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Project XL

Stakeholder Involvement Evaluation

Final Report

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Prepared for the U.S. Environmental Protection Agency
by the Southeast Negotiation Network

Credits

This evaluation report was prepared based on interviews with over seventy-five participants in Project XL stakeholder processes. The names of these individuals are noted in Appendix A of this report.

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Executive Summary

Stakeholder Involvement in Project XL

The U.S. Environmental Protection Agency initiated Project XL in March 1995. Project XL seeks to promote innovative initiatives that improve environmental performance at reduced cost. Each project is initiated by a sponsor who proposes an environmental management project that requires some flexibility in environmental regulations or procedures. All projects are individually designed by project sponsors and reviewed by EPA personnel for inclusion into Project XL. If EPA approves the project, the project sponsor is afforded flexibility on an experimental basis, conditional on demonstration of expected environmental benefits.

EPA seeks to ensure that modification of regulatory requirements or procedures will meet local needs while protecting the environment. To this end, EPA requires meaningful and organized participation on the part of stakeholders in all XL projects. Stakeholder involvement is a collaborative working relationship between project sponsors (organizations who propose XL projects) and stakeholders (people who believe they or their community could be affected by the project).

Such participation helps ensure that projects remain open and accountable to the communities in which they are located. Stakeholder involvement requirements also help ensure that stakeholders with an interest in the proposed project have an opportunity to learn about the nature of the project, identify issues that may have escaped the notice of project sponsors and regulators, and provide feedback regarding their concerns.

As a program designed to promote innovation, Project XL has attracted a wide diversity of projects. Sponsors of projects range from manufacturing facilities and university labs to municipalities and military installations, with projects spanning from pollution prevention to air pollution control to urban redevelopment. Communities in which projects are located are similarly varied, ranging from very rural to very urban. Stakeholder groups are at times small, homogenous communities and at other times a rich diversity of competing interests and perspectives. Projects are located in EPA regions from across the United States.

Not surprisingly, the approaches used by project sponsors to involve stakeholders varies considerably as well. While EPA policies and guidance documents establish a common basis for designing these processes, the guidance provides considerable latitude. As a result, project sponsors work with stakeholders in very different ways.

We are left, then, with several important questions related to program flexibility, expectations of stakeholders and project sponsors, and barriers to effective involvement. These questions include:

- ! *Flexibility in process design:* To what degree of specificity should EPA policy delineate stakeholder involvement processes? How much flexibility should be afforded

project sponsors? How can EPA most effectively promote best practices in the design and implementation of stakeholder processes?

- ! *Expectations of stakeholders and sponsors:* Under existing EPA policies, are stakeholders afforded opportunities to participate that are coincident with their expectations, concerns and stake in the outcome? How does this mesh with the concerns of project sponsors? How can EPA most effectively facilitate productive relationships between stakeholders and sponsors?
- ! *Barriers to effective involvement:* Can we identify specific characteristics of stakeholder involvement processes that contribute to or block effective involvement and satisfaction with that involvement? What might EPA do to reduce the impact of these barriers?

These questions frame our evaluation of the Project XL stakeholder involvement processes.

Approach to Evaluating Stakeholder Involvement for Project XL

Researchers with the Southeast Negotiation Network evaluated the eight XL projects presented in this report in 1999. The cases were selected to clarify the purposes, techniques and impacts of stakeholder involvement at various stages of decision-making. The projects assessed included Andersen Corporation, Atlantic Steel Site (Jacoby Development), CK Witco (previously Witco and OSi Specialties), Exxon/Mobil (Sharon Steel Superfund Site), HADCO, Intel, New England Universities Laboratories, and Vandenberg Air Force Base.

For each case, the evaluation team interviewed participants in the stakeholder involvement process. For the eight cases, interviews were conducted with over 75 community representatives, company sponsors, EPA staff, local and state government agency staff and other stakeholders.

Major Findings

The Need for Flexibility

While some XL projects attract strong interest on the part of many stakeholders (e.g., Atlantic Steel), others attract little concern from stakeholders other than government agencies (e.g., Vandenberg Air Force Base and HADCO). More commonly, projects may attract varying degrees of concern from different stakeholders (e.g., New England Universities Laboratories attracted little participation from either neighbors of the labs or environmental activists, but considerably more from potentially affected laboratories).

A number of factors help shape the demand for stakeholder participation. These include the proximity of the stakeholders to the project site, the potential impact of the project on specific stakeholders, the trust afforded to the sponsor and EPA, the relationship that existed between the sponsor and the stakeholders prior to the Project XL application, the perceived desirability of the project, the technical complexity of the project, the potential for setting precedents, and the scale of the stakeholder groups.

Each of these factors is important to the design of stakeholder involvement processes. Thus, flexibility is needed in the design and implementation of stakeholder processes if those processes are to respond effectively to differences in local context and concerns. EPA's policy to provide overall guidance while permitting considerable latitude in process design therefore seems appropriate.

At the same time, while flexibility is needed, EPA policy appears to provide too much discretion to project sponsors. In particular, the policy does not delineate criteria for determining which stakeholders should be afforded what levels of involvement. This can engender significant tension when the expectations of the stakeholders for involvement in the process exceed the willingness of project sponsors to involve these stakeholders.

Project XL stakeholder involvement processes are designed and implemented by the project sponsors. Within the eight XL projects evaluated for this report, over half of the sponsors developed involvement processes that primarily sought to share information with stakeholders, while a smaller number sought to promote dialogue or to build consensus with stakeholders. In most cases, the differences in levels of involvement bear a reasonable relationship to the context and preferences of the stakeholders for participation. But the cases also show that the predilections of the sponsors to involve stakeholders, as well as the ability of the sponsors to design and manage more complex forms of participation, also play an important role in shaping the levels of participation.

EPA's guidance documents for stakeholder processes contribute to expectations on the part of some stakeholders as to their influence over project decisions. Stakeholders who seek active involvement and a voice in XL project decisions read the EPA criteria as allowing them a choice as to their level of involvement. At the same time, XL project sponsors feel they have the responsibility and authority to design processes. Consequently, some stakeholder processes are designed in ways that do not meet stakeholders' expectations for involvement.

Differences in expectations between sponsor and stakeholders are by no means unique to Project XL. Differences in interests often lead to differences in perception and expectations in stakeholder involvement processes. Yet two aspects of this problem stand out. First, greater attention to the design of the stakeholder process and to the development of clear goals for the process will provide a more solid foundation for managing the involvement processes. Second, EPA often has more incentive to design and implement effective participation processes than do project sponsors. In particular, the person best positioned to assess the adequacy of the stakeholder involvement process is the regional EPA project coordinator assigned to oversee the project.

EPA minimum standards for stakeholder involvement, particularly as interpreted by the regional XL project coordinators, appear to be the most important external impetus to the sponsor for designing participation processes. But the influence of EPA project coordinators over stakeholder processes is used sparingly. Often, EPA personnel felt that more full participation would have been desirable. But while EPA personnel felt free to insist on minimal standards of acceptability, they rarely pressed for levels of participation not clearly required in the guidance documents.

Two dynamics seem to contribute to project coordinators' hesitancy at promoting more effective participation processes. First, as environmental specialists, project coordinators are primarily concerned with improving environmental quality. Moreover, they rarely are trained in stakeholder involvement processes, and are therefore less confident of their judgements in this arena. In practice, then, coordinators are often cautious in their promotion of stakeholder processes.

Second, the requirements of the Federal Advisory Committee Act (FACA) add to the uncertainty of project coordinators. Advisory committees established by federal agencies must meet a wide array of FACA requirements associated with public notice, composition, and process design and implementation. If EPA directly organized XL participation processes, FACA would apply. Since many of FACA's requirements are designed for large-scale advisory processes, these requirements would be difficult to meet in the case of XL projects. Project XL guidance documents therefore give responsibility for stakeholder involvement processes to XL project sponsors, and not EPA. At the same time, guidance documents establish criteria for effective participation. Yet, from the perspective of many EPA coordinators, project sponsors remain solely responsible for the design and implementation of the stakeholder involvement process. This limits the willingness of project coordinators to press for substantial improvements in process design, even though they could exercise influence through their review of the project sponsor's adherence to participation guidance criteria.

What can be done to balance these conflicting concerns within EPA? To begin with, EPA has already made significant progress in clarifying the role of stakeholder processes in XL project development, and in providing clearer guidelines for process design and implementation. In addition, EPA could provide project sponsors with more concrete assistance in the design of effective processes. Effective design helps operationalize EPA criteria in the context of a particular XL project. Moreover, project sponsors appear to be more open to suggestions early in the process, before they are committed to a particular approach to public involvement. Since process design requires more expertise and experience than regional EPA staff are likely to possess, EPA Headquarters will need to work more closely with project sponsors and regional EPA project coordinators to provide such assistance early in the process.

Stakeholders' Expectations and Concerns

Stakeholder involvement processes are designed largely by project sponsors, and the resultant processes are mostly geared toward meeting the sponsor's needs. Sponsors that must negotiate with stakeholders over potentially conflicting issues or sponsors that are high profile companies that seek to build good working relationships with their constituencies develop more sophisticated processes of involvement. Sponsors with more localized constituencies and with less controversial projects involve non-agency stakeholders later in the process and in more limited ways.

Sponsors often envision the primary objective of the stakeholder process as building legitimacy for the proposed project, rather than interactively working out problems that emerge from the project. Negotiations occur rarely except between project sponsors and regulatory agencies, or informally between sponsors and specific interest groups. The primary emphasis is on transparency, with project sponsors (often based on EPA project staff advice) acting to provide

information to the community, and checking to make sure that no significant opposition emerges from stakeholder groups.

A large proportion of participants in the stakeholder involvement processes interviewed were satisfied with the projects set forth in final project agreements. Most participants were also satisfied with their roles in the processes, even though these roles were often limited to information exchange or commentary. However, in XL projects where important differences in interests and perspectives existed, stakeholders were less satisfied, often insisting that more dialogue and consensus-based processes were needed. In these cases, expectations of participants exceeded that of sponsors with regard to citizen involvement in decision-making.

Overall, satisfaction with participatory processes depended primarily on three variables: 1) the willingness of project sponsors to involve stakeholders at a level consistent with the stakeholders' concerns and expectations, 2) the consistency between the stakeholders' expectations as to their influence over decision-making and the stakeholders' perception about their actual impact, and 3) the level and efficiency of effort required to participate.

The degree of community involvement is often, but not always, related to the degree of community concern and the potential impact of the project on the surrounding community. In communities where desire to participate is low, sponsors have little incentive to actively engage stakeholders. More active involvement processes are usually found in communities with active concerns. Yet, projects that elicit a high degree of community concern and that have greater potential for negative impacts on stakeholders do not necessarily develop processes that encourage greater participation. Stakeholder involvement is also linked to the local and regional politics of the project. Sponsors of complex and potentially conflictual projects may well design processes that bifurcate stakeholders in ways that allows for more direct involvement of parties with the power to block the project, and less direct involvement of impacted stakeholders who lack that power.

From the cases examined, sponsors are most likely to design interactive, dialogue-based forums for participation when the proposed project affects a clearly recognizable community of stakeholders, those stakeholders are capable of organizing, and the stakeholders are important constituencies of the project sponsor.

XL participation processes that promote acceptance of project agreements and satisfaction with participation processes exhibit several shared characteristics. Successful processes clearly present the intent of the sponsor as to the purpose of the process and its impact on decision making, effectively identify participants who represent the range of stakeholders and community interests, and effectively design processes of participation that remain open and transparent to stakeholders, resolve stakeholder concerns where possible, provide for fair opportunities for participation, and efficiently use the time and resources of stakeholders, government agencies and sponsors.

In several projects, neither the project sponsors nor EPA personnel involved in the projects had specific training or experience in developing stakeholder involvement processes. In these cases, project sponsors designed involvement processes that lacked clear structure and

objectives, were reactive rather than proactive, and fostered stakeholder expectations that were inconsistent with process design.

Barriers to Effective Stakeholder Involvement

XL stakeholder processes face a number of obstacles. The significance of the obstacles vary by whether the involvement process was designed to promote consultation and consensus building, or sought a more limited goal of exchanging information between the sponsor and stakeholders.

In consultative and consensus building processes, the two most significant barriers to effective participation include time commitments required to participate and the capacity of stakeholders to understand and verify technical issues. Time commitments are a problem, particularly for community representatives, because meaningful consultation and consensus building are often time consuming. Technical issues further complicate these processes because most XL projects involve a variety of complex technical decisions. When stakeholders trust the sponsor, they often simply accepted explanations provided by sponsors and EPA. However, when stakeholders either do not trust the sponsor or disagree with the sponsor's conclusions, participants need better access to and more capacity to verify the conclusions drawn from technical data. This often creates conflict, since few participants have the skills and resources needed to verify information independently from EPA or the sponsor.

In information exchange processes, the most significant barrier to participation is the design and implementation of the process. While some information-exchange processes are systematically designed, most have no clear plan of action. In the absence of systematic approaches to encourage information exchange, efforts to communicate with and to elicit responses from stakeholders often produce little result.

Other findings of interest include the following.

- ! Efforts to focus the XL project meetings exclusively on XL issues often frustrated stakeholders. This was particularly true when stakeholders were primarily concerned with issues associated with, but not directly caused by, the XL project.
- ! Few processes actively involved national groups. Moreover, in projects where national groups were included, the interaction between local and national stakeholders was very limited. In most cases, national groups chose to conserve their resources by providing written and verbal comments instead of directly participating, or to not participate at all. At the same time, processes were rarely designed to provide efficient opportunities for involvement by national stakeholders, and a few created impediments to direct involvement.
- ! Management of meetings was rarely seen as an issue in and of itself. Issues concerning the management of meetings were almost always linked to larger issues of process design and implementation.
- ! Finally, participation dropped significantly during the implementation phase.

Strategic Findings and Opportunities for Improvement

1. Link goals, roles, expectations and resources through effective process design.

The stakeholder involvement process within Project XL requires considerable flexibility to meet the diverse needs of different projects. At the same time, flexibility can contribute to a significant gap between the language incorporated into EPA's guidance documents and the standards applied in local processes. On the one hand, the guidance documents set a goal of providing stakeholders with a choice as to how they wish to participate. On the other hand, the program requirements allow project sponsors to delineate the range of options available to stakeholders, as well as who has access to which options. As a result, expectations of participation at times exceeds opportunities for participation.

To maintain flexibility while promoting more effective participation, greater care is needed in the design and early implementation of the participation processes. Sponsors (and EPA) should implement more systematic convening processes, in which the needs and concerns of the various stakeholder groups are identified, potential representatives are selected, and the stakeholder involvement process is appropriately designed.

A well designed process helps clarify the goals of the process and the roles of the various parties and stakeholders. This in turn provides a more realistic basis for stakeholder expectations and helps identify resources needed to implement the process. Effective convening is made even more important by EPA's attempts to streamline the XL process. Streamlining increases the speed at which timely involvement processes must be developed and implemented. EPA's recent provision of facilitation services for initial Project XL stakeholder meetings is a step in the right direction, but a more systematic approach to convening, process design and early facilitation services is needed.

2. Develop incentives for more meaningful participation.

Consider that XL projects are experiments, designed in part to help EPA and sponsors understand the impacts of innovative environmental protection strategies. In this light, stakeholder processes are meant to promote learning by holding decision making and outcomes open and accountable. Yet, stakeholder processes will contribute to innovation and learning only if they are designed to do so. In practice, this implies that processes should promote creativity and openness to new ideas. Most participants in these processes, however, are less concerned about experimentation than about specific outcomes in their community, and are reasonably risk averse in the way that they relate to other parties to the process. In particular, many project sponsors see little to gain from conducting innovative stakeholder involvement processes, or from developing the expertise necessary to design and manage an innovative process well.

To date, EPA's efforts at improving stakeholder processes have focused on making it easier for well-intentioned project sponsors to design better processes. This support has included guidance documents that delineate best practices and funding for facilitation to help initiate processes. While this support is valuable, in the absence of more clearly delineated incentives or procedures, Project XL sponsors will often provide stakeholders with limited opportunities for involvement within cautiously scripted processes.

3. Promote facilitative leadership within EPA.

One of the most important opportunities for improving stakeholder processes lies in developing facilitative leadership within EPA. Facilitative leaders enable other parties to work more effectively together to achieve goals shared with the facilitative leader. For XL projects, EPA staff can facilitate effective innovation by clearly envisioning and guiding the design and implementation of effective stakeholder processes. These skills are particularly important in projects where highly diverse stakeholder groups express competing interests and concerns. Often, project sponsors respond well to EPA when knowledgeable staff act to expedite new working relationships between project sponsors and the communities of interest that surround their projects. However, most EPA Project XL coordinators are not specifically trained in the stakeholder process skills needed.

EPA staff currently receive limited training in team-building. More is needed. First, EPA staff need the skills to build effective teams that can internally resolve issues between team members, and then clearly and consistently communicate EPA goals and concerns to stakeholder groups. Key EPA staff also need rudimentary process design and consensus building skills in order to promote more proactive leadership on the part of EPA staff in the community. Attention should also be paid to the clear communication of technical information to lay audiences in XL projects.

On-the-job consultations are also needed. Project XL involves a wide range of projects and project personnel. The personnel must draw on skills appropriate to the context and conditions of the XL project in which they are working. Because XL processes are idiosyncratic, personalized consultations are likely to prove highly useful to EPA staff. Project XL therefore needs to maintain process-competent staff within EPA Headquarters and Regions who can respond to the specific needs of EPA project coordinators and staff as XL stakeholder processes unfold.

4. Develop clearer guidance on how best to involve national stakeholders, particularly in strategically directed XL projects.

The Project XL program is increasingly identifying projects for consideration based on strategic concerns with industrial and commercial sectors. Recently, for example, many XL projects have clustered into sectors such as bio-reactor, paper and pulp, and POTW operations. By combining the experience of several individual projects into an assessment of the sector as a whole, EPA staff hopes to raise the potential for innovation.

At the same time, systematic participation will become more important as Project XL increasingly works on strategic issues. Because sectoral issues involve efforts to generalize from several specific XL projects to sector-wide issues, mechanisms for incorporating national stakeholder groups into this process of evaluation and generalization should be developed. Such efforts may also provide a more effective means of focusing the concerns of national stakeholder groups onto issues of national importance.

5. Systematize and share the experience of past XL projects to improve future efforts.

EPA has worked hard to learn from past XL projects and to communicate that learning to sponsors, EPA staff and stakeholders in newly developing and ongoing XL projects. These efforts should continue. Specifically, evaluations of past XL stakeholder processes, including this one,

should be used to develop more concrete advice on how to manage different configurations of projects, sponsors and communities. What are the essential differences between working in communities with considerable shared experience compared to communities with highly diverse stakeholders? How do Project XL coordinators build consensus within EPA itself? Efforts to answer questions such as these should allow for flexibility, but sketch out possible answers in sufficient detail so as to encourage project participants to explore alternatives.

6. Examine the impact of the Federal Advisory Committee Act on efforts to promote stakeholder participation in innovative and experimental processes.

The Federal Advisory Committee Act seeks to promote well-considered relationships between federal agencies and advisory groups. The requirements, however, often conflict with goals of innovative and experimental processes such as Project XL. The practical result of such requirements is that EPA does not initiate nor manage stakeholder processes within such programs, but rather requires project sponsors to do so.

Yet, more direct EPA involvement in the design and management of stakeholder involvement processes would go far in resolving some of the issues raised in this report. EPA should examine the impact of FACA on the capacity of the agency to develop innovative participatory processes. If appropriate, the agency should propose amendments that would promote more effective stakeholder involvement in programs such as Project XL.

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Evaluation Protocols and Overview

Stakeholder Involvement in Project XL

The U.S. Environmental Protection Agency initiated Project XL in March 1995. Project XL seeks to promote innovative initiatives that improve environmental performance at reduced cost. Sponsors of projects range from manufacturing facilities and university labs to municipalities and military installations. Each sponsor proposes an environmental management project that requires some flexibility in environmental regulations or procedures. All projects are therefore individually designed by project sponsors and reviewed by EPA personnel for inclusion into Project XL. If the project is approved, flexibility is afforded to project sponsors on an experimental basis, conditional on demonstration of expected environmental benefits. If the experiment is successful, EPA plans to incorporate the lessons learned from the project into the overall regulatory structure.

EPA seeks to ensure that modification of regulatory requirements or procedures will truly meet local needs while protecting the environment. To this end, EPA requires meaningful and organized participation on the part of stakeholders in all XL projects. Stakeholder involvement is a collaborative working relationship between sponsors – the organizations who propose the XL project – and people who believe they or their community could be affected by the project. EPA defines stakeholders as

- ! communities near the project,
- ! federal, state, tribal or local governments,
- ! businesses,
- ! environmental and other public interest groups, or
- ! similar entities.

Such participation helps ensure that negotiations around specific projects involve the communities in which they are located. Stakeholder involvement requirements also help ensure that stakeholders with an interest in the proposed project have an opportunity to learn about the nature of the project, identify issues that may have escaped the notice of project sponsors and regulators, and provide feedback regarding their concerns.¹

To assist project sponsors and stakeholders, EPA provides guidance as to who constitutes a stakeholder and what constitutes meaningful and organized participation. In the April 1997 *Federal Register* notice, EPA delineated stakeholders into three categories:

- ! direct participants: stakeholders who work in partnership with the project sponsors to develop the project agreement in detail, either because they have legal authority to issue permits and rules necessary for implementation of the project (e.g., federal, state,

¹ April 23, 1997 Federal Register Notice.

local or tribal agencies or authorities) or because they have a strong interest in the project (e.g., impacted neighbors, community residents, environmental groups, and other businesses);

- ! commentors: stakeholders with a strong interest in the project, but who choose to participate indirectly by providing written or verbal comments throughout the process rather than directly in an organized group; and
- ! the general public: stakeholders who wish to be kept abreast of developments and to have access to the proposal development process in response to public notices and in public meetings.

To help clarify what constitutes meaningful participation, EPA took steps to improve and streamline the XL stakeholder involvement process. To this end, EPA published *Project XL Stakeholder Involvement: Guide for Sponsors and Stakeholders*. The stakeholder guide provides information concerning the type of process that is appropriate, stakeholder needs, and the scope and complexity of the involvement process.

While these efforts are helping to guide stakeholder involvement in XL projects, the types of stakeholder processes used and stakeholder satisfaction with these processes remain highly variable. In an on-going effort to improve the stakeholder processes associated with XL projects, EPA continues to assess how effective the stakeholder involvement process has been at providing meaningful and organized participation for stakeholders, and how satisfied stakeholders have been with the process itself and with their ability to affect XL project decisions.

How do Stakeholder Involvement Processes Fit Into Project XL Decision Making?

Project sponsors are responsible for designing and implementing the stakeholder involvement processes. EPA guidance policies and documents provide support for these activities, as do EPA personnel involved in the project. Project sponsors are required to develop a stakeholder involvement plan. This plan is submitted as part of the XL project proposal.

The stakeholder involvement plan delineates the goals and specific actions to be taken to involve interested stakeholders. Some involvement processes seek primarily to share information with stakeholders and identify concerns. Others encourage a dialogue between the project sponsor and stakeholders, with community stakeholders serving an advisory role to the project. Finally, at least one project established a consensus building process in which participants actively negotiated with the project sponsor over the design of the Final Project Agreement. The choice of whether a process will focus on information sharing, consultation, dialogue or consensus building lies with the project sponsor and is largely set in the stakeholder plan.

Project sponsors are also responsible for the management of the stakeholder process. EPA commonly makes suggestions about specific aspects of the process (such as when to hold public meetings), but does not seek to fundamentally alter the processes designed by the sponsors. By comparison, the one project in which EPA staff did strongly encourage additional stakeholder

involvement was a Superfund site, and the suggestions were made in reference to the citizen involvement requirements of Superfund, rather than Project XL.

EPA encourages, but does not require, involvement of stakeholders in the development of the proposal. Only one of the eight project sponsors discussed in this report actively involved stakeholders in developing the project proposal and the stakeholder plan. Thus, decisions about how to involve stakeholders are often made before stakeholders are involved in the process.

The most active phase of stakeholder involvement occurs during the development of the Final Project Agreement (FPA). The FPA serves as the agreement amongst the signatories and delineates the specifics of the XL project. The FPA is negotiated amongst these “direct participants.” Signatories typically include the project sponsor, EPA, and local and state agencies. Signatories can also include other stakeholders, although this is uncommon.

Stakeholders are also involved in monitoring implementation of the FPA, and possibly in renegotiating clauses in the FPA as conditions change. Citizen and environmental stakeholders are typically less actively involved in this phase of the XL project.

Approach to Evaluating Stakeholder Involvement for Project XL

In September 1998, a report entitled *Evaluation of Project XL Stakeholder Processes* was prepared by RESOLVE, Inc. This report provided a review of the design and conduct of the stakeholder processes at four of the initial XL projects to reach Final Project Agreements. For each XL project reviewed, the report describes how stakeholders were involved in the drafting and/or implementation of the Final Project Agreement, the stakeholder involvement model used by company sponsors, and the level of stakeholder satisfaction with the process.

Following completion of this initial evaluation, evaluators with the Southeast Negotiation Network evaluated the eight XL projects presented in this report in 1999. The assessment evaluates six new XL projects and further evaluates two projects previously documented by RESOLVE. The projects were selected to clarify the purposes, techniques and impacts of stakeholder involvement at the various stages of decision-making.

At the start of the evaluation, the evaluation team selected two XL projects that were developing their project agreements, two that had recently finalized their project agreements, and four that had been implementing their project agreements for one year or more. For projects in the process of developing their project agreements, the analysis focused on the initiation and early dynamics of the stakeholder process. These case studies included:

- ! Atlantic Steel, and
- ! New England Universities Laboratories

For projects that had recently signed the Final Project Agreement (FPA), the analysis focused on stakeholder satisfaction and the effectiveness of stakeholder involvement in the process. These case studies included:

- ! Andersen Corporation and
- ! ExxonMobil (previously Exxon).

And finally, for projects that had finalized their FPA at least one year previously, the analysis focused on stakeholder involvement during implementation of the agreement. These case studies included:

- ! CK Witco (the company, created by the merger of Witco and OSi Specialties, changed its name to Crompton after completion of this evaluation),
- ! HADCO,
- ! Intel, and
- ! Vandenberg Air Force Base.

By examining cases in each of these time periods, the evaluation team sought to develop a more comprehensive understanding of factors that contribute to success and those that pose challenges to stakeholder involvement processes. Further, since the evaluations examine projects at different time periods, future evaluations may be able to provide longitudinal data that shows how a process evolves over time.

For each case, the evaluation team interviewed participants in the stakeholder involvement process. For the eight cases, interviews were conducted with over 75 community representatives, company sponsors, EPA staff, local and state government agency staff and other stakeholders. A list of interviewees is presented in Appendix A. The research method is described in more detail in Appendix B.

Brief Overview of the Eight XL Projects

The XL projects evaluated by the research team include the following eight cases:

- ! **Andersen Corporation** is a window manufacturer located in a rural county in Minnesota. The company sought to manage the environmental impacts of their manufacturing facility more comprehensively, by focusing on material reuse, waste minimization and emissions reductions. The company established a community advisory committee to encourage an on-going dialogue with community stakeholders.
- ! **The Atlantic Steel Site** is a 138-acre brownfields site being redeveloped by Jacoby Development. For many decades, the site was used in the manufacture of steel and is contaminated. At the same time, the site is adjacent to the Midtown district, a rapidly developing commercial and residential district in Atlanta. Jacoby proposed a comprehensive redevelopment of the site. This development project, however, depended on construction of a bridge linking the site to Midtown from across the adjacent interstate highway, a project which required EPA approval. From a stakeholder involvement perspective, the Atlantic Steel project is the most complex

project of the eight examined in this report. The project was set in a highly urban community and involved a wide range of development issues, governmental procedures, and constituencies. The stakeholder involvement process used by Jacoby focused on public meetings, with informal negotiations between Jacoby and specific stakeholders around issues of particular concern to those stakeholders.

- ! **CK Witco** is a chemical specialties manufacturer. The facility is located on an 1,300 acre site in rural West Virginia. The CK Witco XL project seeks to reduce air emissions and to promote waste minimization and pollution prevention. CK Witco's stakeholder involvement process included community outreach, the inclusion of two community representatives on the project negotiation team, and involvement of a representative of the Natural Resource Defense Council on a number of conference calls.
- ! **ExxonMobil** (Sharon Steel Superfund Site) involves the cleanup of a Superfund site. The proposal describes an alternative strategy for investigation, risk assessment, remedy selection and remediation of the site. Using an administratively streamlined process, ExxonMobil hopes to clean up the contaminated site in half the time of traditional cleanups and at less cost. Additionally, ExxonMobil is working with stakeholders to locate businesses interested in redeveloping the site. ExxonMobil involved stakeholders through a community advisory committee.
- ! **HADCO** is a leading manufacturer of printed wiring boards (PWB) and electronic interconnection products, located in New Hampshire, New York and elsewhere. As a PWB manufacturer, HADCO generates wastes that are classified as hazardous waste under the Resource Conservation and Recovery Act (RCRA). Since the wastewater sludge produced by HADCO's operations is classified as hazardous under RCRA, it must be shipped to a third-party processor before it can be sent to a smelter for reclamation of the valuable copper contained within. HADCO seeks a conditional delisting of the sludge that would allow them to bypass the third-party processor and ship the wastes directly to an approved smelter. Efforts to involve stakeholders proved difficult, and little participation was achieved in this project.
- ! **Intel**, a large semiconductor manufacturer, produces Pentium microprocessors and other state-of-the-art computer chips. Located in Chandler, Arizona, in the Phoenix metropolitan area, the FAB-12 facility is a state-of-the-art facility. The FPA provides for a facility-wide cap on various air pollutants. The facility-wide cap replaces individual permit limits for different air emissions sources. The FPA also limits water use and waste generation. Intel designed and implemented a consensus building process to involve stakeholders in the design and implementation of the FPA.
- ! **New England Universities Laboratories** seek to develop flexible performance-based standards for managing university laboratory hazardous waste. The project is designed to develop and implement an integrated Environmental Management Plan (EMP) for managing hazardous lab waste at three universities (Boston College; University of Massachusetts, Boston; and University of Vermont). These laboratories typically use small quantities of many different chemicals. A management plan to control their use

and disposal offered environmental advantages relative to the traditional regulatory requirements set forth in the Resource Conservation and Recovery Act (RCRA). The New England Universities Laboratories employed two distinct stakeholder involvement processes, one national and a series of local ones. The national process focused on national constituencies with an interest in the environmental management of university laboratories, and was managed by a central staff. Local processes were organized and managed by the three individual universities, and focused on internal local constituencies (university administrators, faculty, staff and students) with an interest in safety and environmental protection on the campuses of universities participating in the XL project, and external local constituencies (residents and communities adjoining these universities) with an interest in potential off-site impacts.

- ! **Vandenberg Air Force Base (AFB)** conducts and supports missile launches, operates the Western Test Range and responds to worldwide military contingencies. The base covers more than 98,000 acres and is the Air Force's third largest military installation. Vandenberg AFB is located in rural southern California, 15 miles from the nearest municipality. Under Title V of the Clean Air Act, Vandenberg AFB would be designated as a major source of ozone precursor emissions. The designation would require the base to obtain new permits for up to 300 previously unregulated emission sources. The base sought to substantially reduce ozone precursor emissions, sufficient to be redesignated as a minor source and to fund these emission reduction projects using money that would otherwise be spent complying with administrative requirements of Title V. Vandenberg based its stakeholder involvement process on existing environmental review boards.

Table 1 provides an overview of the primary characteristics of these XL projects.

Table 1 Eight XL Projects Evaluated: Location, Status and Format of Participation				
XL Project & Location	Year of Initial Project XL Proposal and Project Status as of June 1999	Activity of Project Sponsor	Environmental Benefit of Project	Format for Participation
<i>Andersen Corporation</i> Bayport, MN (rural)	1997 FPA recently finalized	window manufacturing	reduce air emissions; reuse waste materials	Direct dialogue within a 15-person Community Advisory Committee composed mostly of citizens
<i>Atlantic Steel</i> Atlanta, GA (urban)	1998 Developing FPA	redevelopment of 138-acre brownfield site located in a central city	redevelop brownfield site; minimize transportation-induced air pollution and urban sprawl	Public meetings, with written and oral comments; several interactive workshops sponsored by stakeholders other than the project sponsor
<i>CK Witco</i> (OSi Specialties) Sistersville, WV (rural)	1995 In implementation for more than one year	chemical specialties manufacturing	reduce air emissions; pollution prevention	Public meetings and an informal XL project team that included two citizens and an NRDC representative
<i>ExxonMobil</i> Fairmont, WV (rural)	1998 FPA recently finalized	Superfund remediation	more timely and efficient Superfund cleanup	Direct dialogue within a 25-person stakeholder panel composed mostly of citizens
<i>HADCO</i> Owego, NY Derry and Hudson, NH (small town)	1995 In implementation for more than one year	printed wiring board manufacturing	hazardous waste delisting; material reuse	Primarily direct negotiations between project sponsor and government agencies
<i>Intel</i> Chandler, AZ (suburban)	1995 In implementation for more than one year	computer chip manufacturing	pollution prevention; reduce air emissions; increase water reuse	Direct dialogue and consensus building within a stakeholder negotiation group that included four citizen members

Table 1
Eight XL Projects Evaluated: Location, Status and Format of Participation

XL Project & Location	Year of Initial Project XL Proposal and Project Status as of June 1999	Activity of Project Sponsor	Environmental Benefit of Project	Format for Participation
<i>New England Universities Laboratories</i> Boston College UMASS-Boston Univ. of Vermont (urban)	1997 Developing FPA	experimental research lab management	manage hazardous lab waste more comprehensively; reuse materials	Divided into two distinct types of processes: National Process: Problem solving workshops and an email list server involving research labs Local Processes: informal meetings with university personnel and various forms of public outreach to communities located around the universities
<i>Vandenberg AFB</i> Santa Barbara County, CA (rural)	1995 In implementation for more than one year	air force base management	reduce air emissions	Presentations to pre-existing environmental citizen committees

As a program designed to promote innovation, Project XL has attracted a wide diversity of projects. The diversity is apparent when looking at the range of project sponsors (from small university labs to large corporate manufacturing facilities and a military base), communities (from very rural to very urban), EPA regions (from across the United States), stakeholders (from small, homogenous communities of impacted individuals to a rich diversity of interest groups) and project type (from pollution prevention to urban development).

Not surprisingly, the approaches used by project sponsors to involve stakeholders varies considerably as well. While EPA policies and guidance documents establish a common basis for designing these processes, the guidance provides considerable latitude. As a result, project sponsors work with stakeholders in very different ways.

We are left, then, with several important questions. First, to what degree of specificity should EPA policy delineate the design and implementation of stakeholder involvement processes? Second, under existing EPA policies, are stakeholders afforded opportunities to participate that are coincident with their expectations, concerns and stake in the outcome? And, third, can we identify specific characteristics of stakeholder involvement processes that contribute

to or block effective involvement and satisfaction with that involvement? These questions frame our evaluation of the Project XL stakeholder involvement processes.

Organization of this Report

The remainder of this report first presents the findings and conclusions that emerged from our evaluation of the XL project stakeholder involvement processes. Following this discussion, the report presents more detailed project descriptions and assessments for each of the eight XL projects studied. A list of interviewees, a description of the research method, and a glossary of terms is presented in the appendices.

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Findings and Conclusions

The findings and conclusions of this report are presented with reference to the three major questions raised above. First, we examine the need for flexibility in the design of stakeholder involvement processes, and the implications of this on EPA policy and guidance efforts. Second, we examine the degree to which involvement processes afford stakeholders opportunities to participate consistent with their expectations, concerns and stake in the outcome. And, third, we identify specific characteristics of stakeholder involvement processes that contribute to, or block effective involvement and satisfaction with, that involvement.

1. The Need for Flexibility

To what degree should EPA policies and guidance documents prescribe specific approaches to stakeholder involvement? The eight case analyses indicate that projects are highly diverse in context and levels of complexity and concern. For stakeholder processes to respond effectively to these varying conditions, the policies developed by EPA need to provide for a wide latitude of processes. At the same time, this flexibility increases the responsibility of EPA project coordinators to ensure that the design and implementation of stakeholder processes are consistent with the objectives of meaningful involvement.

1.1. EPA policies and guidance documents provide considerable latitude in the design of XL project stakeholder involvement processes.

Guidance documents set a goal that the process of strategy development “engages those parties affected by environmental regulations and policies in an unprecedented effort to find solutions that work better.” EPA Project XL guidance documents describe three levels of possible involvement for stakeholders to participate in an XL project:

- ! direct participants who engage in the day-to-day negotiations,
- ! commentors who have a direct interest in the project but who do not participate in day-to-day negotiations or project development, but instead provide written or oral comments, and
- ! the general public, who are to be provided clear access to information on project development and results.

Thus Project XL envisions a range of possible roles, with differing levels of participation. At one extreme are stakeholders who “negotiate,” while at the other extreme are stakeholders who have “clear access to information.” In the middle, commentors have access to information and can present their perspectives. Alternatively, we can describe these three roles as each based on the following forms of communication:

- ! two-way communication (including weakly consultative, strongly consultative, joint problem solving, and consensus building processes),
- ! double one-way communication (where project proponents and stakeholders share information and concerns by means of oral or written announcements and comments, without interactive dialogue), or
- ! one-way communication (the project proponents make information available that citizens may access).

1.2. The flexibility afforded by EPA policy allows XL projects to respond to variations in needs for stakeholder involvement. These needs vary considerably amongst XL projects.

The variety of possible roles envisioned in EPA policy provides flexibility for managing the diversity of project types and stakeholder needs. While some XL projects attract strong interest on the part of many stakeholders (e.g., Atlantic Steel), others attract little concern from stakeholders other than government agencies (e.g., Vandenberg AFB and HADCO). More commonly, projects may attract varying degrees of concern from different stakeholders (e.g., New England Universities Laboratories attracted little participation from neighbors of the labs and environmental activists but considerably more from potentially affected laboratories).

A number of factors help shape the demand for stakeholder participation. These include:

- ! the proximity of the stakeholders to the project site (interest in participating decreases with distance from the facility),
- ! the potential impact of the project on specific stakeholders (interest increases as the stake to specific individuals or groups becomes more obvious),
- ! the trust afforded to the sponsor and EPA (interest decreases as a community's trust in EPA or the sponsor increases),
- ! the perceived desirability of the project (participation becomes less critical when the overall project is widely perceived as desirable),
- ! the technical complexity of the project (participation becomes more specialized as the issues become more technical),
- ! the potential for setting precedents (participation by national stakeholders increases as the potential for project agreements to affect future environmental decision making broadens), and
- ! the scale of the stakeholder groups (national stakeholders seek more time efficient forms of involvement – often limited to review and comment – while local groups seek more interactive and participatory forms).

Each of these factors is important to the design of stakeholder involvement processes. Thus, flexibility is needed in the design and implementation of stakeholder processes if those processes are to respond effectively to differences in local context and concerns. EPA's policy to provide overall guidance while permitting considerable latitude in process design therefore seems appropriate.

1.3. EPA policy, while providing flexibility to process design, does not delineate criteria for determining which stakeholders should be afforded what levels of involvement. This can engender significant tension when the expectations of the stakeholders for involvement in the process exceed the willingness of project sponsors to involve these stakeholders.

Given the broad policies established by EPA, how does EPA ensure that individual XL projects meet the fundamental goal of involvement processes, namely to develop a collaborative working relationship between Project XL sponsors and people who believe that they or their communities might be affected by these projects? What happens when the expectations of the sponsors differ significantly from the expectations for involvement held by stakeholders?

Project XL stakeholder involvement processes are designed and implemented by the project sponsors. Project sponsors are the companies or governmental agencies who seek the regulatory flexibility afforded by XL projects. Within the eight XL projects evaluated for this report, over half of the sponsors developed involvement processes that primarily sought to share information with stakeholders, while a smaller number sought to promote dialogue or to build consensus with stakeholders. In most cases, the differences in levels of involvement bear a reasonable relationship to the context and preferences of the stakeholders for participation. But the cases also show that the predilections of the sponsors to involve stakeholders, as well as the ability of the sponsors to design and manage more complex forms of participation, also play an important role in shaping the levels of participation.

As we will discuss in more detail below, given the broad criteria set forth in EPA policy, sponsors design stakeholder involvement processes primarily to meet the sponsors' need to build relationships of cooperation with their communities, public agencies, and EPA. The need to build cooperative relationships therefore depends not only on the issues raised by the XL project and the community's concerns with these issues, but also on the capacity of the sponsors to design effective participation processes (in a situation where most sponsors have never designed a community involvement process before), as well as the sponsor's assessment of the political need for cooperation.

At the same time, the broad criteria embedded in EPA policy helps contribute to overly high expectations on the part of some stakeholders as to their influence over project decisions. No XL project sought the consensus of all stakeholders in developing the Final Project Agreement. Most limit the core negotiations to the company, government agencies and possibly a few key stakeholders. Only one was broadly inclusive in a process clearly designed to build consensus. Yet, when a project involved stakeholders who believed that they had a large stake in

the outcome, it was not uncommon for these stakeholders to expect considerable influence over the outcome.

These differences between sponsor and stakeholder expectations are by no means unique to Project XL. Differences in interests often lead to differences in perception and expectations in stakeholder involvement processes. Yet two aspects of this problem stand out. First, greater attention to the design of the stakeholder process and to the development of clear goals for the process will provide a more solid foundation for assessing the progress of the involvement processes. Second, EPA is the only agency in a position to ensure that the basic goal of stakeholder involvement is met, and in particular, the person best positioned to assess the adequacy of the stakeholder involvement process is the regional EPA project coordinator assigned to oversee the project.

1.4. Sponsors maintain a high degree of control over the selection of participants, the design of the involvement process, the issues discussed and the outcomes of the processes.

EPA policy encourages stakeholder involvement in the proposal development stage, but does not require such engagement. Intel worked with the plant's existing Community Advisory Panel before finalizing its project proposal. No other project significantly involved stakeholders in the design of the facility's stakeholder involvement process or in the development of the Project XL proposal to EPA.

In addition, in most projects the non-governmental stakeholders did not bring about significant, identifiable change in the development of the Final Project Agreement. As discussed below, most processes limit participation to either information exchange or a weak consultative role. For projects that were not particularly controversial, stakeholders often accept this role and approve of the project and the overall direction of the FPA once developed. However, in projects with more controversy, stakeholders raised questions of trust and accountability that stem from the sponsor's control over the involvement processes.

EPA guidance documents do not require specific forms of participation. In the context of this flexibility, each of the stakeholder processes was consistent with EPA guidance documents and requirements. Expectations for meaningful involvement increases with the level of community concern and the expected impact of the project. Yet, when community concern is high, these processes often did not meet the expectations of the stakeholder groups.

Currently, no systematic mechanism – in either the design or the implementation or XL project involvement processes – exists to reconcile differences between sponsor's intentions and stakeholder expectations.

1.5. EPA minimum standards for stakeholder involvement, particularly as interpreted by the regional XL project coordinators, appear to be the most important external impetus to the sponsor for designing more meaningful processes of participation.

Often, EPA personnel felt that more full participation would have been desirable. These personnel actively encouraged greater efforts to reach out to additional stakeholders, at times suggesting specific types of stakeholders that could be included. From time to time, EPA personnel also suggested when and why projects' sponsors should hold meetings, as well as the format for those meetings. Project sponsors usually implemented EPA suggestions, at least in part.

But while EPA project coordinators felt that they could encourage more extensive forms of participation, the project sponsor remained solely responsible for the design and implementation of the stakeholder involvement process. EPA personnel felt free to enforce minimal standards of acceptability, but hesitant when it came to insisting on levels of participation not clearly required in the guidance documents. Several reasons exist for this hesitancy.

- ! First, Project XL is a voluntary program, and as such the project proponent is voluntarily accepting responsibility to design the project agreement and to initiate and maintain the stakeholder involvement process.
- ! Second, the stakeholder processes may well be subject to the Federal Advisory Committee Act (FACA) if initiated and managed by EPA. FACA requirements would be cumbersome and difficult to apply in the experimental projects that XL is designed to attract.
- ! Third, Project XL coordinators are more concerned with developing strategies that improve the environment while lowering costs of compliance than they are with promoting stakeholder involvement in environmental decision making for its own sake. Participation helps legitimize the projects and provides forums where concerns can be raised. Beyond assuring that the process is open and transparent, then, EPA personnel mostly seek to assure that XL projects do not generate high levels of opposition. In the absence of controversy, EPA project coordinators are less likely to strongly encourage more extensive forms of participation.

What can be done to balance these conflicting concerns within EPA? To begin with, EPA has already made significant progress in clarifying the role of stakeholder processes in XL project development, and in providing clearer guidelines for process design and implementation. In September 1998, EPA released its first report of XL stakeholder involvement entitled *Evaluation of Project XL Stakeholder Processes*. Based on this report and additional stakeholder input, in 1999 EPA released the *Project XL Stakeholder Involvement: A Guide for Sponsors and Stakeholders*. These documents, as well as in the future this report, will help EPA personnel and project sponsors clarify the goals and processes employed to promote stakeholder involvement.

In addition, together with the project sponsors and the regional EPA project coordinators, more active EPA Headquarters review of the stakeholder process designs may help build

institutional capacity to promote more effective involvement. Currently, few project coordinators manage more than one XL project. Consequently, the lessons learned by the coordinator are not easily made available to future coordinators. Particularly around issues of stakeholder involvement, such experience may be invaluable in setting reasonable expectations and in designing appropriate processes.

2. Stakeholders' Expectations and Concerns

Project sponsors design most XL stakeholder involvement processes primarily to share information and allow for public comment. A few seek to promote direct dialogue or build consensus. For the most part, participants in the stakeholder involvement processes are satisfied with the substantive outcomes of these processes. While most participants are also satisfied with the involvement processes themselves, two concerns are often expressed. Some participants are surprised at the amount of time needed to participate in these processes, while other participants insist that more dialogue and consensus-building is needed.

The degree of community involvement is often related to the degree of community concern and the potential impact of the project on the surrounding community. For example, when community concern is low, information sharing processes are appropriate. On the other hand, when community concern is high, more interactive forms of stakeholder involvement are usually more appropriate.

In the cases studied, sponsors often, but not always, responded to increases in community concern by designing processes that were more interactive.

2.1. Most XL stakeholder involvement processes are designed primarily to share information and allow for public comments. While some processes also allow for interactive consultation between sponsors and stakeholders, few processes seek or need to build consensus amongst the stakeholders.

Stakeholder involvement processes are designed largely by the sponsors, and the resultant processes are mostly geared at meeting the sponsor's needs. Sponsors that must negotiate with stakeholders over potentially conflictual issues (e.g., ExxonMobil and Intel) or that are high profile companies that seek to build good working relationships with their constituencies (e.g., Andersen, ExxonMobil, Intel) develop more sophisticated processes of involvement. These processes are often interactive, involve specific individuals as representatives of stakeholders, involve those individuals systematically through an on-going forum, and provide for at least a consultative role for these individuals. Sponsors with more localized constituencies and with less controversial projects (HADCO, CK Witco and Vandenberg AFB) involve non-agency stakeholders later in the process and in more limited ways. Interaction amongst stakeholders is limited, usually restricted to presentations within standard meeting and hearing forums or to written communications.

The relationship between stakeholder concern, desire to participate, format of participation and the goal of participation for each case is shown in Table 2 below.

Table 2				
Relationship Between Desire to Participate and Focus and Format of Participation				
XL Project		Stakeholder Desire to Participate	Focus of Involvement Process	Format for Participation
Andersen Corporation		moderate	Information sharing and consultation	Direct dialogue within a 15-person Community Advisory Committee composed mostly of citizens
Atlantic Steel (Jacoby)		very high	Information sharing, with some <i>ad hoc</i> negotiations with specific stakeholders	Public meetings, with written and oral comments; several interactive workshops sponsored by stakeholders other than the project sponsor
CK Witco (OSi Specialties)		low to moderate	Information sharing	Mailings, public meetings and an XL project team that included two citizens and a NRDC representative
ExxonMobil		moderate	Information sharing, with some focus on joint problem solving	Direct dialogue within a 25-person stakeholder panel composed mostly of citizens
HADCO		very low	Government agency negotiations	Primarily direct negotiations between project sponsor and government agencies
Intel		very high	Consensus building	Direct dialogue and consensus building within a stakeholder negotiation group that included four citizen members
New England Universities Laboratories	National Process	high	Joint problem solving	Problem solving workshops and an email list server involving research labs
	Local Processes	low	Information sharing	Informal meetings with university personnel and various forms of public outreach to communities located around the universities
Vandenberg AFB		low	Information sharing	Presentations to pre-existing environmental citizen committees

Sponsors often envision the primary objective of the stakeholder process as building legitimacy for the proposed project, rather than interactively working out problems that emerge from the project. Negotiations occur rarely except between project sponsors and regulatory agencies, or informally between sponsors and specific interest groups. The primary emphasis is on transparency, with project sponsors (often based on EPA project staff advice) acting to provide information to the community, and checking to make sure that no significant opposition emerges from stakeholder groups.

When projects involve a wide range of stakeholder groups and complex issues (e.g., Atlantic Steel and New England Universities Laboratories), the stakeholder involvement processes tend to segment into multiple pathways to participation. These alternative formats afford various stakeholder differing levels of access to participation, with each format designed to appeal to different constituencies. There is little sense of cohesive structure to the participation process. Each participation format has its own rationale, and is organized and conducted largely independent of the other participation formats. When stakeholder groups are largely independent of each other (as are the lab, university and community stakeholders in the New England Lab project), this poses few problems. However, when stakeholder groups are interdependent (as is true of many of the stakeholders in the Atlantic Steel project), the result is often confusing to participants, and potentially leads to marginalization of less powerful or well-connected stakeholders.

2.2 A large proportion of participants in the stakeholder involvement processes interviewed were satisfied with the general project as set out in the Final Project Agreement (FPA). Most participants were also satisfied with their roles in the processes, even though these roles were often limited to information exchange or commentary. However, in XL projects where important differences in interests and perspectives existed, stakeholders were less satisfied, often insisting that more dialogue and consensus-based processes were needed. In these cases, expectations of participants exceeded that of sponsors with regard to citizen involvement in decision-making.

A number of XL projects generated little community concern. In these communities, stakeholders believed that the actions proposed by project sponsors would either be beneficial or would have little impact on the community. Stakeholders therefore made few demands for participation. These projects include HADCO, the local participation process associated with New England Universities Laboratories, CK Witco, and Vandenberg AFB. In these projects, most interviewees indicated that while involvement largely focused on information sharing, this was appropriate to the projects. These participation processes easily met expectations of stakeholders. Dissatisfaction with the stakeholder process, where it existed, tended to come from either EPA, who at times felt that more participation could have been achieved (in spite of a general lack of interest on the part of stakeholders) or from other governmental agencies, who at times spent considerable time in their role as stakeholders in these processes, and felt that the processes should have been more efficient.

In two projects, Andersen and ExxonMobil, stakeholders identified important community concerns with the XL project being proposed, but for the most part trusted the project sponsor to resolve concerns that were raised. Both projects were located in small towns and rural communities where a large percentage of residents worked in manufacturing industries. The project sponsors initiated community advisory panels to focus community involvement on issues raised about the projects. Although the panels were clearly advisory, they allowed for ongoing information-sharing and dialogue between community representatives and the companies. Most interviewees indicated that while they had originally expected a more consensus-oriented process, the emphasis on information sharing and consultation were acceptable. However, a few participants indicated that the advisory nature of their involvement discouraged participation on their parts, or discouraged other stakeholders from actively participating, thereby muting opposition to the project.

The most vocal concerns about the participation process were raised in the Atlantic Steel and Intel processes. Both projects raised issues of significant concern to stakeholders and, in response, stakeholders made large demands for participation. In neither case were the expectations of stakeholders met. Interestingly, of the eight processes studied, the Intel process was probably the most effectively designed process and the most oriented toward consensus building. In this case, dissatisfaction seems to spring primarily from stakeholder concerns about the degree to which their participation should affect the specifics of the project agreement, as well as more general concerns about the appropriateness of affording regulatory flexibility to Intel, rather than from concerns about the design and implementation of the participation process per se. Atlantic Steel, on the other hand, generated considerable objections to the design and implementation of the participation process because while it offered opportunities for information sharing and comments, it did not meet the expectations of stakeholders for more meaningful involvement.

Finally, in one process (the national New England Universities Laboratories process) stakeholders came to a high level of consensus with the project sponsors. However, EPA requested important revisions to the proposed agreement proposed by the sponsor. Participants in the national process consisted largely of representatives of university and private research labs. Interviewed participants were largely supportive of the involvement process, including the interactive workshops and list serve email systems. However, a number of stakeholders expressed dissatisfaction with the outcomes of the process and the resulting FPA. For the most part, these participants felt that EPA had limited the project agreement by too narrowly restricting the flexibility afforded to the project, thereby limiting the value of what the labs considered to be an “experiment.” In addition, the long negotiations between the project sponsors and EPA created difficulties with managing the national participation process.

From these cases, we can conclude that satisfaction with the participatory process in these projects depended primarily on three variables:

- ! the willingness of project sponsors to involve stakeholders at a level consistent with the stakeholders’ concerns and expectations,
- ! the consistency between the stakeholders’ expectations as to their influence over decision-making and the stakeholders’ perception about their actual impact, and

! the level and efficiency of effort required to participate.

These variables are explored more fully in Table 3 below.

Table 3							
Stakeholder Expectations for Participation and Satisfaction with Process and Outcomes							
XL Project	Stakeholder Expectations for Participation and Voice	Perceived Opportunity to		Level of Effort Required from Participants	Perceived Efficiency of Participation	Satisfaction with Participation Process	Satisfaction with Content and Implementation of the FPA
		Participate	Influence Outcomes				
Andersen Corporation							
Atlantic Steel (Jacoby)							
CK Witco (OSi Specialties)							
ExxonMobil (Sharon Steel)							
HADCO							
Intel							
New England Universities Laboratories (national process)							
New England Universities Laboratories (local processes)							
Vandenberg AFB							

Scale: very low low moderate high very high

2.3. The degree of community involvement is often, but not always, related to the degree of community concern and the potential impact of the project on the surrounding community.

As is shown in Tables 2 and 3 above, project sponsors rarely design interactive processes of participation in communities unless demand for participation is moderately high. In communities where desire to participate is low, sponsors have little incentive to actively engage stakeholders. Even if they try, response is sporadic. Typically, XL projects in which stakeholder interest in participating is low are located in rural communities or are dispersed across many communities. These facilities are often physically isolated from neighbors, with relatively little potential for negative impacts as a result of the XL project.

On the other hand, projects that elicit a high degree of community concern and that have greater potential for negative impacts on stakeholders do not necessarily develop processes that encourage greater participation. Stakeholder involvement is also linked to the local and regional politics of the project. Sponsors of complex and potentially conflictual projects (such as Atlantic Steel) may well design processes that bifurcate stakeholders in ways that allows for more direct involvement of parties with the power to block the project, and less direct involvement of affected stakeholders who lack that power. Project sponsors have incentives to bifurcate participation processes because 1) the financial and time resources needed to design and implement a well-integrated participation process increase with the number of stakeholder groups and the complexity of the issues and 2) integrated processes may provide a forum that legitimizes concerns of groups that may otherwise have little voice in the process.

From the cases examined, sponsors are most likely to design interactive, dialogue-based forums for participation when:

- ! the proposed project affects a clearly recognizable community of stakeholders,
- ! those stakeholders are capable of organizing, and
- ! the stakeholders are important constituencies of the project sponsor.

2.4. In several projects, it was clear that neither the project sponsors nor EPA personnel involved in the projects had specific training or experience in developing stakeholder involvement processes. In these cases, project sponsors designed involvement processes that lacked clear structure and objectives, were reactive rather than proactive, and fostered stakeholder expectations that were inconsistent with process design.










































Challenges to the design and implementation of participation processes are many. XL projects often involve specialized issues, technical knowledge and dispersed impacts. Stakeholder groups can be varied and unfamiliar with each other. The project and timetable are often difficult to predict and manage. The goals of processes also vary.

Yet, despite the variation of contexts and goals, XL participation processes need to exhibit several characteristics if they are to promote acceptance of project agreements and satisfaction with participation processes. These include:

- ! clear presentation of the intent of the sponsor as to the purpose of the process and its impact on decision making,
- ! effective identification of participants who represent the range of stakeholders and community interests, and
- ! design of a process that
 - ✓ remains open and transparent to stakeholders,
 - ✓ effectively resolves stakeholder concerns where possible,
 - ✓ provides for fair opportunities for participation, and
 - ✓ efficiently uses the time and resources of stakeholders, government agencies and sponsors.

The design of participation processes form the base upon which involvement processes are built. In particular, stakeholders need to be more effectively identified earlier in the processes, to determine which stakeholders should be involved and to clarify the objectives and type of stakeholder involvement process that should be used.

The capacity to design and organize participation processes varies considerably across sponsors. The three largest corporations (Intel, ExxonMobil and Andersen) and an academic community (New England Universities Laboratories) developed the four most sophisticated participation processes (that afforded the greatest opportunity for dialogue). As is shown in Table 4, each of these projects hired facilitators to help design and implement all or substantial segments of the participation processes. While this did not necessarily reduce conflict, the process design and management did provide for greater clarity of purpose and communication when compared to processes that were not so managed.

<p style="text-align: center;">Table 4 Design of the Participation Process</p>				
XL Project	Stakeholders systematically identified?	Issues systematically identified?	Process goals and steps clearly articulated?	Process facilitated by neutral?
Andersen Corporation				
Atlantic Steel Site (Jacoby)				
CK Witco (OSi Specialties)				
ExxonMobil (Sharon Steel Superfund Site)				
HADCO				
Intel				
New England Universities Laboratories (national process)				
New England Universities Laboratories (local processes)				
Vandenberg AFB				
<p>scale:  low  moderately low  moderate  high  very high</p>				

The design and management of other XL participation processes is more difficult to assess. Neutral third parties were periodically used in two of the remaining four projects. In addition, the local components of the New England Universities Laboratories project were not facilitated. In these cases, involvement was more limited. Often, stakeholders were less clear about the intent of the processes, the opportunities for involvement, and the impact of their involvement on decision-making. Outreach was less systematic and at times problematic. Many of these concerns could be addressed through more effective process design and implementation.

At the same time, demand for participation appears to have been relatively low for most of the participation processes that lacked a clear, transparent design. The only clear exception to this statement was the Atlantic Steel project, where many stakeholders clearly desired a more accessible and transparent process than was afforded to them. In the CK Witco, HADCO, local New England Universities Laboratories, and Vandenberg projects, stakeholder groups did not request more systematic participation.

In the eight XL projects examined, stakeholders never indicated that EPA publications and guidance documents were used to help design the process. No participant discussed these documents, although the Stakeholder Involvement Plans of later XL projects clearly draw from the language of some of these documents.

At the same time, we should note that EPA now uses guidance resources more extensively with newer XL projects. In addition, as noted above, EPA has significantly refined its guidance documents for supporting involvement process design and implementation. These materials were published at the same time as this evaluation project was conducted, and hence were not available to the eight XL projects discussed in this report.

3. Barriers to Effective Stakeholder Involvement

In this final section of the Findings and Conclusions section, we examine specific characteristics of the involvement processes that either contribute to or block more effective involvement processes.

3.1. The most significant barriers to effective participation in consultative and consensus building processes include time commitments required to participate in what are often time-consuming processes and the capacity of stakeholders to understand technical issues.

For processes that were consultative or sought to build consensus, stakeholders often were concerned with the level of time commitments required to participate. These complaints were heard not only from citizen stakeholders, but also from NGOs, agencies and even some sponsors. Concerns about time commitments were highest amongst community stakeholders who participated out of a general sense of voluntary civic responsibility, environmental stakeholders who had hoped to have a greater impact on the project agreement and its implementation, and

state or local government agency representatives who felt that the processes could have been more efficient.

Effective consultation or consensus building also was made more difficult by the complexity of the technical issues at the heart of most XL Projects. When trust of the sponsor was high, participants were accepting of explanations provided by sponsors and EPA. Conditions of distrust or disagreement, however, led to much higher needs for technical information. Few participants have the capacity to verify information provided. While some stakeholders were aware that assistance grants were available, these stakeholders usually felt that these grants could be better used during the implementation phase and so did not apply for these grants. Thus, few supports existed within these processes to enable participants to more effectively manage technical information.

3.2. The most significant barrier to effective participation in processes that emphasize information exchange appears to be the absence of systematic approaches for outreach and eliciting community responses.

Over half the XL projects examined for this study focused their participation processes primarily on information exchange. These included HADCO, Atlantic Steel, the local outreach efforts associated with New England Universities Laboratories, CK Witco, and Vandenberg. Typically, these participation processes were designed and implemented by the sponsors of the project without outside consultative help. Compared to XL projects that incorporated processes of consultation or consensus building, the projects that focused on information exchange were less effective at reaching out to a diverse population. The difficulty appears to spring from two different sources. On the one hand, other than Atlantic Steel, community interest in these “information exchange” projects was lower than found in projects with more active participation processes. On the other hand, other than CK Witco and, to a more limited degree, Vandenberg, “information exchange” participation processes were not systematic in their design or in their implementation. It appears that low stakeholder interest is correlated with less organized participatory processes, but which is cause and which is effect remains difficult to determine for these limited number of cases.

3.3. Efforts to keep the XL project meetings focused exclusively on XL issues created considerable frustration on the part of stakeholders when those stakeholders were primarily concerned with community issues associated with, but not directly caused by, the XL project.

At times, stakeholders, sponsors and EPA cannot easily distinguish between issues that are under the prerogative of XL and those that are not. For example, conceptual models of urban design were included in the analysis for the Atlantic Steel project, while specifics about urban design were excluded for discussion because they were viewed as beyond the scope of the XL process. At other times, Project XL participatory processes provide an opportunity for stakeholders to raise concerns that are not directly related to the XL project. For example, stakeholders from local communities in the New England Universities Laboratories project were

primarily concerned with university impacts on neighborhoods (such as student activity and noise) rather than the management of hazardous wastes in the labs. Similarly, stakeholders in the Andersen project voiced general concerns over the impact of Andersen on its neighbors. In each of these cases, stakeholders were frustrated by the inability of the process to address issues of concern.

By comparison, in the ExxonMobil case, the process allowed discussion of and worked to address ancillary community concerns. This contributed to overall stakeholder satisfaction. However, this approach raises its own concerns. A state agency representative, for example, felt that the process should have been more focused on issues central to Project XL, in order to reduce the amount of time taken up by the process.

3.4. Most processes did not actively involve national groups. Moreover, in those projects where national groups were included, the interaction between the local and national groups was very limited.

National stakeholder groups were explicitly concerned with five of the XL projects explored in this report. National groups were primarily involved as commentators, providing written and verbal comments directly to the project sponsor or EPA. While the comments made by national groups were at times useful to local stakeholders in clarifying issues, national groups did not participate directly in stakeholder meetings in Intel, Atlantic Steel, and New England Universities Laboratories. Representatives of a national environmental group did participate more directly in the Andersen and CK Witco projects, but these too involved very limited interaction between national and local stakeholders.

In the Intel project, a national group requested more active participation as a participant on the stakeholder negotiation team. Participation by the national stakeholders was allowed on a limited basis. The national organization, however, refused to sign a confidentiality agreement with Intel, a requirement for participation that was agreed to by all local stakeholders. This effectively blocked participation by the national group.

In Atlantic Steel, the sponsor worked directly with larger environmental groups to determine and address their concerns outside the local public meeting process. In the New England Universities Laboratories project, the sponsor designed three distinct participation processes, one for national stakeholders, one for university stakeholders, and a third for local community stakeholders.

In Andersen and CK Witco, national environmental groups provided comments and interacted to a limited degree with local stakeholders. In the Andersen project, a representative of the Environmental Defense Fund visited the site and attended one local stakeholder meeting. In Witco, a representative of the Natural Resources Defense Council participated in several stakeholder conference calls, on which two local representatives also participated.

3.5. The management of meetings was rarely an issue in and of itself.

Meetings designed for information sharing were generally perceived as succeeding in transmitting information, and meetings designed to promote dialogue or consensus building were generally seen as well facilitated. While few were facilitated by a neutral party, this was often seen as unnecessary.

At the same time, participants often felt that the agenda for meetings was set by the project sponsors, which some stakeholders perceived negatively. While projects often allowed additional items to be raised by participants, few actively involved participants in the setting of issues to be considered.

3.6. Participation dropped significantly during the implementation phase.

During the implementation phase, participation typically is limited to review of progress reports and occasional open meetings. The projects become very technical, and participants are often at a loss as to the need for their participation, other than as watchdogs to ensure compliance and to keep the community abreast of the project. Participation in the ExxonMobil project, a Superfund site, remains high. Andersen, with a signed FPA but without a permit to proceed, also continues to hold regular stakeholder meetings.

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Strategic Opportunities for Improvement

1. Link goals, roles, expectations and resources through effective process design.

The stakeholder involvement process within Project XL requires considerable flexibility to meet the diverse needs of different projects. At the same time, flexibility can contribute to a significant gap between the language incorporated into EPA's guidance documents and the standards applied in local processes. On the one hand, the guidance documents set a goal of providing stakeholders with a choice as to how they wish to participate. On the other hand, the program requirements allow project sponsors to delineate the range of options available to stakeholders, as well as who has access to which options. As a result, expectations of participation at times exceeds opportunities for participation.

To maintain flexibility while promoting more effective participation, greater care is needed in the design and early implementation of the participation processes. Sponsors (and EPA) should implement more systematic convening processes, in which the needs and concerns of the various stakeholder groups are identified, potential representatives are selected, and the stakeholder involvement process is appropriately designed.

A well designed process helps clarify the goals of the process and the roles of the various parties and stakeholders. This in turn provides a more realistic basis for stakeholder expectations and helps identify resources needed to implement the process. Effective convening is made even more important by EPA's attempts to streamline the XL process. Streamlining increases the speed at which timely involvement processes must be developed and implemented.. EPA's recent provision of facilitation services for initial Project XL stakeholder meetings is a step in the right direction, but a more systematic approach to convening, process design and early facilitation services is needed.

2. Develop incentives for more meaningful participation.

Consider that XL projects are experiments, designed in part to help EPA and sponsors understand the impacts of innovative environmental protection strategies. In this light, stakeholder processes are meant to promote learning by holding decision making and outcomes open and accountable. Yet, stakeholder processes will contribute to innovation and learning only if they are designed to do so. In practice, this implies that processes should promote creativity and openness to new ideas. Most participants in these processes, however, are less concerned about experimentation than about specific outcomes in their community, and are reasonably risk averse in the way that they relate to other parties to the process. In particular, many project sponsors see little to gain from conducting innovative stakeholder involvement processes, or from developing the expertise necessary to design and manage an innovative process well.

To date, EPA's efforts at improving stakeholder processes have focused on making it easier for well-intentioned project sponsors to design better processes. This support has included guidance documents that delineate best practices and funding for facilitation to help initiate

processes. While this support is valuable, in the absence of more clearly delineated incentives or procedures, Project XL sponsors will often provide stakeholders with limited opportunities for involvement within cautiously scripted processes.

3. Promote facilitative leadership within EPA.

One of the most important opportunities for improving stakeholder processes lies in developing facilitative leadership within EPA. Facilitative leaders enable other parties to work more effectively together to achieve goals shared with the facilitative leader. For XL projects, EPA staff can facilitate effective innovation by clearly envisioning and guiding the design and implementation of effective stakeholder processes. These skills are particularly important in projects where highly diverse stakeholder groups express competing interests and concerns. Often, project sponsors respond well to EPA when knowledgeable staff act to expedite new working relationships between project sponsors and the communities of interest that surround their projects. However, most EPA Project XL coordinators are not specifically trained in the stakeholder process skills needed.

EPA staff currently receive limited training in team-building. More is needed. First, EPA staff need the skills to build effective teams that can internally resolve issues between team members, and then clearly and consistently communicate EPA goals and concerns to stakeholder groups. Key EPA staff also need rudimentary process design and consensus building skills in order to promote more proactive leadership on the part of EPA staff in the community. Attention should also be paid to the clear communication of technical information to lay audiences in XL projects.

On-the-job consultations are also needed. Project XL involves a wide range of projects and project personnel. The personnel must draw on skills appropriate to the context and conditions of the XL project in which they are working. Because XL processes are idiosyncratic, personalized consultations are likely to prove highly useful to EPA staff. Project XL therefore needs to maintain process-competent staff within EPA Headquarters and Regions who can respond to the specific needs of EPA project coordinators and staff as XL stakeholder processes unfold.

4. Improve mechanisms for involving national stakeholders, particularly in strategically directed XL projects.

The Project XL program is increasingly identifying projects for consideration based on strategic concerns with industrial and commercial sectors. Recently, for example, many XL projects have clustered into sectors such as bio-reactor, paper and pulp, and POTW operations. By combining the experience of several individual projects into an assessment of the sector as a whole, EPA staff hopes to raise the potential for innovation.

At the same time, systematic participation will become more important as Project XL increasingly works on strategic issues. Because sectoral issues involve efforts to generalize from

several specific XL projects to sector-wide issues, mechanisms for incorporating national stakeholder groups into this process of evaluation and generalization should be developed. Such efforts may also provide a more effective means of focusing the concerns of national stakeholder groups onto issues of national importance.

5. Systematize and share the experience of past XL projects to improve future efforts.

EPA has worked hard to learn from past XL projects and to communicate that learning to sponsors, EPA staff and stakeholders in newly developing and ongoing XL projects. These efforts should continue. Specifically, evaluations of past XL stakeholder processes, including this one, should be used to develop more concrete advice on how to manage different configurations of projects, sponsors and communities. What are the essential differences between working in communities with considerable shared experience compared to communities with highly diverse stakeholders? How do Project XL coordinators build consensus within EPA itself? Efforts to answer questions such as these should allow for flexibility, but sketch out possible answers in sufficient detail so as to encourage project participants to explore alternatives.

6. Examine the impact of the Federal Advisory Committee Act on efforts to promote stakeholder participation in innovative and experimental processes.

The Federal Advisory Committee Act seeks to promote well-considered relationships between federal agencies and advisory groups. The requirements, however, often conflict with goals of innovative and experimental processes such as Project XL. The practical result of such requirements is that EPA does not initiate nor manage stakeholder processes within such programs, but rather requires project sponsors to do so.

Yet, more direct EPA involvement in the design and management of stakeholder involvement processes would go far in resolving some of the issues raised in this report. EPA should examine the impact of FACA on the capacity of the agency to develop innovative participatory processes. If appropriate, the agency should propose amendments that would promote more effective stakeholder involvement in programs such as Project XL.

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Case Studies

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Andersen Corporation

Project Background

Andersen Corporation, a window and door manufacturing company, is located in Washington County, Minnesota. The manufacturing facility is located in the town of Bayport near Stillwater, with 3,500 and 15,000 residents respectively. About half of the adults in this region either currently work, have worked for, or have relatives that have worked for Andersen in some capacity.

In early 1998, Andersen submitted an XL project proposal to EPA. The Final Project Agreement (FPA) was signed on June 30, 1999. Under the agreement, Andersen will reduce their air emissions of volatile organic compound (VOC) emissions per standard unit of production. This performance-based regulatory approach seeks to provide incentives for Andersen to improve their environmental performance. Specifically, the agreement encourages Andersen to:

- ! manufacture more of its windows from wood fiber and vinyl to reduce its use of virgin materials;
- ! substitute low-solvent waterborne processes for solvent-based coating and wood-preservative processes to reduce air emissions; and
- ! develop greater production efficiencies and emission improvements.

Andersen is also experimenting with the recovery of window components by removing paint, processing any lead in the paint for reuse, and using the recovered wood to produce new windows.

This analysis focuses upon stakeholder satisfaction and the effectiveness of the stakeholder involvement process used during the development of the FPA. Stakeholders interviewed for this report are listed in Appendix A. Interviewees included participants representing the community, Andersen Corporation, EPA, and the Minnesota Pollution Control Agency.

Stakeholder Involvement Process

Andersen Corporation designed the stakeholder involvement plan in the fall of 1997. Andersen sought to establish a process for informing and involving a variety of people and organizations interested in the company's Project XL initiative. The plan included the establishment of a Community Advisory Committee (CAC), open houses, a community newsletter, a system for responding to community inquiries, and public relations activities.

In creating the CAC, Andersen developed a charter, member roles and responsibilities, and operating guidelines for the group. Andersen identified categories of stakeholders for representation on the committee. These categories included public health/academia, local officials, county officials, local schools, chambers of commerce, local businesses, local citizens,

environmental groups, resident employees, and residents who have criticized Andersen in the past. Andersen then developed a list of potential candidates for each category. All candidates either lived or worked in the local area.

Candidates were agreed upon internally, in consultation with the Minnesota Pollution Control Agency and a public affairs consultant with experience in stakeholder groups. In October 1997, Andersen contacted the candidates (approximately 50 people) by phone. Andersen described the project, explained what would be expected of stakeholder representatives, and sent out information packets to candidates who were considering joining the CAC. The local newspapers also received information on the CAC and meeting notices. Candidates representing specific organizations, such as the Bayport City Council, were selected by that group.

While the CAC operating guidelines allowed for 15 members, the group began with 11 members and one commentator. By June 1999, the CAC consisted of 10 members.

The company also involved the Environmental Defense Fund (EDF) as a commentator in its stakeholder process. An EDF representative visited the facility and attended a stakeholder meeting, in addition to reviewing documents.

Meetings

Between December 1997 and June 1999, the CAC met approximately once a month. All of the meetings were open to the general public. No more than ten citizens, in addition to CAC members, attended any given meeting. The first seven meetings were designed to inform the CAC about the workings of XL projects, environmental aspects of the company, and specifics of the Andersen proposal. A facilitator hired by Andersen ran these meetings. The CAC decided to operate initially under the Charter, member roles and responsibilities, and operating guidelines that Andersen developed before creating the CAC.

The facilitator set agendas for the meetings, in cooperation with Andersen. The facilitator chaired meetings for approximately eight months until the CAC elected a chairperson. The chairperson then became responsible for facilitating meetings. Agendas were based on issues raised at previous meetings and current progress reports on the XL project. All previous meeting minutes were compiled by the facilitator and Andersen and sent to CAC members for review and approval at the start of the next meeting.

The majority of interviewees stated that the meetings provided good opportunity for dialogue. The CAC members stated that they were given a chance to speak and that Andersen took their comments seriously. As a way of encouraging dialogue, meetings incorporated an open forum for raising issues not included in the agenda.

At the same time, one CAC member expressed concern with the whole CAC process. The member felt that the CAC meetings did not provide a good opportunity for dialogue. That member stated that the meeting seemed designed to provide the community with information rather than as a forum for dialogue.

Goals of the Stakeholder Process

Several CAC members originally believed that the stakeholder process, specifically the CAC, was created to fulfill an XL requirement. Over time, however, they came to believe that the stakeholder process was designed to share information between the company and community. Some members also felt that because the CAC included members who had previously complained about the company, the CAC provided a vehicle for working out some problems between the community and the company. At the same time, some other members felt that Andersen was not accountable to the CAC, and that the CAC needed more latitude to set the overall goals of the stakeholder process, and to alter them as the project progressed.

Both the EPA and Andersen representatives stated that the CAC was very effective in disseminating information about the project to the community. EPA stated that the goals of the stakeholder process were primarily designed to share information with the community but with the added intention of improving community relations with the company. Several CAC members, Andersen and EPA all believe that the CAC would continue even if the XL project were discontinued.

Issues Raised at Meetings

All interviewees stated that the majority of issues raised at the CAC meetings were appropriate and adequately addressed. However, several issues raised were not related to the XL project (odor from the plant, traffic, noise, etc). While Andersen addressed these issues, several CAC members questioned the adequacy of their response. Some CAC members felt that the above issues were important and Andersen could have better responded to the concerns.

Several CAC members also stated that EPA and Andersen seemed to be more concerned with regulatory issues than with non-regulatory issues raised by the CAC. For example, CAC members stated that EPA was primarily concerned with legal and technical issues while Andersen was primarily concerned with the issues raised by EPA. These members believed that the CAC role was limited to commenting on what EPA and Andersen had already worked out.

The majority of CAC members felt that the right people were involved to effectively represent stakeholder interest. However, one CAC member stated that representatives of Bayport merchants, the school district, and the St. Croix River Valley Boundary Commission were needed if the CAC was to effectively represent a broad array of stakeholder interests. Andersen had sought active school district participation, but the district representative participated as a commentator rather than as an active member of the CAC.

Roles of the CAC in the Development of the Project XL Agreement

The CAC was not involved in development of the initial project proposal. The CAC did review the proposal prior to its submittal to EPA. Opinions differed as to the impact of the CAC

on the development of the FPA. Some members felt their role was significant, particularly in resolving EPA issues with the proposal, while others believed that the CAC members did not significantly affect the proposal..

According to EPA, Andersen originally established the CAC to review and comment on the FPA, but that over time the CAC developed stronger roles for themselves. EPA felt that comments made by CAC members were taken seriously. Both EPA and Andersen stated that Andersen would not continue on any part of the XL agreement without support of the CAC.

Several CAC members stated that their role in the process was largely delineated by Andersen. Most felt that they were afforded an opportunity for input on and helped change some of the wording of the FPA, but that no substantive changes to the FPA were made as a result of comments by the CAC. One CAC member also felt that the meeting agendas did not address all the issues of concern to CAC members, and were too inflexible to allow for input on issues not covered by the agendas. At the same time, one member felt that the CAC did have an impact on some substantive issues, including whether the Andersen West site would be included in the XL package, whether Andersen West would be managed under a separate subcap, and the design of the four-tiered performance limit system that would be used to assure Andersen's performance.

Most CAC members had no clear expectations as to their role prior to their actual participation on the panel. One CAC member thought that the CAC would have been more involved with developing the FPA rather than being limited to review and comment.

Management of Technical Issues

Most CAC members felt that the technical issues were understandable and well explained by Andersen and EPA. As stated above, the technical issues were addressed during the first six months of CAC meetings.

One CAC member stated that CAC members only marginally understood and addressed the technical issues, in part because CAC members lacked the technical background to confront the issues directly. At the same time, the CAC included three representatives with expertise in areas related to the XL project. These included an environmental attorney with the Minnesota Center for Environmental Advocacy, a professor in toxicology from the University of Minnesota School of Environmental and Occupational Health, and a scientist from a local bio-technology firm. While lacking specific expertise in the engineering aspects of the project, the committee members were well versed in many of the technical issues raised by the project.

Another member felt that CAC members were simply not interested in the technical issues. The CAC and their constituents (the community) were more concerned with health impacts. The CAC contemplated hiring a technical advisor with the technical assistance grant provided by EPA. However, the CAC decided that a better use of the technical assistance might be to hire an independent consultant to audit the XL project once Andersen is three to five years into the project to determine if the project was meeting goals and obtaining the environmental performance anticipated.

Both EPA and Andersen stated that it was difficult to explain technical issues to the CAC. Efforts by Andersen to clarify the issues over the first six months of meetings were helpful, particularly for regular attendees, but absorbed considerable time and at times involved “overwhelming” levels of technical information. Furthermore, this effort further focused meetings on technical and regulatory concerns (i.e., the XL requirements, PM₁₀ and air toxic modeling) rather than non-regulatory community concerns (i.e., the overall impact of Andersen on the community).

Differences in Interests and Perspectives between Stakeholders

All interviewees, except one, stated that there were no differences in interests or perspectives between stakeholders. The one exception felt that there were no differences in interests or perspectives between stakeholders because the CAC was comprised primarily of Andersen supporters and not critics. This interviewee felt that there should have been more Andersen critics on the CAC. Andersen believed that the CAC was suitably diverse.

Stakeholder Involvement after the Signing of the FPA

The CAC continued to meet after the FPA was signed. In the first half of 2000, several new members were added to the CAC, including an attorney, and two people with chemistry backgrounds.

Satisfaction with the Stakeholder Process and Suggestions for Improvement

Both EPA and Andersen were very satisfied with the stakeholder process. EPA was very content with Andersen’s efforts to include stakeholders and manage the CAC in the XL project. Andersen had no suggestions for improving the process while EPA suggested including a technical expert on the CAC. Andersen felt that the stakeholder process provided an excellent, regular forum for discussion. They felt that this forum was beneficial to both the company and community. EPA felt that the ability of Andersen to listen and react to community concerns was a great benefit of the process.

All except one of the CAC members expressed a general satisfaction with the stakeholder process. The majority of CAC members felt that Andersen did a fine job of publicizing and garnering support for the XL project. They stated that the process allowed substantial opportunity for input. All information on the project was also open and available to the public. The process provided a way for the community to get to know Andersen on a personal basis and help to resolve misgivings associated with the company. The CAC was seen as a dynamic group that understood the key concerns and could provide input.

Most members stated that they had nothing to which to compare the process. Without a context, they felt satisfied. Some members felt that they went into the process believing that the CAC would hold decision-making power in developing the project. They later felt that, given the

complexity of the project, these attitudes were unrealistic. Several members felt that the end result of the stakeholder process (increased awareness of Andersen's activities, better rapport with the company, and full disclosure of info) was very satisfying. The CAC members observed that initially CAC and Andersen did not share a similar vision for the role the CAC would play in the project. This lack of understanding initially created a reluctance on the part of some individuals to participate as CAC members.

A few CAC members also expressed concerns about the management of technical issues. Two CAC members felt that the CAC was not prepared to address technical issues and therefore were not able to effectively comment on technical issues.

Also, one CAC member objected to the lack of Andersen critics on the CAC, and felt that the CAC was formed simply to fulfill an XL requirement. The interviewee further felt that EPA and Andersen had too much control over the decision-making process, and that while the CAC was given an opportunity for input, the impact of that input was low. Despite this interviewee's concern about the XL initiative, the CAC member was somewhat satisfied with the accomplishments made. The member felt that full access to information afforded to the CAC was very important and helped build some confidence in the process.

CAC members and the state agency representative felt that the project did not progress efficiently, and that this hampered the stakeholder process. They felt that EPA slowed down the process immensely. Most CAC members did not understand the reasons for these delays. The state agency representative identified problems associated with EPA review process that led to commenting from multiple EPA staff, as well as the distance between EPA's regional and headquarter offices that led to confusion about who was responsible for decisions at EPA. CAC members felt that EPA should have kept the CAC abreast of what was holding up the process.

Few CAC members made suggestions for improvement. Three members expressed substantive concerns. Two noted that Andersen should have targeted a wider variety of citizens for participation on the stakeholder panel. This CAC member felt that the ads were designed to attract a specific target group (business and government representatives) and not diverse members. Another member (who was well-versed in regulatory issues) felt that the level of technical detail was overwhelming, and that this resulted not only because of the technical detail in the application, but also because of the manner in which EPA interacted with the CAC. EPA's use of jargon (statements such as "EPA has a problem with 40 CFR Part 52.21(r)(4)" during a presentation to the CAC) obfuscates the environmental concerns that they are meant to address. EPA staff must interact with the group in a more meaningful manner and to communicate more clearly if EPA seeks to achieve more meaningful stakeholder involvement.

Both the company and EPA were concerned with the long-term stamina of the CAC. The level of technical expertise on the CAC was also of concern to EPA. While several members had technical backgrounds (a lawyer, a toxicologist and two non-management Andersen employees), EPA suggested that the CAC could have been helped by a technical expert with skills in the process and production issues under negotiation.

Atlantic Steel

Project Background

In 1998, Jacoby Development, Inc. proposed redevelopment of an 138-acre brownfield owned by Atlantic Steel. Although many years of steel manufacturing left the site contaminated, the site is highly desirable for urban redevelopment because of its proximity to Atlanta's central and midtown business districts. The developer's proposal includes a high-density mix of residential and business uses.

While well-situated, the project site suffers from poor accessibility. The site adjoins Interstate 75/85 and the Midtown district of Atlanta, but is directly accessible from neither. Furthermore, I-75/85 blocks the site from the existing MARTA (Metropolitan Atlanta Rapid Transit Authority) rapid rail transit system. The project plan therefore includes a multi-modal bridge that would cross I-75/85 at 17th Street (17th Street bridge). The bridge is designed to connect the site to Midtown and a nearby MARTA mass transit station, as well as to provide access to the interstate. Jacoby will undertake redevelopment of the site only if the bridge is constructed. In addition, the City of Atlanta conditioned its rezoning on construction of the 17th Street bridge.

The bridge is a major transportation project, requiring federal funds to complete. Atlanta, however, is currently not in conformance with the requirements of the Clean Air Act, and cannot use federal funds for new construction until it develops a plan to bring the region into conformance. The proposed redevelopment of the brownfield site, however, is seen as environmentally beneficial both because it would result in the clean-up of the existing contamination, and because its plan and location promise reductions in air pollution relative to alternative projects that it is likely to displace.

Project XL provides a vehicle for enabling federal transportation funds to be used in the project. Jacoby has worked with representatives of EPA, the State of Georgia, local authorities, and public stakeholders to develop a site-specific Project XL Agreement that will allow construction of the bridge.

Due to the complexity of the project and the numerous processes and analyses necessary to implement it, EPA and Jacoby adopted a two-phased approach to the Project XL Agreement. The Phase 1 Agreement between EPA and Jacoby set out the intentions of Jacoby and EPA related to development and implementation of this project. Signed on April 13, 1999, the Phase 1 Agreement detailed the project and the intentions of each party, and described areas where further details or additional discussions between EPA, Jacoby and stakeholders were needed.

The Phase 2 Project Agreement, which also served as the Final Project Agreement (FPA) between EPA and Jacoby, addressed these concerns. The agreement was signed on September 7th, 1999.

Although the Atlantic Steel XL project is currently in implementation, this analysis focused upon the initiation and early dynamics of the stakeholder process used in project development.

Stakeholders interviewed for this report are listed in Appendix A. Interviewees included participants representing the community, environmental groups, CRB Realty (Jacoby), EPA, the City of Atlanta, and the public meeting facilitator.

Stakeholder Involvement Process

Assessment of the stakeholder involvement for the Atlantic Steel XL project posed some unique difficulties. As described above, the project is a high-density urban redevelopment of a 138-acre brownfields site in central Atlanta. Redevelopment of the site requires a wide range of approvals from various local, state and federal agencies, and will require years to complete. The Project XL process was therefore but one piece of a much larger public decision making process, each of which contains its own requirements for citizen involvement. Stakeholders in this project made few distinctions between the various decision-making processes. Instead, they sought to shape and influence the project as a whole within each decision-making process to which they had access.

In particular, the XL project proposed exempted the bridge from Clean Air Act restrictions because EPA's analysis suggested that the project would improve air quality in the region. While the project would clearly generate traffic (and therefore increase air pollution), EPA sought to determine whether the project would induce a smaller increase in air pollution in this location than if the same amount of development was spread around the metropolitan region. EPA's models looked for improvement based on two conditions. First, the location of the site in central Atlanta and its accessibility to public transit would generate fewer and shorter car trips when compared to similar development located on the periphery of the region. Second, the design of the project, with its mix of residential and commercial uses and its emphasis on a pedestrian-friendly environment, would encourage intra-project pedestrian trips, thereby further reducing the number of auto trips. Thus, the environmental benefit is based not only on the proposed design and construction of the bridge, but also on the proposed design of the redevelopment project. Thus the XL project opened up questions of urban design not normally addressed by EPA.

Most local stakeholders were primarily interested in design aspects of the project. For these stakeholders, the XL stakeholder process provided an important opportunity to influence the street and building configuration, the project's transition to neighboring districts, and other aspects of design associated with pedestrianization and urbanism. Other stakeholders were also concerned with the design and configuration of the bridge, its accommodation of alternatives to auto transport and its congruence with the urban design plans of Midtown. Design was thus a politically volatile local issues, inextricably linked with the XL process. Yet the XL stakeholder process tended to focus on the overall impact of the project on air pollution, and did little to address specifics of design. As such, issues of primary concern to many local stakeholders were excluded from the process.

At the same time, it is also important to note that the project was widely supported locally. Even residents of adjoining neighborhoods, who are likely to be most directly impacted by the project, offered conditional support for the project. The focus of concern was primarily on the scale, interconnectivity and design of the project, rather than on the appropriateness of the project itself.

Stakeholder involvement was an important part of the concept and rezoning considerations since the project began in early 1997. Multiple public meetings, discussion groups, individual contacts, and a full public notice and review process were held during the rezoning of this property. The City of Atlanta Planning Department, Georgia Department of Transportation, Atlanta Regional Commission, nine neighborhood organizations, and several other groups such as the Midtown Alliance and Georgia Tech all participated in this process. These groups collaborated on the concept, design, and conditions put in place in the rezoning document, which replaced the existing industrially zoned land use classification with a mixed-use classification that allowed for residential, retail, office, and hospitality uses. After the public input and review, the rezoning was approved by all of the involved neighborhoods, the City of Atlanta Zoning Review Board 9-0, recommended to the City Council by the Zoning Committee 5-0, and passed by the Atlanta City Council 15-0.

The Stakeholder Involvement Plan was intended to supplement previous activities and described the basic methods by which additional input would be solicited and received particularly as it related to Project XL.

Goals of the Stakeholder Process

The goals of the early stakeholder input and the Stakeholder Involvement Plan were to ensure that interested stakeholders were afforded the opportunity to participate in the development of this project and to provide the stakeholders with the information they needed to participate in decisions on the future of the Atlantic Steel Redevelopment.

The following were objectives of the plan as stated by Jacoby:

- ! identify stakeholders and their role in this project,
- ! describe methods of communication between the project sponsor and the stakeholders,
- ! ensure all stakeholders have an opportunity to participate in the project,
- ! promote stakeholder involvement in the development of the FPA, and
- ! assure all previously involved stakeholders that discussions, agreements, and contracts, particularly relating to zoning conditions, remain fully intact.

Roles of Stakeholders Involved in the Process

Stakeholders included individuals, government agencies, neighborhood organizations, academic centers, and companies with an interest in the progress of the Atlantic Steel Redevelopment Project. Invitations to participate were sent to individuals involved in other environmental projects with the Atlantic Steel Redevelopment, others with related interests, and to the general public.

Stakeholders in the XL program typically fell into three categories:

- ! direct participants (EPA, Jacoby Development, Law Engineering, Moreland Altobelli, Idf Associates),
- ! commentors (Georgia Environmental Protection Division, Federal Highway Administration, Metropolitan Atlanta Regional Transit Authority, City of Atlanta, Georgia Department of Transportation, Midtown Alliance, Home Park Neighborhood Association, Ansley Park Neighborhood Association, The Georgia Conservancy, Atlanta Regional Commission, Sierra Club, Southface Energy Institute, Environmental Defense Fund, Georgians for Transportation Alternatives, etc.), and
- ! the general public.

The Atlantic Steel Redevelopment team and EPA worked intensively with “direct participants” to design and develop the project. As can be seen from the bulleted list above, all direct participants were consultants to the project.

The original stakeholder involvement plan called for creation of an advisory committee. Advisory committee members were to consist of direct participants and representatives from local government offices, educational institutions, special interest groups, and interested members of the public. The Plan, however, only vaguely referred to this committee, and a formal Project XL advisory committee was never established. The project proceeded on a very rapid schedule, and stakeholder involvement was conducted through informal negotiations between Jacoby and groups with specific concerns, through formal, written comments, and through meetings open to the general public.

Informal meetings. A number of community organizations were afforded opportunities for more direct participation around a limited set of issues. Specific issues raised by these groups were handled through direct meetings between Jacoby and these groups. Most significantly, a series of concerns about the location and design of the bridge’s egress into Midtown were handled through a committee organized by the City of Atlanta’s Commissioner for Planning, Development and Neighborhood Conservation. This informal group consisted of representatives from Jacoby, the City, the Midtown Alliance, community residents from the Ansley Park neighborhood, and Midtown property owners. This process of negotiations ran parallel to the formal public participation process conducted for the general public.

Formal comments. Most national and regional stakeholder groups participated primarily through written communications. These groups focused their attention on aspects of the project

that were of specific concern to their organizations. Local groups were also afforded opportunities to submit written and verbal comments.

Public meetings. Members of the general public were afforded opportunities for participation through four formal public meetings called by Jacoby (two at the start of the Project XL process and one each before the public comment period for the Phase 1 and Final Project Agreements), an urban design workshop conducted by EPA, and another workshop sponsored by the Georgia Conservancy to help residents of the most affected neighborhood (Home Park) clarify their own goals and desired outcomes in regards to this project.

Community and environmental stakeholders had no direct role in the development of the FPA.

Aside from public agencies, most other interviewees felt that their roles were never clearly defined. The community groups and non-profits stated that EPA or Jacoby should have better explained the roles of the stakeholders at the beginning of the project. The state and city agencies, on the other hand, were more confident in applying their traditional regulatory roles to the XL process.

Many interviewees stated that EPA's role in the process was never well defined. They would have liked to have been better informed on the allocation of responsibility between EPA and Jacoby. For example, some stakeholders stated that while there were not enough public meetings, they did not know whether to blame EPA or Jacoby.

Outreach to Stakeholders

The stakeholder involvement plan developed by Jacoby called for contacting potential stakeholders prior to and during development of the FPA and to set up an advisory committee of direct participants. Jacoby never established such a committee. Jacoby did establish a project mailing list to inform interested stakeholders of opportunities to comment or participate during project development and implementation.

The plan proposed using the following methods to contact and inform additional potential stakeholders.

Local Newspapers: The stakeholder plan called for display and legal ads in the major local newspapers to inform the general public of public meetings and comment periods. Ads appear to have been completely ineffective at reaching public participants. More effective were newspaper articles in local newspapers, written by reporters. As of June, 1999, approximately 12 articles were published. These articles focused primarily on transportation and economic development issues. One article briefly discussed the EPA urban design workshop. None of the articles referenced or informed citizens of the public meetings.

Cable Television: The stakeholder plan called for notices of public meetings and comment periods to be sent to the community access cable station, and to tape and broadcast the public meetings on the community access station. However, this part of the plan was not implemented.

Newsletters / Fact Sheets: The plan also called for publishing fact sheets and mailing these newsletters to everyone on the project mailing list. The plan suggested that newsletters would provide status reports, timelines, mileposts, contacts, and future meeting times and locations. This plan was partly implemented. A project mailing list of 60 people was developed. At EPA's request, a few project updates were sent out to people on the mailing list. The mailing list included state agencies, developers, non-profits and environmental groups. Very few community members were on the list.

These project updates asked recipients to address comments on the mailed materials to EPA. The EPA stated that they received very few comments. Comments that were received came primarily from national and local environmental groups. These comments focused on transportation concerns, bridge design, stormwater runoff, impacts on city water and sewer system, and contaminated site runoff. An EPA representative spoke individually with those who expressed concerns about the project. The project sponsor also met with concerned parties.

Internet: The plan called for establishing a public web site to provide access to announcements, project background and documents, meeting minutes, project developments and implementation status, and provide an Internet address for comment submittal. EPA's Internet site provided access to documents. Jacoby developed a general information site as well. The Internet was not used to broadcast announcements nor to obtain comments. Few stakeholders, including those who directly participated in most of the community meetings, were aware of the existence of the Internet sites.

Information Repository: An information repository for the project was established at the local branch of the Fulton County Public Library System. Most interviewees were not aware of this repository, and no interviewee used this or heard of anyone who used it.

Public Meetings: The plan called for facilitated public meetings during development and implementation of the FPA based on public interest or as decided by the direct participants. Jacoby looked to EPA to indicate when meetings were necessary and what items should be included on the agenda. Jacoby did not call Project XL meetings except as requested by EPA. As mentioned above, Jacoby sponsored four formal public meetings. In addition, Jacoby met with individual or small groups of stakeholders to work out specific problems (such as the location of the bridge). Community workshops were also sponsored by EPA and the Georgia Conservancy. These meetings are described in more detail below.

Meetings

General Public Meetings

Through June of 1999, Jacoby sponsored four formal public meetings. These meetings were primarily designed to share information with the public. Between 40 and 80 people attended each meeting. Jacoby set the agendas based almost entirely on advice from EPA, and ran the meetings. Each meeting provided an opportunity for public questions and answers. The first two public meetings were held in September and November. These meetings introduced the public to the project and to the XL process. A planning consultant hired by Jacoby facilitated these first

two meetings. Additional meetings were held in February and June, to present Draft Phase 1 and Draft Final Project Agreements for public comment. A facilitator was not present at these two meetings.

Jacoby placed meeting announcements in the legal section of the local newspaper a week or two before they were held, and mailed notices to persons who had indicated an interest in the project. However, local community stakeholders often did not receive these mailings, and therefore called other community members to keep informed.

Participants at these meetings included residents of adjacent neighborhoods, the Federal Highway Administration (FHWA), Georgia Department of Transportation (GA DOT), Jacoby Development, Atlantic Steel, EPA Region IV and Headquarters, the Georgia Conservancy, the developer's consulting firms, the surrounding neighborhoods, other special interest stakeholders and the general public.

Typically, each of the general meetings included a number of presentations, primarily by the developer and EPA, with time for questions and comments. For example, at the first meeting, presentations were made by the project sponsor (opening remarks and a detailed presentation of the Atlantic Steel project), EPA Region IV's Air Quality Division (a brief overview of EPA's Project XL), the Georgia Conservancy (an overview of air quality problems in the Atlanta Region and the Conservancy's Smart Growth Initiative), the EPA Region IV Atlantic Steel XL Project Coordinator (a summary of EPA's Project XL program and criteria), and EPA Headquarters (explanation of the air quality performance methodology that will be used). The meeting concluded with a question and answer session. After close of the meeting, Atlantic Steel and EPA project information remained on display, with additional questions answered one-on-one.

The public meetings held in February and June 1999 took place upon completion of the draft Phase 1 Agreement and the draft Final Project Agreement. The meetings were designed to inform the public of what was involved in the draft agreements, to solicit comments on the agreements and to inform attendees of their right to comment during the public notice period. Once again, the meetings were primarily organized around formal presentations. A court stenographer was employed to record the proceedings.

Home Park Charrette

In November 1998, the Georgia Conservancy sponsored a community development workshop in Home Park, the residential neighborhood adjacent to the Atlantic Steel project. Urban design faculty and students of Georgia Tech and the Inter-professional Community Design Collaborative facilitated the workshop. This charrette was not directly related to the XL project. However, a large part of the workshop focused on how to integrate the XL project redevelopment with neighborhood plans. Prior to the workshop, most Home Park residents did not want to incorporate the development into their plans for the neighborhood. They preferred to isolate the neighborhood from the project. However, as a result of the workshop, the Home Park Civic Improvement Association (HPCIA) concluded that Atlantic Steel needed to be a part of the neighborhood. Several community goals regarding the Atlantic Steel project came out of the workshop. They included:

- ! Protect and develop neighborhood edges, particularly along the Atlantic Steel boundary with residential uses that carefully provide transition from existing lower to proposed higher densities.
- ! Protect and infill residential blocks along the Atlantic Steel boundary and extend the urban block scale and street connections into the residential portions of the Atlantic Steel development.
- ! Combine convenience retail elements of the Atlantic Steel proposal with unmet retail demand in the existing neighborhood to create a single center that would help bridge the gap between existing and future residents.
- ! Locate proposed Atlantic Steel open spaces adjacent to existing neighborhood residents to facilitate physical connections between the existing and proposed residential community.
- ! Locate the proposed west side “light rail” transit line and stops to maximize pedestrian accessibility to residents of both the existing and proposed neighborhoods and to serve the proposed neighborhood center and major open spaces.

These goals were submitted to EPA for their consideration in recommending revisions to the proposed Atlantic Steel Plan. At the time of the writing of this report, the impact of these recommendations remained unclear.

EPA Urban Design Workshop

In December 1998, EPA brought in Andre Duany, a renowned ‘New Urbanist,’ to facilitate a workshop on the Atlantic Steel project. The workshop was held over a two-day period. The workshop was designed to gather views from various stakeholders in the project and subsequently develop recommendations for development of the site. The workshop incorporated perspectives provided by the client, consulting professionals, municipal authorities, business owners, and the public. Duany made a series of recommendations in the last meeting of the charrette, and provided a report to EPA.

As of June 1999, this report was not publicly available, but the recommendations as presented in the meeting focused on creating a more integrated, finer scale and less auto-dependent community. Design suggestions included the redesign of the project to better integrate the existing Home Park and the proposed residential communities with the commercial aspects of the project, reduce block size, and improve pedestrian, transit and bicycle access. As of June 1999, the developer has not directly responded to these design suggestions, in part because many of the suggestions require consideration of more details than are afforded by the developer’s conceptual designs.

Goals of the Stakeholder Process

All interviewees stated that the primary purpose of the stakeholder involvement process was to exchange information amongst the stakeholders. Jacoby also felt that the process evolved into a forum to address stakeholder concerns. No other interviewee shared this view. Most interviewees felt that the objectives of the stakeholder process (information sharing) were appropriate given the size and scope of the project.

All interviewees stated that substantial issues were raised throughout the process. Most interviewees felt that every possible issue was raised. However, the majority of interviewees stated that these issues were not adequately addressed due to the size of the project. EPA and the developer stated that the issues often raised at public meetings were not specific to the XL project and therefore were not addressed. The community groups, non-profits, and state and city representatives stated that determining which issues pertained to the project and which did not was very difficult. These groups felt that EPA and Jacoby should have done a better job clarifying pertinent issues.

All interviewees stated that the right people were involved in the process to effectively represent stakeholder interests. All interviewees stated that the number and diversity of stakeholders as well as the inter-agency communication were outstanding. No groups had ever seen such effective inter-agency coordination prior to this project.

Overall, the community groups and citizens living closest to the development site felt that they should have had more input into the process. Community residents interviewed felt that the stakeholder process did not meet their expectations. Community residents interviewed who attended the public meetings stated that the meetings provided no forum for input. They felt that the meetings were informational at best, and that EPA had decided prior to any public meetings that the project would be approved regardless of any concerns raised by citizens. Most community concerns focused on the impact of the project on the community and the integration of the project into the community (rather than on the design and impact of the bridge).

Environmental and other non-residential interviewees generally felt that the formal public meetings, which tended to focus on providing project updates, offered limited opportunity for effective feedback. In general, the larger groups (Environmental Defense Fund, the Georgia Conservancy, the Sierra Club, Midtown Alliance) did not attend the public meetings. Instead, they provided their feedback through more informal meetings or through written communications. In this context, these groups felt that the developer met with their groups and provided other avenues for feedback. From their perspective, the developer sought to incorporate their feedback into the design of the project, and that the conceptual designs for the project evolved as a result of community input. However, since the design remains at a conceptual level of detail, the impact of these design changes on the project will depend heavily on future design choices.

EPA staff felt that the stakeholder process effectively shared information with all concerned parties. EPA and state agencies were also very satisfied with the amount and level of communication and dedication between state and federal agencies. The City of Atlanta noted that while the process was designed solely to share information, the project was too large and complicated to create a more interactive forum for problem solving with stakeholders.

At the same time, the community groups and non-profits stated that their level of involvement was not adequate to make any impact on the project. They reiterated that it appeared that the project would go forward regardless of any of their concerns. They felt that the level of coordination between all regulatory agencies involved was evidence that the outcome of the project was pre-determined.

Differences in Interests and Perspectives Between Stakeholders

All interviewees stated that there were great differences in interests between stakeholders. However, both EPA and the developer felt that the majority of interests and issues were not directly pertinent to the XL project. EPA directly addressed problems or questions that were directly relevant to the project by responding directly to each commentor. All interviewees who had expressed concerns about the specifics of the XL project (the bridge) felt that EPA adequately addressed those concerns.

Management of Technical Issues

Interviewees stated that technical information presented at public meetings was understandable. Most technical concerns were addressed outside of meetings, through individual discussions and written communication. Individuals with concerns about the technical aspects of the project tended to be trained professionals, with a background in transportation and environment. Community groups who lacked technical skills tended to focus on more general concerns about design and implementation.

Most technical issues focused on air quality, site cleanup, bridge location, and the transportation control measures. Environmental groups generally presented their technical concerns directly to EPA. These groups generally felt that EPA and the developer incorporated specific suggestions for improvements into the FPA where possible, or sought to negotiate out concerns over particular issues where this was not possible. These negotiations and discussions tended to occur either with the particular party raising the concern (e.g., transportation control measures) or with small groups of stakeholders sharing a concern (e.g., bridge location).

Satisfaction with the Stakeholder Process and Suggestions for Improvement

All interviewees stated that they were satisfied with the overall outcome of the XL project and generally supported the purpose of the project.

Jacoby and EPA interviewees were satisfied with the community stakeholder process. They stated that the stakeholder process successfully involved many different interest groups and agencies and enhanced their ability to work together towards a common goal and in an expeditious manner. Neither had previously seen a project where so many different agencies have worked together in such a productive fashion. The developer stated that EPA involvement was crucial in focusing all the stakeholders on the goals of the project and helped get quick decisions

from other agencies. At the same time, EPA stated that the process would have been improved through additional public meetings and more direct public involvement. EPA felt that more public meetings earlier in the project would have been particularly helpful.

National and regional environmental groups were also generally satisfied with the stakeholder process. These groups focused their involvement through review, comment and direct discussions with EPA or Jacoby. This level of involvement was relatively efficient, and they did not seek more direct participation.

Other interviewees were not satisfied with the stakeholder involvement process. They felt that the stakeholder process was unclear from the beginning, did not provide a sufficient forum for input, and was managed as a formality. The stakeholders were especially concerned about the organization of the stakeholder participation process. The non-profit groups, state agencies and City of Atlanta, and community residents felt that the stakeholder participation process had few advantages. While they felt that the Atlantic Steel XL project should be developed, the stakeholder participation process had added little and was not effective. The state and city agencies felt that the process had not adequately identified or reached out to community stakeholders. Interviewees recognized that the complexity and scope of the project inhibited efforts for substantial stakeholder participation, but felt that Jacoby did not sufficiently recognize the need for meaningful participation, nor did the company act effectively to improve the process in response to community concerns.

At the same time, many of these stakeholders felt that the developer was generally approachable and concerned about public opinion.

Almost all interviewees stated that there were too many people, agencies, and issues involved in this project. Several people stated that it was difficult to stay focused on XL related issues. Many interviewees also stated that it was almost impossible to determine which issues were XL related and which were not. Many interviewees felt that EPA should have clarified these ambiguities.

The non-profits and community residents felt that the short notice of public meetings and lack of timely information from Jacoby and EPA were major weaknesses of the project. They stated that it was often difficult to tell what phase the project was in at any given time. They felt that either EPA or Jacoby should have better informed them of the project status. They also felt that more continuity between meetings was needed if the issues were to be addressed seriously.

Suggestions for improving the process varied. Many interviewees focused on the need for considerably more public notice for the meetings. The community groups felt that they had the largest stake in the project due to their proximity to the development yet were not sufficiently included. Aside from Jacoby, all interviewees stated that the process should have been better organized from the beginning. These interviewees stated that there should have been more initial clarity and explanations concerning the developer and EPA roles in the project.

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CK Witco

Project Background

CK Witco (renamed Crompton Corporation following completion of this evaluation and formerly called Witco and OSi Specialties Inc. during the events chronicled in this evaluation) is a specialty chemical manufacturer. The XL project focuses on CK Witco's 1,300-acre West Virginia chemical manufacturing plant. The plant produces a broad range of silicone and silane products.

CK Witco's plant is located six miles south of Sistersville. Five other towns are located in the vicinity of the plant, including Ben's Run, Friendly, Middlebourne, Paden City, and St Marys. The population of these communities totals approximately 8,000 people. Both Tyler County (location of the plant) and Pleasants County (the down-river county) are predominantly rural, with populations totaling 10,000 and 7,500 respectively.

Since the arrival of Union Carbide in the 1950's, these communities have relied on the manufacturing industry, including CK Witco, for employment. Over 50% of Tyler and Pleasants county citizens are employed in the manufacturing sector. CK Witco's Sistersville plant employs six hundred persons from these two and other nearby West Virginia and Ohio counties.

Through its XL project, CK Witco's chemical plant is testing alternative methods of pollution prevention, waste minimization and air emission reductions. CK Witco will reuse, recycle or thermally treat some 500,000 pounds of methanol per year rather than treat in a wastewater treatment unit and installed an incinerator that will destroy 98 percent of the air emissions from a process unit. CK Witco also conducted a study to identify additional waste reduction opportunities and is implementing many of the study's recommendations. In exchange, EPA and West Virginia are deferring hazardous waste air emission standards for CK Witco's two hazardous waste surface impoundments.

This analysis focused upon the stakeholder involvement process leading up to the signing of the Final Project Agreement (FPA) and during its implementation. At the time of these interviews, the facility was managed by CK Witco's corporate predecessor: OSi Specialties, Inc. (OSi). Consequently, this report hereafter refers to the corporation as OSi.

The initial project proposal was submitted to EPA in September 1995. OSi first met with and solicited support from community leaders and newspapers in November 1995. OSi's proposal was selected for FPA development by EPA in May 1996. Two months later, OSi held a kickoff meeting with community and union leaders. The draft FPA was published for public comment in June 1997. The FPA was published in the Federal Register in June of 1997 and signed in October. The project received a final federal site-specific rule in September 1998, and is now in implementation.

Stakeholders interviewed for this report are listed in Appendix A. Interviewees included participants representing the community, OSi, the OSi union, EPA, and the West Virginia Division of Environmental Protection (WVDEP).

Stakeholder Involvement Process Before Signing the FPA

OSi did not involve stakeholders in developing the initial project proposal submitted in September, 1995. Community members became involved in the OSi project beginning in November, 1995. An organizational dinner was held by OSi to inform community leaders of the XL project. OSi invited approximately 25 community leaders to the dinner through a series of mailings. However, attendance at the dinner was minimal.

In July 1996, OSi sent personal mailings to approximately 30 community members inviting them to attend a kick-off meeting at the OSi plant. The mailings were sent to local residents who had previously expressed interest to OSi about company activities. A newspaper article and a public notice were published in the local newspaper describing the XL project and inviting interested community members to attend the kick-off meeting. OSi also held an interview on public radio describing the XL project. All interviewees commended OSi's efforts at promoting community participation and informing the community of the project.

The kick-off meeting was held in July 1996. Very few community members (approximately 15) attended the meeting. Two citizens agreed to represent their communities (Tyler and Pleasants Counties) in OSi's XL project. Their roles were defined as informational, with each serving as liaisons between the community and OSi. Each was also asked to participate in the OSi's Project XL meetings and conference calls. They became actively involved with the project beginning in October of 1996, and continued to be actively involved in the project through publication of the FPA and beyond.

A representative of the Natural Resource Defense Council also participated on a number of conference calls.

The company tried to spark community interest in the XL project through their yearly door-to-door alarm and evacuation procedure update. In 1996, OSi representatives visited all homes in the communities directly surrounding the Sistersville plant to explain emergency evacuation procedures. Approximately 100 households were contacted. To spark interest in the XL project, OSi included a brief description of the project as a part of the materials distributed.

Goals of the Stakeholder Process

The stakeholder process was designed to provide a forum for community input and suggestions. Interviewees all agreed that the stakeholder process focused on the sharing of information between the company and the community. They noted the abundance of information made available for the public (repository at local library, public meetings, mailings, and radio and newspaper announcements).

The stakeholder process was not designed to resolve problems between the company and the community. During the development of the FPA, only one citizen expressed concern about the project. After meeting with EPA and OSi and reviewing the project, the citizen was satisfied with the OSi response.

Overall, the interviewees felt that the stakeholder involvement process was effective. The community representatives stated that the rapport between the community and OSi has always been good, but that EPA had more difficulty working within the industrial culture of the community. The community representatives believe that EPA should try and understand the local culture before attempting to require citizen participation. In an “industrial culture,” such as the one surrounding OSi’s chemical facility, the community and the company are intertwined. A majority of the community is employed by the company and therefore trusts the company to make important decisions.

Role of the Stakeholders in the Development of the Project XL Agreement

The community representatives felt that their primary role was to provide information and reaction for OSi consideration. This role was agreeable to all parties involved, including OSi, EPA, WVDEP, and the citizens themselves. Two union employees of the plant were also involved in drafting the FPA. Because these employees also lived in the surrounding communities, they felt that they represented the community in the development of the FPA.

OSi invited both the Natural Resource Defense Council and the Ohio Valley Environmental Coalition (OVEC) to participate in developing the FPA. OVEC lacked the staff to participate, and therefore declined the offer. NRDC national staff actively participated in early FPA development, most especially in designing the waste minimization and pollution prevention study. Several key elements suggested by NRDC were incorporated into the study.

EPA representatives believed that stakeholders should be involved earlier in the process. However, company representatives and the two community representatives from Tyler and Pleasants counties felt that stakeholders did not have the specialized knowledge necessary to become involved in proposal development.

EPA and OSi Roles in the Stakeholder Process

The company designed the stakeholder involvement plan and was responsible for the mailings, the news and radio ads, the library repository, the door-to-door alarm update, and all public meetings.

EPA provided overall guidance to the project. EPA attended all meetings and provided support. EPA had no direct role in the stakeholder process other than verifying that OSi met the stakeholder requirements for an XL project. One community representative felt that EPA and OSi worked in unison to create opportunities for community involvement. All interviewees felt that both the company and EPA were effective in their roles despite the lack of public participation.

Management of Technical Issues

Interviewees stated that the technical issues were clear and understandable to all involved. The technical issues focused on air emissions and health concerns. The community did not raise any specific technical concerns. Several interviewees believed that potential concerns were addressed through an informational interview held by OSi on public radio. The community representatives believed residents knew they could contact OSi and obtain answers to technical questions if they so desired.

OSi scheduled and advertised in newspaper and radio, a public information and training session. The session was designed to assist the public in understanding the regulatory and technical issues. However, no one attended. The community representatives believed that residents trusted OSi, and that the lack of concern with these issues was a result of that trust.

Differences in Interests or Perspectives between Stakeholders

All interviewees agreed that no substantial differences existed amongst the interests and perspectives of the stakeholders. EPA stated that the project was very clear-cut. All interviewees stated that OSi was very receptive to any stakeholder questions that were raised.

Stakeholder Meetings

Several meetings were held throughout the project. The December 1995 informational dinner and the July 9th, 1996, kick-off meeting were designed to establish public support and participation in the project. The dinner was open to invited public officials and community leaders, while the kick-off meeting was open to the public. In addition, between July 1996 and publication of the FPA for public comment in June 1997, direct participants in the development of the FPA (the company and government agencies) held seven workgroup meetings (in Sistersville and Charleston, West Virginia, and Philadelphia and Pittsburgh, Pennsylvania) and thirty workgroup conference calls.

All meetings and conference calls were open to the community representatives. These individuals participated in the public kick-off meeting and one XL workgroup meeting. The two community representatives decided not to directly participate in most of the meetings and conference calls. They were however sent the minutes to all meetings and conference calls and could make comments and suggestions if they so desired. Their comments were then distributed to all other workgroup members and evaluated.

Stakeholder Involvement After the Signing of the FPA

Since the signing of the FPA, the two community representatives continue to be involved in the project. They receive mailings sent by OSi describing implementation and performance test modifications. One of the reps has been involved in a follow-up meeting. The other

representative, however, has not been involved since the signing of the FPA and is quite relieved by this. The interviewee stated that the community was more concerned with the outcomes of the project (such as environmental impacts and job stability) than with the design (initial proposal creation and the development of the FPA) or technical implementation of the project.

Satisfaction with the Stakeholder Process and Suggestions for Improvement

All interviewees were satisfied with the process, but felt that the process was too long (two years between submittal of the first proposal and the signing of the FPA). The community representatives felt that EPA was too stringent in their requirements, and that improvements in EPA's efficiency would save time and money for everyone involved.

The community representatives were very satisfied with the stakeholder process, but were disappointed with the lack of community involvement. They noted that the OSi XL project was not a priority for the community. They were not sure if the lack of involvement was a form of apathy or if community residents simply trusted OSi and were satisfied with what they were told.

The community representatives were particularly appreciative of OSi's willingness to maintain an open forum, the attempts made by OSi to involve the community, the simplicity of technical information, and the company's ability to explain things in terms of outcomes and plain language. One of the community representatives wished for more companies like OSi and projects of this type. Although the two representatives did not give specific suggestions for improving community participation, their concerns focused on increasing community involvement. They both believed that OSi did everything possible to involve the community. They would however like to see EPA become involved with local leaders prior to initiating a project. They believed that local leaders understand the public concerns better than EPA. One representative stated that the key to participation comes from understanding the local culture.

The company representatives, while satisfied with the project, were dismayed by the lack of community involvement. They felt that the company did as much as it could to involve the community. After the project was being implemented, a suggestion arose to place public notices in local churches. Company representatives felt in retrospect that this might have been helpful.

The company representatives also felt that this project was a good way for both EPA and OSi to learn how to work with each other. One union representative felt that EPA benefitted greatly by seeing how a company can gain the trust of a community through effective communication.

The EPA and WVDEP were impressed with OSi's initiative and respect in the community. They stated that OSi's relationship with the community serves as a model for other companies. They felt that OSi did everything it could to involve the community. However, they felt that the representation of two communities out of six possible communities provided for insufficient community participation. They suggested that Project XL should require a minimum level of community participation (such as one person per community).

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ExxonMobil

Project Background

The Sharon Steel Corporation - Fairmont Coke Works Superfund Site is located in Fairmont, West Virginia. Fairmont sits along the I-79 industrial corridor. Fairmont is a town of 15,000 located in a county of 58,000. Approximately 1,000 residents live within a one-mile radius of the Superfund site.

Domestic Coke Corporation (Domestic Coke) purchased the original 44.6 acres of the current site in 1918. Domestic Coke was a wholly owned subsidiary of Standard Oil of New Jersey, the corporate predecessor to ExxonMobil Corporation. Domestic Coke conveyed the land to the U.S. Department of War, who built the Fairmont Coke Works in 1918. The land with improvements was reconveyed to Domestic Coke in 1920. Domestic Coke made additional land purchases to bring the total acreage of the coke plant to approximately 103 acres. All process units were located within an approximately 50-acre parcel at the center of the site. The rest of the site consists of a wooded hillside that descends to the Monongahela River. The site is one of the few large areas of flat, developable industrial land along I-79 in West Virginia.

In 1948, Sharon Steel Corporation purchased the business and operated the coke plant. The coke plant was closed in 1979 following Sharon Steel's reported failure to comply with Clean Air Act and Clean Water Act regulations. In 1991, Sharon Steel was liquidated under jurisdiction of bankruptcy court, with the land transferred to FAC, Inc., a subsidiary of Sharon Steel. In June 1998, Green Bluff Development, Inc. (a subsidiary of Exxon) bought the site.

On November 30, 1999 Exxon merged with Mobil to become ExxonMobil Corporation. Since this report focuses on activities conducted before this date, the report refers to the corporate entity as the Exxon Corporation.

EPA began evaluating the site for inclusion on the National Priority List (NPL) in 1987. The site was listed on the NPL on December 23, 1996. Because of Sharon Steel's bankruptcy and Exxon's prior ownership, Exxon signed a Comprehensive Administrative Order on Consent (AOC) with EPA in September, 1997. The AOC sets out procedures to conduct a Remedial Investigation and Feasibility Study (RI/FS) and Risk Assessment for the site. In 1998, Exxon was the only potentially responsible party with an AOC for this site.

Exxon submitted its XL proposal on September 1998. The proposal described an alternative strategy for investigation, risk assessment, remedy selection and remediation of the site. Using an administratively streamlined process, Exxon hoped to clean up the contaminated site in half the time of traditional cleanups and at less cost. Additionally, Exxon planned to work with other stakeholders to locate businesses interested in redeveloping the site. The Final Project Agreement (FPA) was signed on May 24, 1999.

Although the Exxon XL project is currently in implementation, this analysis focuses upon the stakeholder process used in development of the FPA. Stakeholders interviewed for this report

are listed in Appendix A. Interviewees included participants representing the community, Exxon Corporation, EPA, and the West Virginia Division of Environmental Protection (WVDEP).

Stakeholder Involvement Process

In late 1997, Exxon hired a West Virginia consulting firm to develop and facilitate the stakeholder involvement process for the project. In January 1998 the consulting firm began interviewing community leaders and neighbors with the intent of identifying stakeholders for the project. Telephone interviews were conducted with 15 to 20 community and city leaders identified by the facilitator and Exxon. The objective of these interviews was to gather opinions about who would best represent community interest on the stakeholder panel. The results of these interviews provided a list of 60 people who the facilitator and Exxon felt would best represent community interests. These people were then contacted and interviewed by phone or mail.

The questions asked in these interviews focused on the issues and concerns surrounding the project and the long term commitment and responsibilities that would be required as a stakeholder. The interviews yielded a list of 20 potential members of a stakeholder panel. EPA then reviewed this list. EPA wanted the panel to include members selected from people who nominated themselves rather than relying on members invited to participate. Because the project was a Superfund site, EPA wanted Exxon to hold a public meeting to describe the project to any interested citizen. EPA also suggested that Exxon advertise in the local paper describing the XL project and inviting interested citizens to attend the meeting. Three ads put into the local paper and five news (television) releases described the project and invited attendance.

In mid-June 1998, Exxon held the meeting in Fairmont. Roughly 60 citizens and local media attended. The facilitator managed the public session. The session was designed as an open forum for discussion about the project and as a way to identify additional stakeholders. All session attendees were given a questionnaire to fill out. The questionnaire contained questions pertaining to individual interest in the project, availability and commitment as a stakeholder, and interest in being on the stakeholder panel. The consultant, Exxon, and EPA reviewed the questionnaires. As a result of the public session, five additional members were added to the stakeholder panel. The final stakeholder panel consisted of 25 citizens.

Meetings

The first stakeholder meeting was held on June 30, 1998 at a local union hall. This and all subsequent meetings were facilitated by the facilitator. Meetings were held monthly until the signing of the Final Project Agreement (FPA), and are scheduled to continue more or less on that basis. All meetings were open to the public with approximately 15 minutes set aside for citizen input. The local news media (TV and/or newspapers) were present at every meeting and often ran short informational pieces on the nightly news about the project. The first two meetings were designed to inform the stakeholder panel about XL projects and the specifics of the Exxon XL

project. Ground rules were established by panel members during the first few meetings. The ground rules were as follows:

- ! Start and end on time. (Keep meetings to two hours. End at 7:30 p.m.)
- ! Send minutes, agendas, updates a week in advance of meeting.
- ! Provide breaks.
- ! Speak up!
- ! Always provide opportunity for input from guests.
- ! Publicize all meetings one week ahead.
- ! Give ample lead-time for public input.
- ! Strive to reach consensus input and recommendations through full discussion.

The meeting agendas were originally drawn up by the facilitator in conjunction with EPA, WVDEP and Exxon representatives. After the first meeting, the agendas were set by panel members, including the community, EPA, WVDEP and Exxon representatives who sat on the panel.

Outreach

At the end of 1998, several panel members gave presentations about the Exxon XL project to various community groups in the area (Kiwanis Club, PTA, etc.). These presentations were designed and run solely by panel members. They felt responsible for sharing information with the community. Presentations provided the best means for accomplishing that objective.

In early 1999, several community outreach efforts were conducted to gather input on the project. A one-half page advertisement was placed in the local paper describing and asking for input on and concerns about the project. The ad included an 800-telephone number and an e-mail and mail address where comments could be sent.

A tri-fold pamphlet was also sent out to all residents living within one mile of the site. Eight hundred pamphlets were mailed. The pamphlets were designed to gather feedback from the community about the future use project's site and any community concerns that may have been overlooked by the panel. The pamphlet contained the following questions:

- ! How should the property be used in the future to meet the needs of the citizens of Fairmont?
- ! What suggestions do you have for making information about the site more accessible to the general public (e.g., direct mail, newspaper articles, TV, radio announcements, etc.)?

- ! Exxon wants the input and support of people who have a specific interest in the environmental impact of the cleanup. If you have a specific interest, how would you like to be informed of the project?
- ! How would you prefer to provide input (e.g., mail, phone, e-mail, public mailings, etc.)?
- ! Every effort will be made to complete the cleanup as soon as possible, with minimum impact on the public. Would you consider a five-year time frame (instead of the typical ten years) for cleanup of the site to be timely? If not, what would you consider to be a reasonable time frame?
- ! Exxon will demolish the buildings on the site to prepare for a future use. What, if any, concerns do you have about demolition activities at the site?
- ! What other concerns or questions do you have about the cleanup process?

Responses from the newspaper ad and pamphlet were sent to the facilitator. The consultant reviewed all comments and then passed them on to Exxon. The consultant firm called all respondents in an effort to adequately address concerns raised. Any person commenting on the project was sent a thank you letter by the consultant and subsequently sent periodic project updates.

Response from the newspaper ad and tri-fold pamphlet was minimal. Ten people responded: one by e-mail, two by 800-number, two by writing, and five via the pamphlet response card. While the outreach efforts focused on what would be done with the property after the cleanup, one respondent also raised concerns about the run-off from the site. This respondent participated as a guest at some future stakeholder meetings.

Goals of the Stakeholder Process

Both EPA and Exxon representatives stated that the process was designed to share information about the project with the community. They felt that the process enabled the community, EPA, WVDEP and Exxon to be 'on the same plane' with regards to the project. The process also provided a forum for Exxon to address concerns about why the site was not cleaned up earlier and how long it would take to clean it up, and thereby helped develop a good working relationship between the community and Exxon.

Both EPA and Exxon stated that the stakeholder process has accomplished its objectives to date. They felt that the right issues were raised and adequately addressed. Exxon also felt that the stakeholder panel effectively had the power to decide who should 'be at the table' and that the community interests were properly represented.

The state agency representative raised concerns about the extent of citizen involvement. The representative felt that citizens initially believed that they would have more power to affect the decision-making process than they did, and were unhappy with the limit of their input. The

representative felt that the process should have been more clearly a process devoted to presenting information.

The community interviewees felt that they served primarily as liaisons between the community and Exxon. Exxon would present progress reports at the meetings and the stakeholders would make comments based on what they perceived to be in the community's best interests. Panel members felt that it was their responsibility to keep the community informed of project progress.

Panel members also felt that the process afforded them the opportunity to work out community concerns about the site. These primarily related to the time frame of the cleanup and past alleged wrong-doings by Sharon Steel (who operated the facility from 1948 to 1979, when it closed for failure to comply with the Clear Air and Clean Water Acts). All comments were noted by the facilitator and passed on to Exxon. Exxon would then address concerns at the following meetings. However, some members felt that there was no way to verify the accuracy of responses by Exxon to concerns raised by the panel, since all the information and analysis was generated by the company.

While some interviewees felt that the panel provided the greatest benefit to Exxon, and was used as a public relations tool, all panel members who were interviewed also felt that the process was effective at providing information and clarifying community concerns. All interviewees stated that the right issues were raised and adequately addressed throughout the process. Most panel members felt that the right people were in the process to effectively represent stakeholder interests. The panel members stated that the panel was a good cross-representation of the community (citizens, business owners, and government officials). One stakeholder would have liked more county government representation, but noted that the opportunity to join the panel was made available and apparently county officials were not interested. Another member would have liked more neighborhood representation.

Roles Of Stakeholders in Development of Project Agreement

The stakeholders had no role in the development of the initial XL proposal. Stakeholders also had a relatively small role in the development of the FPA (timeline, goals, wording of FPA). According to the interviewees, suggestions made by the panel did not lead to substantive changes in the FPA, although panel members also felt that Exxon was generally responsive to community concerns.

Exxon originally established stakeholder roles, with panel members primarily acting as liaisons between the community and Exxon. The roles were designed to allow community concerns to be heard and addressed by Exxon. All stakeholders felt that this was accomplished.

The majority of stakeholders initially believed that they would have more input into the drafting of the final FPA than they were afforded. They felt the emphasis of the panel on information sharing, the time involved, and the members' lack of technical expertise did not permit more active involvement. EPA stated that the panel gave as much input as they could, given their limited technical knowledge.

All stakeholders stated that EPA acted to support and guide the XL project process. Stakeholders were satisfied with EPA's role in the project. They felt that EPA representative provided the panel with necessary information and adequately addressed any concerns or questions raised by the panel.

Management of Technical Issues

All panel members felt that Exxon and EPA adequately presented technical information and that it was made understandable. Either EPA or Exxon experts presented technical information to the panel at meetings. Panel members heard the technical presentations and then were allowed an opportunity for questions and clarification of confusing issues. This information was technically 'scaled down' for consumption by the panel. Exxon or EPA would then address the concerns immediately or at the following meeting.

All panel members felt that their technical concerns were addressed sufficiently yet one panel member added that the technical information could never be made completely understandable to lay people. However, the interviewee felt this would not be a problem as long as residents could trust either Exxon or EPA with technical explanations. Initially, some panel members had difficulty understanding the information, and consequently asked the facilitator to slow down the session. The panel members felt that EPA and Exxon listened to and reacted well to concerns raised. The issue of using EPA technical assistance grants (TAG) to hire a technical expert for the panel was raised several times by stakeholders at different points in the process. However, the panel eventually voted not to include a technical expert on the panel. The stakeholders concluded that the technical information was understandable enough for their purposes. The stakeholders stated that technical issues were generally not of prime importance. Their concerns focused primarily on the use of the property after the cleanup.

Differences in Interests or Perspectives between Stakeholders

Interviewees noted that important differences in interests between stakeholders existed, specifically between citizens living close to the site and city leaders. The differences focused primarily on individual interests in the cleanup. The citizens living close to the site were more concerned with Exxon's clean-up actions (timelines, plan of action, health risks, and soot) while the city leaders were more concerned about the future use of the land. Exxon addressed these differences on an individual basis and at stakeholder meetings. If there were concerns, Exxon would contact the individuals and address their concerns. However, some panel members felt that there was no way to verify what Exxon had said or done concerning the issues raised.

Interviewees felt the panel provided a beneficial forum for discussing differences in interests between panel members. One panel member stated that without the panel there would be no way to effectively address the differing interests.

Stakeholder Roles after Signing of the FPA

Since signing the FPA, the panel has continued to meet regularly. Panel meetings allow members to share information about the cleanup and to provide input and feedback throughout the life of the project.

Satisfaction with the Stakeholder Process and Suggestions for Improvement

Exxon expressed great satisfaction with the stakeholder process. This interviewee stated that the panel provided an excellent means of gathering and disseminating information about the project to and from the community. The interviewee also stated that the stakeholder process opened a direct line of communication between the company and the community, something not attempted prior to the project. The interviewee had no suggestions for improving the process.

EPA was also very satisfied with the stakeholder process. EPA felt that Exxon was very open to panel suggestions and committed to working with the community. To improve the process, EPA suggested conducting more initial public meetings to identify stakeholders and including technical experts on the panel. EPA felt that one public meeting was not adequate for identifying stakeholders. EPA also felt that most community members did not have the necessary background to make substantive comments concerning technical issues.

The state regulatory agency representative felt the stakeholder involvement process was over-designed, allowing for too much involvement by too many people. Monthly meetings allowed special interest groups to maintain their momentum between meetings and thereby tie up regulatory time. Quarterly meetings would have been more efficient.

All stakeholder panel members expressed satisfaction with the stakeholder process. Most panel members stated that the process was a very positive experience. These interviewees stated the stakeholder process afforded them the opportunity to establish direct links between the community and Exxon. The stakeholder process gave the community confidence in Exxon. The panel members now feel that if they have concerns about anything that Exxon is doing, they have contacts at Exxon who will adequately address those concerns. They can now put faces to the names. Exxon has effectively been 'humanized' by their efforts in the stakeholder process. They are no longer viewed by the community as a faceless corporation.

Almost all the interviewed stakeholders were very satisfied with the outcome of the process. They felt that the process afforded them the opportunity to gather, analyze, and disseminate information to the community. The also stated that this process was an effective way to create a good working relationship and open line of communication between the community and Exxon.

Some of the strengths specifically noted by the panel members included:

! Meetings provided an open forum for public participation in the project.

- ! Active membership on the panel helped to keep public interest in the project high.
- ! Face to face interaction with Exxon and EPA helped to dispel myths about uncaring business and government agencies.
- ! The stakeholder panel gave community members an opportunity to speak their minds.

Stakeholders noted the following concerns with the process:

- ! Certain issues that were brought up (health concerns and soot on neighbors houses) should have been dealt with more directly by Exxon and EPA (who viewed these issues as ancillary to the XL project and the Superfund cleanup). Some stakeholders felt that Exxon and EPA needed to be more responsive to these community issues. To these interviewees, Exxon and EPA seemed reluctant to give up control of the process to the stakeholders. At the same time, other panel members felt that issues not pertinent to XL project were repeatedly raised and more structure was therefore needed at the meetings.
- ! To at least some panel members, technical information was sometimes presented too quickly and needed to be explained more adequately. Some stakeholders suggested that stakeholder roles should be clarified before stakeholders decide to participate in the process. They felt that more stakeholder involvement in the development of the FPA was needed.
- ! Stakeholder time commitments were too burdensome for some members of the community.

Stakeholder suggested few other improvements for the process. Several stakeholders stated that it was too early in the project to make substantial suggestions.

Exxon felt there were no weaknesses in the stakeholder process.

HADCO

Project Background

HADCO Corporation is a leading manufacturer of printed wiring boards (PWB) and electronic interconnection products. The company is headquartered in Salem, New Hampshire but has additional operations in the United States and Malaysia. The original sites involved in the HADCO XL project were the Salem, Hudson, and Derry sites in New Hampshire, the Owego site in New York, and a site in California. HADCO dropped the California site because of the difficulties in applying the proposed regulation to that state. The Salem site was eventually dropped because HADCO was in the process of moving its headquarters and the facility was having difficulty maintaining sludge constituent levels that were necessary for delisting. The project involved HADCO, EPA Regions I and II, EPA Headquarters, and representatives from the New York State Department of Environmental Conservation (NYSDEC) and the New Hampshire Department of Environmental Services (NHDES).

As a PWB manufacturer, HADCO generates wastes that are classified as hazardous waste under the Resource Conservation and Recovery Act (RCRA). Since the wastewater sludge produced by HADCO's operations is classified as hazardous under RCRA, it must be shipped to a third-party processor before it can be sent to a smelter for reclamation of the valuable copper contained within.

Since the 1970's, HADCO has made changes in its manufacturing processes and believes that the sludge created as a by-product of its operations is now less toxic and no longer needs to be regulated as a hazardous waste. The HADCO project sought to reduce the regulatory burden of RCRA while promoting waste recycling throughout the PWB industry. HADCO, through Project XL, sought a conditional delisting of the sludge that would allow them to bypass the third-party processor and ship the wastes directly to an approved smelter. This action would save costs and decrease the risks associated with shipment of the wastes over long distances. It was determined through the course of the project that the sludge could be eligible for a conditional delisting in New Hampshire and for a solid waste variance in New York.

The initial project proposal was submitted to EPA in July 1995 and was accepted March 1996. The draft Final Project Agreement (FPA) was submitted to EPA in November 1996. The FPA was reviewed and revised and the final FPA was published in the Federal Register on October 2, 1997.

Since the FPA was approved, HADCO has been sampling their sludge according to the FPA and communicating with EPA and the state agencies regarding the samples. HADCO has decided to go with a solid waste variance in New York. To complete the delisting petition for New Hampshire, EPA must have details of contracts with smelters who will receive the waste. As of May, 1999, HADCO had not yet submitted them. Representatives from HADCO noted that they are waiting for details from the smelters that were needed to complete the contracts.

This analysis focused on the stakeholder involvement process used during the implementation of the FPA, but also includes references to the stakeholder process leading up to the FPA signing. It is an addendum to the description of HADCO's project presented in the RESOLVE, Inc. report "*Evaluation of Project XL Stakeholder Processes*" (September 1998).

Stakeholders interviewed for this report are listed in Appendix A. Interviewees included participants representing the HADCO, EPA, other corporate interests, and environmental agencies in New York and New Hampshire.

Role of Stakeholders Before the Signing of the FPA

Nearly all participants felt that there was little stakeholder involvement despite HADCO's apparently substantial efforts to get stakeholders involved in both New York and New Hampshire. Participation was limited to the company, government officials and representatives from the company that had been processing HADCO's sludge. This dearth of participation extended back to before the signing of the FPA. Representatives from other PWB companies were present at some meetings and sometimes took part in the discussion.

Some community participants, such as local officials and citizens in New York and the Audubon Society and the Merrimack River Watershed Council in New Hampshire, attended early meetings but did not take an active role in the process. HADCO's mailing list included approximately 40 invited parties, all of whom received meeting minutes and documents leading up to and following the FPA.

Respondents generally believed that most community and environmental groups had neither the time nor the money to attend such events and that EPA should make funds available for such groups that would like to participate. Respondents also agreed that this particular project did not lend itself well to outside stakeholder involvement because of the apparent benign community impacts. One participant commented that those involved had little sense of what the stakeholder role would look like until after project initiation. HADCO was required by EPA to make a second round of efforts to get stakeholders involved after initial efforts yielded only a few interested citizens and groups, but even then, there was little involvement from the communities.

The government agency and HADCO participants who were interviewed felt that the meetings provided an opportunity for input and most felt that they had an impact on the FPA. Some participants felt that the differences in EPA Regions I and II and EPA Headquarters caused communication problems that were detrimental to the process. The state agencies felt that they did not have access to EPA Headquarters, and therefore, did not have a clear idea of how this project would be managed and what EPA expected the results to be. Agencies believed that decision-making authority should have rested with the EPA Regions, but a number of participants said that EPA Headquarters came in "at the 11th hour" and made major changes to the FPA. This caused the process to be delayed for several months. These interviewees felt that better access to EPA Headquarters would have helped.

Most participants felt that their level of involvement was appropriate, but that the time frame was much too long. Again, most felt that this problem grew out of the administrative

structure to the project. With two states, two EPA regions, and EPA Headquarters involved, clear and complete interaction between all parties was not always achieved. One participant observed that since this was the first XL project to involve multiple jurisdictions, it would have been prudent to plan the structure in more detail before it actually started.

Most participants said that their individual roles played out as expected, but generally required more time and attention from them than they had anticipated. With the exception of having insufficient involvement from community stakeholders, respondents generally believed that the right people were at the table. HADCO invited participation by the smelters who were scheduled to receive the delisted sludge, but these companies chose not to participate. HADCO representatives felt that their presence would have been helpful. The presence of attorneys who represented a hazardous waste processor tended to focus attention onto the specifics of regulatory requirements and therefore had an important impact on the FPA. Most said they did not envision the time it would take to work out the details and the wording of the FPA.

Role of the Stakeholders Since the Signing of the FPA

As noted above, to complete the delisting petition for New Hampshire, EPA must have details of contracts with smelters who will receive the waste. As of May, 1999, HADCO had not yet submitted them.

Since the FPA was signed, all participants have been involved in reviewing and commenting on sample data to ensure that a conditional delisting or a solid waste variance can be supported. No stakeholder meetings or other stakeholder communication were conducted between the signing of the FPA and May 1999. Most participants said that there has been no need for additional stakeholder involvement until the sample data are approved and HADCO has more information to share.

Differences in Interests and Perspectives between Stakeholders

No real differences in interests have emerged among the participants since the FPA, but several came up during the negotiation and near the end of the process. Some disagreements existed between Region II and New York on requiring toxicity testing of the sludge before allowing a delisting. New York felt that the toxicity tests should be done before making a determination on the allowance of a delisting, but HADCO officials felt that all necessary information regarding toxicity was in the comprehensive report incorporated into the FPA.

Until near the signing of the FPA, the New York agencies were unaware of EPA's requirement for HADCO to reinvest all savings into its pollution prevention and recycling programs. This requirement was seen as excessive and unnecessary, although HADCO accepted the condition since so much time and effort had been spent in reaching the FPA.

At times HADCO designated certain information as proprietary, but some participants felt this was inappropriate given that XL is supposed to be a transparent process.

The third-party processor felt that some of the wording contained within the FPA effectively precluded their company from competition among potential waste recipients and was discriminatory to companies in similar positions. This provision was changed after company representatives met with EPA Headquarters.

Outcomes

All participants interviewed felt that they had an impact on the FPA. However, participants felt that the impact of the project was not yet clear since implementation is dependent upon contracts between HADCO and the smelters. Two participants felt that they had instrumental roles in keeping the project going when other participants felt that it was no longer viable. A state agency representative felt particularly helpful in providing detailed information on solid waste programs to EPA attorneys, who had little background in this area.

The levels of satisfaction with the FPA and its implementation vary, but no one reported dissatisfaction with the document. The implementation has taken longer than expected due to errors in the first data analysis and HADCO's inability to get the necessary contracts from the smelters. Some participants noted that this project did not necessarily need an XL classification, in one instance because of the ambiguity in differentiating between traditional and conditional delistings, and in another because the stakeholder believed that if the project had been screened more completely, it would not have qualified as an XL project. This stakeholder believed that the requested deviation from regulation was not legal and said that this would have been made clear in a more rigorous screening process.

HADCO representatives reported being most satisfied with being able to reach out to stakeholder groups with whom they had had no prior contact. They were satisfied with the timeframe from acceptance as an XL project to the draft EPA stage (6 months), but were dissatisfied that the project met so many delays from that point. They were also displeased with the amount of time it was taking to get to implementation. Almost all participants cited the length of time as dissatisfying, and some said the length of time involved in XL projects was detrimental to the entire program. Some participants cited the inaccessibility to officials at EPA Headquarters and poor coordination between the regions and Headquarters as major problems. Respondents cited as accomplishments the good job of writing the FPA and its specificity that allows EPA to review the data and determine if the project is performing as desired.

Satisfaction with the Stakeholder Process and Suggestions for Improvement

Most participants reported moderate levels of satisfaction with the stakeholder process. Since the active stakeholder group was primarily limited to the states, EPA, the company, and the third-party processor, it was difficult for the participants to speculate how the process would have evolved if environmental groups and citizen stakeholders had been more involved. Respondents believed that stakeholder involvement would have been more important if the issues had been controversial.

Interviewees appreciated EPA's commitment to this project and to the program, as well as the technical competence with RCRA exhibited by representatives of the states and HADCO. One participant felt that the stakeholder participation helped keep the process "honest." Another said that the idea of offering flexibility through innovation and finding new ways of doing business was worthwhile.

On the other hand, respondents thought that the time commitments needed to participate were excessive. Several interviewees also indicated that stakeholders with a narrow view or special interests should not be fully involved in decision-making, particularly if they have financial interests in the decision. These respondents viewed special interests as causing unnecessary delays in the process.

Participants felt the process addressed almost all issues that should have been addressed. HADCO representatives questioned why the issue of toxicity testing was not mentioned until after the FPA was drafted. They felt it would have been more constructive to discuss it earlier in the process. The definition of "conditional delisting" was discussed, but not to the satisfaction of some parties.

Some participants felt that more effort should be made to secure stakeholder involvement, and it was suggested that teleconferencing be available to help attain that end. Another suggested that since most companies were not experienced in eliciting stakeholder participation, a better way to identify potential stakeholders was needed. At the same time, it was suggested that all involved should be able to add something to the process instead of inviting participants simply for the sake of having people at the meetings. Stakeholders should be knowledgeable of the project goals and the means available for reaching the goals, and should have some technical knowledge of the issues.

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Intel

Project Background

Intel, a large semiconductor manufacturer, produces Pentium microprocessors and other state-of-the-art computer chips. Located in Chandler, Arizona, in the Phoenix metropolitan area, the FAB-12 facility uses the company's 0.35-micron manufacturing process to produce 8" silicon wafers. The facility covers 1,500,000 square feet of building area, occupies 720 acres of land, and initially employed over 2,000 high-skill, high-wage workers. At the time of construction, the facility was the largest private construction project in the state with an estimated capital cost of \$1.3 billion.

The initial project proposal was submitted to the Arizona Department of Environmental Quality (AZ DEQ) and EPA on June 30, 1995. Meetings for developing the Final Project Agreement (FPA) were held between January 24, 1996 and July 23, 1996. The stakeholder involvement process was based on consensus building amongst stakeholders. The FPA was signed on November 19, 1996, and the project has been in implementation since that time.

The FPA provides for a facility-wide cap on various air pollutants. The facility-wide cap replaces individual permit limits for different air emissions sources. The FPA also limits water use and waste generation. The FPA sets standards that would exceed or, at a minimum, fully comply with applicable emissions standards. Although the initial proposal was developed solely for the FAB-12 facility, Intel envisioned expanding the contract to cover other Intel operations in the Chandler area. These proposals would be contingent upon demonstrating the feasibility and the utility of the new system.

The Maricopa County Bureau of Air Pollution Control is responsible for oversight of most aspects of the agreement. The Bureau uses FPA criteria to review specific changes proposed by Intel. The engineers and field compliance people go over proposed changes and collect supplemental data. Interviewees report that procedures have basically been implemented according to the FPA.

This report focuses on the Intel XL Project's stakeholder involvement since the signing of the FPA on November 19, 1996, but includes references to the stakeholder process leading up to the FPA. The report is an addendum to the description of Intel's project presented in the RESOLVE, Inc. report "*Evaluation of Project XL Stakeholder Processes*" (September 1998).

Stakeholders interviewed for this report are listed in Appendix A. Interviewees included participants representing the community, Intel, EPA, the City of Chandler and county of Maricopa, and the Arizona Department of Environmental Quality.

Stakeholder Involvement Before Signing the FPA

Intel organized a Stakeholder Team to draft the FPA within a consensus building process. The Team served as a multi-interest executive committee (plenary group) with working groups organized to explore more specific issues. The Team consisted of four community representatives (drawn from a pre-existing Community Advisory Panel organized by Intel), local agency officials, state and federal officials, and Intel employees. Public meetings were also held.

Most stakeholders felt that the stakeholder process was well designed and well facilitated by an outside facilitator. Intel was credited for involving a broad-based group of public and agency representatives at the city, county, and state levels. The citizen stakeholders felt that the environmental contingent would have been stronger if more citizens with an environmental focus had been part of the group.

All stakeholders felt that they personally were afforded a good opportunity for input. Everyone felt free to voice his or her opinions. However, one member questioned the breadth of the citizen participation, believing that many interested citizens chose not to participate because they believed that they would have no real impact on the outcome. Another member commented that Intel knew before beginning the process what outcomes they wanted, and little room for negotiation existed on many points. Opinions were mixed as to whether Intel was responsive to the concerns expressed, and whether significant changes were made to the FPA as a result of group requests.

Most stakeholders felt that they had been required to spend too much time on this project. Some noted that the intense six-month timeframe was unreasonable. Meetings were reported to have lasted for three to six hours and were held every two weeks, with greater frequency near the end of the process. This was particularly an issue for the citizen stakeholders, most of whom work regular jobs and were not compensated for their time (the regulatory and industry stakeholders, on the other hand, participated on work time). Still, they felt it was a valuable and worthwhile community service.

Most members felt that the process presented no barriers to participation, while others raised concerns regarding involvement of national environmental groups in the process. The stakeholder team was originally composed of representatives of local environmental and community interests and governmental agencies. After discussing the merits of allowing national groups full participation, the stakeholder team agreed to allow a national group to participate at a lower level. The national group's representative, however, refused to sign a confidentiality agreement with Intel. Intel required this of all stakeholders and would not allow the representative into the plant without the signed agreement. This effectively ended the group's participation. The question of participation by national environmental groups remained problematic throughout the process.

Interviewees also cited difficulties with understanding the technical information as a barrier to full participation by some members.

One citizen stakeholder commented that at the start of the process, Intel worked with citizens under a consensus model of decision-making, but shifted the process to a consultative

model as the process progressed. At the same time, Intel was credited with promoting participation through techniques such as by making telephone lines available for anyone who could not be present at the meetings but wished to participate. All team members were signatories to the FPA.

Stakeholder Involvement Since Signing of the FPA

Intel remains responsible for managing the participation process since the FPA was signed. Intel schedules and sponsors the stakeholder and public meetings, distributes the quarterly report, and maintains a web page with up-to-date information. EPA provides information and obtains data when needed and is involved in reviewing the reports.

As required by the FPA, Intel holds quarterly stakeholder meetings and semi-annual public meetings. The company also produces quarterly reports regarding emissions and air and water quality as affected by its operations. The stakeholder team reviews and discusses the quarterly reports before they are made public to ensure that the reports are comprehensible to the public. The team also reviews the reports to ensure that Intel is meeting the superior environmental performance as directed by Project XL.

The stakeholders use the quarterly meetings to discuss potential revisions to the FPA. An example is the team's decision to revise the company's goal of "100% water reuse" to "95% water reuse" because of the technical difficulties with meeting the original goal. This decision was reached by a unanimous agreement among stakeholders. Another issue addressed by the stakeholder team regards the amount of notice that should be given to the stakeholders before Intel makes a process change.

Since the FPA was signed, some stakeholders have felt that their involvement has been limited. As an example, they cite Intel's decision to change from using arsenic to arsene gas in one of its processes. This decision was made without consultation. Several interviewees felt that the issue should have been discussed with the stakeholders before the decision was made, although most felt that the issue itself was not a great threat to public safety. Most interviewees also noted that Intel made great efforts to alleviate stakeholder concerns regarding the change.

Because Intel has been granted regulatory flexibility, other area industries have requested the same flexibility but without going through the process. Many stakeholders strongly object to the potential for state and local regulators to consider this allowance.

Most interviewees feel that their role in the process was consistent with what they had expected, but that the time commitment was unanticipated. The citizen stakeholder who commented on Intel's decision to move from consensus decision making to advisory roles for citizens had expected a more active role than the interviewee felt was achieved. Most stakeholders felt that the right people were involved in the process, but many commented on the need for more citizen participation. However, those who had been involved with similar processes noted that it is always difficult to get citizens involved.

The Stakeholder Team has discussed the possibility of transferring elements of this project to other industries in the Phoenix area, but concluded that this would be difficult because of the uniqueness of each XL project.

Differences in Interests and Perspectives between Stakeholders

Since signing the FPA, differences in interests amongst the stakeholders is most apparent around decisions that require a change in manufacturing processes or the FPA. Interviewees most often cited Intel's decision to shift to arsene gas, as an example. While Intel made this decision on its own, respondents noted that this change was agreeable to all participants after sufficient information was provided to the stakeholders. One member observed that when the arsene gas issue was raised, the member realized that Intel would most likely do whatever it deems necessary for the company, regardless of stakeholder objections. This stakeholder was somewhat surprised by this realization, feeling that Intel had previously advocated the stakeholders' role in the decision-making process.

Meeting Management Since the FPA

A facilitator who was hired by Intel managed the meetings. The stakeholders set the agenda, and items could be added. One representative noted that sometimes Intel was somewhat resistant to this but generally allowed new items. One meeting involved a discussion among the stakeholders about the positive and negative points of the process and what changes could have been made to improve the process. The meetings involved discussion of the quarterly reports before they were released to the public.

Groundrules for the process were initially agreed upon verbally when the stakeholder team was first initiated. This caused disagreements as the process continued, particularly concerning the definition of what constituted "consensus" approval of the draft FPA. Despite this problem, all participants agreed that the meetings provided a good opportunity for dialogue (both before and after the signing of the FPA). Participants noted that the regular public meetings allowed an opportunity for all interested parties to be involved.

Outcomes

Most participants felt that they or their agency had an impact on the FPA and its implementation. Several participants again noted that Intel appeared to have determined the direction and desired outcome of the process before it started. Most participants were satisfied with the FPA and its implementation, but some noted changes that they felt should have been made. Examples include investigating water consumption instead of water recycling and waste minimization instead of waste reduction.

Participants were satisfied with the manner in which Intel has worked to make local citizens aware of their processes and to invite citizen involvement in project XL. The company

made substantial efforts to get citizens involved through newspaper and television advertisements as well as using door hangers to let people know when meetings were scheduled. The quarterly reports and the web page were both cited as being extremely valuable information sources for the community. Local agencies were somewhat concerned about other local companies requesting the flexibility that has been granted to Intel. Some companies have indicated that they are not being treated fairly in having more stringent regulatory requirements than Intel.

Satisfaction with the Stakeholder Process and Suggestions for Improvement

The participants were all at least fairly satisfied with the stakeholder process, but one stakeholder was dissatisfied with the structure and the difficulty of completing a large task in a short amount of time. Some dissatisfaction also existed over the inability of more citizens and environmental representatives to be involved in the process. Respondents noted that the time requirements were an important barrier to potential participants, as well as a source of difficulty for their own participation. Insufficient resources were also cited as a barrier. One participant noted that a smaller company could not participate in a process as complex as this. The time involvement was a source of dissatisfaction for a number of participants, and an agency representative noted that their agency would not be able to commit such tremendous resources to all permitting processes.

Stakeholders praised Intel's efforts to make the process viable, including the provision for conference calls in lieu of meetings. The company was commended for its endeavor to make the community aware of the process and in using the Internet to do so. The dialogue and information sharing that resulted from the process was seen as a major strength, particularly in the current dialogue regarding worker health and safety. Another strength was the decision to use the Arizona Ambient Air Quality Standards to set an absolute maximum amount of exposure to volatile organic compounds, particulates, nitrogen oxide concentrations, etc.

Stakeholders expressed concern that all parties at the table were not equals, even though equality was a premise of the original process. Most stakeholders felt that more citizen participation would have improved the process. Some issues emerged from the lack of clarity around groundrules, and most participants said that groundrules should be written instead of being based on a verbal agreement.

All participants felt that all issues that should have been addressed were discussed.

Suggestions for improving the process generally centered around finding ways to get more citizens involved and obtaining funds for educating participants on technical issues. Groundrules and deadlines should be established up front, with full understanding of the rules by all participants. Scoping should be revisited at some point during the process to make sure that important issues are being addressed.

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New England Universities Laboratories

Project Background

The Laboratory Consortium for Environmental Excellence (LCEE) is an umbrella organization for university-based environmental and safety officers. Eight New England universities participate in LCEE, including the Amherst and Boston campuses of the University of Massachusetts, Boston College, Harvard University, Northeastern University, Trinity College, Tufts University, and the University of Vermont.

In September 1997, LCEE submitted an XL proposal to EPA to develop flexible performance-based standards for managing university laboratory hazardous waste. The Final Project Agreement (FPA) was approved on September 28, 1999.

The project is designed to develop and implement an integrated Environmental Management Plan (EMP) for managing hazardous lab waste at three universities. These laboratories typically use small quantities of many different chemicals. A management plan to control their use and disposal offered environmental advantages relative to the traditional regulatory requirements set forth in the Resource Conservation and Recovery Act (RCRA). The RCRA process involves a substantial amount of paperwork, sometimes for a small amount of infrequently generated waste. Under the EMP, environmental professionals will seek opportunities for reusing materials within the university. The universities will not be required to make a RCRA hazardous waste determination until the laboratory wastes reaches a central on-site location. The FPA requires reductions in waste generation and material reuse as a result of providing regulatory flexibility.

While the FPA is now signed and the project is being implemented, this analysis focuses upon the initiation and early dynamics of the stakeholder process used in project development.

Stakeholders interviewed for this report are listed in Appendix A. Interviewees included participants representing the communities, environmental groups, the university sponsors, other universities, EPA, and state environmental agencies.

Overview of the Stakeholder Involvement Processes

The stakeholder process developed for the New England Universities Laboratories project differed from that of other XL projects. This project involved several parallel stakeholder processes: one focused on national constituencies, and a series of processes designed to address the concerns of local stakeholders more locally concerned with each of the university campuses. These processes aimed to involve three distinct constituencies:

- ! national constituencies with an interest in the environmental management of university laboratories,

- ! internal local constituencies (university administrators, faculty, staff and students) with an interest in safety and environmental protection on the campuses of universities participating in the XL project, and
- ! external local constituencies (residents and communities adjoining these universities) with an interest in potential off-site impacts.

The remainder of this report on the Universities Laboratories XL Project is divided into two sections. The first section describes the national stakeholder involvement process. The second section describes both the internal and the external local community processes. In each section, we review the process of involvement, the roles of the participants, the management of the process, outcomes and stakeholder satisfaction.

National Stakeholder Involvement Process

Overview of the National Process

The national process consisted of two multi-day meetings. Participants included environment, health and safety coordinators of university and non-university labs, as well as lab managers. Most participants represented institutions that would benefit from regulatory flexibility. In addition to these meetings, participants communicated through the use of an e-mail "listserve."

A national meeting was held in Boston, Massachusetts in the fall of 1997. This meeting focused on RCRA and the regulation of lab wastes. The meeting was formatted similar to a university mini-conference, with presentations primarily by representatives from colleges labs from around the country. The meeting was described as an informational session that sought to delineate the scope of the lab waste problem.

A second national meeting, facilitated by ML Strategies and The Santa Fe Council, was a three-day session held in the Florida Everglades in March 1998. Formatted as a working group, the meeting brought together people from the Boston meeting with other interested parties. Participants were primarily from university-based labs, but included representatives from private labs as well. A few environmentalists and state agencies also participated. ML Strategies and the Laboratory Consortium for Environmental Excellence (LCEE) solicited the participants.

The meeting encouraged interactive problem identification and problem solving. Participants discussed concerns and issues and created an agreement as to what the XL project FPA should cover. Participants sought to identify more flexible approaches to manage wastes from university and research laboratories. Representatives of various labs spent time discussing how the proposal would affect their facilities. Some members noted that the process was not structured to deal with bigger issues that were raised (such as environmental management more generally), but most felt that the meeting was appropriately focused on how best to achieve a common goal (flexible approaches to waste management).

In addition, a number of smaller meetings between LCEE schools were held in New England to develop the FPA. ML Strategies served as facilitator and project coordinator throughout this process.

Stakeholders have continued to be involved at different levels. Although the scope of the project initially appeared to be broad in its applicability, schools in some states realized that implementation would be difficult due to particular nuances in their schools or in their state regulations. Participants also believed that the various EPA regional offices managed issues of laboratory waste differently, with some regions applying specific standards more stringently than others. Thus, some participants determined that the issues identified by the New England schools were less problematic for their universities.

The project was eventually narrowed to include three schools in New England: The University of Vermont, (UVM) Boston College (BC), and the University of MA-Boston (UMass-Boston). These three schools and the LCEE worked with EPA and state agencies, and other stakeholders, to develop the FPA.

Involvement in the Process

Interviewees felt that the stakeholder process was well designed and implemented. Respondents felt that participants felt free to speak and contribute to the discussion. At the same time, most respondents felt that the participants were operating under too many constraints. A number of participants at the meetings sought to shift the focus of the XL project from regulation of specific wastes to comprehensive environmental management plans for the labs. Lab-based interviewees believed that EPA was too cautious, preferring to adapt existing regulatory language as little as possible. Many respondents believed EPA's conditions precluded creativity and innovation. Interviewees questioned why EPA placed these restrictions on a pilot project that could be stopped at any time if it did not yield the desired results. Many lab-based stakeholders believed that minor issues became major points of contention and that this was contrary to the purpose of Project XL.

Most stakeholders felt that their level of involvement was appropriate, given that many of them participated only in the Florida meeting and through the listserve. Interviewees were generally frustrated, however, with the length of time that passed between the end of the national meetings (March 1998) and the signing of the FPA (September 1999). One interviewee observed that more groundwork could have been done between EPA and LCEE before holding the Florida meeting in order to coordinate efforts more effectively.

Most interviewees felt that there were no barriers to participation, but representatives from some schools would have participated more fully had they been closer to Boston, which was the location of a number of smaller meetings (predominantly between the LCEE institutions). Environmental groups noted that they lacked both the funds and the time to participate in a longer process.

Most interviewees believed that the right people were at the table, but some felt that environmental groups, representatives from EPA Headquarters, and smaller universities should have been better represented. An EPA representative noted that participation by environmental

groups was insufficient, and that the project sponsors and EPA needed to work more effectively at promoting such participation. Another interviewee suggested that EPA should fund involvement by non-profit organizations, since such organizations do not have the resources to participate otherwise.

Most interviewees felt that the right issues were raised during the meetings, but were not sure that all had been adequately addressed. Most said that they would have to wait and see what happens with implementation in order to determine if the issues were addressed appropriately.

Some stakeholders said it would be useful to have routine updates on project development or a stakeholder follow-up meeting organized in a structure similar to the Florida meeting.

Roles

With the help of a \$59,000 EPA start-up grant, LCEE hired ML Strategies, an environmental consulting group, to develop the proposal and coordinate the development of the FPA. Most interviewees viewed ML Strategies and LCEE as having the lead throughout the XL process. A few interviewees regarded EPA as having the lead role since regulatory flexibility required EPA approval. Interviewees saw their own role as assisting LCEE develop best management practices that would be applicable to colleges around the country. A representative from the Massachusetts Department of Environmental Protection (MADEP) believed that the state agency became too involved, given that EPA would ultimately regulate the project.

Most interviewees believed that while EPA supported the XL process, agency staff were not in favor of a high level of regulatory flexibility for the labs. Some interviewees felt that EPA staff were supportive but needed to be more proactive at reducing constraints, while others perceived that the problem lay with differences of viewpoint between EPA Region I and Headquarters on this issue.

Management of Technical Issues and Differences in Interests and Perspectives between Stakeholders

Most interviewees who participated in the national process believed that the technical information was understandable to all participants, since all were already involved in regulating environmental programs at their respective schools.

Interviewees noted that various schools had concerns that were particular to their individual situations, but no one cited this as problematic to the proposal. Concerns of smaller schools differed from those of larger schools, because the smaller schools generate far less waste and therefore opposed new regulations or procedures that might increase the reporting that they were required to do. The environmental representatives wanted to ensure that any increase in regulatory flexibility did not pose additional environmental risks. Representatives of universities and private companies differed as to what the regulations should do and whether a single set of regulations could apply to both university and private labs. Private labs were concerned that procedures and regulations developed by EPA and the universities might ultimately be required of them as well.

Meeting Management

ML Strategies and the LCEE schools developed the agenda for the Florida meeting. At the same time, interviewees said that the process allowed for additional issues to be raised. Members had little to say about groundrules; some said none were developed, while others said groundrules existed but were not of major concern. Most viewed ML Strategies as the primary facilitator, responsible for not only keeping the meeting running smoothly but also for building agreement amongst the various labs as to an appropriate direction. One interviewee viewed the EPA representative as the primary facilitator. All agreed that ML Strategies kept the process moving and kept participants encouraged and focused on the goal. It appears that everyone was comfortable in speaking about issues they viewed as relevant.

Satisfaction with the Stakeholder Process and Suggestions for Improvement

Most interviewees were satisfied with the stakeholder process, but some were dissatisfied with what they perceived to be EPA's unwillingness to innovate much beyond the traditional regulatory model. These interviewees reasoned that as a pilot project, Project XL should allow for more experimentation.

Most interviewees approved of bringing interested parties together and believed that participants were all able to contribute effectively. No one reported dissatisfaction with his or her participation in the stakeholder process. One member wondered if, given the breadth of the issues, the diversity of the stakeholders involved was too narrow.

Several interviewees noted that EPA had little sense of deadlines, and that the numerous rewritings of the project agreement was inefficient. Interviewees also noted that EPA seemed too concerned with worst-case scenarios.

Interviewees applauded the process for attempting to give labs a more efficient way to manage waste, for encouraging group membership that was largely appropriate for the issues, for focusing on long-term goals, and for including the input of lab directors and environmental managers from across the nation. Interviewees viewed the meetings as constructive engagements with people sharing viewpoints, and felt these meetings were meaningful and important experiences. Some interviewees said that the project accomplished what labs have been trying to achieve since 1984: establishing performance-based standards for university labs.

Interviewees believed that most issues had been addressed. Exceptions included EPA's position on the types of allowable treatment within labs and storage areas, the definition of what constituted a "lab unit", and issues associated with on-site storage and the "arbitrary" 90-day limit for storing waste.

Local Stakeholder Involvement Processes

Overview of Local Community Processes

The XL project applied to three New England academic institutions, including Boston College (BC), University of Massachusetts – Boston (UMass-Boston), and the University of

Vermont (UVM). BC is located in Newton Massachusetts, an affluent residential community adjacent to Boston. BC has two campuses (law and main) with a total enrollment of 14,000 students. The population of the surrounding community is roughly 200,000. UMass-Boston is located in the heart of the city, adjacent to Boston Harbor. Approximately 12,000 students, all of whom commute to campus, are enrolled in the university. Because of its location, the campus has few close residential neighbors. UVM is located in Burlington, Vermont. The population of the surrounding community is approximately 40,000, including 10,000 students enrolled at the university.

Each of the three “pilot program” schools designed local community participation processes. These processes varied amongst the three schools, but each school developed a process to involve on-campus administrators, faculty, staff and students (internal process) and citizens and public officials from the surrounding community (external process). Thus, the University Laboratories local involvement efforts led to the design and implementation of six local stakeholder involvement processes.

Overall, members of the communities surrounding the colleges showed little interest in participating. Participation by faculty, staff and students on the individual campuses was also generally low.

Stakeholder Involvement Plan

Each university was responsible for developing and implementing its own stakeholder participation processes. University project leads were established to coordinate these local community stakeholder processes. BC began their external process in late 1997 and their formal internal stakeholder process in January 1999. UVM began their internal stakeholder process in early 1998 and their external process in the fall of 1998. UMass at Boston began both their internal and external stakeholder process in January 1998.

Internal to Boston College

The project lead met individually with the internal stakeholders to explain the XL project and gather support. The lead identified fifteen internal stakeholders (various administrators and faculty) to participate on the panel. The first formal meeting of the internal stakeholders was held in January 1999. All 15 stakeholders were present. The next meeting was scheduled for mid-June, 1999. Meetings were facilitated by the project lead. These meetings were informational and focused on the goals and current status of the XL project. The project lead stated that there were no concerns raised by the stakeholders. In addition to the formal meetings, several informal individualized meetings were held between the project lead and various stakeholders. These informal meetings were scheduled primarily to provide project updates.

Internal to UMass-Boston

In January of 1998 the project lead approached a number of internal groups on campus. These included representatives of university staff responsible for environment, health and safety; administration; faculty; and graduate students. The project lead described the XL project and

solicited interest in participating in the stakeholder involvement process. Twelve faculty, administrators and staff volunteered to be on the stakeholder panel.

An initial meeting was held in February 1998. This meeting was primarily informational and focused on explaining XL projects in general as well as specifics related to the project at UMass. Stakeholders were also asked what roles they would like to take as participants in the project. The group decided on a commentary role. No subsequent meetings have been held.

The twelve stakeholders are periodically sent e-mails as project updates occur. They are encouraged to review the documents and send their comments to the university's project lead. The project lead also made two presentations describing the project to an environmental compliance group on campus. The group was asked for their input on the project. No comments were received from either group.

The project lead feels that the stakeholder panel is comprised of a solid cross-section of faculty, staff, and administrators, but remains concerned that the project is attracting little community interest. The interviewee feels that the stakeholders will become more involved once the project is being implemented.

Internal to UVM

UVM has not held any formal internal stakeholder meetings. The project lead contacted and met with several groups and individuals on campus. The project lead sent updates to each of these internal groups and asked for comments. Interviewees stated that the campus stakeholder process was designed to share information, and that the right groups were involved in the process. All participants in this processes were technically proficient.

The project lead at UVM was also responsible for formulating and maintaining an e-mail list server. The list server was designed to keep national and local stakeholders informed and to obtain input from those stakeholders. The list server was established in October 1998 and as of May 1999 had 150 members. The list server membership includes national and campus-specific stakeholders, as well as people not affiliated with the project but who were interested in regulatory issues. Project progress reports were e-mailed monthly to members. The UVM project lead responded to concerns that came in through the list server.

E-mail comments on the progress reports have been minimal. According to the managers of the list server, more comments were received at professional conferences than through the list server. The majority of comments focused on health and safety management in a laboratory setting. Commentors often expressed concerns that the difficulty of organizing a centralized Environmental Management Plan may prove to be more difficult than complying with RCRA on college and university campuses. Aside from this question, however, most commentary on the project has been supportive.

External to Boston College

In late 1997, BC's project lead identified 10 external stakeholders. The stakeholders were asked to participate based on their community involvement, their technical skills, and their interest

in the project. Prospective stakeholders were sent personal letters inviting them to participate. All ten agreed to participate.

As of May, 1999, the project sponsored two formal external stakeholder meetings. The first met on January 13, 1998. Seven people were in attendance. The meeting was arranged and facilitated by the project lead. Topics covered in the meeting included a review of XL projects in general as well as specifics related to the BC pilot project.

The second meeting was held on September 22, 1998. Again seven people attended, including a regional representative from EPA. The project lead also arranged and facilitated this meeting. Topics covered included a review of the performance standards proposed in the XL project as well as a general project status update. The EPA representative clarified issues surrounding the XL project.

The project lead stated that there have been no concerns or comments expressed by the external stakeholder panel either at the meetings or afterwards.

External to UMass-Boston

UMass-Boston has had little involvement of citizens or off-campus organizations. The project lead submitted three articles to a local publication (The University Reporter) describing the XL project and asking for citizen to participate. The articles generated no response. The project lead also talked with various business leaders in the surrounding community. One organization initially expressed interest in the project. The project lead attended two of the organizations bi-monthly meetings, and at each presented an overview of the XL project. Members of the organization did not express any concerns and were not interested in further participating in the stakeholder process. Project progress reports are sent to the organization, with requests for feedback. As of May 1999, no responses were received.

External to UVM

In October 1998, UVM's project lead met with the local voting ward board to discuss the XL project. The board consists of community leaders from the city council, board of health, county waste district, and other agencies. The board suggested contacting the local neighborhood planning unit (NPU). The campus's Environmental Council coordinator attended a NPU meeting to describe the project and ask for input. Concerns raised at the meeting focused on issues not related to the XL project (campus noise, radiation on campus, college parties, etc). The NPU leadership declined further involvement in the project. Meeting attendees were also asked to contact a representative on campus with any additional comments or concerns. No comments have been received as of May 1999. Efforts to increase the community's interest in the project continue.

Goals of Internal and External Stakeholder Processes

All interviewees stated that the objective of the local stakeholder processes was to share information between the project coordinators, internal stakeholders, and the community. Most interviewees felt that the process accomplished that objective. However, each university's project lead felt that the specifics of the XL project were too complicated for the external stakeholders to

understand and this caused the external groups to become disinterested. Several external stakeholders reiterated this point.

The internal processes were designed to increase awareness amongst laboratory personnel. All interviewees felt that this goal was reached. Interviewees also agreed that all interests were effectively represented on the internal panels.

The external processes were designed to reach out to and educate the surrounding communities. However, community interest in the specifics of the XL project was low. Several interviewees felt a greater effort made to include other parties in the external process was needed. The project leads all stated that community residents were primarily interested in issues neighborhood impacts such as noise, traffic, and student housing, issues that were not related to the XL project.

Stakeholder Roles

Local community stakeholders did not assist in developing either the initial proposal or the FPA. The internal and external group roles were advisory. All interviewees stated that the stakeholders were free to develop more active roles in the projects. However, all stakeholder groups decided to keep their roles as advisory.

EPA played very small roles in the stakeholder process at the university and community level. One EPA official did participate in an external stakeholder meeting at Boston College.

Management of Technical Issues

All interviewees stated that technical issues were adequately addressed. The majority of internal stakeholders were familiar with the technical language and content of the project prior to their involvement.

External stakeholders stated that they were not concerned with the technical content of the project. They focused more generally on the potential impacts of the project, and trusted the universities' experts to appropriately interpret the technical background for them.

Satisfaction with the Stakeholder Process and Suggestions for Improvement

No concerns were expressed regarding the internal stakeholder process. However, most interviewees expressed concerns about the external stakeholder process. Interviewees felt that additional efforts should be made to educate and involve the outside community in the project. Several stakeholders felt that greater involvement by the media might have raised community interest. Interviewees also felt that the difficulty of the technical information contributed to the lack of interest on the part of everyday citizens. Finally, one project lead expressed concern that the stakeholder processes were too focused on meeting the formal requirements of Project XL and not enough on meeting the needs of the project sponsors or in addressing the stakeholders concerns (which largely focused on non-XL issues).

No suggestions for improvement were stated.

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Vandenberg Air Force Base

Project Background

The Vandenberg Air Force Base conducts and supports missile launches, operates the Western Test Range and responds to worldwide military contingencies. The base covers more than 98,000 acres and is the Air Force's third largest military installation. Vandenberg Air Force Base (AFB) is located in Santa Barbara County, 15 miles from the nearest municipality, Lompoc (population 35,000). The base is within 55 miles of Santa Maria and Santa Barbara and 150 miles northwest of Los Angeles.

Under Title V of the Clean Air Act and the California permitting process, Vandenberg AFB would be designated as a major source of ozone precursor emissions. Because of the Metropolitan Region's air quality problems, the designation would require the base to obtain new permits for up to 300 previously unregulated emission sources. Through both the ENVVEST² and Project XL programs, the base sought to substantially reduce ozone precursor emissions, sufficient to be redesignated as a minor source. This would result in a substantial reduction in compliance costs. Vandenberg AFB sought to fund these emission reduction projects using money that would otherwise be spent complying with administrative requirements of Title V, such as permitting, record keeping, monitoring, and training.

The initial project proposal was submitted to the Department of Defense and EPA in December 1995. The Draft Project Agreement was developed and submitted to EPA in March 1996. The Final Project Agreement (FPA) was signed and published in the Federal Register in November 1997. The project is now in the implementation phase.

This analysis focused upon the stakeholder involvement process leading up to the signing of the FPA and during the implementation of the FPA.

Stakeholders interviewed for this report are listed in Appendix A. Interviewees included participants representing the community, Vandenberg Air Force Base and EPA.

² As part of the Administration's reinvention initiatives, EPA and the Department of Defense (DoD) signed a Memorandum of Agreement in 1995 that established how the two agencies would interact during implementation of DoD's Environmental Investment (ENVVEST) program. The ENVVEST program emphasizes regulatory compliance through pollution prevention and provides an alternative to prescriptive regulatory requirements through a performance-based environmental management system designed to attain superior environmental results.

Stakeholder Involvement Process

The Stakeholder Involvement Plan was developed in July 1996 by a legal consultant hired by Vandenberg AFB. The plan was part of the draft FPA. Stakeholders were not involved in the development of the plan nor were they involved in the development of the draft FPA.

The Stakeholder Involvement Plan identified mechanisms already existing for conducting public participation in the project. Three existing environmental advisory boards were asked to consider the ENVVEST/XL project at their regularly scheduled meetings. These boards include:

- ! The Vandenberg Citizens Advisory Board (CAB): formed as a forum for education and consultation around environmental restoration projects, the board's mission was later expanded to deal with a wider range of environmental issues. CAB members were chosen by the base community in 1994 through a non-military community-based process and meet quarterly.
- ! The Community Advisory Council (CAC) appointed by the Santa Barbara County Air Pollution Control District board members. And
- ! The Santa Barbara County Community Toxic Advisory Committee, which provided advice to the Santa Barbara County Fire Department.

These existing community boards are briefed at their quarterly meetings and are asked to provide feedback in the formulation and implementation of the ENVVEST/XL project. Copies of the draft FPA were sent to these boards for review and suggestions.

In August 1997, prior to publication of the final FPA, Vandenberg sponsored a public workshop at the base. The workshop was designed to share information and allay public concerns pertaining to activities at Vandenberg AFB, including the ENVVEST/XL project. Invitations to the workshop were sent to 40 public interest groups and individuals that had previously expressed concerns with activities at Vandenberg AFB. Notice of the workshop was also published in the local press and media. Concerned citizens were invited to attend.

Approximately 60 community members, including CAC and CAB members, attended the workshop. At the workshop, Vandenberg personnel explained the project and asked for public comment and concerns. Interviewees who attended the workshop felt that Vandenberg personnel effectively allayed any concerns of the community.

One environmental group, the Environmental Defense Center (EDC), expressed concerns about the ENVVEST/XL project in June 1997. EDC was specifically concerned about the proposed Title V waiver. A representative from the group attended the initial workshop and expressed the concerns of the group. Vandenberg personnel explained the project and answered any questions that were raised by EDC. EDC was satisfied with Vandenberg's response and decided not to participate further in the project.

The next public meeting was held in October 1997. Public notices were again published in the local press and media. However, invitations were not sent out to the previously concerned citizens. No community members attended this meeting. All interviewees felt that Vandenberg personnel had effectively explained the project in the first meeting and that no questions remained unanswered.

The FPA was signed in November 1997 and the project is now in the implementation phase. Stakeholder participation in the implementation phase consists of quarterly CAB briefings by Vandenberg personnel. Few comments or concerns are generated by these briefings.

Goals of the Stakeholder Process

All interviewees stated that the goal of the stakeholder process was to share information about the project with the community. While the process was not designed to resolve issues between the base and the community, very few issues were raised. The only concerns expressed were those of an environmental group and they were allayed through direct discussions with Vandenberg staff. All interviewees felt that the ENVVEST/XL project would benefit the surrounding communities.

Role of the Stakeholders

The CAB and CAC members serve as community representatives on standing committees. They saw their roles as providing information to the community and feedback to the AFB. These roles were not created through the ENVVEST/XL project but were extensions of their duties on their respective committees. As such, the specifics of the ENVVEST/XL project were only a small part of their overall responsibilities.

Vandenberg and EPA roles in the Stakeholder Process

As stated previously, Vandenberg hired a legal consultant to develop the stakeholder involvement plan. Vandenberg personnel were responsible for the invitations to the workshop, the media and newspaper spots, and both of the public meetings. EPA advised Vandenberg on Project XL requirements, assisted Vandenberg in the development of their project, attended all meetings, and provided support. Vandenberg personnel continue to brief the CAB and CAC boards quarterly on the status of the project.

Management of Technical Issues

CAC interviewees were already familiar with the technical language surrounding the project, since their council work frequently pertained to environmental and technical issues. Two CAB members stated that even though they were not familiar with the language used in the

project, they felt that Vandenberg personnel explained everything in a comprehensible manner. EPA also stated that the Vandenberg staff presented technical issues effectively.

Differences in Interests and Perspectives Between Stakeholders

All interviewees stated that, other than the concerns raised by EDC, stakeholders did not express any substantial differences in interests or perspectives.

Satisfaction with the Stakeholder Process and Suggestions for Improvement

All interviewees were relatively satisfied with the process, and few suggestions emerged from the interviews.

The EPA representative was very satisfied with the process. The representative felt that the environmental benefits and the base's rapport with the community were strengths of the process. At the same time, EPA indicated that the stakeholder plan relied too much on existing boards to represent stakeholders, thereby potentially limiting involvement by individuals not affiliated with the base or County agencies.

The Vandenberg representatives were also very satisfied with the process, and viewed the public stakeholder process to be most beneficial immediately before the signing of the FPA, to allay citizen concerns and possible lawsuits. The interviewees suggested that the principal stakeholders and project sponsors needed to be in agreement before going public with a plan, and that efforts to publicize the FPA drafts too early in the process could have been detrimental to the project's success. In the absence of agreement between the principal parties, the public could perceive problems surrounding the project and consequently deem it unworthy of support.

Vandenberg personnel also felt that involving stakeholders by working with existing community boards was particularly useful. While they also expressed concerns about using a board of appointed officials (CAC) as community representatives, they doubted that individual stakeholders would have much reason to participate, given the distance between the AFB and the nearest community.

The CAB and CAC board members interviewed also felt the stakeholder process was a success. Board members identified a need for more opportunities for citizen involvement, although they did not think this would have changed the outcome. Overall, they felt that the issues were reasonably straightforward and that the project as a whole did not require intense review. In addition, these interviewees felt that the base's reputation in the community helped alleviate any concerns that may have emerged otherwise. As such, the CAC and CAB boards did not focus extensively on the ENVVEST/XL project.

Appendices

Appendix A

List of Interviewees by Project

Andersen

Abrahamson, Wally	Community Advisory Committee
Barwick, Brian	EPA Region V
Birnbaum, Nancy	EPA Headquarters
Hogberg, Kirk	Andersen Project Lead
Kellison, Jim	Community Advisory Committee
Klein, Bill	Community Advisory Committee
Ronchak, Andrew	Minnesota Pollution Control Agency
Van Zee, Ron	Community Advisory Committee
Weissner, Carol	Community Advisory Committee

Atlantic Steel

Brandon, Mike	Chairman, Home Park Community Improvement Association
Cohen, Dan	City of Atlanta, Principal Planner, Current Planning
Cooper, Connie	Facilitator (Cooper / Ross Consulting)
Glenn, Michelle	EPA Region IV
Hagar, Brian	Sierra Club
Leary, Brian	Project Lead, CRB Realty (Jacoby)
Powell, Shannon	Midtown Alliance
Roark, Randy	Urban designer and manager of the Home Park Charrette (Georgia Tech)
Repogle, Mike	Federal Transportation Director, Environmental Defense Fund
Smith, Bernadette	Home Park Community Improvement Association
State, Tim	Home Park Community Improvement Association
Torma, Tim	EPA Headquarters

CK Witco

Barnhart, Jesse	CK Witco employee and union leader
Birnbaum, Nancy	EPA Headquarters
McKnight, Jim	Pleasants County Resident

Peters, Eric	Tyler County Resident
Pontiveros, Lucy	West Virginia Division of Environmental Protection
Termini, Beth	EPA Region III
Tucker, Okey	former CK Witco Project Lead

ExxonMobil

Bass, Thomas	West Virginia Division of Environmental Protection
Bledsoe, Barry	Community Liaison Panel
Cain, Steve	Community Liaison Panel
Fantasia, Nick	Stakeholder
Fowlkes, Roberta	Facilitator
Gribben, Karen	Community Liaison Panel
Hannig, John	ExxonMobil Project Lead
McDaniel, Bruce	Community Liaison Panel
Swope, Ron	Community Liaison Panel
Yarmechuk, Marcella	Community Liaison Panel
Watson, Norma	Community Liaison Panel
Pennington, Melissa	EPA Region III

HADCO

Blanchette, Ron	HADCO
Gotschall, Will	World Resources Corporation
Maroukian, Mark	New York Department of Environmental Conservation
Marschner, Ken	New Hampshire Department of Environmental Services
Nadler, Larry	New York Department of Environmental Conservation
Sullivan, Jim	EPA Region II
Wilmot, Lee	HADCO

Intel

Crumbaker, Jo	Maricopa County Bureau of Air Pollution Control
Knox, Barbara	Community Advisory Panel
Larsen, Jim	Intel
Lemmon, Jim	Community Advisory Panel

Matusow, Dave	Community Advisory Panel
McKaughan, Colleen	EPA Region 9
Sampson, Pat	City of Chandler
Workman, Gregg	Arizona Department of Environmental Quality

New England Universities Laboratories

Balf, Tom	Nexus Environmental Partners (formerly ML Strategies)
Brannegan, Dan	Pfizer, Inc.
Deady, Karen	Director, Environment, Health and Safety, University of Massachusetts, Boston
DelaHunt, John	The Colorado College
Frantz, George	EPA Region I
Hawkins, George	Stony Brook Watershed Association
Howard, Suzanne	Project Lead, Boston College
Butler, Kathleen	Community resident, University of Vermont
Kelly, Anne	EPA Region I
Miller, Jim	Massachusetts Department of Environmental Protection
Shoener, Ed	Ecologia
Stuart, Ralph	Project Lead, University of Vermont
Thomann, Wayne	Duke University
Thompson, Fay	University of Minnesota
Walker, Sherri	EPA Headquarters
Zehra Schneider Graham	University Project Lead, University of Massachusetts, Boston

Vandenberg

Dougherty, Jack	Santa Barbara, CA resident
Higgins, Mike	Waste Water Authority, Santa Barbara County
McVay, Monty	Vandenberg Project Lead
Satillo, Mark	Environmental Defense Center
Segal, Sarah	EPA Region IX

Appendix B

Research Method

For each case, principal parties to the stakeholder process were interviewed using a semi-structured interview protocol. The interviews were designed to clarify the actors and events of each case, and to explain not only what conditions existed, but how and why they emerged. Interviews were conducted with participants in the stakeholder involvement process, including citizen representatives, environmentalists, project sponsors, local and state officials, and EPA officials. A list of interviewees is presented in Appendix A.

In each interview, the research team explored the interviewee's:

- ! perceptions as to the organization of the process,.
- ! involvement in the process, including their decision to participate, how they were invited to participate, and any involvement in their community or with the facility before this process began;
- ! perceptions as to whether the stakeholder participation process was well designed and implemented, including whether it afforded the stakeholder a real opportunity for input, whether the level of involvement and the timeframe of involvement were appropriate, and whether there were any barriers to effective participation;
- ! perspectives as to what the stakeholder process was trying to accomplish, including whether the process goals were appropriate and successfully accomplished, and whether the process focused on the right issues, addressed those issues adequately, and brought together the right people in the process to effectively represent stakeholder interests;
- ! roles of the stakeholders, and that of the company and EPA, in the development of the Project XL agreement, including whether the roles were developed by the company alone or in conjunction with other stakeholders, the stage in the decision making process at which stakeholders became involved, whether the roles were consistent with what the stakeholders envisioned when they decided to participate, and the effectiveness of these roles; and
- ! overall satisfaction of stakeholders with the stakeholder involvement process, including their perceptions about the major strengths and weaknesses of the stakeholder involvement process and suggestions for improving the process.

The interviews also explored the interviewee's perspectives concerning

- ! how technical issues were addressed in the stakeholder process and if this enabled technical information to be understandable to all participants;

- ! the degree to which differences in interests or perspectives existed between stakeholders and how any differences that did exist were addressed;
- ! how meetings (if held) were managed, including issues of setting the agenda and groundrules, the use of a facilitator and that person's effectiveness, and whether these meetings provided a good opportunity for dialogue;
- ! the outcomes of the process, and whether the stakeholder felt that they had an impact on the outcome, how satisfied they were with the FPA, and what outcomes were most and least satisfying to them and their constituency; and
- ! if the XL project was in the implementation phase, what had been accomplished since the signing of the FPA, how the stakeholders had continued to be involved, and the effectiveness of that involvement

Michael Elliott conducted the evaluation, with the assistance of Tony Giarrusso and Alison Nichols. Michael Elliott is Principal of the Southeast Negotiation Network, an Associate Professor of City Planning and Environmental Policy at Georgia Tech, and Co-Director for Research with the Consortium on Negotiation and Conflict Resolution. Tony Giarrusso and Alison Nichols are research assistants with the Georgia Institute of Technology's City and Regional Planning Program.

Appendix C

Glossary

Brownfield: Abandoned, idled or under-used industrial and commercial facilities or sites where expansion or redevelopment is complicated by real or perceived environmental contamination.

Clean Air Act: The Clean Air Act 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 to protect public health and the environment.

Clean Water Act: The Clean Water Act 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 water.

Conditional Delisting: Use of the petition process to have a facility's toxic designation rescinded.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): CERCLA is the legislative authority for the Superfund program which funds and carries out EPA's solid waste emergency and long-term removal and remedial activities. These activities include establishing of the National Priorities List (NPL), investigating sites for inclusion on the list, determining their priority, and conducting and/or supervising cleanup and other remedial actions.

Comprehensive Operating Permit (COP): A COP replaces existing permit systems with a single operating and regulatory permit for a facility that encompasses Federal, State and local permitting requirements.

F006 Listing: A hazardous waste that is wastewater treatment sludge produced from nonspecific electroplating processes and operations.

Final Project Agreement (FPA): The FPA outlines the details of the project and each party's commitments. The project's sponsors, EPA, State agencies, Tribal governments, other regulators, and direct participant stakeholders negotiate the FPA.

Hazardous Air Pollutants: Air pollutants that are not covered by the National Ambient Air Quality Standards but that may have an adverse effect on human health or the environment.

Hazardous Waste: By-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed. Hazardous waste possesses at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), or appears on special EPA lists.

National Ambient Air Quality Standards (NAAQS): Standards established by EPA under the Clean Air Act applicable to outdoor air quality throughout the country.

National Priorities List (NPL): EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under Superfund.

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, petrochemical smog, and acid deposition.

Non-attainment Area: A designated geographic area considered to have poorer air quality than the national ambient air quality standards as defined by the Clean Air Act. An area may be a non-attainment area for one pollutant, and an attainment area for others.

Particulates: Fine liquid or solid particles such as dust, smoke, mist, fumes, or smog, found in air or emissions.

Point Source: A stationary location or fixed facility from which pollutants are discharged.

Pollution Prevention: Identifying, altering, or eliminating areas, processes, and activities that create excessive waste products or pollutants.

Potentially Responsible Party (PRP): A PRP is the owner or operator of a contaminated site, or the person or persons whose actions or negligence may have caused the release of pollutants and contaminants into the environment, requiring a remedial action response under CERCLA or SARA. The PRP is potentially liable for the cleanup costs in order to compensate the government for its remediation expenditures.

Printed Wiring Boards (PWB): A device that provides electronic interconnections and a surface for mounting electronic components.

Production Unit Factor (PUF): A production-based performance measure.

Resource Conservation and Recovery Act (RCRA): RCRA authorizes EPA to control hazardous waste from "cradle-to-grave." This includes the generation, transportation, treatment, storage and disposal of hazardous waste. RCRA also sets forth a framework for the management of nonhazardous wastes and for 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.

Sludge: A semi-solid residue from any of a number of air or water treatment processes.

Superfund: The program operated under the legislative authority of CERCLA and SARA that funds and carries out EPA's solid waste emergency and long-term removal and remedial activities.

Toxic Release Inventory (TRI): Database of toxic releases in the United States compiled from SARA Title II Section 313 reports.

Transportation Control Measure (TCM): TCM encompasses elements of both "transportation system management" (TSM) and "transportation demand management" (TDM). TSM generally

refers to the use of low capital intensive transportation improvements to increase the efficiency of transportation facilities and services. These can include carpool and vanpool programs, parking management, traffic flow improvements, high occupancy vehicle lanes, and park-and-ride lots. TDM generally refers to policies, programs, and actions that are directed towards decreasing the use of single occupant vehicles. TDM also can include activities to encourage shifting or spreading peak travel periods.

Variance: Government permission for a delay or exception in the application of a given law, ordinance, or regulation.

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.