OCCUPATIONAL SAFETY AND HEALTH PROGRAM AT THE WEST VALLEY DEMONSTRATION PROJECT

Topical Report

By
L. M. Calderon

April, 1999

Prepared by
West Valley Nuclear Services Co.
10282 Rock Springs Road
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ABSTRACT

The West Valley Nuclear Services Co. LLC (WVNS) is committed to provide a safe, clean, working environment for employees, and to implement U.S. Department of Energy (DOE) requirements affecting worker safety. The West Valley Demonstration Project (WVDP) Occupational Safety and Health Program is designed to protect the safety, health, and well-being of WVDP employees by identifying, evaluating, and controlling biological, chemical, and physical hazards in the work place. Hazards are controlled within the requirements set forth in the reference section at the end of this report. It is the intent of the WVDP Occupational Safety and Health Program to assure that each employee is provided with a safe and healthy work environment.

This report shows the logical path toward ensuring employee safety in planning work at the WVDP. In general, planning work to be performed safely includes: combining requirements from specific programs such as occupational safety, industrial hygiene, radiological control, nuclear safety, fire safety, environmental protection, etc.; including WVDP employees in the safety decision-making processes; pre-planning using safety support resources; and integrating the safety processes into the work instructions.

Safety management principles help to define the path forward for the WVDP Occupational Safety and Health Program. Roles, responsibilities, and authority of personnel stem from these ideals. WVNS and its subcontractors are guided by the following fundamental safety management principles:

"Protection of the environment, workers, and the public is the highest priority. The safety and well-being of our employees, the public, and the environment must never be compromised in the aggressive pursuit of results and accomplishment of work product.

A graded approach to environment, safety, and health in design, construction, operation, maintenance, and deactivation is incorporated to ensure the protection of the workers, the public, and the environment."

These principles are demonstrated through:

- *Conducting all activities in an atmosphere of trust and confidence based on open, honest, and responsive communication.*

- *Using innovative and effective approaches to risk identification and management.*

- *Applying a systematic approach to planning and execution of all activities that affect the environment, safety, and health through use of the Integrated Environment, Safety, and Health Management System.*

- *Holding line management fully accountable to effectively plan and integrate environment, safety, and health activities into field activities.*

- *Providing clear policy and direction on environment, safety, and health issues to guide field work.*

- *Encouraging and promoting the sharing of environment, safety, and health information and resources.*

- *Empowering employees through training, information, tools, and program involvement to effectively protect themselves and the environment.*

- *Ensuring it is every employees' responsibility to identify and report potential safety and health hazards and environmental noncompliance. Together, as a team, we accomplish our mission while protecting the environment and preserving the safety and health of each employee and the public.*

1.0 WVNS SAFETY POLICY

"Exceed customer expectations without injury or illness."

WVNS is committed to a safe and healthy workforce, with the objective of the elimination of job-related injuries and illnesses.

Safety Rules:

1. Plan each job—work the plan.

2. If it's not safe—stop it.

3. If you don't know—find out.

These rules establish the basis for safe work at the WVDP. All work is expected to be planned out in sufficient detail to encourage worker safety, and the work plans must be intelligently followed. If a question exists on the safety of a system, process, etc., action must be taken to find the answer and communicate it to the responsible personnel, as necessary, to ensure worker protection.

Specific, required industrial safety, industrial hygiene, and fire protection programs, policies, and procedures are developed, defined, and incorporated into WVDP-specific programs and procedures. While it is not expected that any site requirements conflict, in such a case, the more restrictive of the two governs. Communication and access to requirements is made available through the WVDP Intranet, newsletters, safety bulletins, and controlled manuals.

2.0 SAFETY MANAGEMENT SYSTEM

2.1 Safety Integration

Safety integration occurs through employee ownership and accountability within all levels and departments of the organization. The Integrated Safety Management System (ISMS) Plan establishes a single, defined Environment, Safety and Health (ES&H) management system that integrates requirements into the work planning and execution processes to effectively protect the workers, public, and environment. The ISMS identifies a set of requirements that reflects DOE's commitment to a "standards-based" safety program and the safety concepts reflected by these requirements. The ISMS provides the mechanisms for increasing worker involvement in work planning, including hazard and environmental impact identification, analysis, and control; work execution; and feedback/improvement processes. The ISMS provides:

- A single, integrated ES&H management system with a defined flow-down of ES&H requirements

- Worker involvement early in the work planning process

- Improved efficiency in identifying, analyzing, and controlling work hazards and environmental impacts

- Clearly stated, measurable, and verifiable performance expectations for ISMS implementation

- Continuous improvement in applying ES&H practices to work for a safer, environmentally protective work place

- A mechanism for senior management visibility and involvement to establish, sustain, and improve the ISMS.

There are five core functions in implementation of an integrated safety system.

1. *Core Function: Define the Scope of Work and Safety and Health Activities*

   a. Defining the scope of work is a critical element of the S&H management function. It sets the stage for the scope and depth of hazards and environmental impact identification/analysis. It is the foundation for the budget formulation/allocation process and is the primary factor in establishing expectations and accountability mechanisms.

   b. Delegation of the scope of work also establishes a shared responsibility for meeting requirements based on the scope of work. This delegation of Safety and Health responsibility can be explicit, such as in the area of construction management, or implicit, such as in design engineering where it is expected the design will meet applicable codes.

2. *Core Function: Identify Hazards and Define Safety and Health Requirements*

   Identifying potential hazards and environmental impacts, and defining applicable Safety and Health requirements is a continual process that occurs throughout the facility or project life cycle (e.g., program planning, design, construction, operation, decommissioning, and closure). The ISMS is essentially a requirements- (or standards-) based system. For the WVDP ISMS, defined requirements drivers represent the fundamental Safety and Health bases, the applicability of which is generally a function of the hazards present. Hazards, impacts, and S&H requirements change as a result of facility and operational modifications, and newly promulgated regulations, standards, DOE Orders, etc. Hazards, impacts, and the associated S&H requirements are evaluated for changing conditions as individual work activities are performed within a facility or project.

3. Core Function: Analyze Hazards and Implement Controls

a. Facility hazard analysis, job hazard analysis (JHA), and the work activity hazard screen checklist are essential processes used to ensure that facility and project operations are conducted in a safe and environmentally protective manner. The JHA identifies hazards and environmental impacts (facility- and task-specific) to establish effective work controls and provide for the safe performance of work. The work activity hazard screen checklist provides for work-specific controls to protect the worker, public, and environment.

b. A team approach to work planning, as in the WVNS Work Review Group, brings together planners, workers and crafts, engineering, operations, and S&H personnel to collaboratively plan the work (including hazard and environmental impact identification, evaluation, and control) and to develop the work package.

c. The facility controls; which include engineered, administrative, and personal protective equipment features; are established to ensure that Safety and Health standards and requirements are met, hazards and impacts are prevented or mitigated, and hazardous materials are contained in a manner that ensures effective protection of the workers. Facility level controls, developed from the facility authorization bases, are documented in policies, procedures, and other lower-level and defense-in-depth controls. These documents are written to protect engineered design features of the facility, protect the assumptions made in the accident analyses, and establish commitments to the safety and environmental programs necessary to ensure the safe operation of the facility.

4. Core Function: Perform Work within Controls

a. An essential aspect of preparing for work is ensuring that the workers, support staff, supervisors, and managers possess the appropriate level of experience, knowledge, skills, and ability (both mental and physical) to safely and effectively discharge their responsibilities.

b. Performing work safely and in a protective manner, a process of confirming readiness and authorizing work at the facility and activity level, is established to ensure that hazards and impacts have been identified and controlled, requirements are met, compliance is ensured, workers understand and are ready to perform the assigned scope of work, and the work can be done in accordance with the authorization bases.

c. The pre-job briefing is the last confirmation of readiness before performing individual work activities. It provides the work team with a collective understanding of the task to be completed, requirements for performing the task, identified hazards and environmental impacts, and necessary controls. Pre-job briefings are face-to-face communications with sufficient technical expertise present to answer questions and ensure understanding of the work tasks and identified controls.

5. Core Function: Provide Feedback and Continuous Improvement

a. A wide variety of mechanisms are used to assess and measure performance and provide opportunities and tools for continuous improvement. These include worker assessments (Safety Observer Program); self-assessments; independent assessments, trend analysis, lessons learned collection, evaluation, and dissemination; commitment tracking (Open Items Tracking System); and external agency inspections such as reviews by the DOE office at the WVDP (OH/WVDP) and the DOE office in Ohio (DOE-OH).

b. Employees are empowered and expected to provide constructive feedback about Safety and Health issues and performance improvements to management. This interaction between employees and management promotes numerous small improvements in the areas of work performance and compliance. Every employee is expected to continually identify safety issues, propose potential solutions, and fully inform management of the situation. Employees are encouraged to elevate issues through their management, safety councils, or the Employee Concerns Program.

c. Visibility and participation, by both managers and safety personnel, at scheduled meetings and interfacing with key planning organizations are essential elements in safety involvement. Innovative awareness activities, reports of safety performance, and strong, consistent field presence encourage integration. Lessons learned, occurrence reports, safety talks, and other communications provide information dissemination across the WVDP.

3.0 SAFETY AUTHORITY / RESPONSIBILITIES

3.1 Safety Authority

The responsibility for the safe conduct of operations, whether in a plant, tank farm, laboratory, or office environment, is assigned through line management to each employee.

Every WVDP employee has Stop-Work Authority as defined in WVDP-011, Industrial Hygiene and Safety Manual.

General assignments of responsibilities are contained in DOE Orders, WVNS Policies and Procedures, and the WVDP Health and Safety Manual.

3.2 Safety Responsibilities

The following are the responsibilities for the administration of the Safety and Health Programs at the WVDP:

3.2.1 Management Responsibilities

The WVNS president, personally, and through delegation to appropriate staff members, is responsible for the formulation, research, and implementation of satisfactory accident, fire prevention, and health hazards control programs that execute the basic Safety Policy.

Responsibility for safe operation is delegated to, and vested in, department staff managers; while the responsibility for formulating satisfactory programs, as well as for auditing the safety performance of organizations, is delegated to, and vested in, the Environment, Safety, Quality Assurance and Laboratory Operations (ESQA&LO) Department.

Top management ensures that the necessary expenditures for safety are authorized and will provide support and direction for safety programs formulated by the ESQA&LO Department.

3.2.2 Environment, Safety, Quality Assurance and Laboratory Operations (ESQA&LO) Department Responsibility

The ESQA&LO Department manager is responsible for the development and administration of a safety and accident prevention and detection program. ESQA&LO is responsible for providing guidance and safety services needed by management. These services include providing information needed to formulate safety policy, directives, and standards, and assisting in providing a low-risk work environment through continually monitoring operations and maintaining an on-going program to improve surveillance of the work environment and control of hazards. A staff of specialists, who are knowledgeable in their safety discipline, maintain required safety documents such as the Health and Safety Program (HASP) and Safety Manual, and provide the required safety services to management (i.e., prescription of personal protective equipment; notification of rights, protections, and obligations; providing training; performing work place evaluations; and recommending controls), is required.

3.2.3 Line Manager Responsibility

Line managers are personally responsible to the WVNS president for the safety of personnel and property within their respective areas of operations. Each line manager takes active and aggressive leadership in the implementation and enforcement of safety policies and programs. They insist that all work is to be done in strict accordance with approved procedures at all times. Line managers conduct an active, self-audit process, hold meetings with their managers, and issue instructions and information, as necessary, to ensure that all personnel are aware of their responsibility for controlling hazards. The expectation of line managers is that a high standard of safety, housekeeping, inspection, and accident investigation is established and that corrective actions are identified and taken.

Each supervisor, and any other person who immediately directs the job efforts of a working unit, is responsible and accountable to ensure that the prevention of injuries to employees under his/her jurisdiction is as much a part of the job as the quantity and quality of production. To accomplish this, employees are trained to work safely and supervisors are directed to observe them closely, to correct unsafe acts or mechanical or physical conditions, enforce safety rules and regulations, assist in the investigation of accidents and incidents, and take other actions necessary to ensure the safety of their employees. It is made clear to each employee that safety measures are a part of their job requirements.

3.2.4 Employee Responsibility

As a condition of employment, all employees individually familiarize themselves with and comply with health and safety regulations and instructions. They use engineering and administrative controls, prescribed personal protective apparel, and the equipment and devices provided for machinery, equipment, tools, and processes. They develop intelligent and safe work habits by following procedures, safe practices, and safety rules and regulations in order to protect themselves and other workers from injury and prevent damage to materials, equipment, and facilities. Employees contribute any suggestions that may assist in the effort to prevent accidents and injuries. They do not undertake a job for which they do not understand the risks, hazards, or safety precautions; or a job for which they have not received proper instructions, training, and authorization. It is the responsibility of all employees to report all accidents or near accidents to their supervisors.

3.2.5 Industrial Hygiene and Safety Responsibility

1. Industrial Hygiene and Safety is an Operations independent organization whose personnel are integrated as team members into the operational organization.

2. Industrial Hygiene and Safety coordinates the development of program implementation strategies, acts as an interface with external organizations, and coordinates facility-wide or programmatic safety activities. Safety performs facility-wide safety oversight functions for data trending, report coordination and development, and records management.

3. Industrial Hygiene and Safety field-level support includes: implementing programs; mentoring operational teams in hazard recognition and control; ensuring safety is built into each document through review of work packages, procedures, job hazard analyses, and project designs; inspecting and walking down facilities; evaluating and monitoring chemical, physical, biological, and ergonomic hazards; assessing effectiveness of controls; and providing training and guidance on safety issues. Specifically, IH&S:

   a. Assists management with establishing a low-risk work environment

b. Develops training on safety programs, issues, and topics

c. Provides facility- or project-specific safety training

d. Participates, where the potential for a safety hazard exists, in the development and review of documents, manuals, procedures, work packages, support documentation, and design reviews

e. Maintains an on-going program to improve surveillance of the work environment and control of hazards

f. Coordinates and performs baseline safety assessments, hazard evaluations, and program assessments

g. Assists with investigations of programmatic issues (e.g., investigation of problem areas identified by data analysis)

h. Disseminates pertinent safety information to field organizations by participating in monthly safety talks and other communications (e.g., Perspective, Operations Safety Newsletter)

i. Maintains records (e.g., Industrial Hygiene monitoring records, trending information)

j. Provides representatives to internal committees (e.g., Central Safety, Safety Success, Safety Observers, Accident Prevention Team)

k. Provides safety awareness coordination

l. Provides subcontractor program review and oversight to ensure effective field safety implementation

3.2.6 Fire Prevention

The Fire Safety Prevention Program includes fire protection system functional testing inspection and maintenance, building tours and inspections, and pre-fire planning. IH&S Fire Protection provides engineering technical support and oversight to the operations organizations to assist them with the implementation of the fire protection program, fire investigations, and resolution of fire system discrepancies.

4.0 MAJOR SAFETY PROGRAM ELEMENTS

4.1 Safety Functional Elements

Industrial Hygiene and Safety professionals are responsible for developing recommendations for establishing a safe work site through a combination of work controls, monitoring, and communication that are focused on achieving WVDP objectives safely, cost effectively, and in compliance with established requirements beyond integration into activities. The essential organizational functions include:

- Hazard analysis/identification

- Hazard prevention and control

- Recordkeeping

- Safety awareness and promotion

- Program implementation.

These elements are described in the following subsections:

4.1.1 Hazard Analysis/Identification

Hazard assessments; as required by DOE, the Occupational Safety and Health Administration (OSHA), and good industrial hygiene and safety practice; qualitatively and quantitatively evaluate the extent of exposure and effectiveness of control of occupational safety and health hazards. Hazard assessments are performed by or with the assistance of a member of Safety and include the following:

1. Analysis of new operations, processes, materials, or equipment before initial use to determine potential hazards. These analyses are performed in conjunction with Procurement and the Engineering and Operations organizations.

2. Analysis of any changes in operations, processes, materials, control equipment, work practices, or personnel that have the potential to cause new or additional hazardous exposures.

3. Comprehensive baseline hazard assessments of all areas and operations identified as having occupational health and safety hazards. Baseline assessments are a systematic approach to identify work place hazards, evaluate controls and their effectiveness, and verify implementation of applicable safety and health requirements within a facility. Facilities are reviewed by an integrated team potentially consisting of Industrial Safety, Industrial Hygiene, Fire Protection, Operations, and Safety Council members.

4. A comprehensive, qualitative characterization of the work place to recognize significant potential physical, biological, or ergonomic exposures to workers. The work place survey defines, through an inventory of stressors and time within a work scope, how personnel are rated in respect to risk. The exposure group is then defined and a risk assessment is assigned. Results of the analyses, professional judgement, and trends identified through the characterization process are used for prioritizing program emphasis, identifying further studies using the Qualitative Exposure Assessment Program, and establishing an industrial hygiene monitoring schedule.

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5. Quantitative monitoring of potentially hazardous exposures:

   a. Personal monitoring and sampling are performed using breathing zone samples that reflect the eight-hour, time-weighted average, short-term exposure limit, or ceiling exposure of employees, as appropriate. Sampling and analysis are done in accordance with sampling and analytical methods specified by OSHA or National Institute for Occupational Safety and Health (NIOSH). Analysis is done by a laboratory accredited by the American Industrial Hygiene Association for the general class of hazardous substance being analyzed.

   b. Source monitoring identifies potential sources of personnel exposure.

   c. Area monitoring determines exposure levels in the general work environment. If a worker's pattern of potential exposure is well-defined, then knowledge of a worker's activity is sufficient to estimate exposure. Area monitoring is a qualitative tool that is a part of a complete monitoring program and may be used as one of the indicators to determine personnel monitoring requirements.

6. Specific program audits, surveillances, and self-assessments (e.g., crane safety, electrical safety, and hazard communication) are conducted to comprehensively review implementation and effectiveness of safety programs.

7. Evaluation of compliance with safety, health, and fire protection requirements is conducted through both scheduled and unannounced field surveys of the work place.

4.2 Hazard Prevention and Control

Hazard prevention and control eliminates or minimizes potential exposure or risk to occupational safety and health hazards identified in the work place. This is accomplished through substitution, engineering controls, use of work practice controls, personal protective equipment, or administrative controls. Safety informs facility management of the control measures required to reduce risk or exposure. Control measures are recommended in accordance with the following hierarchy:

1. Changing the process to a less hazardous process or substituting the hazardous material with a less hazardous material.

2. Isolating or enclosing the process or operation.

3. Implementing engineering controls (e.g., ventilation, installation of sound absorbing material, etc.).

4. Using administrative controls such as work practices or procedures (e.g., limited access or rotating the personnel to minimize exposure).

5. Using personal protective equipment:

   a. Use of respiratory protection during the time period necessary to install, evaluate, or repair engineering controls.

   b. In work situations such as maintenance and repair activities in which engineering controls are not feasible.

   c. In work situations in which engineering controls and supplemental work practice controls are insufficient.

   d. In emergencies.

6. Review of control effectiveness usually occurs during the hazard assessment phase of the baseline, special, or annual surveys. In addition to the traditional controls described above, control of the workers' behavior through procedures, awareness training, and discipline in work performance is also necessary. If a control cannot be immediately implemented, the hazard must be mitigated. This can be done by Lock Out/Tag Out, barriers, or other methods that remove the equipment or hazard from accessibility.

4.3 Recordkeeping

1. Development and maintenance of written hazard assessment and control records is essential for a comprehensive program. Written records document the operations description and the results of hazard assessments, including references to other documents used in the characterization of the work place, facility, or task. Records can also be used to inform the staff of previous studies or findings, determine trends, and validate the effectiveness of controls.

2. Safety ensures that hazard assessment, control, and site survey records are accurate, complete, factual, and in accordance with site documentation standards. Conclusions and recommendations are communicated to the appropriate facility management and affected personnel for corrective actions. Exposure monitoring results are provided to affected employees within 15 days of receipt of analysis results in accordance with OSHA regulations.

3. Field data generated are reviewed for accuracy, completeness, and signed off by the industrial hygienist responsible for the facility or activity. Once reviewed, the record is entered into a database and reported to the organization and the employees monitored, as applicable. Inspection reports are generated as the surveys are conducted; trends are identified quarterly.

4.3.1 OSHA 200 Log

In accordance with the guidelines presented in 29 CFR 1904, a record of all OSHA-recordable injuries and illnesses involving WVNS employees, and other matrixed site and subcontract employees, is kept annually. This injury log reports the name of the affected employee, type of injury, and number of restricted or lost workdays that result from the injury. This information is trended and reported to senior management, DOE, and line management.

4.4 Safety Awareness and Promotion

Employee accountability for safety in their work place is established through effective safety awareness and promotion. Awareness of safety and health issues is maintained by communication between management and employees, and by getting the employees involved in safety programs. It is also promoted through employee recognition awards for safety involvement, which are handled primarily through the safety councils. The following subsections describe some of the methods used to maintain safety awareness and promote safety in the work place:

4.4.1 Safety Groups

4.4.1.1 Central Safety Committee

The Central Safety Committee promotes accountability at the upper management level by reviewing, communicating, and trending safety performance in all areas of safety and health. Meetings are conducted monthly and provide a structure for safety and health issues that require interdepartmental coordination such as company policies and procedures, and resolution of issues from the Safety Success Committee and its sub-committees which cannot be resolved at that level.

4.4.1.2 Radiation and Safety Committee

The Radiation and Safety Committee is appointed by the WVNS president to provide an objective and independent review of safety-related operations, systems, and activities, and to function in an advisory capacity to the line organization and WVNS president.

4.4.1.3 Safety Success Committee

Each WVDP employee is represented on the Safety Success Committee and one of the sub-councils based on their organization and work area. Subcommittees within the WVDP are the Safety Observers, Accident Prevention Team, and Off-the-Job Safety Council. The safety councils increase safety knowledge and awareness and instill safety values through employee participation. The councils are led by the employees and allow direct employee involvement in safety activities and initiatives such as housekeeping inspections, safety improvements, scheduling of safety talks, and communication/awareness activities. Some recent examples of Safety Council accomplishments include participation in the Safety Fair; conducting safety observations and inspections; initiating walkway, stair, and seat belt behavior-based interventions; and investigating injuries and illnesses. The safety councils foster the exchange of information by providing a forum for safety concerns, potential solutions, and safety statistics. Additional training is available for council members to promote more council involvement in fundamental safety issues such as hazard recognition.

4.4.1.4 Safety Observers Program

The Program is designed to allow employee involvement and promote facility ownership. Safety personnel support the Program by participating as team members during the inspection and recommendation process.

Safety Observers provide a method to establish individual pride and ownership through self-assessment, build excellence in all work, and be audit-ready at all times.

4.4.1.5 Accident Prevention Team

This Team investigates the circumstances involved with occupational illness and injury and recommends the necessary controls to eliminate or reduce the hazard.

4.4.1.6 Off-the-Job Safety

This function ensures equal emphasis is placed on safety at work and Off-the-Job.

4.4.2 Safety Talks

Safety talks are held monthly for all WVDP employees. The meetings promote safety by addressing a different health or safety topic each month, including information on basic issues, control methods, and established programs. Employees are encouraged to ask questions and participate in each meeting by sharing their ideas on safety issues.

4.4.3 Lessons Learned

Communication of important safety information is also provided through the Lessons Learned Program. Safety notices of lessons learned are published and distributed to facilities to inform personnel of accidents or events that could potentially have a direct bearing on their work place. The notices are based on items from within the WVDP and from external DOE and commercial sites. They include information on how similar incidents could be prevented in the future.

4.4.4 Training

Training is an important method of communicating safety information. Training requirements are established for each employee, based on the type of work, work area, and potential exposure to various hazards. The requirements follow the precepts of the OSHA safety and health management guidelines and the implementation strategy of the site Voluntary Protection Program (VPP) and Integrated Safety Management System (ISMS). Safety participates in the process by developing and providing training on health and safety issues, and by ensuring safety professionals remain cognizant of current issues and the changes/revisions to programs and requirements. Some examples of safety training developed and provided by Safety personnel include fall protection, ergonomics, and heat stress. In addition, the VPP recommends that managers attend Management Safety Training every year. Safety recommends training line managers on occupational safety and health hazards and the methods available to control exposure associated with various jobs. Employees are trained in the details of the industrial safety, fire protection, and industrial hygiene programs, and in the safety and health hazards associated with any job-related hazardous exposure. Required Reading Programs are also in place for each line organization to ensure employees are kept current on pertinent issues such as manual updates, lessons learned, and other safety-related information.

4.5 Program Implementation

Safety Program implementation ensures requirements, regulations, and good safety principles are applied in the work place, including daily work activities in the office or field and associated planning and follow-up activities. Implementation involves developing and providing training, providing guidance to employees in the basic principles of safety programs, performing hazard assessments and controls, and performing inspections and documenting reviews to ensure those principles are applied.

4.5.1 Document Review

Document review is a method for ensuring safety and health programs are incorporated into designs and operations, and implemented through work procedures. Documents are reviewed and approved by professionals who ensure activities and operations will be carried out in a safe manner according to procedures, ensure potential hazards are addressed in an appropriate manner, and will make recommendations for resolving safety issues. The following is a partial list of the types of documents reviewed by safety professionals:

- Work packages

- Health and Safety Plans

- Readiness Reviews

- Program Plans

- Engineering/design changes

- Procedures

- Permits.

4.5.2 Program Development

4.5.2.1 Safety Manual

A Safety Manual that contains the site safety and health requirements and implementation guidance is maintained by the Industrial Hygiene and Safety Organization. This manual is expected to be used by line management to identify potential hazardous conditions and initiate corrective actions. Implementing policies and programs, procedures, and instructions are derived from the manual.

4.5.2.2 Site-Specific Health and Safety Plan

A site-specific Health and Safety Plan (HASP) was developed to implement the OSHA Hazardous Waste Worker requirements and provide facility-specific requirements and general guidelines to minimize health and safety risks to the workers and other personnel working within exclusion zones. Through the use of assessments such as the Baseline Hazard Assessment and the review of tasks, the HASP is periodically revised by IH&S to update information and controls.

4.5.3 Performance Indicators

Performance indicators define areas to highlight in safety awareness activities, audits, surveys, and self-assessments, and assist in providing focus to the Safety Program. Performance indicators can quantify program symptomatic weaknesses to help define root causes and identify Safety Management System deficiencies. Performance indicators maintained by Safety Compliance and Oversight support personnel are:

- Injury/illness data

- Industrial Health and Safety survey findings

- Employee safety concerns

- Safety talk attendance

- Safety Coupon Program distribution.

4.5.4 Program Assessments

Program assessments are conducted to ensure effective implementation of the Safety Program.

4.5.4.1 Internal Management Self-Assessment

WVNS maintains a Self-Assessment Program for the specific purpose of measuring performance to identify improvement opportunities. The Self-Assessment Program includes all facilities and activities under WVNS cognizance and is one of the Integrated Safety Management System (ISMS) feedback and improvement programs. The Self-Assessment Program covers all disciplines, including Safety and Health, Operations, Maintenance, Environmental Protection, Quality Assurance, management, and business and administration. These areas are assessed at multiple levels, including line organization self-assessment, management assessment, and independent assessment. In addition to these evaluation-based activities, Self-Assessment also includes feedback mechanisms (such as the Performance Analysis Program) for identifying trends requiring attention and issues management systems (such as the Observed Condition Report) for identifying and resolving issues related to safety and other concerns.

4.5.4.2 External Assessments

4.5.4.2.1 OH/WVDP Assessments and Surveillance

OH/WVDP facility representatives and oversight personnel perform monthly program assessments to ensure field implementation of safety and health requirements.

4.5.4.2.2 Westinghouse Corporate Audit

Westinghouse Electric Company (WELCO) representatives periodically conduct comprehensive environmental, safety, and health (ES&H) audits. The audits review WVNS' effectiveness in implementing corporate policy, achieving and maintaining compliance with laws and regulations, maintaining stewardship of assets, and reducing ES&H costs.

4.5.4.2.3 DOE-OH/HQ Environmental Health (EH) Audits

DOE-OH/HQ representatives periodically conduct comprehensive environmental, safety, and health (ES&H) audits. The audits are conducted to evaluate Safety Management Systems, programs, facility operations and activities, and engineering systems considered essential for worker, public, and environmental safety.

5.0 SPECIAL PROGRAMS

The following subsections outline the model programs that Safety is integrating as the basis for the Safety Program.

5.1 Integrated Safety Management System

The Integrated Safety Management System (ISMS) establishes a single, defined environment, safety and health (ES&H) management system that integrates requirements into the work planning and execution processes to effectively protect the workers, public, and environment. The ISMS identifies a set of requirements that reflects DOE's commitment to a "standards-based" safety program and the safety concepts reflected by these requirements.

The ISMS provides the mechanisms for increasing worker involvement in: work planning, including hazard and environmental impact identification, analysis, and control; work execution; and feedback/improvement processes. Effective implementation of the ISMS incorporates the best practices and supports the accomplishment of the VPP, Enhanced Work Planning, and other ES&H performance improvement initiatives.

5.2 DOE Voluntary Protection Program

The DOE Voluntary Protection Program (VPP) is a recognition program that encourages organizations within the DOE complex to achieve an effective safety program and be recognized for the achievement. To advance the VPP principles within WVDP, a Voluntary Protection Program Steering Committee, a subcommittee of the Safety Success Committee, actively pursues awareness, education, and integration initiatives. The Steering Committee develops the VPP application and raises employee awareness of the VPP Recognition Program and what they can do to help achieve its goals. As part of the VPP application development, the Steering Committee helps recognize what systems, functions, and activities are a part of the VPP assessment criteria. With this broadened awareness, employees can be more aware of how their activities support and impact their Safety Program (and their own safety). The Steering Committee has, to date, coordinated the development of the draft application for Voluntary Protection Program recognition. The draft application, along with other safety initiatives such as an annual perception survey, help identify areas of the Safety Program that need additional attention.

5.3 Enhanced Work Planning

The Enhanced Work Planning process started as a pilot project to demonstrate basic capabilities and practices that identify, address, and provide feedback on experience with work place hazards as part of a routine work planning process. The pilot project developed into a process that focuses on using an integrated, risked-based team approach to planning. Enhanced Work Planning involves employees from a cross-section of disciplines in the early planning of each job. This allows early resolution of safety and health issues, and provides a practical approach to resolution of issues that could potentially arise during job planning.

6.0 PROGRAM INTERFACES

The following sections describe major safety organizational interfaces. Safety also interacts with other organizations and companies when necessary for special projects.

6.1 Medical Services

Medical services are provided by a Medical Services organization with the assistance of a contract physician. Medical Services is responsible for administering the Occupational Health Program. Pre-placement, periodic medical surveillance, and return-to-work or fitness-for-duty examinations are provided. Safety provides recommendations to applicable managers on which personnel to include in medical surveillance programs. Safety also provides data regarding health hazards in the work place to Medical Services. These data are based on hazards defined through assessments such as high noise, carcinogens, chemical exposure, or temperature extremes.

6.2 Lessons Learned Program

The Project has a Lessons Learned Program and coordinators to review incidents, activities, and near-misses that may add value to the Project by improving and correcting management systems. Lessons learned bulletins are published and distributed to the working groups for information and action based on discoveries from reviews and oversight activities.

6.3 OH/WVDP

Safety communicates with OH/WVDP in both a formal and informal fashion. Safety provides status information of the Safety Program through monthly meetings and a monthly report. The monthly report provides WVNS activities and status in meeting the milestones and deliverables, and the state of program implementation. The deliverables established are a product of a joint effort in developing the fiscal year work plan. The work plan sets the overall direction and scope of the Safety organization.

6.4 Westinghouse Electric Company

The primary interface for communication, information, and corporate surveys with Westinghouse Electric Company (WELCO) is through the appropriate discipline manager. Information pertinent to WELCO is disseminated through this point of contact and relayed to operations organizations. Safety participates in reviews and WELCO surveys.

6.5 State and Federal Regulatory Agencies

State and federal regulatory agencies such as OSHA provide direction and guidelines for worker safety. Safety implements the applicable requirements and revisions.

6.6 Subcontractors

The number and type of subcontractors providing services to the WVDP varies. Requirements and interfaces are specified through contract and procurement documentation, and WVNS policies and procedures.

7.0 COMMUNICATIONS

Maintaining communications is critical to ensuring a consistent and effective Safety Program within the WVDP. The following are some methods that are used to ensure an adequate information exchange between various disciplines and Safety:

1. A centralized library of safety resources is maintained and made available to all Safety personnel.

2. The Safety Monthly Report to WVNS management and OH/WVDP communicates the overall status of safety and includes assessments, trending of performance indicators, awareness activities, and areas of safety involvement.

3. Urgent information is exchanged by phone with e-mail follow-up.

4. Safety talks are given monthly and by request.

5. Safety Bulletins are posted for hot topics of wide interest.

8.0 REQUIREMENTS

The safety requirements and responsibilities are in accordance with the applicable federal and state regulations and DOE Orders, as outlined in the WVNS contract. These requirements are implemented through WVDP Policies and Procedures for Occupational Safety and Health and Fire Protection, the Health and Safety Plan (HASP), and specific administrative procedures. The following list depicts the referenced identified requirements:

1. WVNS contract.

Federal Regulations

2. 29 CFR 1910, Occupational Safety and Health Standards.

3. 29 CFR 1926, Occupational Safety and Health Regulations for Construction.

4. Federal Register, Vol. 54, No. 16, Thursday, January 26, 1989/Notices, Department of Labor, Occupational Safety and Health Administration, Issuance of Voluntary Guidelines.

DOE Directives

5. DOE 440.1A   Worker Protection Management for DOE Federal and Contractor Employees.

6. DOE G 440.1-4 Contractor Occupational Medical Program Guide for Use with DOE Order 440.1.

7. DOE P 450.4 Safety Management System Policy.

8. DOE G 450.4-1 Integrated Safety Management System Guide.

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9. WV-900, WVDP Worker Safety Program

10. WVDP-106, Conduct of Operations Manual

11. WVDP-011, Safety and Health Manual

12. WV-100, Integrated Safety Management and Control of Documents

13. WV-110, Conduct of Operations

14. WVDP-121, Fire, Safety and Health Procedures

15. WV-989, Job Safety Analyses

16. WV-911, Industrial Work Permit

17. WV-121, Self-Assessment

ACRONYMS

DOE-OH	United States Department of Energy-Ohio
ES&H	Environment, Safety and Health
ESQA&LO	Environment, Safety, Quality Assurance and Laboratory Operations
HASP	Health and Safety Program
ISMS	Integrated Safety Management System
JHA	Job Hazard Analysis
NIOSH	National Institute for Occupational Safety and Health
OH-WVDP	DOE-OH, West Valley Demonstration Project
OSHA	Occupational Safety and Health Administration
RADCON	Radiological Control
VPP	Voluntary Protection Program
WELCO	Westinghouse Electric Company
WVDP	West Valley Demonstration Project
WVNS	West Valley Nuclear Services Company LLC
U.S. DOE	United States Department of Energy

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