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Title: Environmental Management System Program Description		

ENVIRONMENTAL MANAGEMENT SYSTEM	PCN#: N/A
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DESCRIPTION OF CHANGES

Justification (required for major revision)
This revision is the result of the annual review process (AR 281601).

Page(s)	**Description (including summary, reason, initiating document, if applicable)**
10	Section 6.3.4 (formerly) - Removed reference to "Hometown Connections". This business arrangement no longer exists. Section 6.3.6 – Removed superfluous statement regarding frequency of Mason PUD plants running.
21	Section 9.5 – Clarified strengthening of flow down of environmental objectives and targets from strategic environmental initiatives.
52	Section 10.4 – Added new, applicable documents.
53	Section 10.5 – Packwood has changed their documents previously called "plans" to "instructions".
61 - 66	Attachment 11.2 - Several minor updates as prescribed by the Subject Matter Experts to reflect changes in programs or clarify content.

TABLE OF CONTENTS

1.0 PURPOSE

The purpose of this program description (also referred to as the EMS Manual) is to provide a "roadmap" or guide to the Energy Northwest Environmental Management System (EMS), by describing the main elements of the EMS and their interaction, and cross-referencing related documentation.

This EMS Manual is maintained by the EMS Coordinator with input from owners of other management or business systems associated with the EMS. It can be used by staff wanting to learn more about how the EMS works. It is also used during internal and external EMS audits. It is reviewed annually and revised, as necessary, when conditions change. Updates will be performed every three years, if required, to ensure that it remains accurate and up-to-date.

2.0 DESIGN OF THE EMS

An EMS is a tool to systematically identify, manage, control, and monitor environmental impacts. The Energy Northwest EMS is designed to promote environmental stewardship and help improve environmental performance, provide for compliance with the law, improve efficiency and effectiveness, reduce costs, and earn and retain regulator and community trust.

In order to determine which EMS was most suitable for Energy Northwest activities, five EMS models were evaluated: International Chamber of Commerce Business Charter for Sustainable Development (ICC), Commission for Environmental Cooperation Guidance Document, International Organization of Standardization ISO 14001 Standard, EPA Code of Environmental Management Principles, and the International Council of Chemical Associations Responsible Care program.

An adapted EMS that conforms primarily to the requirements of ISO 14001:2004 (including recent planned revisions), and secondarily to the principles in the ICC Charter was developed. This model, referred to as the Energy Northwest Composite EMS Model (located in Attachment 11.7), or simply the "EMS model," also incorporates the strongest elements of other EMS models (such as employee involvement) that were not adequately addressed by the ISO 14001:2004 standard and the ICC Charter. These elements, however, are compatible and appropriate for Energy Northwest's goals and activities. See Section 9.0, EMS Elements, for the content of the EMS model and a description of how Energy Northwest satisfies each requirement.

NOTE:	For the purposes of registration to the ISO 14001 standard, Energy Northwest's conformance to both the ISO 14001 standard and voluntary commitments (the EMS Model) are evaluated.

3.0 SCOPE OF THE EMS

The Energy Northwest EMS is corporate in scope, and applies company-wide to all activities as defined in this EMS Manual. This includes Columbia Generating Station (Columbia), also referred to as the "plant") and other power producing facilities, with the following exceptions:

- **Terminated Projects:** The EMS does not apply to terminated projects that are no longer owned by Energy Northwest.
- **Other Initiatives or Business Ventures:** Application of the EMS to other initiatives or business ventures is limited to activities owned or led by Energy Northwest (Energy Northwest is not contracted). See discussions under each activity listed in the applicable section of this manual.
- **Work performed off-site (on property not owned or leased by Energy Northwest) or performed as a contractor:** If Energy Northwest staff are contracted to perform work at a facility that belongs to another party, in accordance with that client's policies, programs and procedures, the EMS as a system does not apply. However, during work planning, Energy Northwest's activities may be evaluated to determine whether they are consistent with Energy Northwest policies and practices before accepting the work. An exception would be if someone hired Energy Northwest and specified in the contract that the EMS programs and practices be applied to the work.

The Energy Northwest environmental stewardship policy creates an expectation that Energy Northwest employees will bring an environmental ethic with them wherever they work. This means, for example, that an Energy Northwest employee is expected to follow the client's procedures designed to protect the environment. While working within the constraints imposed upon them by the client, they may also promote responsible environmental management, such as suggesting and helping implement pollution prevention when they become aware of opportunities.

Activities are defined in the Key Definitions of the EMS Model as: "operations and functions of all organizational units. Includes projects, products, and services. Includes maintenance, design, project planning/design, and operation of facilities, decommissioning, and leaving" (i.e., terminating activities at) a site. Facilities where Energy Northwest conducts its activities are described under the Facilities section.

The Energy Northwest EMS was certified to the 1996 ISO 14001 standards in 2005. In 2005, Energy Northwest was recertified to the 2004 ISO 14001 standards. In 2008 and 2011 Energy Northwest was again assessed by NSF-ISR and found to be in conformance to ISO 14001:2004. As a result, a new Certificate of Registration to the ISO 14001:2004 standard was issued to Energy Northwest on 19 March 2008 and 6 March 2011. The scope of registration includes the following facilities and locations: Columbia, Nine Canyon Wind Project, Packwood Lake Hydroelectric Project, White Bluffs Solar Station, Industrial Development Complex (IDC), Applied Process Engineering Laboratory (APEL), and the Energy Northwest Office Complex (ENOC). New projects will be included within the scope of registration once they are operational and have been subject to an internal EMS audit and management review.

4.0 COMPANY PROFILE

Energy Northwest is an energy services provider headquartered in Richland, Washington. It is a municipal corporation and Joint Operating Agency of the State of Washington, organized in 1957, and is comprised of member utilities from across the state of Washington.

Energy Northwest is empowered to finance, acquire, construct, and operate facilities for the generation and transmission of electric power. Energy Northwest owns and operates four electricity generating stations: Columbia (nuclear power plant), Packwood Lake Hydroelectric Project, Nine Canyon Wind Project, and White Bluffs Solar Station. All electrical energy produced by Energy Northwest business units is ultimately delivered to electrical distribution facilities owned and operated by the Bonneville Power Administration (BPA) as part of the Federal Columbia River Power System.

5.0 ORGANIZATION

Energy Northwest's Executive Board sets the policies that govern the operations of the organization. It is made up of 11 members, five elected from the Board of Directors, three outside members appointed by the Board of Directors, and three outside members appointed by the Washington state Governor.

Energy Northwest's Board of Directors consists of representatives of member utilities including public utility districts and municipal utilities. The Board of Directors has the authority to authorize new projects and terminate existing ones. It elects members from its own membership and appoints outside directors to the Executive Board.

Management of all operational activities of Energy Northwest is the responsibility of the Chief Executive Officer (CEO). A team of four vice-presidents, each with various organizational responsibilities, supports the CEO. Two vice-presidents support the VP, Nuclear Generation / Chief Nuclear Officer (CNO) leading the Operations and Engineering organizations. The corporate organizational chart is provided electronically in the “Energy Northwest Document Library” in SharePoint (InsideEN).

Energy Northwest typically employs approximately 1,200 employees and 60 - 100 contractors working primarily at the seven different locations listed in Section 6.0. During biennial maintenance and refueling outages at Columbia, approximately 1500 additional temporary contract workers are hired.

Environmental organization and staffing, and roles and responsibilities are described under the Structure and Responsibility element, and in Attachments 11.1 and 11.2.

6.0 FACILITIES

Attachment 11.3 - Map of Facilities at Columbia Generating Station

Attachment 11.4 - Washington State Map of Energy Northwest Facilities Locations

The EMS is limited to those facilities and operations managed and operated by Energy Northwest. The EMS is applicable to the following existing facilities:

- Columbia
- IDC
- APEL
- ENOC
- Nine Canyon Wind Project
- Packwood Lake Hydroelectric Project
- White Bluffs Solar Station

Facility	**Approx Acres Occupied**	**Buildings and Trailers**	**Approx Building Sq. Ft.**	**Approx Employees at Facility**
Columbia and Support Facilities	300	70	585,000(2)	1200
Nine Canyon	40	2	5,000	10
White Bluffs	1	0	N/A	0
Packwood	530(1)	7	20,000	2
APEL	6	2	90,000	11
IDC (Projects 1 and 4)	970	40	330,000(3)	7
ENOC	17	3	175,000	30
				∑ = 1260

(1) Energy Northwest owns approximately 30 acres
(2) Does not include Columbia power block
(3) Does not include IDC Project 1 power block

6.1 Power Producing Facilities

6.1.1 Energy Northwest's primary "business unit" is Columbia, a 1,150-megawatt net boiling water nuclear plant completed in 1984. The Columbia site is located north of Richland, Washington on the U.S. Department of Energy (USDOE) Hanford Site, approximately 3-1/4 miles west of the Columbia River. The leased area of Columbia site is about 1,100 acres. A plot plan of the Columbia industrial area is included as Attachment 11.3.

6.1.2 The Packwood Lake Hydroelectric Project is located near Packwood, Washington on about 30 acres of company-owned land and about 500 acres of U.S. Forest Service land in the Gifford Pinchot National Forest (see Attachment 11.4). This 27.5-megawatt facility, with a 10-megawatt average output per year, was completed in 1964.

6.1.3 The Nine Canyon Wind Project, a wind turbine farm located on leased land south of Kennewick (see Attachment 11.4), was completed in three phases between August 2002 (Phase 1), December 2003 (Phase 2), and early 2008 (Phase 3). The project is capable of generating 96 megawatts from 63 wind turbines.

6.1.4 Energy Northwest operates and maintains the White Bluffs Solar Station, a solar power demonstration project developed through a joint effort of Energy Northwest, Bonneville Environmental Foundation, BPA, DOE, and Newport Northwest LLC. The station was constructed in the spring of 2002 on the Energy Northwest IDC site about one mile east-southeast of Columbia and expanded in 2009. The station is comprised of 242 photovoltaic panels and with a peak output of 38.7 kilowatts DC (converted to 31.5 kilowatts AC).

6.2 Columbia Support Facilities

Support facilities at Columbia range from small modular storage units to 100,000-ft^2 office buildings used to support operation and maintenance of the station. The support functions include mechanical and electrical equipment maintenance, vehicle maintenance, painting and coating, solid and liquid waste processing, training, and general office work.

6.2.1 The Plant Support Facility (Kootenai Building), located 3/4 mile southwest of Columbia, houses staff and facilities for training, telecommunications, and laboratory support (analytical chemistry and instrument calibration).

6.2.2 A warehouse complex located east of the plant provides material receipt, storage, and distribution services.

6.2.3 A pump house on the west bank of the Columbia River supplies water for the Columbia condenser cooling system.

6.2.4 A central sanitary waste treatment facility located to the southeast of Columbia provides treatment for wastewater from Columbia, the IDC (Projects 1 and 4), the Plant Support Facility, and the USDOE 400 Area.

6.2.5 A security training facility, with a small arms range, is located on the Project 4 site, which is within the boundaries of IDC.

6.2.6 The Independent Spent Fuel Storage Installation (ISFSI) has been constructed north of Columbia to store spent nuclear fuel (SNF) in dry cask storage until a federal repository becomes available.

6.2.7 The electrical output of Columbia is delivered to the Bonneville Power Administration's H.J. Ashe Station located 1/2 mile north of the plant.

6.2.8 A bulk hydrogen storage and supply facility located approximately 3/4 mile south of the plant supplies hydrogen to the Columbia Reactor Feed Water (RFW) system.

6.3 Other Initiatives/Business Ventures

Energy Northwest is pursuing a number of new business initiatives to diversify the organization and reduce Columbia operating costs. Activities include project development and facility management.

6.3.1 APEL, a 90,000 ft^2 high-tech research "incubator" facility in North Richland (see Attachment 11.4), is owned and managed by Energy Northwest. Founding community stakeholders – Pacific Northwest National Laboratory (PNNL), Port of Benton, the Department of Energy, Washington State University Tri-Cities, the City of Richland and the Tri-City Development Council – continue to provide strategic vision and technical and operational support. Energy Northwest Environmental and Regulatory Programs (E&RP) staff provide technical support for Energy Northwest activities. A PNNL Environmental Compliance Representative and a Field Services (waste management) Representative provide environmental technical support to APEL for PNNL activities.

Application of EMS: The EMS applies to the APEL facility and Energy Northwest's operations within the facility. Likewise, EMS applies when work is performed by Energy Northwest employees for the APEL lessees. PNNL has its own EMS, which is registered under ISO 14001. Other APEL lessees are not covered by Energy Northwest's EMS. APEL lessees conduct all activities in compliance with applicable environmental regulations, permit conditions, commitments, and procedures.

6.3.2 Energy Northwest provides engineering support to the Grant County Public Utility District (PUD) through loaned employees.

Application of EMS: Limited to role as a contractor.

6.3.3 Engineering and maintenance services have been provided to other public power operators of hydroelectric facilities in the Northwest.

Application of EMS: Limited to role as a contractor.

6.3.4 Energy Northwest provides analytical chemistry and instrument calibration services to several "offsite" customers (including Hanford contractors, Washington State University, Philip Services Corporation, the City of Richland).

Application of EMS: As these services are conducted at Energy Northwest facilities by Energy Northwest staff, they are within the scope of the EMS. Services conducted offsite are limited to the role as a contractor.

6.3.5 ENOC consists of several hundred thousand square feet of rental office space in North Richland (see Attachment 11.4) managed by Energy Northwest. Approximately forty-five Energy Northwest personnel have offices in a portion of this space.

Application of EMS: The EMS applies to the facilities owned by Energy Northwest, and to that portion of Energy Northwest operations within the building, including work performed by Energy Northwest employees for Energy Northwest.

6.3.6 Energy Northwest has an agreement with Mason County PUD to provide operations personnel for the PUD's combustion turbine plants in their county.

Application of EMS: Limited to role as a contractor.

6.3.7 The Energy Northwest IDC is located east of Columbia on a portion of the 970-acre site leased from the USDOE for the terminated Nuclear Projects 1 and 4. It is expected that the site infrastructure will be used to support diversified development. Several companies are leasing existing facilities at the complex.

Application of EMS: The EMS applies to the IDC facility itself, and to Energy Northwest operations within the building, including work performed by Energy Northwest employees for Energy Northwest, and lessees. IDC lessees conduct all activities in compliance with applicable environmental regulations, permit conditions, commitments, and procedures.

7.0 ENVIRONMENTAL ASPECTS

The following environmental aspects have been identified for Energy Northwest operations. Energy Northwest Significant Environmental Aspects have been determined as per GBP-ENV-09. Their significance varies at individual Energy Northwest facilities:

- Regulated industrial, hazardous, radioactive, and mixed wastes
- Atmospheric emissions
- Liquid effluents
- Storage or use of chemicals or radioactive materials
- Water consumption
- Energy consumption
- Land use (including structure erection or alteration)
- Community outreach
- Generation of carbon-free energy

8.0 LICENSES AND PERMITS

Energy Northwest operations are licensed or permitted by numerous Federal, State and local agencies as they relate to environmental media (i.e., air, water, land). RPI-20.0, Environmental Program Description, lists the applicable licenses and permits associated with Energy Northwest environmental compliance programs.

9.0 EMS ELEMENTS

The Energy Northwest EMS is comprised of eighteen (18) inter-related elements as follows:

1. General Criteria, Environmental Stewardship, and Integration (Section 9.1);
2. Environmental Policy (Section 9.2);
3. Environmental Aspects and Impacts (Section 9.3);
4. Legal and Other Requirements (Section 9.4);
5. Objectives, Targets, and Implementation Plans (Section 9.5);
6. Structure and Responsibility (Section 9.6);
7. Training, Awareness and Competence (Section 9.7);
8. Communication (Section 9.8);
9. EMS Documentation (Section 9.9);
10. Document Control (Section 9.10);
11. Records (Section 9.11);
12. Operational Control (Section 9.12);
13. Emergency Planning, Preparedness and Response (Section 9.13);
14. Monitoring and Measurement (Section 9.14);
15. Nonconformity and Corrective and Preventive Action (Section 9.15);
16. Compliance Assurance (Section 9.16);
17. Internal EMS Audit (Section 9.17); and
18. Management Review (Section 9.18)

The following section titles include in parentheses the clause number from the ISO 14001:2004 Standard. The sections list the element of the EMS model (*in italics*), along with a description of how Energy Northwest meets the requirements.

The terms “shall,” “should,” and “may” are used in the EMS model as follows:

- shall - required because either it is in the ISO 14001:2004 Standard, or is considered essential to implementation of an ISO 14001:2004 EMS;

- should - a management expectation. Management approval would generally be expected for deviation. Equivalent to a voluntary commitment; and

- may - suggested. Non-mandatory and optional.

At Energy Northwest, documented procedures may take a variety of forms, depending on their scope and applicability. A General Business Procedure (GPB) applies to all Energy Northwest activities. Reference may be found to General Information Handbooks (GIHs) which have been converted to GBPs. A Site Wide Procedure (SWP) applies to Columbia, the facility with

the majority of significant environmental aspects. Organizations may also have department or unit specific implementing instructions and procedures.

9.1 General Criteria, Environmental Stewardship, and Integration (Clause 4.1)

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
The organization: • *should recognize environmental management as a corporate priority and strive to facilitate a culture of environmental stewardship;*	The Environmental Stewardship Policy (PSM-5.7) establishes environmental management as a corporate priority. It includes a commitment to foster a culture of environmental stewardship and promote consideration of the environment by all employees in everything they do.
• *shall establish, document, implement, maintain and continually improve an environmental management system (EMS) that includes policies, programs, and practices for conducting activities in an environmentally responsible manner;* • *shall define and document the scope of its EMS. The EMS applies to those environmental aspects that the organization identifies as those which it can control and those which it can influence;* • *shall determine how it will fulfill the requirements of the EMS; and* • *should fully integrate the EMS into all its activities, including overall decision-making, planning, and operations (e.g., investments, capital improvements, product and process design, training programs, and maintenance activities).*	Energy Northwest has developed and implemented an EMS that goes beyond the requirements of ISO 14001, as described in the EMS Model (Attachment 11.7 of EMS-01). The EMS is designed to incorporate environmental stewardship into all its activities (as defined in the scope section of this document). The environmental policy speaks to stewardship, responsibly balancing environmental and social factors, and business needs. Policies, programs and practices for conducting activities in an environmentally responsible manner have been integrated with environmental and other business systems (see following sections).
In addition to the specified requirements in the EMS that apply to those working for or on behalf of the organization, the organization may also promote, where appropriate, improvements in practices and adoption of comparable environmental stewardship principles by contractors, including suppliers, contractors, distributors and onsite service providers.	Once the EMS has gone through several post-registration improvement cycles, Energy Northwest may consider expanding its sphere of influence by promoting the adoption of sound environmental principles in its supply chain. Contractors, who work for, or on behalf of Energy Northwest, are required to adhere to applicable requirements, pursuant to general provisions clauses included in contracts and procurements, titled “Environmental Program Requirements.” Requirements for environmentally responsible behavior are incorporated into new contracts.

9.2 Environmental Policy (Clause 4.2)

Energy Northwest has had a formal policy on environmental protection since May 1982. A policy that conforms to the EMS Model requirements was issued on July 22, 2003. This policy was signed by the Chief Executive Officer, and endorsed by the Board of Directors and Executive Board. Minor revisions to the policy were made on February 26, 2004. The Environmental Stewardship Policy was reissued on December 29, 2010.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
After considering legal requirements and stakeholder expectations and concerns, top management shall define the organization's environmental policy and ensure that it:	The CEO issued the Environmental Stewardship Policy (PSM-5.7) after considering legal requirements and stakeholder expectations and concerns.
• *is appropriate to the nature, scale, and environmental impacts of its activities;* • *provides the framework for setting and reviewing environmental objectives and targets*	The policy references providing energy services in a manner that responsibly balances environmental and social factors and business needs. It is corporate in scope, and addresses the operations and facilities noted in Section 6.0. It provides a framework for setting environmental objectives and targets.
• *is documented, implemented, maintained, and clearly communicated to all employees; and*	The policy is documented in PSM-5.7. It is reviewed during EMS Management Reviews, and revised as necessary. It is communicated to employees in accordance with GBP-ENV-10, Environmental Management System Communication, via a variety of methods, including meetings, a brochure, a badge card, newsletter articles, training, and postings. It is communicated to contractors via a variety of methods, including "Blue Badge" training and Columbia Plant Access Training. Contractors may also be provided a brochure that summarizes the environmental policy as part of their pre-job briefing.
• *is available to the public.*	The policy is published on the Energy Northwest external website. A hard copy is also available to anyone upon request.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
• *includes a commitment to:* ◦ *achieve and maintain compliance with applicable legal requirements;* ◦ *conform to voluntary commitments to which the organization subscribes which relate to its environmental impacts;* ◦ *conduct operations in an environmentally responsible manner, including managing and reducing environmental impacts/risks;* ◦ *prevent pollution;* ◦ *share information, as appropriate, on the EMS and environmental performance with stakeholders; and* ◦ *continually improve.*	The policy contains commitments to environmental stewardship, the EMS and continual improvement, environmental compliance, pollution prevention, and communication.
The Chief Operating Office shall sign the environmental policy. Other members of top management may also sign the environmental policy as a visible sign of senior management commitment to the policy.	The policy is signed by the CEO, and has been endorsed by the Executive Board and Board of Directors.

9.3 Environmental Aspects and Impacts (Clause 4.3.1)

GBP-ENV-09, Environmental Aspects Identification, describes the process used to identify environmental aspects. E&RP support staff, along with department EMS Representatives, are responsible for identifying significant environmental aspects and maintaining current environmental information. The procedure defines significance based on five criteria: 1) severity and 2) frequency of the environmental impact, 3) regulatory implications, and 4) internal and 5) external stakeholder issues.

As a result of performing a detailed analysis of activities, products, and services performed at Energy Northwest, seven significant environmental aspects have been identified: 1) waste generation, 2) air emissions, 3) liquid effluents, 4) storage and use of hazardous materials, 5) land use, 6) community outreach, and 7) generation of carbon-free energy.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
The organization shall establish, implement, and maintain (a) procedure(s) to identify the environmental aspects of its activities within the defined scope of the EMS that it can control and those that it can influence, taking into account planned, new, or modified activities. The procedure(s) shall also describe the criteria or method the organization uses to determine those aspects that have or can have significant impacts on the environment (i.e., significant environmental aspects).	GBP-ENV-09, Environmental Aspects Identification.
The organization shall ensure that the significant environmental aspects are taken into account in setting its environmental objectives, and in establishing, implementing and maintaining its EMS.	GBP-ENV-09 indicates that significant aspects information will be used to develop prioritized objectives and targets for controlling, managing, and improving operations that have the potential to significantly impact the environment. GBP-ENV-13, Environmental Performance Measurement, describes the environmental objectives and targets implementation process. GBP-AM-02, Energy Northwest Strategic and Business (Excellence) Planning, describes the corporate planning process.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
The organization should also have a program or process for receiving information from suppliers on the environmental aspects of goods and services that the organization uses.	SWP-PUR-01, Procurement of Services and the User's Guide to Contracting provides requirements for an environmental review of contractor services for Columbia. Also, the contract requisition routing and review system in Asset Suite ensures environmental reviews. The procurement Credit Card User's Guide identifies environmental aspects for consideration during chemical purchases. GBP-PUR-02, Procurement, encourages consideration of environmentally preferable products. GBP-ENV-05, Chemical Management, requires manufacturers and vendors to submit an MSDS for chemical purchases to Supply Chain Services. The MSDS is used for awareness of hazards and effects on environmental aspects.
The organization shall document this information on environmental aspects and keep it up-to-date.	GBP-ENV-09 describes the process for maintaining aspects information and indicates who approves aspects matrices. Aspects are documented on Form 26309, Significant Aspect Determination, and are subject to annual review and update. GBP-ENV-14, Work Planning and Control for Environmental Aspects, includes a link to the Environmental Aspects Identification process to ensure that new activities are reviewed for environmental aspects.

9.4 Legal and Other Requirements (Clause 4.3.2)

GBP-REG-01, Regulatory Requirements Review, establishes the program that requires departments to ensure new and changing regulations that may affect Energy Northwest business are routinely evaluated and incorporated, as needed, into policies, procedures and other work practices to ensure compliance is maintained. RPI-12.0, Review and Management of Legal and Other Requirements, documents the process used by E&RP to identify, review, and track new, revised, or proposed legal requirements and voluntary commitments that are related to the environmental aspects of Energy Northwest activities and programs. RPI-12.0 contains a list of potentially applicable federal, state and local regulations and corresponding significant environmental aspects.

When new or revised requirements are identified that may apply to Energy Northwest, they are tracked by the subject matter expert to ensure that they are reviewed for applicability, and to determine if any actions are needed to conform. Requirements are communicated to affected staff via procedures (e.g., desk instructions, Plant Procedure Manual, Site Wide Procedures, General Business Procedures (GBP)), training, and/or email, as appropriate. Facility specific permit requirements or operating limits are communicated formally to the appropriate line manager. New or revised requirements are communicated to suppliers and contractors via the procurement and/or contracting process and through training. Subject matter experts are available to provide technical assistance to line organizations impacted by new and changed requirements to develop strategies that minimize the fiscal impact of new requirements on operations, and to ensure compliance.

Energy Northwest operations are subject to regulation and oversight by a number of federal, state and local agencies. These agencies are identified in Attachment 11.5.

Specific activities may require interaction with a number of other agencies. These include city services departments, county building departments, regional air authorities, state resource agencies (such as Department of Natural Resources, Washington Fish & Wildlife Service, Washington Department of Archaeology and Historic Preservation), and federal agencies (e.g., U.S. Geological Survey, U.S. Forest Service, U.S. Fish & Wildlife Service, National Marine Fisheries Service, and the Army Corps of Engineers.)

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
With regard to legal requirements, and voluntary commitments related to its environmental aspects, the organization: • *shall establish, implement and maintain a procedure(s) to (1) monitor, identify and have access to applicable legal requirements and voluntary commitments to which it subscribes that are related to its environmental aspects; and, (2) determine how those requirements apply to its environmental aspects.*	GBP-REG-01, Regulatory Requirements Review, implements the Regulatory Review Program with requirements for Energy Northwest departments. RPI-12.0, Review and Planning for Legal and Other Requirements describes E&RP's process of reviewing environmental legal and other requirements..

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
• *should, where possible, anticipate changes including new requirements that may apply as a result of changes in activities;*	RPI-12.0
• *Shall ensure that these applicable requirements and commitments are taken into account in establishing, implementing and maintaining the EMS.*	RPI-12.0 Also, GBP-PRO-01, Manual Control, requires that GBPs are processed in accordance with the SWP-PRO series. SWP-PRO-02, Preparation, Review, Approval and Distribution of Procedures, requires that the author or sponsor identify and review change management actions for completeness and appropriate application, thus ensuring that changes required by the GBP are implemented. Under change management, affected employees typically receive broadcast emails when key procedures change.

9.5 Objectives, Targets, and Excellence Plans (Clause 4.3.3)

The Energy Northwest process for establishing objectives and targets at each level of the organization is described in GBP-AM-02, Energy Northwest Strategic and Business (Excellence) Planning. The Corporate Strategic Plan contains strategic initiatives, which include environmental initiatives. E&RP develops and proposes to senior management environmental objectives and targets consistent with any environmental strategic initiatives and other applicable considerations per GBP-ENV-13, Environmental Performance Measurement. These objectives and targets are incorporated into an Environmental Excellence Plan that contains specific, measurable actions assigned to the appropriate EN department personnel to achieve the stated objectives and targets.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
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 commitments in the environmental policy.	GBP-AM-02, Energy Northwest Strategic and Business (Excellence) Planning, describes the business planning process of setting strategic initiatives. On an annual basis, strategic initiatives are documented in the corporate Strategic Plan. E&RP develops for management approval objectives and targets consistent with the strategic initiative(s), as applicable, and documents in the Environmental Excellence Plan. GBP-ENV-13, Environmental Performance Measurement, addresses development of corporate-level environmental stewardship objectives. GBP-ENV-13, Environmental Performance Measurement, describes the development of environmental objectives and targets, what is considered and how they are implemented. GBP-AM-02 requires management to develop and implement management activities to achieve strategic initiatives, which may include environmental initiatives. Attachment 11.1 of this document identifies responsibilities for implementing and supporting the EMS throughout the organization.
When establishing and reviewing its objectives and targets, the organization shall take into account legal requirements and voluntary commitments; it's significant environmental aspects; technological options; financial, operational and business requirements; and the views of stakeholders.	The Environmental Stewardship Policy (PSM-5.7) is considered when developing objectives. It provides the framework for considering other needs by stating that it, "responsibly balances environmental and social factors and business needs." GBP-ENV-09, Environmental Aspects Identification, indicates that significant aspects information will be used to develop objectives and targets for controlling, managing, and improving operations with a potential to significantly impact the environment.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
The organization shall establish, implement and maintain programs for achieving its objectives and targets. These implementation plans shall include: • *designation of responsibility and accountability for achieving objectives and targets at each relevant function and level; and* • *an action plan that includes measurable milestones and the means and time-frame by which they are to be achieved.* *If a project relates to new developments or new activities, program(s) shall be amended where relevant to ensure that environmental management applies to such activities.*	GBP-ENV-13, Environmental Performance Measurement, describes the environmental objectives and targets implementation process. The Environmental Excellence Plan contains the environmental objectives and targets that support the environmental initiatives in the EN Strategic Plan. Objectives in addition to this may be developed and are updated as needed. The Environmental Excellence Plan includes actions with milestones (steps and dates) and ownership.
Objectives and programs that support environmental stewardship may include activities that provide for: • *alternative, environmental-friendly approaches to developing, designing, and operating facilities;* • *actions to come into and/or maintain compliance with legal requirements;* • *efficient and sustainable use of energy, materials and resources;* • *opportunities to reduce hazardous materials use and waste generation;* • *opportunities to minimize adverse environmental impact, and promote safe and responsible disposal of wastes; and* • *adopting other improvements to the EMS that allow the organization to identify, evaluate, and implement pollution prevention opportunities in the future;* • *follow-up implementation of management review recommendations for prioritized improvements to the EMS.*	GBP-ENV-14, Work Planning and Control for Environmental Aspects, and organizational specific documents (see discussion under Operational Control element) provide for consideration of sustainable development, pollution prevention, and resource conservation. GBP-ENV-15, Pollution Prevention Program Description addresses opportunities for reductions in resource consumption (e.g., energy efficiency), material use (e.g., hazardous materials), and waste generation (e.g., mixed low-level waste).

9.6 Structure and Responsibility (Clause 4.4.1)

All employees have a role to play in the EMS. Roles for the following positions are described in Attachment 11.1: Chief Executive Officer, Executive Board, Vice Presidents, Vice President Employee Development/Corporate Services, EMS Management Representative, Line Organizations, Support Organizations, EMS Representatives, EMS Coordinator, Employees, and Contractors.

Responsibilities for environmental compliance and enhancement are distributed among several organizational units in Energy Northwest. Support for EMS elements that are not strictly environmental (such as communication and records management) is provided by a number of organizations. The respective responsibilities of those organizations are also described in Attachment 11.1, under Support Organizations.

Through the Energy Northwest position descriptions/performance plans, the strategic/business planning process, work planning processes, and the training program, staff members are made aware of their responsibilities, authorities, and accountabilities. Energy Northwest defines the principal accountabilities for each non-bargaining position through position descriptions. For bargaining staff, performance is defined and measured in their contract. Senior management holds staff accountable for their performance.

SWP-PRO-03, Procedure Writer's Manual, requires inclusion of a Responsibilities Section in written administrative procedures. (GBP-PRO-01 applies the SWP-PRO series corporate wide.) The Responsibilities Section lists the positions identified in the body of the procedure, and describes general performance expectations that cannot be effectively described in the main Procedure/Guideline section. Otherwise, responsibilities are to be identified in the Procedure/Guideline section.

Training programs such as Plant Access Training and Blue Badge Training address expectations and responsibilities.

The following GBPs are related to the structure and responsibility EMS element:

- GBP-HR-18, Performance Improvement, indicates staff is expected to plan and conduct work by following environmentally sound work practices and procedures. It notes that staff has a responsibility to notify management of concerns related to environmental issues. It holds non-bargaining staff accountable to environmental Standards of Conduct. It includes guidance for addressing environmental performance concerns.

- GBP-HR-20, Performance Planning/Appraisal, requires that each non-bargaining position have current goals documented in a performance plan. These plans link personal goals to strategic and business goals. For bargaining staff, performance is defined and measured in their contract. The GBP also describes how managers and supervisors in conjunction with the employee develop an employee performance plan that establishes specific employee expectations and performance monitoring. Employee performance is reviewed and documented biannually by the manager and employee.

- GBP-HR-14, Employee Recognition and Awards, includes the Environmental Stewardship Awards Program, which enables use of all Energy Northwest awards for exceptional environmental performance.

- GBP-AM-02, Energy Northwest Strategic and Business (Excellence) Planning, requires the allocation of resources to processes (e.g., EMS) and departments for each fiscal year. Input is received from the strategic planning process and the prior year's business planning results. Department Excellence Plans are then developed. Staffing and budgets are determined based on business plan action requirements.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
Roles, responsibilities and authorities shall be defined, documented, and communicated in order to facilitate effective environmental management.	Attachment 11.1 of this EMS Manual, GBP-HR-18, Performance Improvement, position descriptions (or contracts for bargaining staff), and the responsibilities sections in procedures define and document roles, responsibilities and authorities. GBP-ENV-14, Work Planning and Control for Environmental Aspects, references ensuring that employees and contractors understand their roles and responsibilities. This information is communicated to staff through training programs and tools (e.g., the "EMS and You" brochure), and during the performance planning and appraisal process.
The organization may establish clearly defined employee performance standards that include environmental issues, as appropriate; and recognize and reward exceptional environmental performance.	GBP-HR-14 establishes the Environmental Stewardship Awards Program. GBP-HR-18 establishes environmental stewardship employee performance standards.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
Management: • *should seek to instill the attitude that all employees are responsible for implementing the EMS and improving environmental performance;*	The Environmental Stewardship Policy (PSM-5.7) addresses fostering a culture of environmental stewardship, promotes consideration of the environment by all employees in everything they do, and indicates that environmental stewardship is a responsibility of all employees. GBP-HR-18 establishes employee responsibility to: • Maintain awareness of potential environmental impact of work. Plan and conduct work by following environmentally sound work practices and procedures. • Identify potential environmental hazards or concerns, and unsafe conditions or practices, and implement or suggest controls to minimize risk, protect human health and safety, conserve resources and prevent pollution. • Notify management of concerns related to environmental or safety issues, including the use or disposal of hazardous materials, environmental incidents, or violations of requirements. • Cease work activity upon observing imminent environmental or safety danger, and report the danger immediately to management.
• *should have a system in place for the identification of needs and allocation of resources to implement the environmental policy; and* • *should commit and shall provide, or ensure the availability of, resources essential to establish, implement, maintain and improve the EMS (including achievement of objectives and targets, and environmental programs such as pollution prevention). Resources include human resources (i.e., the availability and assignment of sufficient personnel), specialized skills, organizational infrastructure, technology, and allocation of financial resources.*	GBP-AM-02, Energy Northwest Strategic and Business (Excellence) Planning, provides requirements for allocating resources for EMS related activities. Staffing, equipment, materials, training, and travel are determined prior to the next fiscal year (July 1 - June 30) based on Group and Department business plans. Budgets are approved by senior management, the Board of Directors, and BPA.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
Top management shall appoint a specific management representative(s) who, irrespective of other responsibilities, shall have defined roles, responsibilities and authority for: • *ensuring that the EMS is established, implemented, and maintained in accordance with this model; and* • *reporting to top management on the performance of the EMS for review, including recommendations for improvement.*	The Supervisor, E&RP has been designated as the EMS Management Representative. This person's roles, responsibilities, and authority are documented in this EMS Manual, in GBP-ENV-11, Environmental Management Review, GBP-ENV-09, Environmental Aspects Identification, GBP-ENV-13, Environmental Performance Measurement, and in GBP-ENV-15, Pollution Prevention Program Description.

9.7 Training, Awareness, and Competence (Clause 4.4.2)

Hiring processes ensure staff meets minimum qualifications, augmented as necessary by additional training. The Energy Northwest training policy is stated in PSM-6.11, Training - Qualifications. The policy indicates Energy Northwest uses the Systematic Approach to Training (SAT) for regulatory and industry standards, and may use a graded approach to SAT for non-regulatory or industry standard training. The policy requires line managers identify duties that call for training.

On the corporate level, the Curriculum Review Committee/Training Advisory Group (CRC/TAG), described in GBP-HR-44, Management and Generic Sector Training Combined Curriculum Review Committee/Training Advisory Group, provides a focal point for the oversight and approval of all corporate training for Energy Northwest. The CRC/TAG is responsible for ensuring that training meets business needs, is aligned with strategic objectives, and that training resources are maximized.

GEN-TQS-01, Training Program Administration, and GBP-HR-28, Management, Training, Leadership, and Development, describe processes for identifying training needs for employees and contractors, and ensuring staff are qualified to perform their assigned duties. Training needs for most staff are captured in the Energy Northwest Personnel Qualification Directory (PQD), an online module of the Asset Suite system that tracks training requirements and provides notification of the need to update training. (NOTE: Some offsite facilities have training tracking systems.) PQD provides a listing of all training courses that Energy Northwest provides to staff.

During work planning process, described in GBP-ENV-14, Work Planning and Control for Environmental Aspects, applicable requirements are identified, including training requirements. This combination of processes, programs, and procedures ensure that only staff with appropriate qualifications are assigned to tasks. Department managers and supervisors, with support from the training staff, have prime responsibility to train staff to be competent to perform their work.

Training courses have been developed to enhance environmental awareness and provide staff with necessary skills to identify environmental concerns. General Employee Training (GET) is the key course that provides Energy Northwest employees and contractors with the environmental awareness and job-specific training required.

9.7.1 **Green Badge** – GET is provided annually to employees and contractors who require unescorted access to the Columbia "protected area" and the Columbia "radiological controlled area (RCA)". The training is presented in two parts: 1) Plant Access Training (PAT) and 2) Radiation Worker Training (RWT). Individuals who need access to the protected area take only PAT, which includes modules on 1) environmental management (policy, aspects/impacts, compliance, pollution prevention, and waste management); 2) hazardous materials management; 3) quality programs and problem reporting; 4) fire protection; 5) industrial safety; 6) fitness for duty; 7) emergency response; and 8) radiological protection. This course provides both awareness and job-specific training on many of the generic environmental aspects found at Columbia.

Individuals who need access to the RCA must take RWT in addition to PAT. RWT includes information on 1) radiation sources, types and measures; 2) biological effects; 3) limits and guidelines; 4) dosimetry; 5) contamination; 6) exposure; and 7) radioactive waste.

9.7.2 **Blue Badge** – GET is also provided annually to Energy Northwest employees and contractors who do not need access to the "protected area".

9.7.3 **Job-Specific Training** - Staff whose job activities can significantly impact the environment have been identified and receive job-specific training. Since the PAT awareness-level training provides many topics typically covered under job-specific training, the approach for identifying the target employees was tailored to focus on those persons who perform the following activities:

a. Those with significant aspects not specifically addressed in PAT training (e.g., Dangerous Waste generation and management);

b. Operations controlled by a regulation or regulatory permit; and

c. Those with unique conditions that would benefit from specific instructions to address environmental issues.

Since each organizational unit evaluated its activities, identified associated environmental aspects, and documented the results, the documentation was used to identify the specific activities that require job-specific training. Once these were identified, the job position and/or staff members associated with these activities were also identified. Training is typically presented in group "toolbox" meetings and documented in PQD. For these staff, the courses described above are augmented with job-specific training courses such as Rad Worker or department-specific training (e.g., MX00149, Maintenance Work Practice) and/or pre-job briefings as necessary.

9.7.4 Columbia contractor training requirements are described in PPM 1.4.7, Control of Supplemental Personnel. This PPM discusses training requirements for Technical Representatives and those supervising contractors, and qualifications for contractors (e.g., level of technical competence and knowledge and compliance with applicable procedures, briefings, etc.).

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
The organization shall: • *identify training needs associated with its environmental aspects and EMS;*	GBP-ENV-14. GBP-HR-28. GEN-TQS-01. Asset Suite module - PQD for Columbia Personnel. Requirements in plans (e.g., Spill Plan) and procedures.
• *establish, implement and maintain a procedure(s) to make persons working for the organization or on its behalf aware of:* ◦ *the importance of conformity with the environmental policy (including the importance of compliance), procedures, and the requirements of the EMS;* ◦ *legal requirements associated with their tasks;* ◦ *their roles and responsibilities in achieving conformity with the environmental policy and procedures and other requirements of the EMS, including emergency preparedness and response requirements;* ◦ *the significant environmental aspects and related actual or potential impacts associated with their work;* ◦ *the environmental benefits of improved personal performance; and* ◦ *the potential consequences of departure from specified operating procedures.*	General Employee Training (PAT/RWT). Blue Badge Training. Augmented by job-specific training, as necessary. GBP-ENV-14. Contractor Brochure. Contract clauses. On-the-job and pre-job briefings. PPM 1.4.7, Control of Supplemental Personnel for Columbia.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
• *educate and/or train (or take actions to meet these needs) any persons performing tasks for or on its behalf, that have the potential to cause a significant environmental impact(s), to conduct their activities in an environmentally responsible manner, and to carry out the environmental responsibilities of their positions. The training program should include task specific skills;*	PSM-6.11. GBP-HR-28. GEN-TQS-01. General Employee Training (PAT & RWT). Blue Badge Training Course. On-the-job training. Pre-job briefings. PQD. GBP-ENV-14. SWP-ENV-03, Managing Regulated Waste. Position descriptions identify minimum qualifications. Hiring processes ensure staff meet minimum qualifications, augmented as necessary by additional training needs as defined in PQD
• *retain associated records on education training or experience associated with these requirements.*	Records of training are maintained in PQD and Department training files.

9.8 Communication (Clause 4.4.3)

At Energy Northwest, the majority of EMS communication requirements are fulfilled in five procedures:

- GBP-ENV-10, Environmental Management System Communications - the umbrella document that defines and/or references all communication procedures.
- RPI-8.0, Processing of Regulatory and Industry Correspondence, provides for documentation of external communication with regulatory and industry agencies.
- SWP-REC-01, Records Management, documents the receipt, documentation, and response to external requests for Public Records.
- Public Affairs maintains a Public Inquiry Log to track EMS-related inquiries.
- GBP-COM-06, Chief Executive Officer Event Notification, provides guidance on what events require CEO notification and time frames. Events include events such as emergency classification of Unusual Event or Higher, workplace incidents that may result in adverse publicity, an issue raised by a regulatory agency if judged to be significant, and environmental damage estimated to exceed $100,000.

Other relevant communication procedures include:

- GBP-COM-01, Preparation of Documents for Submittal to the Executive Board/Board of Directors

- GBP-COM-02, Developing Content for Communications Vehicles

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
With regard to its environmental aspects and EMS, the organization shall establish, implement and maintain a procedure(s) for: • *internal communication between the various levels and functions of the organization. This may include how legal requirements and environmental performance will be communicated; how top management will be fully informed of pertinent environmental issues, etc.;*	GBP-ENV-10 defines internal communications and references other relevant procedures
• *whether or not to communicate externally about its significant environmental aspects. If the decision is to communicate, the organization shall establish and implement a method(s) for this external communication. The decision shall be documented;*	GBP-ENV-10. Significant aspects will be communicated in the Energy Northwest annual report or on the Energy Northwest external website.
• *receiving, documenting, and responding to relevant communication from external stakeholders, including concerns regarding environmental performance and compliance.*	RPI-8.0 defines procedures for regulatory and industry correspondence. SWP-REC-01 defines procedures for requests for public records. GBP-ENV-10 and the Public Inquiry Log cover procedures for all other external communications.
• *communicating applicable procedures and requirements to persons working for or on behalf of the organization (e.g., employees, contractors) and suppliers;*	GBP-ENV-10 identifies Supply Chain Services as the lead group responsible for communication with contractors and suppliers.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
In order to foster openness and dialogue with stakeholders, the organization: • *may, at intervals it deems appropriate, prepare an environmental statement, report, or other communication that is available to stakeholders. The statement should be presented in a clear and comprehensible manner. It may include or address topics such as:* ○ *the organization's legal requirements; its significant environmental aspects; its targets and objectives relative to those significant environmental aspects, and progress towards meeting the objectives and targets; its environmental performance, and numerical data, where applicable.*	Communication of this information is performed on a case-by-case basis, as indicated by the term "should," but many of these items are addressed in GBP-ENV-10 particularly via the Energy Northwest external website. GBP-ENV-13 provides requirements for communicating environmental performance, including numerical data.
• *should encourage employee feedback on pollution prevention and other means to reduce environmental impact;* • *may assess employee and community concerns about the organization's activities; and anticipate, where possible, and respond to, their concerns about the potential environmental hazards and impacts of activities;* • *may periodically seek advice and counsel through dialogue with persons in communities near its facilities;* • *may involve stakeholders in the development of its EMS; and* • *may encourage employee involvement in development and implementation of the EMS.*	GBP-ENV-10 includes: • Support of continuous improvement of the EMS by soliciting and responding to feedback from key audiences; and • It defines key audiences and covers site neighbors and all types of employees. Employees and contractors have access to internal and external programs (e.g., reporting to the NRC, use of a web-based form which offers anonymous reporting directly to the CEO, filing of Condition Reports in accordance with GBP-CAP-01, Corrective Action Program) to raise concerns and have them resolved.
The organization may also consider sharing knowledge and lessons learned with other electrical utilities.	Sharing knowledge and lessons learned with other nuclear utilities may occur through vehicles such as INPO connections, through professional conferences, publications, and the Energy Northwest website.

9.9 EMS Documentation (Clause 4.4.4)

This EMS Manual describes the main elements of the EMS, their interaction, and provides references to related documentation. Refer to discussions under Document Control and Records elements for more information.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
EMS documentation shall include: • *the documented environmental policy, objectives and targets;*	Environmental Stewardship Policy (PSM-5.7). GBP-AM-02, Energy Northwest Strategic and Business (Excellence) Planning, and corresponding Implementation Plans.
• *a description of the scope of the EMS;*	This EMS Program Manual (EMS-01)
• *a description of the main elements of the EMS, and their interaction and reference to related documents;*	This EMS Program Manual (EMS-01)
• *documents, including records, required by the EMS; and,*	Documents required by ISO 14001:2004 are referenced in each section in this EMS Program Manual. Also see Section 10.0, References and Attachment 11.6 for lists. Records required by ISO 14001:2004 are included in Attachment 11.6.
• *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.*	These documents are referenced in this EMS Program Manual. Also see Section 10.0, References, and Attachment 11.6 for lists of documents and records.

9.10 Document Control (Clause 4.4.5)

Document control requirements are addressed primarily through two procedures:

GBP-DOC-01, Document Control, establishes the corporate level document control program. It requires organizations to either follow SWP-DOC-01, Document Control, or develop their own documented procedure that addresses the document control requirements in the EMS Model.

In addition, GBP-PRO-01, Manual Control, requires the use of the SWP-PRO series for procedures to be included in the General Information Handbook, with minor variations. SWP-PRO-04 describes the procedures program. It applies to all levels of procedures, instructions, and forms, that affect Columbia nuclear operations and the ISFSI and to GIH/GBPs, which apply to all Energy Northwest activities. It describes:

a. the document hierarchy (starting with policies), and how the need for a procedure is determined;
b. preparation, review and approval (cross-referencing SWP-PRO-02, Preparation, Review, Approval, and Distribution of Procedures, and SWP-PRO-03, Procedure Writer's Manual);
c. format;
d. vendor procedures (which are either approved with the governing procedure or through the vendor submittal review and approval process); and
e. procedure use requirements (e.g., "all users are responsible for verifying that the procedures they are using are the correct revision....").

SWP-PRO-01, Procedure Use and Adherence, also includes requirements to thoroughly review procedures prior to use, that strict adherence to approved written procedures is expected, and describes the "ASSET SUITE Document Management System" database. Revision information is available in Asset Suite.

The Energy Northwest document control system supports location of documents. The most current internal operating procedures for Columbia are maintained in the online Asset Suite system. Revision numbers and dates are tracked in the system, and previous revisions are also available online. There are a number of triggers for document review and update, such as identification of new or revised source material. Desk instructions and other standard operating procedures are controlled, but are not included in Asset Suite.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
Documents required by the EMS shall be controlled. A procedure(s) shall be established, implemented and maintained to define the controls needed to:	GBP-DOC-01 and SWP-DOC-01.
• *Approve documents for adequacy prior to issue;*	GBP-DOC-01 and SWP-DOC-01 address approving controlled documents prior to issue. SWP-DOC-01 also requires controlled documents to be reviewed for technical adequacy by qualified personnel prior to approval for issue. GBP-PRO-01 (referencing SWP-PRO series) addresses review and approval of procedures.
• *Review, update as necessary and re-approve documents;*	GBP-DOC-01 and SWP-DOC-01 address reviewing, updating and re-approving controlled documents. GBP-PRO-01 (referencing SWP-PRO series) addresses review and approval of procedures.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
• *Ensure that changes and the current revision status of documents are identified;*	GBP-DOC-01 requires identifying changes and current revision status for controlled documents. SWP-DOC-01, Section 3.5.2 requires that the current revision status of controlled documents be identified and maintained. For documents contained in Asset Suite, changes and the current revision status are noted. These include SWPs, vendor manuals, forms, plant procedures, drawings, calculations, and some department instructions.
• *Ensure that relevant versions of applicable documents are available at points of use;*	GBP-DOC-01 requires ensuring that relevant versions of applicable documents are available at points of use. SWP-DOC-01 addresses ensuring access of applicable documents at points of use.
• *Ensure that documents remain legible, dated (with dates of revision) and readily identifiable;*	GBP-DOC-01 requires ensuring that documents remain legible and readily identifiable. SWP-DOC-01 requires that controlled documents have a title, unique document number, revision number and when appropriate, an issue date. The procedure references legibility.
• *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*	GBP-DOC-01. These documents are being incorporated into the records management system described in GBP-REC-01, Records Management, and SWP-REC-01, Records Management. RPI-12.0 addresses management of legal and other requirements.
• *Prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose.*	GBP-DOC-01 requires prevention of unintended use of obsolete documents. SWP-DOC-01 addresses precluding the use of obsolete documents.

9.11 Records (Clause 4.5.4)

Two procedures define the records management program:

- GBP-REC-01, Records Management, establishes requirements for the Energy Northwest's Records Management Program and directs all projects to follow requirements in SWP-REC-01.

- SWP-REC-01 establishes requirements for generation, turnover, transfer, storage, maintenance, retention and disposition of all public, essential, and quality assurance records and required by codes, standards, specifications, regulatory and Energy Northwest requirements.

NOTE: The Environmental Protection Plan requires that records relative to environmental aspects of Columbia operation and records of modifications to plant structures, systems and components determined to potentially affect the continued protection of the environment be retained for the life of the plant. Records listed with a Lifetime retention (e.g., offsite environmental monitoring records) are those records required to be retained and managed for the life of the plant, life of the equipment, life of the system, or other event or item to which they relate. The retention period is keyed to an item, event, or process that has a definite start and stop date.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
The organization shall establish, implement and maintain a procedure(s) to demonstrate conformity to the requirements of the EMS, and the results achieved. The procedure shall define controls needed for the identification, storage, protection, retrieval, retention, and disposal of environmental records.	Environmental records have been identified (see Attachment 11.6) and are managed within the Energy Northwest Records Management Program defined under GBP-REC-01.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
Environmental records shall be and remain legible, identifiable and traceable.	GBP-REC-01 establishes records management requirements and directs all projects to follow requirements in SWP-REC-01. SWP-REC-01 applies to all public, essential, and quality assurance records, and requires retention of those records in varying media forms, including paper, film, and digital media. SWP-REC-01 requires that Quality Assurance records be legible, properly completed, and adequately identifiable to the item or activity involved. GBP-DOC-01, Document Control, establishes a document control program that ensures document remain legible and readily identifiable.

9.12 Operational Control (Clause 4.4.6)

Engineered and administrative operational controls are in place to manage environmental aspects and impacts. Administrative controls are documented in procedures and plans. Engineered controls include measures such as spill containment, and filters for radiological effluent controls, etc., with operating criteria specified as necessary in procedures. Security is provided in buildings and facilities to prevent unauthorized entry.

A number of operational control programs (described in Attachment 11.2) have been developed and implemented. As discussed under the EMS element Environmental Aspects, Energy Northwest has identified the following significant environmental aspects. Programs and operational controls in place to manage these aspects are described in Attachment 11.2. There is also an environmental monitoring program that covers a variety of aspects.

- Air Emissions (see Air Emissions, Asbestos, and Refrigerants);
- Liquid Effluents (see Industrial Wastewater, Sanitary Wastewater);
- Storage and Use of Hazardous Materials (see Chemical Control, Community Right-to-Know, PCBs, Emergency Spill Preparedness and Response, and Pollution Prevention);
- Waste Generation (see Solid Waste, Hazardous [Dangerous] Waste, Mixed Waste, Radioactive Waste, and Pollution Prevention);
- Land Use (see Land Use);
- Community Outreach; and
- Generation of Carbon-Free Energy.

Contractors are made aware of Energy Northwest's commitment to Environmental Stewardship through the General Provisions for Consultant and Technical Services attachments to contracts and other procurement documents, which include EMS clauses that emphasize Environmental Program Requirements. In addition, a contractor and vendor information brochure that emphasizes the EMS is provided. PPM 1.4.7, Control of Supplemental Personnel, discusses requirements for contractors at Columbia. Additionally, using the guidance offered in the User's Guide to Contracting, the Contracting Officer and/or Technical Representative are prompted to contact E&RP for guidance if the planned work:

- Involves the storage, handling, or use of chemicals or radioactive materials;
- Generates waste (solid, hazardous, mixed, etc.) or air emissions or liquid effluent;
- Has the potential for hazardous materials or petroleum product spill;
- Requires significant use of energy or water; or
- Involves significant disturbance of the land surface.

The Contracting Officer and/or Technical Representative also offers general EMS information to the contractor through a brochure or other materials as needed, e.g., during pre-job briefings.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
The organization shall identify and plan those activities that are associated with the identified significant environmental aspects and compliance with legal requirements, consistent with its environmental policy, objectives and targets in order to ensure that they are carried out under specified conditions by:	GBP-ENV-09, Environmental Aspects Identification, describes the process for identifying significant aspects. All key work activities have been evaluated for their impact on significant environmental aspects. A walk through and a worksheet on each activity were completed. For new project work, GBP-ENV-14, Work Planning and Control for Environmental Aspects, Purpose and Scope section, requires review of new or modified activities, those that have not already been reviewed, and any activities where failure of existing operational controls results in potential or actual environmental impact. For activities at Columbia requiring plant design changes, procedures DES-2-1, Plant Design Change, and DES-2-7, Minor Plant Design Change, require an initial screening that includes environmental review for design inputs. DES-2-1 provides an environmental checklist to be used for that review. In addition, when activities could potentially require changes to the plant licensing basis, an applicability determination form must be completed. That form requires an evaluation of the environmental impact of the proposed activity. PJM-2-1, Project Teams, includes E&RP participation on projects from the beginning to the closeout activities. This provides identification of environmental aspects during the initial Project Team meeting and identification of potential actions for consideration to reduce impacts to the environment during project development and implementation.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
• *establishing, implementing and maintaining a documented procedure(s) to cover situations where their absence could lead to deviation from the environmental policy and the objectives and targets. This may include engineering and operational controls to detect and prevent unplanned releases to the environment and minimize human error, and other precautionary approaches to prevent environmental degradation such as pollution prevention;*	GBP-ENV-14 establishes the corporate work planning and control process and requires development of procedures where the absence of such procedures could lead to deviations from the Energy Northwest environmental policy and objectives. Work planning procedures also exist at the organizational level. For example, at Columbia this includes: SWP-MAI-01, Work Management Process Overview, PPM 1.3.68, Work Management Process, PPM 1.3.76, Integrated Risk Management, Asset Suite Planners Guide, CMS-3.1.10, and EBSI-2.5, Generation Project Development Checklist. SWP-PRO-01, SWP-PRO-02, SWP-PRO-03, and SWP-PRO-04 describe the document hierarchy (starting with policies), how the need for a procedure is determined; preparation, review and approval; format; vendor procedures (which are either approved with the governing procedure or through the vendor submittal review and approval process); and procedure use requirements for the Administrative Procedures Manual for Columbia (the corporate-level procedures location).
• *stipulating operating criteria in the procedures;*	GBP-ENV-14 says that procedures with operating criteria stipulated should be developed and maintained where the absence of such procedures could lead to deviations from the Energy Northwest environmental policy and objectives.
• *enabling personnel to perform their functions consistent with policies and legal requirements; and*	GBP-ENV-14 states that training and qualifications of Energy Northwest employees and contractors performing the work ensures they are fully qualified to perform the work, consistent with policies and applicable environmental requirements.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
• *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 (refer to Section 9.8, Communications).*	The EBS General Provisions; Appendix D General Provisions for Consultant and Technical Services, Invitation for Bid (equipment), Invitation for Bid (Construction), and the General Provisions for Purchase Orders contain contract clause language regarding environmental expectations of contractors. The User's Guide to Contracting requires that Technical Representatives and/or Contracting Officer contact E&RP if a new project/contract has the potential to impact significant environmental aspects. SWP-PUR-01, Procurement of Services, requires a determination of procurement requirements for contractors and suppliers at Columbia. The Work Supervisor reviews the Service Evaluation, noting any added controls required from the applicable Technical and Administrative reviews, and establishing a mechanism to assure that controls are implemented by suppliers performing onsite services. SWP-PUR-04, Material, Equipment, Parts and Supplies Procurement, addresses purchasing of supplies for use within Columbia. It requires that an MSDS be provided, and a Chemical Permit acquired per SWP-CHE-05, Chemical Management Program, if applicable, along with review by Industrial Safety and Fire Protection Engineer.

9.13 Emergency Planning, Preparedness, and Response (Clause 4.4.7)

Energy Northwest has an Emergency Preparedness/Response program for Columbia, as required to maintain compliance with requirements for operating a nuclear power plant. The program includes procedures for emergency preparedness and response, and drills are conducted.

GBP-EPP-02, Environmental Emergency Preparedness, describes planning for and response to industrial environmental emergencies at Energy Northwest facilities. The procedure does not identify potential emergency situations or accidents (such as meteorological events or wildfires) that could have an environmental impact, nor does it describe how to respond to such incidents. Additionally, the procedure does not address coordination with outside agencies. This procedure does not include response to Columbia nuclear or radiological emergencies. As a commercial nuclear power generating facility licensed by the NRC, Columbia has a comprehensive program designed to enable an effective response to emergency situations. The core of this program is the "Columbia Generating Station Emergency Plan" and its implementing procedures.

- Each of the following offsite locations has a spill/fire/emergency response plan: Packwood, Nine Canyon, IDC, APEL, ENOC, and White Bluffs.

Select procedures or plans relevant to spill response at Columbia are:

- ABN-HAZMAT, Hazardous Materials Spills/Releases - provides plant operators with quick guidance for immediate actions, including spills and releases. It also discusses potential consequences of spills. It indicates, "Hazardous material spills may require reporting to local, State, and Federal agencies, depending on the type and quantity of material spilled." ABN-HAZMAT directs staff to follow SWP-ENV-02, Oil and Hazardous Substance Spill Prevention, Control and Counter-Measure Plan, which incorporates reporting requirements. It is an Operations emergency procedure activated when a spill/release of hazardous material occurs on Energy Northwest property, or a hazardous material spill/release has the potential to threaten Control Room habitability.

- SWP-ENV-02 is the principal guidance for spill response at Columbia. The procedure provides measures to minimize the risk of releases of hazardous substances and prescribes appropriate responses to such releases. The procedure covers prevention and preparedness, response actions, spill site assessment, cleanup and disposal, notifications and reports, training, and medical surveillance.

- PPM 1.10.1, Notification and Reportable Events – provides guidance on catalog event-related reports such as for spills and unauthorized releases for Columbia.

Volume 13, Emergency Plan implementing procedures (EPIPs), directs responses from radiological accidents at Columbia that could impact the environment. EPIP-13.8.1, Emergency Dose Projection System Operations, provides instructions for the use of computer models to predict offsite dose rates, integrated doses, and radioactive material deposition within the 10-mile plume emergency planning zone and the 50-mile ingestion emergency planning zone.

EPIP-13.9.1, Environmental Field Team Monitoring Operations, provides instruction to field team personnel for sampling and field analyses to confirm radiological releases through field measurements. EPIP-13.13.3, Intermediate Phase MUDAC Operations, provides direction for evaluating post accident radiological conditions and for developing recommendations that lead to protection of the public and further spread of contamination to the environment.

Emergency preparedness and response procedures have been reviewed and revised after drills, and lessons learned have been incorporated.

The Control Room is established as a focal point for reporting spills at Columbia. The Shift Manager/Control Room Supervisor serves as the on-duty emergency coordinator. The primary initial responders for emergency situations are the Plant Fire Brigade members, with backup from the Hanford Fire Department. E&RP provides direction for recovery, cleanup and disposal of spill residues. Initial external reports are by the Control Room or E&RP. E&RP prepares, with input from others, follow-up reports that may be required by regulators.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
The organization shall establish, implement and maintain a procedure(s) to identify potential emergency situations and potential accidents that can have an environmental impact(s), and how it will respond to them. The organization shall respond to actual emergency situations and accidents, and prevent or mitigate associated adverse environmental impacts.	Columbia and offsite facilities have emergency response plans.
The organization should coordinate emergency planning, preparedness, and response with emergency services, relevant authorities, and the local community, as appropriate.	Arrangements have been made to coordinate with the Hanford Fire Department for events at Richland facilities.
The organization shall periodically test such procedures where practicable.	GBP-EPP-02, Environmental Emergency Preparedness, requires drills.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
The organization shall periodically review and revise where necessary, its emergency preparedness and response procedures, in particular after the occurrence of accidents or emergency situations.	GBP-EPP-02 requires periodic review and revision of emergency preparedness and response procedures, in particular after accidents or emergencies. Findings are documented via an Action Request - Condition Report in accordance with the Corrective Action Program, per GBP-CAP-01 which documents any accident/emergency event and ensures corrective/preventive actions are taken, including modification of procedures as necessary.

9.14 Monitoring and Measurement (Clause 4.5.1)

With regard to monitoring and measuring of objectives and targets, Energy Northwest has a well-developed strategic and business planning system, and provides regular feedback to employees and managers on status and progress. Action items associated with business plans are assigned and can be tracked by the Action Request – Condition Report process (AR-CR). Color-coded performance reports (e.g., green = exceeds expectations, yellow = needs improvement, etc.) are updated monthly and available to employees and the Board of Directors through the Energy Northwest Performance Indicator Web Application. A subset of the Columbia-related performance indicators are also tracked in the monthly Business Plan Report.

GBP-ENV-13, Environmental Performance Measurement, documents the measures, data collection, and reporting in the Performance Indicator Web Application.

Evaluation of the adequacy of operational controls occurs in accordance with GBP-ENV-14, Work Planning and Control for Environmental Aspects, and its associated organization-level procedures, and GBP-ENV-12, Environmental Compliance Assessments.

Energy Northwest maintains a routine environmental monitoring program (described in Attachment 11.2) for radiological and non-radiological pollutants, including liquid effluents and air emissions. There are administrative procedures for permit compliance monitoring (e.g., for NPDES and REMP) and other required monitoring programs. The Energy Northwest analytical laboratory has a set of calibration and laboratory procedures. These procedures address document control, analytical lab instructions, sample analysis sheets, quality reviews, and a digital information management system, and include:

- Landfill Groundwater Sampling, Environmental and Analytical Laboratory Instructions, EALI 3.15;
- SWP-CHE-02 addresses compliance with NPDES requirements at Columbia;
- PPMs Vol. 12, 16 and 17 at Columbia;
- SWP-ENV-03 for regulated waste management at Columbia;
- PPM 1.11.1, Radiological Environmental Monitoring Program (REMP) Implementation Procedure;

- License Control Specifications;
- PPM 1.14.5, NPDES Permit Compliance, Environmental Control at Columbia;
- Avian and Bat Monitoring Plan for the Nine Canyon Wind Project; and
- Various Standard Laboratory Instructions (SLIs), Supplemental Analytical Laboratory Instructions (SALIs) and Standard Operating Procedures (SOPs), Environmental Services

Energy Northwest Calibration Services are treated as an external vendor, and are subject to NUPIC audits as a Quality Supplier. They follow ANSI NCL2 540, Calibration Laboratory Quality procedures, recall system for tracking, and monitoring system to report deficiencies.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
The organization shall establish, implement and maintain a procedure(s) to monitor and measure, on a regular basis, the key characteristics of its activities that can have a significant environmental impact. This shall include information to monitor performance, applicable operational controls and conformity with the organization's environmental objectives and targets. *The procedure should describe the organization's system for periodically gathering, analyzing, managing, and recording information to track, assess, and as appropriate, determine trends on environmental performance, effectiveness of operational controls, and for identifying areas for improvement (including areas where performance is or is likely to become substandard).*	GBP-ENV-13, Environmental Performance Management (tracking environmental indicators). GBP-AM-02, Energy Northwest Strategic and Business (Excellence) Planning, on tracking performance of top tier actions, etc. Evaluation of the adequacy of operational controls is evaluated during the work planning and control process (GBP-ENV-14, Work Planning and Control for Environmental Aspects), and during compliance assurance self-assessments (conducted in accordance with GBP-ENV-12).
The organization shall ensure that calibrated or verified monitoring and measurement equipment is used and maintained; and	See procedure references above.
shall retain associated records.	Environmental records are managed in accordance with GBP-REC-01, Records Management, and SWP-REC-01, Records Management, and relevant SWPs. Environmental records include those associated with monitoring and measurement (see Attachment 11.6)

9.15 Nonconformity and Corrective and Preventive Action (Clause 4.5.3)

GBP-CAP-01, Corrective Action Program, describes the Energy Northwest process used at non-Columbia facilities to document issues or conditions (other than those that are security or personnel related), and manage them using the AR-CR process. Columbia follows SWP-CAP-01, Corrective Action Program; GBP-CAP-01 does not apply. The details for processing an AR-CR are described in SWP-CAP-01 and associated SWP-CAP series.

Anyone (including contractors) can initiate an AR-CR. AR-CRs applicable to Columbia are reviewed within 24 hours by operations staff to determine the need for immediate actions. The AR-CR then is reviewed by the Condition Review Group, which includes staff from Corrective Action Program, Operations, Maintenance and Engineering, for review and a determination of the level of disposition. This group categorizes all AR-CRs in accordance with SWP-CAP-06, Condition Review Group, and reviews and determines how they should be dispositioned (e.g., need to trend, evaluate only, or do an apparent cause analysis, or root cause analysis.) Root cause analyses are performed using guidance contained in CDM-01, Cause Determination Manual. Staff are trained in root cause analysis techniques. Per SWP-CAP-06 and GBP-CAP-01, root cause analysis is required when specific criteria are triggered, such as a significant release of radioactive materials, oil or chemicals to the environment.

AR-CRs generated through the Action Tracking System are used to track lessons learned, corrective actions, commitments, etc. The Action Tracking System has trending capabilities. If procedure changes are needed, this is also tracked. Accountability for follow-up is inherent, and timeliness with regard to closing issues tracked by AR-CRs is monitored closely.

The Corrective Action Program reviews and grades the response and resolution of apparent cause and root cause analyses. Initiators of AR-CRs that result in an apparent cause or root cause analysis receive a written package on the resolution.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
The organization shall establish, implement and maintain a procedure(s) for dealing with actual and potential nonconformities and for taking associated corrective and preventive actions (e.g., system nonconformities such as failure to define the EMS responsibilities or evaluate compliance with legal requirements; performance nonconformities such as not achieving objectives/targets, failure to perform maintenance requirements on schedule, exceeding operating criteria and/or permit limits, or accidental release of hazardous substances).	GBP-CAP-01, Corrective Action Program. SWP-CAP, Corrective Action Program series for Columbia.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
The procedure(s) shall define requirements for: • *identifying and correcting nonconformities and taking action to mitigate their environmental impacts;*	GBP-CAP-01, Correction Action Program. SWP-CAP series provides requirements for identifying and correcting nonconformities
• *investigating nonconformities, determining the cause(s), and taking action to avoid the occurrence;*	GBP-CAP-01 and SWP-CAP series provide requirements for initiating, evaluating, and determining corrective/preventive actions.
• *defining responsibility and authority for corrective and preventive action;*	GBP-CAP-01 (Responsibilities) and SWP-CAP-06 (Responsibilities)
• *evaluating the need for action(s) to prevent nonconformities, and implementing appropriate preventive actions designed to avoid their occurrence;*	GBP-CAP-01 and for Columbia SWP-CAP-01, provide requirements for timely corrective/preventive actions.
• *reporting nonconformance (internally, and as required, externally);*	GBP-CAP-01 and for Columbia SWP-CAP-01, provide requirements for reporting.
• *recording the results of corrective and preventive action(s) taken; and*	GBP-CAP-01 and for Columbia SWP-CAP-01 provide for documenting actions taken.
• *reviewing the effectiveness of corrective action(s) and preventive actions taken.*	GBP-CAP-01, SWP-CAP-01 and SWP-CAP-05, Corrective Action Review Board, provide for corrective action effectiveness reviews.
Actions taken to identify, correct, mitigate, investigate, evaluate, review, record and report nonconformities, causes, and corrective or preventive actions shall be appropriate to the magnitude of problems and the environmental impact encountered.	GBP-CAP-01 and for Columbia SWP-CAP-01, provide requirements for implementing actions appropriate to the problem.
The organization shall incorporate any necessary changes to EMS documentation (such as procedures) resulting from preventive and corrective action.	GBP-CAP-01 requires AR-CRs involving corrective and preventive actions to be dispositioned in accordance with SWP-CAP series for developing and reviewing action for procedure changes.
The organization should have a system to track key corrective and preventive actions to closure.	GBP-CAP-01 provides for tracking AR-CR actions.

9.16 Compliance Assurance (Evaluation of Compliance) (Clause 4.5.2)

GBP-ENV-12, Environmental Compliance Assessments, provides requirements and guidance for periodically assessing the performance of Energy Northwest and its contractors with regard to applicable environmental requirements.

Assessments include self-assessments conducted by line organizations (e.g., Columbia, Maintenance, Chemistry), programmatic assessments (e.g., evaluations by E&RP of corporate compliance with environmental permit requirements), and monitoring of contractor compliance. Under SWP-ASU-01, Evaluation of Programs, Processes and Suppliers, the Radiological Environmental Monitoring Program (REMP), NPDES program, and radiological effluents requirements (all of which are considered "license-based" programs covered under 10 CFR 50 Appendix B, which is NRC's comprehensive quality assurance program) are audited every two years for compliance to regulatory requirements. Under SWP-ASU-02, Self-Assessment and Benchmark Process, management walkthroughs of Columbia are conducted to observe work practices, and are documented in an Observation Log.

GBP-ENV-12 states that the responsible line manager, department manager, and E&RP Supervisor are informed of environmental issues that may affect regulatory or permit compliance or environmental aspects identified in GBP-ENV-09.

PPM 1.4.7, Control of Supplemental Personnel, and the User's Guide to Contracting discuss requirements for monitoring contractor performance.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
The organization should have a program to proactively identify and resolve potential compliance problems.	GBP-ENV-12, Environmental Compliance Assessments, establishes the corporate compliance assessment program, which includes scope and frequency of assessments. SWP-ASU-02 establishes requirements for management walkthroughs at Columbia.
The organization shall establish, implement and maintain procedure(s) for periodically evaluating compliance with applicable legal environmental requirements.	GBP-ENV-12, Environmental Compliance Assessments GBP-ENV-04, Managing Regulated Waste GBP-ENV-05, Chemical Management
The organization shall also evaluate conformance with voluntary commitments to which it subscribes. (NOTE: These evaluations may be combined or a separate procedure(s) may be established.)	GBP-ENV-12, Environmental Compliance Assessments
The organization shall keep records of the results of the periodic evaluations.	GBP-ENV-12 provides requirements for documenting assessments.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
The organization should also monitor the performance of its contractors with regard to legal requirements, and applicable requirements of the EMS.	The scope of GBP-ENV-12 requires monitoring of contractor compliance with applicable requirements. The User's Guide to Contracting requires that the Technical Representatives monitor the contractor's performance, relative to environmental requirements contained in contract clauses and statements of work.

9.17 Internal EMS Audit (Clause 4.5.5)

EMS audit requirements are documented in GBP-ASU-02, EMS Audits. This procedure addresses auditing the EMS to determine whether it conforms to planned arrangements, including the requirements of the EMS Model, and determining whether it has been properly implemented and maintained. It addresses responsibilities, scope, frequency, requirements, team selection and qualifications, documentation of audit results, and corrective action.

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.

The organization shall ensure that internal EMS audits are conducted at planned intervals in order to:
• *determine whether the EMS:*
  ○ *conforms to planned arrangements for environmental management including the requirements of the EMS; and*
  ○ *has been properly implemented and is being maintained;*
• *provide information on the results of audits to management.*
	GBP-ASU-02 discusses purpose and scope, addresses providing information on results to management, and notes that audit results are used to evaluate whether adjustments to objective and targets are warranted.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
The audit program shall be planned, established, implemented and maintained, taking into consideration the environmental importance of the operation(s) concerned and the results of previous audits. The periodic assessment need not cover the entire EMS, so long as the program ensures all organizational units and functions, system elements and the full scope of the EMS are audited periodically. *<u>NOTE</u>: Planning the scope of the internal EMS audit should take into account and/or be coordinated with EMS assessment requirements contained in the Washington State Department of Ecology EMS Alternative to Pollution Prevention Planning, February 1997 (i.e., annual assessment of the following elements: pollution prevention, objectives and targets, responsibilities and resources, and training).*	GBP-ASU-02 addresses audit scope and frequency. EMS audits are included on the long range schedule.
The audit program shall be planned, established, implemented and maintained by the organization, taking into consideration the environmental importance of the activity concerned and the results of previous audits.	GBP-ASU-02 indicates that audit scope and frequency shall be based on consideration of past performance and the environmental importance of the activity.
The audit procedure(s) shall be established, implemented and maintained that address the following: • *determination of audit criteria, scope, frequency and methods; and* • *responsibilities and requirements for planning and conducting audits, reporting results, and retaining associated records.*	GBP-ASU-02 addresses responsibilities, scope and frequency, requirements, and documentation of results.
Selection of auditors and conduct of audits should ensure objectivity and the impartiality of the audit process. Audit teams may be augmented with technical experts as appropriate to ensure audit reliability, and may be performed by either third party or internal resources.	GBP-ASU-02 addresses EMS audit team selection and qualification.

9.18 Management Review (Clause 4.6)

GBP-ENV-11, Environmental Management Review describes the management review requirements. The EMS Management Representative, with assistance from the EMS Coordinator, EMS Representatives and the other management system owners, has prime responsibility for collecting, compiling, and presenting the required information to senior management to enable them to carry out this evaluation.

EMS REQUIREMENT	**RELEVANT PROCEDURES, ETC.**
Top management shall, at intervals that it determines, review the EMS to ensure its continuing suitability, adequacy and effectiveness. Reviews shall include assessing opportunities for improvement and the need for changes to the EMS, including the environmental policy and environmental objectives and targets.	GBP-ENV-11
Inputs to management reviews shall include: • *results of internal audits and evaluation of compliance with legal requirements, and evaluation of conformance with voluntary commitments;* • *communication from external stakeholders, including complaints;* • *environmental performance;* • *the extent to which objectives and targets have been met;* • *status of corrective and preventive actions;* • *follow-up actions from previous EMS management reviews;* • *changing circumstances, including developments in requirements related to its environmental aspects; and* • *recommendations for improvement*	GBP-ENV-11
The management review may also address: • *results from any benchmarking conducted to compare its environmental operations and EMS with other organizations and management standards, where appropriate;* • *stakeholder expectations;* • *the adequacy or resources assigned to EMS programs.*	GBP-ENV-11

EMS REQUIREMENT	RELEVANT PROCEDURES, ETC.
The output from the management review shall include minutes of the review and any decisions and actions related to the possible need for changes to policy, objectives and targets, and other elements of the EMS, consistent with the commitment to continual improvement.	GBP-ENV-11
Records of management reviews shall be retained.	GBP-ENV-11

10.0 REFERENCES

10.1 Policy Statements Manual (PSM)

- PSM-5.7, Environmental Stewardship Policy
- PSM-6.11, Training - Qualifications

10.2 General Business Procedure (GBP) for all Projects

- GBP-PRO-01, Manual Control
- GBP-DOC-01, Document Control
- GBP-CAP-01, Corrective Action Program
- GBP-AM-02, Energy Northwest Strategic and Business (Excellence) Planning
- GBP-REC-01, Records Management
- GBP-HR-14, Employee Recognition and Awards
- GBP-HR-18, Performance Improvement
- GBP-HR-20, Performance Planning/Appraisal
- GBP-HR-28, Management, Training, Leadership, and Development
- GBP-HR-44, Management and Generic Sector Training
- GBP-PUR-02, Procurement
- GBP-ENV-01, Displaced, Distressed, or Dead Wildlife Program
- GBP-ENV-02, Noxious Weed Control Program
- GBP-ENV-03, Compliance with the State Environmental Policy Act (SEPA)
- GBP-ENV-04, Managing Regulated Waste
- GBP-ENV-05, Chemical Management
- GBP-ENV-06, Water Resources and Liquid Effluents
- GBP-ENV-07, Air Quality
- GBP-ENV-08, Resource Protection
- GBP-ENV-09, Environmental Aspects Identification
- GBP-ENV-10, Environmental Management System Communications
- GBP-ENV-11, Environmental Management Review
- GBP-ENV-12, Environmental Compliance Assessments
- GBP-EPP-02, Environmental Emergency Preparedness
- GBP-ENV-13, Environmental Performance Measurement
- GBP-ENV-14, Work Planning and Control for Environmental Aspects
- GBP-ASU-02, EMS Audits
- GBP-ENV-15, Pollution Prevention Program Description

- GBP-REG-01, Regulatory Requirements Review
- GBP-COM-01, Preparation of Documents for Submittal to the Executive Board/Board of Directors
- GBP-COM-06, Chief Executive Officer Event Notification
- GBP-COM-02, Developing Content for Communications Vehicles

10.3 Site-Wide Procedures (SWP) for Columbia

- SWP-ASU-01, Evaluation of Programs, Processes and Suppliers
- SWP-ASU-02, Self Assessment and Benchmark Process
- SWP-CAP-01, Corrective Action Program
- SWP-CAP-05, Corrective Action Review Board
- SWP-CAP-06, Condition Review Group (CRG)
- SWP-CAP-07, Trending Program
- SWP-CAP-08, Stop Work Authority
- SWP-CHE-02, Chemical Process Management and Control
- SWP-CHE-05, Chemical Management Program
- SWP-DOC-01, Document Control
- SWP-ENV-01, Refrigeration Management Program
- SWP-ENV-02, Oil and Hazardous Substances Spill Prevention, Control and Counter-Measure Plan
- SWP-ENV-03, Managing Regulated Waste
- SWP-ENV-04, Cultural Resource Protection Program
- SWP-ENV-05, Wildlife Response Program
- SWP-MAI-01, Work Management Process Overview
- SWP-ORG-01, Organizational Changes
- SWP-PRO-01, Procedure Use and Adherence
- SWP-PRO-02, Preparation, Review, Approval, and Distribution of Procedures
- SWP-PRO-03, Procedure Writer's Manual
- SWP-PRO-04, Procedure Program – Including Procedures, Instructions, Forms and Manuals
- SWP-PUR-01, Procurement of Services
- SWP-PUR-04, Material, Equipment, Parts and Supplies Procurement
- SWP-REC-01, Records Management
- SWP-RMP-02, Radioactive Waste Process Control Program
- SWP-RPP-01, Radiation Protection Program

10.4 Organization Level Procedures (Not all inclusive - these are examples or procedures specifically referenced in this EMS Manual, as applicable to the referenced Project)

- ABN-HAZMAT, Hazardous Materials Spills/Releases
- Nine Canyon Wind Project Avian and Bat Incidental Monitoring
- CI-9.1, Chemical Hygiene Plan
- FCEI-3.1.3, Columbia Generating Station Site and Facility Weed Control
- FCEI-1.1.15, Facilities and Commercial Engineering Hazardous Substance Spill Prevention, Preparedness and Countermeasures

- FCEI-1.1.17, Chemical/Regulated Waste Management for Electricians
- FCEI-1.1.18, Chemical/Regulated Waste Management for Technicians
- FCEI-1.1.19, Chemical/Regulated Waste Management for Paints and Coatings
- FCEI-1.1.20, Chemical/Regulated Waste Management for Vehicle Maintenance
- FCEI-2.1.8, Engineering Guidelines for Work Planning, Documentation, and Closure
- FCEI-3.1.10, Environmental Management in the Work Planning Process
- FCEI-3.1.13, Control of the Equipment and Material Storage and Waste Recycling Areas
- FCEI-3.1.11, Operation of the CGS Inert Waste Landfill
- DES-2-1, Plant Design Changes
- DES-2-7, Minor Plant Design Change
- PJM-2-1, Project Teams
- Desk Procedure, Data Entry for Environmental Management System Public Inquiry Log
- Volume 13, Emergency Plan Implementing Procedures (EPIPs)
- EBSI-2.5, Generation Project Development Checklist, Energy and Business Services
- RPI-8.0, Processing of Regulatory and Industry Correspondence
- RPI-12.0, Review and Management of Legal and Other Requirements
- RPI-20.0, Environmental Program Description
- RPI-25.0, Waste Shipping Procedure
- RPI-26.0, Waste Designation
- GEN-TQS-01, Training Program Administration

10.5 Plant Procedures Manual (PPM) for Columbia

- PPM 1.3.1, Operating Policies, Programs and Practices
- PPM 1.3.56, Conduct of Maintenance
- PPM 1.3.58, Conduct of Chemistry
- PPM 1.3.68, Work Management Process
- PPM 1.3.76, Integrated Risk Management
- PPM 1.4.7, Control of Supplemental Personnel
- PPM 1.10.1, Notification and Reportable Events - identifies the non-routine reporting requirements
- PPM 1.11.1, Radiological Environmental Monitoring Program (REMP) Implementation Procedure
- PPM 1.14.5, NPDES Permit Compliance - identifies requirements and assigns responsibilities
- PPM 10.2.32, Soil Excavation, Backfill and Compaction
- PPM 12.2.9, Circulating and Plant Service Water Halogenation Surveillance - includes blowdown approval sequence
- PPM 12.14.1, Chemical Treatment of Standby Service Water - includes precautions re: permit compliance for chemical treatment
- PPM 12.14.3, Circulating Water - Corrosion Inhibitor Addition - identifies pH limits re: corrosion control
- PPM 17.1.1, Sampling of Hazardous Substances
- PPM 17.1.2, Regulated Waste and Chemical Product Management at 437' Radwaste

10.6 Manuals, Program Plans and Guides as applicable to the referenced Project

- EMS-01, Environmental Management System Program Description (this document)
- Asset Suite Planners Guide
- Credit Card User's Guide
- User's Guide to Contracting
- Packwood Lake Hydroelectric Project Emergency Instructions
- Industrial Safety Procedures Manual (ISPM)
- Columbia Inert Landfill Plan of Operation
- Columbia Inert Landfill Post-Closure Plan
- IDC Inert Landfill Plan of Operation
- IDC Inert Landfill Closure Plan

10.7 Other for all Projects

- Contractor Brochure
- EMS and You Brochure
- Energy Northwest Composite EMS Model, Attachment 11.7 of EMS-01
- General Provisions for Consultant and Technical Services
- General Provisions for Purchase Orders
- Invitation for Bid
- ISO 14001:2004, Environmental Management Systems - Specifications with Guidance for Use
- Environmental Objective Implementation Plans
- OER INPO SOER 07.2, Intake Cooling Water Blockage {AR 176583}

11.0 ATTACHMENTS

11.1 EMS Roles, Responsibilities and Authorities

11.2 Operational Control/Environmental Management Programs

11.3 Facilities at Columbia Generating Station

11.4 Energy Northwest Facilities Locations

11.5 Regulatory Agencies

11.6 Environmental Documents and Records

11.7 Energy Northwest Composite Environmental Management System (EMS) Model

EMS ROLES, RESPONSIBILITIES AND AUTHORITIES

As indicated in the Environmental Stewardship Policy, everyone at Energy Northwest has a role to play in the EMS. This section defines the roles and responsibilities associated with EMS development and implementation. Roles and responsibilities associated with maintenance and continual improvement of the EMS (and with specific positions, such as the supervisor of E&RP, other supervisory positions, subject matter experts, etc.) should be evaluated and further defined during annual EMS reviews.

Roles described below include:

- Chief Executive Officer
- Executive Board
- Vice Presidents
- Vice President Employee Development / Corporate Services
- E&RP Supervisor / EMS Management Representative
- Line Organizations
- Support Organizations
- EMS Representatives
- EMS Coordinator
- Employees
- Contractors

CHIEF EXECUTIVE OFFICER (CEO)

The CEO should be knowledgeable and committed to successful implementation of the EMS. The CEO's responsibilities include:

- Expressing Energy Northwest's commitment to the environment by developing and issuing the environmental policy.
- Developing (with input from staff) overall organizational environmental stewardship goals and priorities.
- Providing adequate financial resources for the development and implementation of the EMS, or requiring that these resources be planned for and requested.
- Clearly identifying expectations and incorporating EMS requirements and environmental performance in the evaluation criteria for organizational units and senior managers, as appropriate.
- Appointing and releasing employees as EMS Representatives responsible within EN organizations for assuring the EMS is effectively and efficiently integrated into their organizations.
- Considering potential environmental impacts of past, present, and future operations, in decision-making, and ensuring that overall organizational activities and plans are in line with the environmental policy.
- Periodically formally reviewing EMS progress, performance data, and the EMS itself to ensure continued suitability, adequacy, and effectiveness of the EMS, and ensuring that resources are provided for improvement as necessary.
- Communicating with external stakeholders on Energy Northwest's environmental goals, priorities, and policy commitments.

EXECUTIVE BOARD

The Executive Board also needs to be aware and supportive of the EMS. Their responsibilities include:

- Periodically reviewing environmental performance of Energy Northwest.
- Considering the commitments in the environmental policy and potential environmental impacts of past, present, and future operations in decision-making.

VICE PRESIDENTS

Vice Presidents are responsible for the implementation and integration of the EMS within their organizations. In general, the responsibilities of the vice presidents include:

- Issuing supportive communication and guidance on the EMS
- Implementation within their organization.
- Assigning sufficient resources to implement, maintain, and improve the EMS by integrating applicable requirements into activities across their organization.
- Clearly identifying expectations and incorporating EMS requirements and environmental performance into the evaluation criteria for organizational units and staff, as appropriate.
- Designating employees for appointment by the CEO to serve as EMS Representatives (to coordinate implementation of the corporate EMS within their own organization), and ensuring they have the time, resources, and authority to make decisions for the line organization.
- Ensuring design, development, modification, and improvement of existing programs and procedures that they manage in order to support the applicable requirements of the EMS and conformance to the composite EMS model.
- Ensuring the implementation, maintenance, and improvement of the EMS within their own organization including integrating applicable requirements into the activities, products and services with significant environmental aspects across their organization.
- Ensuring the collection of environmental performance and project controls information for their organization and reporting this information to the EMS Management Representative.
- Ensuring establishment and achievement of Energy Northwest environmental objectives and targets related to their activities.
- Considering the commitments in the environmental policy, and potential environmental impacts of past, present, and future operations in decision-making.

VICE PRESIDENT OF EMPLOYEE DEVELOPMENT / CORPORATE SERVICES

In addition to the responsibilities of all Vice Presidents, the Vice President of Employee Development / Corporate Services, as the vice president of the organization managing the EMS program, is the senior management sponsor for the EMS and is ultimately responsible for EMS program implementation and maintenance of its infrastructure, including:

- Accountability to the chief executive officer for ensuring that the environmental policy is implemented and the EMS is maintained.
- Providing oversight, guidance and assistance, including the assignment of sufficient resources, to the EMS to ensure project objectives are accomplished.
- Issuing communication and information on the EMS development and implementation.

EMS MANAGEMENT REPRESENTATIVE

The Supervisor, E&RP, is the EMS Management Representative and is ultimately responsible for EMS implementation and maintenance, including:

- Reporting to CEO and senior management on the overall performance of the EMS, environmental performance, project progress, and making recommendations for enhancements.
- Reporting periodically to the Executive Board as directed by management.

LINE ORGANIZATIONS

The management and staff of the line organizations are responsible for ensuring that the EMS is effectively integrated into their operations, including:

- Implementing, maintaining and improving the EMS within their organization in alignment with the corporate EMS, including developing and implementing specific, assigned, and tracked actions in support of the Environmental Excellence Plan.
- Supporting their EMS Representatives and ensuring they have the time, resources, and authority to make decisions for their organization.
- Through their EMS Representative, participating in EMS project planning and coordination meetings, and providing input to the EMS program.
- Teaming with the EMS Coordinator and their EMS Representative to integrate EMS requirements into their management systems and existing/new/modified/enhanced programs.
- Implementing pollution prevention opportunities and preventing environmental impacts from their activities.

SUPPORT ORGANIZATIONS

E&RP has key environmental management responsibilities. Facilities and Commercial Engineering, Construction and Project Management, the Chemistry Department, and Maintenance also have significant responsibilities in the environmental arena for Columbia. The APEL and IDC also have staff that provides varying degrees of oversight on environmental issues with support from E&RP for their respective Projects.

A number of support organizations own programs or systems (e.g., training, quality, etc.) that are closely intertwined with and critical to the EMS. The management and staff of these support organizations are responsible for ensuring that the EMS is effectively integrated into their programs/systems, including:

- Assigning sufficient resources, and teaming with the EMS Coordinator to implement, maintain, and improve the EMS by integrating applicable requirements into activities across their organizations. This may include developing/modifying/enhancing systems, procedures, plans, programs, and operations to conform to the requirements of the composite EMS model, and committing to specific, assigned, and tracked actions in support of the Environmental Excellence Plan.
- Supporting their EMS Representatives and ensuring they have the time, resources, and authority to make decisions for their organization.
- Through their EMS Representative, participating in EMS project planning and coordination meetings, and providing input to the EMS program.

Specific environmental responsibilities for key organizations are described below.

- Document & Data Services (Employee Development/Corporate Services) - Developing, enhancing, and modifying the supporting systems used to identify, control, manage, retain, and disposition environmental documents and records in accordance with the composite EMS model.
- Maintenance (Nuclear Generation) - Hazardous waste management and refrigerant management for Columbia.
- Chemistry (Nuclear Generation) – Owning the Chemical Management Program at Columbia. Developing, enhancing, and modifying the chemical control program for application at Columbia. Applying the pollution prevention hierarchy to chemical management. National Pollutant Discharge Elimination System (NPDES) permit compliance for Columbia.
- Public Affairs (CEO) - Coordinating communication with internal and external stakeholders on the EMS, environmental issues, and performance, as well as maintaining records of the receipt and responses to communications from external interested parties.
- Facilities & Commercial Engineering (Employee Development/Corporate Services) - Solid waste management, hazardous waste management, pesticide application, and refrigerant management for all Projects.
- Organizational Effectiveness (Nuclear Generation) - Responsible for developing and providing high quality, cost-effective leadership, employee and organization development services. Includes Industrial Safety, which owns the Hazard Communication Program.

- Corrective Action Program (Nuclear Generation) - Assisting in the development and analysis of nonconformance reporting, corrective action, and preventive action planning processes.
- Emergency Preparedness (Nuclear Generation) - Ensuring that emergency preparedness and response procedures and plans meet the requirements of the composite EMS model, including making necessary modifications to procedures and programs, and conducting drills.
- Environmental and Regulatory Programs (Employee Development/Corporate Services) – Provides corporate level guidance on management of environmental programs and oversight of EN organizations conformance to environmental regulatory requirements, EMS standards, and voluntary commitments. Coordinates hazardous waste management, chemical management, and pollution prevention planning. Develops procedures for identifying, monitoring and analyzing environmental requirements and for compliance assurance. Has the lead for securing environmental permits and licenses and interfacing with the regulators. Provides support for any needed modification to monitoring and measurement procedures needed to conform to the composite EMS model. Provides programmatic management of the EMS and implements an Environmental Excellence Plan.
- Environmental Services (Energy/Business Services) - Performs such services as chemical hygiene, environmental sampling, laboratory analysis, and sanitary wastewater treatment system operation. Environmental monitoring programs (radiological and terrestrial programs) are also conducted by the Environmental Services department.
- Finance (CFO) - Assisting with the integration of the requirements in the EMS model for objectives, targets, and feedback from the management review process into planning processes. Ensuring that the planning process considers resources needed for EMS development, implementation and maintenance.
- Human Resources (Employee Development/Corporate Services) - Incorporating EMS model requirements for documenting roles, responsibilities, accountabilities, and authorities into position descriptions, performance appraisals, and recognition or disciplinary processes. Teaming with the EMS Coordinator to develop/enhance employee involvement programs.
- Maintenance Work Planning and Construction & Project Management (Nuclear Generation); Facilities & Commercial Engineering (Employee Development/Corporate Services) - Developing a work planning process that considers requirements and environmental hazards and ensuring that necessary and sufficient operational controls (both administrative and engineered) are put into place for Columbia.
- O&M/Professional Services (Energy/Business Services) - Ensuring a graded incorporation of EMS model requirements into all operating electrical generation projects other than Columbia Generating Station (e.g., Nine Canyon, Packwood)
- Supply Chain Services (Employee Development/Corporate Services) - Incorporating EMS model requirements applicable to contractors and suppliers of goods and services into procurement procedures and programs.
- Quality Services (Nuclear Generation) - Assisting in the incorporation of EMS auditing, compliance assurance, and management review requirements from the composite EMS model into existing self-assessment and/or auditing programs/procedures.
- Training (Nuclear Generation) - Developing/modifying the training program infrastructure to support the identification, delivery, and tracking of environmental training and qualification requirements for managers, employees, and contractors.

EMS REPRESENTATIVES

As the lead for implementation of the EMS within their organizations, the EMS Representatives are responsible for ensuring the EMS is integrated into their organizations' activities effectively and efficiently. Depending on the activities, the organization may have its own EMS Representative, may share an EMS Representative with a similar organization, or may just have a point of contact to provide or receive input. EMS Representatives are listed on the EN EMS website. EN employees are formally appointed and released as EMS Representatives by the CEO.

EMS representatives are specifically responsible for:

- Serving as a communication link for EMS information between their line organizations, other EMS Representatives and the following:
  - Public Affairs
  - EMS Coordinator – E&RP
  - EMS Management Representative – Supervisor, E&RP

  Related requirement: GBP-ENV-10 (Environmental Management System Communications)

- Leading, coordinating, and facilitating the effective implementation and maintenance of the EMS within their assigned organizations according to the EMS technical program requirements. This includes development of action plans and goals specific to their organizations' environmental objectives, targets and performance indicators.

- Periodically collecting and reporting information on EMS maintenance (including status, issues and corrective actions) and environmental performance within their assigned organizations to their senior management and the EMS Coordinator.
  Related requirement: GBP-ENV-13 (Environmental Performance Measurement)

- Supporting the performance of self-assessments for activities led by E&RP in their organizations associated with environmental regulatory compliance and voluntary commitments (identified in Regulatory Program Instruction - RPI-12.0).
  Related requirement: GBP-ENV-12 (Environmental Compliance Assessments)

- Assisting and coordinating the identification and implementation of pollution prevention opportunities for activities within their assigned organizations.
  Related requirement: GBP-ENV-15 (Pollution Prevention Program Description)

- Performing annual reviews of activities within their assigned organizations and updating associated environmental aspects if required.
  Related requirement: GBP-ENV-09 (Environmental Aspects Identification)

- Attending periodic EMS Representative Meetings chaired by the EMS Coordinator.

- Assisting, as needed, with internal EMS audits and external ISO 14001 registration and surveillance audits.
  Related requirement: GBP-ASU-02 (EMS Audits)

EMS COORDINATOR

The EMS Coordinator is responsible for the day-to-day coordination and implementation of the EMS, including:

- Chairing and managing the EMS Representatives committee.
- Providing technical assistance to line and support organizations and facilitating implementation of the EMS throughout Energy Northwest.
- Proposal of environmental objectives and targets implemented in the Environmental Excellence Plan.
- Periodically compiling information on EMS implementation progress (including status, issues and corrective actions) and environmental performance.
- Assisting the EMS Management Representative with coordination of the EMS management review.
- Arranging for, coordinating, and supporting EMS audits, including ISO 14001 registration/surveillance audits and maintenance of EMS registration status.
- Tracking closure of EMS audit findings, and raising concerns or issues with management as necessary.

EMPLOYEES

All employees within Energy Northwest have a role to play in the EMS (including those described in GBP-HR-18, Performance Improvement), including:

- Being aware of the Energy Northwest environmental stewardship policy.
- Following all environmental requirements of the EMS that are applicable to their work.
- Understanding their roles and responsibilities in the EMS, including emergency preparedness and response requirements.
- Understanding how their actions may impact (positively or negatively) the environment and considering the environment when making decisions.
- Proactively working to improve the environmental performance of Energy Northwest within their own areas of responsibility, including suggesting ways to reduce waste and conserve resources, and participating in corporate pollution prevention and recycling programs.

CONTRACTORS

All contractors working for or on behalf of Energy Northwest whose work can have a significant negative impact on the environment, have a role to play in the EMS, including:

- Being aware of the Energy Northwest environmental stewardship policy.
- Following all environmental requirements of the EMS that are applicable to their work.
- Understanding their roles and responsibilities in the EMS, including emergency preparedness and response requirements.
- Understanding how their actions may impact (positively or negatively) the environment and considering the environment when making decisions.

END

Attachment 11.1, EMS Roles, Responsibilities and Authorities

OPERATIONAL CONTROL/ENVIRONMENTAL MANAGEMENT PROGRAMS

As discussed under the EMS element Environmental Aspects, Energy Northwest has identified the following significant environmental aspects. Programs/operational controls in place to manage these aspects are described below. There is also an environmental monitoring program that covers a variety of aspects.

- Air emissions (see Air Emissions, Asbestos, and Refrigerants)
- Liquid effluents (see Industrial Wastewater, Sanitary Wastewater)
- Storage and use of hazardous materials (see Chemical Control, Community Right-to-Know, PCBs, Emergency Spill Preparedness and Response, and Pollution Prevention)
- Waste generation (see Solid Waste, Hazardous [Dangerous] Waste, Mixed Waste, Radioactive Waste and Pollution Prevention)
- Land use (see Land Use)
- Community outreach
- Generation of carbon-free energy

AIR EMISSIONS, ASBESTOS, AND REFRIGERANTS (Aspects: Air Emissions, Waste Generation)

Auxiliary boiler and diesel engine exhausts at Columbia are covered by the SCA and EFSEC Order No. 672. The terms of the order, issued in 1996, limit fuel consumption on an annual basis and require submittal of an annual report of diesel fuel consumed. Annual source re-registration for Columbia is also required in accordance with Washington Administrative Code (WAC) 463-78. Air emissions from the Columbia paint/blast shop are covered by EFSEC Order No. 837.

Maintenance activities occasionally involve the removal of asbestos material. As may be required by the anticipated scope, EN Industrial Safety or contractors provide notifications to the Benton Clean Air Agency (BCAA). Except for disposal issues, these activities are viewed more from a personnel safety perspective than from an environmental perspective. Procedure SWP-OSH-06, Asbestos Operations and Maintenance Program, describes the specific requirements for maintenance activities at Columbia.

Ozone depleting refrigerants are addressed through the refrigeration management program. Mechanics in Columbia Maintenance and Facilities & Commercial Engineering that work on refrigeration equipment are certified to the appropriate level. Refrigeration Technicians and their Craft Supervisor maintain accurate inventories of equipment and refrigerant stocks and maintain records of leak rates and repairs. Refrigerant storage is consolidated in Building No. 72 (coordinates N10400, W0450). Procedure SWP-ENV-01, Refrigeration Management Program, describes the programmatic controls.

INDUSTRIAL WASTEWATER (Aspect: Liquid Effluents)

Discharges from Columbia Generating Station are controlled by the station's NPDES permit (No. WA-002515-1). The permit was renewed by EFSEC for a five-year term on May 26, 2006. EFSEC extended the expiration date of the existing permit on May 17, 2011. The permit specifies three outfalls.

1. Outfall 001 (coordinates N12080, E16520) is in the Columbia River at river mile 351. Cooling water blow down averaging about two million gallons/day is discharged at this location. The permit specifies limits for total copper, zinc, and chromium, total residual halogen (chlorine and bromine), flow, temperature, turbidity and pH.
2. Outfall 002 (coordinates N12600, W0320) is a storm water outfall to an unlined pond located about 1500 feet northeast of the reactor building. In addition to storm water, the outfall receives water from potable water filter backwashes and miscellaneous equipment flushes and drainings. Flow to the pond averages between 20 and 25 gallons per minute. The permit specifies 24-hr composite samples twice a year but imposes no limits on discharges. The samples are tested for metals, fluoride, nitrate, chloride, sulfate, total dissolved solids, pH and conductivity.
3. Outfall 003 (coordinates N10500, W0045) is a six-inch pipe discharging to a trench located about 1300 feet southeast of the reactor building. It historically received batch releases (about 16,000 gallon each) of backwash water from a side stream filter on the standby service water system. The filter was historically backwashed one to three times per week between early May and late October. The permit requires monitoring the effluent and the groundwater at Outfall 003 for lead. Outfall 003 has not had a discharge since 2003.

Plant Operations has primary responsibility for assuring compliance with the Columbia NPDES permit. Plant Chemistry oversees the chemical additions. Plant procedures related to permit compliance include:

SOP-CW-OPS	Circulating Water and Cooling Towers Operation
SOP-CW-CHEM	Circulating Water and Cooling Towers Chemistry
PPM 1.14.5	NPDES Permit Compliance - identifies requirements and assigns responsibilities
PPM 1.10.1	Notifications and Reportable Events - identifies non-routine reporting requirements
SWP-CHE-02	Chemical Process Management and Control - identifies NPDES permit effluent limitations
PPM 12.2.9	Circulating and Plant Service Water Halogenation Surveillance - includes blow down approval sequence
PPM 12.14.3	Circulating Water - Corrosion Inhibitor Addition - identifies pH limits re: corrosion control
PPM 16.9.1	Plant BLOWDOWN DISCHARGE Line Flow Rate – CFT/cc – provides calibration instructions for flow rate monitor CBD-FT-10.

Environmental Services collects and analyzes samples required at Outfalls 002 and 003. They also sample and analyze the circulating water (CW) for copper and other parameters monthly per the monitoring requirements for Outfall 001. Environmental Services also conducts special studies required by the NPDES permit. Environmental Services compiles the routine discharge monitoring reports and provides them to Environmental and Regulatory Programs (E&RP) for plant management signature. The Environmental Services laboratory is accredited (per WAC 173-50) by the WDOE.

E&RP takes the lead in preparing environmental permit applications and all non-routine submittals (e.g., noncompliance reports, study plans). E&RP also provides the primary interface with regulators.

Energy Northwest also holds an industrial wastewater discharge permit for APEL. Permit conditions relative to submittal of plans for solid waste management and spill preparedness are in effect. The Industrial Wastewater Discharge Permit (CR-IU006) issued to APEL by the City of Richland has been in effect since March 1998. The permit specifies monitoring requirements and effluent limitations.

SANITARY WASTEWATER (Aspect: Liquid Effluents)

Sanitary wastes from Columbia, IDC, and the support facilities are piped to a sanitary waste treatment facility (SWTF) that uses aeration lagoons and facultative stabilization ponds. This wastewater treatment facility is located about 1/2 mile southeast of Columbia. The treatment facility also receives wastewater from the USDOE 400 Area located about 2-1/2 miles south-southwest of Columbia. Influent averages about 20,000 gallons per day (gpd) (including 1,000 gpd from the 400 Area), with the higher flows being coincident with the maintenance and refueling outages at Columbia. When the stabilization ponds are full, treated wastewater is discharged to percolation beds. These discharges are made one or two times per year in accordance with the conditions of an EFSEC resolution (No. 300, September 2001) that prescribes the discharge limits and the monitoring and reporting requirements.

The SWTF is operated by a certified operator in the Environmental Services department. Most of the wastewater analyses are performed by Environmental Services. Environmental Services also compiles the monthly monitoring reports for E&RP to submit to EFSEC on a quarterly basis.

CHEMICAL MANAGEMENT (Aspect: Hazardous materials use and storage)

Chemical Management, GBP-ENV-05, establishes the requirements for implementing all aspects of chemical management at all Energy Northwest business unit sites and projects. GBP-ENV-05, Chemical Management, provides requirements for the evaluation, procurement, receipt, storage, use and disposal of non-radioactive chemical materials. The Chemical Management Program, SWP-CHE-05, establishes further requirements for implementing all aspects of chemical management at Columbia. These aspects include chemical material procurement, receipt, warehousing, labeling, distribution, storage, periodic inspection and review, and transition into waste management. Duties and responsibilities for new chemical authorization, chemical material access into critical areas, and the labeling requirements extending to all Columbia areas is covered in SWP-CHE-05, Chemical Management Program.

E&RP provides corporate level programmatic guidance and oversight for the Chemical Management program. Implementation of chemical management at Columbia is managed by the Chemistry Department.

Chemical Management at other Business Units and Projects is specified by the E/BS business sector manager or their assigned delegate in accordance with GBP-ENV-05.

COMMUNITY-RIGHT-TO-KNOW (Aspect: Hazardous materials use and storage)

Hazardous materials inventories (Emergency Planning and Community Right-To-Know Act, Tier II Reports) are prepared by staff at Columbia, IDC, and APEL each year for submittal to state and local authorities by March 1. Submittal is coordinated by E&RP.

POLYCHLORINATED BIPHENYLS (PCBS) (Aspects: Hazardous materials use and storage, Waste generation)

To reduce exposure to PCB issues, EN undertook a transformer retro-fill program at Columbia in 1988. When the project was completed in 1994, the station had converted four PCB-contaminated (mineral oil) transformers and eleven (11) PCB (Askarel) transformers to non-PCB (<50 PPM). The last PCB or PCB-contaminated transformer at the site, a small 10-kVA neutral grounding transformer on the High Pressure Core Spray diesel generator, was removed in August 2001. The only PCB materials regulated under 40 CFR Part 761 remaining onsite are in lighting ballasts and capacitors. Energy Northwest disposes of non-leaking small PCB capacitors and light ballasts in regulated hazardous waste landfills.

If necessary, E&RP prepares an annual document log for the file as required by 40 CFR §761.180. Relevant procedural guidance is in SWP-ENV-02, Oil and Hazardous Substances Spill, Prevention, Control, Counter-Measure Plan, and in SWP-ENV-03, Managing Regulated Waste.

EMERGENCY AND SPILL PREPAREDNESS AND RESPONSE (Aspects: Hazardous materials use and storage, waste generation)

The Control Room is established as a focal point for reporting spills at Columbia Generating Station. The Shift Manager/Control Room Supervisor serves as the on-duty emergency coordinator. The primary initial responders for emergency situations are the Plant Fire Brigade members, with backup from the Hanford Fire Department. E&RP provides direction for recovery, cleanup and disposal of spill residues. Initial external reports are by the Control Room or E&RP. Follow-up reports that may be required by regulators are submitted through Regulatory Affairs.

Columbia Generating Station has an Emergency Preparedness and Response program, as required to maintain compliance with requirements for operating a nuclear power plant. EN has procedures for emergency preparedness and response, and has held drills. The spill plan (SWP-ENV-02, Oil and Hazardous Substances Spill Prevention, Control and Counter-Measure Plan) is referenced in the Dangerous Waste Contingency Plan. This is supplemented by the Corrective Action Program (SWP-CAP-01), which documents any accident or emergency event and ensures corrective and preventive actions are taken. Procedures relevant to spill response are:

SWP-ENV-02	Oil and Hazardous Substances Spill Prevention, Control, and Counter-Measure Plan - this is the principal guidance for spill response
PPM 1.10.1	Notification and Reportable Events - catalogues event-related reports such as for spills and unauthorized releases.
ABN-HAZMAT	Hazardous Materials Spills/Releases - provides operators with quick guidance for immediate actions.

Emergency preparedness and response procedures have been reviewed and revised after drills, and lessons learned have been incorporated.

GBP-EPP-02, Environmental Emergency Preparedness describes planning for and response to industrial emergencies and natural disasters at Energy Northwest facilities. These facilities also have spill prevention, control and countermeasure plans.

Packwood Lake Hydroelectric Project's Emergency Plan covers environmentally related emergency situations such as storm water pollution, forest fire, oil, fuel and hazardous material spills, meteorological, equipment failure, and geological events, as well as plant and equipment fires, safety and first aid emergencies, and man-made emergencies such as bomb threats.

SOLID WASTE DISPOSAL (Aspect: Waste Generation)

Most solid wastes[1] generated at EN facilities on the Hanford Site and in North Richland are collected and taken to the City of Richland municipal landfill by EN Facilities & Commercial Engineering (F&CE) personnel. The exception is the inert wastes (e.g., cured concrete, asphaltic materials) that are disposed onsite at either Columbia or WNP-1/4. These wastes are managed in accordance with WAC 173-350 Solid Waste Handling Standards. The NPDES permit for Columbia requires the submittal of a Solid Waste Control Plan that describes how solid wastes are managed.

The landfill at Columbia is located in a borrow pit that was opened in about 1974 (coordinates N10400, W2050). Burial of construction and demolition related waste material commenced in 1976. Between the early 1980's and early 1990's other facility-generated waste was also buried in the landfill. The landfill was the subject of a RCRA investigation in 1995 that identified low levels of organic solvents in the groundwater. A five-acre parcel was subsequently closed and capped in April/May 1999. This section of the landfill is inspected quarterly in accordance with the Columbia Generating Station (CGS) Landfill Post-Closure Plan. A small area on the west side of the closed landfill is open to receive inert waste material. A certified landfill operator assigned by F&CE operates the landfill in accordance with the CGS Landfill Plan of Operation.

Another active landfill for inert waste is located on the WNP-4 property. This eight-acre landfill (coordinates N12700, E6000) was first opened in 1982. Only wastes from the WNP-1/4 site are buried there. A special disposal activity that started in late 2000 is the burial of almost 30,000 cubic yards of asbestos cement material from six cooling towers. Approval to dispose of this waste onsite was granted by EFSEC in March 2000 through revisions to the Industrial Development Complex Landfill Plan of Operation. No environmental monitoring is required or conducted at the landfill. Industrial Development personnel are responsible for operating the landfill; however, this function has been delegated to E&RP. Brief annual reports on the disposal activity at both Columbia and WNP-1/4 landfills are submitted to EFSEC by E&RP in accordance with the landfill Plan of Operation. Closure activities will be governed by the IDC Inert Landfill Closure Plan.

[1]The term solid waste in this discussion refers to non-liquid wastes that are not dangerous wastes.

HAZARDOUS (DANGEROUS) WASTE (Aspect: Waste Generation)

EN has a hazardous waste generator ID number for Columbia (WAD980738488). WNP-1 at IDC (WAD061666103) APEL (WAH000004507), Packwood (WAH000019299) and Nine Canyon (WAH000033834) ID numbers are in inactive status. An ID number for the Richland office complex (WAD981767460) was placed in inactive status in late 1997.

Current operations include treatment by generator (corrosive waste-elementary neutralization), hazardous waste transportation (onsite only) in flatbed and enclosed trucks, hazardous and mixed waste accumulation, hazardous waste recycling (e.g., onsite paint waste distillation), and operation of the inert waste landfill described above. Types of materials handled include: organics, oils, solvents, pesticides, chlorinated hydrocarbons, PCB capacitors, radioactive material, water-reactives, inorganic acids/bases, metals, empty drums, contaminated soil, contaminated water, and asbestos. The only waste storage that occurs in tanks is radiological waste; the remainder is stored in drums and other containers.

E&RP provides programmatic guidance, coordinates the hazardous waste management program at Columbia and provides expertise and oversight for other EN sites. The relevant procedures are:

- GBP-ENV-04 Managing Regulated Waste – programmatic procedure for managing regulated waste
- SWP-ENV-03 Managing Regulated Waste (Columbia) - identifies requirements for waste generation, accumulation, and disposal. Includes training and contingency plans.
- PPM 17.1.1 Sampling of Hazardous Substances (Columbia) - provides methods for collecting waste and environmental samples.
- PPM 17.1.2 Chemical and Regulated Waste Management at 437' Radwaste (Columbia) - provides direction for processing wastes out of the power block.
- IDWI 7.05 Hazardous Material Management (IDC) - provides requirements for hazardous material and waste management
- Packwood Lake Hydroelectric Project Regulated Waste Management Instructions - provides regulated waste management requirements.
- APEL 9.0 Waste Management Policy - provides requirements for hazardous waste management.

Columbia is a medium quantity generator (MQG) of hazardous (dangerous) wastes. Other Energy Northwest project sites are typically small quantity generators (SQG) but may periodically qualify as an MQG. Mixed radioactive, hazardous wastes and PCB wastes are discussed in other sections herein. Recurrent waste streams (some of which are recycled) include spent batteries, mercury- and sodium-containing lamps, paint wastes, desiccants, old or out-of-specification reagents, cleaners, adhesives, coatings, and lab wastes. Non-recurrent wastes have included spill clean-up and decommissioned equipment. Other than ubiquitous wastes such as batteries, the organizations generating the preponderance of the wastes are Facilities & Commercial Engineering, Columbia Maintenance, and the Coatings department.

Hazardous wastes are accumulated at designated satellite accumulation areas at various locations at Columbia. Wastes are moved to a 180-day accumulation area located southwest of the station (coordinates N10810, W2530). E&RP performs and documents hazardous waste designations and is responsible for management of the 180-day accumulation areas at Columbia, including inspections and arrangement of offsite shipments for disposal. For several years a vendor has provided transportation and disposal services. E&RP prepares the annual waste generator reports for Columbia.

MIXED WASTE

Columbia generates mixed (radioactive and hazardous) wastes. The designated mixed waste 180-day accumulation area is in the south central portion of the Radwaste Building at the 437' elevation.

E&RP provides oversight to the mixed waste program. Procedural guidance is in PPM 17.1.2, Chemical and Regulated Waste Management at 437' Radwaste and SWP-ENV-03, Managing Regulated Waste.

RADIOACTIVE WASTE (Aspect: Waste generation)

Major objectives of the Radioactive Waste Management Program for Columbia are to limit, control, minimize, and measure the production of radioactive materials in gaseous, liquid, and solid effluents. The program is implemented through approved written procedures including (for the solid waste management portion of the program) the Radioactive Waste Process Control Program (SWP-RMP-02). Controls minimize exposure to onsite personnel and plant systems and equipment and reduces external effluents in support of ALARA principles. These objectives are in accordance with applicable NRC, DOT, and Washington Administrative Code (WAC) regulations in 10 CFR 20, 10 CFR 30, 10 CFR 40, 10 CFR 50, 10 CFR 61, 10 CFR 71, 49 CFR 171 through 49 CFR 180 and WAC 246-249 and 446-50.

The Radioactive Waste Management Program is an integrated program combining the efforts of the Operations, Health Physics, Chemistry, Engineering, Maintenance, Training, Licensing, Security, Procurement, and Quality functional areas. Responsibilities in the various functional areas are identified in SWP-ORG-01, Organizational Changes. The overall responsibility for the Radwaste Management Program lies in the Plant Chemistry Organization. Additional responsibilities are specified for the Health Physics, Operations, Maintenance, and Chemistry areas in SWP-RPP-01, Radioactive Waste Management Program, PPM 1.3.1, Operating Policies, Programs and Practices, PPM 1.3.56, Conduct of Maintenance, and PPM 1.3.58, Conduct of Chemistry, respectively.

POLLUTION PREVENTION (Aspect: Waste generation)

The pollution prevention (P2) program is described in GBP-ENV-15, Pollution Prevention Program Description and is coordinated by E&RP. The program addresses energy efficiency and conservation, water efficiency and conservation, waste minimization, spill prevention, and chemical management. Key program activities include developing implementation plans for the environmental stewardship objectives & targets, increasing employee awareness and communication of EMS and P2 activities, providing technical assistance on new P2 related initiatives, etc. Program activities have included expanding the recycling activities to include multiple new streams (e.g., mixed paper, cardboard, fluorescent tubes, toner cartridges, aluminum cans, batteries and more), performing multiple pollution prevention opportunity assessments, increasing internal communications, and more.

E&RP has the lead in implementing the Environmental Management System Alternative to the pollution prevention plan required by WAC 173-307. Based on historical waste generation rates, Columbia was the only EN facility required by WDOE to develop a pollution prevention plan. The first Environmental Management System (EMS) Alternative plan was submitted in 2003 and approved by WDOE through a site visit. Procedural guidance is included in SWP-ENV-03, Hazardous Waste Management. The initial Hazardous Substance Use and Waste Reduction Plan were developed in 1994 and an updated plan, covering 1998 through 2002, was submitted in September 1998. Previously, annual progress reports were prepared by Environmental Services and submitted by Regulatory Programs.

With the EMS Alternative plan in place, annual progress reports do not require detailed waste generation data but rather a progress report on the EMS Alternative plan.

LAND USE (Aspect: Land use)

New projects, in particular, have the potential to result in adverse environmental impacts because of land use. These potential impacts include wind and water erosion, wildlife habitat destruction, noxious weed introduction, cultural or public resource disturbance, and diminished aesthetic values. These impacts are anticipated and minimized through project planning and review. The top-tier procedural control for this planning is provided in GBP-ENV-14, Work Planning and Control for Environmental Aspects, GBP-ENV-08, Resource Protection, and SWP-ENV-04, Cultural Resource Protection Program. For significant new projects, compliance with the State Environmental Policy Act (SEPA) as outlined in GBP-ENV-03, and its implementing rules (WAC 197-11) provide another comprehensive environmental review to identify impacts and mitigation measures.

ENVIRONMENTAL MONITORING

The Columbia Radiological Environmental Monitoring Program (REMP) evaluates the radiological impact of plant operation on the environment in the airborne, direct radiation, waterborne, and ingestion pathways as specified in EFSEC Resolution No. 332 and the Offsite Dose Calculation Manual. Samples of air, water, milk, soil, sediment, fish and garden produce are collected throughout the year and analyzed for radionuclides specific to plant operations. Radiation levels are also monitored using thermoluminescent dosimeters.

The Nine Canyon Wind Project has an ongoing Avian Monitoring Program to monitor the site for bird and bat casualties.

The Packwood Lake Hydroelectric Project has several monitoring programs that are specified in the license issued by the Federal Energy Regulatory Commission (FERC) to maintain and operate the hydropower facility. In accordance with conditions of the license, facility operations and activities are monitored for the following to identify and minimize environmental impacts:

- Lake water levels and stream flow (ramping rates)
- Vegetation and noxious weeds
- Threatened, endangered, and sensitive species
- Entrainment in project lake (fish impingement on screens)
- Fish passage at Snyder Creek
- Wetland habitat for northwestern salamander
- Stormwater
- Amount of spawning and rearing habitat present for resident rainbow trout
- Rainbow trout population density
- Packwood lake tributary headcutting
- Pipeline, surge tank, penstock
- Raptor protection
- Compliance with Washington State's water quality standards in Packwood Lake, Lake Creek, and the tailrace area of the Cowlitz River, based on the designated use categories including criteria for total dissolved gas, pH, dissolved oxygen, fecal coliform, turbidity, and temperature.

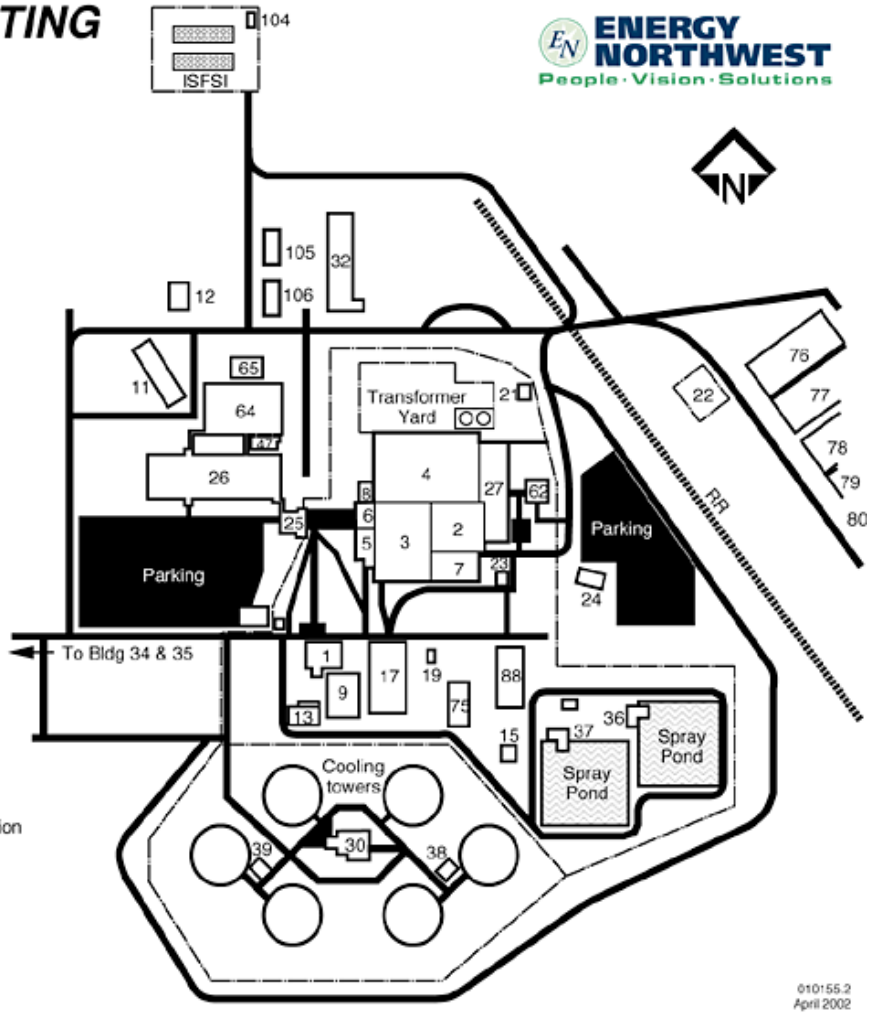
Various environmental performance indicators are tracked via GBP-ENV-13, Environmental Performance Measurement.

END

FACILITIES AT COLUMBIA GENERATING STATION

COLUMBIA GENERATING STATION SITE MAP

Bldg No.	New Name - bldg. Description/Old Name
1	Administration Building
2	Reactor Building
3	Radwaste Building
4	Turbine Generator Building
5	Technical Support Building
6	Health Physics Access Point
7	Diesel Generator Building
8	ASD Building
9	Palouse - Engineering
11	Chelan - Construction & Maint. Services
12	Heavy Equip. Maintenance
13	Cowlitz - Facilities
15	Laborers Storage
17	Wenatchee - Site Maintenance
19	Battery Storage
21	Backflow Preventer Building
22	Service Substation
23	Diesel Fuel Polishing Building
24	Visitor Center (closed)
25	Protected Area Access Point (P.A.A.P.)
26	Deschutes - Plant Engineering Center
27	Yakima - General Service Building
30	Wind River - Circ Water Pumphouse
32	Colville - Site Contractor Fab Shop
34	Kootenai building - Plant Support Facility
35	Klickitat Training Building
36	Standby Service Water Pumphouse 1A
37	Standby Service Water Pumphouse 1B
38	Electrical Building #1
39	Electrical Building #2
47	Document Storage
62	Primary Access Point (P.A.P.)
64	Willamette - Records Mgmt./C&MS/Fitness for Duty Facility/First Aid/Access Authorization
65	Craft Lunchroom
75	Warehouse /Painters
76 thru 80	Snake River Complex (Warehouse Area)
88	Okanogan - Outage/NDE/Security/NRC
100	Vacant
104	ISFSI Switchgear
105	Saluce - ISFSI Equipment Storage
106	Dry Creek - ISFSI Office Building



END

Attachment 11.3, Facilities at Columbia Generating Station

ENERGY NORTHWEST FACILITIES LOCATIONS

END

Attachment 11.4, Energy Northwest Facilities Locations

REGULATORY AGENCIES

- Nuclear Regulatory Commission (NRC) - As an operator of a nuclear power facility, Energy Northwest is a 10 CFR Part 50 licensee of the NRC. The focus of the NRC is public safety related to operation of the nuclear plant.

  Washington Energy Facility Site Evaluation Council (EFSEC) - EFSEC is composed of representatives of five agencies specified in Revised Code of Washington (RCW) 80.50. Its regulations are located in WAC Title 463. Compliance oversight is provided by EFSEC staff and the staff of the Departments of Health and Ecology through contracts (or inter-agency agreements) with EFSEC. All costs are paid by Energy Northwest. SCAs were developed by EFSEC and were co-signed by the Governor and Energy Northwest in the early 1970s. Issues that were not anticipated by the SCA, or that require more specificity than the SCA, are resolved through the passage of EFSEC resolutions. The SCAs provide the general conditions for plant construction and operation and, in theory, are in lieu of all other certificates, permits, and licenses that would otherwise be required by state and local agencies. In practice, the SCA does not obviate the need to acquire other permits. Compliance to SCA conditions is reviewed in quarterly meetings (audits) with the Washington Department of Ecology (WDOE) and EFSEC staff. Site restoration requirements for Nuclear Projects Nos. 1 and 4 are also governed by the SCA between Energy Northwest and the State of Washington, and regulations adopted by the EFSEC.

- Washington Department of Archaeology and Historic Preservation (DAHP) - The DAHP is a Washington State Cabinet-level agency managed by a Governor-appointed Director. DAHP is Washington's primary agency with knowledge and expertise in historic preservation and is the advocate for the preservation of Washington's historic and cultural resources.

- Federal Energy Regulatory Commission (FERC) - FERC licenses the Packwood Lake Hydroelectric Project pursuant to the Federal Power Act and oversees operation and maintenance of the facility.

- Washington Department of Ecology (WDOE) - Most of WDOE's involvement with Energy Northwest is through its support to EFSEC in overseeing conditions of the SCAs. For non-EFSEC projects (e.g., APEL, Nine Canyon Wind Project), WDOE is involved directly in solid waste and hazardous waste reporting, hazardous chemical inventory reporting (Community Right-to-Know), pollution prevention planning, and wastewater issues. WDOE also drafts air Notice of Construction and Prevention of Significant Deterioration (NOC/PSD) permits for EFSEC. WDOE is also responsible for accreditation of Energy Northwest's analytical laboratory. WDOE also provides the 401 Water Quality Certification for the Packwood Lake Hydroelectric Project.

- Washington Department of Health (WDOH) - Like WDOE, the WDOH is involved through its support to EFSEC. As the state-delegated agency for implementation of the Safe Drinking Water Act, WDOH is involved in permitting and oversight of public water systems at Columbia and IDC.

- Washington Dept. of Fish and Wildlife – Is responsible for protecting, restoring and enhancing fish and wildlife and their habitats. This includes implementing migratory bird protective regulations.

- Washington Dept. of Natural Resources – Issues easement to EN for use of aquatic lands for construction and operation of in-river structures.

- U.S. Environmental Protection Agency (EPA) - Most of EPA's regulatory programs applicable to Energy Northwest activities are delegated to Washington State agencies. EPA Region X has retained authority to approve NOC/PSD air permits. Also, EPA has retained a significant role in assuring safe disposal of PCBs and in permitting hazardous waste management facilities (e.g., APEL).

- City of Richland - The City of Richland Publicly Owned Treatment Works receives and permits APEL's sanitary waste discharges. The City of Richland Municipal Landfill also receives Energy Northwest's solid waste from Richland operations.

- Benton Clean Air Agency (BCAA) - The BCAA regulates the fire suppression training facility as an air pollutant source. They also regulate asbestos and open burning.

- Benton County - Benton County issues conditional use permits (e.g., for the wind turbines).

- U.S. Forest Service - The Forest Service issues special use permits related to operations at Packwood.

- U.S Fish and Wildlife Service – Like the Washington Dept. of Fish and Wildlife they are they have federal responsibility to the protection of fish and wildlife and their habitat. They are involved in the Licensing renewal at Packwood Hydro Project.

END

ENVIRONMENTAL DOCUMENTS AND RECORDS

NOTE: Guidance on control of records is provided by GBP-REC-01, Records Management Program. This Appendix lists key environmental documents and records. This list applies to both nuclear and non-nuclear records, but may not be all inclusive.

DOCUMENT/RECORD DESCRIPTION	RESPONSIBLE FUNCTION/ORGANIZATION
EMS-RELATED DOCUMENTS/RECORDS	
Environmental Management System Program Description (EMS-01)	EMS Coordinator / E&RP
EMS Project Implementation Plan	EMS Coordinator / E&RP
Environmental Stewardship Policy, PSM-5.7	EMS Coordinator / E&RP
Environmental Budget and Expense Records	Supervisor, E&RP
EMS-Related Implementing Procedures:	
• GBP-ENV-09, Environmental Aspects Identification	EMS Coordinator / E&RP
• GBP-ENV-10, Environmental Management System Communications	EMS Rep for Public Affairs
• GBP-ENV-11, Environmental Management Review	EMS Coordinator / E&RP
• GBP-ENV-12, Environmental Compliance Assessments	Compliance Assurance Prgm Owner / E&RP
• GBP-EPP-02, Environmental Emergency Preparedness	EMS Rep for Emergency Preparedness
• GBP-ENV-13, Environmental Performance Measurement	Performance Mgmt Prgm Owner / E&RP
• GBP-ENV-14, Work Planning and Control for Environmental Aspects	EMS Coordinator / E&RP
• GBP-ASU-02, EMS Audits	EMS Rep for Quality Services
• GBP-ENV-15, Pollution Prevention Program Description	P2 Prgm Owner / E&RP
• RPI-12.0, Review and Management of Legal and Other Requirements	Regulatory Analysis Program Owner / E&RP
• RPI-20.0, Environmental Program Description	E&RP
Significant environmental aspects and records of analysis	EMS Coordinator / E&RP

DOCUMENT/RECORD DESCRIPTION	RESPONSIBLE FUNCTION/ORGANIZATION
Documentation of Line Organization Evaluation of Objectives and Target (per GBP-ENV-13)	EMS Coordinator / E&RP
Environmental Excellence Plans	EMS Coordinator / E&RP
Environmental Objectives and Targets: Implementation Plans	EMS Coordinator / E&RP
Environmental Objectives and Targets tracking documentation	Performance Mgmt Program Owner / E&RP
Management Review Documentation, including agenda, minutes, participants, decisions made	EMS Coordinator / E&RP
Communications with contractor/supplier related to environmental requirements	Purchasing & Contracts Supervisor / Supply Chain Services
Internal EMS Audit documentation	Quality Services
External EMS Audit documentation	EMS Coordinator / E&RP
Environmental Compliance Self-Assessments	Corrective Action Program
Nonconformance, Corrective Action, and Preventive Action plans and results	Corrective Action Program
Emergency Response drills and tests (Columbia)	Emergency Preparedness / Training
Emergency Response drills and tests (EBS projects)	IDC, APEL, ENOC, Packwood, Nine Canyon
Regulatory Inspection Reports (EPA/Department of Ecology/EFSEC)	E&RP / Regulatory Affairs
Regulatory Inspection Reports (NRC)	Regulatory Affairs
Regulatory Noncompliance Notices or Enforcement Actions	E&RP / Regulatory Affairs
Pollution Prevention Performance Report (annual)	P2 Prgm Owner / E&RP
Pollution Prevention Program documentation	P2 Prgm Owner / E&RP
Regulatory Programs Instructions	Regulatory Affairs
Regulatory Permits	
• NPDES – permit application/renewals, discharge monitoring reports • Other liquid effluents	Chemistry, E&RP
• Synthetic Minor Air Permit Application	Air Program Owner / E&RP
Environmental Operating Report (annual)	E&RP
Community Right to Know Reports (TRI/SARA)	EPCRA Report Owner / E&RP
Transporter Security Plan (SWP-RMP-03)	Chemistry

DOCUMENT/RECORD DESCRIPTION	RESPONSIBLE FUNCTION/ORGANIZATION
LAND USE	
Wildlife Concerns	Natural Resources Program / E&RP
Environmental Impact Statements, Environmental Assessments, and Environmental Evaluations	NEPA/SEPA Program Owner / E&RP, Applicable Project Files, Quality Services
Cultural Resource Protection Program Records	Cultural Resource Program Owner / E&RP, Applicable Project Files
SEPA Documentation	NEPA/SEPA Program Owner / E&RP - Applicable Project Files
Pesticide application records	Craft/Maint Supervisor / Facilities & Commercial Engineering
Pesticide applicator Certification	Craft/Maint Supervisor / Facilities & Commercial Engineering
Columbia/IDC Inert Waste Landfill Documentation	
• Annual Reports	Regulated Waste Management Personnel / E&RP
• Plans of Operation (Columbia & IDC)	Regulated Waste Management Personnel / E&RP
• Post Closure Plan – Columbia • Closure Plan - IDC	Regulated Waste Management Personnel / E&RP
• Environmental Monitoring Report	Regulated Waste Management Personnel / E&RP
• Operating Log	Regulated Waste Management Personnel / E&RP, F&CE
Pre and Post - Excavation Approval Sheets (PPM 10.2.32, Attachment 8.1)	F&CE
REGULATED WASTE RECORDS	
Waste Designation Records, including on-site and off-site laboratory analytical test results that support dangerous waste designation, treatment and disposal.	Regulated Waste Management Personnel / E&RP
Analytical laboratory certifications and supporting documents	Environmental Services Lab (APEL)
Profiles for hazardous waste disposal	Regulated Waste Management Personnel / E&RP
Monitoring equipment inspection, calibration and maintenance records	Chemistry, Environmental Services, Calibration Lab
Notification of Dangerous Waste Activity (Dangerous Waste Site Identification Form)	Regulated Waste Program Owner / E&RP

DOCUMENT/RECORD DESCRIPTION	RESPONSIBLE FUNCTION/ORGANIZATION
Dangerous Waste Annual Report	Regulated Waste Management Personnel / E&RP
Columbia Recycling Records for Dangerous Wastes	
• Paint/Solvent Recycling log	Major Maintenance Programs / Coatings
• Anti-freeze recycling	Regulated Waste Management Personnel / E&RP
• Lead-acid batteries, Universal Waste batteries, lamps, and mercury-containing equipment	Regulated Waste Management Personnel / E&RP
Columbia Used Oil Inventory	Regulated Waste Management Personnel / E&RP
Dangerous Waste Storage Inspection Reports, including Annual Fire Inspection, Weekly 180-Day Dangerous Waste Accumulation Area Inspection Checklist, and Monthly Hazardous Waste Satellite Accumulation Area Inspection Checklist	Regulated Waste Management Personnel / E&RP
Columbia Spill Management Material Storage Cabinet at 437' Radwaste – Annual Inspection	Regulated Waste Management Personnel / E&RP
Electronic Waste Transfer Log	Regulated Waste Management Personnel / E&RP
Waste Analysis Plan (WAP)	Regulated Waste Management Personnel / E&RP
Uniform Hazardous Waste Manifests (including Land Disposal Restriction Certifications, profiles for mixed waste disposal, and supporting records) and Manifest Exception Reports	Regulated Waste Management Personnel / E&RP
PCB records (manifests, certificates of disposals, Annual PCB Document Log, inspection records, cleanup records, information on each PCB item disposed of)	Regulated Waste Management Personnel / E&RP
TSDF Certificate of Disposal	Regulated Waste Management Personnel / E&RP
Asbestos Waste Shipment Records	Regulated Waste Management Personnel / E&RP
Universal waste shipment records	Regulated Waste Management Personnel / E&RP
Landfill groundwater monitoring reports (Inactive – monitoring no longer required)	Regulated Waste Management Personnel / E&RP

DOCUMENT/RECORD DESCRIPTION	RESPONSIBLE FUNCTION/ORGANIZATION
Dangerous Waste Facility closure, post-closure plans and closure cost estimates	Regulated Waste Program Owner / E&RP
Environmental Monitoring Sampling Plan and Reports	E&RP, Environmental Services
Dangerous Waste Facility Operating Records (Inactive – no permitted facility)	Regulated Waste Program Owner / E&RP
Hazardous Waste Contingency, Columbia Generating Station (SWP-ENV-03, Attachment 7.3)	Regulated Waste Management Personnel / E&RP
Dangerous Waste Training (SWP-ENV-03, Attachment 7.2)	Regulated Waste Management Personnel / E&RP
LIQUID EFFLUENT RECORDS	
NPDES Outfall Records/Compliance Data Sheets/Discharge Monitoring Reports	Chemistry, E&RP
Liquid Effluent Determination/Reports	Chemistry, Environmental Services
Permit applications, renewals and supporting documentation	Chemistry, E&RP
Potable Water Data, Water Facilities Inventory Form, Polymer Use Report, Public Water System Operating Permits	Chemistry, E&RP
Water Use Report	E&RP
Sanitary Waste Treatment Facility Discharge Records	Chemistry, E&RP
AIR EMISSION RECORDS	
Air monitoring records	E&RP, Environmental Services, Chemistry
Air Emissions Source Registration and Diesel Fuel Consumption reports	Air Programs Owner / E&RP
Annual Radiological Environmental Operating Report	Environmental Services (APEL)
Refrigerant (CFC/HCFC) Inventory and Disposition Records	Columbia Maintenance, Facilities & Commercial Engineering
Paint and blast shop records	Air Programs Owner / Maintenance

DOCUMENT/RECORD DESCRIPTION	RESPONSIBLE FUNCTION/ORGANIZATION
TRAINING RECORDS	
EMS-related training for EMS Reps, Alternates and E&RP	EMS Coordinator / E&RP
Environmental Training and Qualification records composed of training course lesson plans (including training plans for 180-Day and Permitted Dangerous Waste Facilities), course materials, and attendance records.	Nuclear Training (PQD)
EMERGENCY PREPAREDNESS	
Final After Action Reports	EMS Rep for EP
Drill reports	EMS Rep for EP
Supporting drill paperwork such as drill scenarios after-action comment forms, etc	EMS Rep for EP
STORAGE OR USE OF CHEMICALS	
Weekly Chemical Material Storage Area Inspection Forms (#26615)	Columbia Line Organizations w/ designated chemical material storage and use areas (SWP-CHE-05)
New Chemical Approvals (Form 26087)	Chemical Management Program Owner / Chemistry
Spill Log	Spill Planning & Response Program Owner / E&RP
Underground Storage Tank (UST) Site Inspections (WDOE)	UST Program Owner / E&RP
RECORDS THAT APPLY ONLY TO NUCLEAR ACTIVITIES	
Radioactive material release records	Rad Protection Supervisor / Rad Srvs
Rad Waste	
• Rad Waste logbook, radwaste generation, accumulation, and storage	Rad Protection Supervisor / Rad Srvs
• Rad Waste shipment and disposal records	Chemistry Technical Supervisor / Chemistry
Radiological Environmental Monitoring Program Records	Chemistry Technical Supervisor / Chemistry and E&RP (submittal)
Annual Radioactive Effluent Release Report	Chemistry Technical Supervisor / Chemistry
Annual Environmental Operating Report	Air/Water Program Owner / E&RP

END

ENERGY NORTHWEST COMPOSITE
ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) MODEL

Index of Elements

1. General Criteria, Environmental Stewardship, and Integration (ISO 14001:2004, clause 4.1 General requirements and clause 1, Scope)
2. Environmental Policy (ISO 4.2)
3. Environmental Aspects and Impacts (ISO 4.3.1: Environmental aspects)
4. Legal Requirements and Voluntary Commitments (ISO 4.3.2: Legal and other requirements)
5. Objectives, Targets, and Implementation Plans (ISO 4.3.3: Objectives, targets and program[s])
6. Structure and Responsibility (ISO 4.4.1: Resources, roles, responsibility and authority)
7. Training, Awareness and Competence (ISO 4.4.2: Competence, training and awareness)
8. Communication (ISO 4.4.3)
9. EMS Documentation (ISO 4.4.4: Documentation)
10. Document Control (ISO 4.4.5: Control of documents)
11. Records (ISO 4.5.4: Control of records)
12. Operational Control (ISO 4.4.6)
13. Emergency Planning, Preparedness and Response (ISO 4.4.7: Emergency preparedness and response)
14. Monitoring and Measurement (ISO 4.5.1)
15. Nonconformity and Corrective and Preventive Action (ISO 4.5.3: Nonconformity, corrective action and preventive action)
16. Compliance Assurance (ISO 4.5.2: Evaluation of compliance)
17. Internal EMS Audit (ISO: 4.5.5: Internal audit)
18. Management Review (ISO 4.6)

Key Definitions (ISO 3, Terms and definitions) are included at the end of this document

DISCUSSION

Energy Northwest has implemented a corporate Environmental Management System (EMS). An EMS ensures that environmental issues are systematically identified, controlled, and monitored. Moreover, an EMS provides mechanisms for responding to changing environmental conditions or requirements and reporting on environmental performance, helps build confidence with stakeholders, and reinforces continual improvement. The ultimate desired result of an effectively designed, implemented, and continually improving EMS is improved environmental performance.

Energy Northwest's EMS is based on the Composite Model (referred to in this document as "the EMS") contained in this Attachment. The EMS conforms primarily to the requirements of ISO 14001, and secondarily to principles in the International Chamber of Commerce (ICC) Business Charter for Sustainable Development. It also captures the strongest elements (e.g., employee involvement) of other EMS models such as the EPA Code of Environmental Management Principles, Commission on Environmental Cooperation, Guidance, and Responsible Care that: 1) are not adequately addressed by the ISO 14001 standard and the ICC Charter and 2) are compatible and appropriate for Energy Northwest's goals and activities.

All ISO 14001 requirements are included in this model as required elements. Language that is taken from the ISO 14001:2004 standard is in **bold text**. ISO 14001 was originally issued in 1996, but was revised in 2004. This model incorporates the 2004 requirements.

In some cases, ISO 14001 language has been modified to make it easier to read. For example, in ISO 14001, the standard repeats "activities, products, and services" in numerous locations. In this model, the term "activities" is defined to include these items.

The terms "shall," "should" and "may" are used in this model as follows:

- Shall – required because either it is in the ISO 14001 standard, or is considered essential to implementation of an ISO 14001 EMS;
- Should – a management expectation. Management approval would generally be expected for deviation. Equivalent to a voluntary commitment.
- May – suggested. Non-mandatory and optional.

Other key definitions are found at the end of the model.

This model may be revised on occasion, for instance when the ISO 14001 standard is revised.

ENVIRONMENTAL MANAGEMENT SYSTEM (COMPOSITE MODEL)

1. GENERAL CRITERIA, ENVIRONMENTAL STEWARDSHIP, AND INTEGRATION

The organization:

- should recognize environmental management as a corporate priority and strive to facilitate a culture of environmental stewardship;
- **shall establish, document, implement, maintain and continually improve an environmental management system** (EMS) that includes policies, programs, and practices for conducting activities in an environmentally responsible manner;
- **shall define and document the scope of its EMS**. The EMS applies to those environmental aspects that the organization identifies as those which it can control and those which it can influence;
- shall determine how it will fulfill the requirements of the EMS; and
- should fully integrate the EMS into all its activities, including overall decision-making and planning, and operations (e.g., investments, capital improvements, product and process designs, training programs, and maintenance activities).

In addition to the specified requirements in the EMS that apply to those working for or on behalf of the organization, the organization may also promote, where appropriate, improvements in practices and adoption of comparable environmental stewardship principles by contractors (including suppliers, distributors and onsite service providers).

2. ENVIRONMENTAL POLICY

After considering legal requirements and stakeholder expectations and concerns, **top management shall define the organization's environmental policy and ensure that, within the defined scope of its EMS, it:**

- **is appropriate to the nature, scale, and environmental impacts of its activities;**
- **provides the framework for setting and reviewing environmental objectives and targets;**
- **is documented, implemented, maintained, and** clearly **communicated to all persons working for or on behalf of the organization;**
- **is available to the public;** and
- **includes a commitment to:**
  - achieve and maintain **compliance with applicable legal requirements;**
  - conform to **voluntary commitments to which the organization subscribes, which relate to its environmental aspects;**
  - conduct operations in an environmentally responsible manner, including managing and reducing environmental impacts/risks;
  - **prevent pollution**;
  - as appropriate, share information on the EMS and environmental performance with stakeholders; and
  - **continually improve**.

The Chief Operating Office shall sign the environmental policy.

3. ENVIRONMENTAL ASPECTS AND IMPACTS

The organization shall establish, implement and maintain (a) procedure(s) to identify the environmental aspects of its activities within the defined scope of the EMS that it can control and those that it can influence, taking into account planned or new developments, or new or modified activities.

The procedure(s) shall also describe the criteria or method the organization uses **to determine those aspects that have or can have significant impacts on the environment** (i.e., significant environmental aspects.)

The organization shall document this information on environmental aspects and **keep it up to date.**

The organization shall ensure that the significant environmental aspects are taken into account in setting its environmental objectives, and **in establishing, implementing, and maintaining its EMS**.

It should also have a program or process for receiving information from suppliers on the environmental aspects of goods and services that the organization uses.

4. LEGAL REQUIREMENTS AND VOLUNTARY COMMITMENTS (OTHER REQUIREMENTS)

With regard to legal **requirements, and** voluntary commitments **related to its environmental aspects, the organization:**

- **shall establish, implement and maintain a procedure(s)** to (1) monitor**, identify and have access to applicable legal requirements and** voluntary commitments **to which it subscribes** that are **related to its environmental aspects, and (2) determine how those requirements apply to its environmental aspects;**
- should, where possible, anticipate changes, including new requirements that may apply as a result of changes in activities;
- **shall ensure that these applicable requirements and** commitments **are taken into account in establishing, implementing and maintaining the EMS.**

5. OBJECTIVES, TARGETS, AND IMPLEMENTATION PLANS

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 commitments in **the environmental policy.**

When establishing and reviewing its objectives and targets, the **organization shall take into account legal requirements and** voluntary commitments**; it's significant environmental aspects; technological options; financial, operational and business requirements; and the views of** stakeholders**.**

The organization shall establish, implement and maintain a program(s) for achieving its objectives and targets. These implementation plans **shall include:**

- **designation of responsibility** and accountability **for achieving objectives and targets at relevant functions and levels;** and
- an action plan that includes measurable milestones and the **means and timeframe by which they are to be achieved.**

NOTE:	Objectives and programs that support environmental stewardship may include activities that provide for:

- alternative, environmental-friendly approaches to developing, designing, and operating facilities;
- actions to come into and/or maintain compliance with legal requirements;
- efficient and sustainable use of energy, materials and resources;
- opportunities to reduce hazardous materials use and waste generation;
- opportunities to minimize adverse environmental impact, and promote safe and responsible disposal of wastes; and
- adopting other improvements to the EMS that allow the organization to identify, evaluate, and implement pollution prevention opportunities in the future;
- follow-up implementation of management review recommendations for prioritized improvements to the EMS.

6. STRUCTURE AND RESPONSIBILITY

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

The organization may establish clearly defined employee performance standards that include environmental issues, as appropriate; and recognize and reward exceptional environmental performance.

Management:

- should seek to instill the attitude that all employees are responsible for implementing the EMS and improving environmental performance;
- should have a system in place for the identification of needs and allocation of resources to implement the environmental policy; and
- should commit and shall provide, **or ensure the availability of, resources essential to establish, implement, maintain and improve the EMS** (including achievement of objectives and targets, and environmental programs such as pollution prevention.) **Resources include human resources** (i.e., the availability and assignment of sufficient personnel), **specialized skills, organizational infrastructure, technology, and financial resources.**

Top management shall appoint a specific management representative(s) who, irrespective of other responsibilities, shall have defined roles, responsibilities and authority for:

- **ensuring that EMS is established, implemented, and maintained in accordance** with this model; and
- **reporting to top management on the performance of the EMS for review, including recommendations for improvement.**

7. TRAINING, AWARENESS, AND COMPETENCE

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 identified by the organization** or which can result in noncompliance **is competent on the basis of appropriate education, training,** skills, and/**or experience**. With regard to contractors and leaseholders, the organization shall have a program to provide appropriate guidance, information on applicable requirements, and training (or require it as a prerequisite) on the risks associated with the work they will be performing.

The organization shall:

- **identify training needs associated with its environmental aspects and EMS;**
- **establish, implement and maintain a procedure(s) to make persons working for or on its behalf aware of:**
  - **the importance of conformity with the environmental policy** (including the importance of compliance), **procedures**, **and the requirements of the EMS**;
  - legal requirements associated with their tasks;
  - **their roles and responsibilities in achieving conformity with the** environmental policy, procedures and other **requirements of the EMS**, including emergency preparedness and response requirements;
  - **the significant environmental aspects and related actual or potential impacts associated with their work**;
  - **the environmental benefits of improved personal performance**; and
  - **the potential consequences of departure from specified procedures**.
- educate and/or **train (or take other actions to meet these needs) any persons performing tasks for or on its behalf that have the potential to cause a significant environmental impact(s)** to conduct their activities in an environmentally responsible manner, and to carry out the environmental responsibilities of their positions. The training program should include task specific skills;
- **retain associated records** on education, training or experience associated with these requirements.

8. COMMUNICATION

With regard to its environmental aspects and EMS, the organization shall establish, implement and maintain a procedure(s) for:

- **internal communication between the various levels and functions of the organization.** This may include how legal requirements and environmental performance will be communicated, how top management will be fully informed of pertinent environmental issues, etc;
- whether or not to **communicate externally about its significant environmental aspects. If the decision is to communicate, the organization shall establish and implement a method(s) for this external communication. The decision shall be documented;**
- **receiving, documenting, and responding to relevant communication from external** stakeholders, including concerns regarding environmental performance and compliance.
- communicating applicable procedures and requirements to persons working for or on behalf of the organization (e.g., employees, contractors) and suppliers;

In order to foster openness and dialogue with stakeholders, the organization:

- may, at intervals it deems appropriate, prepare an environmental statement, report, or other communication that is available to stakeholders. The statement should be presented in a clear and comprehensible manner. It may include or address topics such as:
  - the organization's legal requirements; its significant environmental aspects; its targets and objectives relative to those significant environmental aspects, and progress towards meeting the objectives and targets; its environmental performance, and numerical data, where applicable.
- should encourage employee feedback on pollution prevention and other means to reduce environmental impact;
- may assess employee and community concerns about the organization's activities; and anticipate, where possible, and respond to, their concerns about the potential environmental hazards and impacts of activities;
- may periodically seek advice and counsel through dialogue with persons in communities near its facilities;
- may involve stakeholders in the development of its EMS; and
- may encourage employee involvement in development and implementation of the EMS.

The organization may also consider sharing knowledge and lessons learned with other utilities.

9. EMS DOCUMENTATION

EMS documentation shall include:

- **the environmental policy, objectives and targets;**
- **a description of the scope of the EMS;**
- **a description of the main elements of the EMS, their interaction, and reference to related documents;**
- **documents, including records, required by** the EMS**; and**
- **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.**

10. DOCUMENT CONTROL

Documents required by the EMS shall be controlled. A procedure(s) shall be established, implemented and maintained to define the controls needed to:

- **Approve documents for adequacy prior to issue;**
- **Review, update as necessary and re-approve documents;**
- **Ensure that changes and the current revision status of documents are identified;**
- **Ensure that relevant versions of applicable documents are available at points of use;**
- **Ensure that documents remain legible and readily identifiable;**
- **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**
- **Prevent the unintended use of obsolete documents and apply suitable identification to them if they are retained for any purpose**.

Records are a special type of document and shall be controlled according to the requirements specified in Section 11.

11. RECORDS

The organization shall establish and maintain record(s) to demonstrate conformity to the requirements of the EMS, and the results achieved. The organization shall establish, implement and maintain procedure(s) to define controls needed **for the identification, storage, protection, retrieval, retention, and disposal of** environmental **records.**

Environmental records shall be and remain legible, identifiable and traceable.

12. OPERATIONAL CONTROL

The organization shall identify and plan those activities that are associated with the identified significant environmental aspects and compliance with legal requirements, **consistent with its environmental policy, objectives and targets, in order to ensure that they are carried out under specified conditions by:**

- **establishing, implementing and maintaining a documented procedure(s) to control situations where their absence could lead to deviation from the environmental policy, objectives and targets.** This may include engineering and/or operational controls to detect and prevent unplanned releases to the environment and minimize human error, and other precautionary approaches to prevent environmental degradation such as pollution prevention;
- **stipulating operating criteria in the procedures;**
- enabling personnel to perform their functions consistent with policies and legal requirements; and
- **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** (refer to Section 8, Communication).

13. EMERGENCY PLANNING, PREPAREDNESS, AND RESPONSE

The organization shall establish, implement and maintain a procedure(s) to identify potential emergency situations and potential accidents that can have an environmental impact(s), and how it will respond to them.

The organization shall respond to actual emergency situations and accidents, and prevent or mitigate associated adverse environmental impacts.

The organization should coordinate emergency planning, preparedness, and response with emergency services, relevant authorities, and the local community, as appropriate.

The organization shall periodically test such procedures where practicable.

The organization shall periodically review, and revise where necessary, its emergency preparedness and response procedures, in particular after the occurrence of accidents or emergency situations.

14. MONITORING AND MEASUREMENT

The organization shall establish, implement and maintain a procedure(s) to monitor and measure, on a regular basis, the key characteristics of its activities that can have a significant environmental impact. This shall include information to monitor performance, applicable operational controls and conformity with the organization's environmental objectives and targets.

The procedure should describe the organization's system for periodically gathering, analyzing, and recording information to assess, and as appropriate determine trends, on environmental performance, effectiveness of operational controls, and for identifying areas for improvement (including areas where performance is or is likely to become substandard).

The organization shall ensure that calibrated or verified monitoring and measurement equipment is used and maintained, and shall retain associated records.

15. NONCONFORMITY AND CORRECTIVE AND PREVENTIVE ACTION

The organization shall establish, implement and maintain a procedure(s) for dealing with actual and potential nonconformity(ies) and for taking associated **corrective and preventive actions** (e.g., system nonconformities, such as failure to define EMS responsibilities or evaluate compliance with legal requirements; performance nonconformities, such as not achieving objectives/targets, failure to perform maintenance requirements on schedule, exceeding operating criteria and/permit limits, or accidental release of hazardous substances.)

The procedure(s) shall define requirements for:

- **identifying and correcting nonconformities, and taking action to mitigate their environmental impacts;**
- **investigating nonconformity(ies), determining the cause[s], and taking action to avoid their occurrence;**
- defining responsibility and authority for corrective and preventive action;
- **evaluating the need for action(s) to prevent nonconformities, and implementing appropriate** preventive **actions designed to avoid their occurrence;**
- reporting nonconformities (internally; and as required, externally);
- **recording the results of corrective and preventive action(s) taken; and**
- **reviewing the effectiveness of corrective action(s) and preventive actions taken.**

Actions taken to identify, correct, mitigate, investigate, evaluate, review, record and report nonconformities, causes, and corrective or preventive actions **shall be appropriate to the magnitude of problems and the environmental impacts encountered.**

The organization shall incorporate **any necessary changes to EMS documentation** (such as procedures) resulting from preventive and corrective action.

The organization should have a system to track key corrective and preventive actions to closure.

16. COMPLIANCE ASSURANCE (EVALUATION OF COMPLIANCE)

The organization should have a program to proactively identify and resolve potential compliance problems.

The organization shall establish, implement and maintain a procedure(s) for periodically evaluating compliance with applicable legal requirements. The organization shall also **evaluate** conformance with voluntary commitments **to which it subscribes**. (NOTE: these evaluations may be combined, or a separate procedure(s) may be established.)

The organization shall keep records of the results of the periodic evaluations.

The organization should also monitor the performance of its contractors with regard to legal requirements, and applicable requirements of the EMS.

17. INTERNAL EMS AUDIT

The organization shall ensure that internal EMS audits are conducted at planned intervals in order **to**:

- **determine whether the EMS:**
  - **conforms to planned arrangements for environmental management including the requirements of** the EMS**; and**
  - **has been properly implemented and is being maintained;**
- **provide information on the results of audits to management.**

The audit program shall be planned, established, implemented and maintained, taking into consideration the environmental importance of the operation(s) concerned and the results of previous audits. The periodic assessment need not cover the entire EMS, so long as the program ensures all organizational units and functions, system elements and the full scope of the EMS are audited periodically.

> NOTE: Planning the scope of the internal EMS audit should take into account and/or be coordinated with EMS assessment requirements contained in the Washington State Department of Ecology EMS Alternative to Pollution Prevention Planning, February 1997 (i.e., annual assessment of the following elements: pollution prevention, objectives and targets, responsibilities and resources, and training).

An audit procedure(s) shall be established, implemented and maintained that addresses the following:

- **determination of audit criteria, scope, frequency and methods;** and
- **responsibilities and requirements for planning and conducting audits, reporting results, and retaining associated records.**

Selection of auditors and conduct of audits shall ensure objectivity and the impartiality of the audit process. Audit teams may be augmented with technical experts as appropriate to ensure audit reliability, and may be performed by either third party or internal resources.

18. MANAGEMENT REVIEW

Top management shall, at intervals that it determines, **review the EMS to ensure its continuing suitability, adequacy and effectiveness. Reviews shall include assessing opportunities for improvement and the need for changes to the EMS, including the environmental policy and environmental objectives and targets.**

Inputs to management reviews shall include:

- **results of internal audits and evaluation of compliance with legal requirements, and** evaluation of conformance with voluntary commitments;
- **communication from external** stakeholders, **including complaints;**
- **environmental performance;**
- **the extent to which objectives and targets have been met;**
- **status of corrective and preventive actions;**
- **follow-up actions from previous EMS management reviews;**
- **changing circumstances, including developments in requirements related to its environmental aspects; and**
- **recommendations for improvement.**

The management review may also address:

- results from any benchmarking conducted to compare its environmental operations and EMS with other organizations and management standards, where appropriate;
- stakeholder expectations;
- the adequacy of resources assigned to EMS programs.

The output from the management review shall include minutes of the review **and any decisions and actions related to the possible need for changes to policy, objectives and targets, and other elements of the EMS; consistent with the commitment to continual improvement.**

Records of management reviews shall be retained.

KEY DEFINITIONS

Activities - Operations and functions of all organizational units within the defined scope of the EMS. Includes projects, products and services. **Includes** maintenance, design, project planning/design, **normal and abnormal operating conditions, shut-down and start-up conditions,** decommissioning, leaving a site, and **relevant past activities, as well as reasonably foreseeable emergency situations.**

Auditor - Person with the competence to conduct an audit.

Benchmarking - Comparing one organization to another, particularly those recognized as effectively employing best management practices or processes, in order to benefit from the experience of peak performers, and to improve processes or organizational practices.

Compliance - Conforming to relevant and applicable legal requirements.

Continual improvement - Recurring process of enhancing the EMS to achieve improvements in overall environmental performance consistent with the organization's environmental policy. NOTE: The process of continual improvement need not take place in all areas of activity simultaneously. It is assumed that as the organization continually improves its EMS, environmental performance will improve as a result. However, the definition of continual improvement applies strictly to operation of the EMS, and does not automatically apply to environmental performance. Continual improvement includes enhancements to policies, programs, and processes; taking into account legal requirements (as a starting point), technical developments, scientific understanding, consumer needs, and community expectations. It also includes adoption and implementation of policies and procedures associated with the ongoing identification, evaluation (both technical and economic), and implementation of pollution prevention opportunities.

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

Document - Information and its supporting medium. NOTE: The medium can be paper, magnetic, electronic or optical computer disc, photograph or master sample, or a combination thereof. Examples of documents include policy statements, objectives and targets, procedures, equipment manuals, internal and external standards, site emergency plans, and records.

Each relevant function and level - Parts of the organization or staff functions with EMS implementation responsibility.

Environment - Surroundings in which an organization operates; including air, water, land, flora, fauna, other natural resources, habitat, humans, and their interrelation (i.e., the ecosystem).
NOTE: Surroundings in this context extend from within an organization to the global system.

Environmental aspect - Element of an organization's activities that can interact with the environment.
NOTE: A significant environmental aspect has or can have a significant environmental impact.

Environmental impact - Any change to the environment, (including resource use), **whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects.** Environmental impacts may be past, present, or potential (in the future). Environmental impacts may have local, trans-boundary, or global significance.

Environmental Management System (EMS) - The **part of an organization's management system used to develop and implement its environmental policy and manage its environmental aspects. NOTES: A management system is a set of interrelated elements used to establish policy and objectives and to achieve those objectives. It includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources** for developing, implementing, achieving, reviewing, maintaining, and continually improving environmental management.

Environmental performance - Measurable results of an organization's management of its environmental aspects. NOTE: In the context of an EMS, results can be measured against the organization's environmental policy, objectives, targets and other environmental performance requirements.

Environmental policy - Overall intentions and direction of an organization related to its environmental performance as formally expressed by top management. NOTE: The environmental policy provides a framework for action and for setting environmental objectives and targets. The policy establishes environmental commitments, priorities, and attitudes. It relates to the organizations' mission, vision, and core values with respect to the environment.

Environmental stewardship - Recognizing the life-cycle impacts of activities on the environment and adopting environmentally responsible practices that not only eliminate or reduce negative environmental impacts, but also sustain and develop natural resources and the natural world for present and future generations. Environmental stewardship is part of sustainable development, which also involves social and economic responsibility.

Implementation Plan - Action or program plan for achieving environmental objectives and targets, including identification of who has responsibility, other resource needs, tactical steps describing how it will be done, and a schedule.

Internal audit - Systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the EMS audit criteria set by the organization are fulfilled. NOTE: In many cases, particularly in smaller organizations, independence can be demonstrated by the freedom from responsibility for the activity being audited.

Legal requirements - Local, state, and federal statutes, laws, or legislation; regulations; permits; and enforceable agreements that the organization is subject to and must comply with that relate to its environmental aspects. Includes other requirements relevant to the EMS (e.g., DOT hazardous materials transportation regulations.)

May - Suggested. Non-mandatory and optional.

Model - Energy Northwest's Composite EMS Model.

Nonconformity - Non-fulfillment of a requirement.

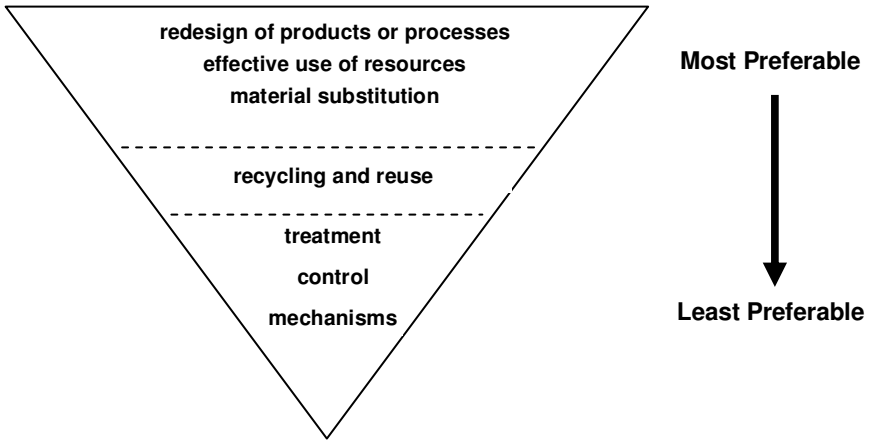
Objective - Overall environmental goal, consistent with the environmental policy, that an organization sets itself to achieve i.e., a goal towards which an endeavor is directed. NOTE: Objectives can be determined by systematically analyzing current environmental efforts, and enhancing programs/strengthening areas that need improvement

Organization - Company, corporation, firm, enterprise, authority or institution, or part or combination thereof, whether incorporated or not, public or private, that has its own functions and administration. NOTE: For organizations with more than one operating unit, a single operating unit may be defined as an organization. All organizational units included within the defined scope of the EMS.

Persons working for on behalf of the organization - Includes employees and those contractors whose work can impact the environment.

Pollution Prevention - Use of processes, practices, techniques, materials, products, services or energy to avoid, reduce, or control (separately or in combination) the creation, emission or discharge of any type of pollutant or waste, in order to reduce adverse environmental impacts.

Waste Management Hierarchy



In order of preference, options may include:

- source reduction or elimination, and resource and energy conservation (e.g., redesign of products, processes or services to reduce hazardous substances at the source, efficient use of resources, and material and energy substitution);
- reuse, recycling and reclamation; and
- treatment and control mechanisms (see Waste Management Hierarchy).

NOTE:	Some definitions of pollution prevention do not include pollution control/end of the pipe treatment. The State of Washington Department of Ecology definition of pollution prevention does include treatment control mechanisms.

NOTE:	Aggressive pollution prevention strategies are central to maintaining compliance, improving environmental performance, reducing risks, and controlling costs. Pollution prevention should be the preferred approach to pollution management.

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

Procedure - Specified way to carry out an activity or a process. NOTE: procedures can be documented or not. Decisions to document procedures where the EMS does not require it may be based on the consequences of not doing so, the need to demonstrate compliance, the need to ensure that the activity is undertaken consistently, and the advantages of doing so (e.g., ease of communication).

Record - Document stating results achieved or providing evidence of activities performed. Examples include records of training, equipment inspection records, and audit and compliance evaluation results, and management review results.

Risk - A factor, course, or element involving uncertain danger; hazard.

Shall - Required either because it is in the ISO 14001 standard, or is considered essential to implementation of an ISO 14001 EMS.

Should - A management expectation. Management approval would be expected for deviation. Equivalent to a voluntary commitment.

Sustainable Development - Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Stakeholder - Person or group concerned with or affected by the environmental performance of an organization.

> NOTE: May also be referred to as an interested party. May be internal or external. Includes employees, the Board of Directors, the public, regulatory agencies and authorities, and environmental groups.

Target - Detailed performance requirement, applicable to the organization or parts thereof, that arises from environmental objectives and that needs to be set and met in order to achieve those objectives.

> NOTE: A target is usually a specific task associated with achieving an objective. Targets should be quantified where practicable, and measurable.

Top management - Usually consists of a person or group of people who direct and control an organization at the highest level. It includes the senior manager(s) ultimately responsible for the environmental performance of the organization. It may include the Chief Executive Officer, Chief Operating Officer, and senior managers responsible for operations that have significant environmental aspects. It may also include senior managers responsible for the organizational units responsible for the functions within the EMS (even if they do not report directly to the Chief Executive Officer).

(Other) Voluntary Commitments - Referred to as “other requirements” in ISO 14001. Environmental principles or industry norms that an organization may choose to adopt or subscribe to. Voluntary commitments or undertakings go beyond compliance, and may relate to regulated and/or non-regulated areas. For example, they could state guidance documents, voluntary agreements, etc.

REFERENCES

ISO 14001:2004, Environmental management systems – Requirements with guidance for use

END

Reference: SWP-PRO-02

ENERGY NORTHWEST PROCEDURE REVISION FORM

[1] Procedure, Instruction or Manual Number

EMS-01

[2] Type of Document to Be Revised

- ☐ Procedure (including Department procedures) – Complete all blocks
- ☐ Department Instruction – Complete items 1, 2, 3, 4, 6, 7, 9, 10 (if applicable), 14, 15, 25 and 26 as a minimum
- ☒ Controlled Manual – Complete items 1, 2, 3, 4, 6, 7, 9, 10 - 11 (if applicable), 14, (if applicable), 15, 25 & 26 as a minimum

[3] Type of Revision (Check one):

- ☒ Major Revision
- ☐ New Document — Obtain new Document Number from Document Control.
- ☐ Deactivate Document (Vol. 18)
- ☐ Reactivate Document (Vol. 18)
- ☐ Cancel Document
- ☐ Document Superseded by: _____

[4] Requested Effective Date

- ☒ ~~N/A~~
- ☒ On or before 10/4/13
- ☐ Exact _____

[5] Procedure Hold Required

- ☐ Yes
- ☒ No

If Yes, Identify Individual to Release the Hold: Name: _____

Justification for Cancellation/Superseding or Deactivation: N/A

[6] Title: Environmental Management System Program Description

[7] Proposed Major Revision: 011 MS

☐ Check if Title Change

[8] PCN Number: (As shown in Asset Suite on Attribute panel as TCN) N/A Incorporated? ☒ None ☐ Yes ☐ No - provide explanation in Box 16 (C-7838)

[9] Responsible Organization (As shown in Asset Suite on the Attributes Panel) Environmental & Regulatory Programs

[10] Identify other procedure, instruction, manual, or form revisions to be issued in parallel (attach additional sheet if more space is needed).

Document Number	Revision	Document Number	Revision	Document Number	Revision
N/A					

[11] Required Forms – Minimum of **three** required for changes to procedures (PPM and SWPs) N/A

- ☐ **Applicability Determination** (per SWP-LIC-02) _____
- ☐ **POC Review Criteria** (per SWP-IRP-01)
- ☐ Applicability of Potential Security Impacts (Form 26803 evaluated) If N/A check block ☐
- ☐ **Operability Impact Determination Screening**
- ☐ Operability Impact Determination Worksheet
- ☐ Licensing Basis Impact Evaluation LE- _____
- ☐ 50.59 Screen _____ ☐ 50.59 Evaluation _____
- ☐ 72.48 Screen _____ ☐ 72.48 Evaluation _____

[12] Licensing Document Change Notice (LDCN) Associated (per SWP-LIC-03)? ☒ No ☐ Yes LDCN- _____

[13] Design Change (Eng.Change) Associated (to be incorporated in the revision per SWP-DES-01)? ☒ No ☐ Yes EC Number _____

[14] Change Management (including GBP-COM-07)

		PERSON CONTACTED OR DOCUMENT INITIATED	
Communications required as a result of this change	☐ Yes		☒ No Impact
Identify documents impacted by this change and notify sponsors	☐ Yes		☒ No Impact
Clearance Order impact identified to CORC	☐ Yes		☒ No Impact
Work Order impact identified to Planners (e.g., change to a procedure where the procedure will be used for upcoming work)	☐ Yes		☒ No Impact
SMS impact identified	☐ Yes		☒ No Impact
MEL impact identified to Equipment Engineering	☐ Yes		☒ No Impact
Requirement impacts identified to Document & Data Services per GBP-PRO-02	☐ Yes		☒ No Impact
Commitment impacts identified to Licensing per SWP-LIC-01	☐ Yes		☒ No Impact
Affected Internal Commitments (e.g., CAPR actions) identified and reviewed	☐ Yes		☒ No Impact
Top Tier impacts and use of calc data identified to Engineering	☐ Yes		☒ No Impact
Emergency Plan impact identified to EP	☐ Yes		☒ No Impact
Safety impact identified to Industrial Safety	☐ Yes		☒ No Impact
PSA or Paragon impact identified to PSA group	☐ Yes		☒ No Impact
Environmental impact identified to Environmental & Regulatory Programs	☐ Yes		☒ No Impact
Configuration management impact identified to Engineering	☐ Yes		☒ No Impact
Training or Simulator impact identified to Training	☐ Yes		☒ No Impact
Training Request (TREQ) initiated	☐ Yes		☒ No Impact

[15] Revision Author: Steve Vaughn (Print Name) | 4505 (Ext.#) | Steven L Vaughn (Signature) | 09/16/13 (Date)

NUMBER: EMS-01 PROPOSED REVISION: 011

16 REVIEWS

Reviewer's Printed Name	Reviewer's Organization	Reviewer's Signature and Date
Audrey Desserault	E/BS	
Shannon Kounnala	E&RP	9/17/2013
Brad Barfuss	E&RP	9-17-13

17 ALARA Review Required? (per PPM 11.2.2.7) ☐ No ☐ Yes — N/A (Print Name) / Signature / Date

18 Validation Required? ☐ No ☐ Yes ☐ Table Top ☐ Field Walkdown ☐ Simulation

N/A / Print Name / Signature / Date / Print Name / Signature / Date

19 When implemented, the new proposed procedure or proposed procedure changes will be consistent with design and licensing documents. {C-11731}

N/A (Print Name) / Signature / Date

REQUIRED REVIEWS AND APPROVALS

20 Manager of Security (for Security) N/A Print Name / Signature / Date	**25 Procedure Sponsor** (As identified in Asset Suite) Robert R. Nielson 9/30/13 Print Name / Signature / Date
21 Fire Marshal/Fire Protection Engineering Staff (for Fire Protection Elements) N/A Print Name / Signature / Date	**26 Responsible Approving Manager** (Approving Authority) Dale K. Atkinson DK Kellett on behalf of DK Atkinson 9/30/13 Print Name / Signature / Date
22 EOP/SAG Coordinator (for EOP/SAG) N/A Print Name / Signature / Date	**27 Approved at POC Meeting No.:** _____ **Date:** _____ **Plant General Manager** (for POC reviewed Procedures)
23 Nuclear Material Mgr. (for PPM 9.2 series & SWP-SNM-01) N/A Print Name / Signature / Date	N/A Print Name / Signature / Date
24 Qualified Procedure Reviewer (may not be sponsor or author) N/A Print Name / Signature / Date	**28 CNO** (for Site Wide), **CEO** (for ISPM) N/A Print Name / Signature / Date

AFTER HOURS IMPLEMENTATION

Ensure notification of Control Room staff for Implementation of revisions after hours.

Date Implemented:		**Time Implemented:**	
Implemented By:			
Control Room Copy Filed By:			

FORWARD the following to Document Control, Mail Drop 964C, for processing.

- Completed, Signed Paperwork, including all original applicable forms
- Printed hard copy of the document

COPY and **PASTE** the electronic file in S:\Document & Data Services\Documents Ready To Process\.

For Document Control Use

Date Received	RECEIVED SEP 30 2013

NUMBER: EMS-01 PROPOSED REVISION: 011

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Reviewer's Printed Name	Reviewer's Organization	Reviewer's Signature and Date
Audrey Desserault	E/BS	Audrey J. Desserault 9/17/13
Shannon Kounnala	E&RP	
Brad Barfuss	E7RP	

17 ALARA Review Required? (per PPM 11.2.2.7) ☐ No ☐ Yes — N/A (Print Name) / (Signature) / (Date)

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Print Name	Signature	Date	Print Name	Signature	Date
N/A			/		

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	Print Name	Signature	Date
20 **Manager of Security** (for Security)	N/A		
21 **Fire Marshal/Fire Protection Engineering Staff** (for Fire Protection Elements)	N/A		
22 **EOP/SAG Coordinator** (for EOP/SAG)	N/A		
23 **Nuclear Material Mgr.** (for PPM 9.2 series & SWP-SNM-01)	N/A		
24 **Qualified Procedure Reviewer** (may not be sponsor or author)	N/A		
25 **Procedure Sponsor** (As identified in Asset Suite)	Robert R. Nielson		
26 **Responsible Approving Manager** (Approving Authority)	Dale K. Atkinson		
27 **Approved at POC Meeting No.:** _____ **Date:** _____ **Plant General Manager** (for POC reviewed Procedures)	N/A		
28 **CNO** (for Site Wide), **CEO** (for ISPM)	N/A		

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