for changes to the EMS including environmental policy objectives and targets. Input to the management review must include:*

- *Results of internal audits and evaluations of compliance with legal and other requirements.*
- *Communication(s) from external interested parties, including complaints.*
- *Environmental performance of the organization.*
- *The extent to which objectives and targets have been met.*

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- *Status of corrective and preventive actions.*
- *Follow-up actions from previous management reviews.*
- *Changing circumstances, including developments in legal and other requirements related to environmental aspects.*
- *Recommendations for improvement.*

*Outputs of the review must include decisions and actions related to possible changes to environmental policy, objectives, targets and other elements of the EMS, consistent with commitment for continual improvement. Records of management reviews must be retained.*

### **WIPP System**

The CBFO and the MOC top management conduct an annual EMS review to ensure the continuing suitability, adequacy, and effectiveness of the system. This is accomplished by the CBFO and MOC EMS Coordinators jointly preparing and providing CBFO and MOC top management an annual overview that evaluates the performance of the EMS over the prior year and includes recommendations for improvement for the current year. The overview must include inputs to the management review as required in the ISO standard.

As a result of the review, the managers make decisions and provide direction for changes to the EMS (e.g., policy, objectives, targets, programs) in order to achieve continuous improvement.

Records of the management review, including decisions and actions, may be in the form of an EMS Annual Report created and maintained in the Q&MIS, or in meeting minutes if the review is done via meetings with top management.

### **Implementing Documents**

DOE/WIPP 05-3318	<i>Environmental Management System Description,</i> sections 4.16 and 5.0
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### **ISMS Integration**

Core Function(s):	Provide Feedback & Continuous Improvement
Guiding Principle(s):	Line Management Responsibility for Safety, Organization Learning for Performance Improvement

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## **5.0 EMS ROLES AND RESPONSIBILITIES**

Roles and responsibilities are defined for implementation of the EMS as described in this section. These roles and responsibilities apply to both MOC and CBFO personnel assigned to those particular departments or specific positions. Individual positions or organizations may have additional responsibilities related to environmental aspects/impacts defined in other implementing procedures.

### **5.1 All Employees**

- Know where to find the WIPP Environmental Policy (DOE/WIPP-04-3310)
- Be mindful of the environmental effects of your actions.
- Avoid negative environmental impacts.
- Help achieve environmental objectives and targets including but not limited to:
  - Minimize personal waste generation by reducing materials used and recycling.
  - Minimize personal use of water and electricity to the extent possible.
- Comply with environmental requirements; follow procedures.
- Look for, and implement, ways to improve protection of the environment.

### **5.2 WIPP Managers**

- Review and provide input, as requested, to maintain currency of significant environmental aspects and impacts.
- Ensure personnel whose work could result in significant environmental impacts have the requisite education, training, and/or experience.
- Ensure programs/procedures are in place to address significant environmental impacts and that operations are performed in a consistent, environmentally responsible manner.
- Ensure environmental requirements, objectives, and targets are communicated to their organization as applicable.
- Request/provide resources sufficient to achieve environmental objectives and targets.
- Develop and incorporate into budget and work schedules methods for achieving environmental objectives and targets. Methods may take the form of a formal project schedules, POW/POD schedules, or documented plans for the actions necessary to meet the targets.

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### 5.3 Department Function Specific Roles and Responsibilities

Department or Function	Roles and Responsibilities
MOC President & Project Manager, CBFO Manager, or designees (described as Top Management by the ISO 14001 standard)	<ul style="list-style-type: none"> <li>• Define WIPP environmental policy.</li> <li>• Communicate expectations for environmental excellence, implementation of the WIPP SSP, and adherence to this EMS.</li> <li>• Perform the annual EMS management review.</li> <li>• Assign action items to appropriate personnel, as necessary, to ensure continuous improvement of the EMS.</li> <li>• Appoint a management representative (the EMS coordinator) who has the responsibility and authority for ensuring that the EMS requirements are established, implemented, and maintained.</li> </ul>
Business/Finance	<ul style="list-style-type: none"> <li>• Advise control account managers of the requirement to include in their budget and work scope activities that: <ul style="list-style-type: none"> <li>- manage significant aspects/impacts</li> <li>- implement DOE HQ sustainability goals and WIPP environmental objectives and targets.</li> </ul> </li> <li>• Set, provide resources for, and implement departmental targets to support WIPP environmental objectives, as appropriate.</li> <li>• Track performance in project schedules or other work schedules for environmental targets, as appropriate.</li> <li>• Maintain and implement procedures that incorporate procurement of biobased, recycled content and less hazardous materials.</li> <li>• Facilitate meeting DOE HQ petroleum fuel reduction goals.</li> <li>• Find and utilize opportunities for reuse or recycling of property, equipment, materials.</li> <li>• Ensure energy efficiency and duplex settings are the default on network printers/copiers.</li> <li>• Provide information regarding progress towards achieving environmental targets that are tracked in project schedules to RES as requested.</li> </ul>
Communications	<ul style="list-style-type: none"> <li>• Provide information to stakeholders and employees about environmental topics.</li> <li>• Incorporate information relating to WIPP environmental issues and EMS in WIPP internal communications (e.g., Visitor and New Employee Guide, 2150, TRU TeamWorks).</li> <li>• Provide responses, in accordance with procedures, to members of the public or outside organizations that make inquiries related to environmental issues.</li> <li>• Notify EMS Coordinator of environmentally related inquiries from stakeholders and the responses as defined in Section 4.6</li> </ul>
Contractor Assurance	<ul style="list-style-type: none"> <li>• Implement and maintain programs for identification of impacts and assessment compliance with DOE Directives.</li> <li>• Maintain and implement programs for contractor assurance program elements (e.g., self-assessments, issues management).</li> </ul>
Emergency Management	<ul style="list-style-type: none"> <li>• Ensure environmental impacts are considered and planned for in emergency management programs.</li> <li>• Implement emergency management programs.</li> <li>• Test emergency response procedures in accordance with emergency management program.</li> <li>• Ensure emergency management planning meets ISO 14001 requirements.</li> <li>• Perform required inspections.</li> </ul>
EMS Coordinators (CBFO, MOC)	<ul style="list-style-type: none"> <li>• Ensure EMS requirements are established, implemented, and maintained.</li> <li>• Prepare and provide annual overview to top management summarizing the suitability, adequacy, and effectiveness of the EMS.</li> <li>• Facilitate the process for identifying environmental aspects and impacts and</li> </ul>

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Department or Function	Roles and Responsibilities
	<p>determining their significance.</p> <ul style="list-style-type: none"> <li>• Facilitate implementation of the SSP through the EMS.</li> <li>• Provide support for updates to the SSP.</li> </ul>
Engineering	<ul style="list-style-type: none"> <li>• Plan, design and execute projects to meet environmental policy, including pollution prevention and sustainability objectives.</li> <li>• Lead preparation and update of the SSP.</li> <li>• Set, provide resources for, and implement departmental targets to support WIPP environmental objectives, as appropriate.</li> <li>• Facilitate the WIPP contribution to meeting DOE HQ sustainability goals (e.g., energy, fuel, water conservation, greenhouse gas reductions, and sustainable buildings).</li> </ul>
Human Resources	<ul style="list-style-type: none"> <li>• Maintain and implement the training program, including environmental content to meet compliance and ISO 14001 requirements.</li> <li>• Assure open door policy is in place for addressing employee concerns.</li> <li>• Include EMS content in initial and refresher GET, Hazardous Waste Worker, and Radiological Worker training and other courses as appropriate.</li> <li>• Set, provide resources for, and implement departmental targets to support WIPP environmental objectives, as appropriate.</li> <li>• Include EMS content in Employee Handbook.</li> </ul>
Information Technology and Information Resources Management	<ul style="list-style-type: none"> <li>• Set, provide resources for, and implement departmental targets to support WIPP environmental objectives and contribute to the DOE sustainability goals, as appropriate (e.g., electronics management, data center energy use).</li> </ul>
National TRU Program	<ul style="list-style-type: none"> <li>• Ensure waste shipped to WIPP conforms to regulatory requirements, including the WIPP Hazardous Waste Facility Permit, Nuclear Regulatory Commission/Department of Transportation requirements for transport, and Environmental Protection Agency requirements of 40 Code of Federal Regulations (CFR) Part 191/194.</li> <li>• Maintain and implement procedures (operational controls) for meeting regulatory requirements for incoming and outgoing (site-generated) wastes and hazardous materials.</li> <li>• Set, provide resources for, and implement departmental targets to support WIPP environmental objectives, as appropriate.</li> </ul>
Operations	<ul style="list-style-type: none"> <li>• Set, provide resources for, and implement departmental targets to support WIPP environmental objectives, as appropriate.</li> <li>• Implement operational controls (e.g., procedures) to appropriately manage WIPP's significant environmental aspects (e.g., TRU waste disposal, ventilation, salt tailings, underground storage tank, wastewater treatment, stormwater collection, etc.).</li> <li>• Maintain and follow procedures to ensure compliance and protect the environment in all operational areas.</li> </ul>
Quality Assurance	<ul style="list-style-type: none"> <li>• Maintain and implement programs that incorporate environmental requirements (e.g., audits/surveillances, issues management, corrective action tracking, and inspections).</li> <li>• Perform independent assessments of EMS to meet ISO 14001 requirements.</li> </ul>
Safety & Health	<ul style="list-style-type: none"> <li>• Integrate EMS into ISMS.</li> <li>• Facilitate meeting the DOE environmental goal for reducing hazards from material use.</li> <li>• Implement operational controls (e.g., procedures) to appropriately manage WIPP's significant environmental aspects as identified in the Aspects and Impacts Matrix.</li> </ul>

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Department or Function	Roles and Responsibilities
	<ul style="list-style-type: none"> <li>• Set, provide resources for, and implement departmental targets to support WIPP environmental objectives, as appropriate.</li> </ul>
Science and Development	<ul style="list-style-type: none"> <li>• Ensure sustainability and compliance are integrated into science projects.</li> </ul>
Site Infrastructure	<ul style="list-style-type: none"> <li>• Plan, design and execute projects to meet environmental policy.</li> <li>• Contribute to preparation of SSP as applicable.</li> <li>• Set, provide resources for, and implement departmental targets to support WIPP environmental objectives, as appropriate.</li> <li>• Facilitate the WIPP contribution to DOE HQ sustainability goals (e.g., energy, fuel, and water conservation, greenhouse gas reduction, sustainable buildings, waste diversion).</li> </ul>
Document Services and Records Management	<ul style="list-style-type: none"> <li>• Implement and maintain document control and records management systems to meet ISO 14001 requirements.</li> <li>• Set provide resources for, and implement departmental targets to support WIPP environmental objectives, as appropriate.</li> </ul>
Security	<ul style="list-style-type: none"> <li>• Include Environmental Policy and EMS awareness in contractor orientation.</li> <li>• Perform required inspections.</li> </ul>
RES	<ul style="list-style-type: none"> <li>• Facilitate process for identification and determining significance of environmental aspects and impacts.</li> <li>• Provide support for preparation, update, and implementation of the WIPP SSP.</li> <li>• Monitor environment, effluents, and emissions.</li> <li>• Manage site generated wastes.</li> <li>• Set, provide resources for, and implement departmental targets to support WIPP environmental objectives as appropriate</li> <li>• Facilitate meeting environmental compliance requirements.</li> <li>• Secure and maintain required environmental permits and compliance certification.</li> <li>• Implement TRU waste acceptance and waste confirmation programs.</li> <li>• Review, and communicate to affected organizations, new or changed environmental requirements (e.g., legal, regulatory, DOE).</li> <li>• Integrate EMS into ISMS.</li> <li>• Request the necessary resources to administer the EMS.</li> <li>• Evaluate compliance with legal requirements.</li> </ul>

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## 6.0 CRITERIA FOR DETERMINATION OF SIGNIFICANCE OF IMPACTS

Frequency, Severity, Legal, and Stakeholder Concerns scales are assigned to aspects/impacts based on qualitative judgment. These scales are outlined in figure 4.

Criteria	Scale	
Severity ( <b>S</b> ), i.e., potential damage to the environment	5	High (severe/widespread damage)
	4 or 3	Medium (moderate /limited damage)
	2 or 1	Low (minor, little, or no damage)
Legal Implications ( <b>L</b> ) <sup>1</sup>	5	High (permit violation, potential NOV/CO)
	4 or 3	Medium (compliance actions are required)
	2 or 1	Low (below regulatory thresholds or not regulated)
<sup>1</sup> Aspects covered by DOE requirements must have a minimum score of 3.		
Stakeholder Concerns ( <b>SC</b> )	3	High (expressed significant concerns)
	2	Medium (expressed some)
	1	Low (expressed minimum or none)
Frequency Range ( <b>F</b> ) Frequency of activity which has potential to generate impact	3	Daily to Continuous
	2	Weekly to Monthly
	1	Annual to Occasional

**Figure 4, Significance Ranking Criteria for Environmental Aspects/Impacts**

The significance score for each aspect is determined using the following formula:

$$\text{Significance Score} = (\text{S} + \text{L} + \text{SC}) \times \text{F}$$

A significant aspect/impact for WIPP is one with a score of greater than 20 or that top management designates as significant.

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<b>REFERENCES</b>
DOCUMENT NUMBER AND TITLE
Pub. L. 91-190, 42 USC §§4321-4347, <i>National Environmental Policy Act</i>
Pub. L. 95-619, 42 USC §§ 8201, <i>National Energy Conservation Policy Act</i>
Pub. L. 99-499, 42 USC §§11001, <i>Emergency Planning and Community Right to Know Act or Title III of Superfund Amendments and Reauthorization Act of 1986</i>
Pub. L. 102-486, 42 USC §§13201, <i>Energy Policy Act of 1992</i>
Pub. L. 107-377, 42 USC §§13011, <i>Pollution Prevention Act of 1990</i>
Pub. L. 109-58, 42 USC §§ 15801, <i>Energy Policy Act of 2005</i>
Pub. L. 110-140, <i>Energy Independence and Security Act of 2007</i>
Executive Order 13693, <i>Planning for Federal Sustainability in the Next Decade</i>
DOE Order 436.1, <i>Departmental Sustainability</i>
DOE Order 450.2, <i>Integrated Safety Management</i>
DOE Policy 450.4A, <i>Integrated Safety Management Policy</i>
<i>Instructions for Implementing Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management)</i>
ISO 14001:2004(E), <i>Environmental Management Systems – Requirements with Guidance for Use</i>
CBFO MP 3.1, <i>Corrective Action Reports</i>
CBFO MP 4.1, <i>Preparation and Maintenance of CBFO Procedures</i>
CBFO MP 4.2, <i>Document Review</i>
CBFO MP 4.4, <i>Document Preparation and Control</i>
CBFO MP 4.5, <i>Generating, Receiving, Storing, and Controlling Active CBFO Program Records</i>
CBFO MP 4.9, <i>Quality Assurance Records</i>
CBFO MP 4.12, <i>NEPA Compliance</i>
CBFO MP 5.4, <i>Directives Compliance Program</i>
CBFO MP 9.1, <i>Management Assessments</i>
CBFO MP 10.3, <i>Audits</i>
CBFO OP 10.2, <i>Surveillances</i>
DOE/CBFO-94-1012, <i>CBFO Quality Assurance Program Document</i>
DOE/CBFO-04-3299, <i>Contractor Oversight Plan</i>
DOE/CBFO-09-3442, <i>CBFO Integrated Safety Management System Description</i>
DOE/WIPP-93-004, <i>WIPP Land Management Plan</i>
DOE/WIPP-99-2194, <i>WIPP Environmental Monitoring Plan</i>
DOE/WIPP-00-3121, <i>Implementation Plan for 40 CFR Part 191, Subpart A</i>
DOE/WIPP-02-3197, <i>Employee Concerns Program</i>

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<b>REFERENCES</b>
DOCUMENT NUMBER AND TITLE
DOE/WIPP-04-3300, <i>WIPP Project Control System Description</i>
DOE/WIPP-04-3310, <i>WIPP Environmental Policy</i>
DOE/WIPP-05-3318, <i>EMS Description</i>
DOE/WIPP-06-3339, <i>Groundwater Protection Program Plan</i>
DOE/WIPP-08-3378, <i>WIPP Emergency Planning Hazards Assessment</i>
DOE/WIPP-09-3441, <i>Functions, Responsibilities and Authorities Manual</i>
DOE/WIPP-xx-varies, <i>WIPP Biennial Environmental Compliance Report (xx=year)</i>
DOE/WIPP-xx-varies, <i>WIPP Annual Site Environmental Report (xx=year)</i>
GET-21X, <i>General Employee Training</i>
WIPP Aspects and Impacts Matrix, WIPPNet
WIPP Environmental Targets, WIPPNet
<i>WIPP Site Sustainability Plan</i>
NWP Employee Handbook
MP 1.21, <i>Management Responsibility and Accountability</i>
MP 1.28, <i>Integrated Safety Management</i>
MP 1.29, <i>Mission, Goals, and Responsibilities</i>
MP 1.34, <i>NWP Contracts and Procurement Program</i>
MP 1.4, <i>Release of Information to the Public</i>
MP 1.41, <i>Issues Management WIPP Form</i>
MP 1.54, <i>Conduct of Operations Policy</i>
MP 4.2, <i>Employee Concerns</i>
MP 4.3, <i>Employee Communications</i>
<i>Visitor and New Employee Guide</i>
WP 02-1, <i>WIPP Groundwater Monitoring Program Plan</i>
WP 02-2, <i>WIPP Discharge Permit 831 Monitoring Plan</i>
WP 02-EC.08, <i>NEPA Compliance Plan</i>
WP 02-EC.11, <i>WIPP Pollution Prevention Program Plan</i>
WP 02-EC.13, <i>Environmental Compliance Walk Around and Assessment Plan</i>
WP 02-EC3801, <i>Environmental Compliance Review and NEPA Screening</i>
WP 02-PC.02, <i>Delaware Basin Drilling Surveillance Plan</i>
WP 02-RC3111, <i>Information Repository</i>
WP 04-CO.01, <i>Conduct of Operations</i>
WP 04-CO.01-x, <i>Conduct of Operations Series (x=series number)</i>
WP 04-CO.01-6, <i>Conduct of Operations Program – Investigation of Abnormal events, Conditions and Trends</i>

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<b>REFERENCES</b>
DOCUMENT NUMBER AND TITLE
WP 09, <i>Conduct of Engineering</i>
WP 10-AD.01, <i>Metrology Program</i>
WP 12-9, <i>WIPP Emergency Management Program</i>
WP 12-11, <i>Development and Maintenance of an Emergency Planning Hazards Survey</i>
WP 12-12, <i>Development and Maintenance of an Emergency Planning Hazards Assessment</i>
WP 12-13, <i>Development and Maintenance of Emergency Action Levels</i>
WP 12-RP.01, <i>U.S. DOE WIPP Emergency Planning Hazards Survey Report</i>
WP 12-VC.01, <i>Confirmatory Volatile Organic Compound Monitoring Plan</i>
WP 12-VC.03, <i>Hydrogen and Methane Monitoring Plan</i>
WP 13-1, <i>Nuclear Waste Partnership LLC Quality Assurance Program Description</i>
WP 13-QA.03, <i>Quality Assurance Independent Assessment Program</i>
WP 13-QA.51, <i>Commitment Tracking System User's Manual</i>
WP 13 QA3004, <i>Nonconformance Report</i>
WP 13-QA3007, <i>CBFO Quality Assurance Corrective Action Coordination</i>
WP 14-TR.01, <i>WIPP Training Program</i>
WP 15-2, <i>NWP Management Control System Description for Operations Activities</i>
WP 15-CA.01, <i>Contractor Assurance System Program Description</i>
WP 15-GM.03, <i>Integrated Safety Management System Description</i>
WP 15-GM1001, <i>Root Cause Analysis</i>
WP 15-GM1002, <i>Issues Management Processing of WIPP Forms</i>
WP 15-MD3102, <i>Event Investigation</i>
WP 15-PA1000, <i>Regulatory Requirements Impact Assessment Process</i>
WP 15-PA1002, <i>Requirements Management</i>
WP 15-PS.2, <i>Procedure Writer's Guide</i>
WP 15-PS3002, <i>Controlled Document Processing</i>
WP 15-PS3103, <i>Document Distribution</i>
WP 15-RM, <i>WIPP Records Management Program</i>