
ENVIRONMENTAL COMPLIANCE SUMMARY

CALENDAR YEAR 2001

Compliance Program

The West Valley Demonstration Project (WVDP) is currently focusing on several goals that will lead to eventual site closure. Processing of the high-level liquid waste into durable, solid glass is almost complete, and the WVDP is now working on removing and vitrifying residual radioactivity remaining in the high-level waste tanks. In addition, the WVDP is shipping low-level waste, constructing a remote-handled waste facility, actively managing on-site groundwater contamination, preparing for the shipment of spent nuclear fuel, and cleaning up facilities not presently used in anticipation of eventual closure.

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 federal 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 environ-

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

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 such as permitting, reporting, inspecting, and self-auditing.

In addition, because the emission 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 that are intended to protect human health and the environment. The WVDP applies to NYSDEC and the EPA for per-

mits that allow the site to release limited amounts of radiological and nonradiological constituents through controlled and monitored discharges into water and air in concentrations that have been determined to be safe for humans and the environment. In general, the permits describe the discharge 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 on 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. 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 be protected from radioactive contamination to the extent practical.

This report summarizes radiological releases from the WVDP in 2001, presents estimates of dose to the public and the environment in 2001, and compares these values with release and dose standards established by DOE Order 5400.5. (See Appendix K [p. K-3].) In 2001, 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, transuranic waste, low-level waste, 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. Compliance with the Order was required by July of 2000.

The WVDP prepared an Implementation Plan for DOE Order 435.1 and submitted the plan to the DOE in June of 2000. The WVDP Radioactive Waste Acceptance Program, a formal document describing how radioactive waste is managed at the WVDP, was issued in July of 2000. Both the Implementation Plan and the Radioactive Waste Acceptance Program were updated in 2001.

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 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 the labeling, packaging, and spill-reporting provisions for hazardous and mixed wastes while in transit.

A 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 RCRA 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 modifications met the requirements for changes to interim status treatment and storage operations at the WVDP.

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 1.3 tons (1.18 metric tons) of nonradioactive hazardous waste to off-site TSDFs in 2001.

Off-site hazardous waste shipments and their receipt at designated treatment, storage, or disposal facilities 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. One exception report was completed in February 2001 for a November 2000 shipment. (Confirmation of the shipment had been made, however, the signed copy of the manifest was not received until after the forty-five-day requirement.)

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 2001 was submitted to NYSDEC by March 1, 2002.

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 2001 and submitted to NYSDEC.

An annual inspection to assess compliance with hazardous waste regulations was conducted by NYSDEC on March 29, 2001. No deficiencies were noted.

Nonhazardous, Regulated Waste Management Program. The WVDP shipped approximately 125 tons (113 metric tons) of nonradioactive, nonhazardous material off-site to solid waste management facilities in 2001. Of this amount, 2.1 tons (1.9 metric tons) were recycled or reclaimed. Some of the recycled materials were lead-acid batteries, nonhazardous oils such as motor oil, hydraulic oil, and compressor oil, 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-10].) The WVDP also shipped approximately 893 tons (810 metric tons) of digested sludge and untreated wastewater from the site sanitary and industrial wastewater treatment facility to the Buffalo Sewer Authority for treatment.

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 annually 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. 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 September 3, 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 to September 30, the end of the DOE fiscal year. A draft update of the fiscal year 2001 activities was presented to DOE for review and comment in October 2001. DOE comments were incorporated into the update and forwarded to NYSDEC before the due date of February 15, 2002.

Shipments of mixed waste to off-site TSDFs for treatment and disposal are documented via uniform Hazardous Waste Manifests. In 2001 the WVDP made four mixed waste shipments. A total of 12.7 tons (11.5 metric tons) were shipped off-site for treatment and disposal.

RCRA §3008(h) Administrative Order on Consent. The DOE and NYSERDA entered into a RCRA §3008(h) Administrative Order on Consent with NYSDEC and the EPA in March 1992. The Consent Order required NYSERDA and the DOE's West Valley Demonstration Project Office (OH/WVDP) to conduct RCRA-facility investigations (RFIs) at 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. As a result of

the RFIs, no corrective actions were required. Groundwater monitoring as specified in the RFI reports continued to be a significant portion of the WVDP groundwater monitoring program during 2001. The WVDP also continued to monitor SWMUs and to comply with the requirements of the RCRA §3008(h) Administrative Order on Consent. (Monitoring results are detailed in Chapter 3.)

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. West Valley Nuclear Services Co. (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 into other nonvitrification sources. See Chapter 1 (p. 1-12) for a detailed discussion of waste minimization activities from all sources in 2001.

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 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 bioventing system, installed in August 1999 to remediate localized petroleum-contaminated soils, 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.

This system continued operating during 2001, except during required maintenance. It is checked daily by site operations personnel, and the combined effluent airflow from the extraction wells is monitored weekly for total volatile organic compounds (VOCs) using a photoionization detector.

The system was assessed in August 2001. Results of this assessment indicated that the system is meeting its intended purpose of providing an oxygen supply to stimulate biodegradation of contaminants present in the subsurface soils. A report was transmitted to NYSDEC in September 2001.

There are no underground bulk chemical 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 measure the current reserves, 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 2001 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 remainder contain diesel fuel. The Quality Assurance department inspects the aboveground petroleum tanks every month.

Nine of the chemical storage tanks are used as needed to contain nitric acid or nitric acid mixtures. Sodium hydroxide and anhydrous ammonia are stored in the remaining two tanks. 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 is unnecessary.) The WVDP is in compliance with the most recent requirements to upgrade chemical bulk storage tanks that went into effect in December 1999.

Medical Waste Tracking. Medical waste poses a potential for humans to be exposed to infectious diseases and pathogens from contact with human 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. Eleven pounds (5 kg) of medical waste consisting of dressings, protective clothing such as rubber gloves, and needles, syringes, and other sharps were generated and disposed in 2001.

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 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, either the EPA or 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. All other air pollutants are regulated by NYSDEC.

Radiological Emissions. Air emissions of radionuclides from point sources 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 lagoons also do not require permits. Emissions from all these sources are quantified for reporting to the EPA. The WVDP reports the radionuclide emissions from its non-permitted and permitted sources to the EPA annually in accordance with NESHAP regulations. Calculations to demonstrate compliance with NESHAP radioactive dose limits showed

calendar year 2001 doses to be less than 0.1% of the 10 millirem standard. (See Table 4-2 [p. 4-6].)

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 NO_x and 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 are capped at 99 tons each. A DOE compliance surveillance performed in August 2001 verified that all conditions of this permit were being met.

The permit describes the conditions of the NO_x and SO₂ 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 SO₂ emission totals. The WVDP is required to submit only an annual site emission report, in January, that contains NO_x and SO₂ emission totals. The 2001 certification reported 4.81 tons of NO_x and 0.06 tons of SO₂, which were well below the 99-ton cap for each category.

The WVDP also conducts cylinder gas audits every quarter but is no longer required to conduct relative accuracy test audits of the melter off-gas NO_x analyzers. A summary of quarterly cylinder gas audit results are incorporated in the annual site emission report.

The air permits that were in effect at the WVDP in 2001 are included on the West Valley Demonstration Project Environmental Permits table (pp. ECS-22 and 23). There were no air permit or regulatory exceedances in 2001. (See also the West Valley Demonstration Project 2001 Air Quality Noncompliance Episodes table [p. ECS-20].)

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. 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 2001. (See also the Status of EPCRA Reporting table [p. ECS-21].)

- WVDP representatives participated in semiannual 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 training drills and in information exchanges concerning hazardous-substance management at the WVDP.

- 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, 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 the emergency responders have current information about hazardous chemicals at the WVDP. No new chemicals were added to the hazardous chemicals list in 2001 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. Fourteen reportable chemicals above threshold planning quantities were stored at the WVDP in 2001. (A list of reportable chemicals is provided on 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 2001 the WVDP used one chemical above the regulatory reporting threshold amount of 10,000 lbs. – nitric acid. Thus, the TRI report for this chemical will be filed with the EPA by July 1, 2002.

Clean Water Act (CWA). 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 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.)

In addition, 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 Clean Water Act as those satisfying specific technical criteria related to vegetation, soils, and hydrologic conditions. The WVDP notifies the U.S. Army Corps of Engineers 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 200-acre (80-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 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.

In December 1999 a Joint Application for Permit was submitted to NYSDEC and the U.S. Army Corps of Engineers 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 Army Corps of Engineers and a Water Quality Certification and Freshwater Wetlands permit was obtained from NYSDEC for these activities.

An additional wetland unit at the foot of the Lake No. 1 dam was delineated in August 2000 to verify

permitting requirements for improvements to the dam. NYSDEC and the Corps of Engineers reviewed the wetland mapping and the associated information and subsequently determined that these improvements were not within their permitting jurisdiction. The improvements were completed in 2001. The purpose of the railroad spur and dam improvements was to facilitate off-site shipment of spent nuclear fuel.

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.

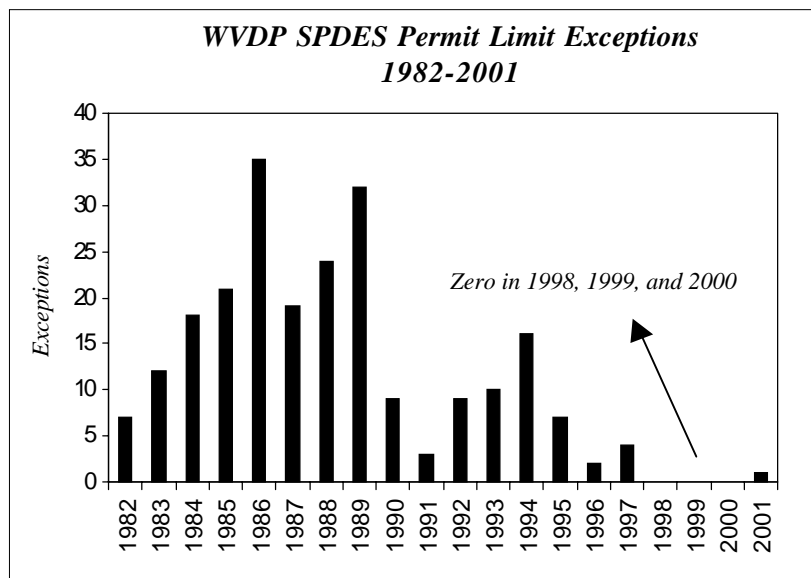
In April 1996 the WVDP obtained storm water characterization data through sampling and analysis and submitted an application for a modification of the SPDES permit to address overall site storm water discharges.

A 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. The permit modification is not expected until 2003.

A draft modified SPDES permit was issued by NYSDEC on December 11, 2001 for public comment. This modification includes a new effluent limit for mercury at outfall 001 and authorizes increased flows from the north plateau groundwater treatment project.

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 four SPDES-permitted compliance points for discharges to Erdman Brook and Frank's Creek.

- Outfall 001 (WNSP001) discharges treated wastewater from the low-level waste treatment facility (LLWTF) and the north plateau groundwater recovery system. (See North Plateau Groundwater Recovery System [p. ECS-12] and Chapter 3, Special Groundwater Monitoring [p. 3-15].) The treated wastewater is held in lagoon 3, sampled and analyzed, and periodically released after notifying NYSDEC. In 2001 the treated wastewater from the LLWTF was discharged at WNSP001 in five batches totaling 8.4 million gallons (31.9 million liters) for the year. The annual average concentration of radioactivity at the point of release was approximately 33% of the DOE derived concentration guides (DCGs). None of the individual releases exceeded the DCGs. (See *derived concentration guide* in the Glossary [p. GLO-2] and in Chapter 1 [p. 1-5].)



(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 on the chart above, 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. In 2001 one exception was recorded at the french drain outfall

- Outfall 007 (WNSP007) discharges the effluent from the site sanitary and industrial wastewater treatment facility, 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 2001 was 18,000 gallons (68,100 liters).

- Outfall 008 (WNSP008) discharges groundwater and surface water runoff directed from the northeast side of the site's LLWTF lagoon system through a french drain. The average daily flow at WNSP008 in 2001 was 1,790 gallons (6,770 liters) until it was capped off in May 2001.

- 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 during discharge of lagoon 3. Before discharge of lagoon 3, sample data for total dissolved solids

008 due to an elevated concentration of lead. The elevated concentration was believed to be caused by silt accumulation and reduced flow typical of an aging groundwater drain system. (See also p. ECS-20.)

In March 2001 NYSDEC conducted its annual facility inspection. At the request of the inspector, the SPDES outfalls, the sanitary and industrial wastewater treatment facility, and the LLWTF were observed. No deficiencies were noted during the inspection.

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) a year to approximately 10.5 million gallons (39.7 million liters) a 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 high-level radioactive waste.)

A draft SPDES permit modification addressing both mercury and the proposed flow increase from the north plateau groundwater recovery system was issued for public comment in December 2001. A final permit addressing these changes is expected in 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 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 25 million gallons (96 million liters) of groundwater have been processed through the system since its inception, including about 3.4 million gallons (13 million liters) in 2001.

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 a portion of the contaminated groundwater in this area is entering and being treated by the PTW. Based on the results of a detailed evaluation in early 2001, additional soil borings and monitoring wells were installed to further evaluate PTW performance and surrounding hydrogeologic conditions.

Petroleum- and Chemical-Product Spill Reporting. The WVDP has a Spill Notification and Re-

porting 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 main plant 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 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 2001.

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 Toxic Substances Control Act (TSCA). No chemical spills or releases exceeded reportable quantities and, thus, no reporting during calendar year 2001 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 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 sample of WVDP drinking water every month to determine bacterial and residual chlorine content. Analysis of the microbiological samples collected in 2001 produced satisfactory results and the free chlorine 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 New York State Department of Health (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. Because sampling for lead

and copper in 1997, 1998, and 1999 indicated that all results were below the action levels for these metals, the next scheduled sampling for lead and copper will be in 2002.

The Cattaraugus County Health Department conducted its annual inspection of the WVDP water supply system on November 8, 2001. No findings or notices of violation were issued.

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

Asbestos-Containing Material (ACM). In 2001 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., October 26, 1999). 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 2001 included the repair or abatement of damaged/friable ACM, removal of approximately 760 linear feet of ACM insulation from abandoned lines, removal of approximately 3,438 square feet 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 (PCBs). Because PCBs are regulated as a hazardous waste in New York State, the WVDP continued in 2001 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 2001 Update (West Valley Nuclear Services Co., February 6, 2002).

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 PCB wastes to be stored for more than one year (40 CFR Parts 750 and 761).

National Environmental Policy Act (NEPA). The National Environmental Policy Act, 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 were identified as the designated national DOE disposal sites for these waste types (Volume 65, Federal Register, p. 10061 [65 FR 10061]). In 2001 West Valley successfully completed the program approval process for access to the Nevada Test Site, and on July 17, 2001 received approval to ship. The WVDP subsequently completed two low-level waste shipments to the Nevada Test Site in 2001, which were the first West Valley low-level waste shipments made to a non-commercial disposal site.

Completion of the WVDP and Closure of the WNYNSC. The DOE and NYSERDA resumed efforts in 2001 to reach agreement on a preferred alternative and agency responsibilities for completion of the WVDP and closure or long-term management of the WNYNSC. Also in 2001, DOE formally initiated its plan to revise the scope of the existing EIS by splitting that scope into two separate documents: one EIS for near-term waste management and one EIS for final decommissioning and/or long-term site stewardship.

DOE published a Federal Register Notice of Intent (NOI) in March 2001 (66 FR 16447) formally announcing its rescoping plan and preparation of the waste management EIS. A draft of DOE's

EIS for waste management is being prepared for public review and comment.

DOE also published an Advance NOI in November 2001 (66 FR 56090) announcing DOE's commitment to begin work on the decommissioning and/or long-term stewardship EIS.

Migratory Bird Treaty Act. The WVDP monitors Project activities to ensure continued compliance with the requirements of both the Migratory Bird Treaty Act and the Endangered Species Act. A New York State Fish and Wildlife License allows the WVDP to remove nests of migratory birds as needed to avoid the potential spread of radioactive contamination or to otherwise protect the health and safety of Project employees and visitors. The WVDP's license (DWP01-004) was received from NYSDEC on January 23, 2001 and was effective from January 1, 2001 through December 31, 2001. A depredation license renewal was filed with NYSDEC in December 2001.

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. In 2002 a request was forwarded to the U.S. Fish and Wildlife Service requesting an update of the status of endangered and threatened (or proposed candidate species) and critical habitats that may be present in the areas of Cattaraugus and Erie Counties in New York.

Current Achievements and Program Highlights

The WVDP's successful high-level waste vitrification program is one of only two such programs operating in the nation.

Phase II Vitrification. Phase II of vitrification, processing the high-level waste residuals (heels) in storage tank 8D-2, continued in 2001. Ten glass canisters were filled during this phase of operation, bringing the total number processed to 264 canisters since operations began in 1996.

Considerable progress has been made in the development and deployment of radiological instrumentation for remote surveying and sampling of the interior surfaces of the high-level waste tank 8D-2. This includes the use of beta/gamma detection systems, a gamma camera, neutron detectors, and use of a burnishing sampler tool. Access to the tank is through tank riser openings. These devices are moved within the tank using remote-controlled arms. Data acquired through the use of these devices will yield technical information about tank contents necessary for future decision making.

Additional noteworthy activities associated with the high-level waste include an acid flush of the vitrification waste header, an acid soak of tank 8D-4, the development of a waste treatment plan to address isolation of sodium-bearing waste from high-level waste tanks 8D-1 and 8D-2, and reduction of radioactivity in the sodium-bearing waste by utilizing the supernatant treatment system and reducing the volume of residual waste via the liquid waste treatment system evaporator.

Integrated Safety Management System (ISMS). In August 2001 a self-assessment was conducted to confirm that the WVDP's integrated environmental, safety, and health management sys-

tem continued to function as verified in the DOE's annual review in February 2001. 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. WVNSCO has reaffirmed its commitment to DOE's Voluntary Protection Program (VPP). During this reporting period, the annual VPP site evaluation was completed and submitted to DOE. WVNSCO also presented a workshop at the VPP Participants Association National Conference on our Interstate Zero Program. In addition, at the VPP Participants Association National Conference, WVNSCO was awarded DOE's Star of Excellence Award which is given to sites with outstanding safety records.

U.S. EPA National Environmental Achievement Track. The WVDP was recognized as a top environmental leader in 2000 and was accepted into the EPA's National Environmental Achievement 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 (EMS), 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 6,733 kg/year 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 made significant progress in these commitments by:

- completing the asbestos reduction goal in its entirety;
- achieving a hazardous waste reduction equivalent to 81% from the baseline of 6,733 kg for 2001;
- achieving the targeted annual goal for reduction of electrical usage; and
- realizing a cost avoidance of 3.3% for both electrical and gas usage as a result of installing the heating, ventilation, and air conditioning tracking database and optimizing all set points.

Environmental Management System (EMS). 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.

The WVNSCO EMS satisfies the requirements of both the Code of Environmental Management Principles (CEMP) for federal agencies and 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 2001 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, 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 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. The WVDP did not release any property classified per DOE Order 5400.5 as material containing residual radioactivity in 2001. (See also the Release of Property Containing Residual Radioactive Material table [p. ECS-20].)

Flood Protection: Water-Supply Dam Repairs. In 1998 an inspection by NYSDEC of the site's two water-supply reservoir dams and the emergency spillway showed that a localized area near dam #1 had slumped and, although the dam was structurally sound, repairs were needed. Plans and permit applications for the repairs and improvements were filed with NYSDEC and the Corps of Engineers in October 2000. NYSDEC concurred with the plans and the Corps determined that no permit was required. Work began in the fall of 2000 and was completed in spring 2001. NYSDEC completed its inspection of the repairs to dam #1 and no deficiencies were identified.

Completion of the WVDP and Closure of the 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 Idaho; completing high-level waste vitrification; and completing environmental impact statement

analyses to support decisions on waste management, site decommissioning, and/or long-term stewardship. (See also p. ECS-14.) Other important Project goals include safely managing low-level waste, constructing the Remote-Handled Waste Facility, and managing contaminated groundwater on the north plateau.

Low-Level Radioactive Waste Shipment. An event involving low-level radioactive waste shipped from the WVDP to the Nevada Test Site occurred on July 30, 2001 in West Wendover, Nevada. A breach in one of the waste containers allowed some absorbent material to be released from the container. No release of radioactive material from the waste containers occurred. (See also Low-level Waste Shipping Program in Chapter 1 [p. 1-12].) As a result of this event, an internal (WVDP) and external (DOE) review of the incident was conducted to determine root causes and contributing causes and to identify corrective actions to prevent such events in the future. A corrective action plan was developed and determined to be acceptable to allow resumption of waste shipments to the Nevada Test Site.

On-Site Contamination Event. During routine radiation work surveys conducted in mid-November 2001, fixed radioactivity was found on-site in unexpected locations close to the main process building. The small spots of contamination were limited to an area immediately north, and to a lesser extent southeast, of the main plant stack. Upon discovery, the area involved was promptly isolated and decontaminated. On-site personnel were surveyed and no personnel contamination was found. Additionally, environmental monitoring data were checked and the data indicated that contamination did not spread off-site.

An extensive investigation was carried out to determine the origin of the contamination. Careful evaluation of radiological monitoring data, opera-

tions records, and meteorological (weather) information helped to confirm that the contamination was the result of small amounts of cesium-137 from the waste tank farm ventilation system dissolved in condensed water vapor being released from the main plant stack during late September and early October 2001. Although the radioactivity release rate was too low to result in any stack monitoring alarms and the total amount of radioactivity released was well within regulatory limits, an unusual combination of ventilation process and weather conditions did result in an unexpected local deposition of radioactivity. (See Unplanned Radiological Releases in Chapter 1 [p. 1-11].) Corrective measures were put into effect to help prevent condensation of water vapor in process ventilation lines and to preclude recurrence of such an event in the future.

Project Assessment Activities in 2001

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 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 2001 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.

**West Valley Demonstration Project 2001 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 2001.

**West Valley Demonstration Project 2001 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	Date(s) Exceeded	Description/Solutions
SPDES	008	Total Recoverable Lead	1	14	13	93%	4/18/01 - 5/04/01	Caused by silt accumulation and reduced flow typical of an aging groundwater drain. Drain pipe was sealed.

**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.*

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 activity was released in 2001.

Status of EPCRA Reporting in 2001

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

***Reportable Chemicals Above Threshold Planning
Quantities Stored at the WVDP in 2001***

Anhydrous ammonia	Zinc bromide solution
Ferric hydroxide slurry	Diesel fuel #2
Hydrogen peroxide solution (35%)	Gasoline
Liquid nitrogen	Ion-exchange media
Lubricating oils	Nitric acid
Portland cement	Sodium hydroxide
Silicon dioxide	Sulfuric acid

West Valley Demonstration Project Environmental Permits

Permit Name and Number	Agency/Permit Type	Description	2001 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	Application changes include remote-handled waste facility, contact size-reduction facility, storage in tanks 8D-1 and 8D-2, and additional storage and treatment capacity.	No expiration date. Received letter from NYSDEC that Part A application modification is complete and meets the regulatory requirements.
Article 19 State Facility Air Permit 90422-00005/00091	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 • vitrification facility heating, ventilation, and air conditioning (HVAC) system • vitrification off-gas treatment system (melter) 	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.

West Valley Demonstration Project Environmental Permits (concluded)

Permit Name and Number	Agency/Permit Type	Description	2001 Changes	Status
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 (NY-0000973)	NYSDEC/Water	Covers discharges to surface waters from various on-site sources	Renewed effective 2/1/99. Expires 2/1/04. Draft permit modification issued for public comment on December 11, 2001.	NYSDEC has prepared a draft permit modification for a groundwater recovery system discharge increase. Permit terms for NYSDERDA and DOE responsibilities related to storm water discharges are being negotiated with NYSDEC.
Buffalo Pollutant Discharge Elimination System (01-04-TR096)	Buffalo Sewer Authority/Sanitary sewage and sewage sludge disposal	Permit issued to hauler of waste from the wastewater treatment facility	Renewed 6/30/01.	Hauler must renew permit by 6/30/02.
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 renew 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 renew before expiration.
Bird depredation license (DWP01-004)	New York State Division of Fish and Wildlife	State license for the removal of inactive nests of migratory birds	License renewed.	CY 2001 NYS license expired 12/31/01. License for 2002 became effective 4/5/02.

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