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XL Project Progress Report
Jack M. Berry, Inc.

On March 16, 1995, the Clinton Administration announced a portfolio of reinvention initiatives to be implemented by the U.S. Environmental Protection Agency (EPA) as a part of its efforts to achieve greater public health and environmental protection at a more reasonable cost. Through Project XL, which stands for eXcellence and Leadership, EPA enters into specific project agreements with public or private sector sponsors to test regulatory, policy, and procedural alternatives that will produce data and experiences to help the Agency make improvements in the current system of environmental protection. The goal of Project XL is to implement 50 projects that will test ways of producing superior environmental performance with improved economic efficiencies, while increasing public participation through active stakeholder processes. As of October 1998, 10 XL projects are in the implementation phase and 20 XL projects are under development. Project XL Progress Reports provide project-specific overviews of the status of XL projects that are implementing Final Project Agreements (FPAs). The progress reports are available on the Internet via EPA's Project XL web site at http://www.epa.gov/Project XL. Or, hard copies may be obtained by contacting the Office of Reinvention's Project XL Docket at 202-260-7434. General information on Project XL is available on the web site or by contacting the general information number at 202-260-5754.

Background

Jack M. Berry, Inc., is a midsized citrus juice-processing company. The company's facility in LaBelle, Florida, is the site of the Project XL pilot. It is located 30 miles east of Fort Myers on Berry's largest grove, consisting of about 10,000 acres of orange and grapefruit trees. The Berry XL Project establishes a process by which Berry will prepare a Comprehensive Operating Permit (COP) in partnership with the Florida Department of Environmental Protection (FDEP), South Florida Water Management District (SFWMD), and EPA. The COP will eliminate the requirement of preparing multiple permit applications every few years. The resulting cost savings will be used by Berry to improve

Berry XL Project
LaBelle, Florida

Major Milestones

- August 16, 1995 — Berry XL Proposal Submitted
- August 8, 1996 — Final Project Agreement Signed
- August 31, 1997 — Scheduled Completion of COP (currently on hold)
- August 31, 2002 — Scheduled Evaluation of COP Effectiveness

environmental performance. The COP will be re-evaluated every 5 years by EPA, the State of Florida, SFWMD, and Berry.

In the FPA, Berry also commits to instituting the ISO 9000 management program and the ISO 14000 environmental management program as a means of promoting continuous environmental performance, including pollution prevention and source reduction strategies. The anticipated superior environmental benefits of this project include:

- Reducing air emissions of volatile organic compounds (VOCs), sulfur dioxide (SO_2), and nitrogen oxide (NO_x) through voluntary installation of updated equipment and implementation of updated procedures used in citrus processing;
- Reducing consumptive water use through both water conservation and the reuse of treated industrial wastewater as irrigation water;
- Reducing substantially the use of the facility's spray site as an industrial wastewater disposal area;
- Minimizing offsite odors and consequent complaints from the public, by using artificial wetlands to treat industrial wastewater;
- Eliminating a source of potential groundwater contamination, and additionally controlling odor by closing or modifying an existing surge pond;
- Reducing the amount of hazardous solvents and lubricants used onsite by replacing them with more environmentally friendly materials;
- Conducting innovative research on the use of natural substances extracted from orange peels as alternatives to toxic solvents; and
- Reducing the amount of material entering the solid waste stream by increasing metal recovery and recycling scrap material, paper, glass, and plastics.

Regulatory Flexibility

The Berry plant currently is required to obtain multiple operating permits from multiple regulatory agencies. Air quality, water quality, and consumptive use regulations govern the plant's boilers, feed mill dryers, drinking water, industrial wastewater, and water use operations. The COP will consolidate selected operating permits and requirements, maintain all environmental standards, and commit Berry to superior environmental performance.

The statutory programs, and the EPA offices administering those programs, that affect the Berry XL Project are:

- Drinking Water Act programs administered by the EPA's Office of Ground Water and Drinking Water;
- Clean Water Act (CWA) programs administered by the EPA's Office of Wastewater Management and the EPA's Office of Wetlands, Oceans, and Watersheds;
- Resource Conservation and Recovery Act (RCRA) programs administered by the EPA's Office of Solid Waste; and
- Clean Air Act (CAA) programs administered by the EPA's Office of Air Quality Planning and Standards.

All permitting programs required to implement the COP have been delegated by EPA to the State of Florida. Permits are issued by SFWMD and FDEP, which has been designated the lead agency for oversight of the Berry XL Project.

Reporting. Flexibility in Florida regulations governing the permit application process allows Berry to accelerate its permit application process. Florida will allow Berry to use nonstandard forms in reporting environmental performance. Also, Florida may not require Berry to provide certification of environmental reports by a professional engineer, because the COP will be more comprehensive than a certified professional engineer's application. Standard operating procedures and detailed work instructions for implementing the COP will be written in easy-to-follow language to raise the level of employee comprehension and compliance.

Permit Renewal. Under the COP, Florida and EPA will relieve Berry of administrative and procedural rules that require the preparation and certification of multiple permit renewal applications every few years. The streamlined permitting approach is expected to result in cost savings, which Berry will reinvest in new environmentally beneficial operating procedures that will exceed current minimum standards and increase permit compliance. The burden on the EPA and the Florida agencies to review permit applications and issue permits will be reduced, allowing those agencies to concentrate on obtaining compliance with environmental laws, and moving beyond compliance.

Management Change. The Berry XL Project underwent a management change at the facility while the COP was being developed. Through a lease agreement signed in 1997, Cargill, Inc., became the new operator of Berry's LaBelle, FL, facility. The company will hold the lease for five years and has an option to purchase the plant. As a result, for the Berry XL Project to continue, Cargill must become a party to the FPA.

Promoting Innovation and System Change

Project XL provides EPA opportunities to test and implement approaches that protect the environment and advance collaboration with stakeholders. EPA is continually identifying specific ways in which XL projects are helping to promote innovation and system change. The innovation(s) and system change(s) that have emerged from the Berry XL Project are described below:

Consolidated Operating Permit (COP). The Berry company, in partnership with Florida DEP, SFWMD, and EPA, is piloting a consolidated multimedia permit concept. Experience gained through this project will be used by EPA to develop a framework for developing consolidated permits that can be transferred to other facilities, states, and regions. On a broader level the Agency also is undertaking a coordinated permitting reform effort. As indicated in the Permit Reform Action Plan, which will guide that effort, the lessons learned from the Berry COP will be used as permit reform advances.

Environmental Management Systems (EMSs). As announced in the Federal Register on March 12, 1998, the Agency is in an evaluative phase which will lead toward development of an EPA policy on Environmental Management Systems (EMSs). During the evaluative phase, EPA is conducting a number of pilot projects which will provide data on the actual compliance and environmental benefits of EMS approaches. Project XL is piloting involvement of regulators in conducting courtesy inspections and developing standard operating procedures as part of an environmental management system, through efforts such as the Berry XL Project.

Project Commitment Summary

This table and the environmental performance table summarize progress in meeting commitments described in the XL Final Project Agreement (FPA) for the Berry Corporation facility. Berry has met some of its project commitments even though work on the Comprehensive Operating Permit has been put on hold pending decisions to be made by EPA, the State of Florida, Berry, and the new facility operator, Cargill, Inc.

Commitment	Status
Comprehensive Operating Permit (COP)	
Develop COP.	Draft COP was due 8/31/97. Substantial progress has been made, but work on the COP was put on hold in late 1997 pending decisions to be made by the new plant operator, Cargill, Inc.
ISO 14000 Environmental Management System	
Prepare documentation for the ISO 14000 Environmental Management Program.	Work on this item has not begun; however, the standard operating procedures and work instructions in the draft COP have been formatted to be compatible with ISO to expedite implementation.
Air	
Replace existing peel dryer with a more efficient peel dryer, or modify the drying process to reduce VOC emissions.	Improved peel dryer installed 9/96.
Perform stack test following installation of new peel dryer or process improvement.	No information is available on progress.
Prepare strategy for reducing emissions of SO_2, NO_x, and VOCs; to be completed one year from COP effective date.	Information on progress will be available starting one year after COP effective date.
Implement strategy for reducing emissions of sulfur dioxide, nitrous oxides, and volatile organic compounds; to be implemented following approval of emission reduction strategy	Information on progress will be available after approval of the emission reduction strategy (see above).
Water	
Abandon spray site as industrial wastewater disposal area, in order to reduce odor problems.	Spray site abandoned 10/97; certification on abandonment of spray site will be provided annually starting one year after COP effective date.
Reuse treated industrial wastewater to irrigate a 1,400-acre section of citrus groves.	Industrial wastewater reuse was achieved 10/97; information on amounts of wastewater reused is not available.

Commitment	Status
Describe facility's water conservation measures; submit report annually starting one year after COP effective date.	Information on progress will be available starting one year after COP effective date.
Measure amount of water used in facility operations; submit report annually starting one year after COP effective date.	Information on progress will be available starting one year after COP effective date.
Maintain wetland treatment of wastewater; certify use of wetland treatment annually starting one year after COP effective date.	Wetland treatment system in full use in 1996; certification on use of wetland treatment area will be provided annually starting one year after COP effective date.
Maintain current location of wetland treatment ponds to minimize offsite odor complaints; certify location of ponds annually starting one year after COP effective date.	Certification on location of wetland treatment ponds will be provided annually starting one year after COP effective date.
Close or modify surge pond to eliminate odor problems and the potential for groundwater contamination from industrial wastewater.	The surge pond was modified in 1997 by installing larger pumps, operating at lower levels.
Meet drinking water standards equal to half of Maximum Contaminant Levels (MCLs) allowed under the Safe Drinking Water Act; report MCLs in accordance with Florida regulation.	The facility meets drinking water standards equal to half of MCLs except for radionuclides. Information on progress in reducing radionuclide levels to half the MCLs is not available.
Solid and Hazardous Waste	
Reduce number and types of solvents and lubricants used onsite; provide an annual list of solvents and lubricants used onsite, and their environmentally friendly replacements, starting one year after COP effective date.	The list of solvents and lubricants used onsite is included in the FPA; the list of solvents and lubricants, and their environmentally friendly replacements, will be provided annually starting one year after COP effective date.
Recycle scrap metal.	Recycling increased 2/97; no information is available on how this was accomplished.
Reduce landfill disposal of paper, metal, glass, and plastic to the best extent possible.	Solid waste disposal decreased 2/97; no information is available on how this was accomplished
Employee Training.	
Train processing plant personnel on the COP, permit conditions, and general regulatory requirements.	Status is unknown.
Provide continuous training through regulatory council and regulatory steering committee.	Status is unknown.

Environmental Performance

One of the objectives of the Berry XL Project is to replace existing regulatory permits and regulatory operating requirements with a single COP. The following permits will be combined into a single permit that will be evaluated by EPA, Florida, and Berry every 5 years.

Permit/Requirement	Responsible Agency	Year Issued (if applicable)	Latest Permit Issued	Year Expires (if applicable)
Boiler #1 Air Quality Permit	FDEP	1989	1998	2006
Boiler #2 Air Quality Permit	FDEP	1989	1998	2006
Boiler #3 Air Quality Permit	FDEP	1993	1998	2006
Feed Mill Dryer Air Quality Permit	FDEP	1989	1998	2006
Drinking Water Requirement	FDEP	1993	1998	
Industrial Wastewater-Groundwater Monitoring Requirement	FDEP		1998	2000
Consumptive Use Permit	SFWMD		1997	2007

Monitoring and reporting of most environmental performance commitments under the Berry FPA is related to the effective date of the COP. Berry has made progress in environmental performance in some areas, even though work on the COP was put on hold in 1997. Environmental performance commitments include the following:

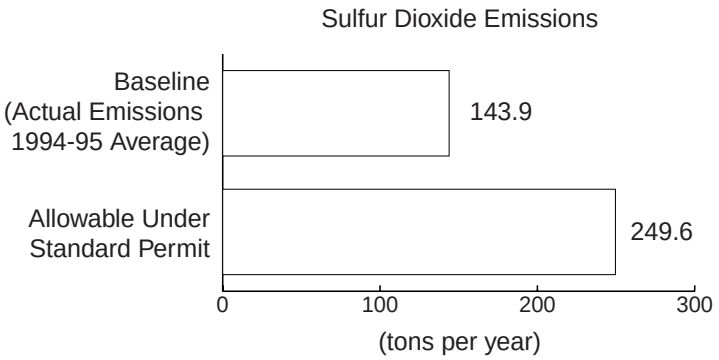
Water Consumption and Conservation: Berry has committed to reusing its treated wastewater for irrigation rather than disposing of wastewater through land application on a spray field. Berry also has committed to describing its water conservation activities and measuring the amount of water used in facility operations. Reports on water conservation and the facility's use of water will be prepared annually starting one year after the effective date of the COP. Under its existing permit, the LaBelle facility's maximum daily wastewater flow limit is 0.98 million gallons per day.

Progress: Berry has eliminated a spray field (88-acre field in operation since 1974) that had been used for wastewater disposal. This eliminated an odor problem it caused. The Berry facility is now reusing all wastewater produced by the facility to irrigate a 1,400-acre section of citrus groves.

Potable Water: Berry has voluntarily committed to meet drinking water standards equal to half of the Maximum Contaminant Levels (MCLs) allowed under the Safe Drinking Water Act. Chapter 62-550, Florida Administrative Code (FAC) specifies allowable MCL levels for a variety of types of contaminants, including inorganics, volatile organics, radionuclides, microbiological contaminants, and other miscellaneous contaminants. Berry will report contaminant levels, in accordance with the FAC, to FDEP.

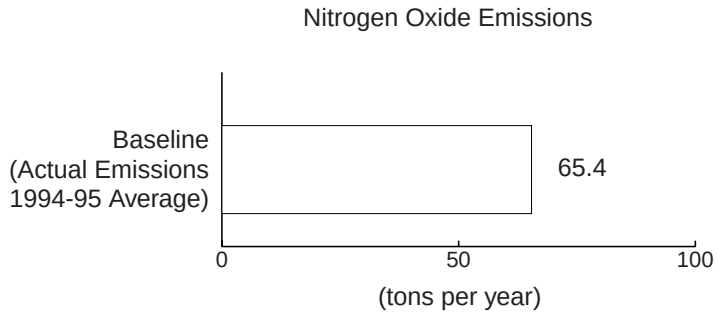
Progress: Currently available test data indicate that, for each drinking water contaminant except for radionuclides, Berry either meets a voluntary drinking water standard equal to half of the MCLs allowed under the Safe Drinking Water Act or is not able to detect the contaminant. For radionuclides, the most recent test data show gross alpha particle activity to be 9.7 picocuries per liter (pCi/L); the MCL for gross alpha particles is 15 pCi/L. Test data also show the combined radium-226 and radium-228 level to be 5.8 pCi/L; the MCL for combined radium-226 and radium-228 is an annual average concentration of 5 pCi/L. Information on progress toward achieving radionuclide levels equal to half the applicable MCLs is not available.

Sulfur Dioxide (SO_2) Emission Reductions: Berry has committed to preparing and implementing a strategy for reducing SO_2 emissions. The strategy will be completed one year from the COP effective date. Emissions reporting requirements will be detailed in the strategy. Reductions in SO_2 emissions may be accomplished through decreasing the sulfur content in fuel oil and limiting the quantity of oil burned per year. The baseline for the facility's emission of SO_2 is 143.9 tons/year based on an average of 1994 and 1995 emissions.



Progress: Information on progress in preparing the emissions reduction strategy is not available.

Nitrogen Oxide (NO_x) Emission Reductions: Berry has committed to preparing and implementing a strategy for reducing NO_x emissions. The strategy will be completed one year from the COP effective date. Emissions reporting requirements will be detailed in the strategy. NO_x emissions currently are not covered by Berry's existing air permits, but a Title V permit under the revised CAA is expected to be completed in 1999. The baseline for the facility's emission of NO_x is 65.4 tons/year based on an average of 1994 and 1995 emissions.

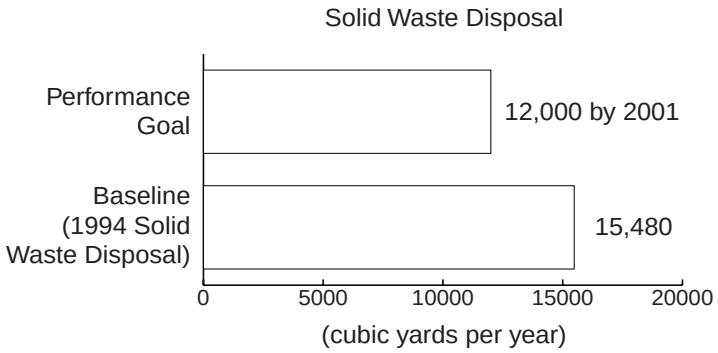


Progress: Information on progress in preparing the emissions reduction strategy is not available.

Volatile Organic Compound (VOC) Emission Reductions: Berry has committed to preparing and implementing a strategy for reducing VOC emissions. The strategy will be completed one year from the COP effective date. VOC emissions currently are not covered by Berry's existing air permits, but a Title V permit under the revised CAA is expected to be completed in 1999. Berry also committed to replace its existing peel dryer with a more efficient peel dryer to reduce VOC emissions. Additional reductions may be accomplished through process improvements or installation of a VOC control device. Emissions reporting requirements will be detailed in the emissions reduction strategy. The baseline for VOC emissions against which progress will be measured has not been established.

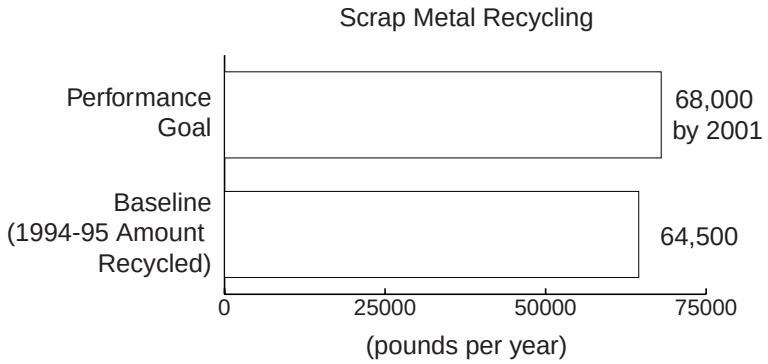
Progress: Berry installed a more efficient peel dryer in September 1996. Information on progress in reducing VOC emissions is not available.

Solid Waste Disposal Reductions: Berry has committed to reducing the disposal of solid waste generated by the facility through recycling of paper, plastic, metal, and glass. The baseline for solid waste disposal by the facility is 15,480 cubic yards/year (based on January 1994 through December 1994 levels). Reports on solid waste disposal will be prepared annually starting one year after the effective date of the COP.



Progress: Solid waste recycling was initiated in February 1997. Information on the amount of solid waste recycled and disposed of in landfills are not available.

Scrap Metal Recycling: Berry has committed to increase the recycling of scrap metal generated by the facility. The baseline for scrap metal recycling is 64,500 pounds/year (based on June 1995 through June 1996 levels). Reports on scrap metal recycling will be prepared annually starting one year after the effective date of the COP.



Progress: Scrap metal recycling was increased in February 1997. Information on how this was accomplished and progress in scrap metal recycling are not available.

Hazardous Chemical Use Reductions: Berry has committed to reduce the number and types of solvents and lubricants used onsite and to replace these with environmentally friendly materials where possible. Berry will provide in the FPA a list of existing spray can solvents and lubricants used onsite, prepare a list of environmentally friendly solvents and lubricants one year after the COP effective date, and certify or modify the list annually thereafter.

Progress: Berry implemented a self-audit process and prepared a list of solvents and lubricants used onsite in the FPA. As result of the audit, Berry was able to eliminate the use of some hazardous materials. No information is available on the quantities of hazardous materials involved.

ISO 14000 Environmental Management System: Berry has committed to instituting the ISO 14000 Environmental Management System. A target date for completing the documentation and implementing the new system has not been established.

Progress: Detailed work instructions developed by Berry as part of documenting the ISO 14000 Environmental Management System have helped standardize environmental testing at the facility. All three employee shifts at the plant perform testing in a similar manner, resulting in consistent data quality. The work instructions have enabled employees to better understand the environmental aspects of their jobs, leading to continuous improvement in environmental performance. Overall, Berry's level of compliance with regulations has improved, and the incidences of violations have been reduced significantly.

Stakeholder Participation

Signatories to the Berry FPA were Jack M. Berry, Inc., EPA, FDEP, and SFWMD. To ensure stakeholder participation, a Stakeholder Committee was formed by the facility in May of 1996, including representatives from the LaBelle, Florida Chamber of Commerce, Regional Economic Development Initiative (REDI), River Watch, Audubon Society, Nature Conservancy, Department of the Interior, and the Mayor of LaBelle. The Stakeholder Committee participated in the public meeting held by the facility in LaBelle, Florida, on May 9, 1996. The purpose of the meeting was to inform all interested citizens concerning the development and implementation of Berry's XL Project and to seek public comment and input on the proposal. The Stakeholder Committee also will review and comment to Berry on the proposed COP.

Berry will continue to involve stakeholders in Lee and Hendry Counties on the implementation of the COP after it is signed. Except for data determined to be confidential business information, all reports prepared under the COP will be available for public inspection at the FDEP and Berry offices. Berry will continue to maintain open communication with stakeholders.

Six-Month Outlook

Development of the COP remains on hold pending decisions to be made by EPA, the State of Florida, Berry, and the new facility operator, Cargill, Inc., regarding whether to maintain or suspend the final project agreement.

Project Contacts

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- Chad Carbone, EPA Headquarters, 202-260-4296
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Information Sources

The information sources used to develop this progress report include: 1) discussions during a teleconference among representatives of the U.S. Environmental Protection Agency, Jack M. Berry, Inc., Cargill, Inc., and Florida Department of Environmental Protection; and 2) the Final Project Agreement for the Jack M. Berry, Inc. XL project. The information sources are current through December, 1998.

Glossary

Clean Air Act (CAA): The CAA is the comprehensive Federal law that regulates air emissions from area, stationary, and mobile sources. This law authorizes EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment.

Clean Water Act (CWA): The CWA sets the basic structure for regulating discharges of pollutants to waters of the United States. The law gives EPA the authority to set technology-based effluent standards on an industry basis and continues the requirements to set water quality standards for all contaminants in surface waters. The CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a National Pollutant Discharge Elimination System (NPDES) permit is obtained under the Act.

Comprehensive Operating Permit (COP): A single permit, including all operating procedures, that consolidates existing operating permits issued under various Federal and state environmental protection statutes.

Gross Alpha Particle Activity: A measurement of radioactivity due to emission of alpha particles. Alpha particles are positively charged particles, each composed of 2 neutrons and 2 protons, released by some atoms undergoing radioactive decay.

Inorganics: Substances of mineral origin, not having a carbon-based (organic) atomic structure.

International Organization for Standardization (ISO) 9000: ISO 9000 is primarily concerned with "quality management." The definition of quality in ISO 9000 refers to all those features of a product or service that are required by the customer. Quality management is the action taken by an organization to ensure that its products conform to customers' requirements. The ISO 9000 series sets out the methods that can be implemented in an organization to ensure that customers' requirements are fully met, and that available resources, including material, people, and technology, are used efficiently.

International Organization for Standardization (ISO) 14000: ISO 14000 is primarily concerned with "environmental management." The ISO 14000 series sets out the methods that can be implemented in an organization to minimize harmful effects on the environment caused by pollution or natural resource depletion.

Maximum Contaminant Levels (MCLs): The maximum concentrations of specific contaminants that are allowed under the federal Safe Drinking Water Act.

Nitrogen Oxides (NO_x): An air pollutant that is the result of photochemical reactions of nitric oxide in ambient air. Typically, it is a product of combustion from transportation and stationary sources. It is a major contributor to the formation of tropospheric ozone, photochemical smog, and acid deposition.

Picocurie: A unit of measure used for expressing levels of radioactivity. One picocurie is one trillionth of a curie and represents about 2.2 radioactive particle disintegrations per minute.

Radionuclides: Radioactive particles, man-made or natural, with a distinct atomic weight number. Radionuclides can persist for many years as soil or water pollutants.

Resource Conservation and Recovery Act (RCRA): RCRA gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of nonhazardous wastes. RCRA enables EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. RCRA focuses only on active and future facilities and does not address abandoned sites.

Safe Drinking Water Act: The Safe Drinking Water Act was established to protect the quality of drinking water. This law focuses on all waters actually or potentially designated for drinking use, whether from above- ground or underground sources. The Act authorizes EPA to establish safe standards of purity and requires all owners or operators of public water systems to comply with primary (health-related) standards. State governments, which assume this power from EPA, also encourage attainment of secondary standards (for example, water clarity).

Surge Pond: A man-made body of water built to capture excess water flows: for example, from a storm.

Sulfur Dioxide (SO_2): SO_2 gases are formed when fuel containing sulfur (mainly coal and oil) is burned. They are also formed during metal smelting and other industrial processes. SO_2 is associated with acidification of lakes and streams, accelerated corrosion of buildings and monuments, reduced visibility, and adverse health effects, including effects on breathing, respiratory illness, and aggravation of existing cardiovascular disease.

Title V Permit: An operating permit, enforceable by EPA, that includes all CAA requirements for a source in a single document. The permits are referred to as Title V Permits because they are authorized under Title V of the 1990 Amendments to the CAA. This new law required states to develop operating permit programs that are approved by EPA by 1995. Prior to this requirement, many states had had their own operating permit programs for many years, but these permits were not enforceable by EPA.

Volatile Organic Compound (VOC): Any organic compound that easily evaporates and participates in atmospheric photochemical reactions, except those designated by EPA as having negligible photochemical reactivity.

Wastewater: The spent or used water from a home, community, farm, or industry that contains dissolved or suspended matter.

Wetlands: An area that is regularly saturated by surface water and groundwater. Wetlands are characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include: swamps, bogs, fens, marshes, and estuaries.