RECLAMATION

Managing Water in the West

Upper Colorado Regional Environmental Management System (EMS) Implementation Plan

Version 1.0

Approved and Authorized by: _____
Regional Director

Recommended by: _____
Environmental Management Representative

U.S. Department of the Interior
Bureau of Reclamation
Upper Colorado Region
Salt Lake City, Utah

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Mission Statements

The US Department of the Interior protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Contents

Purpose of This Plan

The purpose of this plan is to document and compile procedures the Upper Colorado Region of the Bureau of Reclamation follows in establishing, documenting, implementing, maintaining, and continually improving its environmental management system (EMS). The EMS is based on a cyclical process known as plan-do-check-act, as described by the International Standard for Organization (ISO) 14001:2004. The plan-do-check-act cycle is described in detail in this plan, but it is summarized as follows.

1. Plan; establish the objectives and processes necessary to deliver results in accordance with the environmental policy. Planning elements include identification of environmental aspects and legal and other requirements.
2. Do, implement the processes. Implementation and operation elements include the definition of resources, roles, responsibilities and authorities; identification of required competencies, training, and awareness programs; communication; documentation and document control; operational controls; and emergency preparedness and response.
3. Check, monitor and measure processes against environmental policy, objectives, targets, legal, and other requirements, and report the results. Checking is accomplished through monitoring; evaluation of compliance; identification of nonconformities; internal audits; and management reviews.
4. Act; take actions to continually improve performance of the EMS.

The region has formed a committee or cross-functional team representing all offices, divisions, and functions, who shall be responsible for establishing and maintaining the EMS and ensuring its conformance with ISO 14001:2004 and applicable environmental laws and regulations. This plan has been prepared by the region's EMS committee and is distributed by the regional EMS coordinator to the region’s top management (i.e., the EMS management representative and regional director) and to the public. This plan, including the region's environmental policy, shall be made available to all regional employees, especially those who perform work related to the EMS. The plan shall be made available to employees and the public by posting on the internet. The internal audit process described in this plan serves as the basis for the region's periodic internal assessment of its EMS. This plan is considered a dynamic document; hence, it is subject to scheduled, periodic amendments in the form of progress updates, activity additions, and activity removal upon completion.

Definitions and Abbreviations

Definitions in this plan follow the ISO 14001:2004 standard, or in some cases, definitions from relevant environmental statutes or executive orders.

Definitions

Auditor. Person with the competence to conduct an audit.

Committee or cross-functional team. Members of the organization who are responsible for representing their area or department in several facets of the EMS, e.g., establishing environmental aspects, determining significant aspects, setting objectives and targets, implementing environmental management programs, reviewing and tracking EMS internal audits results, and serving as an information resource. The committee meets or communicates regularly to discuss the EMS.

Continual improvement. Recurring process of enhancing the EMS to achieve improvements in overall environmental performance consistent with the organization's environmental policy.

Coordinator. A member of the organization whose responsibility is to identify, assign, schedule, provide the necessary support for, and ensure completion of all tasks relating to the EMS. Coordinators work closely with the top management representative (EMR) and serve on the committee. The regional EMS coordinator is also responsible for maintaining this manual, under the leadership of the management representative, and in coordination with the committee.

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

Document. Written communication or other information that presents an organization's policy, procedures, and requirements. Documents describe the EMS, provide a basis for auditing, provide continuity of the EMS and its requirements during changing circumstances, support training of personnel in EMS requirements, present the EMS for external purposes, demonstrate the conformance of the EMS in contractual situations, and allow improvement in the control of practices and environmental management activities. The medium for the document may be paper, electronic, computer disc, photograph, or combination thereof.

Environment. Surroundings in which the organization operates, including air, water, land, natural resources, flora, fauna, humans, and their interaction.

Environmental aspect (EA). Element of the organization's activities, products, or services that can or does interact with the environment (i.e., can or does create an environmental impact). These interactions and their effects may be continuous, periodic, or associated only with events such as emergencies.

Environmental impact. Any change to the environment, whether adverse or beneficial, wholly or partially resulting from the organization's activities, products, or services.

Environmental management representative (EMR). Member of the organization's top managers who is responsible for the functioning of the EMS. An EMR ensures that all tasks relating to the EMS are identified and completed in a timely manner. An EMR is responsible for reporting periodically to the top plant management group on the progress and results of the EMS.

Environmental management system (EMS). Part of the overall management system which includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy. Part of an organization's management system used to develop and implement its environmental policy and manage its environmental aspects.

Environmental policy. Overall intentions and direction of an organization related to its environmental performance, and as expressed by top management.

Environmental objective. Overall environmental goal, consistent with the environmental policy, that the organization sets itself to achieve.

Facility. The Emergency Planning and Community Right-to-Know Act (EPCRA) definition at 40 CFR 372.3 is used here to define facilities within Reclamation projects. A facility is all buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person (or by any person which controls, is controlled by or under common control with such person).

Green purchasing. As defined in the Department of the Interior's Green Purchasing Plan (2008), green purchasing refers to incorporating key environmental factors with traditional price and performance considerations in purchasing decisions.

Hazardous chemical. As defined by the Department of Labor, Occupational Safety and Health Administration at 29 CFR 1910.1200(c) as any element, chemical compound, or mixture of elements or compounds which is a physical hazard or health hazard.

Hazardous material. The Department of Transportation (DOT) definition (49 CFR 171-180) is any substance or material that could adversely affect the safety of the public, handlers, or carriers during transportation. There are nine classes: explosives, compressed gases, flammable liquids, flammable solids, oxidizers and organic peroxides, toxic materials, radioactive materials, corrosive materials, and miscellaneous.

Hazardous waste. Materials are considered waste when the generator determines that the material has no further use. A hazardous waste is a material or chemical with properties that make it capable of causing illness, death, or harm to humans or the environment when mismanaged or released into the environment. The Resource Conservation and Recovery Act and 40 CFR 262.11 define a regulatory process for determining whether a waste is hazardous. The regulatory definition includes certain solid wastes, listed wastes (40 CFR 261), characteristic wastes (ignitable, corrosive, reactive, toxic), and universal wastes (batteries, pesticides, thermostats as regulated under 40 CFR 273).

Internal audit. Systematic, independent, and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the EMS criteria set by the organization are fulfilled.

ISO 14001 elements. As mentioned above, the ISO 14001:2004 standard is based on the plan-do-check-act cycle. The first requirement is that the organization's environmental policy is developed and endorsed by top management. The *planning* requirements include identification of environmental aspects, tracking legal and other requirements, setting objectives and targets for reducing environmental impacts, and developing environmental management programs for achieving its objectives and targets. The *implementation* and *operation* requirements include assigning roles and responsibilities; training and communication; documentation; operational control; and emergency preparedness and response. The *checking* requirements include establishing ways to monitor, measure, audit, and correct environmental problems and nonconformities; and top management review. All of these ISO 14001:2004 elements are focused on continuous improvement of environmental performance.

Material safety data sheet (MSDS). Documentation required by the Department of Labor, Occupation and Safety Health Administration's hazard communication standard found at 29 CFR Section 1910.1200(g), and as mandated by EPCRA Section 329(6)). The requirement at Section 1910.1200(b)(3)(ii) is that material safety data sheets are received within incoming shipments of hazardous chemicals and the sheets are readily accessible during each workshift to employees when they are in their work areas.

Nonconformity. Non-fulfillment of a requirement or the discrepancy between the organization's actual EMS activities and the procedures laid out in this manual (i.e., where the actual activities do not follow the procedures).

Objective. Overall environmental goal, consistent with the environmental policy, that an organization sets itself to achieve.

Procedure. Specified way to carry out an activity or a process.

Record. Written evidence established and maintained to track performance of an EMS and to demonstrate conformance with EMS requirements.

Release. Using the EPCRA definition, any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, or other closed receptacles) of any EPCRA section 313 chemicals as defined at 40 CFR 372.3.

Significant environmental aspect (SEA). An environmental aspect the region deems as having, or potentially having, a significant impact on the environment.

Stakeholder or interested party. Any person or organization concerned with or affected by the environmental performance of the organization. Internal stakeholders may include employees, shareholders, customers, suppliers, investors and insurers. External stakeholders may include neighbors, community organizations, environmental groups, larger companies, the media, and the general public.

Sustainable practices. Following Executive Order 13423, sustainable practices shall include improvements in energy efficiency, reduction in greenhouse gas emissions, use of renewable energy, reduction in water consumption, sustainable acquisition, reduction of the use and disposal of toxic and hazardous chemicals and materials, waste prevention and recycling programs, building high performance and sustainable buildings, vehicle fleet management, and electronics stewardship.

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

Toxic chemical. A chemical or chemical category listed in 40 CFR Section 372.65 and 40 CFR Section 372.3 of EPCRA.

Important Abbreviations

EA	environmental aspect
EMR	top management representative
EMS	environmental management system
ISO	International Organization for Standardization
SEA	significant environmental aspect

Description of the Region

A federal agency within the US Department of the Interior, the Bureau of Reclamation is the largest wholesaler of water in the western United States. Reclamation is subdivided into five geographic regions. The geographic subdivision known as the Upper Colorado Region, henceforth the region, manages congressionally approved water projects in all or portions of seven western states: Colorado, Idaho, Nevada, New Mexico, Texas, Utah, and Wyoming. The regional office is located in the federal building at 125 South State Street, Salt Lake City, UT 84138. One area office, the Power Office (PWR) is also located in the federal building with the regional office. Other area offices are located in Albuquerque, New Mexico (AAO); Provo, Utah (PAO); and Grand Junction, Colorado (WCN), with a satellite office in Durango, CO (WCS). The region also includes the Four Corners Construction Office in Farmington, New Mexico and two job corps centers in Collbran, Colorado and Ogden, Utah.

Table 1 lists the region's authorized projects as they are labeled in the June 2008 FIRM database of the region's lands division. Table 1 lists the managing office and states where the project is located, the major facilities that store or deliver water, along with the design capacity of any hydropower generating facility at the project. These are the major facilities included in this EMS, although all regional projects were considered in identifying impacts and aspects and in setting objectives and targets.

Table 1. Regional projects, as listed in land audit records, by office

Authorized Project	Area Office1	State	Facility that Stores or Delivers Water	Hydropower (Design Capacity kW)
Balmorhea Project	AAO	TX	Lower Parks Dam, Madera Diversion Dam	0
Brantley (subdivision of Carlsbad)	AAO	NM	Brantley Dam	0
Carlsbad Project	AAO	NM	Avalon Dam, Black River Diversion Dam, McMillan Dam, Sumner Dam	0
Fort Sumner Project	AAO	NM	Fort Sumner Diversion Dam	0
Malaga Bend Division	AAO	NM		0
Middle Rio Grande Project	AAO	NM	Angostura Diversion Dam, El Vado Dam, Isleta Diversion Dam, San Acacia Diversion Dam	El Vado 6000
Pecos River Basin Water Salvage Project	AAO	NM		0
Rio Grande Project	AAO	NM	American Diversion Dam, Caballo Dam, Elephant Butte Dam, Leasburg Diversion Dam, Mesilla Diversion Dam, Percha Diversion Dam, Picacho North and South Dams, Riverside Dam	Elephant Butte 27,945
San Juan-Chama Project	AAO	NM	Blanco Diversion Dam, Heron Dam, Little Oso Diversion Dam, Nambe Falls Dam, Oso Diversion Dam	0
San Luis Valley Project, Closed Basin	AAO	CO		0
San Luis Valley, Conejos Division	AAO	CO	Platoro Dam	0
Tucumcari Project	AAO	NM	Conchas Dam	0

Velarde Ditch Project	AAO	NM		0
Bear River Project	PRO	ID		0
Bonneville Unit, CUP Project	PRO	UT	Currant Creek Dam, Docs Diversion Dam, Jordanelle Dam, Knight Diversion Dam, Layout Creek Diversion Dam, Lost Lake Dam, North Bottle Hollow Dam, Rhodes Diversion Dam, Soldier Creek Dam, South Bottle Hollow Dam, Starvation Dam, Upper Stillwater Dam, Vat Diversion Dam, Washington Dam, Water Hollow Diversion Dam, Win Diversion Dam	0
Eden, CRSP Unit	PRO	WY	Big Sandy Dam, Eden Dam, Little Sandy Diversion Dam	0
Emery County Project	PRO	UT	Huntington North Dam, Joes Valley Dam, Swasey Diversion Dam	0
Hyrum Project	PRO	UT	Hyrum Dam	0
Jensen Unit, CUP Unit	PRO	UT	Red Fleet Dam	0
Lyman Project, CRSP Unit	PRO	WY	Meeks Cabin Dam	0
Moon Lake Project	PRO	UT	Duchesne Feeder Canal Diversion Dam, Midview Dam, Moon Lake Dam	0
Newton Project	PRO	UT	Newton Dam	0
Ogden River Project	PRO	UT	Pineview Dam	0
Preston Bench Project	PRO	ID		0
Provo River Project	PRO	UT	Deer Creek Dam, Duchesne Diversion Dam, Murdock Diversion Dam, Olmstead Diversion Dam, Weber-Provo Diversion Dam	Olmstead 10,300
Provo River Restoration Project	PRO	UT		0
Sanpete Project	PRO	UT		0
Scofield Project	PRO	UT	Scofield Dam	0
Strawberry Valley Project	PRO	UT	Indian Creek Crossing Diversion Dam, Spanish Fork Diversion Dam, Strawberry Valley Diversion Dam	Lower Spanish Fork 400
Sublette Project	PRO	WY		0
Uinta Basin Replacement Project, CUP	PRO	UT		0
Uintah Unit, CUP	PRO	UT		0
UPALCO Unit, CUP	PRO	UT		0
Ute Indian Unit, CUP	PRO	UT		0
Vernal Unit, CUP Unit	PRO	UT	Fort Thornburgh diversion Dam, Steinaker Dam	0
Wasatch County Water Efficiency Project	PRO	UT		0
Weber Basin Job Corps Center	PRO	UT		0
Weber Basin Project	PRO	UT	AV Watkins Dam, Causey Dam, East Canyon Dam, Lost Creek Dam, Slaterville Diversion Dam, Stoddard Diversion Dam, Wanship Dam, multiple small dams	Gateway 4,500, Wanship 1,950, Echo 4,500
Weber River Project	PRO	UT	Echo Dam	Echo 4500
*Flaming Gorge Unit, CRSP Unit	PRO&PRW	UT		Flaming George 151,485
*Seedskadee Unit, CRSP Unit	PRO&PWR	WY	Fontenelle Dam	Fontenelle 10000

*Glen Canyon Unit, CRSP Unit	PRW	AZ, UT		Glen Canyon 1,312,000
Recovery Implementation Program	PWR	UT		0
Battlement Mesa, CRBP Unit	WCN	CO		0
Cliffs Divide Project	WCN	CO		0
Dallas Creek, CRBP Unit	WCN	CO	Ridgeway Dam	0
Fruitgrowers Project	WCN	CO	Dry Creek Diversion Dam, Fruitgrowers Dam	0
Fruitland Mesa, CRSP Unit	WCN	CO		0
Grand Valley Project	WCN	CO	Grand Valley Diversion Dam	0
Grand Valley Unit, CRBSCP	WCN	CO		0
Paonia Project, CRSP Unit	WCN	CO	Paonia Dam, Fire Mountain Diversion Dam	0
Savory-Pot Hook, CRSP Unit	WCN	CO, WY		0
Silt Project, CRSP Unit	WCN	CO	Rifle Gap Dam	0
Smith Fork Project, CRSP Unit	WCN	CO	Crawford Dam, smith Fork Diversion Dam	0
Uncompahgre Project	WCN	CO	Delta Diversion Dam, East Canal Diversion Dam, Garnet Diversion Dam, Gunnison Diversion Dam, Ironstone Diversion Dam, Loutzenhizer Diversion Dam, Montrose&Delta Diversion Dam, Selig Diversion Dam, Taylor Park Dam	0
West Divide Project, CRBP Unit	WCN	CO		0
Whitewater Unit, CRSP Unit	WCN	CO		0
Yampa-White Project	WCN	CO, UT		0
**Collbran Project	WCN&PWR	CO	Atkinson Dam, Big Creek Dam 1, Big Meadows Dam, Blackman Dam, Bonham Dam, Contwood Dams 1-5, Currier Dam, Decamp Dam, East Fork Diversion Dam, Forty Acre Dam, Kitson Dam, Lambert Dam, Leon Creek Diversion Dam, Little Meadows Dam, Neversweat Dam, Park Creek Diversion Dam, Silver Lake Dam, Vega Dam	Lower Molina Powerplant 4,860; Fruitgrowers Dam 25
*Aspinall Unit, CRSP Unit	WCN&PWR	CO	Blue Mesa Dam, Crystal Dam, Morrow Point Dam	Blue Mesa 86,400; Crystal 31,500; Morrow Point 165,000
Bostwick Park, CRSP Unit	WCN&PWR	CO	Silverjack Dam	0
Animas-LaPlata, CRBP Unit	WCS	CO	Ridges Basin Dam	0
Dolores, CRBP Unit	WCS	CO	McPhee Dam	1,283
Florida Unit, CRSP	WCS	CO	lemon Dam, Florida Farmers Diversion Dam	Lomon Dam 185; Lemon Powerplant 120
Hammond Project	WCS	NM	Hammond Diversion Dam	0
Mancos Project	WCS	CO	Jackson Gulch Dam	Jackson Gulch 260
Navajo Indian Irrigation Project, CRSP Unit	WCS	NM	Cutter Dam	0
Navajo Unit, CRSP Unit	WCS	NM	Navajo Dam	nonfederal 30,000

Paradox Valley Unit, CRBSCP	WCS	CO		0
Pine River Project	WCS	CO	Vallecito Dam	Vallecito 5,844
TOTAL				0

1 AAO=Albuquerque; PRO=Provo; WCS=Durango; WCN=Grand Junction, PWR=Power (*=PWR responsible for primary jurisdiction area, including dams and powerplants; ** PWR responsible for Upper and Lower Molian Powerplants)

The Region's EMS: Introduction, Scope, and Policy

The mission of Reclamation is to manage water and related resources in an environmentally sound manner for the American public. The Upper Colorado (UC) Region (henceforth the region) has developed this ISO-comparable EMS to ensure this mission is accomplished while providing a safe and healthy workplace for our employees and acting as responsible members of our communities. This EMS plan is designed to help us understand our environmental impacts, and reduce risks that our operations pose to employees, our communities, and the environment. This EMS plan also describes a regional policy and processes whereby we review and set environmental objectives designed to foster continual improvement.

Scope of the Region's EMS

The scope of an EMS is referred to as its "fence line" or geographic and operational area of coverage. The scope of the Upper Colorado Region's EMS is all Reclamation-owned or operated projects listed in Table 1 that store or deliver water or produce hydropower, i.e., those projects with an entry in the last two columns of Table 1. Over time, the individual projects or divisions within the region may establish their own EMS, but presently all environmentally regulated activities, programs, divisions, operations, or facilities at projects that store or deliver water or produce hydropower are included in this plan.

Some projects in Table 1 are operated or maintained by water districts or other contractors or concessionaires. Following Executive Order 13423, where contractor or concessionaire activities affect an agency's environmental, transportation, or energy issues, these activities shall be addressed in the agency's EMS. Instructions for implementing E.O. 13423 add further guidance that where an agency owns or manages public lands on which non-governmental entities are present and whose activities are permitted, licensed, or otherwise authorized or regulated, the agency shall consider the environmental impacts of the non-governmental activities in its EMS. Reclamation lands are not public lands so this instruction does not technically apply to the region; nonetheless, environmental impacts resulting from non-governmental activities are considered in this EMS. Projects or activities that have been transferred out of Reclamation control are excluded from consideration, along with projects that do not store or deliver water or produce hydropower.

Standards

The Department of the Interior has promoted use of the International Organization for Standardization (ISO) 14000 series for implementing EMS. However, there are slight differences in the definitions of pollution prevention between ISO 14001:2004 and the Pollution Prevention Act (P2), leading the region to develop an ISO-comparable EMS, rather than an ISO-conformant EMS.

The ISO 14001:2004 standard includes recycling and treatment in its definition of preventing pollution, while the P2 defines pollution prevention as source reduction with recycling and treatment considered less desirable alternatives. With a goal of complying

with P2, the region does not intend to seek certification to the ISO 14001:2004 standard through a formal third party audit process. Through this plan, the region has developed an ISO-comparable EMS, one that performs the same functions and elements as described in the ISO 14001:2004 standard.

The elements of an ISO-comparable EMS are listed in Table 2. This table and the detailed descriptions of the procedures will be used to assist the region in demonstrating that the EMS established through this plan is comparable to the ISO 14001:2004 standard.

Table 2. ISO 14001:2004-comparable EMS components

ISO 14001:2004 Element (Section in Standard)	Pages in this Plan
Environmental policy (4.2)	13
Environmental aspects (4.3.1)	16
Legal and other requirements (4.3.2)	18-19
Objectives, targets and programs (4.3.3)	25-26
Resources, roles, responsibility and authority (4.4.1)	14-15
Competence, training and awareness (4.4.2)	27-29
Communication (4.4.3)	30-31
EMS documentation (4.4.4)	32
Control of documents (4.4.5)	32
Operational control (4.4.6)	33-36
Emergency preparedness and response (4.4.7)	37-38
Monitoring and measurement (4.5.1)	45-46
Evaluation of compliance (4.5.2)	39
Nonconformity, corrective action and preventive action (4.5.3)	40
Control of records (4.5.4)	32
Internal audit (4.5.5)	42-43
Management review (4.6)	45-46

In defining scope, it is important to define the concept of significance. The Department of Energy and Environmental Protection Agency (1998) cautioned federal agencies that "significant impacts" are different concepts under the ISO 14001:2004 standard and under the National Environmental Policy Act (NEPA). In NEPA compliance, if future impacts of a proposal or policy are likely to be significant, then an environmental impact statement is required. Under ISO 14001:2004, the organization identifies which environmental aspects have significant impacts and these impacts must be considered when establishing objectives and targets. But the threshold for significance is not the same. Under NEPA, there is extensive case law and guidance addressing significance of impacts. Under ISO 14001:2004, the organization makes the determination or prioritization of its environmental aspects based on a set of selected criteria. As a practical example, a federal agency may have a project or activity for which it has made a "finding of no significant impact" based on a NEPA environmental assessment, but that project or activity may be defined as a significant environmental aspect in the EMS. Conversely, a significant aspect may not rise to the level of NEPA significance. While the thresholds are different, some of the factors to be considered in assessing significance are common to both NEPA and the ISO

14001:2004 standard, including regulatory requirements, community concerns, use of natural resources, chemical and material risks.

EMS Elements, Procedures, and Documentation

The following sections of this plan document the elements of the region's EMS and procedures by which these elements are carried out. The relationship between the plan elements and ISO 14001:2004 EMS required elements is shown in Table 2. In the following sections, descriptions of each of the elements of the EMS include:

- The purpose of the element, i.e., how it fits into the overall EMS.
- Numbered steps that comprise the procedure for carrying out the component. These steps describe what actions are taken, assign responsibilities, and reference related records or documentation.
- The frequency with which the procedure is carried out.
- Summary list of records referenced in the procedure and person(s) responsible for maintaining them.

Environmental Policy and Commitment Statement

The core of an EMS is the organization's environmental policy. While E.O. 13423 and the Department of the Interior have established policies and principles related to overall environmental performance, to create a framework for action within the region (in particular to set environmental objectives and targets), the region's top mangers, otherwise known as the regional leadership team (regional director, deputy, assistants, area managers and their deputies) determined the short-term focus should be on pollution prevention and management of hazardous materials. This focus defines the region's environmental policy and commitment statement.

The Upper Colorado Region commits to:

- comply with all applicable environmental and safety laws and regulations which relate to its environmental aspects,
- prevent pollution with source reduction the highest priority,
- maintain a safe and healthy workplace,
- minimize the production of hazardous wastes generated by our operations,
- provide a plan for setting and reviewing environmental objectives and targets,
- continuously seek opportunities to improve our environmental performance.

Every employee is responsible for implementing the region's commitment to Reclamation's mission and this policy. This policy shall be made available to everyone working for or on behalf of the region by posting on the region's internet page. This policy, along with Reclamation's and the Department's policies are available on line. Specific EMS responsibilities of the region's employees are described in the next section and throughout this plan.

Resources, Roles, Responsibility, and Authority

An ISO-conformant EMS defines roles, responsibilities and authorities to facilitate effective environmental management. As stated in the ISO 14001:2004 Annex A.4, successful implementation of an EMS calls for a commitment from all persons working for the organization or on its behalf. Environmental roles and responsibilities therefore should not be seen as confined to the environmental management function, but also cover other areas of an organization, such as operational management or staff functions other than environmental. For the regional EMS, specific employees shall assume the roles and responsibilities defined here.

Procedure

Regional director. As stated in ISO 14001:2004, the role of top management is to ensure the availability of resources to establish, implement, maintain, and improve the EMS. The regional director has these responsibilities. The Regional Director shall appoint or delegate approval of the positions described here. The Regional Director shall develop the region's environmental policy statement and demonstrate commitment to it by signing it and making it available to employees and the public.

EMS management representative. The environmental management representative (EMR) is a member of the region's top leadership team who is responsible for the functioning of the EMS. Her responsibility is to ensure that all tasks relating to the EMS are established, implemented, maintained, and completed on time. She reports annually to the Regional Director and Department of the Interior on the progress and results of the EMS. She reviews and approves all revisions to this plan.

Area managers. Area managers within the Upper Colorado Region (Albuquerque, Power, Provo, and Western Colorado) shall appoint at least one EMS coordinator from their respective offices or facilities to serve on the EMS committee. Area managers may recommend additional appointments of other committee members to enhance the cross-functional and multidisciplinary expertise of the committee. Area Managers also have delegated authority from the Secretary of the Interior, through the Regional Director, for ensuring compliance with each applicable environmental and safety law and regulation and other requirement to which the region subscribes.

Regional coordinator. The Regional Director shall appoint an EMS coordinator to lead the EMS committee. The regional EMS coordinator reports to the EMR on the performance of the EMS. The regional coordinator's primary responsibility is maintaining this plan under the leadership of the EMR and in coordination with the committee.

Area office coordinators. Each of the four area offices shall have an EMS coordinator, appointed by their respective manager, who serves on the EMS committee. They shall assist in the implementation, maintenance, and periodic review of the EMS. Over time, they may develop EMS plans for their projects or facilities.

EMS committee. The committee is comprised of coordinators and other employees. The committee is responsible for accomplishing the EMS activities in their respective areas and for reporting the results of these activities to top management (EMR). The committee undertakes specific EMS activities such as the selection of significant environmental aspects, implementing programs and procedures to ensure compliance with environmental and safety laws and regulations, reviewing and setting environmental objectives to foster continual improvement. The committee meets periodically and communicates often regarding the EMS.

Supervisors. Supervisors must make it clear to their employees that they consider EMS activities worthwhile and important. They shall incorporate relevant activities from the EMS into their employee's job assignments and performance reviews.

Frequency

Each person assigned an EMS role should be periodically evaluated on their performance of those roles and duties.

Records

Table 3 lists the personnel with specific responsibilities in the EMS, including the management representative, coordinators, and committee members.

Table 3. Regional EMS Roles and Responsibilities

EMS Roles, Responsibilities	Position	Name of Employee
Albuquerque Area Office coordinator	Environmental protection specialist, hazmat coordinator	Robert Maxwell
Emergency preparedness	Safety officer, emergency management coordinator	Dino Alaraji
Energy conservation	Supply technician	Wendy Monroe
Electronic stewardship	General supply specialist	Virginia Thurgood
Fleet management	General supply specialist	Virginia Thurgood
Green purchasing	Procurement analyst	Karen Happ
EMS Management representative	Deputy regional director	Ann Gold
Power Office coordinator		vacant
Provo Area Office coordinator	Biologist, hazmat coordinator	Rafael Lopez
Regional coordinator	Environmental compliance officer	Nancy Coulam
Western Colorado Area Office coordinator	Environmental engineer, hazmat coordinator	Rutheyi Thompson

Identification of Environmental Aspects

Elements of the region's activities or operations that impact the environment are called *environmental aspects*. Following ISO 14001:2004 (Annex A), the relationship between environmental aspects and impacts is one of cause and effect. The process for identifying environmental aspects should consider normal and abnormal operating conditions, including reasonably foreseeable emergencies.

Purpose

To understand and manage actual and potential environmental impacts, the region identifies the environmental aspects of its operations that it can control and influence.

Procedure

1. For projects in Table 1 that store or deliver water or generate hydropower (i.e., those with an entry in the two right columns) identify inputs and outputs of each activity or operation by consulting personnel familiar with the activity or operation.
2. Based on inputs and outputs and in consideration of legal and regulatory requirements, classify operations, activities, or uses of equipment that have or may result in the following environmental aspects (using the aspect list and alphabetical order from Annex A of ISO 14001:2004)
    a. emissions to air (a)
    b. releases to water (b)
    c. releases to land (c)
    d. use of raw materials and natural resources (d)
    e. use of energy (e)
    f. energy emitted, e.g., heat, radiation, vibration (f)
    g. waste and by-products (g)
3. Document inputs, outputs, and aspects in Table 4.

Frequency

This procedure is repeated annually to ensure that impacts and aspects are identified and documented.

Records

The compilation and documentation of inputs, outputs, and aspects in Table 4 is created by the EMS committee and included in this plan.

Table 4. Inputs, outputs, and aspects of water and power operations

Water Delivery and Power Generation	Inputs	Outputs	Aspects following ISO A.3.1
personnel transportation system, elevators, vehicles (boats, aircraft, cars, heavy equipment)	energy, fuel, lubrication fluids	air emissions, spills, leaks, used oils, lubricants, batteries, tires, heat emissions, noise emissions possible with heavy equipment	a,b,c,d,e,f,g
heating, cooling systems for personnel and equipment	energy, water, lubricating oil, refrigerants	air emissions, leaks (of oil or petroleum products), used oil, refrigerant gas, vibration and noise	a,b,c,d,e,f,g
maintenance and repairs and fabrication	energy, metals, consumables, oil and lubricants, solvents, chemicals, gases, raw materials (metals, wood products, soils)	spills, leaks, used chemicals and solvents, used oils and lubricants, consumables, air emissions, noise from equipment	a,b,c,d,e,f,g
gates and valves	steel, paint, oil, lubricants, energy	used oil, grease, lead-based paint, noise can be significant	a,b,c,e,f,g
fire suppression systems	CO2, energy, water	CO2 emissions, wastewater	a,b,c,d,e,g
emergency generators	fuel, lubricants, batteries, chargers, energy	air emissions, leaks, filters, coolants, used batteries, heat generated, noise and vibration	a,b,c,e,f,g
air compressors	energy, air, lubrication, water cooling	oil leaks, filters, used water, vibration, emissions, noise	b,c,d,e,f,g
Painting	paint, rags, solvents, brushes, disposable clothing, energy for compressors, spray equipment, ventilators	air emissions (VOCs), used clothing and tarps, waste paint, copper slag (if blasting), paint strippers, solvents, consumables (coveralls, masking, etc.). Could add noise from equipment.	a,b,c,e,f,g
electricity from generators, to breakers, to step-up transformers, to switchyard	Electricity	electricity, sulpher hexafluoride (SF6) gas and byproduct, PCBs, heat, noise and vibration	a,b,c,e,f
sump pumps, oil skimmers	water, oil, grease, sometimes cleaning chemicals	wastewater, sludge (of greases, oil), hydrocarbons in the water, noise	b,c,e,f,g
lighting systems	energy, lamps, lead acid batteries, transformers, ballasts	waste lamps, batteries, ballasts, heat from transformers or ballasts	a,c,e,f,g
DC station service batteries & UPS, chargers	batteries, chemicals, heavy metals, energy	batteries, acid leaks, explosions and release of gases, if explosions occur, add energy emissions	a,b,c,e,g
Cleaning	solvents,	copper slag, used solvents, used strippers, waste water, consumables, noise from equipment	a,b,c,f,g
pest management	chemicals, energy and fuel, consumables (tyvek suits, gloves, etc.), herbicides, insecticides, pesticides, oil and grease (chain saws)	leaks, spills, air emissions, runoff, solid waste and biowaste, used chemicals, consumables	a,b,c,e,g
facility maintenance (canal cleaning, sediment management)	energy, consumables, oil and grease (equipment), fuels, chemicals, heavy metals, solvents	air emissions, releases to land and water, spills, leaks, solid waste, biowaste, hazwaste, hydrocarbons,	a,b,c,e,g
sewage system, testing, effluent discharge	raw wastewater, chlorine, energy, chemicals	sludge (biosolids), wastewater, chemicals	b,c,e,g
lubrication systems	oils, greases, energy for system,	leaks, used oils and grease, filter products (used filters)	b,c,e,g
mercury containing equipment	mercury, possibly other heavy metals	mercury, possibly other heavy metals, released to land or water or air	a,b,c,g
raw water pumps	water, energy, lubricants	used lubricants, releases to land or water through leaks, vibration and noise	b,c,e,f
asbestos management	asbestos, consumables, energy	asbestos, air emissions, releases to land, landfill and solid waste, consumables	a,b,c,g
water running through turbines, draft tubes, to tailbay	water	water, grease, noise and vibration	b,d,f
fuel storage	propane, oil	used oil, air emissions, spills or leaks	a,b,c

Identifying Legal and Other Requirements

To be effective, ISO 14001:2004 Annex A.3.2 states that the organization needs to identify all legal requirements that are applicable to its environmental aspects.

Purpose

The region is committed to complying with federal environmental and safety laws and regulations and to fulfilling permit requirements relating to its environmental aspects. This procedure describes how the region identifies applicable laws and regulations and determines how these requirements apply to its environmental aspects.

Procedure

1. The EMS committee is responsible for tracking applicable environmental laws, regulations, and permits, and relating them to operations and environmental impacts. Its members employ several techniques to track, identify, and evaluate applicable laws and regulations. These techniques include the internet, communication with federal and state regulatory agencies, and periodic training or refresher courses on environmental laws and regulations. One technique used by the Glen Canyon Field Division is subscribing to environmental law update services such as the Touchstone Environmental and Specialty Technical Publishers.
2. The committee may call upon solicitors for legal advice.
3. The committee compiles and maintains a table listing the major applicable environmental laws and regulations.
4. The committee correlates these laws and regulations to the region's environmental aspects.
5. The table may be amended or modified over time with the addition or deletion of laws and regulations or permit requirements.

Frequency

Periodic, depends on the frequency of changes to or additions of new environmental and safety laws or regulations.

Records

Table 5 lists the most applicable laws and regulations related to the region’s EMS. The region's management’s representative (EMR) and appropriate managers throughout the region are informed of these legal requirements by the EMS coordinators. The emphasis is on chemical use laws (Federal Insecticide Fungicide and Rodenticide Act, Occupational Safety and Health Act, Toxic Substance and Control Act); chemical discharge control laws (Clean Air Act, Clean Water Act, Safe Drinking Water Act), waste disposal laws (Resource Conservation and Recovery Act, Oil Pollution Act, Comprehensive Environmental Response, Compensation and Recovery Act and its amendments, the Superfund

Amendment and Reauthorization Act), and on chemical transportation laws (Hazardous Materials Transportation Act). These laws and regulations are the most important in determining significant aspects for the region. The National Environmental Policy Act (NEPA) is also included because its scoping and analysis processes enable the region to discover and disclose compliance issues and concerns to the public, stakeholders, as well as personnel.

Table 5. Applicable Legal Requirements

Statute	Description	Relevance to Regional Facilities	Implementing Regulations
Clean Air Act (CAA); 42 U.S.C. §§ 7401-7671g	Protect public health through control of air pollution at the source. Sets forth National Ambient Air Quality Standards (NAAQS).	Federal facilities that discharge air pollutants are subject to the CAA and must comply with all state, interstate, and local requirements for control and abatement of air pollution.	None
Clean Water Act (CWA); 33 U.S.C. 1251 et seq.	The CWA, first passed in 1972 and amended in 1977 and 1978, is the most comprehensive source of federal regulatory authority to control water pollution. In relation to federal facilities, it: • establishes limits on effluents that prohibit discharge of pollutants • Requires states to adopt water quality criteria • Requires EPA to adopt water quality guidelines • Requires source performance standards based on best demonstrated control technology • Requires dischargers of toxic pollutants to meet limits on effluents • Establishes the national pollution discharge elimination system (NPDES) permit program • Requires permits from the U.S. Army Corps of Engineers (USACE) for disposal of dredged material into navigable waters • Authorizes citizen suits,	Act relates to all waters of the US, but does not include groundwater. Many federal facilities own and operate permitted wastewater treatment systems that treat industrial and domestic sewage generated at the facilities. Also, some stormwater runoff discharges at federal facilities are subject to permitting under NPDES.	• Regulations under the CWA are found at 40 CFR parts 100 through 140. Those regulations set forth instructions for the NPDES program and related wastewater treatment activities • The guidelines for standards of performance for new sources are found at 40 CFR parts 400-699. Those guidelines prescribe minimum standards for treatment of a variety of industrial sources, such as metal finishing and explosives manufacturing operations, and hospitals • Regulations governing dredge-and-fill operations are found at both 40 CFR and 33 CFR
Comprehensive Environmental Response, Compensation , and Liability Act (CERCLA or Superfund); 42 U.S.C. 9601 - 9675	Provides the basic legal framework for the federal "Superfund" program to clean up old hazardous waste sites. • Title III of the 1986 Superfund Amendments and Reauthorization Act (SARA) (also known as the Emergency Planning and Community Right-to-Know Act [EPCRA]) requires all manufacturing facilities to report annually to the public information about stored toxic substances, as well as about release of such substances, into the environment. The report is known as the Toxic Release Inventory (TRI).	Covers all sites contaminated with hazardous substances. Provides framework and guidance for federal facilities to conduct installation restoration, environmental restoration, and similar programs. • Executive Order (EO) 12856 made the TRI reporting requirement applicable to all federal facilities. Consequently, federal facilities were required to submit their first set of TRI data to EPA on July 1, 1995.	The regulations governing Superfund are found in 40 CFR part 300. They are called the National Contingency Plan (NCP). Although they do not set forth any standards, they do establish procedures and practices for cleaning up a contaminated site. • The regulations governing implementation of EPCRA are found at 40 CFR parts 350-399
Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA); 42 U.S.C. 11001 - 11050, and 42 U.S.C. 13101 TO 13109 (SARA Title III)	Establishes a program (Toxic Release Inventory) to inform the public about releases of hazardous and toxic chemicals. Reporting requirements apply to companies that use, process, or store specific chemicals over specified quantities. The act was designated to promote emergency planning and preparedness at the state and local levels. EPCRA requires use of emergency planning and designates state and local governments as recipients for information regarding certain chemicals used in the community.	Requires source reduction at federal facilities and possibly filing a TRI report. Some offices may participate in LEPCs.	40 CFR Parts 350-374
Farm Security and Rural Investment Act of 2002; PL 107-171	Establishes affirmative procurement programs for purchasing USDA-designated products.	A requirement of the law is annual monitoring and reporting on use of biobased products and recycled content products.	

Federal Acquisition Regulation (FAR), esp. Subchapter D, socioeconomic Programs, Part 23	Codifies uniform policies for acquiring supplies and services for all agencies. New subchapters promote energy efficiency, water conservation, and environmentally preferable products and services. Subchapter D, Part 23 has requirements on energy, environment, water efficiency, renewable technology, occupational safety.	Establishes green purchasing standards, along with Department policy.	Part 23.303 specifies that solicitations and contracts calling for delivery or use of hazardous materials include MSDS sheets. Part 23.404 calls for purchasing EPA or USDA-designated "green" products. Subpart 23.10 includes contractual requirements for EPCRA and P2 requirements.
Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); 7 U.S.C. 136 et seq.	FIFRA provides a comprehensive framework for regulating the sale and distribution of pesticides within the US. Under the statute, EPA registers pesticides for either "general" or "restricted" use. Once a pesticide has been registered, its handling and distribution are addressed. However, once a pesticide is in or on a raw agricultural commodity, the pesticide is regulated under the Federal Food, Drug, and Cosmetic Act.	Federal facilities are affected by FIFRA because pesticide application occurs at those facilities. FIFRA includes pesticides, fungicides, rodenticides, and insecticides that may be used.	The regulations, which are found at 40 CFR parts 152-186, govern federal facilities' use of pesticides and worker protection for their application.
Hazardous Materials Transportation Act (HMTA); 49 U.S.C. 1801-1819	Establishes standards for the safe transportation of hazardous materials in the US. Policy is to improve regulatory and enforcement authority of the Secretary of Transportation. Covers transport of all hazardous materials including but not limited to solvents, asbestos, PCBs, paints, pesticides, hazardous wastes, etc.	Persons transporting hazardous materials, including hazardous wastes, must comply with DOT requirements for manifests, container marking and labeling, vehicle placarding, record keeping, etc. Federal facilities must prepare shipping papers, properly mark and label containers, properly placard vehicles carrying hazardous materials. Manifests will be required for hazardous wastes. Training and certification requirements must be met.	49 CFR Parts 100-180; also 40 CFR 263 for Standards Applicable to Transporters of Hazardous Wastes
National Environmental Policy Act of 1969 (NEPA); 42 U.S.C. §§ 4321-4347	NEPA imposes environmental responsibilities on all federal agencies. NEPA makes it the policy of the US to use all practicable means to administer federal programs in the most environmentally sound fashion. NEPA requires that decision-making processes of federal agencies take into account environmental factors. The agencies do so through the conduct of an environmental assessment (EA) that often is followed by an environmental impact statement (EIS).	Federal facilities are affected by NEPA every time a decision is made to expend a "significant" amount of federal dollars. Before that money can be spent, an EA or an EIS must be conducted at the facility. Thus, every time they build a road, bridge, or building, federal facilities must assess the environmental effects and make a finding of no significant impact.	The regulations governing NEPA are found at 40 CFR part 1500 et. seq.
Pollution Prevention Act of 1990 (P2); 42 U.S.C. 13101 et seq.	The P2 makes it a national policy of the US to reduce or eliminate the generation of waste at the source whenever feasible. Pollution that cannot be prevented should be recycled; pollution that cannot be prevented or recycled should be treated in an environmentally sound manner. The EPA is directed to undertake a multimedia program of information collection, technology transfer, and financial assistance to enable the states to implement this policy and to promote the use of source reduction techniques.	Federal facilities are implementing the P2 through changes in policies and procedures that govern acquisition and procurement. PPA requires owners or operators of facilities to file an annual toxic chemical release form under EPCRA Section 313 and to include with each filing a toxic source reduction and recycling report. Federal facilities are required to prepare pollution prevention plans.	The P2 is not implemented by federal regulations. However, facilities with extremely hazardous substances in amounts equal to or greater than the amounts in 40 CFR 355 are required to notify the state emergency response commission (SERC), and designate a representative to participate in local emergency planning committees (LEPC).
Occupational Safety and Health Act of 1970 (OSHA);29 USC 651 et seq. (84 Stat. 1590; P.L. 91-596)	Governs worker protection and safety training for employees working with hazardous materials. The OSHA sets standards and conducts workplace inspections to ensure employers are complying with the standards and providing a safe and healthful workplace.	It is the responsibility of the employer to become familiar with the standards applicable to their establishments and to eliminate hazardous conditions to the extent possible, and to comply with the standards. Employees must comply with all rule and regulations applicable to their own actions. OSHA applies to 8 main areas: 1) guards on moving parts; 2) permissible exposure limits; 3) personal protective equipment, 4) lockout/tagout; 5) confined space' 6) hazard communication, 7) process safety management, 8) bloodborne pathogens, 9) excavations and trenches.	29 CFR 1900 et seq.
Oil Pollution Act of 1990 (OPA); 33 U.S. Code 2701-2761 et seq.	The act has six major provisions: expanded federal role in oil-spill response, contingency planning, establishment of the Oil Spill Liability Trust Fund, increased liability for spills of oil or hazardous substances, tanker requirements, and requirements for increased research and development into spill response technologies.	Facility response plans may be required if they can reasonably be expected to cause substantial harm to the environment by discharging oil into or on navigable waters or adjoining shorelines. Spill Prevention, Control and Countermeasures (SPCC) may be required.	33 CFR 150; Response Plans; 49 CFR 106; Oil Spill Prevention and Response Plans 15 CFR 990, 33 CFR 135, 33 CFR 137

Resource Conservation and Recovery Act of 1976 (RCRA); 42 U.S.C. 6901 et seq.	RCRA governs disposal of solid waste. Establishes standards and regulations applicable to generators, transporters, and owners or operators of hazardous waste treatment, storage, and disposal facilities (Subtitle C) and management of solid waste (Subtitle D). Contains provisions regulating underground storage tanks (UST) that store petroleum and chemical products.	Federal facilities are regulated under RCRA and subject to its corrective action authority: • Almost all federal facilities generate solid waste that requires disposal hazardous waste through maintenance or manufacturing activities • Some also are treatment, storage, or disposal • Many also generate facilities. • Many store petroleum products in USTs	Regulations under the RCRA program, which are found at 40 CFR parts 240-299, govern waste management practices at federal facilities.
Safe Drinking Water Act (SDWA); 42 U.S.C. 300f et seq., 6939b; 15 U.S.C. 1261 et seq.	The SDWA's objective is to protect the nation's sources of drinking water and to protect public health to the maximum extent possible. The SDWA requires EPA and states to establish drinking water standards and to establish techniques to meet those standards. States are responsible for enforcement.	Facilities that treat drinking water supplies are regaled by the states through permits. Underground sources of drinking water are also protected. Section 1447 requires each federal agency with jurisdiction over public water systems or activities that result in underground injection to comply with federal, state, local requirements and authorities.	None
Toxic Substances Control Act of 1986 (TSCA); 15 U.S.C. 2601 - 2671	Gives the EPA comprehensive authority to regulate all chemicals whose manufacture, processing, distribution in commerce, use, or disposal may present an unreasonable risk of injury to health or the environment. • Regulates asbestos and radon inside buildings. One subchapter covers polychlorinated biphenyls (PCBs), another asbestos hazard emergency response, and another radon.	• Federal facilities are affected by regulations under TSCA because they address both the handling and disposal of substances regulated under TSCA plus the remediation of asbestos and radon. • Federal facilities handle many substances regulated under TSCA, such as polychlornated biphenyls (PCB). • Asbestos and radon problems are found in many buildings owned by federal agencies.	Regulations implementing TSCA are found at 40 CFR parts, 700-799

Determining Significant Environmental Aspects

To plan for and control environmental impacts, the impacts must be identified and environmental aspects determined. Identification of aspects involves looking at operations and consulting other sources of information such as environmental permits, EPCRA reports, material safety data sheets, and monitoring records.

Purpose

The purpose of this element is to document methods used to look at all of the region's environmental aspects within the defined scope of the EMS and to systematically determine which are significant and should be addressed as a priority by the EMS.

Procedure

The significance of environmental aspects identified in Table 4 is determined using these four steps.

1. In Table 4, the EMS committee assigned each activity, operation, or use of equipment or supplies to one or more of the environmental aspects listed in Annex A of the ISO 14001:2004 standard. The aspects are:
   a) Emissions to air,
   b) Releases to water,
   c) Releases to land,
   d) Use of raw materials and natural resources,
   e) Use of energy,
   f) Energy emitted, e.g., heat, radiation, vibration,
   g) Waste and by-products
2. For each regional activity, operation, use of equipment or supply likely to result in an environmental impact, the committee determines potential aspects (a-g) and assigns each aspect a one (1) in Table 5.
3. The committee adds together the number of potential aspects per activity and lists the total score. A score of six or above is considered significant. In other words, significance is defined by having the potential for six or seven different aspects (emissions to air, releases to water, releases to land, use of raw materials and natural resources, use of energy, energy emitted, waste and by-products).
4. The committee reviews the significant environmental aspects (SEAs) with the management representative (EMR). Upper management has a direct role in ensuring that plans to reduce significant environmental aspects and impacts compliment the environmental policy and meet the objectives and targets set for the year.

Frequency

This procedure is repeated annually.

Records

Table 6 is maintained by the EMS committee. It shows the EMS committee's evaluation of the region's environmental aspects, with "significance" defined by a score of six or seven in the column labeled "sum."

Table 6. Scores for significant environmental aspects

Water Delivery and Power Generation	Inputs	Outputs	a*	b	c	d	e	f	g	Sum	Aspects following ISO A.3.1
Sum			16	21	21	6	17	13	18	0	
personnel transportation system, elevators, vehicles (boats, aircraft, cars, heavy equipment)	energy, fuel, lubrication fluids	air emissions, spills, leaks, used oils, lubricants, batteries, tires, heat emissions, noise emissions possible with heavy equipment	1	1	1	1	1	1	1	7	a,b,c,d,e,f,g
heating, cooling systems for personnel and equipment	energy, water, lubricating oil, refrigerants	air emissions, leaks (of oil or petroleum products), used oil, refrigerant gas, vibration and noise	1	1	1	1	1	1	1	7	a,b,c,d,e,f,g
maintenance and repairs and fabrication	energy, metals, consumables, oil and lubricants, solvents, chemicals, gases, raw materials (metals, wood products, soils)	spills, leaks, used chemicals and solvents, used oils and lubricants, consumables, air emissions, noise from equipment	1	1	1	1	1	1	1	7	a,b,c,d,e,f,g
gates and valves	steel, paint, oil, lubricants, energy	used oil, grease, lead-based paint, noise can be significant	1	1	1		1	1	1	6	a,b,c,e,f,g
fire suppression systems	CO2, energy, water	CO2 emissions, wastewater	1	1	1	1	1		1	6	a,b,c,d,e,g
emergency generators	fuel, lubricants, batteries, chargers, energy	air emissions, leaks, filters, coolants, used batteries, heat generated, noise and vibration	1	1	1		1	1	1	6	a,b,c,e,f,g
air compressors	energy, air, lubrication, water cooling	oil leaks, filters, used water, vibration, emissions, noise		1	1	1	1	1	1	6	b,c,d,e,f,g
Painting	paint, rags, solvents, brushes, disposable clothing, energy for compressors, spray equipment, ventilators	air emissions (VOCs), used clothing and tarps, waste paint, copper slag (if blasting), paint strippers, solvents, consumables (coveralls, masking, etc.). Could add noise from equipment.	1	1	1		1	1	1	6	a,b,c,e,f,g
electricity from generators, to breakers, to step-up transformers, to switchyard	Electricity	electricity, sulpher hexafluoride (SF6) gas and byproduct, PCBs, heat, noise and vibration	1	1	1		1	1		5	a,b,c,e,f
sump pumps, oil skimmers	water, oil, grease, sometimes cleaning chemicals	wastewater, sludge (of greases, oil), hydrocarbons in the water, noise		1	1		1	1	1	5	b,c,e,f,g
lighting systems	energy, lamps, lead acid batteries, transformers, ballasts	waste lamps, batteries, ballasts, heat from transformers or ballasts	1		1		1	1	1	5	a,c,e,f,g
DC station service batteries & UPS, chargers	batteries, chemicals, heavy metals, energy	batteries, acid leaks, explosions and release of gases, if explosions occur, add energy emissions	1	1	1		1		1	5	a,b,c,e,g
Cleaning	solvents,	copper slag, used solvents, used strippers, waste water, consumables, noise from equipment	1	1	1			1	1	5	a,b,c,f,g
pest management	chemicals, energy and fuel, consumables (tyvek suits, gloves, etc.), herbicides, insecticides, pesticides, oil and grease (chain saws)	leaks, spills, air emissions, runoff, solid waste and biowaste, used chemicals, consumables	1	1	1		1		1	5	a,b,c,e,g
facility maintenance (canal cleaning, sediment management)	energy, consumables, oil and grease (equipment), fuels, chemicals, heavy metals, solvents	air emissions, releases to land and water, spills, leaks, solid waste, biowaste, hazwaste, hydrocarbons,	1	1	1		1		1	5	a,b,c,e,g
sewage system, testing, effluent discharge	raw wastewater, chlorine, energy, chemicals	sludge (biosolids), wastewater, chemicals		1	1		1		1	4	b,c,e,g
lubrication systems	oils, greases, energy for system,	leaks, used oils and grease, filter products (used filters)		1	1		1		1	4	b,c,e,g
mercury containing equipment	mercury, possibly other heavy metals	mercury, possibly other heavy metals, released to land or water or air	1	1	1				1	4	a,b,c,g

raw water pumps	water, energy, lubricants	used lubricants, releases to land or water through leaks, vibration and noise		1	1		1	1		4	b,c,e,f
asbestos management	asbestos, consumables, energy	asbestos, air emissions, releases to land, landfill and solid waste, consumables	1	1	1				1	4	a,b,c, g
water running through turbines, draft tubes, to tailbay	water	water, grease, noise and vibration		1		1		1		3	b,d,f
fuel storage	propane, oil	used oil, air emissions, spills or leaks	1	1	1					3	a,b,c

A=emissions to air; b=releases to water; c=releases to land; d=use of raw materials and natural resources; e=use of energy; f=energy emitted; g=waste. Source: ISO 14001:2004, Annex A.3.1.

Development of Objectives, Targets, and Programs

An organization improves over time by setting environmental objectives and developing an action plan or "programme" (ISO 14001:2004) to meet the objectives. Objectives and action plans or programs should have timelines and be measurable so achievements are tracked.

Purpose

The purpose of this element is to set environmental objectives and establish action plans or programs to meet the objectives. Programs are also defined through operational controls. Objectives must be directly related to the region's significant environmental aspects and follow from the environmental policy. The objectives describe goals for environmental performance.

Procedure

1. The committee reviews every activity, operation, use of equipment or supply in Table 4 and identifies significance based on total numeric scores of six or seven in Table 5. One or more objectives should be established among these high-ranking, "significant" activities, although not all significant environmental aspects will have an objective or target due to technological, financial, operational, or other requirements, and based on the views of interested persons.
2. The committee sets objectives that are realistic and that reduce the impact on the environment.
3. The objectives should have timelines and be measurable. For each objective, decide how to measure performance.
4. This will require establishing baseline data to be able to measure progress.
5. Data must be normalized to account for increases or decreases in operations over time.
6. Clearly state which employees measure progress towards meeting the objectives and targets and which employees undertake corrective action when necessary.
7. Set actions plans (programs) to achieve the goals.
8. Communicate the reasons for selecting each objective and target to the environmental management representative (EMR) or other managers.
9. Measure and monitor progress toward the objectives and targets and towards meeting the policy on a routine basis.

Frequency

Environmental objectives and targets are reviewed annually. The targets and action plans or environmental management programs are developed and revised as needed by the committee.

Records

Environmental objectives and targets are recorded using Table 7. The EMS coordinator is responsible for maintaining this table as EMS documentation.

Table 7. Environmental objectives, targets, and environmental management programs

Significant Environmental Aspect	Paint, painting
Objective # 1: Paint Management and Minimization	Reduce oil-based paint product and all waste paint throughout the region. Minimize inventory and only order enough to satisfy enough to satisfy short-term needs. Stock only paint that will be used on a recurring basis or for a specific project.
Measurement or Target	Reduce inventories by 5%.
Action Plan or Program	Ensure all regional facilities inventory paint. Identify waste paint i.e., paint that will not be used over the next year or where the shelf-life has been exceeded. Collect waste paint; seek out recycling opportunities, properly ship and dispose of waste paint with appropriate disposal facility.
Person(s) responsible:	For action plan measurement, area office hazmat coordinators. For taking action, all personnel are responsible. Everyone is responsible for waste reduction.
Budget	No specific budget is allocated to this objective. Rather, it should be part of daily routine and conducted as part of the chemical inventory requirement of this plan.
Time-frame	Begin at start of FY2009 by inventorying chemicals, and identifying waste paint. By start of FY2010, should have completed investigation of recycling opportunities and prepared to ship and dispose of waste paint. By 2011, all waste paint properly disposed of--assume waste paint is at least 5% of all paint supplies.
Review cycle	Complete in one fiscal year--annual review of accomplishment
Significant Environmental Aspect	Applies to all SEAs and all facilities.
Objective # 2: Improve Housekeeping	Product Inventory and Annual Housekeeping, reduce stock of RCRA chemicals.
Measurement or Target	Reduce inventories (overall) by 10%.
Action Plan or Program	All regional facilities will improve housekeeping. Once a year, inventory all hazardous chemicals (OSHA definition); i.e., solvents, cleaning products, lab supplies, lubricants, paints, silicone, epoxies, adhesives. Verify that products have MSDS accessible within 10 minutes of area of use. Ensure products are properly labeled (including secondary containers), storage and containment is appropriate, shelf life has not been exceeded, etc. Ensure the product will be used during the year or if not, arrange recycling, transport, and disposal.
Person(s) responsible	For action plan measurement, area office hazmat coordinators. For taking action, every department is responsible for their ongoing and annual housekeeping. For warehouse products and housekeeping, the warehouse is responsible for inventory and verification that the product is still useful (and not waste).
Budget	$0
Time-frame	On-going
Review cycle	Annual

Training, Awareness, and Competence

An ISO-14001:2004 EMS requires that the organization ensures that any person performing a task for it or on its behalf that has the potential to cause a significant environmental impact is competent on the basis of appropriate education, training, or experience. T

Purpose

The purpose of this element is to minimize risks to the environment and the safety of employees and associates in the vicinity of our operations. The emphasis of this procedure is on compliance with OSHA's hazard communication standard at 29 CFR 1910.1200.

Procedure

General Environmental Awareness Training

1. All new employees shall receive a brief introduction to the region's mission and policies. Topics covered shall include the environmental policy, potentially significant environmental impacts, and the employees' roles and responsibilities in conforming with the requirements of the EMS. This introduction is embedded in the overall new employee training curriculum by human resources (HR).
2. Each year employees are invited to a 10-minute presentation by a member of the EMS committee or are directed to a webpage with EMS information. This presentation covers the state of its EMS and the objectives for the year.

Task-specific or Chemical-specific Training

3. Managers or supervisors should identify job functions that are associated with significant environmental aspects, impacts, or materials requiring MSDS.
4. The manager or supervisor shall identify the criteria for personnel competence and identify associated training needs and timeframes.
5. The manager or supervisor shall provide training or take other action to meet employee needs. This can be planned and documented through the annual training plan for each employee. It is recommended that these training needs become a part of the environmental objectives and targets for the upcoming fiscal year.
6. All employees who have responsibility or authority over operations that have the potential for significant environmental and safety impacts or aspects shall receive job-related training. The job-related training provides the employees with information and updates them on procedures or work instructions, the explanation as to why the changes (if any) are necessary, and which changes will affect their daily activities. Some types of job-related training are required by a specific law or regulation; e.g., health and safety, hazard communication, hazardous waste management, spill prevention and countermeasure, and storm water pollution prevention.

7. Where possible, environmental and chemical training is integrated with other types of training that employees are receiving.

OSHA Training

8. The OSHA training requirement at 1910.1200(h)(1) is that the employer shall provide effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and material safety data sheets.
9. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals.
10. The OSHA regulation at 1910.1200(g)(8) is that the employer shall maintain in the workplace copies of the required material safety data sheets (MSDS) for each hazardous chemical, and shall ensure that they are readily accessible during each work shift to employees when they are in their work area(s). Electronic access, microfiche, and other alternatives to maintaining paper copies of the material safety data sheets are permitted as long as no barriers to immediate employee access in each workplace are created by such options. For this plan, "readily available" is defined as being reachable within 10 minutes of the location of use.
11. The OSHA training requirement at 1910.1200(h)(3)(i) is that employees shall be trained in methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when released.);
12. The requirement at 1910.1200(h)(3)(iii) is that employees shall be trained in the physical and health hazards of the chemicals in the work area and the measures employees can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and
13. The OSHA requirement at 1910.1200(h)(3)(iv) is that employees must be trained in the details of the hazard communication program developed by the employer, including an explanation of the labeling system and the material safety data sheet, and how employees can obtain and use the appropriate hazard information.

RCRA and DOT Training

14. As part of the region's hazardous waste management program, employees who handle hazardous waste will receive appropriate training to ensure compliance with RCRA and OSHA requirements. The US Department of Transportation (DOT) requires that individuals offering hazardous materials for shipment be trained in DOT regulations. The DOT training regulation is found at 49 CFR 172,

Supart 4). Individuals within the following job classifications are anticipated to need RCRA, DOT or OSHA training.

h. Hazardous waste specialists or environmental protection specialists
i. Chemists
j. Safety personnel
k. Engineering technicians
l. Facility maintenance coordinators
m. Maintenance supervisors

Frequency

Environmental awareness training is given to new employees during their orientation to Reclamation. Task-specific or chemical-specific training is given following OSHS requirements. The OSHA training is updated, as necessary. For employees required to be RCRA certified or DOT certified, they must successfully complete their training within six months after their date of employment or assignment to a facility where they are expected to handle hazardous waste or a new position. They must complete annual refresher training. Employees who have not received the appropriate training must not work in unsupervised positions until they have completed the training requirements of this section.

Records

Training plans and records of the environmental awareness and task-specific training received by each employee are established and maintained by the Human Resources division in accordance with Reclamation and Interior's record retention policies and procedures. For OSHA and RCRA requirements, the Human Resources division or field division manager keep records of the required training received by each employee.

Communication

An ISO-14001:2004 EMS requires that the organization establish, implement, and maintain procedures for internal communication within the organization, and procedures for receiving, documenting, and responding to substantive communication from external interested parties or stakeholders. The major program dealing with internal communication of information to employees is the OSHA hazard communication standard. Major programs dealing with external communication are EPCRA and NEPA, as well as emergency management communication as defined under Reclamation Manual FAC 01-01.

Purpose

The purpose is to formalize procedures for internal and external communication to minimize risk to the environment and to protect safety of employees and associates.

Procedure

1. *Internal Communication*. There will be open communication with all employees about major elements of the EMS including:
    - Environmental policy
    - Environmental aspects and impacts
    - Environmental objectives and targets
    - Environmental management roles and responsibilities

   The major method to communicate shall be by posting this plan on the internet. The regional coordinator shall ensure this procedure is carried out.
2. *Hazard Communication*. Each office with the potential for physical or health hazards is required to have a written hazard communication program. The program shall be designed to communicate information to employees regarding physical or health hazards of materials used in the workplace.
    - Major components of the hazard communication program include chemical inventories, training, Material Safety Data Sheets (MSDS), container labeling, and emergency procedures.
    - To summarize the EPCRA and OSHA requirements, any owner or operator of any facility that is required to have available a MSDS for a hazardous chemical under the hazard communication standard of the OSHA must submit an MSDS to the state emergency response commission (SERC), the local emergency planning committee (LEPC), and the local fire department for each hazardous chemical stored on-site in a quantity greater than the reporting threshold. The current reporting threshold is 10,000 pounds unless the chemical is specifically listed as an extremely hazardous substance under EPCRA section 302, in which case the threshold is 500 pounds or the threshold planning quantity, whichever is less.
    - The reporting threshold for gasoline is 75,000 gallons and for diesel fuel is 100,000 gallons. The public is allowed the same access to MSDSs that facilities provide to their employees.

- Section 312 of EPCRA requires owners and operators of facilities subject to section 311 to annually report the inventories of those chemicals reported under section 311. The Environmental Protection Agency (EPA) is required to publish two emergency and hazardous chemical inventory forms, known as Tier I and Tier II for use by these facilities. Any facility that is required to submit an MSDS or list of chemicals under section 311 must submit a tier I form annually on March 1 to the SERC, LEPC, and local fire department. The Tier II form, which provides chemical-specific information, is submitted in lie of the Tier I form if requested by the SERC or LEPC.

3. *External Communication*. In addition to the SERC and LEPC external communications, the region shall establish and maintain open communication for the exchange of environmental information with all external interested parties.
    - The environmental resources divisions shall identify external interested parties or stakeholders and their interests in the environmental performance of the region, usually through the maintenance of project-specific mailing lists.
    - When an interested party or stakeholder sends in a communication about the region's environmental performance or management, the message should be handled by the appropriate legal and regulatory process, whether NEPA, RCRA, or CERCLA.
    - The EMR and other top managers should be notified of the concerns. The EMR decides whether to respond to the communication and in what manner.

Frequency

Each legal or regulatory program's frequency will be followed, for example, EPCRA Tier I or II communications with SERC and LEPC are annual.

Records

Records of environmental communications from stakeholders are kept by the environmental divisions, usually as part of NEPA or other administrative records. Each office maintains its own hazard communication program documentation. If Tier I or II reporting is required these forms constitute records under this EMS procedure.

Documentation and Document Control

This EMS plan comprises some of the required EMS documentation, although other documentation is incorporated by reference from other programs such as the OSHA, EPCRA, and NEPA compliance programs.

Purpose

To ensure effective operation of the EMS, the region documents its procedures and keeps records of the outcomes of EMS processes.

Procedure

1. This plan documents the procedures that define the region's EMS. The EMS committee formally reviews and, if necessary, revises this plan annually. The revised plan will be assigned a new revision number (a minor set of revisions would change the number from, say, 1.1 to 1.2; a major revision would change the number from, say, 1.1 to 2.0). Finally, the EMS committee ensures that no employees or managers use outdated versions of this plan.
2. The committee maintains updated records of the following outcomes or results of the functioning of the regional EMS:
   - Environmental policy
   - Environmental aspects and significant environmental aspects
   - Applicability of legal requirements
   - Objectives, targets, and environmental management programs
   - List of operational control procedures related to SEAs
   - Results of internal EMS audit
   - Corrective actions taken
   - Management reviews

Frequency

The plan will be reviewed and revised annually. This is expected to occur at or near the start of each new fiscal year.

Records

Records shall be maintained as outlined in the procedure. The EMS coordinators are not responsible for maintaining records of environmental training and emergency response preparations, the operational control procedures themselves, or the purchase approvals. These records are maintained by the appropriate person, division, or group, as specified in the relevant procedures of this manual.

Development of Operational Controls

Following Soesilo (2008), the term operational controls refers to a facility's operating procedures and work instructions. Both function to control the facility's environmental aspects. There should be an operating procedure or work instruction for any process in the facility, which if uncontrolled, would have an adverse impact on the environment.

Purpose

By developing operational controls for activities associated with significant environmental aspects, the region intends to mitigate and control (to the extent possible) the environmental impacts.

Procedure

1. The EMS committee, with additional input from managers, finds out which aspects of the facility's operation need an operational control.
2. Once the operational controls have been identified, the EMS committee determines whether the facility has operational procedures or work instructions already in place to control the activities related to the SEA.
3. Where there is a need to create or modify an operational control procedure to include environmental issues, the manager or department that oversees the operation should write the operation control document. In most cases, a separate operational control procedure is not be required, rather the environmental control procedures are integrated into existing procedures, such as standard operating procedures (SOPs), job hazard analyses (JHA), or job plans.
4. The operational control procedure takes many forms, but lists required steps or measures. In addition to describing the steps necessary to carry out the particular activity in an environmentally sound manner, the work instruction should also include steps to conduct monitoring, where applicable.
5. Employees who are involved in the operations should be trained on the operation procedures or work instructions.

Frequency

The frequency is as new significant environmental aspects are identified.

Records

The procedures are maintained by the department that oversees the activity.

Operational Controls for Chemical Inventory and Review of New Chemical Purchases

Through the hazard communication (OSHA compliance) programs, the region maintains ongoing inventories for all toxic chemicals, hazardous substances, and EPA-designated priority chemicals. The current EPA priority chemical list includes cadminum, lead, polychlorinated biphenyls (PCBs). The green purchasing program is also instrumental in reducing the purchasing of toxic chemicals, hazardous substances, and EPA-designated priority chemicals.

Purpose

The purpose of this procedure is to reduce usage of toxic chemicals, hazardous substances, and EPA-designated priority chemicals. The purpose is also that when purchasing new chemical supplies whose properties may have the potential for physical, reactionary, health, or biological hazards, the region strives to ensure that environmental considerations, including employee health and safety, and other considerations related to significant environmental aspects (SEAs) are taken into account. Utilization of cost effective procedures will be used to buy environmentally preferable products and alternatives to hazardous materials or toxic chemicals in accordance with the Department's green purchasing plan.

Procedure

1. At each office, facility, or workplace where chemicals that may have the potential for physical, reactionary, health, or biological hazards (i.e., chemicals requiring availability of MSDS) are stored, handled, or used, one employee shall be designated to maintain a chemical inventory for the facility.
2. That employee or their designee updates the chemical inventory and maintains MSDS to be compliant with OSHA standards.
3. As part of the chemical inventory, the facility sets limits on the amount of chemical product that may be stored or used at any one time and lists the department or work area where the product is used.
4. In the environmental awareness training, employees will be educated about purchasing new chemicals and ensuring that environmental concerns (including employee health and safety) are considered.
5. When any employee proposes purchasing new chemicals not on existing inventories, GSA Advantage “green products” shall be purchased when possible.
6. Employees will look for alternatives to the priority chemicals listed in the Department's green purchasing plan.
7. Forms and procedures related to all green purchasing are available from the Department and shall be used as appropriate.

Frequency

These procedures shall be followed as new chemical supplies are purchased. Reduction of inventory of priority chemicals is on-going, as is maintenance of MSDS or chemical inventory.

Records

The MSDS are maintained as required by OSHA at each workplace. This is one element reviewed during the regulatory compliance audits. Additional records recommended by the Department include the Green Procurement Requirements Reference sheet, the Green Procurement Program Statement, Recovered Material Determination form, Purchase Cardholder Purchasing Considerations and Guidelines Log, and the Green Procurement Program Annual Review Form. These are maintained as appropriate by the Acquisition Management Division in the regional and area offices.

Operational Controls for Electronic Stewardship

Through the Department of the Interior's Strategic Sourcing Initiative, the region is committed to meeting and exceeding the electronic stewardship requirements across three life-cycle phases for electronics assets: acquisition, maintenance, and disposal. Also, the Federal Acquisition Regulation at FAR 23.202 states that the government's policy is to acquire supplies and services that promote energy and water efficiency, advance the use of renewable energy products, and help foster markets for emerging technologies.

Purpose

The purpose of the region's electronic stewardship program, following the FAR and the Department's Strategic Sourcing Initiative, is to acquire cost effective, energy efficient, and environmentally preferable electronic equipment; to ascertain that such equipment is maintained for longevity, efficiency, and performance; to reduce the economic and environmental life-cycle costs of this equipment; to promote utilization, sale, and recycling of end-of-life electronic equipment; and to seek cooperation with the private sector in these endeavors.

Procedure

At each office or facility where electronics are used, the following procedures will be followed.

1. Purchase. Equipment purchased must be Energy Star and Federal Energy Management Program designated products, or Electronic Product Environmental Assessment Tool-registered products.
2. Trade-ins. In support of environmental efforts, equipment should only be purchased from vendors participating in a recycle program for accepting Department-owned equipment for recycling.
3. Recycle. Empty toner cartridges shall be recycled. The region should only work with vendors who offer a free merchandise return capability to recycle empty toner cartridges associated with their equipment.

Frequency

The frequency is as new electronic equipment is purchased or as its life cycle is ended.

Records

New electronic equipment purchase approval forms are maintained by the Information Technology office. Disposal records shall be maintained by the Property Office. In addition, the annual RCRA report includes the documentation of actions taken under this element of the EMS.

Emergency Preparedness, Response and Controlling Liabilities

Introduction

The organization shall establish, implement, and maintain procedures to identify potential emergency situations and potential accidents that can have an impact on the environment (including employee health and safety) and how it will respond to them. As part of the EMS, the region strives to ensure that the environmental impacts associated with any accidents, spills, or emergency situations are avoided or controlled to reduce the risk to people and the environment. The EMS must address environmental impacts from the perspective of liability and legal and regulatory compliance.

Purpose

The region has developed and maintains procedures to prevent accidents from occurring and to respond to emergencies when they occur. The region strives to ensure that environmental impacts associated with any emergencies are minimized to the extent possible by applying appropriate procedures.

Procedure

1. *Continuity of operations plan (COO).* Each office has a continuity of operations plan (COO), an office occupant emergency plan, and a pandemic influenza plan. These plans are office-specific and not centralized into one larger regional emergency planning effort.
2. Each COO plan is focused on continuing operations at an alternative site, and is not the plan for environmental response. Each employee is required to be familiar with the procedures of the COO plan and the occupant emergency plan.
3. *Emergency action plan (EAP).* The Reclamation Manual has a directive and standard for emergency management. This directive and standard requires that each area office develop and maintain an emergency action plan (EAP) for all significant and high hazard dams. The directives and standard describes the required contents of EAPs, a requirement for annual review and update, as well as table top exercises with all downstream entities every three years. Every six years a functional exercise is done on each EAP. Each EAP must identify significant environmental impacts from potential emergency scenarios and makes plans to minimize those impacts.
4. Additional guidance on emergency planning is found in the *Emergency Planning and Exercise Guidelines* published by Reclamation in 1995.
5. Each facility and all high and significant hazard dams should ensure that adequate training, including simulations and drills, is provided to appropriate staff. If staff are not specifically trained in emergency response, then they are instructed to dial 911, alert the National Response Center (800-424-8802), or otherwise utilize local emergency protocols. Supervisors and facility managers must be notified of any mishap or emergency involving a hazardous substance.

6. Spill Prevention Control and Countermeasure (SPCC) Plan. Based on the EPA's Oil Pollution Prevention and Response Rule and the Spill Prevention Control and Countermeasure (SPCC) Plan regulation at 40 CFR 112, SPCC plans shall be current for all regional facilities that:
    - store or use oil or petroleum products (including fats, oils, or greases, vegetable oils, mineral oils, petroleum in any form including crude oil, fuel oil, sludge, oil refuse, and refined products, etc.),
    - have the potential to discharge into navigable wasters of the US or adjoining shorelines,
    - have aboveground oil storage capacity of 1,320 gallons,
    - have buried oil storage capacity of 42,000 gallons or greater.
7. It is a requirement of the SPCC regulations that any oil-handling employee (defined in this EMS plan as any regional employee involved in oil handling, transfer, storage, delivery, spill response, or maintenance of oil containing equipment) should know their facility's SPCC plan and be trained in their spill prevention plan at least once per year.
8. Any manager, supervisor, or lead with responsibilities for oil handling within a regional facility must be familiar with their facility's SPCC plan.
9. While the SPCC plans provide details, in general, employees can help prevent spills by:
    - knowing your facilities layout, values, and shutoffs,
    - knowing and following operational procedures,
    - maintaining equipment to prevent leaks and spills,
    - making sure others follow appropriate delivery and handling procedures,
    - visually inspecting oil storage locations for spills.

Frequency

The frequency of trainings, reviews, exercises, etc. varies with the legal or regulatory requirement. In most regional facilities that have 1,320 gallons of oil on site, annual spill prevention training is conducted.

Records

Records of emergency preparedness and response training and procedures are kept by the individual facility. Formal training records are kept by the Human Resources Office. The Emergency Planning and Community Right to Know Act (EPCRA) of 1986 and Executive Order 12856 require federal agencies with quantities of hazardous substances above specified thresholds to submit Material Safety Data Sheets (MSDS) and Hazardous Chemical Inventory Reports (Tier I or II) to the Local Emergency Planning Committee (LEPC), the State Emergency Response Commission (SERC), and the local fire department. This EMS builds on and complements these existing systems.

Evaluation of Legal and Regulatory Compliance

Introduction

The ISO standard requires organizations to establish, implement, and maintain procedures for periodically evaluating compliance with applicable legal and regulatory requirements. Furthermore, Executive Order 13423 requires that each agency establish a program for environmental compliance review and audit.

Purpose

The region conducts periodic compliance audits to ensure that its facilities comply with all applicable local, state, tribal, and federal environmental and safety laws and regulations.

Procedure

1. Through this EMS, applicable legal requirements are identified.
2. Through the Denver Office of Program and Policy Services (PPS), there is a Reclamation-wide identification of applicable legal requirements expressed in the format of checklists of questions to be used as a regulatory compliance audit tool.
3. When applied at an audit, the completion of the checklists and audit questions is intended to ascertain the compliance status of the audited facility with respect to applicable environmental laws and regulations.
4. The PPS auditor (or other auditor) provides copies of the audit results to the local hazmat coordinators and to the appropriate facility or area manager. After reviewing the audit results, the hazmat coordinator notes any actual or potential environmental compliance issues. Each actual and potential compliance finding is referred to corrective action and to the EMS coordinator, who may or may not be a different employee than the hazmat coordinator.

Frequency

The frequency is annually or as frequently as the regulatory compliance audit is conducted.

Records

Compliance audit results are recorded by the compliance audit team using the compliance audit checklists and protocols of PPS. Records are maintained by the regional hazmat coordinator with copies to the regional EMS coordinator. Records are also maintained via the GPRA database.

Nonconformity, Corrective Action and Preventive Action

The region shall establish, implement, and maintain procedures for dealing with actual and potential nonconformities and for taking corrective actions and preventive actions to mitigate environmental impacts. The ISO 14001:2004 standard defines a nonconformity as not fulfilling a requirement, whether policy, procedure, regulatory, or legal.

Purpose

The region uses a formal process to ensure that actual or potential compliance issues and EMS nonconformities are identified, addressed quickly, effectively, and corrected.

Procedure

1. The EMR or delegated supervisor assigns responsibility for taking action to correct each actual or potential compliance issue or nonconformity identified in a *regulatory compliance audit* or an *internal EMS audit* to an appropriate manager or employee.
2. The person assigned responsibility then undertakes the corrective action required, calling upon the EMR, the EMS committee, and others for assistance as necessary.
3. The person assigned responsibility fills out the "Completion of Corrective Action" part of the Corrective Action Notice when corrective action is complete.

Frequency

Corrective action occurs whenever significant problems in the functioning of the EMS are identified or in the region's environmental compliance, primarily through the regulatory compliance and the internal audit process.

Records

Corrective action is recorded using Table 8. Records are maintained by the EMS coordinator.

Table 8. Corrective actions

Statement of the problem
Date problem observed or identified
Description of nonconformity or actual or potential compliance issue
Description of potential solution
Person responsible for corrective action
Deadline for completion of corrective action
Actions taken
Results
Date of action
Signature of Management Representative:

Conducting an Internal EMS Audit

Organizations should routinely review their EMS and evaluate how the objectives, targets, and procedures have enabled it to meet its policy.

Purpose

The region requests periodic internal audits of its EMS to ensure that it is being implemented and operated according to the procedures laid out in this plan. Following the ISO 14001:2004 standard, internal audits of the EMS will be conducted by personnel from within the organization or by external persons selected by the organization, working on its behalf. In either case, the persons conducting the audit should be competent and in a position to do so impartially and objectively.

Procedure

1. At intervals, a team of two or three auditors conduct an internal assessment or audit of the EMS.
2. The audit team shall meet the ISO standard for being free from responsibility for the activity being audited. The audit team shall not consist of members of the regional EMS committee.
3. The audit team uses this plan and the ISO 14001:2004 standard as the basis for its assessment. In particular, the team checks to make sure that:
    - each procedure is being carried out as stated in this plan,
    - the environmental policy is being upheld,
    - progress is being made in meeting the environmental objectives.

    The team bases its evaluation on objective evidence, including documentation and records (e.g., those cited in this plan), interviews with key employees, and observations. Note that this is *not* a compliance audit.
4. The internal audit team completes Table 8 and writes up its findings. A major nonconformity occurs when an EMS procedure is clearly not being implemented, when one of the commitments in the policy is not being upheld, or when no progress is being made in achieving an environmental objective. A minor nonconformity occurs when a procedure is being implemented inconsistently, yet without causing major failings in the EMS as a whole.
5. Each nonconformity is immediately referred to corrective action.
6. Records of each assessment are maintained by the EMS coordinator.

Frequency

At least once every three years. It is recommended that this internal EMS audit be conducted at the same time as the three-year periodic management reviews and six year comprehensive reviews.

Records

Assessment results are recorded by the internal EMS audit team using Table9.

Table 9. Internal EMS audit record

Internal Audit EMS Team	
Date of Internal EMS Audit	
Audit of EMS Procedures, check each item assessed (includes auditing of records, where applicable):	
☐ Environmental policy (adherence to policy commitments)	
☐ Environmental objectives (progress; implementation of action plans)	
☐ EMS responsibilities	
☐ Identification of environmental aspects	
☐ Identification of legal requirements	
☐ Identification of significant environmental aspects	
☐ Development of objectives, targets, and programs ☐ Achieved objective #1, for years covered by audit ☐ Achieved objective #2, for years covered by audit	
☐ Development of Operational Controls	
☐ Environmental Training	
☐ Emergency Preparedness	
☐ Review of New Products and Processes	
☐ Documentation	
☐ Conducting a Regulatory Compliance Audit	
☐ Taking Corrective Action	
☐ Management Review	
Comments	
Major Nonconformities Observed	
1.	
2.	
3.	
Minor Nonconformities Observed	

1.
2.
3.
Suggestions for improving the EMS

Monitoring, Measurement, and Management Review

The ISO standard requires management review to ensure the continuing suitability, adequancy, and effectiveness of the EMS. Furthermore, the Council on Environmental Quality's instructions for implementing Executive Oder 13423 require that once implemented, an EMS shall be reviewed and updated annually or more frequently by senior leadership accountable for the implementation of the EMS.

Purpose

To ensure the effectiveness of the EMS and its continual improvement, the region's leadership team (RLT) must periodically review the important elements and outcomes of the EMS. This includes the monitoring and measurement component of the ISO 14001:2004 standard.

Procedure

1. In preparation for the management review, the committee gathers the following information and makes it available to the management representative in the form of a brief performance report on the following elements.

- Environmental policy
- List of EMS committee members
- List of significant environmental aspects
- Update on compliance status
- Environmental objectives and targets
- Environmental performance results (from monitoring and measuring SEAs and indicators of progress toward environmental objectives and targets). This will describe the results achieved in meeting objectives and targets.
- Bullet-point description of other accomplishments of the EMS (e.g., number of people trained, etc.)
- Results of most recent EMS internal audit, regulatory compliance audit, and corrective actions taken
- Description and documentation of feedback from stakeholders (if received)
- Analysis of the costs and benefits of the EMS (as quantitative as possible)

2. Top management meets to review and discuss the information presented. At a minimum, the EMS management representative and regional coordinator will be present. Depending on its review, top management may direct specific or significant changes in the scale and direction of the EMS to improve its effectiveness and fiscal value. The conclusions and directives that result from the management review are recorded using Table 9 and kept by the EMS coordinator.

Frequency

Annually. The management review should be scheduled at the end of the fiscal year so that year, plus the planning for the new fiscal year, may be reviewed.

Records

Results of management reviews are recorded using Table 9.

Table 10. Management review record

Date of review meeting	
Report prepared by:	
Report approved by EMR:	
Persons present at meeting:	
Name	Position

Questions:
- ☐ Is the EMS working? Is it adding value?
- ☐ Is the EMS cost-effective?
- ☐ Does the EMS adequately respond to changing external conditions or requirements?
- ☐ Is the EMS contributing to achieving the mission of Reclamation?

EMS Performance
- ☐ Achieved objective #1 _____
- ☐ Achieved objective #2 _____
- ☐ Achieved objective #3 _____

Conclusions

Actions to be taken	Person(s) responsible

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