ANNUAL SITE ENVIRONMENTAL REPORT
FOR CALENDAR YEAR 1993

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PREFACE

The Western Area Power Administration (Western) has established a formal environmental protection, auditing, monitoring, and planning program that has been in effect since 1978. The significant environmental projects and issues Western was involved with in 1993 are discussed in this annual site environmental report. It is written to show the nature and effectiveness of the environmental protection program.

The Department of Energy Order 5400.1, Chapter II.4, requires the preparation of an annual site environmental report. Because Western has facilities located in 15 States, this report addresses the environmental activities in all the facilities as one "site."

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1.0 INTRODUCTION

The Western Area Power Administration (Western) was established on December 21, 1977, pursuant to Section 302 of Public Law 95-91, the Department of Energy Organization Act dated August 1, 1977. Western is responsible for the Federal electric power marketing and transmission functions in 15 central and western states encompassing a 1.3 million-square-mile geographic area (Figure 1).

In 1993, Western provided power to more than 600 wholesale power customers consisting of cooperatives, municipalities, public utility districts, investor-owned utilities, federal and state agencies, irrigation districts, and project use customers. The wholesale power customers, in turn, provide service to millions of retail consumers in the States of California, Nevada, Montana, Arizona, Utah, New Mexico, Texas, North Dakota, South Dakota, Iowa, Colorado, Wyoming, Minnesota, Nebraska, and Kansas.

Western is responsible for the operation and maintenance of more than 16,658 miles of transmission lines, 271 substations, and various appurtenant power facilities in the States listed above. Western also is responsible for planning, construction, and operation and maintenance of additional federal transmission facilities that may be authorized in the future. Electric power marketed by Western is generated by the Bureau of Reclamation (BuRec), the U.S. Army Corps of Engineers (Corps), and the U.S. Section of the International Boundary and Water Commission (IBWC). There is a combined total of 55 hydroelectric power generating plants in the service area. Additionally, Western markets the United States entitlement from the Navajo coal-fired plant near Page, Arizona. The maximum operating capability that Western currently markets is 10,082 megawatts (MW). In 1993, Western sold nearly 34 billion kilowatt hours of electricity that generated more than \$737 million in revenues.

Western's organization consists of the Headquarters Office located in Golden, Colorado, and five Area Offices located in Billings, Montana; Phoenix, Arizona; Loveland, Colorado; Sacramento, California; and Salt Lake City, Utah. Additionally, there are five District Offices and six power dispatching centers. Figure 1 is the Western marketing area. Through its power marketing and transmission program, Western secures revenues to meet the annual costs of operation and maintenance of transmission facilities, purchased power, wheeling, and other expenses. Western is required to repay within allowable time periods all the power investment plus interest as well as the portion of the Government's irrigation and other non-power investments beyond the water users repayment capability.

POWERPLANTS AND MARKETING AREA

FIGURE 1

2.0 SUMMARY

Many state and federal environmental protection laws and regulations are applicable to Western facilities. Western facilities are under the jurisdiction of six Environmental Protection Agency (EPA) Regions and 15 states. To help assure conformance with all regulatory requirements, Western developed Environmental Protection Implementation Plans (EPIPs) in accordance with DOE Order 5400.1, for Headquarters and each of the five Area Offices. The EPIPs establish environmental protection programs that define Western's environmental compliance program, the overall environmental protection and pollution prevention goals and objectives. Additionally, Western Headquarters compiled the Long Range Environmental Plan, also required by DOE Order 5400.1, to provide general guidance for compliance with environmental laws and regulations as they pertain to environmental protection compliance issues. Western is taking action to prevent, control, and abate environmental pollution at facilities under its control.

One of the major regulatory impacts upon Western continues to be the Toxic Substances Control Act (TSCA) that regulates the use of polychlorinated biphenyls (PCBs). Western's policy is to eliminate PCBs wherever economically and operationally possible to lessen the impact of PCB regulations. Western has undertaken efforts to minimize procurement expense and maximize contracting efficiency by coordinating PCB removal activities throughout Western's power marketing system.

Electric and magnetic field (EMF) effects of alternating current (AC) and direct current (DC) power transmission remain a concern in the decision-making process under the National Environmental Policy Act (NEPA). Increased public awareness has also added impetus for additional research in the area of EMF effects. Western continues to monitor the research efforts underway in these areas and is a participant in a study coordinated by Bonneville Power Administration that exposes sheep to high voltage AC fields.

Throughout 1993, Western's environmental planning continued toward increasing public and agency involvement early in the planning process of proposed projects. This emphasis on early scoping of environmental issues, which follows the amended DOE Guidelines for Compliance with NEPA, is to identify significant impacts.

Western determines the appropriate level of environmental documentation by its policy of pre-scoping and increasing the level of public and agency participation in project development.

Large scale projects and projects with a high potential for significant environmental impacts are analyzed within the framework of environmental assessments and impact statements. Most Western projects result in minimal environmental impacts with appropriate planning and mitigation.

More comprehensive official participation by the Advisory Council on Historic Preservation earlier in the planning process has streamlined Western's cultural resource compliance activities. Monitoring of project implementation through public and agency feedback has improved planning methods.

3.0 COMPLIANCE SELF-ASSESSMENT

3.1 COMPLIANCE STATUS

The Western Area Power Administration (Western) operates in compliance with environmental and other requirements established by Federal, state, and local statutes and regulations, Executive Orders, Department of Energy Orders, and agreements with Federal, state, and local regulatory agencies. The following paragraphs summarize Western's compliance status with the major environmental statutes.

3.1.1 Resource Conservation and Recovery Act (RCRA)

Since 1984, many regulations have been proposed or finalized as a result of the Hazardous and Solid Waste Amendments of 1984 (HSWA). HSWA-based regulations impact Western most significantly by classifying some facilities as small quantity generators of hazardous waste. HSWA also impacts Western by prohibiting the landfilling of liquids, dioxin-containing wastes, and certain solvents.

The State of California requires that disposal of "extremely hazardous wastes" be permitted on a case-basis. The State considers PCBs at a concentration of greater than 5,000 ppm as an "extremely hazardous waste". Western's required permits are ongoing and current.

3.1.1.1 Underground Storage Tanks (UST)

California requires the annual renewal of permits to operate underground storage tanks. Through the monitoring and updating of permits, Western continued to comply with California underground storage tank regulations during 1993.

Western removed underground storage tanks at the following facilities: Loveland Power Operations Center. Closure of all tanks was in accordance with state regulations.

A leaking underground storage tank was discovered in 1985 at the Huron O&M Center in South Dakota. At the direction of the State of South Dakota, monitoring wells were installed to determine if off-site migration was taking place. In December 1990, the State required Western to place an additional monitoring well on-site for further verification regarding off-site migration. The installation was accomplished in 1991 and the monitoring data for the past year is found in Table 5. Remediation of the contaminated soil took place in late 1993. Approximately 700 cubic yards of soil were removed from the site and approximately 6,000 gallons of gasoline contaminated water was pumped from the excavation site. The groundwater monitoring well was removed in accordance with state requirements. It was determined by the state that Western has successfully remediated this site and the state concurred with Western's recommendation to backfill the site and perform quarterly monitoring for a year.

3.1.2 Toxic Substances Control Act (TSCA)

Western continued the removal and proper disposal of PCBs from facilities during 1993. An agency-wide PCB transportation and disposal contract ensures consistent and proper handling of PCB waste material. The contractor transports and disposes of the PCBs and prepares all necessary paperwork, including certificates of destruction or disposal. Western reduced the risk of future PCB spills by removing and disposing of more than 353,000 kg of PCB-contaminated oil and equipment.

3.1.3 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

Congress passed the Superfund Amendments and Reauthorization Act (SARA) of 1986, which revised and expanded CERCLA. Many revisions apply to Western.

Western does not have any sites currently listed on the National Priority List (NPL), but the Agency has taken a proactive role by implementing a Facility Evaluation Program. The purpose of this program is to evaluate all Western facilities for sources of and suspected releases of oil, hazardous substances,

pollutants, or contaminants into the environment. Western has also proactively conducted Preliminary Assessments and Site Investigations (PA/SI) at sites which could have the potential for contamination. The Montrose Power Operations Center, located in Montrose, Colorado, notified EPA of hazardous waste storage activities in the early 1980's as did the Watertown Substation in Watertown, South Dakota, and Casper Maintenance Yard in Casper, Wyoming. None of these sites are RCRA hazardous waste Treatment, Storage or Disposal Facilities, but because they have facilities for storage of PCB wastes, the sites were listed on the docket. Preliminary Assessments and screening Site Investigation final reports have been completed and submitted to EPA.

Update No. 6 of the Federal Agency Hazardous Waste Compliance Docket listed two Western facilities which Western disputed: Pierre Hydroelectric Plant and Parker Dam. EPA corrected the listing of the Pierre Hydroelectric Plant, to reflect ownership by the U.S. Army, Corps of Engineers. Parker Dam is pending further review by EPA. Update No. 7 listed three facilities as Site Evaluation Accomplished (SEA): Montrose Power Operations, Hinton, and Casper Maintenance Yard. In 1987, Western acquired a 1.45 acre parcel of land east of the Gering Substation in Gering, Nebraska, with the intent of using the area for expansion of the existing substation. An inactive foundry and machine shop is located on the parcel. After acquiring the property, Western suspected that it was contaminated with heavy metals and solvents associated with activities conducted at the site by the prior owners. Western conducted a site visit and reconnaissance of the facility in March of 1990. Based on the results of the reconnaissance, Western determined that a more detailed environmental investigation was necessary. Western conducted a Preliminary Assessment in early 1991. This facility was listed on the Federal Agency Hazardous Waste Compliance docket Update No. 5 which was published in December 1991. The final Site Investigation report was submitted to EPA Region 7 in early 1992. The additional sampling that EPA required indicated less contamination than had been previously expected.

3.1.4 Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

Western is required to comply with the use, storage, and disposal regulations contained in FIFRA and individual state pesticide management programs. Pesticides are used by Western to control vegetation, rodents, and for wood preservation.

Western is complying with a Federal mandate to implement Integrated Pest Management (IPM) methods, or more specifically, integrated vegetation management. During 1993 and continuing into 1994, Western is developing an integrated vegetation management program which addresses the control of vegetation at facilities and along transmission line rights-of-way which combine mechanical, biological, and chemical methods in a way that minimizes economic, health, and environmental risks. To assess the risk of effects to humans and nontarget species from using herbicides, an herbicide risk assessment will be conducted which will serve as a screen in the selection of a Western-approved herbicide use list. Herbicides can then be selected from this approved list for use by Western and/or contract applicators. Western is also evaluating herbicides in regard to their potential for groundwater contamination by setting limits on known physical and chemical characteristics of herbicides which influence leaching potential. Mitigation measures will be outlined which are known to reduce the likelihood of herbicide contamination risks to human health and the environment. In addition, a program is being developed to monitor herbicide residues in soil and water to determine the concentrations or persistence of these chemicals in the environment.

Along with the selection of approved herbicides, this program is designed to promote the use of herbicide application and management practices which will decrease potential for contaminating ground and surface water. Specific application and management guidance has been identified and incorporated into the vegetation management program.

Pesticide guidance is being developed for miscellaneous pesticide uses such as the disposal of chemically treated wood poles and crossarms and the control of rodent/bird damages at Western facilities. An interagency agreement has been established between the Department of Agriculture, Animal Damage Control, and Western for the control of pest-caused damages to electric transmission facilities.

During 1993, Western has been evaluating a new method of vegetation control which involves the use of a lance with an encapsulated herbicide to control the resprouting of stump cut trees. The lance is used to inject the herbicide product into the tree stump thus minimizing worker and environmental exposure to chemicals.

In compliance with the Federal Noxious Weed Act of 1974, as amended by Section 15, Management of

Undesirable Plants on Federal Lands, 1990, and State/County noxious weed management legislation, Western has written draft policy guidance for the management of noxious weeds identified by State and County weed management laws on Western fee-owned and nonfee-owned (easements, rights-of-way, permits, etc.) land. Federal interagency agreements and county cooperative agreements have been developed for control of noxious weeds.

The annual selection of contractor services for control of vegetative growth within substations and maintenance yards has been updated to include the submittal of the contractors' technical qualifications along with cost information. The contractor is selected based upon technical merit as well as cost proposal. In addition, the scope of the statement of work for annual chemical control of vegetation has been expanded to include the control of State and County targeted noxious weed species on Western fee-owned land.

3.1.5 Clean Air Act (CAA)

Several potential sources of air emissions exist at Western facilities that are regulated under the Clean Air Act: dust during construction activities; friable asbestos during building renovation or demolition; and volatile organic compounds emissions from gasoline dispensing facilities and cold solvent cleaners.

In arid regions, Western requires that all disturbed areas and roads be watered during construction activities to reduce particulate (dust) air pollution.

Asbestos regulations under the National Emission Standards for Hazardous Air Pollutants affect Western when any work is planned to modify or demolish existing buildings. Surveys to identify and quantify asbestos in Western facilities were initiated in 1988. The results of these surveys indicated the presence of asbestos.

Some states also regulate the removal and disposal of friable asbestos. Western personnel are aware of the need to notify all appropriate regulatory agencies when planning renovation and demolition projects, and to assure proper disposal of asbestos wastes.

A Refrigerant Working Group composed of individuals from various parts of Western has been formed to develop strategies to comply with Sections 608 and 609 of the Clean Air Act. A consensus of the group

was to inventory all equipment containing ozone-depleting refrigerants to comply with regulations and plan for the phase out of ozone-depleting substances. Technician certification is mandatory effective November 14, 1994, for all individuals who service air conditioning and refrigeration equipment. This includes motor vehicle air conditioners (MVAC) and MVAC-like appliances under Section 609 of the CAA. Facilities will have to acquire approved equipment and training for technicians, or contract for such services that have EPA approval, to conform to the refrigerant recycling rule. Facilities will also have to implement procedures to ensure that leaks are repaired and records are kept in accordance to the regulations. The equipment used for servicing also needs to be able to comply with the applicable requirements.

3.1.6 Safe Drinking Water Act (SDWA)

3.1.6.1 Underground Injection Control (UIC)

As required by UIC regulations, Sacramento and Loveland Area Offices, located respectively in California and Colorado, have submitted inventory information to EPA regional offices to retain authorization by rule. All wells found to date, at the facilities, are classified as Class V injection wells.

It has been discovered that floor drains within some battery rooms and vehicle maintenance buildings are connected to dry wells. Some air compressors used on power circuit breakers send small quantities of blow-by oil into dry wells. The Sacramento Area Office is working with EPA Region IX to obtain permission to permanently abandon all of the battery and oil room injection wells. Additionally, some septic systems used to dispose of sanitary waste qualify as injection wells. Western is eliminating the use of injection wells at their new facilities. Western has plugged the drains from washbays and maintenance facilities leading to dry wells or septic systems at a number of facilities. An updated inventory of facilities with underground injection control wells will be conducted during implementation of the Groundwater Protection Management Program in 1994.

3.1.7 Clean Water Act (CWA)

3.1.7.1 Spill Prevention, Control, and Countermeasure Plans (SPCC)

The discharges from the facilities Western owns and operates are generally not regulated under the Clean Water Act and other water pollution control laws and statutes. Most of Western's facilities do not generate effluent except for stormwater runoff. New stormwater discharge regulations have impacted some of Western's facilities.

In 1990, Western identified unpermitted point source discharges at some of its larger facilities where floor drains were found to connect to storm sewer drainage systems. Most of the discharges are to dry ditches along public roadways next to the facilities. These were corrected in 1991 and 1992 as part of the Facility Evaluation Program. The purpose of this program is to evaluate all Western facilities for sources of and suspected releases of oil, hazardous substances, pollutants, or contaminants into the environment.

Western facilities using or storing oil must assess the potential for spilled oils to reach navigable waters or their tributaries. If the potential exists, Western develops and implements Spill Prevention, Control, and Countermeasure plans, including appropriate provisions for diversion and secondary containment.

SPCC plans are reviewed every three years and amended, if necessary. All new and amended plans are recertified by a registered professional engineer. Over a hundred facility SPCC plans were reviewed, amended, or recertified in 1993. Water pollution control regulations found in 40 CFR §112 also provide guidelines for construction of structures to prevent spilled oil from reaching navigable waters. Western follows these guidelines when designing new facilities or refurbishing existing substations.

The Salt Lake City Area developed a standard spill containment kit that is stored at facilities regulated under 40CFR112. Western is considering using these kits Western-wide. Western is also studying the use of alternative

secondary containment measures, such as aboveground storage tanks with reinforced concrete secondary shells and improved oil/water separators.

The Miles City Converter Station, located in Montana, is a back-to-back, alternating-current to direct-current converter facility. This facility has been granted a water pollution control permit from the State of Montana. This facility is required to conduct a quarterly groundwater monitoring program for the on-site coolant system evaporation pond.

3.1.8 Hazardous Materials Transportation Act (HMTA)

Much of the hazardous and toxic materials transported for Western is shipped via contracted commercial haulers. However, trained and qualified Western employees occasionally transport toxic materials from one facility to another.

Hazardous waste transportation requirements for the California Department of Health Services are more extensive than those of the U.S. Department of Transportation (DOT). Therefore, the Sacramento Area Office and Phoenix Area Office must have a California waste hauler's permit for the transportation of PCB wastes. In 1993, the permits for vehicle inspections and insurance were renewed by both Area offices. The annual report on quantities shipped was provided to the State as required by their waste hauler's permit.

Western environmental staff developed a training program in 1993 which addresses the requirements of HM-126F for the safe transportation of hazardous materials. DOT regulates Western's transportation of hazardous wastes, PCB wastes, and other hazardous materials. DOT also regulates personnel transport, gasoline and other fuels for use in construction equipment, large batteries for use at substations, battery acid, compressed gases, especially nitrogen, sulfur hexafluoride and acetylene, and bulk quantities of non-hazardous electrical oil.

3.1.9 National Historic Preservation Act (NHPA)

During 1993, Western initiated or continued previous cultural resource compliance efforts for 26 projects in 8 states. The projects included the construction of substations, microwave communication facilities, construction at pumping plants, repeater facilities, electrical transmission lines, access road maintenance, access road construction, site monitoring, site testing, and warehouse construction. In accordance

with Section 106 of the National Historic Preservation Act, as amended, Western solicited the comments of the State Historic Preservation Officer(s) in 8 states regarding these projects. This allowed Western to evaluate cultural resources within the proposed project areas and identify potential effects of the projects on significant cultural resources. Plans to mitigate potential project effects included avoiding, monitoring, testing, and excavation.

3.2 CURRENT ISSUES

The DOE Office of Audit conducted a Line Program Environmental Management Audit in December 1991. A total of nineteen findings were identified by the audit team. Seven of the nineteen findings were compliance findings, in that the audit team felt that Western was not in compliance with DOE Orders. The remaining twelve were "Best Management Practice" findings. Western received the final audit report May 22, 1992, and submitted a final remedial action plan July 30. Department approval was received August 28, 1992. Listed below is a table of the activity on the remedial action items for the first quarter calendar year 1994 (January through March 1994).

FINDINGS	REMEDIAL ACTION ITEM	DATE COMPLETED
OS/BMPF-2	Identify Personnel needing environmental language in their job descriptions. Prepare letter to rewrite job descriptions. Review existing job descriptions. Review existing performance standards. Apply existing job descriptions. Apply existing performance standards. Develop environmental job descriptions as needed. Develop environmental performance standards as needed.	In progress In progress DOE lead In progress DOE revising In progress DOE lead Drafted
CA/BMPF-1	Implement a documented periodic Western-wide environmental Self-Assessment Program to provide Senior Management with information on the status of Western's environmental performance.	Drafted
SR/BMPF-1	Perform analysis of current and projected staffing needs for Headquarters Division of Environmental Affairs.	Not done
SR/BMPF-2	Provide environmental awareness training to all line personnel and key managers.	Not done
EP/CF-1	Develop Meteorological Monitoring Plan Develop Groundwater Monitoring Plan Develop program for evaluating and permitting surface water discharges Begin implementation of Western-wide Waste Minimization and Pollution Prevention Program Develop Western-wide Environmental Monitoring Plan Implement the Western-wide Groundwater Protection Management Program.	In progress Drafted Drafted In progress In progress In progress
EP/CF-2	Develop guidance for well closures. Finalize Hazardous Waste Management Plans. Implement Hazardous Waste Management Plans. Develop Pesticide Management Program. Develop Underground Storage Tank Program. Develop Underground Injection Control Program. Develop a comprehensive SPCC Program.	Drafted Partially complete Portions drafted In progress In progress Drafted
EP/CF-3	Develop guidance to ensure remedial responses comply with regulatory requirements. Incorporate remedial action response training into Training Program.	March 1994 In progress
EP/BMPF-1	Develop procedure to ensure mitigation action plans are followed.	In progress
IC/BMPF-1	Develop "lessons learned" program.	In progress

SR/BMPF-2	Modify IDP and DTIS systems.	In progress
SR/BMPF-3	Develop Environmental Training Program. Identify personnel needed environmental training. Determine training needs. Coordinate training needs with other functional areas. Develop generic SOW for training. Incorporate environmental training into IDP and DTIS systems. Develop recordkeeping procedures. Procure training.	Partially complete In progress Partially complete Partially complete In progress Not done Not done Not done
PE/CF-1	Incorporate self-assessment missing elements. Incorporate self-assessment into training.	In progress In progress
PE/CF-2	Rewrite WAPA 5482.1 (replaced by WAPA 5482.2A) Supplement audit/appraisal plans, as needed. Incorporate into training program. Implement all phases of audit and appraisal program.	March 1994 Drafted Not done Not done
PE/CF-3	Establish program to collect data to track and trend. Establish program to track and trend. Provide training in tracking and trending.	Partially complete Partially complete Partially complete Not done
PE-BMPF-1	Provide environmental training to maintenance personnel.	In progress
RM/BMPF-1	Review and define existing risk management. Develop procedures to ensure identification of regulatory issues pertinent to risk management.	First Phase completed

Several separate hazardous/toxic material spill incidents were reported. These spills were cleaned up as required by TSCA, RCRA, or the CWA, and the spills resulted in insignificant environmental damage. The locations and materials spilled are listed below:

TABLE 1

LIST OF HAZARDOUS MATERIAL SPILLS
DURING CALENDAR YEAR 1993

FACILITY	STATE	SPILLED SUBSTANCE
Beaver Substation	CO	PCB-containing Dielectric Fluid (<RQ)
Carrington Substation	ND	PCB-containing Dielectric Fluid (<RQ)
Granite Falls Substation	MN	PCB-containing Dielectric Fluid (<RQ)
Gunnison Substation	CO	DDT and Coal Tar Residue
Bismarck Substation	ND	Diesel Oil (<RQ)
Mead Substation	NV	Dielectric Fluid Mineral Oil (<RQ)
Miles City Substation	MT	Dielectric Fluid Mineral Oil (<RQ)
Parker Dam Substation	CA	Dielectric Fluid Mineral Oil (<RQ)
Shelby Substation	MT	Dielectric Fluid Mineral Oil (<RQ)
Spencer Substation	IA	Dielectric Fluid Mineral Oil (<RQ)

Reportable quantity (RQ) is the quantity of hazardous/toxic substance for which reporting of a spill or discharge is required. Under the National Contingency Plan all spills involving 1 pound or more by weight of PCBs (>RQ) must currently be reported to the National Response Center. Notification should be in the shortest possible time after discovery, but in no case later than 24 hours after discovery. Spills of less than 1 pound of PCBs by weight (<RQ) must be cleaned up in accordance with TSCA requirements, but notification of EPA is not required.

3.3 SUMMARY OF PERMITS

Western is required to obtain permits for underground storage tanks, PCB transportation and storage, hazardous waste storage, gasoline dispensing and underground injection wells.

TABLE 2

**LIST OF ENVIRONMENTAL PERMITS
OBTAINED OR ONGOING DURING CALENDAR YEAR 1993**

<u>NAME</u>	<u>ISSUING AGENCY</u>	<u>STATUS</u>	<u>EXPIRATION DATE</u>
404 Permit-			
Nationwide	U.S. Army Corps	Ongoing	None
Hazardous Waste			
Hauler Registration	State of CA	Renewed	10/31/94
Variance Application	State of CA	Obtained	10/31/94
Permit to Operate			
Underground Storage Tanks	Shasta County	Ongoing	Annually
	Sacramento County	Ongoing	Annually
Hazardous Materials Permit			
Hazardous Materials Business Plans	Shasta County	Ongoing	Annually
	Sacramento County	Ongoing	Annually
	Tehama County	Ongoing	Annually
Water Quality			
Miles City Converter	State of Montana	Ongoing	5/31/94
Virginia Smith Converter Station	State of Nebraska	Ongoing	Annually
RCRA Part B Permit			
Permit for Hinton Hazardous Waste Storage Facility	U.S. EPA	Pending	N/A
Gasoline Dispensing			
Facility Permit (CA)	Air Pollution Control District	Ongoing	9/94

3.4. COMPLIANCE SUMMARY (JANUARY THROUGH MARCH 1994)

National Environmental Policy Act (NEPA). Western has several environmental assessments (EA) and EIS in various stages of the NEPA process. The most notable are described here.

Billings Area Office: Categorical Exclusions (CX) processed were (1) White-Brookings Pole Replacement; and (2) Grand Island Fiber Optic Project.

Loveland Area Office: The following CX was signed by the Administrator: Gering Maintenance Building Project. State notifications were made for the following CXs: (1) for the LAP Rate Adjustment, state notification letters were prepared and sent to the states of Wyoming, Nebraska, and Kansas; the State of Colorado was notified through the State CIRS computer system on February 17; (2) notification was sent to Nebraska for the Gering Maintenance Building Project; (3) the notification for the Greeley 115-kV Transmission Line Removal Project was entered into the State of Colorado's CIRS computer system on March 17; a letter was prepared and submitted to Wyoming on March 2 notifying the state of Western's categorical exclusion for the Platte Pipeline Shoofly Project. The following were submitted to Headquarters for processing: (1) Erie Substation Site for the proposed grant-of-easement to Public Service Company for a transmission line easement across Western's property; (2) Big George-Carter Mountain Project EA, State comment letters, and Finding of No Significant Impact (FONSI) were submitted to Headquarters for processing, and review and approval by the Department; (3) Derby Hill and Loveland Substations Project; (4) Erie Substation Site prepared for the proposed grant-of-easement to Public Service Company for a transmission line easement across Western property; (5) Fort Morgan Tapline Project; (6) Frenchman Creek Substation Project; (7) Holyoke and Wray Substations Project; (8) Loveland Area Office Wood Pole Replacement Project Number 1; and (9) Lusk and Lusk Rural Substations Project. For the Flatiron-Erie Project EIS, responses to written and oral comments received from the public were completed with the draft EIS being distributed for internal review on March 22. Review comments are due by April 4. For the Gering-Stegall Transmission Line Project EA, a public meeting was held on February 3 in Gering. The primary concerns expressed by the public centered on electro-magnetic fields (EMF) and health effects.

Phoenix Area Office: The Area Office environmental staff reviewed a contractor proposal concerning the Electric Lightwave Southwest Fibernet Project. The project is an overhead ground wire installation of fiber optic cable to be installed on the 69-kV line from Boulder Beach to Mead Substation and from Boulder Beach to Hoover Dam. This line is operated by Nevada Power Company. The majority of the line consists of single pole steel tubular double circuit construction from Mead Substation to Boulder Beach with a few two-foot wood H-frame structures. The line section from Boulder Beach to Hoover Dam is four-legged lattice construction. It is proposed to install an OPGW fiber optic cable in the position now occupied by the overhead shield wire. The following CXs were prepared and submitted to Headquarters for processing: (1) Tucson Substation; the proposed work activity involves the installation of a domestic water line into Tucson Substation from the city water meter; (2) Mead Stage 06; and (3) Mesa Substation Site Investigation and Remedial Action. The following

CXs were signed by the Administrator: (1) Prescott Pilot Soil Remediation Test Project; (2) Tucson Substation Water Pipeline Installation Project; and (3) Mead Stage 06 Building Project. A CX is being proposed for the Mead Substation. Proposed actions include a 500-kV addition and upgrades in the station yard, such as replacement of 24-kV shunt reactor, maintenance facility, and reconfiguring ground mat. The following state notifications for CX determinations were sent to Arizona: (1) Prescott Substation Pilot Soil Remediation Project; and (2) Tucson Substation Water Pipeline Installation Project.

Sacramento Area Office: Efforts are continuing by Area Office environmental staff to coordinate Western's 2004 EIS with development of the Bureau of Reclamation's Central Valley Project Improvement Act EIS. An informational bulletin is being prepared to inform customers and the public of the status of the 2004 EIS effort and how they can participate in upcoming public workshops on alternatives development. Area Office staff continued work on definition of action alternatives based on their generic components, i.e., resources, products and services, marketing area, customers, and contract terms. Team meetings were held February 23-24, 1994, including a seminar on potential applicability of Decision Analysis to environmental review activities. Area Office environmental staff drafted a CX addressing proposed improvements at Elverta Maintenance Facility, including expansion of the outside equipment storage area and maintenance buildings and addition of a left-turn pocket at the substation entrance from Elverta Road and onto Sorrento Road from Elverta Road. Area environmental staff attended public workshop on City's proposed transmission line route for the City of Shasta Lake Second Interconnection. The environmental office received state comments and clearance on January 11, 1994, for the Sacramento Energy Services Center EA. The comments were incorporated into the final EA and FONSI. The Olinda Substation Improvements CX was prepared addressing proposed improvements including expansion of the outside storage area and maintenance buildings, and addition of a left-turn pocket at the substation entrance from the County Road. The environmental staff reviewed an Environmental Impact Report prepared by Modesto Irrigation District and Turlock Irrigation District. Area Office staff met with the two districts to discuss strategy for completing NEPA clearance for this project. It has been determined that an EA is required.

Salt Lake City Area Office: The draft EIS for Glen Canyon Dam has been filed with the Environmental Protection Agency and a 90-day public comment period ending April 11, 1994, is underway. A briefing of Congressional staff members and the first public information session took place January 27 in Washington, D.C. Questions from the Congressional staff members reflected concern about how well the proposed adaptive management program for operation of Glen Canyon Dam will work, given that its first test (the recommendation of the scientists, the cooperating agencies, and the basin states that the Secretary of the Interior relax two interim operating criteria) seems to be going nowhere. Future public meetings are scheduled for Salt Lake City, Phoenix, and Flagstaff to be followed by formal public hearings in Los Angeles, San Francisco, Phoenix, Flagstaff, Salt Lake City, Denver, and Washington, D.C., in March. The final EIS is scheduled for completion in October 1994 with the Record of Decision in December 1994. For the proposed changes to interim operations, the Bureau of Reclamation has reversed its initial position of recommending on behalf of

the cooperating agencies, Basin states, and interested parties that the Secretary of the Interior approve Western's proposed changes to interim operating criteria. When it became apparent that the initial recommendation to approve changes had not gone beyond the Commissioner of Reclamation in Washington, D.C., letters of support for the request were forwarded directly to the Secretary of the Interior from the Hopi Tribe and the Arizona Game and Fish Department. Meanwhile, U.S. Senators Wallop, Simpson, Hatch, Domenici, Brown, and Nighthorse-Campbell wrote to encourage Commissioner Beard of Reclamation to make a decision in light of the emphasis being placed on the recommendation as a test of adaptive management. Conversely, a letter signed by representatives of six environmental groups was also sent to the Secretary of the Interior urging extreme caution in approving the recommendations and stating that they did not consider it to be a test of adaptive management. The issue has not formally been addressed by the Secretary of the Interior. Western has mailed the public draft of the Salt Lake City Area Integrated Projects Electric Power Marketing EIS. The public comment period of 90 days terminates the end of May. Public hearings will be held in Denver on April 11; Albuquerque on April 12; Salt Lake City on April 18; Flagstaff on April 26; and Phoenix on April 27. The EIS is in four volumes: a summary, the EIS, and two technical appendices.

Resource Conservation and Recovery Act (RCRA).

Billings Area Office: The Huron District Office (HDO) submitted four hazardous waste biennial reports to South Dakota. HDO also submitted the 1994 "Inventory of Federal Hazardous Waste Facilities" and the 1994 "Hazardous Waste Report" to EPA. The Hinton manned facilities and the Hazardous Waste Storage Facility underwent the annual RCRA inspection by EPA. No violations were found. It is likely that EPA will consider this facility as a "conditionally exempt small quantity generator". The Bismarck District Office submitted twenty-two 1993 Annual Reports to North Dakota prior to March 1, 1994, as required by the State. Bismarck District Office environmental staff evaluated the Yuasa-Exide facility at Bismarck and found operations acceptable for recycling lead acid batteries.

Loveland Area Office: Area environmental staff performed a site visit at the Sherman Hill Substation to collect samples of the underground tank contents. Removal and disposal of the tank is anticipated in mid-March 1994. The environmental staff prepared guidance on the recycling of NiCad batteries and distributed via computer to area staff.

Phoenix Area Office: The Phoenix Area Office submitted Hazardous Waste Generation Facility Annual Reports to the Arizona Department of Environmental Quality (ADEQ) for 21 sites. These reports, which document 1993 activities for Bouse, Buckeye, Casa Grande, Cochise, Coolidge, Davis Dam, ED-2, ED-4, Gila, Liberty, Maricopa, Mesa, Nogales, Oracle, Phoenix Operation & Maintenance Complex, Phoenix, Pinnacle Peak, Prescott, Tucson, and Wellton, are required by Arizona Administrative Codes R18-8-262.F and R18-8-261.D and Arizona Revised Statute 49-922.E. The environmental staff also submitted Hazardous Waste Reports as specified in Nevada Administrative Code Section 444.8675 to the Nevada Division of Environmental Protection Bureau of Waste Management. These reports document 1993 hazardous waste activities for three sites located in

Amargosa, Basic, and Mead. Oil contaminated soil and debris was consolidated at the Phoenix Operations and Maintenance Complex. The waste was generated during normal maintenance throughout the Phoenix work area. A representative sample was collected and forwarded to an approved laboratory for proper waste characterization and profiling. Analytical results were received from the petroleum contaminated soil collected during the injection well removal at Pinnacle Peak Substation. Laboratory data showed the non-hazardous nature of the waste. The data are being used to profile the waste to Waste Management's Butterfield Station Regional Facility.

Sacramento Area Office - The Hazardous Waste Management Plan has been distributed to appropriate area staff. The Plan was generated in response to item number 10 of the Root Cause Analysis report which required the Sacramento Area Office to formalize a process for hazardous waste management.

Comprehensive Environmental Response, Compensation, and Liability Act.

Preliminary assessments are underway at various sites within each area of Western. The Gering Foundry cleanup activities are progressing in the Loveland Area. The Engineering Evaluation and Cost Analysis (EE/CA) was reviewed, finalized, and forwarded to EPA, the State of Nebraska, the City of Gering, and the Scotts Bluff County Health and Welfare in late February 1994. A public notice of Availability of the EE/CA for review is scheduled for publication March 17, 1994. The comment period ends April 22, 1994. The Loveland Area office awarded an 8A firm the contract to prepare the preliminary assessment at the Fort Morgan Substation. The draft report is due to the Loveland Area environmental staff by March 31. The Sacramento Area Office began the preliminary assessment at the Folsom Substation in January 1994. The Phoenix Area Office conducted a Site Investigation at the Cochise Substation in March. The investigation is directed at delineating the vertical and horizontal extent of soil contamination of diesel/gasoline range and total petroleum hydrocarbons resulting from historical leakage of dielectric fluids. Site investigation project work began late in March 1994 at the Watertown Substation located in the Billings Area, Huron District.

Toxic Substances Control Act.

Nothing to report.

Safe Drinking Water Act.

Loveland Area Office: The Area Office continues to work with the State of Wyoming on the closure of the Cody dry well. The State does not see a need to close the wells at Cody, however, they are not opposed to closure. The Loveland Area Office prefers to close the wells permanently considering the potential for well damage from vehicles and other risks to groundwater contamination if the wells are left in place.

DOE 5400.1.

The Western Quality Assurance Program Plan is being formatted for inclusion in Western's two-volume Environmental Manual being written for

distribution to all staff involved in environmental work. Preliminary implementation is underway in the Area Offices within Western. Quality assurance requirements are written into all statements of work for contracted field and laboratory support at Western sites.

4.0

ENVIRONMENTAL PROGRAM INFORMATION

4.1 ENVIRONMENTAL PROTECTION PROGRAMS

4.1.1 Environmental Protection Implementation Plan

In accordance with DOE Order 5400.1, Western developed an Environmental Protection Implementation Plan for Headquarters and each of the five Area Offices. The plans establish a written program that defines Western's environmental compliance, protection, and pollution prevention goals and objectives. The plans also delineate the responsibilities and authorities of the Heads of Field Organizations. Each Area Office is responsible for overseeing development of the program and ensuring its implementation. Western's Division of Environmental Affairs is responsible for overseeing development and implementation of the Environmental Protection Implementation Plan for Western's Headquarters Office.

4.1.2 Environmental Auditing Program

Western established an environmental auditing program in 1980. The major purposes of the auditing program are as follows:

- discover noncompliance with applicable local, state, and Federal regulations;
- reduce environmental risks;
- allow for communication with facility personnel;
- improve overall environmental performance;
- provide assistance and discuss compliance alternatives for problem areas;
- accelerate development of good environmental management practices;
- provide for worker safety when working with hazardous materials; and
- provide management with a tool for evaluating the priority of compliance issues.

The Western environmental auditing program includes auditing of Western facilities. The purpose of these audits is to advise facility and Area management of the applicability of current regulations regarding their particular operations. The audits are also conducted to review records, point out areas of non-compliance, and identify practices that are at variance with industry environmental standards. The audit results are used to provide compliance assistance to the facilities.

In 1993, 40 facilities were audited by Headquarters Division of Environmental Affairs staff. These functional appraisals were

undertaken in accordance with DOE Order 5482.1B and included substations, maintenance facilities, and storage yards. The audits were performed as part of Western's Combined Field Review Program. In 1992 Western initiated a Combined Field Review Team incorporating environmental, safety, and maintenance staff members. This provides a multi-disciplinary view of jointly related issues to supplement the formal audit program.

Formal audit reports are prepared for each functional appraisal to discuss the problems found and call attention to potential problems noted by the auditors. The reports include recommended actions the facility may adopt to improve compliance with the applicable regulations. The audited facilities are required by DOE Order 5482.1B and Western Order 5482.1 to formally respond to the audit within 30 days after receiving the report, and to correct the identified problems.

4.1.3 Long Range Environmental Plan

In 1988, the Department of Energy committed to the preparation of a long range plan to address the Department's environmental, safety, and health concerns. Western began the preparation of its long range environmental plan in 1988 in accordance with DOE Order 5400.1. An updated draft of the plan was prepared in November of 1990 and revised again in 1993. The primary purpose of the plan is to present environmental protection requirements, goals, and necessary resources so that long range budgets and other commitments can be made. The information presented in the plan will also aid the Area offices and facilities in understanding, and complying with the Federal environmental protection regulations. Some specific issues addressed in the plan are provided below.

- assessing environmental compliance
- implementing programs and achieving compliance
- emergency planning
- environmental training equipment
- recordkeeping and waste tracking
- enforcement actions
- air quality control
- water quality control
- managing and disposal of hazardous wastes
- transporting of hazardous wastes
- managing and disposal of pesticides
- managing solid wastes
- managing polychlorinated biphenyls
- managing underground storage tanks
- compliance with community right-to-know
- assessment and management of past disposal practices

4.1.4 Environmental Protection Compliance Information

In 1993, Western continued to provide field staff with information on environmental protection compliance. Information and summaries of specific regulations, statutes, and compliance issues are

covered in non-legal terms, to enhance understanding and readability. Advisories developed during 1993, as shown below, supplement the more formal notices (sent in the form of handbooks and memoranda) that are used to inform Area and District Managers and their environmental staff of regulatory requirements.

- Draft Quality Assurance Program Plan
- Revised HRS Procedures
- NPDES Stormwater Discharge Rules Updates
- Underground Storage Tank Requirements
- SARA Title III Right-to-Know Guidance
- Revised Preliminary Assessment/Site Investigation Guidance Document
- Groundwater Protection Guidance
- Class V Underground Injection Well Information and Guidance
- Oil Pollution Act of 1990 Update and Guidance
- DOE Guidance Sheets for RCRA/CERCLA
- Land Disposal Restrictions Regulation Changes
- Clean Air Act Updates and Guidance
- Risk Management Guidance
- EPA SAFER and SACM Guidance
- Stormwater Management Guidance

4.1.5 Waste Minimization

Minimization of hazardous waste production is continuing at Western. First, hazardous waste minimization is accomplished by the reduced use of hazardous materials, that is, smaller amounts of hazardous materials, such as solvents, are being used. Second, materials that are non-toxic or that have reduced toxicity are being substituted, whenever possible, for more hazardous materials. Western is specifying a product that is not listed as hazardous be substituted, where possible, for treating wood transmission line structures. Third, employees are being informed as to the desirability of using alternate, less regulated solvents, degreasers, corrosion inhibitors, and other substances.

4.2 STATE AND LOCAL ENVIRONMENTAL REQUIREMENTS

Western operates in 15 western and mid-western states. State, county, and local governments apply environmental and siting controls and restrictions to Federal agencies as well as to private industry. Executive Order 12088 requires Federal agencies to comply and coordinate with EPA and state and local environmental regulators in many situations.

Most of the states in Western's service area regulate the generation, transportation, treatment, storage, and disposal of hazardous and toxic materials. Community right-to-know legislation and hazardous waste clean-up laws, enacted by numerous states, are increasing control over or tracking hazardous and toxic materials. Congress has included provisions in most of its Federal environmental acts for states to become authorized to implement and manage the requirements of Federal acts. Examples of

this include RCRA authorization, community right-to-know, pesticide application, and underground storage tank regulations.

Western cooperates with state and local environmental regulators and works toward compliance with applicable laws, statutes, regulations, and ordinances. Environmental audits of Western facilities address applicable state requirements in addition to those imposed by the Federal government.

4.3 ENVIRONMENTAL PLANNING ACTIVITIES AND RESEARCH

Table 3 lists the Environmental Assessments (EA) and Environmental Impact Statements (EIS) completed in calendar year 1993. One EA was completed in calendar year 1993.

Western's list of standard mitigation measures (Appendix C) accompanies all transmission line construction contracts. This list has been developed over the years to ensure compliance with the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) guidelines, the National Historic Preservation Act (NHPA), and the Fish and Wildlife Coordination Act, among others. These measures are based on Western's experience with impacts associated with transmission line construction, operation, and maintenance.

TABLE 3
ENVIRONMENTAL ASSESSMENTS AND
ENVIRONMENTAL IMPACT STATEMENTS
FOR CALENDAR YEAR 1993

PROJECT NAME	CLEARANCE DATE
Watertown-Summit Transmission Line Rebuild Environmental Assessment (EA)	09/93

In 1993, Western continued its policy of initiating contacts with resource management and permitting agencies in the early stages of projects. This provides an effective and efficient means of assuring the consideration of sensitive environmental parameters.

Western construction activities operated under two Mitigation Action Plans during CY 1993. Accomplishments under the Plan for the Mead-Phoenix Transmission Line Project are reported in Attachment D and those for the Sacramento Operations Center are reported in Attachment E. Other mitigation activities undertaken during CY 1993 are listed below.

- Surveys were undertaken for the American burying beetle and the prairie fringed orchid in South Dakota; black-footed ferrets in Wyoming; birds of prey in Wyoming, Colorado, Nebraska, Utah, and Arizona; and various endangered or threatened plants in Arizona and New Mexico.

- Aviation marker balls were installed at river crossings in Montana, Nebraska, and California.
- Purchased 1200 acres of waterfowl habitat in California and developed Waterfowl Management Plan.
- Monitored reconstructed vernal pools (wetlands) in California to determine success rate. Requirements were to replace 2.92 acres. Western is currently showing 3.27 acres as successful habitat.

Western had approximately 87 environmental planning projects either started or underway during CY 1993. Most of these projects, listed in Table 4, are Categorical Exclusions, EISs or EAs for high voltage transmission lines, power marketing rate adjustments, and/or communications systems.

TABLE 4
ENVIRONMENTAL PLANNING PROJECTS ONGOING
OR COMPLETED IN CALENDAR YEAR 1993

PLANNING PROJECTS	CLEARANCE
CATEGORICAL EXCLUSIONS	
Woodrow Substation Transformer Replacement CX	02/93
Fort Peck Office-Warehouse CX	08/93
Dawson County Operations and Maintenance Building CX	11/93
Devils Lake Storage Building CX	08/93
Glendive Garage and Office Building CX	02/93
Fox Creek Microwave Site CX	01/93
North Dakota Communications Sites CX	09/93
Williston Substation Control Building CX	04/93
Kones Korner Microwave CX	12/93
Pick-Sloan Missouri Basin Program Rate Increase CX	12/93
Casper Area Transmission Line Modifications CX	04/93
Greeley 115kV Transmission Line CX	12/93
Loveland Area Power Rate Adjustment	12/93
Fort Morgan West Substation CX	12/93
Lingle Substation Oil Spill Containment CX	01/93
Laramie Substation Removal CX	02/93
Sterling Substation Transformer and Fuse Replacement	05/93
Brighton Substation Land Additions CX	11/93
Glendo Transformer and Breaker Replacement CX	01/93
Nunn Substation Switch Repair CX	06/93
Willow Creek Substation Foundation Repair CX	11/93
Nebraska-Wyoming Conductor CX	11/93
Big George-Carter Mountain Transmission Line Structure Relocation/Modification CX	08/93
Platte Pipeline Temporary Shoofly CX	12/93
Parker-Davis Project Firm Power and Transmission Rate Adjustment CX	09/93
PNW-PSW Transmission Rate Adjustment CX	05/93
California Valley Project Power and Transmission Line Rate Adjustment CX	02/93
Redding Maintenance Facility Expansion CX	03/93
Redding Emergency Power Scheduling Contract CX	01/93

PLANNING PROJECTS	CLEARANCE
CATEGORICAL EXCLUSIONS (con't)	
Elverta-Tracy/Shasta-Tracy/Cottonwood-Tracy Transmission Lines CX	08/93
Glen Canyon Switchyard CX	12/93
Blue Mesa-Salida Transmission Line Relocation CX	07/93
Hayden-Gore Pass Transmission Line Tap CX	01/93
Craft Training Center CX	05/93
Blue Mesa Switchyard Stage 03 CX	06/93
January 1993 thru January 1995 Western-wide Routine Activities and Operations CX	01/93
Granby Substation Stage 02 CX	*
Thermopolis Substation Shoofly CX	*
Fort Morgan North 115kV Tapline CX	*
Oil Spill Containment-Ault/Beaver Creek/Stegall Yellowtail CX	*
Elverta Maintenance Facility CX	*
Roseville Substation Stage 03 CX	*
Buenaventura Boulevard Extension CX	*
ENVIRONMENTAL ASSESSMENTS	
Watertown-Summit Transmission Line Rebuild EA	09/93
Gering-Stegall Transmission Line EA	*
Weld-Windsor Transmission Line Project EA	*
Carter Mountain-Big George Transmission Line Rebuild EA	*
City of Shasta Lakes Interconnect EA/CX	*
Modesto/Turlock Irrigation Districts Interconnects EA	*
Sacramento Area Office Operations Center Stage 02 EA	*
ENVIRONMENTAL IMPACT STATEMENTS	
Flatiron-Erie Transmission Line EIS	*
Adelanto-Lugo Transmission Line EIS	*
Mead-Basic No. 2 Transmission Line	*
Sacramento 2004 Marketing Program EIS	*

PLANNING PROJECTS	CLEARANCE
ENVIRONMENTAL IMPACT STATEMENTS (con't)	
Salt Lake City Area/Integrated Projects Electric Power Marketing EIS	*
Glen Canyon Dam EIS	*
Navajo Transmission Line Project EIS	*
Energy Planning and Management Program EIS	*
CULTURAL RESOURCES	
Limestone-Gering-McGrew Cultural Resources	06/93
Watertown-Summit Transmission Line Rebuild	05/93
Fort Peck Office/Warehouse	10/93
North Dakota Communications Sites	*
Weld Windsor	10/93
Carter Mountain-Big George	*
Greeley 115kV Transmission Line Removals	10/93
Brighton Substation	10/93
Buenaventura Boulevard Extension	12/93
Oracle-Tucson Pole Replacement	11/93
Carter Mountain-Thermopolis Mitigation	07/93
Elverta-Tracy/Shasta Tracy	06/93
Curecanti-Blue Mesa Survey	10/93
Curecanti-Blue Mesa Mitigation	11/93
Willow Creek Substation	11/93
Carrington Repeater Testing	11/93
Fooses Creek Survey	10/93
Guernsey Shoofly	10/93
Dawson County Substation Reroute	12/93
Watertown	04/93
Roseville Fiberoptics	12/93
Kones Corner Microwave	10/93
Flowing Wells Microwave	11/93
Wyoming DOT Realignment of H-120	12/93
Warren AFB Removals	09/93
Mead-Phoenix Access/Mitigation	*

* = ongoing projects not completed in 1993

4.3.1 Research

Western participated in several programs dealing with environmental planning. Among these is the Colorado River Endangered Fish Species Recovery Program. For this program Western provides program review of the ecological studies of such endangered fish as the Colorado River Squawfish and the Humpback Chub. Western also has personnel serving on the Joint High Voltage Direct Current Agricultural Study Oversight Committee, Western Systems Coordinating Council Environmental Committee, the Mid-Continent Area Power Pool Environmental Committee, American Public Power Association Environmental Committee, and the Electric Power Research Institute's Environmental Research Oversight Committees.

5.0

ENVIRONMENTAL MONITORING INFORMATION

5.1 GROUNDWATER MONITORING

Two Western facilities are required by state regulations to conduct quarterly groundwater monitoring. The groundwater monitoring wells at the facilities are to determine if degradation of groundwater is occurring.

5.1.1 Miles City Converter Station

Miles City Converter Station is a back-to-back, alternating-current to direct-current converter facility. It is located in Montana and has obtained a water pollution control permit from the State of Montana. The permit is required under the Administrative Rules of Montana 16.20.1017. The permit, number MGWPCS-0020, allows Western to discharge coolant water to an on-site evaporation pond. The coolant water discharge contains low concentrations of a corrosive inhibitor, an anti-foaming agent, and sodium hypochlorite.

Western was authorized by the State of Montana, to operate an evaporation pond at the Miles City Converter Station in June of 1984. Operation began on July 11, 1985, and the first sampling event occurred on November 14, 1985. As required by the state permit, there are three wells located at the facility used to monitor groundwater degradation. The wells are sampled on a quarterly basis and samples are sent to an off-site laboratory for analysis. The results of the 1993 monitoring are included in Appendix A.

The permit requires quarterly analysis of the groundwater monitoring wells for the following parameters:

- Specific conductance (umhos/cm @ 25 C)
- ethylene glycol (mg/l)
- total phosphorus (mg/l)
- static water level (tenths of feet below datum)

Three alternatives to correct deficiencies of the existing cooling water system at the Miles City Converter Station were formulated in 1992. The alternatives were: (1) connecting to city water and

sewer; (2) replacing the cooling system with a new closed loop system; (3) continuing present operations and re-permitting the evaporation pond. The best long-term solution to the problem appears to be connecting to city water and sewer. Resolution of the problem is still pending.

5.1.2 Huron District Office

In 1986, an underground storage tank (UST) was found to be leaking during construction activity at the Huron District Office. The state of South Dakota was notified and three monitoring wells were placed to ascertain the extent of the contamination and the tank was removed. Laboratory analyses (see Appendix B) showed that groundwater contained benzene and total hydrocarbons but that they were within the parameters permitted by the State. The site of the tank was then paved and made part of the District Office's parking area. Quarterly monitoring conducted in 1990 showed an irregular decline in the parameters being measured. The request for this monitoring was based on 1989 tests, using a different analysis method which indicated that benzene and total hydrocarbons (THC) were not within recently revised regulations. The South Dakota Department of Water and Natural Resources (DWNR) notified the Huron District Office on December 10, 1990, of this deficiency.

Western is investigating the difference between the testing procedures used during the initial testing and those used during the retest. Monitoring results of monitoring well No. 1 showed declines since the tank's removal in 1986, except for the results of the retest. Based on the results of that investigation, Western will respond to the DWNR report and will comply with the requirements of the DWNR. Table 5 gives the test results for monitoring well No. 1. The results indicate contamination levels in the groundwater exceed the state groundwater quality standards of 0.1 ppm THC and 5 ppb benzene with the levels increasing considerably in mid-year and decreasing only slightly with the last quarterly monitoring results.

TABLE 5
RESULTS FROM MONITORING WELL No. 1
AT THE HURON DISTRICT OFFICE

DATE	LAB	THC	BENZENE	TOLUENE	XYLENE
10/86	TCT	64	13.0	15.0	14.0
07/89	SRM	165	11.9	20.2	18.3
01/90	TCT	37	4.7	0.39	2.3
04/90	TCT	39	4.1	1.8	2.8
07/90	TCT	30	4.9	0.58	1.7
09/90	TCT	58	3.0	1.2	2.2
06/91	GEO	27	2.9	1.9	4.2
12/91	GEO	9.1	0.2	0.04	0.2
07/92	GEO	15.8	3.1	1.6	1.9
03/93	DEC	4.83	0.2	0.02	0.2
04/93	SRM	9.44	1.8	0.9	1.7
12/93	DEC	9.3	0.5	0.04	0.5

NOTE: All values are in ppm.

5.2 HAZARDOUS MATERIAL SPILL INFORMATION

Western had no significant hazardous materials spills in 1993.

6.0 GROUNDWATER PROTECTION PROGRAM

Western is developing a risk-based groundwater protection management program for the protection of both groundwater quality and quantity. A groundwater monitoring plan, as required by DOE Order 5400.1, will be part of the program. Until recently, groundwater protection management requirements had been incorporated into other programs which inherently involve groundwater protection; such as underground storage tanks, underground injection control, and solid waste disposal. Compliance with Federal, State, and local regulations is an integral part of all Western programs.

One of the findings during the DOE audit of the Phoenix Area Office in 1990 was the need for a Facility Evaluation Program. As a result, a Facility Evaluation Program was developed and implemented by Western in 1991. To date, over 300 facilities have been evaluated. This program

is aimed at evaluating all Western facilities for sources of and suspected releases of oil, hazardous substances, pollutants, or contaminants into the environment.

7.0 QUALITY ASSURANCE

The current quality assurance policy for Western has been established in Western Order 5700.1. It is Western's policy that, in the areas of environmental compliance, safety, and health, quality requirements shall be established consistent with DOE Orders. The Assistant to the Administrator for Conservation, Environment and Safety is responsible for the quality of compliance with relevant environmental laws and regulations. The Area Managers are responsible for the quality of activities in their own geographical areas. Due to the nature of Western's operations, an independent data verification program has not been established. Independent laboratories are used for analyzing samples taken by Western or its contractors, and the laboratories used are certified when required by Federal, State or local regulations. Western uses split sampling and similar techniques to test the accuracy of data from laboratories. An independent data verification program will be established for a specific project if required by the regulatory agency involved.

A Quality Assurance Program Plan (QAPP) has been developed to outline the policies, objectives, concepts, systems, and procedures for Western as required by DOE Orders 5400.1 and 5700.6C. The QAPP draft was peer reviewed and preliminary implementation of the plan began in late 1992. The implementation of a Quality Assurance Program Plan will provide credibility for environmental projects and ensures the generation of legally defensible data.

REFERENCES

Clean Air Act
Clean Water Act
Code of Federal Regulations
Comprehensive Environmental Response Compensation and Liability Act
Department of Energy Organization Act of 1977 (P.L. 95-91)
DOE Order 5400.1
DOE Order 5482.1B
DOE Order 5484.1
Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.)
Executive Order 12088
Federal Insecticide, Fungicide, and Rodenticide Act
Federal Water Pollution Control Act
Fish and Wildlife Coordination Act (16 U.S.C. 661-666c)
Hazardous and Solid Waste Amendments of 1984
National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347)
National Historic Preservation Act of 1966, as Amended
Resource Conservation and Recovery Act
Safe Drinking Water Act
Superfund Amendments and Reauthorization Act of 1986
Toxic Substances Control Act
Western Area Power Administration Order 5480.1

APPENDIX A

Miles City Converter Station Groundwater Monitoring Results

Huntingdon

Chen-Northern, Inc.

600 SOUTH 25TH STREET
P.O. BOX 30615
BILLINGS, MT 59107
(406) 248-9161
FAX (406) 248-9282

TECHNICAL REPORT

JAN 12 1994

REPORT TO: ATTN: JIMMY BLACK
U.S. DEPARTMENT OF ENERGY
WESTERN AREA POWER ADMINISTRATION
P O BOX 145
FORT PECK. MT 59223

DATE: January 10, 1994
JOB NUMBER: 85-945
SHEET: 1 of 3
INVOICE NO.: 004489

REPORT OF: Goundwater Analysis - Miles City Converter

SAMPLE IDENTIFICATION:

On December 14, 1993, these groundwater samples (our laboratory numbers 147535 through 147537) were received in our laboratory for analysis. Tests were conducted in accordance with the U.S. Environmental Protection Agency Manual EPA 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes."

The results of the analysis are shown on the following pages.

Ethylene glycol content was analyzed by Accu-Labs Research, Inc. Their results are enclosed.

Enclosure

Reviewed by

David Cornhill

cc: Mr. Ben Blaquiere - WAPA
P O Box 789
Miles City, MT 59301

rmr

Client Name: U. S. DEPT. OF ENERGY
WESTERN AREA POWER ADMINISTRATION
Project No.: 85-945
Laboratory No.: 147535
Sample Name: NORTH WELL
Sample Date: 12/13/93
Collected by: ROGER JAEGER
Time Sampled: 1630
Sample Type: GROUNDWATER

Page 2

PARAMETER	MEASURED VALUE	DATE ANALYZED
INORGANICS		
Electrical Conductivity	14,000 umhos/cm	12/28/93
NUTRIENTS		
Phosphorous Total	0.28 mg/l	12/22/93

Laboratory No.: 147536
Sample Name: WEST WELL
Sample Date: 12/13/93
Collected by: ROGER JAEGER
Time Sampled: 1230
Sample Type: GROUNDWATER

PARAMETER	MEASURED VALUE	DATE ANALYZED
INORGANICS		
Electrical Conductivity	16,100 umhos/cm	12/28/93
NUTRIENTS		
Phosphorous Total	0.40 mg/l	12/22/93

Client Name: U. S. DEPT. OF ENERGY
WESTERN AREA POWER ADMINISTRATION
Project No.: 85-945
Laboratory No.: 147537
Sample Name: EAST WELL
Sample Date: 12/14/93
Collected by: ROGER JAEGER
Time Sampled: 0945
Sample Type: GROUNDWATER

Page 3

PARAMETER	MEASURED VALUE	DATE ANALYZED
INORGANICS		
Electrical Conductivity	15,900 umhos/cm	12/28/93
NUTRIENTS		
Phosphorous Total	0.15 mg/l	12/22/93

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A N A L Y S I S R E P O R T

DATE: 01/06/94 PAGE 1

DAVE COUNCILL
CHEN-NORTHERN, INC.
P.O. BOX 30615
BILLINGS, MT 59107

Lab Job Number: 8734-52022-3
Date Samples Received: 12/20/93
Customer PO Number: 81104

These samples to be disposed of 30 days after the date of this report.

ALR Designation -	8734-52022-3-1	8734-52022-3-2	8734-52022-3-3
Sponsor Designation -	147535 NORTH WELL	147536 WEST WELL	147537 EAST WELL
Date Collected -			

Determinations in mg/L unless noted

Ethylene Glycol	<10	<10	<10
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By:

John B. Atwater
John B. Atwater
Organic Chemistry Supervisor

JBA/ep

BL-PC-04556-11431

75-9465

CHAIN OF CUSTODY RECORD

Western Area Power
Project or Site Name Miles City Converter

Huntingdon
Consulting Engineers Environmental Scientists

Bern Blaguer
Contact or Report to
PO Box 789
Miles City, MT 59301
Contact Address or Location

Project Number

Roger Jaeger
Sampler Name (Printed)

- ☒ Chen-Northern, Inc., Division
☐ Thomas-Hartig & Associates, Inc., Division
☐ Schaefer Dixon Associates, Inc., Division
☐ Herzog Associates, Inc., Division

Sampler Signature

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED										NOTES	LAB NUMBER	
						EC	TD	DO	PH	Ca	Mg	Na+K	Cl	SO4	NO3			NO2
12-13-93	1630 MST	North Well		Water	1												Normal parameter list	147535
12-13-93	1230 MST	West Well		Water	1													36
12-14-93	0945 MST	East Well		Water	1													37
Relinquished by:			Date	Time	Received by:	Remarks: see new P.O. attached												
Relinquished by:			Date	Time	Received by:													
Relinquished by:			Date	Time	Received by:													
Relinquished by:			Date	Time	Received by:													

Huntingdon

Chen-Northern, Inc.

600 SOUTH 25TH STREET
P.O. BOX 30615
BILLINGS, MT 59107
(406) 248-9161
FAX (406) 248-9282

TECHNICAL REPORT

REPORT TO: U. S. DEPARTMENT OF ENERGY
WESTERN AREA POWER ADMINISTRATION
P O BOX 145
FORT PECK MT 59223

DATE: September 30, 1993
JOB NUMBER: 85-945
SHEET: 1 of 3
INVOICE NO.: 3320
P.O. #BE-PO-02511-12064

REPORT OF: Groundwater Analysis - Miles City Converter

SAMPLE IDENTIFICATION:

On September 8, 1993, these groundwater samples (laboratory numbers 144617 through 144619) were received in our laboratory for analysis. Tests were conducted in accordance with the U.S. Environmental Protection Agency Manual EPA 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes."

The results of the analysis are shown on the following pages. A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable.

Ethylene glycol content was analyzed by Accu-Labs Research, Inc. Their results are enclosed.

Reviewed by David Connell

ba

Enclosure - Accu-Labs Research report

cc: Mr. Ben Blaquiere - WAPA
P. O. Box 789
Miles City, MT 59301

Mr. Ted Anderson - WAPA
P. O. Box 35800
Billings, MT 59107

Client Name: U. S. DEPT. OF ENERGY
WESTERN AREA POWER ADMIN.
Project No.: 85-945
Laboratory No.: 144617
Sample Name: EAST WELL
Sample Date: 09/07/93
Collected by: CLIENT
Time Sampled: 1730
Sample Type: GROUNDWATER

Page 2

PARAMETER	MEASURED VALUE		DATE ANALYZED
INORGANICS			
Electrical Conductivity	15,700	umhos/cm	09/15/93
NUTRIENTS			
Phosphorous Total	0.21	mg/l	09/23/93

Laboratory No.: 144618
Sample Name: WEST WELL
Sample Date: 09/07/93
Collected by: CLIENT
Time Sampled: 1730
Sample Type: GROUNDWATER

PARAMETER	MEASURED VALUE		DATE ANALYZED
INORGANICS			
Electrical Conductivity	16,500	umhos/cm	09/15/93
NUTRIENTS			
Phosphorous Total	0.20	mg/l	09/23/93

Client Name: U. S. DEPT. OF ENERGY
WESTERN AREA POWER ADMIN.

Page 3

Project No.: 85-945
Laboratory No.: 144619
Sample Name: NORTH WELL
Sample Date: 09/07/93
Collected by: CLIENT
Time Sampled: 1730
Sample Type: GROUNDWATER

PARAMETER	MEASURED VALUE		DATE ANALYZED
INORGANICS			
Electrical Conductivity	14,100	umhos/cm	09/15/93
NUTRIENTS			
Phosphorous Total	0.05	mg/l	09/23/93

Accu-Labs[®] Research, Inc.

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A N A L Y S I S R E P O R T

DATE: 09/23/93 PAGE 1

DAVE COUNCILL
CHEN-NORTHERN, INC.
P.O. BOX 30615
BILLINGS, MT 59107

Lab Job Number: 8734-50339-3
Date Samples Received: 09/14/93
Customer PO Number: 67871

These samples to be disposed of 30 days after the date of this report.

ALR Designation -	8734-50339-3-1	8734-50339-3-2	8734-50339-3-3
Sponsor Designation -	EAST WELL 144617	WEST WELL 144618	NORTH WELL 144619
Date Collected -			

Determinations in mg/L unless noted

Ethylene Glycol	<10	<10	<10
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By:

John B. Atwater
John B. Atwater
Organic Chemistry Supervisor

JBA/ep
ep

APPENDIX B

**Huron District Office
Site Map**

SITE SKETCH
WAPA
HURON, SD

N

Third Street NE

#3

Property Line and
edge of old shed

#5

#1

#6

#2

Approximate
location of old
storage tank

O & M Maintenance
Building
(Under Construction)

#7

Iowa Ave. NE

curb

curb

#4

#8

- ⊕ Soil Boring Locations
- ⊗ Soil Boring and Monitoring Well Locations

Existing Building

T.B.M.: Floor of
existing bldg.
Elev. 1274.60'

APPENDIX C

Standard Mitigative Measures for Construction, Operation, and Maintenance of Transmission Lines

STANDARD MITIGATIVE PRACTICES

Mitigation Measure

- 1 The contractor shall limit the movement of its crews and equipment to the right-of-way (ROW), including access routes. The contractor shall limit movement on the ROW so as to minimize damage to grazing land, crops, or property and shall avoid marring the land.
- 2 When weather and ground conditions permit, the contractor shall obliterate all contractor-caused deep ruts that are hazardous to farming operations and to movement of equipment. Such ruts shall be leveled, filled, and graded, or otherwise eliminated in an approved manner. In hay meadows, alfalfa fields, pastures, and cultivated productive lands, ruts, scars, and compacted soils shall have the soil loosened and leveled by scarifying, harrowing, disking, or other approved methods. Damage to ditches, tile drains, terraces, roads, and other features of the land shall be corrected. Before final acceptance of the work in these agricultural areas, all ruts shall be obliterated, and all trails and areas that are hard-packed as a result of contractor operations shall be loosened, leveled, and reseeded. The land and facilities shall be restored as nearly as practicable to their original conditions.
- 3 Water bars or small terraces shall be constructed across all ROW and access roads on hillsides to prevent water erosion and to facilitate natural revegetation.
- 4 The contractor shall comply with all Federal, State, and local environmental laws, orders, and regulations. Prior to construction, all supervisory construction personnel and heavy equipment operators will be instructed on the protection of cultural and ecological resources.
- 5 The contractor shall exercise care to preserve the natural landscape and shall conduct its construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, approved construction roads, or excavation operations, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the contractor's construction operations and equipment. The edges of clearings and cuts through tree, shrubbery or other vegetation shall be irregularly shaped to soften the undesirable visual impact of straight lines. Where such clearing occurs in the Lake Mead National Recreation Area, the contractor shall consult with the on-site Park representative.
- 6 On completion of the work, all work areas except access roads shall be scarified or left in a condition which will facilitate natural revegetation, provide for proper drainage, and prevent erosion. All destruction, scarring, damage, or defacing of the landscape resulting from the contractor's operations shall be repaired by the contractor.

- 7 Construction staging areas shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent. On abandonment, all storage and construction buildings, including concrete footings and slabs, and all construction materials and debris shall be removed from the site. The area shall be regraded as required so that all surfaces drain naturally, blend with the natural terrain, and are left in a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion.
- 8 Borrow pits shall be excavated so that water will not collect and stand therein. Before being abandoned, the sides of borrow pits shall be brought to stable slopes, with slope intersections shaped to carry the natural contour of adjacent undisturbed terrain into the pit or borrow area giving a natural appearance. Waste piles shall be shaped to provide a natural appearance.
- 9 Construction activities shall be performed by methods that will prevent entrance, or accidental spillage, of solid matter contaminants, debris, any other objectionable pollutants and wastes into streams, flowing or dry watercourses, lakes, and underground water sources. Such pollutants and waste include, but are not restricted to refuse, garbage, cement, concrete, sanitary waste, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailing, mineral salts, and thermal pollution.
- 10 Dewatering work for structure foundations or earthwork operations adjacent to, or encroaching on, streams or watercourses shall be conducted in a manner to prevent muddy water and eroded materials from entering the streams or watercourses by construction of intercepting ditches, bypass channels, barriers, settling ponds, or by other approved means.
- 11 Excavated material or other construction materials shall not be stockpiled or deposited near or on streambanks, lake shorelines, or other watercourse perimeters where they can be wasted away by high water or storm runoff or can in any way encroach upon the actual watercourse itself.

- 12 Waste waters from concrete batching, or other construction operations shall not enter streams, watercourses, or other surface waters without the use of such turbidity control methods as settling ponds, gravel-filter entrapment dikes, approved flocculating processes that are not harmful to fish, recirculation systems for washing of aggregates, or other approved methods. Any such waste waters discharged into surface waters shall be essentially free of settleable material. For the purpose of these specifications, settleable material as defined as that material which will settle from the water by gravity during a 1-hour quiescent detention period.
- 13 The contractor shall utilize such practicable methods and devices as are reasonably available to control, present, and otherwise minimize atmospheric emissions or discharges of air contaminants.
- 14 The emission of dust into the atmosphere will not be permitted during the manufacture, handling, and storage of concrete aggregate, and the contractor shall use such methods and equipment as necessary for the collection and disposal, or prevention, of dust during these operations. The contractor's methods of storing and handling cement and pozzolans shall also include means of eliminating atmospheric discharges of dust.
- 15 Equipment and vehicles that show excessive emissions of exhaust gases due to poor engine adjustments, or other inefficient operating conditions, shall not be operated until repairs or adjustments are made.
- 16 The contractor shall prevent any nuisance to persons or damage to crops, cultivated fields, and dwellings from dust originating from his operations. Oil and other petroleum derivatives shall not be used for dust control. Speed limits shall be enforced, based on road conditions, to reduce dust problems.
- 17 To avoid nuisance conditions due to construction noise, all internal combustion engines used in connection with construction activity shall be fitted with an approved muffler and spark arrester.
- 18 Burning or burying waste materials on the ROW or at the construction site will be permitted if allowed by local regulations. The contractor shall remove all other waste materials from the construction area. All materials resulting from the contractor's clearing operations shall be removed from the right-of-way.

- 19 The contractor shall make all necessary provisions in conformance with safety requirements for maintaining the flow of public traffic and shall conduct its construction operations to offer the least possible obstruction and inconvenience to public traffic.
- 20 Western will apply necessary mitigation to eliminate problems of induced currents and voltages onto conductive objects sharing a ROW, to the mutual satisfaction to the parties involved.
- 21 Structures will be carefully located to avoid sensitive vegetative conditions, including wetlands, where practical.
- 22 Rights-of-way will be located to avoid sensitive vegetation conditions including wetlands where practical, or, if they are linear, to cross them at the least sensitive feasible point.
- 23 Removal of vegetation will be minimized to avoid creating a swath along the ROW.
- 24 Topsoil will be removed, stockpiled, and respread at all heavily disturbed areas not needed for maintenance access.
- 25 All disturbed areas not needed for maintenance access will be reseeded using mixes approved by the landowner or land management agency.
- 26 Erosion control measures will be implemented on disturbed areas, including areas that must be used for maintenance operations (access ways and areas around structures).
- 27 The minimum area will be used for access ways (12 feet to 15 feet wide, except where roadless construction is used).
- 28 Structures will be located and designed to conform with the terrain. Leveling and benching of the structure sites will be the minimum necessary to allow structure assembly and erection.
- 29 Rights-of-way will be located to utilize the least steep terrain and, therefore, to disturb the smallest area feasible.
- 30 Careful structure location will ensure spanning of narrow flood prone areas.
- 31 Structures will not be sited on any potentially active faults.

- 32 Structure sites and other disturbed areas will be located at least 300 feet, where practical, from rivers, streams (including ephemeral streams), ponds, lakes, and reservoirs.
- 33 New access ways will be located at least 300 feet, where practical, from rivers, ponds, lakes, and reservoirs.
- 34 At crossings of perennial streams by new access ways, culverts of adequate size to accommodate the estimated peak flow of the stream will be installed. Construction areas will minimize disturbance of the stream banks and beds during construction. The mitigation measures listed for soil/vegetation resources will be performed on areas disturbed during culvert construction.
- 35 If the banks of ephemeral stream crossings are sufficiently high and steep that breaking them down for a crossing would cause excessive disturbance, culverts will be installed using the same measures as for culverts on perennial streams.
- 36 Blasting will not be allowed.
- 37 Powerline structures will be located, where practical, to span small occurrences of sensitive land uses, such as cultivated areas. Where practicable, construction access ways will be located to avoid sensitive conditions.
- 38 Rights-of-way will be purchased at fair market value and payment will be made of full value for crop damages or other property damage during construction or maintenance.
- 39 The powerline will be designed to minimize noise and other effects from energized conductors.
- 40 The precise location of all structure sites, rights-of-way, and other disturbed areas will be determined in cooperation with landowners or land management agencies.
- 41 Crossing of operating railroads by construction vehicles or equipment in a manner that would cause delays to railroad operations will be avoided. Construction will be coordinated with railroad operators. Conductors and overhead wire string operations would use guard structures to eliminate delays.
- 42 Before construction, Western will perform a Class III (100 percent of surface) cultural survey on all areas to be disturbed, including structure sites and new access ways. These surveys will be coordinated with the appropriate land owner or land management agency. A product of the survey will be a Cultural Resources Report recording findings and suggesting mitigation measures. These findings will be reviewed with the State Historic Preservation Offices and other appropriate agencies, and specific mitigation measures necessary for each site or resource will be determined. Mitigation may include careful relocation of access

ways, structure sites, and other disturbed areas to avoid cultural sites that should not be disturbed, or data recovery.

- 43 The contractor will be informed of the need to cease work in the location if cultural resource items are discovered.
- 44 Construction activities will be monitored or sites flagged to prevent inadvertent destruction of any cultural resource for which the agreed mitigation was avoidance.
- 45 Construction crews will be monitored to the extent possible to prevent vandalism or unauthorized removal or disturbance of cultural artifacts or materials from sites where the agreed mitigation was avoidance.
- 46 Should any cultural resources that were not discovered during the Class III Survey be encountered during construction, ground disturbance activities at that location will be suspended until the provisions of the National Historic Preservation Act and enabling legislation have been carried out.
- 47 Construction activities will be monitored or significant locations flagged to prevent inadvertent destruction of any paleontological resource for which the agreed mitigation was avoidance.
- 48 Clearing for the access road will be limited to only those trees necessary to permit the passage of equipment.
- 49 The access road will follow the lay of the land rather than a straight line along the ROW where steep features would result in a higher disturbance.

APPENDIX D

**REPORT ON CY 1993 ACCOMPLISHMENTS
MITIGATION ACTION PLAN
FOR THE
MEAD-PHOENIX TRANSMISSION LINE PROJECT**

**REPORT ON CY 1993 ACCOMPLISHMENTS
MITIGATION ACTION PLAN
FOR THE
MEAD-PHOENIX TRANSMISSION LINE PROJECT**

Prepared to Accompany DOE/EIS-0107-F

Prepared by:

Division of Environmental Affairs
Western Area Power Administration
Golden, CO

UPDATED March 18, 1994

**MITIGATION ACTION PLAN
FOR THE
MEAD-PHOENIX TRANSMISSION LINE PROJECT**

The Mead-Phoenix 500-kV transmission line project will connect the Western Area Power Administration's (Western) Mead substation in Clark County, Nevada, to the Westwing Substation in Maricopa County, Arizona. As the lead Federal agency, Western prepared an Environmental Impact Statement (EIS) for the project, in accordance with 40 CFR 1500-1508. The final EIS was published in February, 1986 (DOE/EIS-0107-F). In 1989, the project was modified somewhat from the originally proposed direct current (d.c.) facility to an alternating current (a.c.) configuration, and an Environmental Analysis (analysis) of the changes in the project and the environmental conditions in the project area was prepared in accordance with 40 CFR 1502. The analysis indicated that a supplement to the EIS was not needed, and a record of decision was issued for the project and published in the Federal Register on September 7, 1990 (55 FR 36862).

Both the EIS and the analysis identified some impacts which would occur as a result of the proposed action and a series of mitigative measures to minimize those impacts. This mitigation action plan (plan) has been prepared in accordance with DOE Order 5440.1E. The information contained in the plan has been summarized from the EIS and the analysis. The site specific mitigation measures listed in Appendix A are fully described in the draft EIS, Table 5-2. The draft EIS should be reviewed in conjunction with this plan to better understand the mitigation measures listed to in the table. Copies of the draft and final EIS may be obtained by writing Area Manager, Phoenix Area Office, Western Area Power Administration, P.O. Box 6457, Phoenix, AZ 85005.

Monitoring of the mitigation measures described below and in the draft EIS will be accomplished by the project Sponsors' construction inspector. The construction inspector will notify Western's Division of Environmental Affairs, in writing, when the mitigative measures are completed. Additionally, Western's Division of Environmental Affairs will also provide some oversight of the construction activities. In accordance with DOE 5440.1E, Western's Division of Environmental Affairs will submit an annual report, beginning with the first Annual Site Environmental Report prepared after the onset of construction activities, to EH-25 regarding the status of the mitigative measures and any changes associated with them. The latter could be the result of landowner request or changes in the status of an environmental resource.

Western incorporates a list of "Standard Mitigative Practices" in its environmental reports and construction contract specifications. This list is included as Appendix B. In addition to these standard practices, site specific measures are also included in construction contract specifications. The site specific mitigation measures for the Mead-Phoenix project are listed in Appendix A by resource type and route segment. The locations of the route segments (Links) are shown in Figure 1.

As of January, 1994, several modifications to the mitigation action plan have occurred as a result of discussions with land-management agencies and resource management agencies, particularly the U.S. Bureau of Land Management, the National Park Service, and the Arizona Department of Fish and Game. These modifications are directed primarily at sensitive plant species, the desert tortoise (both Mojave and Sonoran populations) and birds of prey. An example of this modifications would include the decision to relocate Arizona and Nevada native plants of concern out of "harms way" rather than salvage by transporting them to a collection point for distribution to the general public.

Additionally, Western reinitiated Section 7 consultation with the U.S. Fish and Wildlife Service in July, 1993, as a result of some designations of proposed critical habitat for the Mojave desert tortoise in the Nevada portion of the project.

Modifications to the mitigation measures which have occurred since it was written are presented in bold type in Appendix A. Activities which have been completed are underlined.

Appendix A frequently refers to "survey prior to construction" and "avoid sensitive features" in the Mitigation section. These measures will be accomplished by having qualified personnel conduct preconstruction surveys for the resource of concern, and by having appropriate technical experts, such as archaeologists and biologists, at the locations of resources of concern during structure siting and construction activities. Identification of a sensitive resource and subsequent actions will be coordinated with the appropriate resource management agency. All pre-construction surveys and monitoring studies will be coordinated with land owners/managers. Surveys for listed and candidate plant species will be conducted during the appropriate phenology for identification of the plant species. Because plant species are being reclassified, mostly in their candidate status, contact with the appropriate state and Federal agency will be necessary prior to beginning these surveys. Surveys for species protected by the Arizona "Native Plant Law" and the Nevada "Cactus and Yucca Law" will be coordinated with the appropriate state agency. Relocation of salvaged plant material, if needed, will be coordinated with the landowner or resource management agency.

SURVEYS FOR PLANTS OF CONCERN TO THE STATE OF ARIZONA, THE U.S. FISH AND WILDLIFE SERVICE, THE U.S. BUREAU OF LAND MANAGEMENT, AND THE NATIONAL PARK SERVICE WERE CONDUCTED INITIALLY DURING THE PERIOD APRIL-MAY, 1993. IN ADDITION, SURVEYS AND FLAGGING OF CERTAIN SPECIES OF CONCERN ARE ONGOING IN FRONT OF ACCESS ROAD AND STRUCTURE PAD CLEARING CREWS. THESE LATTER SURVEYS IDENTIFY SENSITIVE SPECIES WHICH NEED TO BE EITHER AVOIDED OR RELOCATED TO MINIMIZE LOSS OF PLANTS. IN THE CASE OF ARIZONA CLIFFROSE, ACCESS ROADS ARE BEING LAID OUT SO THAT ANY EROSION THAT MAY OCCUR WILL NOT ADVERSELY AFFECT THE INDIVIDUAL PLANTS DOWN-GRADIENT FROM THE ROAD.

**MITIGATION OF IMPACTS BY RESOURCE,
LINK NUMBER, AND MILE SEGMENT**

TABLE 1-A

LAND USE

LINK NO.	MILE SEGMENT	IMPACT	MITIGATION
3/5	4.6-4.7	Crosses corral	Place structures to avoid sensitive features
	31.2-31.3	Crosses cemetery	Place structures to avoid sensitive features. REROUTED LINE AWAY FROM CEMETERY.
21a	1.9-10.5	Crosses two dwellings	Purchase dwellings at landowner request. DWELLINGS PURCHASED.
68	0.0-0.3	Near airfield	Place line parallel to glidepath
14c	1.7-2.4	Crosses proposed state natural area	Place structures to span sensitive features

TABLE 1-B

VISUAL RESOURCES

LINK NO.	MILE SEGMENT	IMPACT	MITIGATION
21a	0.3-1.3	Background visual impacts	Use nonspecular conductors and place structures to avoid sensitive features
	1.3-1.9	Foreground/ middleground impacts	Use dull steel on towers, nonspecular conductors and avoid sensitive features
	1.9-10.5	High visual impact	Use special tower design, dull steel towers, nonspecular conductor, and avoid sensitive features
78	0.0-3.1	High visual impact	Use dull steel on towers, nonspecular conductors and avoid sensitive features

TABLE 1-C

BIOLOGICAL RESOURCES

LINK NO.	MILE SEGMENT	IMPACT	MITIGATION
1	0.0-16.7	Desert bighorn critical habitat	Survey prior to construction, avoid during critical period. DELETED PRECONSTRUCTION SURVEY, THERE WILL BE NO CONSTRUCTION DURING JANUARY THROUGH APRIL.
	0.0-16.7	DESERT TORTOISE HABITAT	SURVEY PRIOR TO CONSTRUCTION, AVOID TORTOISE BURROWS OR MOVE TORTOISES.
	0.0-26.5	<u>Penstemon bicolor</u> habitat	Survey prior to construction, coordinate with FWS AND NPS if found. <u>SURVEY CONDUCTED APRIL-MAY 1993.</u>
	7.0-11.0	Raptor nesting area	Survey prior to construction, avoid active nest sites, mark line at river crossing. <u>FIRST SURVEY CONDUCTED MAY 1993.</u>
3/5	0.0-31.0	Raptor nesting area	Survey prior to construction, avoid active nest sites. <u>FIRST SURVEY CONDUCTED MAY 1993.</u>
13	12.0-14.6	Desert tortoise habitat	Survey prior to construction, avoid tortoise burrows or move tortoises
14a	0.0-25.0	Desert tortoise habitat	Survey prior to construction, avoid tortoise burrows or move tortoises
14b	0.0-22.4	Desert tortoise habitat	Survey prior to construction, avoid tortoise burrows or move tortoises
14b	10.0-22.5	Arizona cliffrose habitat	Survey prior to construction, coordinate with FWS if found. LOCATE ACCESS ROADS TO MINIMIZE SECONDARY IMPACTS DUE TO EROSION. <u>SURVEY CONDUCTED APRIL-MAY 1993.</u>

14b	17.0-19.0	Raptor nesting area	Survey prior to construction, avoid active nest sites. <u>FIRST SURVEY CONDUCTED MAY 1993.</u>
14c	0.0-1.3	Desert tortoise habitat	Survey prior to construction, avoid tortoise burrows or move tortoises
17	0.0-4.8	Important desert tortoise habitat	Survey prior to construction, avoid tortoise burrows or move tortoises.
	4.8-15.5	Desert tortoise habitat	Survey prior to construction, avoid tortoise burrows or move tortoises
10	0.7-33.2	Desert tortoise habitat	Survey prior to construction, avoid tortoise burrows or move tortoises. <u>SURVEY CONDUCTED JANUARY 1994.</u>
	33.2-39.0	Important desert tortoise habitat	Survey prior to construction, avoid tortoise burrows or move tortoises. <u>SURVEY CONDUCTED DECEMBER 1993.</u>
	39.0-41.3	Desert tortoise habitat	Survey prior to construction, avoid tortoise burrows or move tortoises. <u>SURVEY CONDUCTED DECEMBER 1993.</u>
21a	1.7-6.2	Desert tortoise habitat	Survey prior to construction, avoid tortoise burrows or move tortoises. <u>SURVEY CONDUCTED NOVEMBER 1993.</u>
	6.2-10.0	Important desert tortoise habitat	Survey prior to construction, avoid tortoise burrows or move tortoises.
35	4.2-5.8	Riparian habitat	Avoid during construction
	15.0-16.1	Riparian habitat	Avoid during construction
78	0.0-3.1	Desert tortoise habitat	Survey prior to construction, avoid tortoise burrows or move tortoises. <u>SURVEY CONDUCTED NOVEMBER 1993.</u>
	1.0-1.8	Riparian habitat	Avoid during construction
76	0.0-16.5	<u>Penstemon bicolor</u> habitat	Survey prior to construction, coordinate with FWS AND NPS if found. <u>SURVEY CONDUCTED IN APRIL-MAY 1993.</u>

77	0.0-3.0	Desert tortoise habitat	Survey prior to construction, avoid tortoise burrows or move tortoises. <u>SURVEY CONDUCTED NOVEMBER 1993.</u>
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TABLE 1-D

EARTH RESOURCES

ALL GEOTECHNICAL SURVEYS WERE COMPLETED BY END OF 1993.

LINK NO.	MILE SEGMENT	IMPACT	MITIGATION
35	0.0-1.3	Erosion potential	Geotechnical survey during structure siting, close unneeded access roads
	1.8-2.0	Erosion potential	Geotechnical survey during structure siting, close unneeded access roads
	2.3-2.4	Erosion potential	Geotechnical survey during structure siting, close unneeded access roads
	2.9-4.8	Erosion potential	Geotechnical survey during structure siting, close unneeded access roads
	6.8-8.8	Erosion potential	Avoid sensitive features, close unneeded access roads
68	0.0-0.1	Erosion potential	Geotechnical survey during structure siting, close unneeded access roads
	0.2-0.5	Erosion potential	Geotechnical survey during structure siting, close unneeded access roads
	1.7-1.9	Erosion potential	Geotechnical survey during structure siting, close unneeded access roads
77	0.0-4.6	Erosion potential	Geotechnical survey during structure siting, close unneeded access roads
78	0.0-0.8	Erosion potential	Geotechnical survey during structure siting, close unneeded access roads
	1.3-2.0	Erosion potential	Avoid sensitive features, close unneeded access roads
	2.3-3.1	Erosion potential	Geotechnical survey during structure siting, close unneeded access roads

TABLE 1-E

CULTURAL RESOURCES (The locations of cultural resource mitigation will be given by site number to avoid disclosure)

SITE NUMBER	SITE CLASS	MITIGATION
NA9,088	Prehistoric	No construction activities between 8427+00 and 8430+00. Use existing access roads.
NA17,314	Prehistoric	No construction activities between 776+50 and 778+50. Use existing access roads.
NA18,133	Prehistoric	Access road will "tee" off of existing access road. Structure laydown & assembly, and crane pad will be north of structure. Monitor during construction. No other construction activities between 9996+00 and 9998+00.
NA18,134	Prehistoric	No construction between 9916+00 and 9921+00. Use existing access road with NO upgrading.
NA18,135	Prehistoric	No construction between 9784+50 and 9794+50 except structure erection. Use existing access roads.
NA18,138	Prehistoric	No restrictions
NA18,144	Prehistoric	No construction between 8989+00 and 8991+50. Use existing access roads.
NA18,145	Prehistoric	No construction activities between 8216+00 and 8219+00. Use existing access road with NO upgrading.
NA18,147	Prehistoric	No construction activities between 8073+00 and 8076+00. Use existing access road with NO upgrading.
NA18,152	Prehistoric	No construction activities between 7007+00 and 7008+50. Use existing access roads.
NA18,153	Prehistoric	No construction activities between 5866+00 and 5868+00. Use existing access roads.

NA18,157	Prehistoric	No construction activities between 4652+50 and 4654+50. Use existing access road with NO upgrading.
NA18,158	Prehistoric	No construction activities between 4623+00 and 4626+00 and between 4629+00 and 4633+00. Access to structure 404 will "tee" off of existing access road.
NA18,159	Historic	No construction activities between 4231+00 and 4233+00. Use existing access road with NO upgrading.
NA18,160	Historic	Outside right-of-way
NA18,164	Historic	No construction activities between 4094+00 and 4097+00. Use existing access road.
NA18,172	Prehistoric	Use existing access roads between 7465+00 and 7527+00. Access to structures 648, 649, 650, 651, 652, and 653 will "tee" off existing access road. If pulling station or other ground disturbing activities are necessary between stations, and archaeologist will monitor activity.
NA18,173	Prehistoric	Data recovery will take place prior to construction. No construction between stations 7340+00 and 7355+00 until clearance is given by Western.

APPENDIX E

**REPORT ON THE
MITIGATION ACTION PLAN
FOR THE
SACRAMENTO OPERATIONS CENTER**

ATTACHMENT E

REPORT ON THE
MITIGATION ACTION PLAN
FOR THE
SACRAMENTO OPERATIONS CENTER

The Sacramento Operations Center (SOC) Project proposed to construct an operations center in Folsom, California to eliminate overcrowding at its existing Sacramento facilities and improve operation efficiency. Habitat for one federally listed threatened species, the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), was identified at the project site. Of the two shrubs identified, one would be affected by the proposed action. Mitigation and compensation measures were subsequently established.

Mitigation and compensation measures implemented at the SOC:

- Location of a mitigation area was identified in the northernmost portion of the property.
- The relocation of the one elderberry shrub occurred on November 13, 1992, and followed the guidelines specified by the U.S. Fish and Wildlife Service. [To increase the likelihood of plant survival, transplanting and replacement planting was conducted during the winter months (November through March) when the shrub was dormant.]
- Protective construction fencing was installed around the second elderberry shrub on the site.
- Habitat compensation planting occurred on March 11, 1993. The replacement planting ratio used to mitigate the transplanted elderberry shrub was 5:1. Transplanting efforts followed the recommended guidelines specified by the U.S. Fish and Wildlife Service and included 20 elderberry seedlings, 8 oak saplings, a bubbler irrigation system and protective chain-link fencing.
- Meeting with USFWS to review possible impacts to 10-acre site on October 19, 1993.
- Transmitted letter to USFWS to apprise them of results of the mitigation and monitoring effort on October 26, 1993.
- A couple of bushes were replaced prior to end of construction and the irrigation system repaired after tampering by a vagrant was discovered.
- Task order prepared for contractor to monitor mitigation area for first three years until buildings are occupied and Western personnel on hand.

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