
ENVIRONMENTAL COMPLIANCE SUMMARY

CALENDAR YEAR 2002

Compliance Program

The West Valley Demonstration Project (WVDP) is currently focusing on several goals that will lead to completion of the WVDP Act. Processing of the liquid high-level radioactive waste (HLW) into durable, solid glass was completed in 2002. The WVDP is now processing residual radioactive wastes, decontaminating former reprocessing cells within the main process building, and constructing a remote-handled waste facility for processing and packaging project waste into shipment containers. Additionally, the WVDP is dismantling the apparatus and removing waste from within the fuel receiving and storage pool facility, and actively managing on-site groundwater contamination.

The activities in progress at the WVDP are regulated by various federal and state laws that protect the public, workers, and the environment.

The U.S. Department of Energy (DOE), the agency that oversees the WVDP, established its policy concerning environmental protection in DOE Order 5400.1, General Environmental Protection Program. This Order lists the regulations, laws, and required reports that are applicable to DOE-operated facilities. DOE Order 231.1, Environment, Safety, and Health Reporting, requires the preparation of this Annual Site Environmental Report, which is intended

to summarize environmental data gathered during the calendar year, describe significant environmental programs, and document WVDP compliance with environmental regulations.

(New DOE Order 450.1, Environmental Protection Program, was issued on January 15, 2003. This Order specifies that a site must establish an environmental management system [EMS] as part of its integrated safety management system [ISMS]. In regard to compliance with the new Order, the WVDP has had an EMS in place as part of its ISMS for a number of years. [See pp. ECS-16 and ECS-17 for a discussion of the EMS and ISMS at the WVDP.] DOE Order 450.1 also canceled DOE Order 5400.1, discussed above. However, per DOE Order 450.1, compliance with DOE Order 5400.1 is required as long as DOE Order 5400.1 remains in the West Valley Nuclear Services Company [WVNSCO] contract. The deadline for implementing the requirements of DOE Order 450.1 is December 31, 2005.)

The major federal environmental laws and regulations that apply to the West Valley Demonstration Project are the Resource Conservation and Recovery Act (RCRA), the Clean Air Act (CAA), the Emergency Planning and Community Right-to-Know Act (EPCRA, enacted as Title III of the Superfund Amendments and Reauthorization Act

[SARA]), the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), the Toxic Substances Control Act (TSCA), and the National Environmental Policy Act (NEPA). These laws are administered primarily by the U.S. Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (NYSDEC) through state programs and regulatory requirements for permitting, reporting, inspecting, self-monitoring, and audits.

In addition, because some release of radiological and nonradiological materials from an active facility cannot be completely prevented, the EPA, NYSDEC, and the DOE have established standards for such emissions and discharges that are intended to protect human health and the environment. The WVDP applies to NYSDEC and the EPA for permits that allow the site to release limited amounts of radiological and nonradiological constituents through controlled and monitored effluent releases into water and air in concentrations that have been determined to be safe for humans and the environment. In general, the permits describe the release points, specify management and reporting requirements, list the limits on those pollutants likely to be present, and define the sampling and analysis schedule. A summary of permits may be found in Table ECS-7 (pp. ECS-22 and ECS-23).

Compliance Status

The following summary describes WVDP compliance with DOE Orders 5400.5 and 435.1 and federal and state laws and regulations that are applicable to the Project.

Radiation Protection of the Public and the Environment (DOE Order 5400.5). DOE Order 5400.5 was issued in February of 1990 to establish standards and requirements for protection of the public and the environment against undue risk

from radiation resulting from activities of the DOE and DOE contractors. The objectives of the Order were to ensure that (1) operations are conducted so that radiation exposures to members of the public are maintained within the limits established in the Order, (2) potential exposures to members of the public are as far below the limits as is reasonably achievable, (3) routine and non-routine releases are monitored and dose to the public is assessed, and (4) the environment is protected from radioactive contamination to the extent practical.

This report summarizes radiological releases from the WVDP in 2002, presents estimates of dose to the public and the environment in 2002, and compares these values with release and dose standards established by DOE Order 5400.5. (See Appendix K [p. K-3].) In 2002, both releases and estimates of dose to the public were well within applicable limits.

Radioactive Waste Management (DOE Order 435.1). DOE Order 435.1 was issued in July of 1999 to ensure that all DOE radioactive waste – including HLW, transuranic waste, low-level radioactive waste (LLW), and the radioactive component of mixed waste – is managed in a manner that (1) protects the public from exposure to radiation from radioactive materials, (2) protects the environment, (3) protects workers, and (4) complies with applicable federal, state, and local laws and regulations, as well as applicable Executive Orders and other DOE directives. The WVDP Radioactive Waste Acceptance Program, a formal document describing how radioactive waste is managed at the WVDP, was issued in July of 2000. The Radioactive Waste Acceptance Program was updated in 2002.

Resource Conservation and Recovery Act. RCRA was enacted to ensure that hazardous wastes are managed in a manner that protects human health and the environment. RCRA and

its implementing regulations govern the generation, treatment, storage, and disposal of hazardous waste. RCRA regulations mandate that generators take responsibility for ensuring the proper treatment, storage, and disposal of their wastes. The EPA is the federal agency responsible for issuing guidelines and regulations for the proper management of solid and hazardous waste (including mixed [radioactive and hazardous] waste).

In New York, the EPA has delegated the authority to enforce these regulations to NYSDEC. In addition, the U.S. Department of Transportation (DOT) is responsible for issuing guidelines and regulations for labeling, packaging, and spill-reporting for hazardous and mixed wastes while in transit.

A RCRA Part A Permit Application (for interim status) is required for a facility that treats or stores large quantities of hazardous waste for more than 90 days or disposes of hazardous waste at that facility. The facility must apply for a permit from the EPA (or authorized state). The Part A Permit Application defines the treatment processes to be used, the design capacities, the location of hazardous waste storage units, the design and operating criteria for disposal units, and the hazardous wastes to be managed.

In 1984 the DOE notified the EPA of hazardous waste activities at the WVDP and identified the WVDP as a generator of hazardous waste. In June 1990 the WVDP filed a RCRA Part A Hazardous Waste Permit Application with NYSDEC for storage and treatment of hazardous wastes and has been operating under interim status since then.

The WVDP updates its Part A Permit Application as changes to the site's interim-status waste-management operations occur. An updated Part A Permit Application was submitted to NYSDEC on March 6, 2001. On November 13, 2001,

NYSDEC responded that the RCRA Part A Permit modifications met the requirements for changes to interim status treatment and storage operations at the WVDP. Additionally, supplementary information concerning operational changes for mixed waste treatment and solidification of the sodium-bearing waste was submitted to NYSDEC on September 4, 2002.

Hazardous Waste Management Program. Hazardous wastes at the WVDP are managed in accordance with Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York (6 NYCRR Parts 370–374 and 376). To dispose of hazardous wastes generated from on-site activities, the WVDP uses New York State-permitted transporters (pursuant to 6 NYCRR Part 364) to ship RCRA-regulated wastes to permitted or authorized treatment, storage, or disposal facilities (TSDFs). Using these services, the WVDP shipped approximately 0.30 tons (0.27 metric tons) of nonradioactive hazardous waste to off-site TSDFs in 2002.

Off-site hazardous waste shipments and their receipt at designated TSDFs are documented by signed manifests that accompany the shipment. If the signed manifest is not returned by the TSDF to the WVDP within the regulatory limit of forty-five days from shipment, an exception report must be filed with NYSDEC and it must be confirmed that the waste was received by the TSDF. No exception reports were required during 2002.

Hazardous waste activities must be reported to NYSDEC each year through the submittal of the facility's annual Hazardous Waste Report. This report summarizes the hazardous waste activities for the previous year, specifies the quantities of waste generated, treated, and/or disposed, and identifies the TSDFs used. The annual Hazardous Waste Report for calendar year (CY) 2002 was submitted to NYSDEC on February 27, 2003.

In addition, a hazardous waste reduction plan must be filed every two years and updated annually. This plan documents efforts to minimize the generation of hazardous waste and was first submitted to NYSDEC in 1990. The most recent Annual Status Report for the Hazardous Waste Reduction Program was updated in June 2002 and submitted to NYSDEC.

An annual inspection to assess compliance with hazardous waste regulations was conducted by NYSDEC on March 29, 2002. No deficiencies were noted.

Nonhazardous, Regulated Waste Management Program. The WVDP shipped approximately 36 tons (33 metric tons) of nonradioactive, nonhazardous material off-site to solid waste management facilities in 2002. Of this amount, 1.4 tons (1.3 metric tons) were recycled or reclaimed. Some of the recycled materials were lead-acid batteries and spent lamps, which were recycled at off-site authorized reclamation and recycling facilities. Lead-acid batteries and spent lamps are managed as universal wastes. (See *universal wastes* [p. GLO-11].) The WVDP also shipped approximately 437 tons (396 metric tons) of digested sludge and treated wastewater from the site sanitary and industrial wastewater treatment facility to the Buffalo Sewer Authority for disposal.

Mixed Waste Management Program. Mixed waste contains both a radioactive component, regulated under the Atomic Energy Act, and a hazardous component, regulated under RCRA. Both the EPA and NYSDEC oversee mixed waste management at the WVDP.

The Federal Facility Compliance Act (FFC Act) of 1992, an amendment to RCRA, required DOE facilities to prepare plans for treating their mixed waste inventories and to update these plans annu-

ally to account for development of treatment technologies, capacities, and changes in mixed waste inventories. Each plan was approved by the respective state agency or the EPA after consultation with other affected states and after consideration of public comments.

The WVDP's plan comprises two volumes: The Background Volume provides information on each mixed waste stream and information on the preferred treatment method for the waste, and the Plan Volume contains proposed schedules for treating the mixed waste to meet the land disposal restriction (LDR) requirements of RCRA.

The DOE and NYSDEC entered into a Consent Order on August 27, 1996 that requires the completion of the milestones identified in the Plan Volume. The WVDP began implementing its Site Treatment Plan (STP) immediately and updates it annually to bring waste stream, inventory, and treatment information current to September 30, the end of the DOE fiscal year. A draft of the WVDP Site Treatment Plan update for fiscal year 2002 was submitted to DOE for review and comments in January 2003. The final version was submitted to NYSDEC on February 14, 2003.

Shipments of mixed waste to off-site TSDFs for treatment and disposal are documented via uniform hazardous waste manifests. In 2002 the WVDP made one mixed waste shipment. A total of 0.27 tons (0.24 metric tons) was shipped off-site for treatment and disposal. The waste consisted of polychlorinated biphenyl (PCB)-contaminated liquids and solids shipped to the DOE-operated TSCA incinerator at Oak Ridge, Tennessee. This represented the first shipment of PCB waste from the WVDP to the Oak Ridge incineration facility.

RCRA §3008(h) Administrative Order on Consent. The DOE and the New York State Energy Research and Development Authority

(NYSERDA) entered into a RCRA §3008(h) Administrative Order on Consent with NYSDEC and the EPA on March 15, 1992. The Consent Order required NYSERDA and the DOE's West Valley Demonstration Project Office (OH/WVDP) to conduct RCRA-facility investigations (RFIs) at on-site solid waste management units (SWMUs) to determine if there had been a release or if there is a potential for release of RCRA-regulated hazardous constituents from SWMUs. The final RFI reports were submitted in 1997, completing the investigative activities associated with the Consent Order. No corrective actions were required as a result of the RFIs. Groundwater monitoring, as specified in the RFI reports, continued to be a significant portion of the WVDP groundwater monitoring program during 2002. The WVDP also continued to monitor SWMUs and to comply with the requirements of the RCRA §3008(h) Administrative Order on Consent. (Groundwater monitoring results are detailed in Chapter 4.)

Waste Minimization and Pollution Prevention.

The WVDP continued a long-term program to minimize the generation of low-level radioactive waste, mixed waste, hazardous waste, industrial waste, and sanitary waste, and to promote affirmative procurement as directed by Executive Order 13101 (Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition) and Executive Order 13148 (Greening the Government Through Leadership in Environmental Management), which promote the Affirmative Procurement Program and RCRA §6002, Federal Procurement. The Affirmative Procurement Program specifies responsibilities and direction for federal agencies in acquiring recycled and environmentally preferable products and services designated by the EPA in Title 40, Protection of Environment, Code of Federal Regulations (40 CFR) Part 247, Comprehensive Procurement Guideline for Products Containing Recovered Material. WVNSCO reports its challenges and

successes associated with the purchase and use of these materials and services to the DOE each year.

For purposes of waste-reduction tracking, on-site waste streams are separated into either waste from sources directly associated with the vitrification process or from nonvitrification sources. See Chapter 1 (p. 1-11) for further discussion of waste minimization activities from all sources in 2002.

Underground Storage Tanks Program. RCRA regulations also cover the use and management of underground storage tanks and establish minimum design requirements to protect groundwater resources from releases. The regulations, specified in 40 CFR Part 280, require underground storage tanks to be equipped with overfill protection, spill prevention, corrosion protection, and leak detection systems. New tanks must comply with regulations at the time of installation.

New York State also regulates underground storage tanks through two programs – petroleum bulk storage (6 NYCRR, Parts 612–614) and chemical bulk storage (6 NYCRR, Parts 595–599). The state registration and minimum design requirements are similar to those of the federal program except that petroleum tank fill ports must be color-coded using American Petroleum Institute standards to indicate the product being stored.

A 550-gallon, double-walled, steel underground storage tank, upgraded in 1998 to bring it into compliance with the most recent EPA requirements (40 CFR Part 280.21), is used to store diesel fuel for the supernatant treatment system/permanent ventilation system standby power unit. This tank is equipped with aboveground piping, an upgraded interstitial leak detection system, and a high-level warning device and meets the state requirements of 6 NYCRR Parts 612–614. This is the only un-

derground petroleum-storage tank currently in use at the WVDP.

A former underground petroleum-storage tank, closed in place before the New York State underground storage tank program closure requirements were implemented in 1985, was removed in 1997. Testing of soils from the tank excavation had shown evidence of earlier petroleum leakage, and on March 19, 1999 the DOE and NYSDEC executed a Stipulation Agreement Pursuant to Section 17-0303 of the Environmental Conservation Law and Section 176 of the Navigation Law for mitigation of the petroleum contamination.

A soil bioventing system was installed in August 1999 to remediate localized petroleum-contaminated soils in the vicinity of the former underground petroleum storage tank. The system stimulates natural in-situ biodegradation of petroleum hydrocarbons in the soil by providing an abundant oxygen supply to existing soil microorganisms within the contaminated soil zone. Soil and groundwater samples were collected in 2002 to evaluate whether an adequate level of remediation has been achieved. Sample results have been reviewed by NYSDEC.

There are no underground chemical bulk storage tanks at the WVDP.

New York State-Regulated Aboveground Storage Tanks. The state of New York regulates aboveground petroleum bulk storage under 6 NYCRR Parts 612–614, and aboveground hazardous bulk chemical storage under 6 NYCRR Parts 595–599. These regulations require secondary containment, external gauges to indicate the content levels, monthly visual inspections of petroleum tanks, and documented daily, annual, and five-year inspections of chemical tanks. Documentation relating to these periodic inspections is maintained by the WVDP and is available for regulatory

agencies to review. Petroleum tank fill ports also must be color-coded and chemical tanks must be labeled to indicate the product stored.

WVDP registration at the end of 2002 included nine aboveground petroleum tanks and eleven aboveground chemical storage tanks. Three of the petroleum tanks contain No. 2 fuel oil, one contains unleaded gasoline, and the others contain diesel fuel. WVNSCO Quality Assurance Department personnel inspect the aboveground petroleum tanks every month.

Nine of the chemical storage tanks were used as needed to contain nitric acid or nitric acid mixtures, and sodium hydroxide and anhydrous ammonia were stored in another two tanks. All eleven tanks were emptied in the fall of 2002 after vitrification operations were completed. Plans for the future use or closure of these tanks are being developed.

All of the tanks are equipped with gauges and secondary containment systems except the anhydrous ammonia tank, which does not require secondary containment. (Any release of the contents of the anhydrous ammonia tank would be in gaseous form; thus, secondary containment of liquids is unnecessary.) The WVDP is in compliance with the most recent requirements to upgrade chemical bulk storage tanks. These requirements went into effect in December 1999. An inspection by NYSDEC was performed in December of 2002 and it was determined that all chemical bulk storage tanks were in compliance with New York State regulations.

Medical Waste Tracking. Medical waste poses a potential to expose humans to infectious diseases and pathogens from contact with bodily fluids. Medical evaluations, inoculations, and laboratory work at the on-site Health Services office regularly generate potentially infectious medical wastes

that must be tracked in accordance with NYSDEC requirements (6 NYCRR Part 364.9).

The WVDP has retained the services of a permitted waste hauler and disposal firm to manage these medical wastes. Medical wastes are sterilized with an autoclave by the disposal firm to remove the associated hazard and then disposed. Thirty pounds (14 kg) of medical waste consisting of dressings, protective clothing such as rubber gloves, and needles, syringes, and other sharps were generated and disposed in 2002.

Clean Air Act. The CAA, including Titles I through VI, establishes a framework for the EPA to regulate air emissions from both stationary and mobile sources. These amendments mandate that each state establish a program to permit the operation of sources of air pollution. In 1996 NYSDEC amended 6 NYCRR Parts 200, 201, 231, and 621 to implement the requirements of the new EPA Clean Air Act Title V permitting processes.

In New York State, NYSDEC issues permits for stationary sources that emit regulated pollutants, including hazardous air pollutants. Sources requiring permits are those that emit regulated pollutants from a particular source (e.g., a stack, duct, vent, or other similar opening) if the pollutants are in quantities above a predetermined threshold. WVDP radiological emissions are regulated by the EPA.

Radiological Emissions. Air emissions of radionuclides at the WVDP are regulated by the EPA under the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations, 40 CFR Part 61, Subpart H, National Emission Standards for Emission of Radionuclides Other Than Radon From Department of Energy Facilities. The WVDP currently has permits for six radionuclide sources, including the slurry-fed ceramic melter

and the vitrification heating, ventilation, and air conditioning (HVAC) system.

Other less significant sources of radionuclide emissions, such as those from the on-site laundry, do not require permits. Non-point radiological sources of air emissions such as open-air lagoons also do not require permits. The WVDP reports the radionuclide emissions from its non-permitted and permitted sources to the EPA annually in accordance with NESHAP regulations. The annual NESHAP report is submitted to EPA by June 30th of the following calendar year. Calculations to demonstrate compliance with NESHAP radioactive dose limits showed calendar year 2002 doses to be approximately 0.04% of the 10 millirem standard. (See Table 2-6 [p. 2-31].)

Nonradiological Emissions. Nonradiological point sources of air emissions are regulated by NYSDEC. Major-source facilities are required by 6 NYCRR Part 201 to file a Title V Permit Application unless emissions are capped below operating limits. The WVDP submitted – and has received NYSDEC approval of – a capping plan for oxides of nitrogen (NO_x) and sulfur dioxide (SO_2).

The WVDP opted to file a State Facility Permit Application for the site. A State Facility Permit modification to incorporate sitewide air emission sources was submitted in December 1997 and approved June 1, 2000. Annual NO_x and SO_2 emissions under the updated permit are capped at 99 tons each.

The permit describes the conditions of the NO_x and SO_2 capping plan and the operational conditions for the boilers, melter, cold chemical facility, and the vitrification HVAC system. In July 1999 NYSDEC granted the WVDP a waiver of quarterly submissions of NO_x and SO_2 emission totals. The WVDP is required to submit only an annual site emission report (in January) that con-

tains NO_x and SO₂ emission totals. The 2002 certification reported 5.68 tons of NO_x and 0.05 tons of SO₂, which were well below the 99-ton cap for each category.

The WVDP also conducted cylinder gas audits (CGA) for the first three quarters of 2002 but was not required to conduct relative accuracy test audits of the melter off-gas NO_x analyzers. A summary of quarterly cylinder gas audit results is incorporated in the annual site emission report. Because the vitrification process was shut down in September 2002, a request was made of NYSDEC to cancel the melter off-gas and canister welding permits and discontinue performing CGA and submittal of annual NO_x and SO₂ reports. NYSDEC agreed to the request in November 2002.

The air permits that were in effect at the WVDP in 2002 are included in Table ECS-7, West Valley Demonstration Project Environmental Permits (pp. ECS-22 and ECS-23). There were no air permit or regulatory exceedances in 2002. (See also Table ECS-1, West Valley Demonstration Project 2002 Air Quality Noncompliance Episodes [p. ECS-20].)

Emergency Planning and Community Right-to-Know Act. EPCRA was designed to create a working partnership between industry, business, state and local governments, public health and emergency response representatives, and interested citizens. The Act is intended to address concerns about the effects of chemicals used, stored, and released in local communities.

Executive Order 12856, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements, requires all federal agencies to comply with the following EPCRA provisions: planning notification (Sections 302–303), extremely hazardous substance (EHS) release notification

(Section 304), material safety data sheet (MSDS)/chemical inventory (Sections 311–312), and toxic release inventory (TRI) reporting (Section 313). The WVDP continued to comply with these provisions in 2002. (See also Table ECS-5, Status of EPCRA Reporting in 2002 [p. ECS-21].)

- WVDP representatives participated in semi-annual meetings of the Cattaraugus County Local Emergency Planning Committee (EPCRA Sections 302–303). WVDP representatives also attended meetings held by the Cattaraugus and Erie County Emergency Management Services concerning WVDP and other local emergency planning activities. Area hospitals and the West Valley Volunteer Hose Company continued to participate in on-site briefings and emergency response exercises and in information exchanges concerning hazardous-substance management at the WVDP. The WVDP continues to interface with off-site organizations with which Memoranda of Understanding or Letters of Agreement exist. These organizations are annually provided an opportunity to participate in a site tour and update to better understand on-site hazards for emergency response.

- Compliance with all EPCRA reporting requirements was maintained and all required reports were submitted within the required time frame. There were no releases of extremely hazardous substances at the WVDP that triggered the release notification requirements of Section 304 of EPCRA.

- Under EPCRA Section 311 requirements, the WVDP reviews information about reportable chemicals every quarter. If a hazardous chemical that was not previously reported is present on-site in an amount exceeding the threshold planning quantity, a Material Safety Data Sheet (MSDS) and an updated hazardous chemical list are submitted to the state and local emergency response

groups. This supplemental reporting ensures that the public and the emergency responders have current information about hazardous chemicals at the WVDP. No new chemicals were added to the hazardous chemicals list in 2002 and no additional EPCRA Section 311 notifications were required.

- Under EPCRA Section 312 regulations, the WVDP submits annual reports to state and local emergency response organizations and fire departments that specify the quantity, location, and hazards associated with chemicals stored on-site. Thirteen reportable chemicals above threshold planning quantities were stored at the WVDP in 2002. (A list of reportable chemicals is provided in Table ECS-6 [p. ECS-21].)
- Under EPCRA Section 313, the WVDP provides information about releases to all environmental media of EPA-listed toxic release inventory chemicals that are used at or above specified regulatory thresholds at the WVDP. TRI reports are filed for the preceding year. In 2002 the WVDP used one chemical above the regulatory reporting threshold amount of 10,000 pounds: nitric acid. Accordingly, the TRI report for this chemical will be filed with the EPA by July 1, 2003.

Clean Water Act. Section 404 of the CWA regulates the development of areas in and adjacent to the waters of the United States. Supreme Court interpretations of Section 404 have resulted in the inclusion of certain non-isolated wetlands in the regulatory definition of waters of the United States. Section 404 regulates the disposal of solids, in the form of dredged or fill material, into these areas by granting the U.S. Army Corps of Engineers (ACOE) the authority to designate disposal areas and issue permits for these activities. Executive Order 11990, Protection of Wetlands, directs federal agencies to “avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid

direct or indirect support of new construction in wetlands wherever there is a practical alternative.” (Article 24 of the New York State Environmental Conservation Law also contains requirements for the protection of freshwater wetlands.)

Also, Section 401 of the CWA requires applicants for a federal license or permit pursuant to Section 404 to obtain certification from the state that the proposed discharge complies with effluent- and water-quality-related limitations, guidelines, and national standards of performance identified under Sections 301–303, 306–307, and 511(c) of the CWA. The EPA has delegated administration of this program to New York State.

Wetlands. Jurisdictional wetlands are defined in Section 404 of the CWA as those satisfying specific technical criteria related to vegetation, soils, and hydrologic conditions. The WVDP notifies the ACOE and NYSDEC of proposed actions that could affect wetland units not specifically exempted from regulation or notification.

A wetlands assessment in August 1998 identified and delineated jurisdictional wetlands regulated under the Clean Water Act, Section 404, and/or those wetlands that may be regulated by the state of New York under Article 24 of the Environmental Conservation Law. The 375-acre (152-ha) assessment area covered a portion of the Western New York Nuclear Service Center (WNYNSC), including the entire 164-acre (66-ha) WVDP and adjacent parcels north, south, and east of the WVDP premises. The assessment also supported the requirements of Executive Order 11990 and updated a 1993 investigation. Fifty-nine jurisdictional wetlands ranging in size from 0.01 to 8.6 acres, a total of approximately 39 acres (16 ha) of wetland, were identified. This wetland delineation was submitted to the U.S. Army Corps of Engineers for verification of the wetland boundaries. Verification was obtained in November 1999.

Additional jurisdictional wetlands were assessed in a 150-foot (46-m) corridor along both sides of the railroad spur from the southern fenced boundary of the Project premises to the intersection with Fox Valley Road in August and September 1999. Twenty-three separate wetland units ranging in size from 0.01 to 4.7 acres, a total of approximately 12 acres (5 ha), were identified. An additional wetland unit, approximately 1.7 acres (0.7 ha), at the foot of the Lake No. 1 dam was delineated in August 2000 to verify permitting requirements for improvements to the dam.

In December 1999, a Joint Application for Permit was submitted to NYSDEC and the ACOE for activities in Buttermilk Creek and in or near the wetlands associated with the railroad spur. These activities included repairs to the culvert that carries the railroad over Buttermilk Creek and improvements to portions of the raiiside storm water drainage system. In April 2000 an Individual Dredge and Fill Permit was obtained from the ACOE and a Water Quality Certification and Freshwater Wetlands permit was obtained from NYSDEC for these activities.

Storm Water Discharge Permit. Section 402 of the CWA generally regulates disposal of liquids and, as amended, authorizes the EPA to regulate discharges of pollutants to surface water through a National Pollutant Discharge Elimination System (NPDES) permit program. The EPA has delegated this authority to the state of New York, which issues State Pollutant Discharge Elimination System (SPDES) permits for discharges to surface water.

Surface water runoff from precipitation can become contaminated with pollutants from industrial process facilities, material storage and handling areas, access roads, or vehicle parking areas. To protect the environment, aquatic resources, and public health, Section 402(p) of the CWA requires

that a storm water discharge permit application containing facility-specific information be submitted to the permitting authority. NYSDEC, the permitting authority in New York State, uses this information to ascertain the potential for pollution from storm water collection and discharge systems and to determine appropriate permitting requirements.

In April 1996, the WVDP obtained storm water characterization data through sampling and analysis and submitted an application for a modification of the SPDES permit to address overall site storm water discharges. A Notice of Complete Application from NYSDEC was then followed by issuance of a draft SPDES permit for public comment in June 1997.

A permit application that updates the site storm water and process water discharges, including those associated with the construction and operation of the new remote-handled waste facility (RHWF) and with the operation of the site's refurbished railroad spur, was submitted to NYSDEC in September 2000.

NYSDEC SPDES Inspection. On March 22, 2002, NYSDEC completed its annual facility inspection of the WVDP with observations of the SPDES outfalls, the site sanitary and industrial wastewater treatment facility (WWTF), low-level waste treatment facility (LLWTF), and discharge monitoring records. The inspection concluded with NYSDEC requesting an investigation of the process wastewater sewer system integrity. Investigation of this sewer system was requested after an unplanned release that occurred in September 2001, when boiler wastewater was released through a suspected leaking sanitary sewer. In June 2002, the WVDP issued a report that assesses the condition of the process sewer system, with a plan for additional inspection of process sewer lines between the main process building and

the LLWTF using video camera technology. According to this plan, which was approved by NYSDEC in September 2002, completion of the camera inspection and the final evaluation report is expected by the second half of calendar year 2004.

SPDES Permit Modifications. In March 1996, a SPDES permit application was submitted to NYSDEC to increase the average flow of effluent from the north plateau groundwater recovery system from approximately 2.6 million gallons (9.8 million liters) per year to approximately 10.5 million gallons (39.7 million liters) per year. (See North Plateau Groundwater Recovery System [p. ECS-12].)

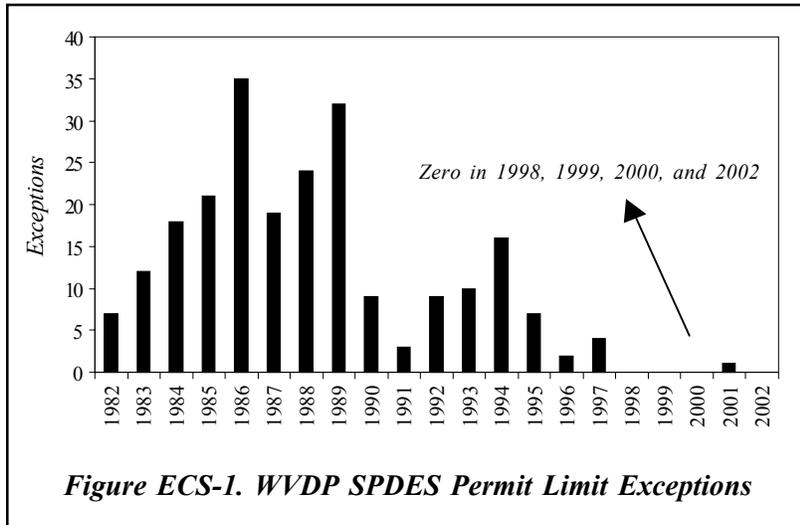
In 1999, increasing concentrations of total mercury were observed in process water collected in the LLWTF. The source of the mercury was determined to be process water from the liquid waste treatment system evaporator. (The evaporator is used to reduce the volumes of liquid waste generated during processing of liquid radioactive waste.) A draft permit addressing both increasing flow and mercury was issued for public comment in December 2001.

A final SPDES permit was issued by NYSDEC on July 15, 2002. This modified permit includes a new effluent limit for mercury and action levels for boron and bromide at outfall 001, internal operational limits for mercury, and authorization for increased flows from the north plateau groundwater treatment project. (See SPDES-Permitted Outfalls [below].)

SPDES-Permitted Outfalls. Point-source liquid effluent discharges to surface waters of New York State are permitted through the New York SPDES program. The WVDP has five SPDES-permitted compliance points for discharges to Erdman Brook and Frank's Creek.

- Outfall 001 (WNSP001) discharges treated wastewater from the LLWTF and the north plateau groundwater recovery system. (See North Plateau Groundwater Recovery System [p. ECS-12] and Chapter 4, Special Groundwater Monitoring [p. 4-16].) The treated wastewater is held in lagoon 3, sampled and analyzed, and periodically released after notifying NYSDEC. In 2002, the treated wastewater from the LLWTF was discharged at WNSP001 in seven batches totaling 13.7 million gallons (52.0 million liters) for the year. The annual average concentration of radioactivity at the point of release was approximately 34.4% of the DOE derived concentration guides (DCGs). None of the individual releases exceeded the DCGs. (See *derived concentration guide* in the Glossary [p. GLO-3] and in Chapter 1 [p. 1-5].)

- Outfall 01B (WNSP01B) is an internal process compliance point established by the final SPDES permit modification issued on July 15, 2002. This internal outfall receives effluent from the liquid waste treatment system (LWTS) evaporator process after passing through a mercury pretreatment system. The LWTS is used to pretreat residual radioactive wastes from the main process building and the former HLW storage tanks before final polishing treatment at the LLWTF. Effluent is sampled and tested at this location to determine compliance with Federal Great Lakes Initiative and SPDES permit requirements for total mercury. As required by the SPDES permit, samples from this location and outfall 001 are analyzed using the proven EPA Method 245.1, with a duplicate sample analyzed using the relatively new "ultra-clean" Method 1631. Testing with Method 1631, which was issued by the EPA in 1999, is conducted as part of a required study to verify effectiveness of this method on radioactively contaminated effluent. A total flow of 47,200 gallons (179,000 liters) was measured at outfall 01B from the effective date of permit modification through the end of CY 2002.



determining compliance with SPDES permit limits during discharge of lagoon 3. Before discharge of lagoon 3, sample data for total dissolved solids (TDS) and flow measurements from upstream sources are used to calculate the amount of augmentation water and flow needed to maintain compliance with SPDES-permitted TDS limits.

As shown in Figure ECS-1 (at left), the annual number of exceptions to the discharge concentration limits specified in the site's SPDES permit have been substantially reduced, especially

when compared to the peak of thirty-five exceptions noted in 1986. As indicated in this figure and Table ECS-2 (p. ECS-20), there were no permit limit exceptions recorded during 2002.

North Plateau Groundwater Recovery System. In November 1995 the WVDP installed a groundwater recovery system to mitigate the movement of strontium-90 contamination in the groundwater and reduce groundwater seepage northeast of the process building. Three recovery wells, installed near the leading edge of the groundwater plume, collect contaminated groundwater from the underlying sand and gravel unit. The groundwater is then treated at the low-level waste treatment building (LLW2) using ion-exchange to remove strontium-90. After the groundwater is processed, it is discharged to lagoon 4 or 5 of the LLWTF. Approximately 29 million gallons (110 million liters) of groundwater have been processed through the system since its inception, including about 4.3 million gallons (16.3 million liters) in 2002.

In 1999 the Project installed a pilot-scale permeable treatment wall (PTW) to test this in-situ passive technology for treating contaminated groundwater. Analytical data collected from within

- Outfall 007 (WNSP007) discharges the effluent from the Wastewater Treatment Facility (WWTF), which treats sewage and various non-radioactive wastewaters from physical plant systems (e.g., water plant production residuals and boiler blowdown). The average daily flow at WNSP007 in 2002 was approximately 19,000 gallons (72,000 liters).
- Outfall 008 (WNSP008) formerly discharged groundwater and surface water runoff directed from the northeast side of the site's LLWTF lagoon system through a french drain to Erdman Brook. This outfall was capped off in May 2001 after elevated concentrations of total recoverable lead were observed. The elevated lead concentration was believed to be caused by silt accumulation in the pipe and reduced flow typical of an aging groundwater drain system.
- Monitoring point 116, located in Frank's Creek, represents the confluence of discharge from outfalls 001, 007, and 008; base stream flow; wet weather flows (e.g., surface water runoff); groundwater seepage; and augmentation water (untreated water from the site reservoirs). This is not a physical outfall but a location where the combination of source-flow inputs is used to calculate values for

and around the wall indicate that a portion of the contaminated groundwater in this area is entering and being treated by the PTW. The hydrogeologic evaluation of the pilot test was completed in 2002. The evaluation concluded that complex hydrogeologic conditions and disturbances from the installation are influencing groundwater flow into and around the pilot PTW.

Petroleum- and Chemical-Product Spill Reporting. The WVDP has a Spill Notification and Reporting Policy to ensure that all spills are properly managed, documented, and remediated in accordance with applicable regulations. This policy identifies the departmental responsibilities for spill management and the proper spill-control procedures. The policy stresses the responsibility of each employee to notify the plant systems operations shift supervisor upon discovery of a spill. This first-line reporting requirement helps to ensure that spills are properly evaluated and managed.

Under a 1996 agreement with NYSDEC regarding petroleum spill-reporting protocol, the WVDP is not required to report spills of petroleum products of 5 gallons (19 liters) or less onto an impervious surface that are cleaned up within two hours of discovery. Petroleum-product spills of 5 gallons or less onto the ground are entered in a monthly petroleum spill log, which is submitted to NYSDEC by the fifteenth day of the following month. Spills of any amount that travel to waters of the state must be reported within two hours to the NYSDEC spill hotline and also are entered in the monthly log. Spills of petroleum products that enter navigable waters of New York State are reported to the National Response Center within two hours of discovery. There were no spills to waters of the state at the WVDP in 2002.

The WVDP also reports spills or releases of hazardous substances in accordance with the reporting requirements of RCRA, the Comprehensive

Environmental Response, Compensation, and Liability Act (CERCLA) if a reportable quantity has been exceeded, and the CAA, EPCRA, the CWA, and the TSCA. No chemical spills or releases exceeded reportable quantities and, thus, no reporting during calendar year 2002 was required.

In the event of a spill or release, all spills are cleaned up in a timely manner in accordance with the WVDP Spill Notification and Reporting Policy, thereby minimizing any effects on the environment. Debris generated during cleanup is characterized and dispositioned appropriately.

Safe Drinking Water Act. The SDWA requires 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. Compliance with regulations promulgated under the SDWA in the state of New York is overseen 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 WNYNSC and is considered a non-transient, noncommunity public water supplier. The WVDP's drinking water treatment facility purifies the water by clarification, filtration, and chlorination before it is distributed on-site.

As an operator of a drinking water supply system, the WVDP routinely collects and analyzes drinking water samples to monitor water quality. The results of these analyses are reported to the Cattaraugus County Health Department, which also independently analyzes a monthly sample of WVDP tap water to determine bacterial and residual chlorine content and an annual WVDP tap water sample for nitrate (as nitrogen). Analysis of the microbiological samples collected in 2002 produced satisfactory results and the free chlo-

rine residual measurements taken throughout the distribution system were positive on all occasions, indicating proper disinfection.

The WVDP regularly tests the site's drinking water for lead and copper in accordance with EPA and NYSDOH regulations. NYSDOH regulations allow a facility to reduce sampling from once a year to once every three years if three consecutive annual sampling campaigns produce results below the action level. All results for samples obtained in 2002 were below action levels for lead and copper.

The Cattaraugus County Health Department conducted its annual inspection of the WVDP water supply system on December 16, 2002. No deficiencies were issued.

Toxic Substances Control Act. TSCA regulates the manufacture, processing, distribution, and use of chemicals, including asbestos-containing materials (ACM) and PCBs.

Asbestos-Containing Material. In 2002, the WVDP continued to maintain compliance with all TSCA requirements pertaining to asbestos by managing asbestos-containing material at the site in accordance with the Asbestos Management Plan (West Valley Nuclear Services Co., revised December 6, 2002). The plan was prepared to ensure compliance with TSCA requirements and includes requirements for limiting worker exposure to ACM and for asbestos-abatement projects, maintenance activities, and periodic surveillance inspections (at least once every three years). The plan also identifies the inventory and status of on-site ACM.

Activities in 2002 included the repair or abatement of damaged/friable ACM, removal of approximately 30 linear feet (9 m) of ACM insulation from abandoned lines, removal of approximately 2,063

square feet (192 m²) of ACM insulation from abandoned tanks, and the maintenance of signs and labels to warn workers of asbestos-containing material. All activities associated with ACM are completed by personnel who are certified by the New York State Department of Labor (NYSDOL). WVNSCO maintains an asbestos-handling license issued by NYSDOL.

Polychlorinated Biphenyls. Because PCBs are regulated as a hazardous waste in New York State, the WVDP continued in 2002 to manage radioactively contaminated PCB waste as mixed waste and nonradioactive PCB waste as hazardous waste. Details concerning PCB-contaminated radioactive waste management, including a description of the waste and proposed treatment technologies and schedules, can be found in Section 3.1.5 of the Site Treatment Plan, Fiscal Year 2002 Update (West Valley Nuclear Services Co., February 13, 2003).

To comply with TSCA and the PCB regulations, all operations associated with PCBs comply with the PCB and PCB-Contaminated Material Management Plan. The WVDP also maintains an annual document log that details PCB use and appropriate storage on-site and any changes in storage or disposal status. The WVDP complies with the regulations for the disposal of PCBs, which conditionally allow radioactive and nonradioactive PCBs to be stored for more than one year (40 CFR Parts 750 and 761).

National Environmental Policy Act. NEPA, as amended, establishes a national policy to ensure that protection of the environment is included in federal planning and decision making (Title I). Its goals are to prevent or to eliminate potential damage to the environment that could arise from federal legislative actions or proposed federal projects.

Nationwide Management of Waste. In May 1997, DOE Headquarters issued the Final Waste Management Programmatic Environmental Impact Statement (EIS) to evaluate nationwide management and siting alternatives for the treatment, storage, and disposal of five types of radioactive and hazardous waste. The alternatives address waste generated, stored, or buried over the next twenty years at fifty-four sites in the DOE complex.

The Final Waste Management Programmatic EIS was issued with the intent of developing and issuing separate records of decision for each type of waste analyzed. In 1998 the DOE issued records of decision for transuranic and non-wastewater hazardous waste. In 1999 the DOE issued the record of decision for high-level radioactive waste. This decision specifies that the WVDP high-level vitrified waste will remain in storage on-site until it is accepted for disposal at a geologic repository.

On February 25, 2000 the DOE issued its record of decision for the management of low-level radioactive waste and mixed low-level waste, including West Valley's wastes. Hanford and the Nevada Test Site (NTS) were identified as the designated national DOE disposal sites for these waste types (Volume 65, Federal Register [FR], p. 10061 [65 FR 10061]). In 2001, West Valley successfully completed the program approval process for access to the NTS, and on July 17, 2001 received approval to ship. The WVDP subsequently completed two LLW shipments to the NTS in 2001. Four LLW shipments were completed in 2002.

Decommissioning and/or Long-Term Stewardship at the WVDP and WNYNSC. DOE published a Federal Register Notice of Intent (NOI) on March 26, 2001 (66 FR 16447) formally announcing its rescoping plan and preparation of the waste management EIS. A draft EIS for waste management is being prepared for public review and comment. DOE also published an Advance

NOI on November 6, 2001 (66 FR 56090) announcing its commitment to begin work, in cooperation with NYSERDA, on the Decommissioning and/or Long-Term Stewardship EIS. DOE and NYSERDA are joint lead agencies on this EIS. The DOE and NYSERDA continued negotiations during 2002 in an effort to reach agreement on a preferred alternative and agency responsibilities for decommissioning and/or long-term stewardship at the WVDP and WNYNSC.

On February 1, 2002, the NRC issued its *Decommissioning Criteria for the West Valley Demonstration Project (M-32) at the West Valley Site; Final Policy Statement* in the Federal Register (67 FR 5003). The Final Policy Statement applies the NRC's License Termination Rule (10 CFR Part 20, Subpart E) as the decommissioning criteria for the WVDP and as the decommissioning goal for the entire WNYNSC.

In October 2002, DOE invited the EPA, the U.S. Nuclear Regulatory Commission (NRC), and NYSDEC to be formal cooperating agencies on the Decommissioning and/or Long-Term Stewardship EIS. All three agencies accepted DOE's invitation.

During 2002, DOE continued to prepare the draft of the Waste Management EIS. DOE also prepared the draft of the Notice of Intent for the Decommissioning and/or Long-Term Stewardship EIS which, when issued jointly with NYSERDA, will begin the public scoping process for that EIS in accordance with NEPA.

Migratory Bird Treaty Act. The WVDP monitors wildlife activity near WVDP work areas and, where possible, implements controls to prevent and minimize nesting of migratory birds within radiologically contaminated areas of the site. In 2002, the WVDP obtained a depredation permit from the U.S. Fish and Wildlife Service for the removal

of active migratory bird nests. Also in 2002, the NYSDEC renewed the bird depredation license for the removal of inactive and abandoned bird nests at the WVDP. (See Table ECS-4 [p. ECS-20] for a summary of the bird depredation action taken at the WVDP during 2002.)

Endangered Species Act. The WVDP periodically updates its information about the potential for federally listed or proposed endangered or threatened species to be in the vicinity of Project activities. This was last done via correspondence with the U.S. Fish and Wildlife Service in June 1999. Their reply on June 21, 1999 reconfirmed that, “except for occasional transient individuals,” no plant or animal species protected under the Endangered Species Act were known to exist at the WVDP.

Current Achievements and Program Highlights

The WVDP’s successful high-level radioactive waste vitrification program is the first program to reach completion in the nation.

Phase II Vitrification. Phase II of vitrification, processing the HLW residuals (heels) in storage tank 8D-2, was completed in 2002. Eleven glass canisters were filled during 2002, bringing the final total number processed to 275 canisters of HLW since operations began in 1996. Two final canisters, generated when the melter was evacuated, are classified as low-level radioactive waste.

Integrated Safety Management System. In August 2002 a self-assessment was conducted to confirm that the WVDP’s integrated environmental, safety, and health management (ISMS) system continued to function. Results from the self-assessment were verified in the DOE’s annual review, conducted in November 2002. The WVDP continues to demonstrate its commitment to an all-inclu-

sive approach to safety through its safety programs and through ongoing efforts to strengthen its integrated safety management program by worker involvement in the safety program.

STAR Status. WVNSCO has reaffirmed its commitment to DOE’s Voluntary Protection Program (VPP). During the reporting period, the VPP was reviewed as part of the annual ISMS review. The DOE completed an on-site review of the VPP and the WVDP has been recertified as a DOE-VPP STAR site. At the annual VPP Participants National Conference, WVNSCO was awarded the DOE’s Star of Excellence Award, which is given to sites with outstanding safety programs. WVNSCO is the only site to receive this award two years in a row.

EPA National Environmental Performance Track. The WVDP was recognized as a top environmental leader in 2000 and was accepted into the EPA’s National Environmental Performance Track. The WVDP was awarded Charter Member status as part of the first group of applicants.

To qualify for the award, the WVDP had to demonstrate that it voluntarily has adopted and implemented an environmental management system, has attained previous specific environmental achievements, has made a commitment to achieve four future goals, has a public outreach program, and has a sustained record of environmental compliance.

The WVDP’s four commitments include:

- achieving a 62% reduction in hazardous waste generated over a three-year period from a baseline of 6,805 kg/year down to 2,545 kg/year;
- reducing the generation of oily condensate wastewater from 1,600 gal/year to less than 100 gal/year;

- removing 2,000 linear feet of asbestos; and
- reducing natural gas usage from 909,000 cubic feet per year to 800,000 cubic feet per year, and reducing electrical usage from 2,008,679 kilowatt hours per month to 1,800,000 kilowatt hours per month.

In 2001, the WVDP completed the asbestos-reduction goal in its entirety.

In 2002, the WVDP continued to make significant progress in the remaining commitments by:

- achieving a hazardous waste reduction equivalent of 710 pounds (89% from the baseline of 6,805 kg);
- electrical usage was slightly higher (1,952,946 kW hr/month) than the goal as a result of a more severe winter than expected.

Environmental Management System.

WVNSCO's environmental management system comprises procedures that provide the basic policy and direction for accomplishing work through proactive management, environmental stewardship, and the integration of appropriate technologies across all Project functions. Environmental management is integrated with other safety management and work planning processes at the WVDP through the integrated environmental, health, and safety management program, as required in new DOE Order 450.1.

The WVNSCO EMS satisfies the requirements of both the Code of Environmental Management Principles (CEMP) for federal agencies and the International Organization for Standardization (ISO) 14001, Environmental Management Systems: Specifications for Guidance and Use, which are the two major frameworks for environmental management systems. The CEMP was developed by the EPA in response to Executive Order 12856,

Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements. It embodies the principles and underlying performance objectives that are the basis for responsible environmental management. ISO 14001 is an EMS comparable to the CEMP.

Environmental Issues and Actions

Closed Landfill Maintenance. Closure of the on-site nonradioactive construction and demolition debris landfill (CDDL) was completed in August 1986. The landfill area was closed in accordance with NYSDEC requirements for this type of landfill, following a closure plan (Standish, 1985) approved by NYSDEC. To meet routine post-closure requirements, the CDDL cover was inspected twice in 2002 and found to be in generally good condition. The grass cover on the clay and soil cap is routinely maintained and cut, and drainage is maintained to ensure that no obvious ponding or soil erosion occurs.

Release of Materials Containing Residual Radioactivity. The release of property containing residual radioactivity from DOE facilities is carefully controlled by DOE guidelines and procedures. In two special memoranda issued in January and July of 2000, the Secretary of Energy placed a moratorium on the release of contaminated materials and on the unrestricted release, for recycling, of metal from radiological areas within DOE facilities. The moratorium will remain in effect until directives clarifying the release criteria have been developed and implemented. Any transfer that places property (real property, structures, equipment, or scrap metal) containing radioactivity into public use is classified as a type of environmental release.

In keeping with DOE initiatives to expand environmental information provided to the public, cer-

tain details of transfers of property containing residual radioactivity are to be included in Annual Site Environmental Reports. The information provided should include, among other things, the type of material and the amount of residual radioactivity, the basis for releasing the property for public use (including release limits and when the property was released), the end use and cost savings associated with release of the property, and potential doses to individuals and the potential collective dose to the public associated with each release. As indicated in Table ECS-3 [p. ECS-20], the WVDP did not release any property classified per DOE Order 5400.5 as material containing residual radioactivity in 2002.

Decommissioning and/or Long-Term Stewardship at the WVDP and WNYNSC. Although ongoing negotiations conducted between the DOE and NYSERDA to date have not resulted in agreement on long-term cleanup responsibilities, both parties remain committed to accomplishing important goals. These include shipping the 125 spent fuel assemblies to the Idaho National Laboratory (INL) and completing environmental impact statement analyses to support decisions on waste management, site decommissioning, and/or long-term stewardship. (See also p. ECS-15.) Other important Project goals include safely managing low-level radioactive waste, constructing the remote-handled waste facility, and managing contaminated groundwater on the north plateau.

is used to identify issues or potential problems that can be corrected immediately.

The local DOE Project office and other agencies with responsibilities for the WVDP also independently review various aspects of the environmental and waste management programs, as discussed in preceding sections. In 2002, overall results reflected continuing, well-managed environmental programs at the WVDP.

Project Assessment Activities in 2002

As the primary contractor for the DOE at the WVDP, WVNSCO maintains a comprehensive review program for proposed and ongoing operations. Assessments are conducted through formal surveillances and informal programs. Formal surveillances monitor compliance with regulations, directives, and DOE Orders. The informal program

Compliance Tables

DOE Headquarters uses environmental compliance summary information from sites across the DOE complex to compile national environmental summary reports. The tables on the following pages were prepared to assist in this compilation.

**Table ECS-1
West Valley Demonstration Project 2002 Air Quality
Noncompliance Episodes**

Permit Type	Facility	Parameter	Date(s) Exceeded	Description/Solutions
EPA NESHAP	All	All	None	None
NYSDEC Air	All	All	None	None

There were no episodes of noncompliance in 2002.

**Table ECS-2
West Valley Demonstration Project 2002 NPDES/SPDES*
Permit Limit Noncompliance Episodes**

Permit Type	Outfall	Parameter	No. of Permit Exceedances	No. of Samples Taken	No. of Compliant Samples	Percent Compliance Samples	Description/Solutions
SPDES	All	All	0	1,046	All	100%	None

* Radionuclides are not regulated under the site's SPDES permit. However, special requirements in the permit specify that the concentration of radionuclides in the discharge is subject to requirements in DOE Orders 5400.1 and 5400.5.

**Table ECS-3
Release of Property Containing Residual Radioactive Material**

Approved Limit	Rationale	Date of Approval	Type of Material	Basis for Release	End Use	Volume of Material	Total Activity	Maximum Individual Dose	Collective Dose
NA	NA	NA	None	NA	NA	0	0	0	0

No property containing residual radioactivity was released in 2002.

**Table ECS-4
West Valley Demonstration Project Migratory Bird Nest Depredation Episodes
in 2002**

Permit/License Type	Parameter	Permit/License Limit	Total Removed in 2002
U.S. Fish and Wildlife - Bird Depredation Permit	Removal of Active Barn Swallow Nests	15	0
U.S. Fish and Wildlife - Bird Depredation Permit	Removal of Active American Robin Nests	15	0
U.S. Fish and Wildlife - Bird Depredation Permit	Removal of Active Eastern Phoebe Nests	5	0
NYSDEC - Bird Depredation License	Removal of Abandoned/Inactive Migratory Bird Nests	Not limited	3

Table ECS-5
Status of EPCRA Reporting in 2002

EPCRA Section	Description of Reporting	Status*
<i>EPCRA 302-303</i>	<i>Planning Notification</i>	<i>Yes</i>
<i>EPCRA 304</i>	<i>Extremely Hazardous Substance Release Notification</i>	<i>Not Required</i>
<i>EPCRA 311-312</i>	<i>Material Safety Data Sheet/Chemical Inventory</i>	<i>Yes</i>
<i>EPCRA 313</i>	<i>Toxic Release Inventory Reporting</i>	<i>Yes</i>

* "Yes" indicates that the site reported under the provision.
 "No" indicates that the site should have reported but did not.
 "Not Required" indicates that the site was not required to report under the provision.

Table ECS-6
Reportable Chemicals Above Threshold Planning Quantities Stored at the WVDP in 2002

<i>Anhydrous ammonia*</i>	<i>Diesel fuel #2</i>
<i>Ferric hydroxide slurry</i>	<i>Gasoline</i>
<i>Hydrogen peroxide solution (35%)</i>	<i>Ion-exchange media</i>
<i>Liquid nitrogen</i>	<i>Nitric acid</i>
<i>Oils - various grades</i>	<i>Sodium hydroxide</i>
<i>Portland cement</i>	<i>Sulfuric acid</i>
<i>Silicon dioxide</i>	

* Storage at the WVDP discontinued in late 2002

Table ECS-7
West Valley Demonstration Project Environmental Permits

Permit Name and Number	Agency/Permit Type	Description	2002 Changes	Status
West Valley Demonstration Project RCRA Part A Permit Application	NYSDEC/Hazardous Waste	Provides interim status under RCRA for treatment and storage of hazardous waste	None - Supplementary information concerning operational changes for stabilization of sodium-bearing waste submitted on 9/4/02.	No expiration date.
Article 19 State Facility Air Permit (9-0422-00005/00091)	NYSDEC/Air Emissions	Site-wide permit includes: <ul style="list-style-type: none"> • 1 boiler • cold chemical solids transfer system • cold chemical vessel vent system • cold chemical vessel dust-collection hood 	Vitrification facility activities removed from the permit due to the shutdown of the vitrification process	Effective 6/1/00. No expiration date.
Slurry-fed ceramic melter (modification to WVDP-687-01) process building ventilation	EPA/NESHAP	Slurry-fed ceramic melter radionuclide emissions — main plant stack modified 2/18/97	None	Permit approved 2/18/97. No expiration date. Request to modify submitted to the EPA 8/99.
Vitrification facility HVAC system	EPA/NESHAP	Vitrification facility HVAC system for radionuclide emissions	None	Permit approved 2/18/97. No expiration date.
01-14 building ventilation system (WVDP-187-01)	EPA/NESHAP	Liquid waste treatment system ventilation of radionuclide emissions in the 01-14 building	None	Issued 10/5/87. Modified 5/25/89. No expiration date.
Contact size-reduction facility (WVDP-287-01)	EPA/NESHAP	Contact size-reduction and decontamination facility radionuclide emissions	None	Issued 10/5/87. No expiration date.
Supernatant treatment system/Permanent ventilation system (WVDP-387-01)	EPA/NESHAP	Supernatant treatment system ventilation for radionuclide emissions	None	Revised 1/1/197. No expiration date.
Outdoor ventilated enclosures (WVDP-587-01)	EPA/NESHAP	Ten portable ventilation units for removal of radionuclides	None	Issued 12/22/87. No expiration date.
State Pollutant Discharge Elimination System (NY0000973)	NYSDEC/Water	Covers discharges to surface waters from various on-site sources	A permit modification was issued on July 15, 2002 for groundwater recovery system discharge increase and other activities	Permit terms for NYSERDA and DOE responsibilities related to storm water discharges are being negotiated with NYSDEC.

Table ECS-7 (concluded)
West Valley Demonstration Project Environmental Permits

Permit Name and Number	Agency/Permit Type	Description	2002 Changes	Status
Buffalo Pollutant Discharge Elimination System (02-05-TR096)	Buffalo Sewer Authority/Sanitary sewage and sewage sludge disposal	Permit issued to hauler of waste from the wastewater treatment facility	Renewed 6/30/02.	Hauler must renew permit by 6/30/03.
Fill Discharge Permit (94-973-29(4))	U.S. Army Corps of Engineers/Water	Buttermilk Creek culvert repairs and railroad spur improvements	None	Issued 4/27/00. Expires 4/27/05.
Freshwater Wetlands Permit and Water Quality Certification (9-0422-00005/00093)	NYSDEC/Water	Buttermilk Creek culvert repairs and railroad spur improvements	None	Issued 3/31/00. Expires 4/1/05.
Chemical Bulk Storage (9-000158)	NYSDEC/Chemical bulk storage tank	Registration of bulk storage tanks used for listed hazardous chemicals	None	Permit expires 7/5/03. Will be renewed before expiration.
Petroleum Bulk Storage (9-008885)	NYSDEC/Petroleum bulk storage tank registration	Registration of bulk storage tanks used for petroleum	None	Registration expires 9/2/06. Will be renewed before expiration.
Bird depredation license (DWP02-026)	New York State Division of Fish and Wildlife	State license for the removal of inactive nests of migratory birds	License renewed on 1/16/03.	CY 2002 NYS license expired 12/31/02. License renewed on 1/16/03.
Bird depredation permit (MB747595-0)	U.S. Fish and Wildlife Service	Federal permit for the limited taking of migratory birds and active bird nests	Permit issued on 5/18/02.	Permit expires 4/30/03. Renewal application filed on 12/30/02.

This page intentionally left blank