ENVIRONMENTAL COMPLIANCE SUMMARY

CALENDAR YEAR 2005

Compliance Program

The United States (U.S.) Department of Energy (DOE) is currently focusing on several goals at the West Valley Demonstration Project (WVDP or Project) in support of completion of the WVDP Act. (See Appendix K CD.) Activities during 2005 included increased processing and packaging of low-level radioactive waste (LLW) inventories for off-site shipment and disposal, dismantling the former vitrification waste processing cell and removing the radioactive waste, continued operation of the remote-handled waste facility, reducing infrastructure, and continued treatment of radioactively contaminated groundwater.

Activities at the WVDP are regulated by various federal and state public, worker, and environmental protection laws. 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. Table ECS-1 summarizes the WVDP's compliance status with applicable environmental statutes, DOE directives, and executive orders.

Because release of radiological and nonradiological materials from an active facility cannot be completely prevented, the EPA, NYSDEC, and DOE have established standards for effluents that are intended to protect human health, safety, and the environment. The DOE applies to the EPA for permits to release limited amounts of radiological constituents to the air and applies to NYSDEC for permits to release limited amounts of nonradiological constituents to the air and water in concentrations determined to be safe for humans and the environment. In general, the permits describe release points, specify management and reporting requirements, list discharge 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-2. No releases above allowable permit or regulatory limits occurred in 2005.

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, required that DOE sites implement an

Table ECS-1
Compliance Status Summary for the WVDP in 2005

Citation	*Environmental Statute, DOE Directive, Executive Order*	*WVDP Compliance Status*	*Location in 2005 ASER*
42 United States Code (USC) §2011 *et seq*.	The **Atomic Energy Act** (AEA) of 1954 was enacted to assure the proper management of source, special nuclear, and by-product material. The AEA and the statutes that amended it delegate the control of nuclear energy primarily to the DOE, the Nuclear Regulatory Commission (NRC), and the EPA.	See discussions of the WVDP Act and of DOE Orders 435.1, 450.1, and 5400.5.	Environmental Compliance Summary
Public Law 96-368	The **West Valley Demonstration Project Act of 1980** (WVDP Act) authorized the DOE to carry out a high-level liquid nuclear waste demonstration project at the Western New York Service Center in West Valley, New York.	The DOE is focusing on goals that will lead to completion of activities listed in the WVDP Act.	Executive Summary; Introduction; Appendix K
DOE Order 450.1	DOE O 450.1, **Environmental Protection Program**, required implementation of an EMS for conducting work at DOE sites to protect the air, water, land, and other natural and cultural resources impacted by DOE operations.	The WVDP EMS is integrated with other site safety management and work planning processes.	Environmental Compliance Summary; Chapter 1
DOE Order 5400.5	DOE Order 5400.5, **Radiation Protection of the Public and the Environment**, established standards and requirements for operations of the DOE and DOE contractors with respect to protecting members of the public and the environment against undue risk from radiation.	Estimated doses from airborne and waterborne releases to the maximally exposed off-site individual in 2005 were 0.05% of the 100 mrem standard, and about 0.02% of natural background radiation.	Environmental Compliance Summary; Chapter 2; Appendices C, D, and K
DOE Order 231.1A	DOE O 231.1A, **Environment, Safety, and Health Reporting,** was issued to ensure timely collection, reporting, analysis, and dissemination of information on environment, safety, and health issues as required by law or regulations or as needed to ensure that the DOE and National Nuclear Security Administration are kept fully informed on a timely basis about events that could adversely affect the health and safety of the public or the workers, the environment, the intended purpose of DOE facilities, or the credibility of the DOE.	This WVDP Annual Site Environmental Report (ASER) is prepared and submitted annually in compliance with DOE O 231.1A.	Entire 2005 WVDP ASER
DOE Order 435.1	DOE O 435.1, **Radioactive Waste Management,** was issued to ensure that all DOE radioactive waste is managed in a manner that is protective of worker and public health and safety, and the environment.	Management of radioactive waste at the WVDP is conducted in accordance with written site policies, procedures, and manuals.	Environmental Compliance Summary; Chapter 1

Table ECS-1 (continued)
Compliance Status Summary for the WVDP in 2005

Citation	*Environmental Statute, DOE Directive, Executive Order*	*WVDP Compliance Status*	*Location in 2005 ASER*
42 USC §6901 *et seq* . New York State (NYS) Environmental Conservation Law (ECL)	The **Resource Conservation and Recovery Act (RCRA)** of 1976 and the **New York State Solid Waste Disposal Act** (NYS ECL Article 27 [Title 9]) govern the generation, storage, handling, and disposal of hazardous wastes and closure of tank systems that handle these wastes. RCRA was enacted to ensure that hazardous wastes are managed in a way that protects human health, safety, and the environment.	Generation, storage, handling, and disposal of hazardous waste, and closure of tank systems that handle hazardous waste at the WVDP, are conducted in accordance with the RCRA Part A Permit Application and interim status regulatory requirements, as well as the RCRA §3008(h) Administrative Order on Consent. Activities are compliant with written site procedures. Compliance was verified by inspections in 2005.	Environmental Compliance Summary; Chapter 4
Amendment to 42 USC §6961	The **Federal Facilities Compliance Act (FFCA)** of 1992 (an amendment to RCRA) clarified provisions concerning the application of certain requirements and sanctions to federal facilities.	An Order of Consent, negotiated under the FFCA, was executed between NYSDEC and DOE in 1996. The order establishes commitments regarding compliance with the Site Treatment Plan (STP) for mixed waste inventories at the WVDP.	Environmental Compliance Summary
NYS Navigation Law and ECL	NYS Navigation Law, Article 12, et seq.; NYS ECL, Article 17 (Titles 10 and 17); and Article 40. These articles regulate design, operation, inspection, maintenance, and closure of aboveground bulk petroleum and bulk chemical storage tanks. They also regulate spill reporting and cleanup.	There are 10 registered bulk storage tanks that are periodically inspected and maintained. Spills are reported and cleaned up in accordance with written policies and procedures. In 2005, there were no spills in excess of the reportable quantities.	Environmental Compliance Summary; Chapter 1
Executive Orders (E.O.) 13101 and 13148	E.O. 13101, **Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition**, promotes the use of recycled and environmentally preferable products and services by federal agencies. E.O. 13148, **Greening the Government Through Leadership in Environmental Management**, specifies that heads of federal agencies are responsible for integrating environmental accountability into agency day-to-day decision-making and long-term planning processes.	Waste minimization, pollution prevention, recycling, and affirmative procurement objectives are achieved in accordance with written site policies and procedures.	Environmental Compliance Summary; Chapter 1

Table ECS-1 (continued)
Compliance Status Summary for the WVDP in 2005

Citation	*Environmental Statute, DOE Directive, Executive Order*	*WVDP Compliance Status*	*Location in 2005 ASER*
42 USC §7401 *et seq*.; Title 40 of the Code of Federal Regulations (CFR) 61, Subpart H	The **Clean Air Ac**t of 1970 (CAA) and the **NYS ECL** regulate the release of air pollutants through permits and air quality limits. Emissions of radionuclides are regulated by the EPA via the **National Emission Standards for Hazardous Air Pollutants** (NESHAP) regulations.	In 2005, the DOE maintained one Air Facility Registration Certificate for nonradiological emissions and six NESHAP permits for radiological emissions for the WVDP. Estimated dose from radiological air emissions to the maximally exposed off-site individual in 2005 was 0.01% of the 10 millirem Subpart H standard. Nonradiological emissions of nitrogren oxides and sulfur oxides were less than 10% of the standard for maintaining the registration certificate.	Environmental Compliance Summary; Chapters 2 and 3; Appendix D
42 USC §11001 *et seq*.	The **Emergency Planning and Community Right-to-Know Act** of 1986 (EPCRA) was designated to help local communities protect public health, safety, and the environment from chemical hazards.	The WVDP's chemical inventory was reported in 2005. No further reporting was required.	Environmental Compliance Summary
33 USC §1251 *et seq*.	The **Federal Water Pollution Control Act** (Clean Water Act [CWA]) and **NYS ECL** seek to improve surface water quality by establishing standards and a system of permits. Wastewater and storm water discharges are regulated by NYSDEC permits through the State Pollutant Discharge Elimination System (SPDES). Discharges of fill material are regulated through permits issued by the ACOE and water quality certifications issued by NYSDEC.	In 2005, no SPDES exceedences were noted. Monitoring of storm water under the SPDES permit was added in 2005. Compliance with permit requirements was confirmed by inspections in 2005. A fill discharge permit from the ACOE expired in 2005 as the work was completed.	Environmental Compliance Summary; Chapter 3; Appendix C
NYS ECL, Article 15, Title 5, *et seq*.	NYS ECL, Title 5, **Protection of Water** regulates the safety of dams and other surface water impounding structures, including construction, inspection, operation, maintenance and modification of these structures.	The two surface water impounding dam structures on the Western New York Nuclear Services Center (WNYNSC) have been periodically inspected and properly maintained.	Environmental Compliance Summary
E.O. 11990	E.O. 11990, **Protection of Wetlands**, directs federal agencies to avoid, where possible, impacts (e.g., destruction, modification, or new construction) that would adversely effect wetlands wherever there is a practical alternative. Activities in wetlands are regulated by the ACOE and NYSDEC permits.	Wetlands on the WVDP have been identified, delineated, and mapped. In 2005, NYSDEC approved the wetland delineation report and the ACOE performed a field verification wetland assessment.	Environmental Compliance Summary

Table ECS-1 (continued)
Compliance Status Summary for the WVDP in 2005

Citation	*Environmental Statute, DOE Directive, Executive Order*	*WVDP Compliance Status*	*Location in 2005 ASER*
42 USC §300f *et seq.*	The **Safe Drinking Water Act** of 1974 (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 in New York is overseen by NYSDOH through the NYS Public Health Law and county health departments.	CY 2005 results from analyses of drinking water were reported to the Cattaraugus County Health Department (CCHD). All test results were within drinking water limits.	Environmental Compliance Summary; Chapter 2; Chapter 3; Appendix C
15 USC §2601 *et seq* .	The **Toxic Substances Control Act** of 1976 (TSCA) was enacted to give the EPA the ability to track industrial chemicals produced or imported into the U.S.	Asbestos-containing materials and polychlorinated biphenyls (PCBs) are managed in accordance with written site policies and procedures.	Environmental Compliance Summary
42 USC §4321 *et seq.*	The **National Environmental Policy Act** of 1969 (NEPA) established a national policy to ensure that protection of the environment is included in federal planning and decision-making.	Alternatives for management of WVDP LLW, mixed waste, high-level waste (HLW), and transuranic (TRU) wastes were evaluated in a Waste Management Environmental Impact Statement (EIS). In 2005 the Record of Decision (ROD) was issued.	Environmental Compliance Summary
16 USC §703 *et seq.*	The **Migratory Bird Treaty Act** of 1918 implements various treaties and conventions between the U.S. and foreign countries for the protection of migratory birds. Under the Act, taking, killing, or possessing migratory birds is unlawful.	The DOE maintains, and complies with, a NYS Division of Fish and Wildlife Bird Depredation License and a U.S. Fish and Wildlife Bird Depredation Permit for the WVDP.	Environmental Compliance Summary
16 USC §1531 *et seq.*	The **Endangered Species Act** of 1973 provides for the conservation of endangered and threatened species of fish, wildlife, and plants.	Several ecological surveys of the WVDP premises have been conducted. Except for "occasional transient individuals," no plant or animal species protected under this Act are known to exist at the WVDP.	Environmental Compliance Summary
7 USC §136 *et seq.*	The **Federal Insecticide, Fungicide, and Rodenticide Act** of 1996 (FIFRA) and **NYS ECL** provide for EPA and NYSDEC control of pesticide distribution, sale, and use.	Chemical pesticides are applied at the WVDP only after alternative methods are evaluated by trained and NYSDEC-certified professionals and determined to be unfeasible.	Environmental Compliance Summary

Table ECS-1 (concluded)
Compliance Status Summary for the WVDP in 2005

Citation	*Environmental Statute, DOE Directive, Executive Order*	*WVDP Compliance Status*	*Location in 2005 ASER*
16 USC §470	The **National Historic Preservation Act** of 1966 established a program for the preservation of historic properties throughout the nation.	Surveys have been conducted of the WNYNSC for historic and archaeological sites.	Results are summarized in EIS documents and are not reported in the ASER.
42 USC §9601 *et seq.*	The **Comprehensive Environmental Response, Compensation, and Liability Act** of 1980 (CERCLA, including the **Superfund Amendments and Reauthorization Act** of 1986 [SARA]) provides the regulatory framework for remediation of releases of hazardous substances and remediation of inactive hazardous waste disposal sites.	Based on the results of a Preliminary Assessment Report prepared for the DOE, it was determined that the WVDP did not qualify for listing on the National Priorities List. Therefore, no further investigation pursuant to CERCLA was warranted. However, if a spill exceeds a reportable quantity, CERCLA reporting requirements may be triggered. The WVDP annually reports chemical inventories under EPCRA (also known as SARA Title III) as appropriate.	Environmental Compliance Summary
E.O. 11988	E.O. 11988, **Floodplain Management**, was issued to avoid adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.	No activities were performed at the site that would impact the 100-year flood plain within the WVDP premises.	Environmental Compliance Summary

environmental management system (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.

Environmental Management System. 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 discussed in Chapter 1 and summarized in Table 1-1.

Integrated Safety Management System (ISMS). The EMS is an important part of the WVDP ISMS. Sitewide management continues to demonstrate commitment to an all-inclusive approach to safety through ongoing efforts to strengthen its integrated safety management program and by encouraging worker involvement.

In November 2005, a self-assessment was conducted to confirm that the WVDP's integrated environmental, safety, and health management system continues to be effectively implemented. Results from the self-assessment were verified in the DOE's annual review, completed in December 2005, when the DOE-WVDP Ohio Field Office submitted a report to DOE Headquarters declaring that the WVDP meets the EMS requirements specified in DOE Order 450.1.

Radiation Protection of the Public and the Environment (DOE Order 5400.5). Objectives of DOE Order 5400.5 are 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 nonroutine releases are monitored and dose to the public is assessed, and (4) the environment is protected from radioactive contamination to the extent practicable.

This ASER summarizes radiological releases from the WVDP in 2005, presents estimates of dose to the public and the environment, and compares these values with release and dose standards established by DOE Order 5400.5. (See Appendix K[CD] and Chapter 2.) In 2005, both releases and estimates of dose to the public were well within applicable limits.

Radioactive Waste Management (DOE Order 435.1). Radioactive wastes at the WVDP are managed in accordance with a defined radioactive waste acceptance program supported by approved site procedures. The formal site program, updated in August 2005, defines how radioactive waste – including HLW, TRU waste, LLW, and the radioactive component of mixed waste – is managed at the WVDP to (1) protect the public from exposure to 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.

Nationwide Management of Waste. In May 1997, DOE Headquarters issued the Final Waste Management Programmatic EIS to evaluate nationwide management and siting alternatives for treatment, storage, and disposal of five types of radioactive and hazardous waste. The alternatives addressed 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 RODs for each type of waste analyzed. In 1998, the DOE issued RODs for TRU and nonwastewater hazardous waste. In 1999, the DOE issued the ROD for HLW. This decision specified that WVDP-vitrified HLW will remain in on-site storage until it is accepted for disposal at a geologic repository.

On February 25, 2000, the DOE issued its ROD for the management of LLW and mixed LLW, 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 successfully completed the program approval process for access to the NTS, and on July 17, 2001 received approval to ship waste. LLW shipments from the WVDP have been ongoing since then.

Waste Characterization, Packaging, and Shipping. In 2005, upgrades were made to several facilities and areas on site to support new or increased activities to prepare Class A LLW for off-site shipment. Characterization of waste streams (wastes that came from the same point of origin or that had similar physical characteristics) continued through-

out 2005, and shipments of waste took place by truck and by rail. Details pertaining to the LLW shipments in 2005 are included in Table ECS-3.

Resource Conservation and Recovery Act. RCRA and its implementing regulations govern the life cycle of hazardous waste from "cradle-to-grave" and mandate that generators take responsibility for ensuring the proper treatment, storage, and ultimate disposal of their wastes.

The EPA is 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 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. New York State facilities in existence on the date that hazardous waste regulations impacting their operations took effect were required to apply for interim status from NYSDEC by submitting a RCRA Part A Permit Application in accordance with Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York (6 NYCRR) Part 373-3. Facility operations during interim status are limited to those described in the Part A Permit Application and must comply with the Interim Status Standards regulations.

In 1984, the DOE notified the EPA of hazardous waste activities at the WVDP and identified the WVDP as a generator of hazardous waste. After New York initially received final EPA authorization to implement its base hazardous waste management program effective in May 1986, hazardous waste permitting authority was delegated to NYSDEC. 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, a RCRA Part A Permit Application for the WVDP was filed with NYSDEC for storage and treatment of hazardous and mixed wastes, and the WVDP has operated under interim status ever since.

The RCRA Part A Permit Application is revised as changes to the site's interim status waste-management operations occur. The last update of the RCRA 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 the DOE, NYSDEC made an official request for the submittal of a Part 373-2 Permit Application for the WVDP. The complete Part 373-2 Permit Application (i.e., Part B) was transmitted to NYSDEC on December 23, 2004. This includes RCRA closure plans for all interim status units that continue to be managed in accordance with 6 NYCRR Part 373-3 until a final determination by NYSDEC on the Part 373-2 Permit Application is made and a 6 NYCRR Part 373-2 permit is issued.

In December 2002, the WVDP previously submitted an interim status closure plan for the HLW tanks 8D-1 and 8D-2 and the Supernatant Treatment System to NYSDEC. NYSDEC responded that the closure plan did not properly address RCRA clean closure requirements. Three additional closure plans (for the vitrification facility, the lag storage addition #1 [LSA #1] and LSA #2 hardstand, and the interim waste storage facility) were submitted in December 2004, prior to the

date by which the WVDP expected these units to receive their final volume of hazardous waste, as required by 6 NYCRR Part 373-3. NYSDEC's response is pending for these closure plans.

In April 2005, the DOE transmitted nine additional RCRA hazardous waste closure plans. These nine closure plans are associated with interim status hazardous waste units, which are also SWMUs. The closure plans were transmitted in anticipation of implementing interim status unit closure activities in 2006 for one or more of the permitted units. NYSDEC's response is expected in 2006.

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 (the Consent Order) with NYSDEC and the EPA in March 1992. The Consent Order required NYSERDA and the DOE's WVDP 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 at that time as a result of the RFIs. Groundwater monitoring, as recommended in the RFI reports and approved by the EPA and NYSDEC, continued during 2005 in compliance with the requirements of the Consent Order. Groundwater monitoring results are presented in Appendix E[CD] and discussed in Chapter 4.

On February 17, 2005, the DOE transmitted a summary report to NYSDEC and the EPA for one SWMU (Breach in Laundry Wastewater Line) identified and reported in 2003. Following review of this summary evaluation of soil sampling results, the Division of Solid & Hazardous Materials of NYSDEC and the EPA communicated in a May 2005 correspondence that no further action is needed at this time. (See "Process Sewer Integrity Evaluation" later in this chapter for additional detail.)

Pursuant to a request from NYSDEC in a January 2004 correspondence, a report entitled "West Valley Demonstration Project Solid Waste Management Unit Assessment and Current Conditions Report" was submitted to NYSDEC in November 2004. This report summarized the historic activities at individual SWMUs and provided current environmental monitoring data and information on site activities performed since the completion of the RFI reports.

As a result of its review, NYSDEC determined that corrective measures studies (CMSs) pursuant to the Consent Order were required. Therefore, in an April 2005 correspondence, NYSDEC requested that CMSs be performed for select SWMUs at the WVDP. The DOE and NYSDEC met in June 2005 to discuss NYSDEC's request and the scope of subsequent CMS activities. As a result of this meeting, the DOE submitted to NYSDEC a draft "Corrective Measures Study Work Plan for the West Valley Demonstration Project" in August 2005 to address CMS requirements for six SWMUs. Closure of two SWMUs was deferred to closure under SPDES requirements. NYSDEC transmitted comments to the DOE in November and the DOE subsequently transmitted a revised draft CMS Work Plan to NYSDEC in January 2006 addressing NYSDEC comments. NYSDEC is expected to approve this work plan in 2006. Concurrently, the DOE began preparing draft CMS reports for the six SWMUs agreed upon by NYSDEC in the June 2005 meeting. The draft CMS reports are scheduled to be submitted to NYSDEC for review in mid-2006.

Hazardous Waste Management Program. Hazardous wastes at the WVDP are managed in accordance with 6 NYCRR Parts 370–374 and 376. Hazardous and mixed waste activities are reported to NYSDEC annually by submitting the WVDP's Annual Hazardous Waste Report. This report summarizes the hazardous waste activities for the previous year, specifies the waste quantities generated, treated, and/or disposed of, and identifies the treatment, storage, and disposal facilities used. The Annual Hazardous Waste Report for 2005 was submitted to NYSDEC in February 2006. Quantities of hazardous waste generated and disposed of in 2005 are summarized in Table ECS-3.

A hazardous waste reduction plan documenting efforts to minimize hazardous waste generation is prepared annually and submitted to NYSDEC per regulations. The most recent "Annual Status Report for the Hazardous Waste Reduction Program" was submitted to NYSDEC in 2005. In addition, an update of the biennial hazardous waste reduction plan is prepared. This update was last performed in 2005.

An annual inspection to assess compliance with hazardous waste regulations was conducted by NYSDEC on March 15, 2005. No deficiencies were noted.

Mixed Waste Management Program. Mixed waste contains both a radioactive component, regulated under the AEA, and a hazardous component, regulated under RCRA.

The FFCA of 1992, an amendment to RCRA, requires DOE facilities to prepare a Site Treatment Plan (STP) for treating mixed waste inventories to meet land disposal restrictions and to update the plan 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 STP is comprised of two volumes: the Background Volume (that provides information on each mixed waste stream and its preferred treatment method) and the Plan Volume (that includes schedules for treating the mixed waste to meet RCRA land disposal restriction requirements).

The DOE entered into a Consent Order with NYSDEC for the WVDP on August 27, 1996 that requires completing milestones identified in the Plan Volume. The Plan is updated annually to bring waste stream, inventory, and treatment information current through September 30, the end of the DOE fiscal year (FY). The one milestone proposed in the FY 2004 STP Annual Update was completed in the fourth quarter of FY 2005.

No mixed waste was shipped from the WVDP in 2005. (See Table ECS-3.)

Nonhazardous, Regulated Waste Management Program. Nonradioactive, nonhazardous material was shipped off site to solid waste management facilities in 2005. Certain components of this waste (e.g., lead-acid batteries and spent lamps [universal wastes]) were reclaimed or recycled at off-site, authorized reclamation and recycling facilities. Digested sludge and treated wastewater from the site sanitary and industrial wastewater treatment facility were shipped to the Buffalo Sewer Authority for disposal. Quantities of nonhazardous wastes handled in 2005 are listed in Table ECS-3.

Waste Minimization and Pollution Prevention. In 2005, WVNSCO continued a long-term program to minimize the generation of LLW, mixed waste, hazardous waste, industrial waste, and sanitary waste, and to promote affirmative procurement as directed by Executive Orders 13101 and

13148. The Affirmative Procurement Program specifies responsibilities and direction for federal agencies in acquiring recycled and environmentally preferable products and services as designated by the EPA in 40 CFR Part 247, "Comprehensive Procurement Guideline for Products Containing Recovered Material." WVNSCO annually reports challenges and successes associated with the purchase and use of these materials and services to the DOE. See Table ECS-3 for waste quantities generated in 2005 as compared with target quantities. See "Performance Measures" in Chapter 1 for a trend plot of waste minimization goals achieved over the last 10 years.

Underground Storage Tanks Program. RCRA regulations cover the use and management of underground tanks for storage of petroleum and hazardous substances 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. In addition, 40 CFR 112 addresses the requirements of a spill prevention control and countermeasure (SPCC) plan for the management of oil discharged from tanks, lines, and associated transfer activities.

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 therefore meets the state requirements of 6 NYCRR Parts 612–614. This is the only underground petroleum storage tank currently in use at the WVDP. (There are no underground chemical bulk storage tanks 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. In accordance with a stipulation agreement with NYSDEC, a soil bioventing system was installed in August 1999 to remediate localized petroleum-contaminated soils in the vicinity of the 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 the level of remediation achieved. Based on the sample results, NYSDEC determined that no further remediation was required. Final disposition is pending the Decommissioning and/or Long-Term Stewardship EIS.

New York State-Regulated Aboveground Storage Tanks. New York State regulates aboveground petroleum and chemical bulk storage tanks under 6 NYCRR Parts 612–614, and Parts 595–599, respectively. 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 at the WVDP and is available for regulatory agencies to review. Pe-

troleum tank fill ports also must be color-coded, and chemical tanks must be labeled to indicate the product stored. Petroleum bulk storage is also addressed through the WVDP's SPCC plan prepared in accordance with 40 CFR 112.

Tank registration for the WVDP at the end of 2005 included nine aboveground petroleum tanks (three containing No. 2 fuel oil, one containing unleaded gasoline, and the others containing diesel fuel).

One aboveground hazardous bulk chemical storage tank containing a nitric acid mixture was on the WVDP registration at the end of 2005. This tank is located inside the vitrification test facility. Plans were made in 2005 to permanently close this tank in early 2006.

Seven aboveground chemical storage tanks, used as needed to contain nitric acid or nitric acid mixtures, were emptied in the fall of 2002 and were permanently closed near the end of 2004. The required submittals were made to NYSDEC to remove these seven tanks from the registration and a new registration certificate reflecting these closures was received by the DOE in February 2005.

The most current inspections by NYSDEC confirmed that the petroleum and chemical bulk storage tanks were in compliance with NYS regulations.

Medical Waste Tracking. Contact with medical waste can potentially expose humans to infectious diseases and pathogens from 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 DOE has retained the services of a permitted waste hauler and disposal firm to manage these medical wastes. Medical wastes such as dressings, protective clothing (e.g., rubber gloves), needles, and syringes are sterilized with an autoclave by the disposal firm before disposal. The quantity of medical waste generated and disposed of in 2005 is listed in Table ECS-3.

Clean Air Act. The CAA establishes a framework for the EPA to regulate air emissions from both stationary and mobile sources. Amendments to the CAA mandate that each state establish a program to permit operation of sources of air pollution. In New York State, NYSDEC implements the requirements of the EPA CAA Title V permitting process through 6 NYCRR Parts 200, 201, 231, and 621. A listing of air permits in effect at the WVDP can be found in Table ECS-2. As shown in Table ECS-4, no air quality noncompliances were noted in 2005.

Radiological Emissions. Emissions of airborne radionuclides are regulated by the EPA under NESHAP (40 CFR Part 61, Subpart H). The DOE currently holds permits for six point sources of radionuclide emissions at the WVDP. In 2005, stack systems in use for potential major emission points were inspected in accordance with 40 CFR 61, Appendix B, Method 114. Visual inspections, leak checks, and cleaning were carried out, as appropriate.

Monitoring results from sampling of permitted and nonpermitted air emission points (e.g., those points that, due to the low potential for release of radionuclides, do not require permitting), are presented in Appendix D[CD] and discussed in Chapter 2.

Results from sampling of airborne releases, estimates of releases from sources that do not require sampling, and estimates of releases from diffuse sources (such as the lagoon system) are used to estimate dose from the WVDP to the maximally exposed individual. Estimated doses are summarized in annual NESHAP reports that are

submitted to the EPA by June 30th of the following calendar year.

Estimated CY 2005 dose from the WVDP was approximately 0.0012 millirem (mrem), 0.01% of the 10 mrem NESHAP standard. (See Tables 2-3 and 2-6 for additional information regarding airborne radiological releases and estimated dose from WVDP air emissions.)

Nonradiological Emissions. Nonradiological point sources of air emissions are regulated by NYSDEC. NYSDEC issues permits for stationary sources (e.g., stacks, ducts, vents) that emit regulated hazardous air pollutants if quantities released are above a predetermined threshold. 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 DOE submitted and received NYSDEC's approval of a plan for capping WVDP annual airborne releases of oxides of nitrogen (NO_x) and sulfur dioxide (SO_2) at 99 tons each. Releases in 2005 were about 4.1% and 0.01%, respectively, of the capping limits for each. Therefore, there were no air permit regulatory exceedances in 2005.

Two boilers are the remaining Project site contributors of NO_x and SO_2. These sources are operated and monitored as required by the NYSDEC Air Facility Registration Certificate, as modified on March 22, 2005.

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

E.O. 13148 requires all federal agencies to comply with the following EPCRA provisions if certain thresholds are exceeded: 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). Compliance with these provisions continued at the WVDP in 2005, as summarized in Table ECS-5.

• 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 representatives continue 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.

In July 2005, the triennial emergency response exercise, which involved a simulated rail transportation accident and injury, was held at the WVDP. The exercise enabled emergency response organizations to test the skills of on- and off-site emergency responders in the event of a real transportation accident. Participating teams were the on-site Transportation Emergency Management Organization, Radiological Assistance Program Team, and off-site agencies such as the West Valley Volunteer Hose Company, Cattaraugus County HazMat Team, and Bertrand Chaffee Hospital.

• There were no releases of EHS at the WVDP in 2005 that triggered the release notification requirements of EPCRA Section 304.

• Under EPCRA Section 311, WVDP personnel are required to review 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 2005 and no additional EPCRA Section 311 notifications were required.

• Under EPCRA Section 312 regulations, annual reports are submitted to state and local emergency response organizations and fire departments specifying the quantity, location, and hazards associated with chemicals stored at the WVDP. In 2005, nine reportable chemicals were stored at the WVDP above threshold planning quantities. These chemicals are listed in Table ECS-6.

• Under EPCRA Section 313, information must be provided about releases to all environmental media (e.g., air, water) of EPA-listed TRI chemicals used at or above specified regulatory thresholds at the WVDP. In 2005, no chemical exceeded the reporting threshold for the EPCRA Section 313 report.

Clean Water Act. Section 404 of the CWA regulates the development of areas in and adjacent to the waters of the United States. Supreme Court interpretations of Section 404 have affirmed the inclusion of certain nonisolated 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 ACOE the authority to designate disposal areas and issue permits for these activities. E.O. 11990 directs federal agencies to "avoid to the extent possible the long- and short-term adverse impacts that destroy or modify wetlands." Article 24 of the NYS ECL also contains requirements for the protection of freshwater wetlands and adjacent buffer areas.

Section 401 of the CWA requires applicants for a federal permit (required by Section 404) to obtain certification from the host 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 NYS for activities within New York.

Section 402 of the CWA regulates process, sanitary, certain storm water, and other effluent discharges to surface waters. Regulated storm water discharges include those that receive runoff from areas where industrial, construction, or demolition activities are performed. Administration of Section 402 in New York is delegated to NYSDEC, which, under NYS ECL, also regulates disharges to groundwater.

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 DOE notifies the ACOE and NYSDEC of proposed actions that could affect wetland units not specifically exempted from regulation or notification.

Wetland field assessments are periodically performed and wetland maps revised accordingly, with the most recent assessment and mapping completed in 2004. This assessment identified the presence of 68 jurisdictional wetlands that range in size from 0.01 acres to 7.3 acres and cover approximately 36.5 acres within the WVDP and adjacent premises. In December 2005, NYSDEC

approved this wetland delineation report. Field verification wetland assessment was performed by the ACOE in 2005, with final written approval from the ACOE expected in 2006.

SPDES Permit. New York State is delegated by the EPA to administer the National Pollutant Discharge Elimination System (NPDES) under an equivalent state program. At the WVDP, NYSDEC regulates point-source liquid effluent discharges to surface waters of NYS under the SPDES permit.

New and modified SPDES permit requirements for the WVDP, which went into effect on January 1, 2005, included (1) reduced sampling and analysis of discharges at outfall 001 (monitoring point WNSP001), (2) reduced reporting frequency for the mercury analytical method study, (3) new requirements for monitoring and reporting usage of water treatment chemicals, (4) additional water discharge sampling and analysis where herbicides are applied, and (5) a new requirement to prepare and implement a Storm Water Pollution Prevention Plan.

In addition to five existing permitted monitoring points, the permit added authorization, monitoring requirements, and release limits for discharges at 20 storm water outfalls. These outfalls receive storm water runoff from inactive waste disposal areas, areas where materials or wastes are stored or handled, and areas where construction or structure dismantlement or other soil disturbance activities may be performed.

The compliance points for monitoring discharges to Buttermilk Creek tributaries, including Erdman Brook, Frank's Creek, and Quarry Creek, may be found on Figures A-2, A-3, and A-4. The routine monitoring points and the new storm water monitoring points are described in Appendix B. Monitoring results for 2005 are presented in Appendix C and discussed in Chapter 3.

As shown on Figure ECS-1, the annual number of effluent limit exceptions to requirements in the site's SPDES permit has been substantially reduced over time, especially when compared to the peak of 35 exceptions noted in 1986. As indicated on this fig-

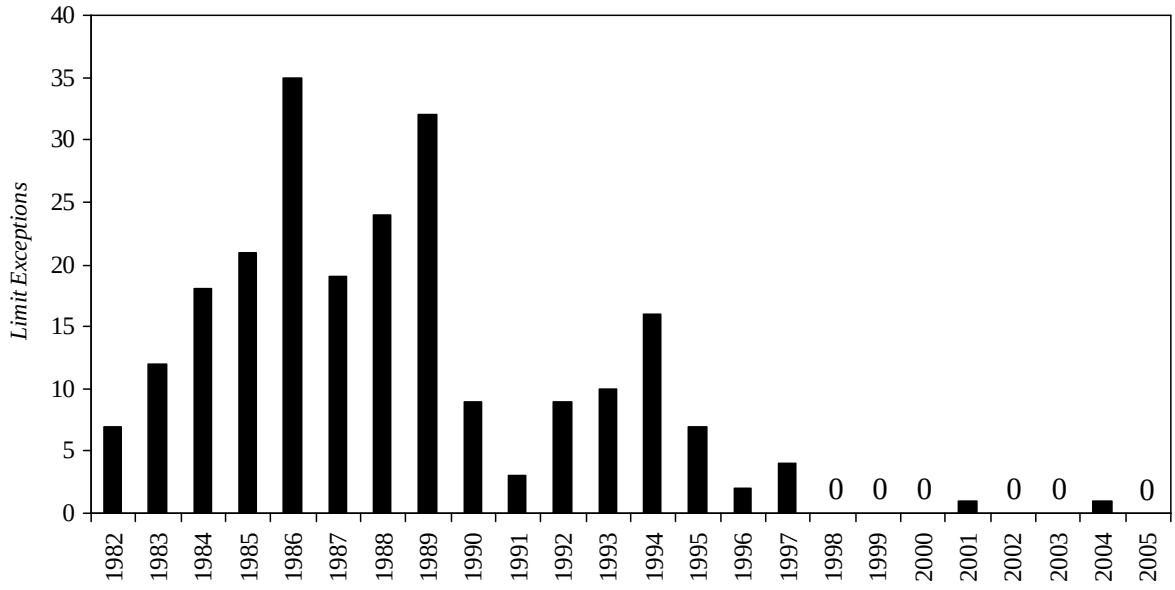

Figure ECS-1. WVDP SPDES Effluent Limit Exceptions

ure, there were no permit effluent limit exceptions recorded during 2005. (See Table ECS-7.)

In September 2005, NYSDEC issued for public comment a draft modification to the WVDP SPDES permit. This modification reflects the new NYSDEC policy for regulating mercury in water discharges from the WVDP and addresses requests from the DOE to eliminate pH limits for site storm water discharges and to reduce monitoring for 17 analytical parameters at outfall 001. The finalized permit modification is expected in 2006.

Storm Water Discharge Monitoring. The NPDES Permit Application Regulations for Storm Water Discharges, Final Rule (40 CFR Parts 122, 123, and 124, as amended), and as expressed in Section 403(p) of the CWA, require that specified facilities acquire NPDES permits for storm water discharge associated with industrial activities. Permitted or interim status RCRA hazardous waste treatment, storage, and disposal facilities are specifically defined as associated with industrial activity in the regulations (40 CFR Part 122.26[a][14][iv]).

Since the WVDP is an interim status RCRA facility, storm water discharges from the WVDP qualify as being associated with industrial activity. Six other groups of activities at the WVDP are also subject to storm water permitting: 1) aboveground container storage; 2) aboveground and underground tank storage; 3) belowground waste burial; 4) haul roads and railway lines; 5) liquid waste treatment facilities; and 6) construction activities.

As discussed above, the WVDP SPDES permit (as modified in 2005) included new requirements for storm water monitoring. To meet the new requirements in the modified permit, the monitoring plan for storm water discharges at the WVDP was revised and implemented in 2005.

NYSDEC SPDES Inspection. On March 23 and August 23, 2005, NYSDEC completed its inspections of the WVDP facilities through observation of the SPDES outfalls, the site sanitary and industrial wastewater treatment facility (WWTF) operation, storm water discharge control practices, effluent-holding lagoon embankment conditions, flow monitoring devices, and discharge monitoring records. No deficiencies were identified.

Process Sewer Integrity Evaluation. Video inspection of camera-accessible process sewer lines was initiated in 2003. During this inspection, a hole was discovered in a tributary line where laundry wastewater was discharging to subsurface soil. The breached line was removed from service and laundry wastewater was diverted to another line with known integrity. Reports of this discovery were filed with NYSDEC in 2003. Video inspection of process sewer lines was completed and the final report was submitted to NYSDEC in the fall of 2004. In 2005, NYSDEC, the DOE, and the NYS-licensed Professional Engineer responsible for sewer integrity evaluation met to review and discuss the final report and the video recordings. The Division of Solid & Hazardous Materials Department of NYSDEC evaluated the soil sampling results from this investigation and concluded that no further action was needed at this time. The NYS-licensed Professional Engineer from the NYSDEC Division of Water, after additional review and evaluation, identified a future action to include periodic video inspection of the lines to be completed by 2010.

North Plateau Groundwater Activities. In November 1995, a groundwater recovery system was installed at the WVDP to mitigate a portion of the strontium-90 groundwater plume and reduce groundwater seepage northeast of the process building. In 1999, a pilot-scale permeable treatment wall was installed to test in-situ passive technology for treating contaminated groundwater.

Detailed descriptions of these two treatment processes and activities in 2005 are presented in Chapter 4.

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

Under a 1996 agreement with NYSDEC, the DOE 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 used to be submitted monthly to NYSDEC. In 2005, this agreement was modified to reduce reporting frequency from monthly to quarterly.

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. 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 2005.

The WVDP operators are also required to report spills or releases of hazardous substances in accordance with reporting requirements of RCRA, CERCLA (if a reportable quantity has been exceeded), and the CAA, EPCRA, CWA, and TSCA. No chemical spills or releases exceeded reportable quantities and, thus, no reporting during CY 2005 was required.

Safe Drinking Water Act. Drinking water for the WVDP is obtained from surface water reservoirs on the WNYNSC. The WVDP system is considered a nontransient, noncommunity public water supply. The WVDP's drinking water treatment facility purifies the water by clarification, filtration, and chlorination before it is distributed on site.

Monitoring and Reporting. Samples from the WVDP drinking water system are periodically collected and tested for various water quality parameters. (See Appendix B for a description of sampling frequency and analytical constituents and Appendix C-6 for a listing of 2005 test results.) Test results are reported monthly to the CCHD, which also independently collects and analyzes a monthly sample of WVDP tap water to determine bacterial and residual chlorine content, and an annual tap water sample for nitrate (as nitrogen). All test results were within drinking water limits in 2005.

Cross-Connection Control. The SDWA requires that public water suppliers prevent cross-connections between the potable water supply and systems containing hazardous or infectious substances. Cross-connection control devices, such as 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. The WVDP has a total of 13 backflow prevention devices, all of which were tested and repaired as necessary by a NYSDOH-licensed tester in 2005 to ensure that all devices were functioning properly.

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

Asbestos-Containing Material. In 2005, continued compliance was maintained with all TSCA requirements pertaining to asbestos by managing ACM in accordance with the site "Asbestos Management Plan." This plan 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). This plan also identifies the inventory and status of on-site ACM.

Activities in 2005 included the repair or abatement of damaged/friable ACM, removal/cutting of nonfriable ACM from roof systems to support trailer removal activities, and maintenance of signs and labels to warn workers of ACM. All activities associated with ACM are completed by personnel who are certified by the New York State Department of Labor (NYSDOL). WVNSCO maintains an asbestos-handling license issued by NYSDOL.

Polychlorinated Biphenyls. Because PCBs are regulated as a hazardous waste in NYS, the DOE continued in 2005 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 the "Site Treatment Plan, Fiscal Year 2005 Update."

To comply with TSCA and PCB regulations, all operations associated with PCBs comply with the "PCB and PCB-Contaminated Material Management Plan." The WVDP operators maintain an annual document log that details PCB use, appropriate on-site storage, and any changes in storage or disposal status. The WVDP also 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. Under NEPA, the DOE is required to consider the overall environmental effects of its proposed actions. The President's Council on Environmental Quality established a screening system of analyses and documentation that requires each proposed action to be categorized according to the extent of its potential environmental effect. The levels of documentation include categorical exclusions (CXs), environmental assessments (EAs), and EISs.

CXs document actions that will not have a significant effect on the environment. EAs are used to evaluate the extent to which the proposed action will affect the environment. If a proposed action has the potential for significant effects, an EIS is prepared that describes proposed alternatives to an action and explains the effects of each.

Facility maintenance, decontamination activities, and minor projects that supported HLW vitrification were documented and submitted for approval as CXs. Based on preliminary review of proposed activities for building removal, as part of infrastructure reduction at the WVDP, an EA is being developed to evaluate potential effects on the environment.

In December 1988, the DOE published a Notice of Intent (NOI) with NYSERDA to prepare an EIS for the completion of the WVDP Act and closure of the facilities at the WNYNSC.

The draft EIS, which describes the potential environmental effects associated with Project completion and various site closure alternatives, was

West Valley Citizen Task Force

In addition to the public comment process required by the National Environmental Policy Act, NYSERDA, with participation from the DOE, formed the West Valley Citizen Task Force in January 1997. The mission of the Task Force is to provide advice on the completion of the WVDP Act and cleanup, closure, and/or long-term management of the facilities at the site. The Task Force process has helped illuminate the various interests and concerns of the community, increased the two-way flow of information between the site managers and the community, and provided an effective way for the Task Force members to establish mutually-agreed-upon recommendations for the site managers to consider in their decision-making process.

completed in 1996 and released without a preferred alternative for a six-month public review and comment period. Having met throughout 1997 and 1998 to review alternatives presented in the draft EIS, the West Valley Citizen Task Force (CTF; see inset) issued the West Valley Citizen Task Force Final Report (July 29, 1998). This report provided recommendations and advice on the development of a preferred alternative. Throughout 2005, the CTF continued to meet and discuss issues relating to Project completion and site closure decision-making.

In 2001, the DOE formally initiated a plan to split the scope of the 1996 draft EIS into two phases – one for near-term waste management decision-making and one for final decommissioning and/or long-term stewardship decision-making. Each phase would be covered by a separate EIS.

The DOE published an NOI on March 26, 2001 (66 FR 16447) formally announcing its rescoping plan and preparation of the waste management EIS. The DOE also published an Advance NOI on November 6, 2001 (66 FR 56090) announcing in advance its commitment to begin work, in cooperation with NYSERDA, on the EIS for decommissioning and/or long-term stewardship.

Waste Management EIS. On May 16, 2003, the DOE issued the draft Waste Management EIS (68 FR 26587) for public comment. The Waste Management EIS presented alternatives for the management of WVDP LLW, mixed LLW, TRU waste, and HLW. The DOE addressed public comments and issued the final Waste Management EIS in January 2004.

The DOE published its decision in the Federal Register (70 FR 35073) on June 16, 2005. The DOE has decided to implement Alternative A, the preferred alternative, for the management of WVDP LLW and mixed LLW that are either currently in storage at the site or will be generated at the site over the next ten years. A decision on TRU wastes will be deferred, contingent upon a determination by the DOE that the waste meets all statutory and regulatory requirements for disposal at the Waste Isolation Pilot Plant near Carlsbad, New Mexico. The HLW canisters will remain in storage on site until they can be shipped directly to a repository.

Decommissioning and/or Long-Term Stewardship at the WVDP and WNYNSC. The NRC is authorized by the WVDP Act to prescribe decommissioning criteria for the WVDP. From 1998 until early 2002 the NRC worked to develop decommissioning criteria through a series of draft policy papers and public meetings. On February 1, 2002, the NRC issued its "Decommissioning Criteria for the West Valley Demonstration Project (M-32) at the West Valley Site; Final Policy Statement" in the Federal Register (67 FR 5003). The Final Policy Statement applies the NRC's License Termination Rule (10 CFR Part 20, Subpart E) as

the decommissioning criteria for the WVDP and as the decommissioning goal for the entire WNYNSC.

The DOE published an NOI on March 13, 2003 (68 FR 12044) announcing its intent to prepare, in cooperation with NYSERDA, the Decommissioning and/or Long-Term Stewardship EIS. The DOE and NYSERDA are joint lead agencies on this EIS and the EPA, NRC, and NYSDEC are cooperating agencies. This work continued with the issuance of an internal, multi-agency pre-decisioned draft in September 2005.

In 2005, an impasse continued between the DOE and NYSERDA pertaining to agency responsibilities for decommissioning and/or long-term stewardship at the WVDP and the WNYNSC. In mid-2005, proposed legislation dealing with the long-term responsibility for the WVDP was introduced into the U.S. House of Representatives by Congressmen Kuhl, Boehlert, Reynolds, and Higgins, and a companion bill was introduced into the U.S. Senate by Senators Schumer and Clinton. The bill, entitled "West Valley Remediation Act of 2005," includes provisions for federal (DOE) takeover of the responsibility for the WVDP and the entire WNYNSC from the current owner, the State of New York. The legislation directs the DOE to complete and issue a draft of the site's decommissioning and long-term stewardship EIS within two years of the law's enactment. The bill also includes a provision for minimum funding levels and prohibits any new waste from being transported to West Valley.

The future progress of this legislation is uncertain as of early 2006. As a result, the NYSERDA Board voted to authorize legal action against the DOE over issues relating to ongoing cleanup responsibilities at the WVDP. However, this legal action is still pending.

Federal Insecticide, Fungicide, and Rodenticide Act. In 2005, approximately 350 pounds (160 kilograms) of a NYSDEC-registered biocide were applied by NYSDEC-licensed commercial pesticide applicators to control algae and waterborne pathogens in the site cooling water tower system. Control of the organisms is necessary to minimize the potential for cooling system damage due to fouling from algae buildup and minimize the potential for worker exposure to waterborne pathogens such as *Legionella*.

Environmental Conservation Law - Structures Impounding Waters and Structures in Waters. Under the ECL, two site earthen dams, which form the site water supply, must be inspected and maintained to minimize the potential for uncontrolled releases of the impounded water. The dams, including the grass cover, have been periodically inspected and properly maintained in accordance with NYSDEC regulations and guidelines to prevent soil exposure to erosive forces of storm water runoff and other methods of structural failure.

Current Achievements and Program Highlights

Vitrification Facility Dismantlement Project. In 2005, the remaining major pieces of equipment in the vitrification cell were dismantled and removed. Completion of this effort made the WVDP the first site in the nation to design, construct, operate, shut down, and dismantle a full-scale radioactive vitrification system.

Infrastructure Reduction. Office personnel were relocated to new offices on and off the site. Temporary office trailers, connecting hallways, and ancillary structures, 115 units in all, were removed from the site. Excess office components and furnishings were removed and dispositioned through the government excess process by a com-

bination of surplus sales, transfers of property, and donations. All structures and equipment that were released had not been exposed to radioactive contamination and, therefore, did not contain residual radioactive materials.

Star Status. By the end of 2005, the WVDP's employees were responsible for achieving more than three years and 3.7 million cumulative manhours worked without a lost-time work accident.

The WVDP's Star status in DOE's Voluntary Protection Program underwent DOE review in 2005. During a week-long visit, an independent DOE team reviewed the Project's safety program and evaluated it against DOE's criteria for designation as a Star site. Based on the review, the team recommended continued Star status for the WVDP.

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 had adopted and implemented an EMS, had attained previously specified environmental objectives, had made a commitment to achieve four future goals, had a public outreach program, and had a sustained record of environmental compliance.

A WVDP renewal request, proposing three new environmental commitments, was accepted by the EPA in December 2004. Progress toward achieving these commitments is summarized in Table ECS-3. In 2005, the WVDP employees continued to monitor, and take necessary actions toward, successfully achieving these goals.

Environmental Issues and Actions

Construction and Demolition Debris Landfill (CDDL). Closure of the on-site CDDL was completed in August 1986. The solid waste landfill area was closed in accordance with NYSDEC standards for this type of landfill, following NYSDEC approval (Mitrey, 1986) of the closure plan (Standish, 1985). To meet routine post-closure requirements, the CDDL cover was inspected twice in 2005 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.

NRC-Licensed Disposal Area (NDA). As mentioned earlier in this chapter, a draft "Corrective Measures Study Work Plan for the West Valley Demonstration Project" was submitted to NYSDEC in 2005 for review. After reviewing the CMS work plan for the NDA, NYSDEC requested in November 2005 that DOE demonstrate that the depth of the existing cover over the burial ground is continuous and as deep (4 ft [1.2 m]) as required by the NRC license. In response to this request, the DOE is evaluating investigation activities that would provide surface and subsurface control data related to cap thickness and extent. The DOE is also evaluating additional capping options in response to NYSDEC's request.

Unplanned Releases. No unplanned releases of pollutants or hazardous substances, radiological or nonradiological, from the WVDP occurred in 2005.

Coalition Files Suit Over WVDP EIS Process. On August 26, 2005, the Coalition on West Valley Nuclear Wastes (a citizen's group) filed a complaint in the U.S. District Court, Western District of New York, against the DOE regarding work at the WVDP.

In its complaint, the Coalition contended that the March 26, 2001 DOE announcement that revised the approach to the EIS for completion of the WVDP Act violated NEPA and the Stipulation of Compromise Settlement between the DOE and the Coalition. The EIS, which had been initiated in 1988, was revised into two separate studies – one on facility decontamination and waste management and a second on site closure or long-term stewardship. (See "National Environmental Policy Act" earlier in this chapter.)

Reaching a ROD on the Waste Management EIS in June 2005 enabled the DOE to evaluate off-site shipment and waste disposal, which helped accelerate the shipping of LLW being stored at the site and being generated by routine Project activities.

Through the complaint, the Coalition seeks to prevent the DOE from taking any actions as a result of the Waste Management EIS. It also requests that the DOE be ordered to complete the EIS process as outlined in 1988, requests a declaration that separating the EIS into two EISs violates NEPA, and seeks a declaration that the DOE is not empowered to reclassify waste at the West Valley site using the "waste incidential to reprocessing" determination process.

Project Assessment Activities in 2005

As the primary contractor for the DOE in CY 2005 at the WVDP, WVNSCO maintained a comprehensive review program for proposed and ongoing operations. Assessments were conducted through formal surveillances and informal programs. Formal surveillances monitored compliance with regulations, directives, and DOE Orders. The informal program was used to identify issues or potential problems that could be corrected immediately.

The local DOE Project office and other agencies with responsibilities for the WVDP also independently reviewed various aspects of the environmental and waste management programs, as discussed in preceding sections. In 2005, 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-2
WVDP Environmental Permits

Permit Name and Number	Agency/Permit Type	Description	2005 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	No changes to Part A.	No expiration date. A RCRA Part B Permit Application was submitted on December 23, 2004.
Air Facility Registration Certificate (9-0422-00005/00099)	NYSDEC/Air Emissions	Sitewide permit includes: • 2 boilers	The existing Air Facility Registration Certificate was modified.	Revised 3/22/05. 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 Heating, Ventilation, and Air-Conditioning (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	None	An amended permit addressing storm water discharges, monitoring modifications, and other items went into effect on 1/1/05. Expires 2/1/09.

Table ECS-2 (concluded)
WVDP Environmental Permits

Permit Name and Number	Agency/Permit Type	Description	2005 Changes	Status
Buffalo Pollutant Discharge Elimination System (05-05-TR096)	Buffalo Sewer Authority/sanitary sewage and sewage sludge disposal	Permit issued to hauler of waste from the wastewater treatment facility	Renewed 6/05.	Hauler must renew permit by 6/30/06.
Chemical Bulk Storage (9-000158)	NYSDEC/chemical bulk storage tank	Registration of bulk storage tanks used for listed hazardous chemicals	Cold chemical tanks 65D05 and 65D06 were permanently closed and deleted from the registration on 2/20/04. Cold chemical tanks 65D02, 65D03, 65D04, 65D07, 65D08, 65D09, and 63-V-048 were permanently closed on 11/10/04. A new registration certificate reflecting these closures was received by the WVDP in February 2005.	Registration expires 7/5/07.
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 (32)	New York State Division of Fish and Wildlife	State license for the removal of all nests of migratory birds	License amended and renewed on 8/15/05.	NYS license expires 6/30/06.
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 7/22/05.	Permit expires 6/30/06.

Table ECS-3
Summary of Waste Management Achievements at the WVDP in 2005

Description	*2005 Expected Result or Goal*	*2005 Achievement*	*Discussion*	*ASER Section*
WVDP Pollution Prevention (P2)/Waste Reduction Goals[a]				
Low-level waste generation	80% Reduction (10,125 ft^3 [287 m^3])	89% Reduction	Exceeded the reduction goal by 9%	ECS, Chapter 1
Mixed waste generation	80% Reduction (1,160 lb [524 kg])	98% Reduction	Exceeded the reduction goal by 18%	ECS, Chapter 1
Hazardous waste generation	75% Reduction (2,500 lb [1,136 kg])	96% Reduction	Exceeded the reduction goal by 21%	ECS, Chapter 1
Industrial waste generation	60% Reduction (19,600 lb [8,889 kg])	Waste generation increased (138.72 tons [125,845 kg]); the goal was not met.	Increased waste generation was due to activities supporting site milestones for CY 2005 and infrastructure reduction.	ECS, Chapter 1
Sanitary waste generation	75% Reduction (290 tons [260 metric tons])	45% Reduction (See paper, scrap metal and other below)	Below the goal by 30%. Increased waste generation was due to infrastructure reduction of the equivalent of 115 site trailers. Most offered for sale, resulting in cost avoidance of more than $300K.	ECS, Chapter 1
WVDP EPA National Performance Track Objectives[b]				
Halon 1301 in fire suppression systems	Eliminate usage 2004–2006	Eliminated during 2004 (0 lbs.)	No Halon 1301 remains on site.	ECS, Chapter 1
Energy usage	2004–2006; Reduce total energy usage by 10%	Reduced usage by 18.8%	On track to meet the 2006 goal.	ECS, Chapter 1
Radiological wastewater from the low-level waste treatment facility (LLWTF [WNSP001])	By the end of 2006; reduce radiological curies in wastewater discharges by 10%	Commitment not met in 2005, increased curies by approximately 58%. About 13.6 million gallons (51.4 million liters) of wastewater was discharged.	Corrective measures implemented in the latter part of 2005, which improved performance in later discharges. Additional corrective measures are being developed to further assist in meeting this commitment.	ECS, Chapters 1and 2

[a] *Pollution prevention/waste-reduction goals, applicable to routine wastes, were established in 1999 on the basis of 1993 quantities.*
[b] *Established commitments per WVDP EPA National Environmental Performance Track membership requirements.*

Table ECS-3 (continued)
Summary of Waste Management Achievements at the WVDP in 2005

Waste Description	*Type of Project*	*2005 Weight or Volume*	*Discussion*	*ASER Section*
Other Site Waste Minimization Efforts/Processing/Shipping				
Remote-handled waste facility operations	Waste processing and packaging	39 containers; 3,250 ft^3 (92 m^3)	Containers were characterized, sorted, processed as necessary, and packaged to meet regulatory requirements for transportation.	ECS, Chapter 1
Low-level waste	Waste shipping	More than 300,000 ft^3 (8,500 m^3)	280 truck and 3 rail shipments off site	ECS, Chapter 1
Hazardous waste	Waste shipping	573 lbs (260 kg)	Shipped to an EPA-approved facility.	ECS, Chapter 1
Mixed waste	Waste shipping	None	No mixed waste was shipped in 2005.	ECS, Chapter 1
Paper and paper products	Waste reduction	117 tons (106 metric tons)	Waste recycling, affirmative procurement, P2 program	ECS, Chapter 1
Scrap metals	Waste reduction	147 tons (133 metric tons)	Waste recycling, affirmative procurement, P2 program	ECS, Chapter 1
Other materials	Waste reduction	11.6 tons (10.5 metric tons)	Waste recycling, affirmative procurement, P2 program	ECS, Chapter 1
Nonradioactive, nonhazardous, regulated waste	Waste shipping	6.24 tons (5.66 metric tons) (See lead acid batteries below)	Waste minimization effort	ECS, Chapter 1
Lead-acid batteries and spent lamps (universal waste)	Waste recycling	5.19 tons (4.71 metric tons) of the above	This volume of the above regulated waste was reclaimed or recycled at off-site, authorized reclamation and recycling facilities.	ECS, Chapter 1
Wastewater internal mercury pre-treatment process compliance point at WNSP01B	Pre-treatment for mercury	42,000 gallons (160,000 liters)	The liquid waste treatment system pre-treats residual radioactive wastewater. Effluent is sampled to determine compliance with Federal Great Lakes Initiative and SPDES permit requirements for total mercury.	ECS, Chapters 1 and 3
Treated sewage and industrial wastewaters (WNSP007)	Wastewater processing, discharge	6.74 million gallons (25.5 million liters)	The WWTF treats sewage and various industrial wastewaters that are discharged through WNSP007.	ECS, Chapters 1, 2, and 3
North plateau groundwater recovery system (NPGRS)	Pump and treat strontium-90 (Sr-90) contaminated groundwater	4.1 million gallons (16 million liters)	The NPGRS operates to recover groundwater from an area near the leading edge of the Sr-90 plume on the north plateau. Water is treated by ion exchange to remove Sr-90, then transferred to the lagoon system.	Chapters 1, 2, and 4

Table ECS-3 (concluded)
Summary of Waste Management Achievements at the WVDP in 2005

Waste Description	Type of Project	2005 Weight or Volume	Discussion	ASER Section
NRC-licensed disposal area groundwater interceptor trench (WNNDATR)	Interceptor trench and groundwater pre-treatment	401,000 gallons (1,520,000 liters)	Groundwater is pumped and transferred to the LLWTF; no n-dodecane or tributyl phosphate were encountered in 2005. Therefore no pre-treatment was necessary.	Chapters 1, 2, 3, and 4
Digested sanitary sludge	Waste shipping	840 tons (762 metric tons)	Digested sludge from the site sanitary and industrial wastewater facility is shipped to the Buffalo Sewer Authority for disposal.	ECS
Medical wastes	Waste shipping	15 lbs (6.8 kg)	The services of a permitted waste hauler and disposal firm is retained to manage medical wastes.	ECS

Table ECS-4
WVDP 2005 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 2005.

Table ECS-5
Status of EPCRA (SARA Title III) Reporting at the WVDP in 2005

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

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

Table ECS-6
Reportable Chemicals Above EPCRA 312 Threshold Planning Quantities Stored at the WVDP in 2005

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

Table ECS-7
WVDP 2005 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	0	1,060	1,060	100%	NA

NA - Not applicable; no permit noncompliance episodes in 2005

* 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-8
WVDP Migratory Bird Nest Depredation Episodes in 2005

Permit/License Type	Parameter	Permit/License Limit	Total Removed in 2005
U.S. Fish and Wildlife - Bird Depredation Permit	Removal of Active Barn Swallow Nests	15	0
U.S. Fish and Wildlife - Bird Depredation Permit	Removal of Active American Robin Nests	15	3
U.S. Fish and Wildlife - Bird Depredation Permit	Removal of Active Eastern Phoebe Nests	5	0
U.S. Fish and Wildlife - Bird Depredation Permit	Removal of Active Canada Goose Nests	5	1
NYSDEC - Bird Depredation License	Removal of Inactive Migratory Bird Nests	Not limited	2