
ENVIRONMENTAL COMPLIANCE SUMMARY

CALENDAR YEAR 2003

Compliance Program

The West Valley Demonstration Project (WVDP) is currently focusing on several goals that will lead to completion of the WVDP Act. (See Appendix K-3^C [p. K-7].) Construction of the remote-handled waste facility, which will be used to process and package radioactive Project waste into shipping containers, was completed in early 2004. The WVDP completed dismantling of process equipment and removal of waste from the fuel receiving and storage pool facility. Preparations for dismantlement of process equipment in the vitrification facility were initiated. Decontamination of former fuel reprocessing cells within the main process building and management of contaminated groundwater continued.

In January 2003 the U.S. Department of Energy (DOE), the federal agency that oversees the WVDP, issued a directive (DOE Order 450.1) requiring implementation of an environmental management system (EMS) for conducting work at DOE sites, including the WVDP. In response to this directive, the existing WVDP EMS was reviewed and further enhanced. (See pp. ECS-2 and ECS-17 and Table ECS-1 [p. ECS-19].)

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

Major federal environmental laws and regulations applicable to the WVDP are: the Resource Conservation and Recovery Act; the Clean Air Act; the Emergency Planning and Community Right-to-Know Act (enacted as Title III of the Superfund Amendments and Reauthorization Act); the Clean Water Act; the Safe Drinking Water Act; the Toxic Substances Control Act; the Migratory Bird Treaty Act; and the National Environmental Policy Act. These laws are administered primarily by the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers (ACOE), the New York State Department of Environmental Conservation (NYSDEC), and the New York State Department of Health (NYSDOH) through programs and regulatory requirements for permitting, reporting, inspecting, self-monitoring, and audits.

Because 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 to release limited amounts of radiological and nonradiological constituents through controlled and monitored effluent releases into water and air in concentrations determined to be safe for humans

and the environment. In general, the permits describe release points, specify management and reporting requirements, list limits on those pollutants likely to be present, and define the sampling and analysis regimen. A summary of permits may be found in Table ECS-8 (pp. ECS-26 and ECS-27).

Compliance Status

The following summary describes WVDP compliance with DOE Orders 450.1, 5400.5, and 435.1 and federal and state laws and regulations applicable to the Project.

Environmental Protection Program (DOE Order 450.1). DOE Order 450.1, issued in January 2003, requires DOE sites to implement an EMS by December 31, 2005. An EMS is a continuing cycle of systematic planning, implementing, evaluating, and improving processes and actions undertaken to achieve environmental goals. Since 1999, the WVDP has implemented an EMS via policies and procedures that provide for accomplishing work through proactive management, environmental stewardship, and integration of appropriate technologies across all Project functions. The West Valley Nuclear Services Co. (WVNSCO) EMS satisfies the requirements of both the Code of Environmental Management Principles for federal agencies and the International Organization for Standardization 14001, *Environmental Management Systems: Specifications for Guidance and Use*. Elements of the WVDP EMS are summarized in Table ECS-1 (p. ECS-19).

Radiation Protection of the Public and the Environment (DOE Order 5400.5). DOE Order 5400.5, issued in February of 1990, established 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 2003, presents estimates of dose to the public and the environment in 2003, and compares these values with release and dose standards established by DOE Order 5400.5. (See Appendix K^C.) In 2003, 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 high-level waste (HLW), transuranic waste, low-level radioactive waste (LLW), and the radioactive component of mixed waste – is managed to (1) protect the public from exposure to radiation from radioactive materials, (2) protect the environment, (3) protect workers, and (4) comply 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 updated in 2003.

Resource Conservation and Recovery Act (RCRA). 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 life cycle of hazardous waste and mandate that generators take responsibility for ensuring the proper treatment, storage, and disposal of their wastes. The EPA is the federal agency responsible for is-

suing 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 issue permits and enforce these regulations to NYSDEC. In addition, the U.S. Department of Transportation is responsible for issuing guidelines and regulations for labeling, packaging, and spill-reporting for hazardous and mixed wastes while in transit.

A hazardous waste permit is required for facilities that treat or store large quantities of hazardous waste for more than 90 days or dispose of hazardous waste at the facility. Facilities in existence on the date that hazardous waste regulations impacting their operations take effect must apply for interim status. These facilities must therefore apply for interim status from the NYSDEC by submitting a RCRA Part A Permit Application. Facility operations during interim status must limit operations to those described in the Part A Permit Application and must comply with the Interim Status Standards regulations.

For existing hazardous waste management facilities in New York, the NYSDEC sets a date for submitting the Part B Application (also known as Part 373 Permits in New York). Facilities with interim status are treated as having been issued a permit until a final determination on the RCRA Permit Application is made. The Part 373 Application must be submitted in narrative form and contain all of the information specified in Title 40, Protection of Environment, Code of Federal Regulations (CFR) Parts 270.14 through 270.29 and Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York (6 NYCRR) Part 373-1.5. Hazardous waste management facilities must have a permit throughout the active life of hazardous waste management activities.

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 effective date of the New York State regulations governing treatment, storage, and disposal of mixed (i.e., RCRA hazardous and Atomic Energy Commission radioactive) waste, the WVDP filed a Part A Hazardous Waste Permit Application with NYSDEC for storage and treatment of hazardous and mixed 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.

In a July 16, 2003 letter to DOE, NYSDEC made an official request for the submittal of a Part 373 Permit Application for the WVDP. The complete Part 373 Permit Application is planned for transmittal to NYSDEC for review and processing during 2004.

Hazardous Waste Management Program. Hazardous wastes at the WVDP are managed in accordance with 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). The WVDP shipped approximately 1.20 tons (1.09 metric tons) of nonradioactive hazardous waste to off-site TSDFs in 2003.

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 45 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 2003.

Hazardous and mixed 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) 2003 was submitted to NYSDEC in February 2004. 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 submitted to NYSDEC in June 2002. The hazardous waste reduction plan was also updated in 2003, as required.

An annual inspection to assess compliance with hazardous waste regulations was conducted by NYSDEC on March 20, 2003. No deficiencies were noted.

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 of 1992, an amendment to RCRA, requires DOE facilities to prepare plans (i.e., the Site Treatment Plan) for treating their mixed waste inventories and to up-

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

The WVDP's Site Treatment 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 requirements of RCRA.

The DOE and NYSDEC entered into a Consent Order in August 1996 that requires the completion of the milestones identified in the Plan Volume. The WVDP began implementing its Site Treatment Plan immediately and updates it annually to bring waste stream, inventory, and treatment information current through September 30, the end of the DOE fiscal year. A draft update of the fiscal year 2003 activities was forwarded to NYSDEC before the due date of February 15, 2004.

Just as for hazardous waste, shipments of mixed waste to off-site TSDfs for treatment are documented via uniform hazardous waste manifests. In 2003 the WVDP made one mixed waste shipment, which consisted of elemental lead and solid metal debris. A total of 1.83 tons (1.66 metric tons) were shipped to Envirocare of Utah for treatment and disposal.

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 in March 1992. The Consent Order re-

quired NYSEDA and the DOE's West Valley Demonstration Project Office 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 during 2003. 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.

Two new SWMUs were identified in 2003 and an additional SWMU was identified in early 2004: a breach in the laundry wastewater line, the concrete vault staging area, and the remote-handled waste facility. Notifications were submitted to the EPA and to NYSDEC, as required.

Nonhazardous, Regulated Waste Management Program. The WVDP shipped approximately 19 tons (17 metric tons) of nonradioactive, nonhazardous material off-site to solid waste management facilities in 2003. Of this amount, 3.4 tons (3.1 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-12].) The WVDP also shipped approximately 415 tons (376 metric tons) of digested sludge and treated wastewater from the site sanitary and industrial wastewater treatment facility to the Buffalo Sewer Authority for disposal.

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. These Executive Orders are also supported by DOE Order 450.1, Environmental Protection Program. 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 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. 1-17) for further discussion of waste minimization activities from all sources in 2003.

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). 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 underground 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 stimulated 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 reviewed by NYSDEC determined that no further remediation is required at this time.

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

New York State-Regulated Aboveground Storage Tanks. New York State 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 2003 included nine aboveground petroleum tanks and ten 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. Sodium hydroxide was stored in the other tank. A tank formerly used to store anhydrous ammonia was closed in 2002. All 11 tanks were emptied in the fall of 2002 after vitrification operations were completed. The sodium hydroxide tank and one nitric acid tank were permanently closed in 2003. Plans are under development for future use or closure of the remaining eight tanks.

All the tanks are equipped with gauges and secondary containment systems. The WVDP is in compliance with the most recent requirements to upgrade chemical bulk storage tanks that 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 can potentially 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 are 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 2003.

Clean Air Act (CAA). 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 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 CAA 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.

In 2003, in compliance with updated stack inspection requirements of 40 CFR 61, Appendix B, Method 114, sampling systems in use for major emission points were inspected and the results were documented. Cleaning was carried out, as appropriate. Sampling systems for the main stack (ANSTACK), the supernatant treatment system/permanent ventilation system (ANSTSTK), and the vitrification HVAC system (ANVITSK) were inspected.

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 2003 doses to be approximately 0.02% of the 10 millirem standard. (See Table 2-6 [p. 2-28].)

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 (SO₂).

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 SO₂ emissions under the updated permit were capped at 99 tons each.

The main contributing source of NO_x and SO₂ at the WVDP was the melter, which was shut down in September of 2002. This left site boilers and standby diesel generators as the only contributors of NO_x and SO₂ (at greatly-reduced levels as compared to the melter). Accordingly, a request was submitted to NYSDEC to discontinue submission of annual NO_x and SO₂ emissions. The request was granted on November 1, 2002.

Air permits that were in effect at the WVDP in 2003 are included in Table ECS-8, West Valley Demonstration Project Environmental Permits (pp. ECS-28 and ECS-29). There were no air permit or regulatory exceedances in 2003. (See also Table ECS-2, West Valley Demonstration Project 2003 Air Quality Noncompliance Episodes [p. ECS-23].)

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

Executive Order 13148, Greening the Government Through Leadership in Environmental Management, 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 2003. (See also Table ECS-6, Status of EPCRA Reporting in 2003 [p. ECS-25].)

- 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, emergency response exercises, and 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 timeframe. There were no releases of EHS at the WVDP that triggered the release notification requirements of EPCRA Section 304.

- Under EPCRA Section 311 requirements, the WVDP reviews information about reportable chemicals every quarter. If a hazardous chemical

not previously reported is present on-site in an amount exceeding the threshold planning quantity, an 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 emergency responders have current information about hazardous chemicals at the WVDP. No new chemicals were added to the hazardous chemicals list in 2003 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 specifying the quantity, location, and hazards associated with chemicals stored on-site. Nine reportable chemicals above threshold planning quantities were stored at the WVDP in 2003. (A list of reportable chemicals is provided in Table ECS-7 [p. ECS-25].)
- Under EPCRA Section 313, the WVDP provides information about releases to all environmental media of EPA-listed TRI chemicals used at or above specified regulatory thresholds at the WVDP. In 2003 no chemical exceeded the reporting threshold for the EPCRA Section 313 report.

Clean Water Act (CWA). Section 404 of the CWA regulates the development of areas in and adjacent to 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 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 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, conducted in August 1998, identified and delineated jurisdictional wetlands regulated under the CWA, 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. In 1998, 1999, and 2000, 83 jurisdictional wetlands ranging in size from 0.01 to 8.6 acres, a total of approximately 53 acres (22 ha) of wetland, were identi-

fied. This wetland delineation was submitted to the ACOE for verification of the wetland boundaries.

The ACOE verification of site wetlands delineations will expire starting in 2004. In anticipation of these expirations, assessment of site lands for wetland features was completed in 2003 to support re-verification by the ACOE.

State Pollutant Discharge Elimination System (SPDES) Permit Renewal. In August 2003, the WVDP filed an application with the NYSDEC for renewal of the SPDES Permit. In September 2003, the NYSDEC issued a renewed permit, which will expire in 2009.

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 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 January 2003, a supplement to an earlier permit application was filed with NYSDEC to request

separate permits for storm water discharges from the WVDP and discharges from the State-Licensed Disposal Area, maintained by NYSERDA. In March 2003, NYSDEC issued a notice with questions and comments on this application. A permit application with response to the NYSDEC questions and comments was filed in July 2003. This application also addressed new requests, including reduction in monitoring for chemical constituents no longer detected in site discharges and authorizations for storm water discharges associated with future dismantlement and demolition-related activities.

NYSDEC SPDES Inspection. In March 2003, 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. No deficiencies were identified.

Process Sewer Integrity Evaluation. In 2002, NYSDEC requested that the site process sewer system integrity be assessed. This assessment was requested after an unplanned release occurred in 2001, when boiler wastewater was released through a suspected leaking underground sanitary sewer. Later in 2002, the WVDP issued a report evaluating the condition of the process sewer system, with a plan for an inspection of accessible process sewer lines between the main process building and the LLWTF, using video camera technology.

Video inspection of the process sewer lines was initiated in 2003. During this inspection, a hole was discovered in a tributary sewer line where laundry wastewater was released. The breached line was removed from service and laundry wastewater flow was diverted to another line with known integrity. Reports on this discovery were filed with the NYSDEC in November and December 2003.

Video inspection of process sewer lines is scheduled to resume in 2004, followed by submission of the final report to NYSDEC by the end of the year.

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. 4-12].) The treated wastewater is held in lagoon 3, sampled and analyzed, then periodically released after notifying NYSDEC. In 2003, the treated wastewater from the LLWTF was discharged at WNSP001 in seven batches totaling 15.0 million gallons (56.7 million liters) for the year. The annual average concentration of radioactivity at the point of release was approximately 29.3% of 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].)

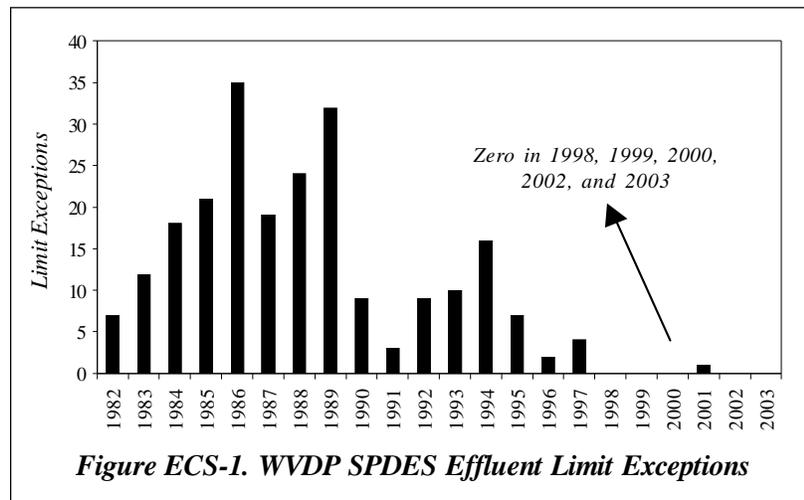
- Outfall 01B (WNSP01B) is an internal process compliance point established by the final SPDES Permit modification issued on July 15, 2002. This internal outfall receives effluent from the liquid waste treatment system (LWTS) evaporator process after passing through a mercury pretreatment system. The LWTS is used to pretreat residual radioactive wastes from the main process building and the 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 Test 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. During 2003, a total flow of over 156,000 gallons (592,000 liters) was measured at outfall 01B.

- Outfall 007 (WNSP007) discharges the effluent from the WWTF, which treats sewage and various nonradioactive wastewaters from physical plant systems (e.g., water plant production residuals and boiler blowdown). The average daily flow at WNSP007 in 2003 was approximately 26,000 gallons (98,000 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 determining compliance with SPDES Permit limits for total dissolved solids (TDS) during discharge of lagoon 3. Before discharge of lagoon 3, sample data for TDS and flow measurements from up-



stream 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 (above), the annual number of effluent exceptions specified in the site's SPDES Permit have been substantially reduced, especially when compared to the peak of 35 exceptions noted in 1986. As indicated in this figure, there were no permit effluent exceptions recorded during 2003.

In June 2003, however, analyses by a vendor laboratory of samples obtained at outfall 007 for five-day biochemical oxygen demand (BOD₅) and total suspended solids (TSS) and samples obtained at outfall 001 for surfactant (as linear alkylate sulfonate [LAS]) were performed outside the maximum allowable sample holding time. As a result, the minimum number of sample analyses specified by the SPDES Permit for these parameters was not met. These incidents of analyses performed outside the allowable holding time were attributable to vendor laboratory personnel changes and associated communication breakdowns. To prevent recurrence, WVDP sample analytical requirements were reviewed with contract laboratory personnel. All permit non-compliance episodes

are summarized in Table ECS-3 (p. ECS-24).

North Plateau Groundwater Recovery System. In November 1995 the WVDP installed a groundwater recovery system to mitigate the movement of strontium-90 contamination in 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 collected 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 34 million gallons (128 million liters) of groundwater have been processed through the system since its inception, including about 4.5 million gallons (17 million liters) in 2003.

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 and around the wall indicate that only 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 all spills are properly managed, documented, and remediated in accordance with applicable regulations. This policy iden-

tifies departmental responsibilities for spill management and 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 spills are properly evaluated and managed.

Under a 1996 agreement with NYSDEC, the WVDP is not required to report a spill of petroleum products onto an impervious surface if the spill is less than 5 gallons (19 liters) and is cleaned up within two hours of discovery. Any spill of 5 gallons or less onto the ground is entered into a petroleum spill log that is submitted monthly to NYSDEC on the fifteenth day following the subject month. A spill of more than 5 gallons on any surface must also be logged and reported within two hours to the NYSDEC hotline. A spill of any amount that enters state waters must be reported to the NYSDEC hotline within two hours of discovery and, if it has reached navigable state waters, also reported to the National Response Center. The last reportable petroleum spill at the WVDP, a contained spill of 8 gallons that did not reach state waters, occurred in 2002. No reportable spills of over 5 gallons of petroleum products to an impervious surface, or to the ground or waters of the state, occurred at the WVDP in 2003.

The WVDP also reports spills or releases of hazardous substances in accordance with reporting requirements of RCRA, the Comprehensive Environmental Response, Compensation, and Liability Act if a reportable quantity has been exceeded, and the CAA, EPCRA, CWA, and Toxic Substances Control Act (TSCA). No chemical spills or releases exceeded reportable quantities and, thus, no reporting during calendar year 2003 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 (SDWA). The SDWA requires that each federal agency operating or maintaining a 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 NYSDOH through county health departments.

The WVDP obtains its drinking water from surface water reservoirs on the WNYNSC and is considered a non-transient, non-community public water supplier. The WVDP's drinking water treatment facility purifies the water by clarification, filtration, and chlorination before it is distributed on-site.

Monitoring. As an operator of a drinking water supply system, the WVDP routinely collects and analyzes drinking water samples to monitor water quality. 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).

Results for microbiological analysis of monthly tap water samples collected in 2003 indicated that total coliform and *E. coli* were not present in the potable water distribution system. Monthly tap water sample results for residual chlorine were positive on all occasions, indicating proper disinfection. The annual result for nitrate was also within the drinking water limit.

As a result of the EPA Disinfection By-Products Rule and Long-Term 1 Enhanced Surface Water

Treatment Rule, analysis of water samples from the WVDP potable water system for disinfection by-products and disinfection by-product precursors for compliance with maximum contaminant levels (MCLs) and treatment standards was performed at the WVDP in 2003 on a required routine basis. Quarterly sample results for disinfection by-products, which include total trihalomethanes and five haloacetic acids, were within MCLs for these parameters. Monthly sample results for disinfection by-product precursors, which include total organic carbon and alkalinity, were also within treatment system performance standards.

Cross-Connection Control. The SDWA requires that public water suppliers implement practices to protect the water supply from sanitary hazards. One specific requirement is to prevent cross-connections between the potable water supply and systems containing hazardous or infectious substances. Cross-connection control devices, which include double check valves and reduced-pressure zone valves, must be installed, inspected, and maintained at strategic locations at facilities where hazardous materials are used in a manner that could result in their introduction into the potable water distribution system under low-pressure conditions. In addition, secondary cross-connection controls, such as air gaps, at the point of use are also recommended to protect users within a specific facility from hazards posed by intrafacility operations. The WVDP has a total of 12 backflow prevention devices, all of which were tested by NYSDOH in 2003. If problems are encountered, these devices are repaired and retested or replaced.

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

Asbestos-Containing Material. In 2003, 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 (WVNSCO, 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 2003 included the repair or abatement of damaged/friable ACM, removal of approximately 68 linear feet of ACM insulation from abandoned lines, and 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 (NYS DOL). 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 2003 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, proposed treatment technologies, and schedules, can be found in Section 3.1.5 of the Site Treatment Plan, Fiscal Year 2003 Update (WVNSCO, February 5, 2004).

To comply with TSCA and 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, appropriate storage on-site, and any changes in storage or dis-

posal status. The WVDP complies with regulations for 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).

NEPA, as amended, establishes a national policy to ensure protection of the environment is included in federal planning and decision-making (Title I). Its goals are to prevent or 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 treatment, storage, and disposal of five types of radioactive and hazardous waste. The alternatives address waste generated, stored, or buried over the next 20 years at 54 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 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 designated national DOE disposal sites for these waste types (Volume 65, Federal Register [FR], p. 10061 [65 FR 10061]). In 2001, West Valley success-

fully completed the program approval process for access to the NTS, and on July 17, 2001 received approval to ship. Six LLW shipments were sent in 2001 and 2002, and 13 shipments were sent to NTS in 2003.

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. DOE published an NOI on March 13, 2003 (68 FR 12044), announcing its intent to prepare, in cooperation with NYSERDA, a Decommissioning and/or Long-Term Stewardship EIS. DOE and NYSERDA are joint lead agencies on this EIS, while the EPA, U.S. Nuclear Regulatory Commission, and NYSDEC are cooperating agencies. Work on preparation of the Decommissioning and/or Long-Term Stewardship EIS continued in 2003.

In May 2003, DOE issued a draft of the Waste Management EIS (68 FR 26587) for public comment. DOE considered public comments and issued the final EIS in January 2004.

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 2003, the WVDP filed for renewal and modification of its bird depredation permit to allow for removal of nests of Canada Geese, which in recent years were observed within radiologically-controlled areas of the site. In June 2003, the U.S. Fish and Wildlife Service renewed and modified this permit to allow for removal of Canada Geese nests. Similarly, the NYSDEC renewed and modified the bird depredation license to allow for removal of migratory bird and Canada Geese nests.

(See Table ECS-5 [p. ECS-25] for a summary of the bird depredation action taken at the WVDP during 2003.)

Endangered Species Act. The WVDP periodically updates its information about the potential for federally-listed or proposed endangered or threatened species in the vicinity of Project activities. This was last done via correspondence with the U.S. Fish and Wildlife Service in October 2003. Their reply on October 23, 2003 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.

In December 2003, the WVDP submitted an inquiry to NYSDEC’s Natural Heritage Program seeking information in the state database of the potential for rare or endangered species or threatened ecological communities within the site premises. Corollary information was received from NYSDEC on January 26, 2004 confirming the absence of known New York State protected or endangered species at the WVDP.

Current Achievements and Program Highlights

The WVDP’s successful high-level radioactive waste vitrification program was the first program to reach completion in the nation. The vitrification facility was closed in September 2002 after a total of 275 containers of HLW had been processed. During July 2003, the WVDP developed and implemented plans for equipment removal and cleanup of the vitrification cell.

Spent Nuclear Fuel Shipment Completed. In 2003, two casks containing spent nuclear fuel were safely transported from the WVDP to the Idaho National Engineering and Environmental Laboratory.

Integrated Safety Management System (ISMS). In August 2003 a self-assessment was conducted to confirm that the WVDP’s integrated environmental, safety, and health management system continues to be effectively implemented at the WVDP. Results from the self-assessment were verified in the DOE’s annual review, conducted in December 2003.

The WVDP continues to demonstrate its commitment to an all-inclusive 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. The WVDP 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, the WVDP was awarded the DOE’s Star of Excellence Award, which is given to sites with outstanding safety programs. The WVDP is the only site to receive this award three 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 are listed in Table ECS-1 (p. ECS-19), together with performance toward each in CY 2001, CY 2002, and CY 2003.

Environmental Management System. The WVDP EMS is integrated with other safety management and work planning processes at the WVDP. In August 2003, the DOE completed an audit of the WVDP environmental compliance program and concluded that required elements of the program are being implemented. Elements of the EMS are outlined in Table ECS-1 (pp. ECS-19 through ECS-23).

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 2003 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 release of contaminated materials and on 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, certain 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 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 potential collective dose to the public associated with each release. As indicated in Table ECS-4 [p. ECS-24], the WVDP did not release any property classified per DOE Order 5400.5 as material containing residual radioactivity in 2003.

Decommissioning and/or Long-Term Stewardship at the WVDP and WNYNSC. Although 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 completing environmental impact statement analyses to support decisions on site decommissioning and/or long-term stewardship. (See also p. ECS-15.) Other important Project goals include safely managing low-level radioactive waste, operating the remote-handled waste facility, and managing contaminated groundwater on the north plateau.

Project Assessment Activities in 2003

As the primary contractor for the DOE at the WVDP, WVNSCO maintains a comprehensive review program for proposed and ongoing opera-

tions. Assessments are conducted through formal surveillances and informal programs. Formal surveillances monitor compliance with regulations, directives, and DOE Orders. The informal program 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 2003, overall results reflected continuing, well-managed environmental programs at the WVDP.

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 Elements of the Environmental Management System Implementation at the WVDP

Environmental Policy	The WVDP environmental policy is to conduct all activities, including design, construction, testing, start-up, commissioning, operation, maintenance, and decontamination and decommissioning in a manner appropriate to the nature, scale, and environmental impacts of these activities. The WVDP is committed to full compliance with applicable federal and New York State laws and regulations for the protection of the environment, continual improvement, the prevention and/or minimization of pollution, and public outreach, including stakeholder involvement.
Environmental Aspects and Impacts	<p>When operations have an environmental aspect, WVDP implements the Environmental Management System (EMS) to minimize or eliminate any adverse potential impact. The EMS is a prerequisite for the EPA National Environmental Performance Track awarded by the EPA to the WVDP. Using the EMS, the WVDP evaluates its operations, identifies the aspects of operations that can impact the environment, and determines which of those impacts are significant. The WVDP has determined that the following operational aspects have the potential to affect the environment:</p> <ul style="list-style-type: none"> • Waste generation • Atmospheric emissions • Liquid effluents • Storage or use of chemicals and radioactive materials • Natural resource usage - power and water consumption • Noise • Soil disturbance • Disturbances to endangered species/protected habitats • Contamination areas from historical operations • Other facility-specific compliance aspects.

Table ECS-1 (continued)
Elements of the Environmental Management System
Implementation at the WVDP

Legal and Other Requirements	The WVDP has implemented an environmental regulatory review and assessment process to deliver WVDP-level requirements and guidance to all staff. New or revised requirements (e.g., new regulations) are analyzed to determine their applicability to the WVDP and to identify whether actions are required to achieve compliance. This may involve developing or revising WVDP documents or operating procedures, implementing administrative controls, providing training, installing engineered controls, or increasing monitoring.
Objectives and Targets	<p>The performance-based management system is designed to develop, align, balance, and implement the WVDP's strategic objectives, including environmental objectives. Objectives and targets are developed by calendar year (CY). For the three-year period of CY 2001–2003, the following objectives were also commitments made under the EPA National Environmental Performance Track:</p> <ul style="list-style-type: none"><li data-bbox="630 915 1377 1100">• Commitment 1 - Reduction in routinely-generated hazardous waste - achieve a 62% reduction over the three-year period from the CY 2000 baseline. Results: CY 2001 - 69%, CY 2002 - 90%, CY 2003 - 90%. This goal was exceeded.<li data-bbox="630 1142 1377 1327">• Commitment 2 - Reduction in routine generation of condensate oil wastewater - achieve a 94% reduction over the three-year period from the CY 2000 baseline. Results: CY 2001 - 14%, CY 2002 - 51%, CY 2003 - 96%. This goal was exceeded.<li data-bbox="630 1369 1377 1713">• Commitment 3 - Reduction in total energy use - achieve an 11% reduction over the three-year period from the CY 2000 baseline in combined electric and natural gas usage. Results: CY 2001 - 22% over baseline, CY 2002 - 0.4%, CY 2003 - 5.4%. This goal was not achieved. However, there were no “normalizing” factors considered. Had they been incorporated, it is likely this goal would also have been achieved.

Table ECS-1 (continued)
Elements of the Environmental Management System
Implementation at the WVDP

Objectives and Targets (concluded)	<ul style="list-style-type: none"> • Commitment 4 - Removal of 22% (2,000 feet) of the asbestos in the CY 2000 baseline. <p style="text-align: center;">Results: CY 2001 - 48% (4,354 feet) removed, CY 2002 - 25% (2,213 feet) removed, CY 2003 - 1% (68 feet) removed. This goal was exceeded.</p> <p>Commitments for CY 2004–2006 will be submitted to the EPA for approval in early 2004 as part of the National Environmental Performance Track renewal application.</p>
Environmental Management Program	The WVDP has a pollution prevention program to conserve resources and minimize waste generation. The WVDP has a budgeting system designed to ensure that priorities are balanced and that resources essential to the implementation and control of the EMS are provided.
Structure and Responsibility	All employees at the WVDP have specific roles and responsibilities in key areas, including environmental protection. Environmental and waste management technical support personnel assist the line organization with their environmental responsibilities.
Training, Awareness and Competence	Training on EMS requirements has been provided to staff whose responsibilities include environmental protection. The training program includes general environmental awareness for all employees, regulatory compliance training for select staff, and specific courses for managers, internal assessors, EMS implementation teams, and operations personnel whose work can impact the environment.
Communication and Community Involvement	The WVDP continues to improve processes for internal and external communications on environmental issues. Communications with the local community include monthly meetings with the local Citizen Task Force and meetings with the general public on a quarterly basis. Notable community involvement activities by the WVDP in 2003 included the Annual Food Drive and participation in the United Way Day of Caring.
EMS Documentation	WVDP has comprehensive, up-to-date written environmental policies describing the EMS. Written procedures and manuals tell staff how to control processes and perform work at the WVDP in a manner that protects the environment.

Table ECS-1 (continued)
Elements of the Environmental Management System
Implementation at the WVDP

Document Control	The WVDP maintains a comprehensive electronic document control system to ensure the effective management of procedural documents. When facilities require additional procedures to control their work, document-control protocols are implemented to ensure that workers have access to the current version of procedures.
Operational Control	Operations at the WVDP are evaluated for the adequacy of current controls to prevent impacts to the environment. As needed, additional administrative or engineered controls are identified and plans for upgrades and improvements are developed and implemented.
Emergency Preparedness and Response	The WVDP has an emergency preparedness and response program and specialized staff to provide timely response to hazardous material releases or other environmental emergencies. This program includes procedures for preventing, as well as responding to, emergencies.
Monitoring and Measurement	Liquid effluent and air-emission monitoring helps ensure the effectiveness of controls, adherence to regulatory requirements, and timely identification and implementation of corrective measures. The WVDP has a comprehensive, sitewide environmental monitoring program. Results are reported to regulatory agencies and summarized in this Annual Site Environmental Report. In addition, the WVDP assesses monitoring data for adverse trends to determine site performance, impacts from site conditions, and the need for proactive or corrective measures.
Nonconformance and Corrective and Preventive Actions	The WVDP continues to implement processes that identify and correct problems. This includes a lessons learned program to prevent recurrences, robust self-assessment and environmental assessment programs, and an electronic action tracking system.
Records	EMS-related records, including audit and training records, are maintained to ensure integrity, facilitate retrieval, and protect them from loss.
EMSAudit	To periodically verify that the EMS is operating as intended, assessments are conducted by DOE and its contractors. These assessments are designed to ensure that nonconformances are identified and addressed. In addition, compliance with regulatory requirements is verified through routine inspections, operational evaluations, and periodic assessments and self-assessments.

Table ECS-1 (concluded)
Elements of the Environmental Management System
Implementation at the WVDP

Management Review

In addition to audits, a management review process has been established to involve top management in the overall assessment of environmental performance, the EMS, and progress toward achieving environmental goals. This review also identifies, as necessary, the need for changes to and continual improvement of the EMS.

Table ECS-2
West Valley Demonstration Project 2003 Air Quality
Noncompliance Episodes

Permit Type	Facility	Parameter	Date(s) Exceeded	Description/Solutions
<i>EPANESHAP</i>	<i>All</i>	<i>All</i>	<i>None</i>	<i>None</i>
<i>NYSDEC Air</i>	<i>All</i>	<i>All</i>	<i>None</i>	<i>None</i>
<i>There were no episodes of noncompliance in 2003.</i>				

Table ECS-3
West Valley Demonstration Project 2003 NPDES/SPDES*
Permit Noncompliance Episodes

Permit Type	Outfall(s)	Parameter	No. of Permit Exceptions	No. of Samples Taken	No. of Compliant Samples**	Percent Compliance Samples	Description/ Solutions
SPDES	All	All	3	1,243	1,240	99.8%	Samples analyzed outside allowable holding time./ Sample holding time requirements were reviewed with laboratory personnel.
SPDES	001	Surfactant (as LAS)	1	14	13	92.9%	See above.
SPDES	007	BOD ₅	1	36	35	97.2%	See above.
SPDES	007	TSS	1	36	35	97.2%	See above.
SPDES	Sum of 001, 007, 008	BOD ₅	1	12	11	91.7%	See above.

* 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 of DOE Order 5400.5.

** Sample count provided for outfall(s) identified in the second column, and parameters identified in the third column.

Table ECS-4
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 2003.

Table ECS-5
West Valley Demonstration Project Migratory Bird Nest Depredation Episodes
in 2003

Permit/License Type	Parameter	Permit/License Limit	Total Removed in 2003*
<i>U.S. Fish and Wildlife - Bird Depredation Permit</i>	<i>Removal of Active Barn Swallow Nests</i>	<i>15</i>	<i>0</i>
<i>U.S. Fish and Wildlife - Bird Depredation Permit</i>	<i>Removal of Active American Robin Nests</i>	<i>15</i>	<i>0</i>
<i>U.S. Fish and Wildlife - Bird Depredation Permit</i>	<i>Removal of Active Eastern Phoebe Nests</i>	<i>5</i>	<i>1</i>
<i>NYSDEC - Bird Depredation License</i>	<i>Removal of Migratory Bird Nests</i>	<i>Not limited</i>	<i>10</i>

* Removed under terms of permit issued in 2002 and modified in 2003.

Table ECS-6
Status of EPCRA Reporting in 2003

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>Not Required</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-7
Reportable Chemicals Above Threshold Planning
Quantities Stored at the WVDP in 2003

<i>Hydrogen peroxide solution (35%)</i>	<i>Gasoline</i>
<i>Liquid nitrogen</i>	<i>Ion-exchange media</i>
<i>Oils - various grades</i>	<i>Sodium hydroxide</i>
<i>Portland cement</i>	<i>Sulfuric acid</i>
<i>Diesel fuel #2</i>	

Table ECS-8
West Valley Demonstration Project Environmental Permits

<i>Permit Name and Number</i>	<i>Agency/Permit Type</i>	<i>Description</i>	<i>2003 Changes</i>	<i>Status</i>
West Valley Demonstration Project RCRA Part A Permit Application	NYSDEC/Hazardous Waste	Provides interim status under RCRA for treatment and storage of hazardous waste	No changes to Part A. A request for a Part B Permit Application was received in July 2003. The application is currently under development.	No expiration date.
Article 19 State Facility Air Permit (9-0422-00005/00091)	NYSDEC/Air Emissions	Sitewide 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 	None	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 1/1/97. 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	Renewed on 9/10/03 with no changes.	A draft permit modification addressing storm water discharges, monitoring modifications, and other items is expected in 2004.

Table ECS-8 (concluded)
West Valley Demonstration Project Environmental Permits

Permit Name and Number	Agency/Permit Type	Description	2003 Changes	Status
Buffalo Pollutant Discharge Elimination System (03-05-TR096)	Buffalo Sewer Authority/sanitary sewage and sewage sludge disposal	Permit issued to hauler of waste from the wastewater treatment facility	Renewed 6/30/03.	Hauler must renew permit by 6/30/04.
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	New registration issued 6/19/03. Ammonia tank permanently closed and deleted from registration effective 6/19/03.	Registration expires 7/5/05.
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 (DWP03-002)	New York State Division of Fish and Wildlife	State license for the removal of all nests of migratory birds	License amended and renewed on 7/8/03.	NYS license expires 5/31/04. Renewal request has been submitted.
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 renewed and modified on 6/23/03.	Permit expires 5/31/04. Renewal request has been submitted.

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