
Western Area Power Administration Environmental Management System



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Contents

1.0 INTRODUCTION	3
2.0 ENVIRONMENTAL POLICY	4
3.0 EMS PLANNING	4
3.1 Environmental Aspects	4
3.2 Legal and Other Environmental Requirements	5
3.3 Objectives and Targets	5
4.0 IMPLEMENTATION AND OPERATION	6
4.1 Structure and Responsibility	6
4.2 Competence, Training, and Awareness	6
4.3 Communication	7
4.4 Documentation	8
4.5 Document Control	9
4.6 Operational Control	10
4.7 Emergency Preparedness and Response	11
5.0 CHECKING AND CORRECTIVE ACTION	12
5.1 Monitoring and Measurement	12
5.2 Evaluation of Compliance	12
5.3 Non-Conformance and Corrective and Preventative Action	14
5.4 Records	14
5.5 Environmental Management System Audit	15
6.0 MANAGEMENT REVIEW	17
Attachment A	18

1.0 INTRODUCTION

Western Area Power Administration

The Western Area Power Administration (Western) is a power marketing agency of the U.S. Department of Energy (DOE). Western markets and transmits approximately 10,479 megawatts of power annually from 56 hydropower plants and one thermal power plant to 682 wholesale customers. Western's service area covers 1.3 million square miles in 15 states. Western operates and maintains over 17,000 miles of high-voltage transmission lines and rights-of-way, 315 substations, and various other facilities (offices, maintenance service centers, warehouses, communication facilities, and metering sites) in its service area.

The operation and maintenance of facilities generate hazardous and non-hazardous waste. These facilities house circuit breakers, transformers, batteries, and other equipment that may contain regulated materials. Western's facilities are located in areas near a variety of ecosystems such as rivers, forests, wetlands, grasslands and deserts. Many of Western's electrical substations were constructed near hydroelectric dams, bodies of water, and irrigation projects as part of Federal irrigation and flood control projects by the Bureau of Reclamation or the U.S. Army Corps of Engineers. Operation and maintenance of these facilities, as well as the construction of new facilities, has the potential to affect sensitive environmental resources. Power sales, transmission operations, and maintenance and engineering services are accomplished by employees at 52 duty stations located throughout the service area.

Major duty stations include the Corporate Services Office (CSO) in Lakewood, Colorado, four regional Customer Service Offices located in Billings, Montana (Upper Great Plains Region, UGP); Phoenix, Arizona (Desert Southwest Region, DSW); Loveland, Colorado (Rocky Mountain Region, RMR); Folsom, California (Sierra Nevada Region, SNR); and the Colorado River Storage Project Management Center (CRSP-MC), located in Salt Lake City, Utah.

Environmental Management System

This Environmental Management System (EMS) outlines a systematic process that guides Western's activities to ensure implementation of environmental requirements and to encourage the achievement of continuous improvement. Western's EMS is formatted after the ISO 14001:2004 standard requirements with 5 sections describing the 17 core elements following the Plan-Do-Check-Act methodology. Western's EMS conforms to the International Standards for Environmental Management Systems described by ISO 14001:2004. It also meets the criteria of Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, DOE Order 436.1, *Departmental Sustainability*, which requires Federal facilities to implement EMSs, as well as the Code of Environmental Management Principles for Federal Facilities (CEMP). This EMS is applicable to all functions within Western.

2.0 ENVIRONMENTAL POLICY

The purpose of the EMS is to ensure systematic approaches to managing environmental issues and full implementation of the Environmental Policy. The Environmental Policy is the foundation of commitments made by Western's senior managers to implement and improve Western's environmental program. The EMS Policy Statement is integral to the EMS awareness training provided to all employees and all employees are expected to be aware of and to comply with the spirit as well as the letter of this Policy. The EMS Coordinator is responsible for maintaining records pertinent to the Policy and ensuring that the Policy is reviewed annually. The Environmental Policy that has been approved by Senior Managers is as follows:

Western will conduct its mission of marketing and delivering reliable, cost-based hydroelectric power and related services in compliance with environmental laws and regulations. Business will be conducted in an environmentally sustainable and economically sound manner. Western will use its environmental management system to integrate and comply with the requirements of this policy and continually improve environmental performance. Protecting the environment is every employee's responsibility and is a sound business practice. Western will use effective environmental planning to avoid or mitigate environmental impacts of its actions.

The Environmental Policy can also be found on the web at:

[http://www.cso.wapa.gov/coo/natres/WebPages/Environmental Policy.htm](http://www.cso.wapa.gov/coo/natres/WebPages/Environmental%20Policy.htm).

3.0 EMS PLANNING

This section outlines the process for identifying environmental aspects, legal and other requirements, establishing objectives and targets, and establishing environmental management programs. Systematic planning, integrated execution, and evaluation of programs for the public health and environmental protection, and pollution prevention are requirements of DOE Order 436.1, *Departmental Sustainability* and ISO14001.

3.1 Environmental Aspects

Environmental aspects are the elements of Western's activities, products and services that can interact with or have an impact upon the environment, such as the use, storage and transportation of chemicals, or vegetation management on rights-of-way. The environmental managers will identify and evaluate all environmental aspects within the scope of the EMS in order to identify significant environmental aspects. The significance criteria will be evaluated on the frequency of occurrence and by the significance level. The significant aspects will then be managed in a manner that reduces or eliminates the environmental impacts associated with them. The aspects will be reviewed annually or more frequently as needed. Significant environmental aspects and impacts can be found in [Attachment A](#) at the end of this document.

3.2 Legal and Other Environmental Requirements

The legal and other environmental requirements applicable to the EMS are a combination of federal and state laws and regulations, Executive Orders, DOE requirements, internal Western orders and directives, and any requirements and regulations promulgated by other federal agencies. Laws and regulations change frequently and it is imperative that the EMS Coordinator continually identify the updated requirements so only the most current and applicable ones are being used. The EMS Coordinator is responsible for maintaining a current list of legal and other environmental requirements as well as for evaluating environmental compliance and recommending corrective actions. The EMS Coordinator will utilize information acquired from Western, DOE, and other sources to ensure compliance requirements are identified and appropriately addressed.

The current list of legal and other environmental requirements can be found at <http://www.cso.wapa.gov/coo/natres/WebPages/legal.htm>.

3.3 Objectives and Targets

One of the major functions of the EMS planning process is to monitor and improve environmental performance. This is accomplished by developing written objectives and targets that are to be achieved by the EMS and consistent with the Environmental Policy. When Western determines the objectives, significant aspects, views of interested parties, legal and other requirements, technological options, financial, and business requirements will be considered. Objectives and targets are developed with consideration to what the significant environmental aspects are and where environmental performance improvements can be made. The objectives and targets will identify the time frame and person(s) responsible for achieving them. Progress toward accomplishing the goals is monitored semi-annually at the environmental manager meetings. The environmental managers will annually evaluate the previous year's objectives and targets for completion and determine if the desired objective was achieved. Current objectives and targets can be found at <http://www.cso.wapa.gov/coo/natres/WebPages/objandtargets.htm>.

4.0 IMPLEMENTATION AND OPERATION

This section outlines how Western's Environmental Policy is implemented and operated.

4.1 Structure and Responsibility

Western Order 450.1B, *Environmental Protection Program* (WAPA 450.1B) establishes policy, assigns responsibilities, and delegates authority to ensure that agency activities comply with the letter and spirit of environmental requirements. The EMS covers implementation of this directive, which includes Western's Environmental Policy.

Western's Administrator is the senior management official charged with directing resources and has the overall responsibility for environmental compliance. The senior managers (managers who report directly to the Administrator and/or who have been designated senior management status) are charged with agency oversight and management. The senior managers confer at least monthly. The Regional Managers and the CRSP-MC Manager have responsibility for assigning resources and ensuring environmental compliance at each regional office. Each Western office is responsible for environmental compliance with applicable state and local regulations, rules, and other requirements within their boundaries, and for implementing its environmental program in accordance with WAPA 450.1B, Western's Environmental Policy, and the EMS.

The regional environmental managers are responsible for developing, managing and supporting environmental programs within their respective offices. Regional functional managers are responsible for assuring compliance with environmental program requirements. The environmental managers are charged with ensuring EMS requirements are established, implemented, and maintained in accordance with recognized standards. They periodically analyze the performance of the EMS and make progress reports and recommendations for improvement to senior management. They also set policies to support environmental programs within Western.

The CSO Natural Resources Office is responsible for supporting specific regional environmental projects and programs, providing policy and program support, and providing liaison and quality control services. Western's organization charts are kept by the Human Resource Office.

4.2 Competence, Training, and Awareness

Environmental training requirements are outlined in Federal, state and DOE regulations, and environmental program plans. Each office (regional, CSO, CRSP-MC), is responsible for developing, implementing, documenting and keeping records of their training programs. Functional managers, in consultation with their respective environmental manager, identify personnel/positions which require environmental training. Assuring staff complete required environmental training is the responsibility of the functional manager. Training is provided by environmental offices or by off-site vendors. At the minimum, employees receive training that includes the following:

- Awareness and purpose of the EMS and the importance of conformance with the Environmental Policy, legal and other requirements.
- The significant environmental impacts of individual work activities, and the environmental benefits of improved personal performance.
- Individual roles and responsibilities in achieving conformance with compliance requirements, and with the requirements of the EMS.
- The potential consequences of not meeting compliance and EMS requirements.

For training routinely provided in-house, the environmental managers work to define and coordinate training that is common throughout Western. Regional environmental managers define and develop training that is unique to their region, including state and local requirements.

All new employees receive training on EMS and compliance requirements. Environmental staff receives training as defined in their individual development plans (IDP) and as required by regulation or policy.

Current environmental training requirements can be found on the internal HR website at <http://www.int.wapa.gov/HR/employee/training.htm> under Western's Mandatory Training List.

4.3 Communication

Regional environmental managers, the CSO environmental team lead and the CSO Natural Resources Manager are the primary authority for communicating information on environmental matters to interested parties, within and outside of Western. Communication from regulatory agencies is also directed to each manager, who may choose to relay it to the responsible functional manager or environmental staff. NEPA projects may have environmental staff assigned as project managers who interact with the public and other interested parties. Certain communication will be handled by, or coordinated with the Office of Corporate Communication. Western Policy 141.1, *Public Communications* provides specific guidance on communicating with external parties.

The environmental managers may communicate information relative to the EMS to senior management, other functional managers, employees, external stakeholders and customers.

The Annual Site Environmental Report outlines the accomplishments and issues of Western's environmental program for the previous calendar year. The report is available to all employees and the public and is distributed to managers, external stakeholders, and state and Federal agencies.

Other methods of communicating environmental information include:

- Western's Strategic Plan
- Western's Annual Report
- DOE and Western Directives
- Western's publication *Closed Circuit*
- Senior manager meeting notes
- Environmental manager meeting notes
- E-mail notices and correspondence
- Western's internet and intranet
- Telephone conversations

Western communicates occurrences (unusual occurrences, spills, etc.) to DOE and state and local agencies using procedural methods established in WAPA 450.1B, DOE Order 231.1B, *Environment, Safety, and Health Reporting*, and DOE Manual 232.2, *Occurrence Reporting and Processing of Operations Information*.

4.4 Documentation

Documentation describes an environmental management system. It also describes the relationships between the documents and where other documentation can be found.

Western's documentation includes:

- Environmental policy
- Significant environmental aspects
- Procedures (implementation guidance including program plans and specifications)
- Organizational charts
- Internal and external standards (orders, policies, manuals and standards)
- Site emergency plans

The decision-making process for preparing EMS documentation is based on the factors of: the consequences of not doing so; the need to demonstrate compliance; the need to ensure an activity is performed consistently; improved communication and training; reduction in ambiguity, and improved environmental visibility.

The central and coordinating environmental management system document for Western is the EMS. The maintenance and management of the EMS is the responsibility of the environmental managers. It is reviewed prior to every external audit and updated as needed. The current EMS with supporting documentation is on Western's intranet. The CSO Natural Resources Manager may issue controlled paper copies. They are distributed only to regional and CSO environmental offices. Current EMS documents are therefore able to be accessed by all Western management and staff.

4.5 Document Control

Western creates and maintains documents to ensure tracking and implementation of the EMS. The EMS is designed to be a tool for more effective and efficient environmental compliance and performance, therefore the management of a heavily resource-dedicated document control system is not emphasized at Western.

The responsibilities and procedures for controlling, preparing, reviewing and updating, and deleting EMS documentation are covered in this section. They apply to all Western offices and functions that manage EMS documents.

The overall responsibility for assuring the Western wide EMS documentation is correct, complete, up-to-date, tracked and available lies with the CSO Natural Resources Manager. The environmental managers are responsible for assuring EMS documentation at the regional or office level is correct, complete, up-to-date and available.

Preparation of New Documents

The environmental managers determine the need for a new EMS document and assign staff and due date. Assigned staff sets meetings, coordinates with affected functional groups, prepares drafts, coordinates with affected groups, receives comments and keeps environmental managers advised of progress. The environmental managers review and approve documentation. The CSO Natural Resources Manager then assigns document control identification information, adds the information to the EMS Document Summary, places the document on the internal web site, and distributes controlled copies to each regional/CSO environmental office.

Review and Update of Controlled Documents

The CSO Natural Resources Manager is responsible for scheduling review and revision schedules for each controlled EMS document. Each document may contain a review schedule, or a review schedule matrix for EMS documentation may be prepared. Western employees may request a review and revision at any time. Upon confirmation by the environmental managers that review and revision is appropriate, staff and due date are assigned. Assigned staff reviews the document, suggest changes if appropriate, coordinates with affected groups, receives comments and keeps environmental managers advised of progress. The environmental managers review and approve the documentation. The CSO Natural Resources Manager assigns new document control identification information, adds the information to the EMS Document Summary, and ensures previous versions are removed from the internal web site and elsewhere. The new document is placed on the internal web site and controlled copies are distributed to each regional/CSO environmental office.

Deletion of Documents

Functional management and staff, environmental staff, and environmental managers may determine that a controlled EMS document is obsolete or no longer applicable. Upon confirmation by the environmental managers that the document should be deleted from the EMS, the CSO Natural Resources Manager places that information on the EMS Document Summary. The CSO Natural Resources Manager removes the document from the internal web site and advises personnel who manage controlled copies at each regional/CSO environmental office.

Other functional offices in Western manage their own program-specific documents. The CSO Natural Resources Manager ensures those documents are reviewed for EMS-related content at the periodic review schedules established by those offices.

Western is subject to regulation and guidance by external parties. Related external documentation includes that from DOE, other federal agencies, state agencies, customers, and electrical reliability councils. Such documentation is normally included in Western's EMS by identification and reference in program plans and other applicable documents.

EMS documents are designated by title and date. Revisions are tracked in the EMS Document Summary.

4.6 Operational Control

Western conducts numerous operations that, without established documented procedures and controls, could lead to deviations from the Environmental Policy, significant environmental impacts or regulatory violation. Operational control documents are established and managed by Western as summarized below:

Operational Control Document	Management Method
Directives in the form of policy, notice, and order	Prepare new or update existing as needed from aspect analysis, audit findings, incident investigation results, and employee suggestions. Any functional organization may initiate.
Operating manuals in the form of the Power System Maintenance Manual, the Power System Safety Manual, and the Engineering Manual	Environmental staff conduct periodic reviews and updates of operating manuals to ensure environmental procedures are addressed and up to date.
Written spill control procedures (SPCC Plans)	Environmental staff prepare and update plans in accordance with current regulations.
Environmental Program Plans	Environmental staff prepare and update plans in coordination with affected functional groups.
Construction and other procurement specifications	Environmental staff and management review standard and individual specifications routinely to ensure contractors conduct environmental activities as required.

Operational Control Document	Management Method
Regional environmental guidance documents	Regional environmental staff prepare guidance documents for topics that are unique to their situations, based on regulations, risk exposure, audit feedback, state requirements, etc.
Memoranda from management	Environment offices initiate memorandums guiding specific operations or operational corrections in special, near term or emergency cases.
Job Hazard Analysis (JHA) documents	Routine maintenance operations may require special operational guidelines based on non-routine work, or to reinforce existing operational controls. Maintenance supervisors initiate the JHA.
Facility audit (inspection) reports	Environmental staff conducts facility audits (inspections) to assess if applicable regulations and requirements are met.

4.7 Emergency Preparedness and Response

Situations at Western that may require emergency preparedness and response procedures include mineral oil and PCB releases, regulated materials releases, cultural resources damages, taking of endangered species, and wildlife interactions with facilities.

The following procedures are in place to respond to emergency situations and to prevent or mitigate associated environmental impacts:

- Procedures prescribed in each of Western’s spill prevention, control and countermeasures (SPCC) plans in place at facilities where oil spills could potentially harm the environment.
- Western’s implementation of DOE Order 231.1B, *Environment, Safety and Health Reporting* guides reporting procedures and evaluations to determine causes and preventive measures.
- Western Order 450.1B, Chapter 1, directs procedures for incident investigations and evaluations to determine causes and preventive measures.
- Environmental program plans describe specific roles, responsibilities and procedures for emergency preparedness and response.

Procedures are in place to regularly review and revise orders, SPCC plans, and environmental program plans, as outlined in the environmental program plans.

5.0 CHECKING AND CORRECTIVE ACTION

This section outlines the programs Western uses to (1) monitor and measure its operations that can have a significant environmental impact, (2) evaluate compliance with environmental, legal, policy and other requirements, (3) maintain procedures for controlling non-conformities and for taking corrective and preventive actions, (4) establish and maintain records, and (5) ensure the performance of EMS audits at planned intervals.

5.1 Monitoring and Measurement

Permits and environmental program plans outline monitoring and measurement of activities that have significant environmental impacts. Methods of monitoring and measurement employed at Western include some of the following:

- Laboratory analysis of suspected contamination (contaminated soil from an oil or PCB spill, and other);
- Tracking mitigation commitments (i.e. endangered species, cultural resources, etc.);
- Reports and tracking of regulated materials purchases and use;
- Tracking and reporting of sanitary and hazardous waste disposals;
- Tracking and reporting of pollution prevention data;
- Tracking and reporting of affirmative procurement data;
- NEPA documents tracking and reporting;
- Auditing proposed disposal facilities;
- Tracking wildlife transmission system interactions;

Procedures in place for the above are in program plans, and in Western and DOE directives and guidance documents. Procedures are also in place to periodically evaluate compliance with relevant environmental requirements, based on facility audits and other requirements.

5.2 Evaluation of Compliance

Audits and inspections are conducted at Western facilities to evaluate compliance with environmental, legal, and other requirements. The Assessment and Corrective Action Plan outlines the processes and procedures followed for conducting assessments. Types of evaluations included in the program plan are:

- Self-Assessments – assessments of Western’s environmental program conducted by an environmental team on a 3-5 year cycle.

- Facility evaluations, audits or assessments – field audits conducted by each regional environmental staff according to an auditing schedule.
- Vendor Audits – conducted as needed on vendors who handle, transport, process or dispose of regulated materials to determine their ability to comply with regulatory requirements to minimize the risk of future cleanup costs. These are conducted either by Western’s environmental staff, or by another Federal agency.
- External Audits – conducted ad hoc by external agencies such as the Environmental Protection Agency and Federal, state and local regulatory agencies.

Each regional environmental manager is responsible for conducting regional assessments according to an assessment schedule. The results of these assessments are forwarded to the appropriate functional manager for assignment of corrective actions. Self-assessments of Western-wide programs are initiated by the environmental managers. These are conducted internally by cross-regional teams appointed by the environmental managers. Findings from these assessments are evaluated and corrective actions are assigned and prioritized by the environmental managers.

DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*, establishes “the Department’s expectations for DOE line management environment, safety and health oversight.” The policy is broader than just audits and assessments, and places these tools in the context of performance measures and performance indicators; data collection and analysis and corrective actions; and continuous feedback and performance improvement. Western’s facility audits, vendor audits, self assessments, pollution prevention data collection, and other sources of performance measurement are regularly analyzed to meet the DOE requirement.

The Annual Site Environmental Report submitted to DOE summarizes the status of environmental issues at Western, including projects, permits, audits, reviews, self assessments, EMS implementation and more. External enforcement actions are reported to DOE in accordance with the procedures of DOE Order 231.1B, *Environment, Safety, and Health Reporting*.

5.3 Non-Conformance and Corrective and Preventative Action

The Assessment and Corrective Action Plan outlines the processes and procedures followed for evaluating and responding to findings, preparing corrective actions, and tracking and trending findings and corrective actions. Non-conformances follow the procedures for assessment findings and are forwarded to the appropriate functional or environmental office for assignment of a corrective action.

Regional environmental managers are responsible for tracking and trending findings and corrective actions within their regions. Functional managers are responsible for responding to findings and implementing corrective actions in accordance with the processes and procedures of the Assessment and Corrective Action Plan. The environmental managers have responsibility for determining appropriate corrective actions for findings that have Western-wide impacts such as self-assessments, EMS audits, and some external audits. The CSO Natural Resources Manager has responsibility for tracking Western-wide findings and corrective actions.

5.4 Records

Records are kept to meet and demonstrate regulatory compliance, and to show conformance with Western's EMS.

Western follows the policies and procedures according to DOE Order 243.1A, *Records Management Program* for maintenance of records related to the EMS and environmental programs. This Order includes directions regarding retention periods and disposition of records. Some records are maintained indefinitely due to possible future regulatory or legal situations. Records are maintained within the regional environmental office that generates the record and/or within the official project file.

Other records are maintained in the offices of other functional managers. Examples of such records include audit and inspection reports, training records, pollution prevention/affirmative procurement records, etc. Those records are maintained in accordance with DOE, Western, and functional office policy.

5.5 Environmental Management System Audit

Annually, the environmental managers evaluate comments and inputs received regarding the EMS. The EMS review evaluates the level of implementation and operational effectiveness of procedures, programs, and controls, and evaluates progress made on objectives and targets. The CSO Natural Resources Manager coordinates the report distribution and any changes and updates as directed by the environmental managers.

Responsibilities for internal EMS audits are:

Responsibility	Action
Environmental Managers	<ul style="list-style-type: none"> • Schedule and coordinate internal EMS audits at periodic intervals. • Schedule and coordinate external EMS audit. • Approve audit criteria to be used. • Selects audit leader and participants for internal audits. • Ensures those who lead and participate in audits are properly trained. • Annually evaluate comments received regarding the EMS. • Provide general guidance and protocols to team lead. • Provide information and records to audit team as requested. • Receive report from audit team. • Evaluate audit results, summarize deficiencies, and prepare plans and strategies for remedying deficiencies. • Presents audit results to Chief Operating Officer.
CSO Natural Resources Manager	<ul style="list-style-type: none"> • Coordinates EMS audit reporting and distribution and tracks changes and updates as directed by the environmental managers. • Retains audit records.
Chief Operating Officer	<ul style="list-style-type: none"> • Receives audit reports and information.
Audit Leader and Team Members	<ul style="list-style-type: none"> • Coordinates audit schedule as directed by environmental managers. • Clarifies audit assignments and requirements with team members. • Meets with the audit team members regularly to review emerging results and to resolve issues. • Upon completion of the audit, ensure report is prepared and collects working documents and backup information used to prepare the report.

Individuals on the EMS audit team must be qualified and have received appropriate training. EMS audits are conducted against pre-established and recognized audit criteria. The environmental managers approve the criteria to be used. The criteria

must be sufficient to determine conformance with ISO 14001, ISO 19011:2002, Executive Order 13423, and DOE Order 450.1B. Audit findings must be based on objective evidence that is properly documented and authenticated.

- **Audit Process:** The EMS Audit is conducted through interviews with personnel and evaluation of guidance, policy, procedure, directives and other documentation. The audit team conducts opening and closing meetings with responsible management in the locations to be audited. The team documents findings and conducts the appropriate analysis to determining level of compliance. Areas noted for corrective action are to be processed in accordance with the Manual for the Preparation of Assessment and Corrective Action Implementation Plans.
- **Compliance Status:** The EMS audit may also document the status of regulatory compliance if that observation is incidentally made during the audit.
- **Audit Reporting:** The audit team lead submits the EMS Audit Report to the environmental managers. The report includes, at the minimum, all areas as detailed above in Audit Planning.
- **Audit Closeout:** The EMS audit is closed when the audit team determines the listed corrective actions have been accomplished.
- **Input to Management Review:** The EMS audit report and actions taken to address findings are considered inputs to the management review.

Every three years, an external team composed of personnel from Western, DOE, another Federal agency, or an EMS-certified auditing consultant, conducts an assessment of Western's EMS using ISO 14001 as the review standard. The evaluation includes measures of how effectively Western is implementing EMS procedures, programs, controls and progress made on objectives and targets. The report is submitted to Western's environmental managers.

The environmental managers evaluate the audit results, summarize deficiencies, and prepare plans and strategies for remedying deficiencies. The audit report, summary of deficiencies, and the plans and strategies are presented to the senior managers through the Chief Operating Officer. Changes and updates to the EMS will be directed by the environmental managers and incorporated into the EMS by the CSO Natural Resources Manager.

6.0 MANAGEMENT REVIEW

The environmental managers review the EMS annually to ensure its continuing suitability, adequacy, and effectiveness. The environmental managers facilitate the continuous improvement process by preparing a summary progress report.

The summary progress report describes how performance has met the criteria of the environmental policy statement, overall improvement of environmental performance, successful and unsuccessful programs, and the level of achievement toward meeting objectives and targets. Sources of information include: the Annual Site Environmental Report, status of environmental management programs, status of environmental commitments in Western's Annual Performance Plan, results of prior EMS audits, communication from internal and external sources, status of corrective actions, follow-up actions from previous management reviews, changing circumstances, and recommendations for improvement. The summary progress report is submitted to the Chief Operating Officer and includes plans and timelines for correcting any items that are not in conformance or are not on schedule.

The Chief Operating Officer evaluates the summary progress report to ensure the EMS continues its:

- Suitability to Western's mission, culture and strategic plan.
- Adequacy in fulfilling requirements of ISO 14001.
- Effectiveness in managing and improving environmental performance.

Each review considers the need for updating the Environmental Policy, environmental objectives and targets, and other elements of the EMS.

The review is documented and presented to the senior managers by the Chief Operating Officer. The results of the review are incorporated within the Annual Site Environmental Report.

Attachment A

Environmental Aspect and Impact Matrix

Aspect	Responsibility	Activity, Service, or Product	Impacts	Significant
Storage tank releases	Maintenance (substation)	Filling, using, and draining storage tanks	Potential contamination	No
Electrical equipment dielectric releases	Maintenance (substation), warehouse	Filling, using, and draining electrical equipment dielectric	Air (SF6, fire) contamination Water and soil (oil) contamination	No Yes
Hazardous waste generation and disposal	Maintenance (T-line, substation, comm., construction), facilities, warehouse	Maintenance of facilities and vehicles	Potential contamination Landfill space	No No
Waste generation and disposal	All functions	Maintenance of facilities and vehicles	Potential contamination Landfill space	Yes Yes
Vehicle releases (e.g, fuel or hydraulic fluid leaks	Operation, Maintenance, and Construction (t-line, substation, comm. facilities)	Maintenance of facilities and vehicles	Potential contamination	No

Aspect	Responsibility	Activity, Service, or Product	Impacts	Significance
Historical releases of chemicals (Existing contamination)	Maintenance, facilities, warehousing	Procurement of new properties; property transfers; CERCLA/SARA	Existing contamination of water, soil Worker exposure	No No
T-line pole, structure and other equipment replacement and repair, and non-chemical vegetation management	Operation, Maintenance, and Construction (t-line, substation, comm. facilities)	Maintenance and construction of facilities	Vehicle emissions Dust emissions Cultural resource damage Endangered Species take Wetland disturbance	No No Yes Yes Yes
Pest Control and Management	Maintenance (T-line, substation, comm., construction), facilities, warehouse	Storage and application of pesticides	Potential contamination Damage to non-target crops and species	No No
Implement Sustainability Plan	All functions	Purchase, use, recycle of materials, energy, water. Design of sustainable facilities	Reduction of pollution and conservation of resources	Yes