
ENVIRONMENTAL COMPLIANCE SUMMARY

CALENDAR YEAR 1992

Compliance Status

Environmental compliance activities during 1992 at the West Valley Demonstration Project (WVDP) successfully addressed the full range of environmental laws and regulations, including the management of radioactive mixed wastes under the Resource Conservation and Recovery Act (RCRA). The WVDP negotiated a Federal and State Facilities Compliance Agreement (FSFCA) to address compliance issues relating to radioactive mixed waste management, including compliance with RCRA land disposal restrictions (LDRs). (See **Current Issues and Actions** below.)

No compliance findings were raised during inspections and audits conducted by the U.S. Environmental Protection Agency (EPA), the New York State Department of Environmental Conservation (NYSDEC), the New York State Department of Health (NYSDOH), and the Cattaraugus County Health Department. From November 2, 1992 through November 6, 1992 a major audit was conducted by the Department of Energy Idaho Field Office's Office of Environmental Safety and Health Oversight (Environmental

Quality Assurance Division). None of the deficiencies found presented an immediate risk to the public health or the environment.

Management at the WVDP continues to provide strong support for environmental compliance issues, ensuring that all state and federal statutes and regulations, as well as Department of Energy (DOE) Orders, are integrated into the compliance program at the Project.

Clean Air Act (CAA)

The Clean Air Act establishes a comprehensive federal and state framework that regulates air emissions from both stationary and mobile sources: any emission sources of a CAA-regulated substance may require a permit or be subject to registration or notification requirements. Emission sources regulated by the CAA may include stacks, ventilators, ventilation ducts, wall fans, open burning, and dust piles.

Nonradiological emissions are regulated by NYSDEC. The construction of three air emission sources related to the scale vitrification system and

an extension of the construction period for sources within the cold chemical facility were approved by NYSDEC in 1992. A certificate to operate the blueprinting equipment was also issued. The permit to construct the vitrification off-gas treatment system was reviewed by NYSDEC and was approved. Approval was also given to continue fire brigade training exercises under the conditions contained in a Restricted Burning Permit, which expired in November 1992.

The WVDP operated under twenty-two active air permits in 1992. (See Table B-3 in *Appendix B*.) Of the twenty-two permits, six are for radiological emissions and therefore are regulated under the U.S. Environmental Protection Agency's National Emissions Standards for Hazardous Air Pollutants (NESHAPs) program.

The annual NESHAPs inspection in June 1992 indicated no noncompliance episodes or notices of violation. Calculations to demonstrate compliance with NESHAPs standards showed 1992 doses to be less than $3 \times 10^{-3}\%$ (0.0003 mrem) of the 10 millirem standard.

Emergency Preparedness and Community Right-to-Know Act (EPCRA)

The purposes of EPCRA are to provide local governments and the public with information concerning potential chemical hazards in their communities and to encourage and support emergency planning efforts at the state and local levels.

The EPCRA program requires the WVDP to submit reports to off-site state and local emergency response organizations that give information about the quantities, locations, and any associated hazards of chemicals used and stored on-site. Additionally, the WVDP is required to submit an annual report to the U.S. Environmental Protection Agency and the New York State Department of

Environmental Conservation on toxic chemical emissions from the site.

All required reports were submitted to the appropriate organizations by the required deadlines. In support of the waste minimization and pollution prevention directives from the EPA and NYSDEC, the number of reportable chemicals stored on-site above their threshold planning quantity (TPQ) during calendar year 1992 was reduced from twenty-one to eighteen, as indicated by the quarterly reports submitted to the state and local emergency planning and response agencies and groups. These updates ensure that the public and emergency organizations have the most recent information about site conditions and operations.

Clean Water Act (CWA)

The Clean Water Act is the primary statute governing water pollution control programs in the United States. It controls discharges to surface water and groundwater through a National Pollutant Discharge Elimination System (NPDES) permit program that requires permits to be issued specifying discharge standards and monitoring and reporting requirements. Authorized states such as New York are allowed to issue equivalent State Pollutant Discharge Elimination System (SPDES) permits.

SPDES-permitted Outfalls

All WVDP point source discharges to surface waters are permitted through the New York SPDES program.

The WVDP has three permitted outfalls, all of which discharge to Erdman Brook. (See Figs. 2-3 and 2-15):

- Outfall 001 (WNSP001) discharges the effluent from the low-level radioactive wastewater treatment facility (LLWTF).

- Outfall 007 (WNSP007) discharges the combined effluent from the site's sewage treatment plant and various nonradioactive industrial and potable water treatment systems. The average monthly flow in 1992 was 1.92 million gallons.
- Outfall 008 (WNSP008) directs groundwater flow from the northeast side of the site's LLWTF lagoon system through a french drain. The average monthly flow in 1992 was 0.21 million gallons.

In 1992 treated water from the low-level waste treatment facility was discharged in seven batches that averaged 5.28 million liters (1.39 million gal) each. The annual average concentration of radioactivity at the point of release was 31% of the DOE's derived concentration guides (DCGs). None of the individual releases exceeded the DCGs. (See Table B-1 in *Appendix B*.)

There were two instances when the SPDES permit levels were exceeded. The first excursion occurred in June when settleable solids from outfall 007 exceeded the permit level of 0.3 ml/L. The actual reported value was 20 ml/L. During a water treatment equipment repair, water containing a high concentration of natural clay and polymer drained to a sump connected with outfall 007. The duration of this condition was estimated to be about ten minutes, during which the excursion was measured.

The second excursion occurred in December when the flow-weighted concentration of iron from all three outfalls was calculated to be 0.37 mg/L. The permit level is 0.31 mg/L. The level of naturally occurring iron in the raw water used by the WVDP was determined to be a contributing source of the iron excursions. Precipitated iron in the site's discharge basins remains to be satisfactorily addressed. It is possible that natural sediments may become resuspended in the water column during batch discharge, thus causing an elevated iron level that is not directly due to the LLWTF effluent. The discharge pipe in the basin was elevated to

limit sediment entrainment in the treated water. The limited data available indicates this approach is successful. Other remedial measures are currently being investigated.

Discussions with NYSDEC relating to the pending SPDES permit renewal may result in monitoring requirements that account for the effect of natural iron variations.

There were no excursions attributable to the sewage treatment plant in 1992. A proposal for the expansion of the sewage treatment plant into a wastewater treatment facility has been forwarded to NYSDEC and is awaiting approval. Construction will begin following receipt of the permit application approval. (See **Clean Water Act**, *Environmental Compliance Summary: First Quarter 1993*.)

Stormwater Permit Application

Stormwater from municipal or industrial facilities may contain a variety of pollutants. To protect aquatic resources and the public health, regulations require that facilities such as the WVDP must obtain permits specifying discharge limits.

The WVDP obtained site-specific data through extensive sampling in 1991 and submitted a stormwater discharge permit application to NYSDEC on September 30, 1992. Analytical results of the sampling were included on the application. Detailed maps describing site drainage patterns and the location of various process units and buildings were also included in the permit application. The permit is in the review process.

Safe Drinking Water Act (SDWA)

The Safe Drinking Water Act states that each federal agency having jurisdiction over a federally owned or maintained public water system must comply with all federal, state, and local requirements regarding safe drinking water. The

drinking water quality program in the state of New York is administered by the New York State Department of Health (NYSDOH) through county health departments.

The WVDP obtains its drinking water from surface water reservoirs on the Western New York Nuclear Service Center (WNYNSC) site and is considered a nontransient, noncommunity public water supplier (i.e., it does not serve residents of the community outside the workplace but does regularly serve at least the same twenty-five people for six months of the year). As an operator of a drinking water supply system, the WVDP must sample the water and report the results of the analyses to the Cattaraugus County Health Department, which also collects independent samples periodically.

The water is purified by settling, filtration, and chlorination before it is distributed on-site. Monitoring results in 1992 indicated that the Project drinking water met NYSDOH drinking water quality standards. There were no violations of the drinking water program during 1992.

Medical Waste Tracking

The WVDP used the services of Bertrand Chaffee Memorial Hospital for incineration of medical wastes generated at the Project. When the hospital stopped incinerating wastes, the WVDP retained a commercial medical waste removal firm that picks up waste generated at the site and transports it off-site to an approved medical waste incinerator. Less than fourteen pounds of medical waste were removed in 1992.

Petroleum Product Spill Reporting

Under an agreement with the New York State Department of Environmental Conservation, the WVDP reports on-site spills of petroleum products of ten gallons or less onto an impervious surface (such as blacktop) in a monthly log. Spills

greater than ten gallons that do not affect ground- or surface water or enter a drainage system must be reported to NYSDEC within twenty-four hours and entered in the monthly log. Spills of any amount that do affect waters of the state (groundwater, surface water, drainage systems) must be reported immediately to the NYSDEC spill hotline and also are entered in the monthly log.

There were fifty-one minor spills of petroleum products in 1992 totaling approximately 31 liters (8 gal). These spills were typically associated with leaks from heavy industrial construction equipment and vendor delivery vehicles.

Of the fifty-one spills, none required immediate notification of NYSDEC under the reporting protocol. All spills were cleaned up in a timely fashion in accordance with the WVDP Spill Prevention, Control, and Countermeasures Plan. None of the spills resulted in any discernible adverse environmental effect.

Toxic Substances and Control Act (TSCA)

There also are radioactively contaminated polychlorinated biphenyls (PCBs) on-site from a hydraulic unit that had been cut up several years ago. PCBs are regulated under the Toxic Substances and Control Act (TSCA), and to comply with TSCA, the WVDP reports to the EPA every year what progress has been made in identifying treatment and disposal facilities that are able to manage this material. The toxic chemical inventory is provided in Chapter 1, *Environmental Monitoring Program Information*.

Resource Conservation and Recovery Act (RCRA)

Hazardous Waste

The WVDP has been operating under RCRA interim status for treatment and storage of ra-

dioactive mixed waste since its original submittal of a RCRA Part A permit application in June 1990.

In April 1991 the WVDP amended its RCRA interim status application to allow for limited storage of nonradioactive hazardous waste. During 1992 the WVDP disposed of approximately 12 tons of nonradioactive, hazardous waste off-site, using permitted transportation and disposal services. Sources of these materials ranged from expired laboratory chemicals to maintenance shop wastes. The WVDP also reclaimed, recycled, or rendered nonhazardous by neutralization 945 kilograms (2,083 lbs) of material as part of its waste minimization and reduction program.

Underground Petroleum Storage Tanks

RCRA regulations also cover all solid wastes and underground storage tanks as well as hazardous wastes. There are three 2,000-gallon underground petroleum storage tanks at the WVDP. One contains diesel fuel #2 oil and two contain mid-grade unleaded gas. The tanks are resupplied periodically and stay at about the same total volume throughout the year. For example, as of February 1993, the diesel fuel tank held 1,395 gallons. The other two tanks held 1,697 gallons and 374 gallons of unleaded gas. These totals are measured daily and reconciled monthly with the daily readings. Permits for the tanks are renewed every five years.

Nonhazardous, Regulated Material

The WVDP disposed of 96 tons of nonradioactive, nonhazardous material to permitted facilities in 1992. These shipments consisted of wastewaters and sludges from the sewage treatment facility, industrial wastewaters, and solid wastes such as refractory brick and construction materials.

Radioactive Mixed Waste (RMW) Management Program

Radioactive mixed waste is waste that contains both a radioactive constituent, which is regulated by the

Atomic Energy Act (AEA), and a hazardous waste component, which is regulated under RCRA.

Potential conflicts between RMW regulations under the Atomic Energy Act and under RCRA regulations led to the WVDP's initiation of discussions with the regulatory agencies to resolve these conflicts through a Federal and State Facility Compliance Agreement (FSFCA). Negotiations on the FSFCA and a RCRA 3008(h) Administrative Order on Consent continued during 1992. The Consent Order was signed in March 1992. These agreements will provide the means whereby the WVDP can comply with RCRA regulations and with the requirements of the AEA. (See **Current Issues and Actions** below.)

In October 1992 the WVDP received a Notice of Noncompliance from the EPA documenting the site's mixed waste management compliance issues. The EPA indicated, however, that the notice would be resolved once the FSFCA was fully executed. (See **Current Issues and Actions**, *Environmental Compliance Summary: First Quarter 1993*.)

The Federal Facility Compliance Act (FFC Act) of 1992 was signed into law on October 6, 1992. As a result of this law, the federal government will be subject to the "full range of available enforcement tools" provided in federal, state, or local environmental law. The waiver of sovereign immunity became effective on October 6, 1992, except as it relates to certain mixed waste storage requirements for which the FFC Act provides a three-year delay period. During this three-year period, the DOE is to prepare plans for the "development of treatment capacity and technologies for its facilities that generate and store mixed wastes." The Act also requires the DOE to submit a mixed waste inventory to the EPA and the states within which mixed waste is located as well as progress reports regarding implementation of the new law. (See **Current Issues and Actions** below.)

National Environmental Policy Act (NEPA)

The National Environmental Policy Act establishes the nation's policies for the protection of the environment. Its goals are to prevent or eliminate damage to the environment and to restore the environment where necessary. The President's Council on Environmental Quality, established by the National Environmental Policy Act, carries out this policy. Its regulations are found in the Code of Federal Regulations, Title 40, Parts 1500-1508 (40 CFR 1500-1508).

Since 1990 the Department of Energy has been revising its NEPA-compliance program, which was approved by the President's Council on Environmental Quality and was codified in 10 CFR 1021 on April 24, 1992. It went into effect on May 26, 1992. This rule facilitates participation by the public in the NEPA process for proposed DOE actions. It also includes a revised and expanded list of typical classes of action such as categorical exclusions.

1992 NEPA Activities

NEPA requires that any activity of a federal agency that might significantly affect the environment be reviewed through preparation of detailed documents such as an environmental impact statement (EIS) or an environmental assessment (EA), thus ensuring that environmental information is available to public officials and citizens before decisions are made and before actions are taken.

Activities at the West Valley Demonstration Project that are subject to NEPA review are either ongoing activities to support solidification of the high-level waste (Phase I) or activities to support a joint preparation by the DOE and the New York State Energy Research and Development Authority (NYSERDA) of the environmental impact statement that will assess the effect of Project completion activities (Phase II).

Phase I

Phase I activities generally are activities associated with stabilizing the high-level radioactive waste and those that are typical of facility operation and maintenance. During 1992, twenty-five proposed WVDP actions were submitted to the DOE as categorical exclusions, recommending that because of their insignificant environmental impact no further NEPA review be required.

In addition, an environmental assessment for a proposed expansion to the WVDP sewage treatment plant was approved by the DOE and a subsequent finding of no significant impact was issued.

Phase II

Phase II activities, which concern site characterization, continued in 1992. The baseline data collected through this characterization will provide the technical supporting information needed for the environmental impact statement for completion of the West Valley Demonstration Project and closure of the Western New York Nuclear Service Center. Basic research continued in several primary areas of investigation: geology, seismology, hydrology, soil characterization, water quality, radiological survey, and solid waste management unit assessment. Documentation of these studies has been summarized in environmental information documents (EIDs) that provide both data and references to information needed to prepare the EIS.

In late 1992, the DOE selected an independent contractor who will prepare the EIS.

Summary of Permits

Environmental permits in effect at the Project during 1992 are listed in Table B-3 of *Appendix B*.

Current Issues and Actions

Resource Conservation and Recovery Act (RCRA)

In 1992 the WVDP completed negotiations with the EPA and NYSDEC for a Federal and State Facility Compliance Agreement regarding compliance with RCRA regulations pertaining to radioactive mixed waste management, including compliance with RCRA land disposal restrictions (LDRs). The agreement also provides a plan and schedule to address container storage and waste analysis issues at the WVDP. The agreement becomes effective after all parties have signed.

The RCRA 3008(h) Administrative Order on Consent is an agreement between NYSDEC, the EPA, NYSERDA, and the DOE about the kind and extent of the work needed to identify and evaluate any hazardous waste or hazardous constituent that may be at the WVDP site. The Consent Order requires NYSERDA and the West Valley Project Office (WVPO) to conduct investigations at solid waste management units (SWMUs) to determine if there was a release or a potential for release of hazardous waste constituents that require corrective action. The Order provides a framework for compliance with RCRA that is consistent with the EIS site characterization work for completion of the Project.

Finalization of the Consent Order was the primary focus in the first part of 1992. The data-gathering activities required by the Consent Order will continue to be integrated with the data-gathering work that has been under way for the EIS. Tasks were identified and schedules defined for activities that will take place in 1993 and 1994. The WVDP has completed a RCRA facility investigation (RFI) Work Plan, which is being reviewed by NYSDEC. Currently, the WVDP also is conducting SWMU-specific investigations that will be submitted to the EPA and NYSDEC in 1993 and 1994. (See also

Current Issues and Actions, Environmental Compliance Summary: First Quarter 1993.)

Department of Energy Environmental Audit

From November 2 to November 6, 1992 eleven members of the U.S. Department of Energy Idaho Field Office, Office of Environmental Safety & Health Oversight, Environmental and Quality Assurance Division performed a comprehensive appraisal of the WVDP.

The appraisal team reviewed the WVDP programs for environmental protection, quality assurance, emergency preparedness, and firearms safety. Four Environmental Management Systems Concerns, fourteen Compliance Findings, sixteen Observations, and two Noteworthy Practices were identified. According to the appraisal report, none of the deficiencies presented an immediate risk to public health or the environment. All compliance findings were category III, which does not represent a substantial deviation from DOE requirements.

Follow-up to 1991 Department of Energy Environmental Audit

A final report by the Department of Energy Headquarters Office of Environmental Audit on the 1991 environmental audit was received by the WVDP in March 1992. The WVDP completed its final action plan and resubmitted it to DOE Headquarters in April 1992. More than 70% of the identified action items have already been resolved.

ENVIRONMENTAL COMPLIANCE SUMMARY

FIRST QUARTER 1993

Compliance Status

The compliance status of the West Valley Demonstration Project's major environmental programs through the first quarter of 1993 is noted below.

Clean Air Act (CAA)

The WVDP was issued a permit to construct a melter off-gas treatment system. The permit was received from NYSDEC on March 27, 1993 and will allow construction of the vitrification ventilation system to proceed on schedule.

Clean Water Act (CWA)

Approval was granted on March 16, 1993, to proceed with the construction of a wastewater treatment plant expansion at the WVDP.

NYSDEC conducted the annual SPDES inspection at the WVDP on March 29, 1993. No citations were issued, and the WVDP was found in full compliance.

Several meetings and discussions have taken place between the WVDP and NYSDEC to resolve final issues regarding the SPDES permit renewal. The permit is still under review by NYSDEC and has not been issued.

Safe Drinking Water Act (SDWA)

The Cattaraugus County Health Department advised the WVDP of additional drinking water monitoring requirements to be effective in 1993. These tests include monitoring of metals and inorganic and synthetic organic chemicals that had not been previously required. Sampling plans have been prepared and initial sampling began in March 1993.

Emergency Preparedness and Community Right-to-Know Act (EPCRA)

Emergency and Hazardous Chemical Inventory (Tier II) reports for the 1992 reporting period were transmitted to state and local emer-

gency response organizations by the required deadline. These reports contain listings of materials that may be of concern to personnel responding to an emergency at the WVDP.

Resource Conservation and Recovery Act (RCRA)

The annual New York State Department of Environmental Conservation RCRA inspection was conducted at the WVDP on March 22 and 23, 1993. No violations were found or citations issued.

Hazardous waste shipped in January and March 1993 removed chemical wash solutions and laboratory wastes. A large shipment of nonhazardous industrial wastes was also completed in March 1993.

The annual Hazardous Waste Generator/Waste Minimization Report was submitted to the New York State Department of Environmental Conservation by the required deadline.

National Environmental Policy Act (NEPA) Activities

A contractor has been retained and is in the process of preparing the environmental impact statement (EIS) for WVDP completion and site closure or long-term management. The draft EIS is scheduled to be available for public review in June 1994.

Current Issues and Actions

The Federal and State Facility Compliance Agreement (FSFCA) became effective on March 23, 1993. The agreement defines specific requirements for the management of radioactive mixed waste, including compliance with land disposal restrictions.

On February 5, 1993, the WVDP was listed in the EPA's Federal Agency Hazardous Waste Compliance docket. This action will result in an evaluation of the WVDP to ascertain its status relative to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requirements.

Deliverables related to the Federal Facility Compliance Act were submitted in 1993. An initial report on current and future mixed waste generating activities and treatment capabilities was submitted to DOE Headquarters in January 1993, and a final report was provided in March 1993 for inclusion in a DOE-wide report.

Progress continues on the RCRA 3008(h) Consent Order implementation. The quarterly report for the last quarter of calendar year 1992 was submitted in early 1993.

Department of Energy Environmental Audit

In March 1993 the WVDP submitted the final action plan responding to the 1992 DOE Idaho Field Office Environmental Appraisal.

The WVDP is currently working on addressing the action items identified in the plan.

Summary of Permits for First Quarter 1993

A letter requesting a one-year extension of the scale vitrification facility construction permit was transmitted to NYSDEC in March 1993. Permits to construct a system to exhaust welding fumes from the vitrification facility and to construct the melter off-gas system were issued by NYSDEC in February 1993 and March 1993, respectively.