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United States
Environmental Protection
Agency

Office of the Administrator
Washington, DC 20460
Mail Code 1802

EPA 100-R-00-004
December 1999
www.epa.gov/reinvent

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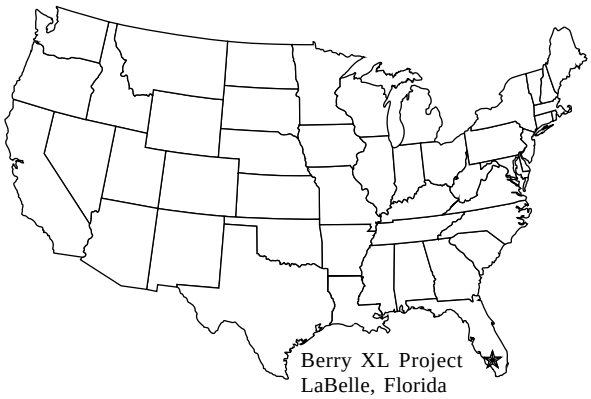
Project XL Progress Report
Jack M. Berry, Inc.

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 1999, 15 XL projects are in the implementation phase and 35 XL projects are under development. EPA Project XL Progress Reports provide 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 general information number at 202-260-7434. Additional information on Project XL is available on the web site or by contacting the general information number.

The Jack M. Berry, Inc. facility in LaBelle, Florida, was the site of one of the earliest Project XL pilots. The project, however, was terminated June 2, 1999, following a management change at the facility and suspension of work on the Comprehensive Operating Permit (COP) that would have been the project's focus. Even though the project was not implemented as expected, the cooperative work by Berry, the Florida Department of Environmental Protection (FDEP), the South Florida Water Management District (SFWMD), and EPA was a valuable learning experience.



Background

Jack M. Berry, Inc. is a midsized citrus juice-processing company. The company's LaBelle facility is located 30 miles east of Fort Myers on Berry's largest grove, consisting of about 10,000 acres of

Major Milestones

- August 16, 1995 — Berry XL Proposal Submitted
- August 8, 1996 — Final Project Agreement Signed
- 1997 — LaBelle Facility's Change in Operator
- June 2, 1999 — Project Terminated

orange and grapefruit trees. The Berry XL Project would have established a process by which Berry would prepare a COP in partnership with the FDEP, SFWMD, and EPA. The COP would have eliminated the requirement of preparing multiple permit applications every few years. The resulting cost savings would have been used by Berry to improve environmental performance. Once completed, the COP would have been reevaluated every 5 years by EPA, FDEP, SFWMD, and Berry.

In the FPA developed for the project, Berry also committed to instituting both the International Organization for Standardization (ISO) 9000 management program and the ISO 14000 environmental management program as a means of promoting continuous superior environmental performance, including strategies for pollution prevention and source reduction. The superior environmental benefits of this project would have been

- a reduction in 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 citrus processing procedures;
- a reduction in consumptive water use through both water conservation and the reuse of treated industrial wastewater as irrigation water;
- a substantial reduction in the facility's spray site's use as an industrial wastewater disposal area;
- minimized offsite odors, and consequently complaints from the public, by using artificial wetlands to treat industrial wastewater;
- the elimination of a source of potential groundwater contamination and odor by closing or modifying an existing surge pond;
- a reduction in the amount of hazardous solvents and lubricants used onsite by replacing them with more environmentally friendly materials;
- innovative research on the use of natural substances extracted from orange peels as alternatives to toxic solvents; and
- a reduction in the amount of material entering the solid waste stream by increasing metal recovery and by recycling scrap material, paper, glass, and plastics.

The Experiment

The Berry project aimed to develop a facility-wide COP that would have consolidated 23 Federal, state, and local environmental permits and all operating procedures into a single manual for the facility. The COP would have been a multi-media permit that was part of a streamlined permitting approach that was expected to better integrate plant operation and compliance procedures, as well as to eliminate unnecessary administrative requirements.

The Flexibility

The Berry plant 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 would have consolidated selected operating permits and requirements, maintained all environmental standards, and committed Berry to superior environmental performance.

The statutory programs, and the EPA offices administering the programs, affecting the Berry XL Project would have been

US EPA ARCHIVE DOCUMENT

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

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

Permits. If the COP had been completed, the State of Florida and EPA would have relieved Berry of administrative and procedural rules that required the preparation and certification of multiple permit renewal applications every few years. The streamlined permitting approach was expected to result in cost savings, which Berry could have reinvested in new environmentally beneficial operating procedures that would have prompted exceedence of current minimum standards and increased permit compliance. The streamlined approach would have reduced the burden on EPA and the Florida agencies to review permit applications and issue permits, allowing those agencies to concentrate on obtaining compliance with environmental laws and moving beyond compliance.

Reporting. Flexibility in Florida regulations governing the permit application process would have allowed Berry to use nonstandard forms in reporting environmental performance, which would have been simplified and part of the approved COP. Also, the State of Florida may not have required Berry to provide certification of environmental reports by a professional engineer, because the COP would have been more comprehensive than a certified professional engineer's application.

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 innovations and system changes that emerged during developmental stages of the Berry XL Project are described below.

The Multi-media Consolidated Operating Permit. Even though the multi-media COP for Berry was not completed, the process of developing the project concept and the State of Florida's approach to consolidated permitting yielded valuable lessons. During the initial phase of COP development, Berry employees and the State of Florida worked together on the development of detailed work procedures. EPA will document the methodology used in preparing the standard work procedures in order to develop a case study of the process that will be available to Federal and state permit writers. Also, Project XL will continue to seek opportunities to test the COP concept at another facility. In March 1999, EPA approved a detailed plan for "The Next Generation in Permitting." The COP concept is an integral part of this plan and a potential component in the Agency's ongoing permit improvement process.

Consolidated Reporting. The nonstandard forms for reporting environmental performance would have been used for air quality, drinking water, industrial wastewater, groundwater monitoring, and fresh water use reporting. A number of state programs are looking to transition to a consolidated "one stop" reporting system. In

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keeping with this trend, EPA plans to further explore the Federal component of the consolidated reporting and burden reduction opportunities as investigated by the former Berry project.

Linking Environmental Management Systems to Standard Operating Procedures. On March 12, 1998, EPA issued a policy statement in the Federal Register describing a number of pilot projects—including Project XL—which will provide data on the actual compliance and environmental benefits of Environmental Management System (EMS) approaches. Project XL had been testing the development of standard operating procedures (SOPs) as part of an EMS. Early activities undertaken during the Berry XL Project have provided valuable experience in the development of SOPs that both raise employee awareness of environmental protection and improve facility compliance.

Project Commitment Summary

Berry's LaBelle facility underwent a management change while the COP was being developed. Through a lease agreement signed in 1997, Cargill, Inc. became the facility's new operator. The company will hold the lease for 5 years and has an option to purchase the plant. As a result, for the Berry XL Project to have continued, Cargill would have had to become a party to the FPA. Work on development of the COP was put on hold in late 1997 pending a decision by Berry and Cargill regarding the project's continuation. Getting to a final decision on the project's future, however, proved elusive. Since further progress appeared unlikely, 3 years after the project agreement was signed, EPA and the State of Florida chose to terminate the agreement on June 2, 1999. The LaBelle, Florida, facility remains part of the traditional regulatory system and continues to be governed by Federal, state, and local regulations.

This table and the environmental performance section that follows summarize progress in meeting commitments described in the FPA for Jack M. Berry, Inc.

Commitment	Status
Comprehensive Operating Permit (COP)	
Develop COP.	The COP was not completed.
Develop Standard Operating Procedures (SOPs).	SOPs, along with easier-to-follow work instructions, have led to continuous improvement in environmental performance by reducing incidences of minor environmental violations.
ISO 14000 Environmental Management System (EMS)	
Complete documentation for the ISO 14000 EMS.	The EMS documentation was not completed. The SOPs and work instructions in the draft COP were designed to be compatible with the ISO to expedite implementation.
Air	
Replace the existing peel dryer with a more efficient peel dryer, or modify the drying process to reduce VOC emissions.	Improved peel dryer was installed 9/96.
Perform a stack test following either installation of the new peel dryer or process improvement.	No information available.

US EPA ARCHIVE DOCUMENT

Commitment	Status
Air	
Prepare strategy for reducing emissions of SO_2, NO_x, and VOCs; to be completed one year from COP effective date.	Work on this did not occur.
Implement strategy for reducing emissions of SO_2, NO_x, and VOCs; to be implemented following approval of emission reduction strategy.	Work on this did not occur.
Water	
Abandon use of the spray site as an industrial wastewater disposal area in order to reduce odor problems.	Spray site abandoned 10/97. Certification on the spray-site abandonment site was to be provided annually starting one year after the COP's effective date, but certification did not occur.
Reuse treated industrial wastewater to irrigate a 1,400-acre section of citrus groves.	Industrial wastewater reuse was reported achieved by 10/97. Information on amounts of wastewater reused is not available.
Describe the facility's water conservation measures; submit a report annually starting one year after the COP's effective date.	Work on this did not occur.
Measure the amount of water used in facility operations; submit a report annually starting one year after the COP's effective date.	Work on this did not occur.
Maintain wetland treatment of wastewater; certify use of wetland treatment annually starting one year after the COP's effective date.	Wetland treatment system reported in full use in 1996. Certification on the use of the wetland treatment area but did not occur.
Maintain the current location of wetland treatment ponds to minimize offsite odor complaints. Certify the location of ponds annually starting one year after the COP's effective date.	Certification on the location of the wetland treatment ponds did not occur.
Close or modify the 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 that operate at lower levels.
Meet the drinking water standards equal to half of the Maximum Contaminant Levels (MCLs) allowed under the Safe Drinking Water Act (SDWA); report the MCLs in accordance with Florida regulation.	The facility met drinking water standards equal to half of the MCLs except for radionuclides. Information on progress in reducing radionuclide levels to half of the MCLs is not available.

US EPA ARCHIVE DOCUMENT

Commitment	Status
Solid and Hazardous Waste	
Reduce the 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 the COP's 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, was not provided.
Recycle scrap metal.	Recycling reported increased by 2/97. No information is available on the amounts recycled.
Reduce landfill disposal of paper, metal, glass, and plastic to the best extent possible.	Solid waste disposal reported increased by 2/97. No information is available on the level of disposal reductions.
Employee Training	
Educate processing plant personnel on the COP, permit conditions, and general regulatory requirements.	Status unknown.
Provide continuous training through regulatory council and regulatory steering committee.	Status unknown.

Environmental Performance

One of the objectives of the Berry XL Project was to replace existing regulatory permits and regulatory operating requirements with a single COP. The following permits were to be combined into a single permit to 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

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US EPA ARCHIVE DOCUMENT

This section summarizes progress in meeting the environmental performance described in the FPA for Jack M. Berry, Inc.

Water Consumption and Conservation: Berry had committed to reusing its treated wastewater for irrigation rather than disposing of it through land application on a spray field. Berry eliminated a spray field (88-acre field in operation since 1974) that had been used for wastewater disposal. This eliminated an odor problem. The Berry facility also began reusing all wastewater produced by the facility to irrigate a 1,400-acre section of citrus groves.

Berry also had committed to describing its water conservation activities and measuring the amount of water used in facility operations. Under its existing permit, the LaBelle facility's maximum daily wastewater flow limit is 0.98 million gallons per day. There were to be annual reports on water conservation activities, starting one year after the effective date of the COP. This commitment was not implemented.

Potable Water: Berry had voluntarily committed to meet drinking water standards equal to half of the MCLs allowed under the SDWA. The Florida Administrative Code, Chapter 62-550, specifies allowable MCL levels for a variety of contaminants, including inorganics, volatile organics, and radionuclides, as well as for microbiological contamination. Berry reports contaminant levels to FDEP in accordance with Florida regulation.

Berry voluntarily met drinking water standards equal to half of the MCLs allowed under the SDWA, except for radionuclides. The most recent test data on radionuclides showed gross alpha particle activity to be 9.7 picocuries per liter, compared to Florida's MCL of 15 picocuries per liter. Test data show combined radium-226 and radium-228 activity to be 5.8 picocuries per liter, compared to Florida's MCL of 5 picocuries per liter. Information on progress toward achieving radionuclide levels equal to half the applicable MCL is not available.

Sulfur Dioxide (SO_2) Emission Reductions: Berry had committed to implementing a strategy for reducing SO_2 emissions within one year from the COP effective date. The strategy would detail emissions reporting requirements. Potential methods for reducing SO_2 emissions included decreasing the sulfur content in fuel oil and limiting the quantity of oil burned per year. Under a standard permit, the facility is allowed to emit 249.6 tons per year of SO_2. The baseline level of emissions that was to be used for implementing the COP was 143.9 tons per year (1994-1995 average). This commitment was not implemented.

Nitrogen Oxide (NOx) Emission Reductions: Berry had committed to implementing a strategy for reducing NO_x emissions within one year from the COP effective date. The strategy would detail emissions reporting requirements. NO_x emissions were not covered by air permits at the time the FPA was signed. However, a baseline of 65.4 tons per year (1994-1995 average) of NO_x emissions was to be used for implementing the COP. This commitment was not implemented.

Volatile Organic Compound (VOC) Emission Reductions: Berry had committed to implementing a strategy for reducing VOC emissions within one year from the COP effective date. The strategy would detail emissions reporting requirements. VOC emissions were not covered by air permits at the time the FPA was signed. Berry installed a more efficient peel dryer in September, 1996, to reduce VOC emissions. There may have been additional reductions accomplished through process improvements or installation of a VOC control device. There was no baseline established for VOC emissions against which progress would have been measured. Other than replacing the peel dryer, this commitment was not implemented.

Solid Waste Disposal Reductions: Berry had committed to reducing the disposal of solid waste generated by the facility through recycling of paper, plastic, metal, and glass. There were to be annual reports on solid waste disposal, starting one year after the effective date of the COP. The baseline for solid waste disposal by

the facility was set at 15,480 cubic yards per year (1994-1995 levels). The performance goal was 12,000 cubic yards per year by the year 2001, and Berry reported that solid waste recycling was initiated in February, 1997. Information on the amount of solid waste recycled and disposed of in landfills is not available.

Scrap Metal Recycling: Berry had committed to increasing its scrap metal recycling from a baseline of 64,500 pounds per year (June 1995 through June 1996) to a goal of 68,000 pounds per year by the year 2001. There were to be annual reports on scrap metal recycling, starting one year after the effective date of the COP. Berry reported that it increased scrap metal recycling in February, 1997, but information on the amount of scrap metal recycled is not available.

Hazardous Chemical Use Reductions: Berry had committed to reducing the number and types of solvents and lubricants used onsite and to replace these with environmentally friendly materials where possible. There were to be annual reports on hazardous material use reductions, starting one year after the effective date of the COP. Berry reported implementing a self-audit process and prepared a list of solvents and lubricants used onsite during development of the FPA. As result of the audit, Berry was able to eliminate the use of some hazardous materials. Information on the quantities of hazardous materials eliminated is not available.

ISO 14000 Environmental Management System: Berry had committed to instituting an ISO 14000 EMS at its facility. Berry facility managers and employees, with assistance from Florida DEP, began developing detailed work instructions to help employees better understand the environmental aspects of their jobs, leading to continuous improvement in environmental performance. This helped standardize environmental testing performed by different employee shifts at the plant, resulting in consistent data quality. Overall, Berry's level of compliance with regulations has improved, and the incidences of violations have been reduced significantly. The work instructions and ISO 14000 EMS implementation have not been completed.

Stakeholder Participation

To ensure stakeholder participation, the facility formed a Stakeholder Committee in May, 1996; it included representatives from the LaBelle Chamber of Commerce, the Regional Economic Development Initiative (REDI), River Watch, the Audubon Society, the Nature Conservancy, Department of the Interior, and the Office of 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 about the development and implementation of Berry's XL Project and to seek public comment and input on the proposal. Additional stakeholder involvement activities did not take place. Had the project been implemented, the Stakeholder Committee would have been asked to review and comment to Berry on the proposed COP. In addition, except for data determined to be confidential business information, all reports prepared under the COP would have been available for public inspection.

Project Contacts

- Katherine Dawes, EPA Headquarters, (202) 260-8394.
- Zylpha Pryor, EPA Region 4, (404) 562-9535.
- Michael Owens, FDEP, (850) 921-9717.
- Terrie Bates, SFWMD, (561) 682-6952.

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Information Sources

The information sources used to develop this progress report include (1) discussions during teleconferences among representatives of the U.S. EPA; Jack M. Berry, Inc.; Cargill, Inc.; and Florida DEP; (2) the FPA for the Jack M. Berry, Inc. XL project; and (3) the June 2, 1999 letter terminating the project.

Glossary

Baseline: The measure by which future environmental performance can be compared.

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.

Environmental Management System (EMS): Documentation that describes the methods that can be implemented in an organization to minimize harmful effects on the environment caused by pollution or natural resource depletion.

Final Project Agreement (FPA): An agreement negotiated by the project sponsor, EPA, state agencies, Tribal governments, other regulators, and direct participant stakeholders. The FPA outlines the goals of the project and each party's commitments.

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

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 (SDWA).

US EPA ARCHIVE DOCUMENT

Media: Specific environments—air, water, soil—that are subject to regulatory concern and activities.

Multi-media: Several environmental media, such as air, water, and land.

Nitrogen Oxide (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.

Potable Water: Water that is safe for drinking, typically referring to well water.

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 (SDWA): The SDWA 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).

Sulfur Dioxide (SO_2): A gas that is formed when fuel containing sulfur (mainly coal and tar fuels) is burned and during metal smelting and other industrial processes. Sulfur dioxide is associated with acidification of lakes and streams, accelerated corrosion of buildings and monuments, reduced visibility, and such adverse health effects as inhibition of breathing, respiratory illness, and aggravation of existing cardiovascular disease.

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

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.

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