



Project XL: Summary of Current Pilot Projects

WHAT IS PROJECT XL?

Project XL, which stands for "eXcellence and Leadership", is a national pilot program that tests innovative ways of achieving better and more cost-effective public health and environmental protection. The information and lessons learned from Project XL are being used to assist EPA in redesigning its current regulatory and policy-setting approaches. Project XL encourages testing of cleaner, cheaper and smarter ideas to attain environmental results superior to those achieved under current regulations and policies, in conjunction with greater accountability to stakeholders.

As of May 2000, 25 pilot experiments are being implemented under Project XL and about 30 more are in various stages of development. During project development, the project sponsors, EPA, States, co-regulators, and other stakeholders participate in day-to-day negotiations leading to a Final Project Agreement (FPA). FPAs outline the details of XL projects and each party's commitments. It is vital that each project test new ideas with potential for wide application and broad environmental benefits. This fact sheet provides a very brief summary of each of the 25 final pilot projects.

For more information on Project XL, see EPA's fact sheet entitled, "What is Project XL? Excellence and Leadership in Environmental Protection" (EPA-100-F-00-011), May 2000, and other project-specific fact sheets—all of which are available on the Internet at <http://www.epa.gov/Project> XL or via Project XL's Information Line at 202-260-5754.

WEYERHAEUSER FLINT RIVER OPERATIONS

Weyerhaeuser Company's pulp manufacturing facility in Oglethorpe, Georgia, is striving to minimize the environmental impact of its manufacturing processes on the Flint River and the surrounding environment by pursuing a long-term vision of a Minimum [environmental] Impact Mill. The company plans to support the project for a period of 15 years. The Weyerhaeuser final project agreement was signed on January 17, 1997.

Innovative Approach: Weyerhaeuser's project will test: (1) how a facility operates under an environmental management system with a minimum impact goal; and (2) whether new approaches to meet ambitious environmental goals can be created by a company together with stakeholders and government agencies.

Benefits for the Environment: First-year results include a 32 percent decrease of certain bleach plant effluent discharges into the Flint River, a 40 percent reduction of solid waste, and a 13 percent decrease in air emissions. Additional benefits are anticipated: (1) cuts in its bleach plant effluent by 50 percent over a ten-year period; (2) reduction of water usage by about 1 million gallons a day; (3) cuts in solid waste generation in half over a ten-year period; (4) reduction of hazardous waste constituents; and (5) improved forest management practices in over 300,000 acres of land by stabilizing soil, creation of stream side buffers, and safeguarding of unique habitats.

Benefits to the Facility: After just one year of implementation, Weyerhaeuser has saved \$176,000 in

operating costs and expects to save an additional \$10 million in future capital spending.

Weyerhaeuser is gaining from regulatory flexibility that (1) enables it to consolidate a number of routine reports into two reports per year; (2) allows use of alternative means to meet the requirements of new maximum achievable control technology regulations; and (3) waives government review prior to certain physical modifications, provided emissions do not exceed stipulated levels.

Stakeholder Involvement: Local stakeholders have been fully involved in the development, environmental design, and impact assessment of the project. The outcome has been ongoing high stakeholder satisfaction and improved availability of information from the company.

INTEL CORPORATION

Intel's Fab 12 facility, which manufactures semiconductors (computer chips) in Chandler, Arizona, is implementing an Environmental Management Master Plan that includes a facility-wide cap on air emissions to replace individual permit limits for different air emissions sources. Since Intel's products often have a very short life span, production delays caused by multiple permit reviews can be critical and costly to the company. Intel's final project agreement was signed on November 19, 1996.

Innovative Approach: Intel's project will test: (1) the time efficiency of performance-based caps in lieu of pre-construction permit reviews; (2) the value of incorporating non-regulated items into the regulatory permit process; and (3) the effectiveness of community involvement in decision making as an incentive for improving environmental performance. The project includes multi-media, performance-based permits that specify performance levels for each regulated pollutant at the new facility.

Benefits for the Environment: The facility will (1) reduce up to 60 percent of the solid waste and up to 70 percent of the non-hazardous chemical wastes it generates by the year 2000; (2) recycle up to 65 percent of the fresh water it uses; and (3) balance limits on hazardous air pollutant emissions with health-based permits that specify performance levels for each regulated pollutant at the new facility.

Benefits to the Facility: Intel will gain from the opportunity to make operational changes without permit review, as long as permit limits are met. This allows it to bring products on line faster, a critical aspect in this "quick-to-market" industry. Results from the first year show that Intel avoided millions of dollars worth of production delays by eliminating 30-50 permit reviews a year.

Stakeholder Involvement: Stakeholders have been fully involved in the development, environmental design, and impact assessment of the project. Intel has become one of the first facilities in the U.S. to make its environmental reporting data available on the Internet in a format designed by community stakeholders. The project has also led to environmental mentoring and educational activities for local students and community groups.

JACK M. BERRY INC.

Jack M. Berry Inc. is a mid-sized juice-processing facility in LaBelle, Florida. Through this XL project, Jack M. Berry Inc. is developing a facility-wide comprehensive operating plan that consolidates environmental permits and all operating procedures into a single manual for the facility. The project builds in stakeholder participation, and will be evaluated with appropriate public notices every five years. By developing and gaining approval for just one comprehensive operating permit instead of many each year, the project may consolidate seven federal, state, and local environmental permits. It is also improving compliance with environmental requirements by involving staff in the development of the facility-wide operating plan and by using simple language to describe more clearly what is required by law. The Jack M. Berry final project agreement was signed on August 8, 1996.

Innovative Approach: The Jack M. Berry, Inc. project will (1) explore the benefits and pitfalls of

comprehensive operating permits that meld dozens of local, state, and federal permits into one; (2) the impact of permit consolidation on costs and expenditures; and (3) the impact of permit certainty on cost of capital.

Benefits for the Environment: In the first year of the project, the facility eliminated several hazardous waste streams, and an 88 acre area previously used to disperse wastewater, which relieved the community of irritating odor problems. The facility is also expected to: (1) reduce air emissions of volatile organic compounds, sulfur dioxide, and nitrogen oxides; and (2) further reduce the number and types of solvents and lubricants used onsite and replace them with a number of environmentally-friendly materials.

Benefits to the Facility: Jack M. Berry Inc. will save significant expenditures by eliminating the costly requirement of preparing multiple permit applications every few years. This results in reduced lender concern about future operational status, which, in turn, can translate into lower interest rates for long-term loans. In addition, as a result of audits during the project's first year, the company's new work procedures are expected to result in 50 percent savings in environmental control investments, improved worker safety, and substantially reduced employee training costs.

Stakeholder Involvement: Jack M. Berry Inc. has been working to ensure that those parties with a stake in the environmental concepts of its project are informed and have had an opportunity to participate in the development of the project.

HADCO CORPORATION

HADCO is a leading manufacturer of printed wiring boards and electronic interconnection products. Due to process changes since the 1970's, HADCO believes that the sludges created as a by-product of its operations are far less toxic and no longer need to be regulated as a hazardous waste. HADCO's XL project proposes to remove these wastes, which are rich in valuable copper, from regulation under the Resource Conservation and Recovery Act based on analyses of the waste with the hope that they are sent directly to be recycled. Four HADCO facilities are participating in Project XL – Owego, NY; and facilities in Derry, Hudson, and Salem, NH. The HADCO final project agreement was signed on October 7, 1997.

Innovative Approach: HADCO's five-year project will help demonstrate whether valuable materials determined to be safe can be reclaimed from waste streams without shipping them long distances to "middleman" processors, which is costly and increases risk. The project may demonstrate that new regulatory approaches can tip the economic scales in favor of recycling throughout the printed wiring board industry by tailoring regulatory requirements to the specific circumstances of the facility and the waste.

Benefits for the Environment: HADCO has committed to directing 100 percent of cost savings realized from the project towards expanding its efforts to recover valuable metals or prevent pollution. HADCO will voluntarily recycle copper dusts—another by-product of its operations—that are currently sent to land fills, and research their ability to install sludge dryers to reduce the volume of sludge wastes.

Benefits to the Facility: HADCO will gain flexibility to recycle wastes and avoid currently long and costly procedures for delisting hazardous waste.

Stakeholder Involvement: A regional environmental group, local representatives of national environmental groups, representatives from local towns, and industry representatives fully participate in the development of the project. A number of meetings were held to seek public input from all interested citizens.

MERCK STONEWALL PLANT

Merck & Co., Inc. is a pharmaceutical manufacturing facility in Elkton, Virginia. Avoiding production delays is important to this company so that life-saving drugs can be made available to the public as quickly as possible. The company also aims to reduce emission levels for sulfur dioxide and nitrogen oxide to protect visibility and reduce acid deposition in nearby Shenandoah National Park and the community. The Merck final project agreement was signed on December 15, 1997.

Innovative Approach: Merck's project will focus on: (1) whether a cap on criteria air pollutants for the entire site provides better overall air quality than before while offering more operational flexibility than the current permitting system; (2) whether a cap for the entire site can create better incentives to minimize emissions than the current air permitting system; and (3) whether a system that requires increased monitoring, record keeping, and reporting as emissions approach the cap ensures compliance and creates additional incentives to minimize emissions.

Benefits for the Environment: The facility will achieve: (1) permanent reductions in certain air pollutant emissions by 20 percent (about 300 tons/year); (2) decreases in sulfur dioxide and nitrogen oxide emissions by 900 tons/year (60 percent); and (3) reductions in hazardous air pollutants by 47 tons/year (65 percent).

Benefits to the Facility: As long as the facility's emissions remain below the established caps, Merck will no longer have to undergo time-consuming and costly permit reviews by EPA or the Virginia Department of Environmental Quality for changes at the facility that increase emissions. In addition, Merck will benefit from flexibility under certain new air pollution control regulations by having the option of either installing the prescribed new control technology or decreasing the facility's emissions by the emission reduction that would have been achieved with the new technology by some other means.

Stakeholder Involvement: The stakeholder team consists of representatives from the communities of Elkton and Rockingham County, VA, the U.S. Department of Interior/National Park Service, federal and state regulatory agencies, and Merck. The team also has received input from regional environmental organizations and other interested parties through numerous public meetings, briefings, and newsletters.

VANDENBERG AIR FORCE BASE

Vandenberg Air Force Base (AFB), located in Santa Barbara County, California, is the third largest Air Force installation in the United States. Most of the stationary source ozone precursor emissions at the base are generated by boilers, furnaces, process heaters, and internal combustion engines. Vandenberg has completed and assessment of the emission reduction potential from a variety of sources, and is now in the process of upgrading or retrofitting those emission sources with advanced pollution control technology to convert those sources to lower-emitting sources. Vandenberg is the first XL project involving a federal facility and is the first Department of Defense regulatory reform project known as ENVVEST (Environmental Investment). The Vandenberg final project agreement was signed on November 3, 1997.

Innovative Approach: Vandenberg AFB and the stakeholder technical review team are assessing the emissions reduction potential from a variety of sources, including internal combustion engines, space heaters, water heaters, chillers, and solvent applications. By upgrading the more energy-efficient, state-of-the-art equipment, significant emission reductions can be achieved. Installation of the new equipment is expected to continue over the next 3 years.

Benefits for the Environment: The facility will reduce its annual emissions of ozone precursors into the air by 10 tons or more within the next five years through emissions reductions in boilers, furnaces, and/or process heaters. Vandenberg will no longer be a potential major source of air pollution under Title V of the Clean Air Act.

Benefits to the Facility: By using money that would have been spent on administrative compliance with Title V and instead using it to make real world upgrades in equipment the base can reduce paperwork and decrease emissions to the environment.

Stakeholder Involvement: Vandenberg AFB worked to ensure that those parties with a stake in the environmental concepts and effects of its project have had the opportunity to participate in the development of the project. For example, it consulted closely with the District Advisory Council and the Vandenberg Community Advisory Board and held regularly scheduled public meetings.

OSI SPECIALTIES, INC.

OSi Specialties, Inc. (a subsidiary of Witco Corporation) is a specialty chemical manufacturer. OSi's Sisterville, WV, plant has agreed to: (1) install air pollution controls on a production unit well ahead of when the controls are anticipated to be required by EPA regulations; (2) reuse/recycle methanol, thereby reducing generation sludge at the facility; and (3) study the feasibility of reducing its waste streams. OSi's project will extend until 2002, unless additional environmental benefits warrant a continuation of the regulatory flexibility. OSi's final project agreement was signed on October 17, 1997.

Innovative Approach: OSi's project will determine: (1) whether providing flexibility to control pollution in a more cost-effective manner will produce benefits for both the environment and industry; (2) whether it is environmentally beneficial to defer regulations as an incentive for encouraging waste minimization/pollution prevention activities; and (3) what results can be obtained through a waste minimization/pollution prevention study.

Benefits for the Environment: The project will result in the destruction of 98 percent (by weight) of the organic compounds in the vent stream, or about 309,000 pounds per year. OSi will also recover and reuse an estimated 500,000 pounds per year of methanol that would otherwise be treated in its wastewater system. This will result in a reduction in sludge from the facility's wastewater treatment system of about 815,000 pounds per year.

Benefits to the Facility: EPA and the West Virginia Department of Environmental Protection have deferred new organic air emission regulations (RCRA Subpart CC) applicable to OSi's two hazardous waste surface impoundments.

Stakeholder Involvement: OSi held a series of public meetings during the development of the project, gave a presentation to the West Virginia Conference on the Environment, had interviews with local radio stations and newspapers, and sent information on the project to a number of other interested parties.

LUCENT TECHNOLOGIES, INC.

The Microelectronics business unit of Lucent Technologies designs and manufactures integrated circuits and optoelectronic components for the computer and communications industries. The Final Project agreement (FPA) of this XL pilot is an "umbrella" document, under which details for individual facilities will be worked out in subsequent site specific addenda. The FPA outlines a process that allows Lucent to use its existing environmental management system (EMS) as a framework for developing specific proposals to simplify permitting, record keeping, and reporting requirements, while driving continual improvement and pollution prevention programs. The Lucent umbrella final project agreement was signed on August 19, 1998.

Innovative Approach: Lucent's project will determine: (1) whether a state-of-the-art EMS can achieve superior environmental performance in both regulated and non-regulated areas and drive environmental management toward continuous improvement; (2) what characteristics of an EMS are necessary to provide superior environmental performance; and (3) how EPA regulations can be crafted to allow a company with a high-quality EMS to best implement projects arising from the EMS.

Benefits for the Environment: The EMS will foster superior environmental performance by identifying opportunities to reduce Lucent's environmental impacts in a variety of areas, both regulated and non-regulated, across the entire business unit involving a number of facilities.

Benefits to the Facility: Under the "umbrella" FPA, the stakeholders will develop site-specific addenda for several Lucent facilities which will enable Lucent to have potential flexibilities in permitting, permit modification, compliance monitoring, and record keeping requirements under Title V of the Clean Air Act, the Clean Water Act, and RCRA.

Stakeholder Involvement: Lucent has established facility-specific Local Environmental Advisory Groups (LEAGs) for all of its facilities globally. Each LEAG is composed of local stakeholders including environmental organizations, community groups, employees, and other interested citizens. The LEAGs provide input on the XL

project and the facility's EMS as both are implemented. The Environmental Law Institute is a signatory to the FPA.

MOLEX, INC.

Molex Incorporated (Molex) is a multinational company that operates several electroplating facilities worldwide. Molex's project is based on innovative management of its waste sludges at its Lincoln, Nebraska facility, which allows the facility to optimize the recovery of metals used in electroplating processes. The Molex final project agreement was signed on August 8, 1998.

Innovative Approach: Molex's project will test whether regulatory approaches can tip the economic scales in favor of recycling metals by tailoring regulatory requirements to the specific circumstances of the facility and its waste.

Benefits for the Environment: The implementation of Molex's project will reduce the amount of metals released to the publicly-owned treatment work (POTW) by at least 50 percent. In addition, the pure sludge generated will not require disposal, and will be sold directly to processors.

Benefits to the Facility: The regulatory flexibility provided under this XL project allows Molex to segregate their waste streams, which were previously co-mingled. By changing the process lines to generate separate waste streams (nickel, copper, tin/lead), the facility can optimize the precipitation of each metal more effectively before the effluent is sent to the POTW. A second benefit is that the resultant mono-metal sludges will be commodity-like materials suitable for recycling.

Stakeholder Involvement: Molex has worked with and will continue to involve those parties with a stake in the environmental effects of its proposal to ensure they are informed and have an opportunity to fully participate in project development. Efforts so far have included working with the State of Nebraska, the City of Lincoln, Nebraska, and the Lincoln/Lancaster County Health Department.

MASSACHUSETTS ENVIRONMENTAL RESULTS PROGRAM (ERP)

The Environmental Results Program (ERP) was developed by the Massachusetts Department of Environmental Protection (DEP) to streamline permitting and reporting processes in the state for approximately 5,000 small businesses to begin with, and possibly 10,000 by the end of the year. It will reduce the number of traditional permits and reporting requirements through a program of facility-wide, performance-based self-certification. Industry representatives have cooperated with Massachusetts DEP to establish criteria for reporting compliance with stringent state performance and operating standards in certain industrial categories, without developing permits for each facility.

The ERP currently applies to three industrial sectors—dry cleaners, photo processors and printers. Massachusetts DEP will guide companies through the process, providing explanations of laws and regulations and ideas for meeting associated requirements. The project is intended to reduce resources expended by both the DEP and industry in the permitting process, as well as improve compliance by offering companies flexibility in pollution prevention. Massachusetts DEP believes that after an initial evaluation and revision phase, the program will be transferable to other industry sectors throughout Massachusetts and other states. The Massachusetts ERP umbrella final project agreement was signed on October 6, 1998.

Innovative Approach: The Massachusetts ERP has taken the bold step of streamlining permitting and reporting processes for three industrial sectors in order to achieve more effective environmental protection. ERP promises to make it easier for the regulated community to meet and exceed Massachusetts' stringent environmental standards by giving them flexibility to decide the best, most cost-effective ways to comply with performance standards.

Benefits for the Environment: The Environmental Results Program will achieve superior environmental performance beyond what is achieved by the current federal and state regulatory systems. By converting permit

requirements into industry-wide performance standards, DEP anticipates superior environmental performance since facility managers will be aware of their environmental obligations before they make decisions about modifying equipment and operations, rather than at the end of a long, expensive permitting process. For example, the new system is expected to reduce wastewater discharges of silver by 99 percent from photo processors, and to achieve a 43 percent reduction in emissions of perchlorethylene from dry cleaners. Since all companies will ultimately be held to strict ERP performance standards, environmental protection will be strengthened.

Benefits to the Facility: ERP improves accountability and increases flexibility for companies. For the first time ever, top management of the companies involved will certify annually that their facilities are in compliance with all applicable air, water and hazardous waste management performance standards. Facilities not in compliance will be required to specify interim milestones toward achieving compliance by a certain date. This will give companies more flexibility to choose cost-effective compliance strategies for themselves, thereby reducing the "time-to-market" for new products and removing regulatory obstacles to pollution prevention.

Stakeholder Involvement: As part of its draft Final Project Agreement, Massachusetts DEP will actively work to ensure and maintain involvement of key stakeholders and the general public in ERP implementation. DEP has been and will continue to work with an ERP Design Team comprised of representatives from EPA, other government entities, environmental advocacy groups, business and industry, consulting firms, and the legal community.

ATLANTIC STEEL

EPA and Jacoby Development Inc., a developer in Atlanta, Georgia, are working on an XL project to allow construction of an urban redevelopment project in Atlanta. This redevelopment project will explore new ways to meet community, environmental and economic interests. Jacoby has proposed a mixed-use (residential, retail, office, and entertainment) redevelopment of a 138-acre site in midtown Atlanta that was formerly the home of Atlantic Steel. An essential component of the Atlantic Steel redevelopment project is construction of a bridge which would cross an Interstate highway adjacent to the site and link the site and the surrounding community with a nearby rapid transit station.

The Atlanta metropolitan area is one of the fastest growing regions in the country. In part due to its rapid growth, Atlanta has failed to meet federal air pollution standards and as a result is barred from building certain types of road projects. The prohibition on new road projects also applies to the bridge linking the Atlantic Steel site with the rapid transit station. However, projects that will reduce air emissions can be approved as Transportation Control Measures (TCMs). EPA has never evaluated a project of this size and complexity, combining Atlantic Steel's location, transit linkage, site design, and other elements, as a TCM. Through Project XL, EPA is using an innovative approach to approving the entire Atlantic Steel redevelopment project as a TCM. EPA and Jacoby signed the first of a two-part XL agreement on April 13, 1999, and they hope to sign a subsequent Final Project Agreement in June, 1999.

Innovative Approach: The Atlantic Steel Project will test (1) whether the combination of location, linkage to transit, and design characteristics of a development project will result in significant, measurable emissions reductions, and (2) whether the application of "smart growth" site design principles (pedestrian friendliness, mix of uses, etc.) make a difference in travel patterns, even in Atlanta -- where people drive more per capita than any other city in the country.

Benefits for the Environment: The Atlanta region will continue to grow. If the Atlantic Steel site is not redeveloped, the growth it represents would locate at other sites in the Atlanta region. EPA and Jacoby feel that construction of the bridge and redevelopment of the Atlantic Steel site will produce less air pollution than an equivalent amount of development at other likely sites in the region. The combination of the site's location, design elements and connection to the public transportation system are expected to work together to reduce growth of auto traffic in the Atlanta region. The project will also accelerate the clean-up of an underused former industrial site in midtown Atlanta.

Benefits to the Facility: Because Atlanta cannot currently get federal approval for new road projects, the

proposed bridge cannot be built without the flexibility being provided by EPA under Project XL.

Stakeholder Involvement: EPA and Jacoby participated in a number of public stakeholder meetings to discuss the project and the Phase 1 Agreement and are planning similar meetings prior to signing a Final Project Agreement. EPA and Jacoby have also participated in meetings with an Environmental Justice Focus Group and several meetings regarding the proposed bridge at the invitation of the City of Atlanta and/or the Georgia Department of Transportation and the Atlanta Regional Commission. EPA received valuable feedback on the Project Agreement from national and local environmental and transportation groups and other interested organizations and individuals. A Stakeholder Participation Plan and minutes from public meetings are posted on the Project XL web site at: <http://www.epa.gov/projectxl>.

EXXON FAIRMONT COKE WORKS

This project will test an alternative strategy for cleaning-up the Sharon Steel Fairmont Coke Works Superfund Site, located in Fairmont, WV. The site was placed on the EPA's National Priorities List (NPL) on December 23, 1996. Exxon is the only Potentially Responsible Party (PRP) working with EPA and the West Virginia Division of Environmental Protection (WVDEP) under an Administrative Order on Consent to address environmental concerns at this site.

To clean up the site, Exxon proposes that changes to the traditional Superfund process be made. These changes would affect: (a) site characterization and clean-up, (b) risk assessment procedures, (c) the management of onsite landfills, (d) mitigation requirements for EPA-created wetlands onsite, (e) the stakeholder and community involvement process, (f) reduction of paperwork requirements, and (g) the quality assurance process. In addition, as a new approach, Exxon will work with stakeholders and community groups to seek interested developers for commercial or industrial re-development of the site. The Exxon final project agreement was signed on May 24, 1999.

Innovative Approach: The Exxon Fairmont Coke Works project will test whether coupling expedited Superfund clean-up procedures with land reuse commitments will result in benefits to the community, the environment and industry.

Benefits for the Environment: In this project, Exxon will implement changes to the Superfund process that will yield significant benefits to the environment, the surrounding community, and Exxon. Key benefits include: (1) Much shorter clean-up times that more quickly eliminate the potential risk to human health; (2) A commitment from Exxon to work with stakeholders and community groups to seek interested developers for commercial/industrial redevelopment of the site; (3) A commitment from Exxon to demolish and dispose of all on-site buildings and structures; (4) Reduced administrative burden through the use of streamlined risk assessment and site characterization processes and electronic document/data submittals.

Benefits to the Facility: By participating in Project XL, Exxon will obtain flexibilities that will allow them to reduce the oversight costs, cleanup time and paperwork burden normally associated with a Superfund Cleanup. These flexibilities specifically allow Exxon to streamline traditional Superfund processes related to risk assessment, site characterization, on site landfill management and mitigation requirements. The alternative cleanup strategy will result in economic and schedule benefits for Exxon. Exxon's innovative team approach at the site will also significantly reduce the amount of time necessary to review documents, because it will receive direct input from EPA, the State of West Virginia, and the community prior to finalizing a document. The experience gained from this project will allow Exxon to perform similar redevelopment activities at other sites.

Stakeholder Involvement: As part of its FPA commitments, Exxon will continue to work actively to ensure and maintain involvement of key stakeholders and the general public during the clean-up and redevelopment and planning of the site. Exxon will also directly fund the WVDEP's involvement in the project and will work with the Fairmont Community Liaison Panel (FCLP) and EPA in every stage of the clean-up process.

ANDERSEN CORPORATION

Andersen Company manufactures windows at its facility in Bayport, MN. According to EPA regulations, facilities must obtain prior approval from either the state or EPA when making modifications that result in significant increases in volatile organic compound emissions, which produce smog. Through Project XL, Andersen can shift from high-emission processes like solvent-based wood preservation to lower-emission processes like waterborne wood treatment. Andersen can also shift production to an innovative process called Fibrex™, which uses wood fiber and vinyl to make window components--this process has lower emissions and the components can be recycled into Fibrex again and again. To support the movement to these cleaner processes, Andersen, EPA, the Minnesota Pollution Control Agency (MPCA), and Washington County have agreed on legal mechanisms that authorize Andersen to make these changes without additional approval. The final project agreement, EPA's 13th XL project, was signed on June 30, 1999.

Innovative Approach: The Andersen project will explore (1) whether an innovative, incentive-based system of tying emission limits to a given quantity of product will reduce a facility's impact on the environment; (2) if operational flexibility for a facility will allow it to better transition to more environmentally-beneficial products; and (3) if simplified record keeping will work as an incentive for a facility to focus resources on better environmental practices.

Benefits for the Environment: This project provides incentives for Andersen to continually lower the amount of emissions per unit of product. Caps on emissions of VOCs and particulate matter ensure that the facility's overall emissions will not exceed those from normal operations, even while expanding and transitioning to new lower pollution processes. In addition, Andersen will be able to manufacture more of its windows from wood fiber and vinyl than in the past, reducing its use of virgin materials and its air emissions. Andersen will also increase its reliance on low-solvent processes, further reducing air emissions at the facility. Andersen must show that cost savings resulting from shutting down this equipment have been reinvested in projects that further reduce emissions.

Benefits to the Facility: Benefits for achieving substantial reductions in emission rates include rewards such as an extension of the project or a commendation letter from EPA. Under this XL project Andersen can modify and add pre-approved emission sources (such as waterborne treatment lines and Fibrex production) without additional review by EPA or Minnesota. In addition, the permit combines 26 different emission limits for Andersen's two diptanks into one limit. Minnesota will provide Andersen with flexibility on procedures to close these diptanks. Also, the project allows Andersen to remove an emission control unit (which may be the source of odors in the community) with the approval of EPA, Minnesota, and the Community Advisory Committee.

Stakeholder Involvement: The project was developed with extensive involvement by the Community Advisory Committee. In addition, a number of national environmental groups were provided information and the opportunity for input. The Environmental Defense Fund reviewed and commented on the project during the development stage.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

The Resource Conservation and Recovery Act currently requires producers of hazardous wastes at remote locations (e.g., manholes and pipelines away from their staffed facilities) to transport all quantities of waste--no matter how small -- to an often distant treatment, storage, and disposal facility (TSDF). The waste producers, which include public utilities, may keep the waste at the remote location for up to 90 days before transporting it to the TSDF. Under the new Project XL agreement between EPA and the New York State Department of Environmental Conservation (NYSDEC), public utilities in New York State will be able to transport wastes to a nearby central collection facility, provided they do it as soon as the waste has been collected. They then can store the waste at the central collection facility - designated by the state - for up to 90 days before transporting it to a permitted TSDF. Approximately fifteen utilities -- including gas, electric, and phone companies with locations throughout the state -- are expected to participate initially. The final project agreement, EPA's 14th XL project, was signed on July 12, 1999.

Innovative Approach: The NYSDEC project will test (1) whether immediate transport of hazardous waste to local facilities will reduce accidental releases and traffic congestion; (2) if utility and agency costs are

significantly reduced by consolidating reporting requirements and eliminating administrative requirements; and (3) if the reinvestment of a portion of the utilities' savings in environmental projects can provide better environmental protection than current regulation?

Benefits for the Environment: The project provides the following environmental benefits: (1) Reduces the risk of accidental hazardous waste releases at remote locations (e.g. manholes and pipelines) by quickly moving the waste to a nearby collection facility; (2) Allows consolidation of similar waste at central collection facilities, which reduces the number of vehicle trips to often-distant treatment, storage and disposal facilities and avoids traffic disruptions; and (3) Requires each participating utility to reinvest one-third of its direct cost savings (e.g. staff time and paperwork) into one or more new, environmentally beneficial projects.

Benefits to the Facility: Under current regulations, New York State public utilities must transport waste generated at remote locations to a permitted treatment, storage and disposal facility. Under this XL project, the participating utilities will instead be able to transport the waste to central collection facilities where they may accumulate waste for up to 90 days. In addition, participating utilities will be permitted to obtain a single identification number and submit a single Biennial Report for the central collection facility and all remote locations that ship waste to that facility.

Stakeholder Involvement: The project was developed with extensive involvement by New York State public utilities. Information on the project was disseminated to over 500 local environmental groups and published in the New York State Register and the New York State Environmental Reporter. In addition, the project provides for public notice and comment prior to designation of each central collection facility.

NEW ENGLAND LABS

This pilot allows participating laboratories at the University of Massachusetts-Boston in Boston, MA; Boston College in Chestnut Hill, MA; and University of Vermont in Burlington, VT (the "Universities") to implement flexible, performance-based standards for managing hazardous wastes in their laboratories. The site-specific rule enables laboratories at the three Universities to replace existing requirements for hazardous waste generators (that had been designed with industrial generators in mind) with a comprehensive Laboratory Environmental Management Plan developed by each University and including certain minimum performance criteria.

Under the rule, the Universities will not be required to make a RCRA hazardous waste determination with respect to laboratory waste until it reaches a central on-site location. This should allow the Universities' Environmental Health and Safety professionals to more effectively manage the laboratory waste at the institutional level and increase reuse and recycling opportunities. The New England Laboratory Final Project Agreement, EPA's 15th XL project, was signed on September 28, 1999.

Innovative Approach: This innovative pilot will test whether: (1) the use of performance-based standards as part of the Environmental Management Plan (EMP) will enhance environmental results beyond those achieved by existing regulatory requirements in the laboratory setting; (2) the integration of OSHA-based health and safety requirements for hazardous chemicals with the RCRA generator requirements and elements of ISO 14001 environmental management system's voluntary standards will result in a more consistent and resource efficient scheme for regulating laboratories; (3) the use of an EMP will result in increased implementation of pollution prevention and waste minimization activities and more environmentally informed students and researchers.

Benefits for the Environment: The Laboratory XL project is expected to result in increased pollution prevention. The Universities have set specific pollution prevention goals, including a 10% reduction in the overall amount of hazardous waste generated from participating laboratories, and a 20% increase in reuse of laboratory waste over the next four years, or the life of the project. The Universities participating in this XL project will report each year on their progress in meeting their goals. The Universities will also conduct environmental awareness surveys and training for all laboratory workers.

Benefits to the Facility: A primary aim of the project is to allow the Universities to develop and implement an

Environmental Management Plan that defines the policies and procedures for managing all hazardous chemicals, including laboratory wastes under a logical, integrated scheme. This XL pilot provides the Universities with a temporary conditional deferral from two specific RCRA regulations dealing with Hazardous Waste Determinations Satellite Accumulation Provisions. The regulatory changes set forth are conditioned upon the Universities' compliance with the Minimum Performance Criteria and the Laboratory Environmental Management Plan.

Stakeholder Involvement: The university and research communities are diverse and active. Stakeholder involvement at both national and local levels has been extensive. As this XL project is implemented, the stakeholder involvement program will ensure that: (1) interested parties are apprised of the status of project implementation and (2) national and local stakeholders have access to information sufficient to judge the success of this pilot.

ELMENDORF AIR FORCE BASE

Elmendorf Air Force Base (EAFB), in Alaska, plans to streamline the application, implementation, management, and renewal process for their Title V air emissions permit, through reduced monitoring and record keeping. EAFB estimates that total monitoring, record keeping, reporting, and overall permit management costs will decrease by about 80 percent, yielding about \$1.5 million in savings over six years. These realized cost savings will be directed toward pollution prevention (P2) opportunities around the base. The Final Project Agreement (FPA), EPA's sixteenth XL project, was signed on December 15, 1999.

Innovative Approach: This pilot will try to decide: (1) if redirecting resources from monitoring and record keeping to P2 projects will improve the environment; (2) whether the regulation of military facilities should be modified so that they can reduce monitoring and record keeping and increase their investment in environmentally-beneficial projects; and (3) which P2 projects provide the greatest benefits at military facilities.

Benefits for the Environment: EAFB will spend the savings derived from streamlining its environmental management costs on P2 opportunities. A P2 project identified in the FPA involves installing a compressed natural gas (CNG) fueling station, purchasing new CNG vehicles, and converting certain base fleet vehicles to allow them to use CNG as an alternative fuel. EAFB has assembled a list of other feasible P2 opportunities available at the base, along with the estimated costs and environmental benefits of each opportunity. EPA, the State of Alaska, and EAFB have expressed a preference for projects that reduce hazardous air contaminants.

Benefits to the Facility: The traditional Alaska operating permit program currently treats the entire EAFB installation as a single air contaminant emission source. However, under this FPA the permit applies to only a small segment of EAFB, including one source that is a major stationary source and several others that are subject to new source performance standards. The other sources at EAFB that will not be permitted will instead obtain limits on their potential-to-emit to ensure that they are not considered major sources. This will simplify monitoring, record keeping, and reporting associated with Title V, and result in significant cost savings that will be applied to P2 projects.

Stakeholder Involvement: Elmendorf held public meetings to request input on the project. These meetings were publicized through local newspapers and personal contacts. In addition, Trustees for Alaska submitted a comment on the project. The comment and EPA's response are attached to the FPA.

IMATION CORPORATION

Imation Corporation produces magnetic data-storage tapes, primarily for the computer industry, at its plant in Camarillo, California. Imation must be able to make changes to existing production processes or begin producing new advanced products without delay in order to stay competitive in a rapidly evolving worldwide industry. However, Clean Air Act regulations require manufacturers to obtain approval for each prospective change to plant processes and/or new equipment addition. Following these traditional procedures impedes Imation's ability to

respond rapidly to the marketplace, particularly since Imation anticipates numerous changes over the next several years. Through Project XL, EPA is employing a broader interpretation of existing preconstruction review and permit rules to preapprove changes Imation anticipates making in the future. The preapproval strategy is meant to satisfy the preconstruction review and permit revision requirements that otherwise would apply, while allowing Imation to make changes without delay. The Final Project Agreement, EPA's seventeenth XL project, was signed on December 21, 1999.

Innovative Approach: This innovative pilot will examine whether: (1) the preapproval approach to accommodating changes at a plant will produce environmental compliance better than the traditional case-by-case review of changes, and are enforcement officials able to follow changes and determine compliance as easily; (2) Imation will experience decreased time to implement changes under this experiment; and (3) whether permitting "transaction" costs are reduced for the environmental agency and Imation compared to the traditional system?

Benefits for the Environment: (1) Imation will comply with emissions caps on volatile organic compound (VOC) emissions, which produce smog, and other air pollutants. Emission reduction credits generated through imposition of the VOC cap will in part be retired by Imation and in part donated to Ventura County. Ventura County will sell the credits and use the proceeds to fund clean air projects that would not have been funded otherwise. (2) Imation equipment emitting VOCs will comply with the most stringent federal emission reduction requirements of all those that apply at the plant, even though many plant operations are subject to less rigorous requirements. (3) VOC emissions will be tracked through a state-of-the-art continuous emissions monitoring device, which is not otherwise required. This will provide the best available compliance information.

Benefits to the Facility: This project will allow Imation to use alternate operating scenarios to preapprove classes of changes to existing equipment and additions of new equipment, without revising their permit prior to these changes.

Stakeholder Involvement: The project details and draft Final Project Agreement are products of an active stakeholder group that consists of EPA, California Air Resources Board, Ventura County Air Pollution Control District (APCD), and community representatives. Several Ventura County organizations offered valuable input, including the Environmental Coalition, the American Lung Association, and the Ventura County Economic Development Association. An ongoing stakeholder group will participate in evaluating the project, recommending changes to the project, assisting in brining out community concerns, and maintaining a dialogue with Imation to ensure transparency of project-related operations and continued superior environmental performance.

LOUISVILLE PRETREATMENT

Louisville and Jefferson County Metropolitan Sewer District (MSD) have signed Phase 1 of a two-phase agreement with the EPA. The Agreement spells out MSD and EPA's intentions to achieve greater environmental gains by redesigning MSD's waste water pre-treatment program, developing performance measures, and collecting data to gauge progress. Using the new information, MSD plans to move toward a more holistic watershed protection strategy for the Chenoweth Run watershed, whose current level of pollution is not meeting the State's use designation. MSD will redesign the pretreatment program to reduce key pollutant loadings and identify areas where resources can be shifted to achieve greater environmental benefits. The Phase 1 Project Agreement, EPA's 18th XL project, was signed on January 31, 2000.

Innovative Approach: This pilot will explore whether MSD can build a bridge between the pretreatment program and watershed management programs and use new and existing mechanisms to involve stakeholders and citizens in this project.

Benefits for the Environment: MSD plans to reduce the amount of pollutants being released into the watershed by using pollution prevention measures and changing pretreatment program requirements. These changes will allow local industry to save on operating costs and shift funds to nontraditional water quality

controls, such as reducing erosion and storm water run off, improving stream banks, and planting trees.

Benefits to the Facility: Under the current proposal, MSD is not requesting regulatory flexibility from EPA. MSD's Phase I Agreement describes a process to collect data, develop pretreatment performance measures, and to redesign and implement an improved pretreatment program. The proposal does outline areas that may require regulatory flexibility once all data has been collected. These areas include, but are not limited to: significant noncompliance; monitoring and inspections; reporting; and the definition of significant industrial user (SIU).

Stakeholder Involvement: MSD held public meetings to request input on the project. These meetings were publicized through local newspapers and/or personal contacts. Comments on the project and EPA's response are on EPA's website and will be attached to the Final Project Agreement.

ALBUQUERQUE PRETREATMENT

This project aims to reduce the amount of pollutants released into the environment from industries and businesses in Albuquerque by integrating pollution prevention (P2) activities with the existing Industrial Pretreatment Program (IPP). The City of Albuquerque's proposal allows the present IPP program to shift resources from certain less productive requirements towards innovative activities likely to yield superior environmental results. Albuquerque will also initiate a variety of outreach efforts designed to increase the number of businesses using P2 techniques. The Final Project Agreement (FPA), EPA's 19th XL project, was signed on February 3, 2000.

Innovative Approach: This innovative project will test whether sewer sub-basin monitoring is a better method to determine where certain pollutants predominate in a watershed

Benefits for the Environment: Albuquerque will attempt to initially reduce loadings of aluminum, cadmium, chromium, copper, cyanide, fluoride, lead, mercury, molybdenum, nickel, selenium, silver, and zinc by 10 - 25%. In addition to reducing pollution loadings for these 13 pollutants of concern and improving the area's overall water quality, this project will reduce mass and concentration loadings of influent, effluent and biosolids. To help reach these goals, Albuquerque plans to increase the number of businesses using P2 techniques by 25 new businesses per year.

Benefits to the Facility: Albuquerque will modify some permits for burden reduction, replace certain permits with general use permits, and revise its enforcement response plan. These changes will allow Albuquerque to shift resources to cover P2 outreach and other costs associated with reducing certain pollutants by 10-25%.

Stakeholder Involvement: Albuquerque held public meetings to request input on the project. These meetings were publicized through local newspapers and personal contacts. Comments on the project and EPA's response are attached to the FPA.

DENTON PRETREATMENT

In 1997, the City of Denton Environmental Services Division and the University of North Texas (UNT) Institute of Applied Sciences conducted an 18 month study to assess the feasibility of integrating the industrial pretreatment program activities with those required under the Phase II Stormwater regulations. Denton's XL project will allow it to continue implementation of recommendations resulting from that study, which was completed in March of 1998. Denton will reduce its monitoring and annual inspections for certain individually approved facilities and focus on pollutants in the urban stormwater drainage. The Final Project Agreement (FPA), EPA's 20th XL project, was signed on February 22, 2000.

Innovative Approach: This project will test whether integrating industrial pretreatment program activities with those required under the Phase II Stormwater regulations can improve the environment; and whether a combination of Pollution prevention measures, including BMPs, buffer zones and public education can increase control of run-off from point and non-point sources?

Benefits for the Environment: Saved resources will be reapportioned to watershed protection activities including inspections of vehicle maintenance facilities, recycling centers, junkyards, salvage yards, municipal and school district fleet service operations, construction sites, establishment of a remote creek monitoring network, and incorporation of pollution prevention BMPs into the local code of ordinances.

Benefits to the Facility: Denton will be reducing its monitoring and inspection frequencies for certain individually approved facilities, so that it can redirect resources to focus on pollutants in the urban stormwater drainage.

Stakeholder Involvement: Denton held public meetings to request input on the project. These meetings were publicized through local newspapers and personal contacts. Comments on the project and EPA's response are attached to the FPA.

International Paper - Predictive Emissions Monitoring

The International Paper XL Project will develop, test, and implement a computer model that can estimate pollutant emissions on a continuous basis. The computer model which IP proposes to develop is called a Predictive Emissions Monitoring System (PEMS). The project proposes to develop and subsequently install the PEMS on IP's waste fuel incinerator. The PEMS has been developed and implemented for simple stacks such as gas fired boilers, but has had very limited application for complex, saturated stacks such as waste fuel incinerators. The International Paper PEMS project, EPA's 21st signed Final Project Agreement, was signed on April 20, 2000.

Innovative Approach: This experiment will test whether (1) a PEMS technology can be used to provide continuous information for PM emissions from a complex, saturated stack; (2) continuous emissions data is accurate enough to replace current monitoring requirements; and (3) an improved understanding of the operating parameters does lead to reductions in emissions that would otherwise not be attainable.

Benefits for the Environment: The primary goal of this XL Project is to develop an innovative state-of-the art monitoring system designed to increase information on environmental emissions, particularly particulate matter (PM) emissions. The PEMS technology will allow IP to optimize stack emissions and production rates by developing a linkage between emission rates and production rates and the operating parameters that affect them. In addition, by identifying continuous emission levels and key operating parameters, the PEMS would provide instant compliance information, allowing mill operators to identify opportunities for reductions in emission rates and to prevent pollution from occurring in the first place.

Benefits to the Facility: The company is seeking regulatory flexibility in two areas. The first is to allow short term, minor exceedances above existing permit limits in order to accurately calibrate and develop the computer model. The second area of flexibility requested is from the frequency of routine stack testing and the replacement of continuous emission monitoring with the computer model. These requirements are primarily embodied in state regulations that have been approved by EPA and are considered to be federally enforceable. If the PEMS are determined to be successful, Maine DEP would submit, and EPA would intend to approve, an amendment to State Implementation Plan that would allow PEMS to become the approved continuous monitoring method on the waste fuel incinerators for all emission sources.

Stakeholder Involvement: International Paper has held several public meetings to request input on the project. These meetings were publicized through local newspapers and through local radio announcements of meetings and the availability for review of documents, meeting notes and technical data generated during project implementation and testing. The stakeholder group will also be invited to participate and observe the work during

project implementation. Non-governmental stakeholders include, but are not limited to: Maine Lung, Environment Northeast, Alliance for Environmental Innovation and Western Mountain Alliance and the Jay High School Science Club.

U.S. Postal Service - Denver

The USPS will scrap 512 late-1970s/early 1980s vintage postal vehicles operating in the Denver/Boulder non-attainment area, taking these vehicles off the road permanently. The USPS commits to using at least 794 alternative fuel vehicles in the Denver area and helping to stimulate the development of a public infrastructure to support these vehicles. In exchange for these commitments, the USPS will receive up to 794 emission credits from the State of Colorado. The USPS is not requesting any federal flexibility. USPS, EPA's 22nd Final Project Agreement, was signed on May 22, 2000.

Innovative Approach: This experiment will test whether: (1) a demonstration project can provide the impetus for other fleet operators to purchase alternative fuel vehicles; and (2) 794 vehicles is a sufficient number of vehicles to build an alternative fuel infrastructure.

Benefits for the Environment: Some of the environmental benefits expected from this pilot include direct reductions of air emissions by replacing high-emission vehicles with low emission vehicles. Other benefits are more difficult to measure--for example, stimulating the development of an infrastructure for alternative fuel vehicles.

Benefits to the Facility: Through this XL agreement, the USPS will earn 512 emission credits to scrap vehicles (one credit for each vehicle scrapped) and can earn up to 282 additional credits based on the amount of ethanol used in the vehicles. The USPS will also gain preferred vendor status and public recognition, as well as assistance in publicizing the XL project.

Stakeholder Involvement: The organizations that helped develop this project include but are not limited to: Ford Motor Company, National Ethanol Vehicle Coalition, environmental groups, U.S. Environmental Protection Agency, U.S. Department of Energy, State of Colorado, local ethanol production industry, and local gasoline service stations.

Naval Station Mayport

To maintain adequate depths for naval ships, Naval Station Mayport (NS Mayport), in Jacksonville, Florida, must dredge 600,000 cubic yards of sediment, every 18-24 months from the entrance channel of the St. Johns River and the facility's turning basin (where the ships are anchored). Currently, this material is disposed into the ocean. In an effort to eliminate ocean disposal, NS Mayport is asking EPA, under the XL/ENVVEST Program, to create a partnership with the US Army Corps of Engineers (COE), the State of Florida Department of Environmental Protection (DEP), and the City of Jacksonville that would streamline the permitting process for dredging and ocean disposal. NS Mayport is proposing to investigate and demonstrate the beneficial re-use of dredged material by using it to produce construction blocks and artificial reef material. This would ultimately eliminate the need for ocean disposal of the dredged material. NS Mayport, EPA's 23rd Final Project Agreement, was signed on May 30, 2000.

Innovative Approach: This innovative pilot will analyze: (1) the effectiveness of a multi-agency partnership between EPA, NS Mayport, COE, Florida DEP and the City of Jacksonville to improve public health, the environment and marine habitat; (2) the ability to produce construction blocks and artificial reef material from dredged material; and (3) the value of streamlining NS Mayport's dredging and ocean disposal permitting process.

Benefits for the Environment: Some of the potential superior environmental benefits of this project include: (1) decreasing and eventually eliminating the need for ocean disposal of NS Mayport's maintenance dredged material; (2) beneficially reusing the dredged material now contained in NS Mayport's two upland disposal sites to

produce construction blocks and artificial reef material; (3) reducing the potential for adverse impacts to water quality and benthic communities due to ocean disposal; and (4) reducing the amount of raw materials, such as cement and aggregate, necessary for making concrete.

Benefits to the Facility: Through Project XL, NS Mayport seeks to synchronize the dredging and ocean disposal permitting process.

Stakeholder Involvement: Public meetings were held to inform the general public and national environmental groups about the Project and to invite their comments and participation. Additional public meetings may be held during implementation of the Agreement based on public interest or as decided by the direct participants. Stakeholder input and community goals have been and will continue to be considered throughout project implementation.

Steele County, XL for Communities (XLC)

Nine small-to-medium sized industrial facilities located in Owatonna and Blooming Prairie, Minnesota are committing to reduce the discharge of four priority metals and three priority effluents that flow to the local waste water treatment facilities. The Owatonna sponsors also plan to minimize storm water runoff at each participating facility and will work with the local wastewater treatment facility to develop and distribute to the community educational materials on the importance of minimizing storm water infiltration into the sewer system. The Steele County Project, EPA's 24th Final Project Agreement, was signed on May 31, 2000.

Innovative Approach: The Steele County project is the first XLC project, which encourages local public sector and community organizations to come forward with new approaches to demonstrate **community-designed and directed strategies** for achieving greater environmental quality consistent with community economic goals. This new agreement will examine the effectiveness of an overall community-based approach to achieving superior environmental results. It will also determine if: providing mass-based limits prior to full adoption of water conservation practices can encourage facilities to incorporate water conservation measures into their operations to a greater extent; and development of an alternative approach to SNC publication will enhance a community-based approach to joint problem solving.

Benefits for the Environment: The project sponsors have committed to four key areas of environmental performance that will enhance local environmental quality: (1) Reduce the discharge of four metals (Chromium, Copper, Nickel, and Zinc) and three priority effluents (BOD, TSS, TKN) that flow into the local wastewater treatment facilities; (2) Reduce the amount of water flowing to the local wastewater treatment facilities; (3) Minimize the adverse impact of storm water on the local wastewater treatment facility by reducing the runoff from each participating facility and developing education materials for the local community; and (4) Arrange and participate in training for the development of an ISO 14000-based Environmental Management System (EMS) for each facility.

Benefits to the Facility: Although the Blooming Prairie sponsor is not seeking regulatory flexibility, the Owatonna sponsors are seeking flexibility from existing Federal specified pretreatment regulations.

Stakeholder Involvement: The Steele County Sponsors have worked to ensure that those parties with a stake in the project are informed and have had an opportunity to fully participate in project development. Efforts have included: contact with a diverse local and national stakeholder group; holding regularly scheduled public meetings to inform the public; requesting coverage of public meetings by the local media; and providing public access to project documents through State, EPA Regional and Headquarters offices, as well as via the Internet. As project implementation proceeds, outreach to local stakeholders will continue via the local media and direct contact. National and local stakeholders will also have adequate access to information to judge the success of the project.

Georgia Pacific

Georgia-Pacific Corporation, a pulp and paper mill in Big Island, Virginia, will test the effectiveness of a new

gasification technology under their signed agreement with EPA. Georgia-Pacific owns and operates a mill that produces the components of cardboard and emits pollutants during the manufacturing process. In April 1998, EPA proposed a performance standard, the Maximum Achievable Control Technology (MACT II) regulation which, if promulgated would regulate hazardous air pollutant emissions from combustion sources specifically associated with the recovery of pulping chemicals from spent pulping liquor (aka "black liquor"). Presently, Georgia-Pacific employs evaporators to concentrate black liquor and subsequently combust it in two high temperature recovery smelters. To meet the standard proposed for pulp and paper mills in the MACT II regulation, Georgia-Pacific proposes to install a black liquor gasification system that would be the first commercial application of this innovative gasification technology in the United States. Georgia Pacific, EPA's 25th Final Project Agreement, was signed on May 31, 2000.

Innovative Approach: This XL pilot will help determine if: (1) Georgia-Pacific's proposed installation of a black liquor gasification system will make energy conversion systems more efficient and less capital intensive, while improving safety and environmental standards; and (2) gasification will replace the need for expensive fossil fuels.

Benefits for the Environment: This new gasification technology has the potential to produce much lower air emissions compared to traditional technology, eliminate smelt-water explosion hazards, greatly improve the industry's energy conversion potential, and to reduce operation and maintenance costs. The expected emissions to be reduced include: particulates (PM, PM10), Sulfur Dioxide (SO₂), Total Reduced Sulfur (TRS), Nitrogen Oxides (NO_x), Volatile Organic Compounds (VOC), Carbon Monoxide (CO), HAPs, and greenhouse gases, specifically Carbon Dioxide (CO₂).

Benefits to the Facility: Because this is a new technology and the first commercial scale demonstration of this type of gasifier, there is some risk that the technology will not work at all or will not work as well as anticipated. Under these scenarios, Georgia-Pacific may have hazardous air pollutant emissions in excess of the EPA MACT II performance standard, and under Project XL they seek allowance for such emissions for a set period of time (until a conventional recovery system can be built).

Stakeholder Involvement: To encourage stakeholder involvement, public meetings were held in Bedford, Lynchburg, and Big Island. Information about the project was distributed to local newspapers, radio and TV stations. A series of eight stakeholder meetings were held to discuss the Final Project Agreement. The first two meetings included tours of the Big Island facility and detailed briefing and discussions of the Mill's operations, manufacturing process, the proposed gasification system process and the anticipated air quality improvements associated with the proposed new equipment.

International Paper Effluent Improvements

The International Paper Androscoggin Mill, in Jay, Maine, will design, implement and install innovative projects to remove spent pulping liquors (chemicals used to turn wood chips into pulp) from the waste stream while improving pulp quality. This will result in even cleaner wastewater discharges than would have been possible under existing Clean Water Act regulations. Under Project XL, EPA will allow International Paper to replace generic Best Management Practice requirements with targeted, facility-specific effluent improvement projects in exchange for accepting new limits in their water quality permit. This will reduce the mill's discharge levels of several key pollutants to approximately half of current levels.

Innovative Approach: This XL pilot will test: (1) The ability of tailored effluent improvement projects to improve environmental performance at a pulp and paper mill beyond what would be expected through compliance with existing Clean Water Act Best Management Practices; (2) The use of the water quality permit to capture environmental improvements on an on-going basis rather than merely to serve as a guarantee against performance backsliding; and (3) The use of a collaborative process with participants from outside parties to optimize a company's environmental performance.

Benefits for the Environment: Replacing generic Best Management Practices requirements with targeted, facility-specific effluent improvement projects and with new permit limits is expected to reduce the mill's discharge levels of several key pollutants to approximately half of current levels. Ultimately, these effluent

improvements will contribute to improved ambient water quality downstream in the Androscoggin River.

Benefits to the Facility: Under this XL project, International Paper (IP) will receive a waiver from certain Best Management Practices (BMPs) under the Clean Water Act (CWA). Existing federal regulations under the CWA require pulp and paper mills to implement certain BMPs to prevent leaks and spills of spent pulping liquor, soap and turpentine that might end up in a mill's final effluent. IP claimed in their project proposal that current practices at their Androscoggin Mill are advanced enough that further implementation of the required BMPs as detailed under the CWA is unlikely to result in significant improvements to the mill's final effluent. EPA's assessment of the proposal confirmed this claim, and gave rise to the Agency's support for the waiver.

Stakeholder Involvement: For this project, IP contacted stakeholders early on in project development and has requested their input on a continual basis. This project has a unique feature that guarantees continued input by including stakeholders on the collaborative process team that is to assess the effluent improvement projects.

FOR ELECTRONIC INFORMATION

More information about Project XL is available on the Internet at <http://www.epa.gov/ProjectXL>, or via Project XL's Information Line at 202-260-5754.