

US EPA ARCHIVE DOCUMENT

Appendix 1: Case Studies

This appendix provides case studies using Constructive Engagement and are organized according to the type of process. The collection is diverse; each case study illustrates a unique set of issues and lessons. Taken as a whole, themes emerge and you can identify what you can expect to accomplish through successful Constructive Engagement.

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Lucent Technologies Microelectronics Group's Local Environmental Advisory Group: A Company Takes the Advisory Group Plunge—Allentown, Pennsylvania

Lucent Technologies' Microelectronics Group has run Local Environmental Advisory Groups (LEAGs) at its facilities throughout the world since 1996, including its Allentown, Pennsylvania plant. A LEAG provides input and recommendations to a facility about its environmental management plans and results. This case illustrates:

- *How a company benefits from including both friends and adversaries in its community involvement group.*
- *How a company's disclosure of sensitive information to a group may be less scary than expected and can help build trust.*
- *How skeptical activists were recruited and then continued to participate.*
- *How the LEAG maintains high attendance and enthusiasm.*

Background

Lucent Technologies' Microelectronics Group developed a business-wide Environmental Management System (EMS) as part of its efforts to meet the voluntary International Organization for Standardization (ISO) 14001 standards, which require companies to incorporate environmental management systems into all aspects of their operations. At the same time, through implementation of the EMS, Lucent sought to participate in EPA's Project XL (XL stands for "Excellence and Leadership"). Project XL is an alternative-compliance program which offers regulatory flexibility in exchange for 1) a plan for achieving "superior environmental performance," i.e., better results than full compliance with existing regulations would produce, and 2) stakeholder involvement in developing and implementing the company's participation plan.

According to EPA's Steve Hoover, it took a long time and considerable pressure from EPA and the Pennsylvania Department of Environmental Protection before key staff at Lucent fully grasped the concept of public involvement as expressed in Project XL. Once they realized it entailed much more than one-way communication to the public, "Lucent finally got the message and started to ask exactly

what we meant by community involvement,” said Hoover. “....they finally got on the stick and developed the LEAGs.”

Goals

The Allentown LEAG is one of Lucent Microelectronics’ most successful advisory groups. According to its charter (which was discussed and accepted by the members), the group’s purpose is to “gather a diverse group of community representatives and facility personnel in order to exchange ideas and respond to concerns regarding environmental activities at the facility.”

Participants

The LEAG has 20 members, representing a diversity of views. Included are three Lucent employees—the manufacturing director and two union representatives—who do not participate in making group recommendations. The union representatives were included at the urging of the facilitators. Other members include environmentalists, business people, scientists, civic group members, emergency response professionals, and facility neighbors. Members are only asked to serve

for one year, but the vast majority have renewed their membership. The LEAG has its own member selection committee, although company personnel chose the initial members from people who responded to an open invitation in local newspapers.

Guidelines from Lucent Microelectronics headquarters ask LEAG organizers to create a diverse group that includes detractors as well as friends. Initially, facility managers, such as Environment, Health, and Safety Manager Debra Wenger, were nervous about inviting potential adversaries, such as vocal environmental activists, into the group. Eleanor Winsor, lead facilitator from the firm Winsor Associates, helped managers overcome their fears. Wenger now feels that it is better to have potential foes at the table rather than outside the process. Their participation has proven valuable, stimulating useful discussions, rather than making meetings more difficult.

The environmental activists in the group also had concerns to overcome. Tom Kerr of Wildlands Conservancy explains, "I was skeptical in the beginning, but not enough to keep me away." He worried about being "manipulated," but this has not been his experience. Pat

Smith of Clean Water Action said “I thought it would be another dog-and-pony show,” but found otherwise.

“They’re trying to reach out to the community, be open about what they’re doing . . . I believe Lucent is honest in saying they want to simplify permitting and regulatory processes, but also move towards environmental impact improvement.”

While members are chosen to represent a broad range of interests and affiliations, they officially participate in their individual capacity. The charter contains a ground rule, “Members should exchange relevant information with non-group constituents,” but there are no formal mechanisms for implementing this rule.

Procedures and Issues

The LEAG usually meets bimonthly. Ground rules are established in the charter, and an independent facilitator is present. The meetings are informal and fairly amicable, although members sometimes openly disagree with each other. Meetings are open to the public, with time set aside at the end of the meeting for observers to speak.

Originally, the two-and-a-half hour meetings began at 7:00 pm, with no meal served. However, members complained they didn't have time for dinner, so the meeting time was changed to 6:00 pm, and a light supper was offered at 5:30 pm. Ilse Stoll, a plant employee designated as LEAG coordinator, said she was initially concerned that providing a meal might look like Lucent was "buying" the participants. However, she now sees the meal as a form of customer service, and finds that the meal puts members in a better frame of mind to listen and provide input.

The group discusses issues including the EMS, chemical use and the Toxics Release Inventory, some air quality issues, and water consumption and discharge. LEAG members also took a plant tour in which employees pointed out aspects of the facility that could potentially affect the environment.

Role of the LEAG

The role of the group is strictly advisory. Jerry Fields of PPL Inc. (formerly Pennsylvania Power and Light) says members “review and evaluate [Lucent’s] ideas . . . We’re their conscience, though they’re already very conscientious. We’re a check on their thinking.”

Facilitator Eleanor Winsor explains, “The company keeps control of the decision-making process. No one questions that or objects to it.”

Challenges

Public disclosure. According to Eleanor Winsor, one challenge was Lucent’s nervousness about opening up to the public. “We did a lot of hand-holding to develop their comfort level.” A major turning point came when the plant had a minor chemical spill, and, according to Winsor, “they were panicked.” Winsor continues, “We worked with them, and when they shared the information with the LEAG, members responded, ‘Well, it looks like you handled things well.’ Lucent couldn’t believe it was such a non-issue. The LEAG offered suggestions and asked ‘how will you prevent this in the future?’ They were very constructive.” Member Tom Kerr concurred: “It was in

effect [Lucent] blowing the whistle on themselves. If my son came to me upset and said, ‘I got a B-B gun and shot a bird,’ the effect of him telling me would be powerful. It’s kind of the same . . . It’s healthy for people to admit their mistakes, to admit they’re human, and invite us to help keep them clean.”

So far, the members have not requested information that the company considers too sensitive to reveal. The charter stipulates that “Issues associated with confidential business information or trade secrets, personnel information or legal questions will be outside the group’s scope of discussion.” Overall, however, sharing information openly has been an important trust-builder. One member recently revealed that he had asked for certain information early on just to test whether the company would provide it! (They did.)

Technical information. Many group members found it difficult to digest and respond to complex technical information. Member Tom Kerr has dealt with this mostly by relying on other group members with more technical expertise. He originally hoped Lucent could use less technical language, but acknowledges that might be costly. Member Pat Smith remarked, “I can always raise

my hand and say I don't understand" and receive a better explanation. She pointed out that using plain English, taking time to explain, using charts and visuals, and offering plant tours have all helped.

Publicity. Smith points out a different area in need of improvement: "I'd like to see more press about what's happening at Lucent." The goal of heightening public awareness about pollution and its prevention would be served by such publicity. Smith also notes that other companies might be inspired by Lucent's example to involve the community in their environmental planning.

Costs

Most LEAG costs are absorbed by Lucent. The plant manager, Nick Khoury, attends most of the meetings. The two union representatives participate, and others from the company, such as environmental engineers, attend when they are needed to make presentations and answer questions on particular topics. Other costs include a newspaper ad for each meeting, refreshments, the facilitator's fees, and the time of one Lucent employee, Ilse Stoll, who serves as coordinator and point-of-contact for the LEAG. Stoll does considerable between-meeting

work including: 1) reminding members of upcoming meetings and action items, 2) arranging for catering and room set-up, 3) reminding them to read minutes, and 4) regularly thanking members for their participation.

Member costs essentially consist of the time to attend meetings, read minutes, and do follow-up. A few members give additional time on the membership committee, and occasionally activities are planned which require some preparation. For example, one member was asked to give a presentation about his organization.

Outcomes

The LEAG has provided many benefits to the company.

- According to Debra Wenger, the LEAG is “building a good will account with the community . . . you hope you never have to call upon it. It’s been a challenging growth exercise for our organization . . . It broadens our perspective and keeps us on our toes.”
- It helps keep environmental issues at a high priority for the company, according to Wenger.

Members cite different benefits for themselves:

- For members, the opportunity to learn about Lucent's actions—and to hear other members' reactions—is an important participation benefit. The plant is a major business in Allentown, so its actions can affect the whole community. Specifically, Pat Smith of Clean Water Action sees her participation as furthering the goal of greater public awareness of industrial facilities and the toxics they generate. Dan Koplisch of the Allentown City Water Department and Jerry Fields of PPL Inc. both take interest in Lucent's innovative way of working with regulators on environmental compliance (particularly through EPA's Project XL) and its approach to working with the public. They are also interested in the plant as a major customer of water and power. Tom Kerr of the Wildlands Conservancy participates in part to learn what makes some companies more inclined than others to balance environmental considerations with profit motives.
- Members also gain a chance to network with other influential people, and in some cases, to promote their organizations.

- Finally, members derive satisfaction from seeing their input taken seriously.

The LEAG has also contributed to substantive changes:

- With the help of the LEAG's input, the company is reducing the usage of water and water-treatment chemicals, thereby reducing discharges of treated water into the nearby Lehigh River.
- The LEAG discussed and agreed to the plant's Final Project Agreement for Project XL. Under the agreement, the plant will conserve large amounts of water, while benefiting from a new water discharge permitting procedure.

Success factors

Several factors have contributed to the LEAG's success:

- Although the EMS establishes a few basic requirements for all LEAGs, they are otherwise locally controlled. For example, each LEAG selects its own members, establishes its own charter, and chooses what issues to address.

- The company's willingness to invite environmental activists has contributed to a credible balance of views on the LEAG. However, all members must be local, according to the company-wide guidelines for LEAGs. Thus, any representatives of national environmental organizations must be from a local chapter. According to Lucent's Ted Polakowski, this is intended to ensure that the representative shares a concern for the community as a whole, not just a particular issue.
- Both the professional facilitator and Lucent's LEAG coordinator (Ilse Stoll) have been crucial to the smooth functioning of the LEAG. The facilitator keeps the meetings on track, encourages the plant to be open with information, offers advice on membership, and helps build meeting agendas—all in the interest of an open, fair process and building trust among all parties. Ilse Stoll's between-meeting contacts and reminder calls may be the reason for regular attendance of over 90%, and for generally high enthusiasm and morale.
- The top management of the plant is as committed to the LEAG as the environmental staff, showing the LEAG that the whole plant is committed to environmental

responsibility. According to facilitator Eleanor Winsor, plant manager Nick Khoury actively participates by listening, interacting, and treating the members as peers. Winsor feels this is crucial: “You have to have the commitment at the top—it’s extremely important, and it has to be sincere. If there’s no commitment, people see right through it.”

Note: The charter for Lucent’s Allentown LEAG is included in Appendix 4.

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- Steve Hoover, EPA Headquarters, August 12, 1998.
- Tom Kerr, LEAG member, July 13, 1998.
- Ted Polakowski, Corporate Environmental and Safety Officer, Lucent Microelectronics Group, July 1, 1998.
- Pat Smith, LEAG member, July 14, 1998.
- Ilse Stoll, LEAG coordinator, Lucent Allentown plant, July 20, 1998.

- Debra Wenger, Environment, Health, and Safety Manager, Lucent Allentown plant, July 9, 1998.
- Eleanor Winsor, facilitator, July 22, 1998.
Rohm and Haas' Bristol Plant's Community Advisory Committee: Promoting Communication Between a Company, its Workers, and the Community—Bristol, Pennsylvania

The Community Advisory Committee (CAC) at Rohm and Haas' Bristol plant convened in 1986 after a series of events led leaders to conclude that the company needed to rethink how it was communicating with the public. Since then, the CAC has functioned as a component of the plant's Community Relations Program. This case study illustrates:

- *How a company-initiated collaborative process serves as an important link between the company, workers at the plant, and the surrounding communities.*
- *How a company developed internal mechanisms to communicate more effectively about community health, safety, and environmental concerns.*

Background

The two communities of Bristol and Croydon border Rohm and Haas' Bristol plant in eastern Pennsylvania. The chemical company's corporate office is in Philadelphia; it has 22 subsidiaries located in the United States and 27 others throughout the world. The Bristol plant is one of the company's largest facilities, with both a manufacturing and a plastics research operation. The materials manufactured at the Bristol plant are commonly used by other companies in their production of consumer goods.

The Bristol plant opened in 1917 and has a long history with the surrounding communities. While a large portion of its workforce resides in the area, the relationship between the plant and the local communities has, at times, been characterized by a high degree of conflict. Contentious labor-management relationships existed in the early 1970s. In 1983, the company and the local communities became involved in a highly publicized dispute over waste disposed from 1952 to 1975 in a Bristol site landfill. Cleanup of the landfill followed, but

the company's credibility was questioned during the process.

The events at the Bristol plant, and at other Rohm and Haas facilities in the U.S., led company leaders to believe they had reached a crisis point and needed to examine company practices for managing community relations. The result of their effort was a shift within Rohm and Haas, changing the way the company works with neighboring communities and in how it involves workers in the process.

Goals

The Bristol plant established its Community Relations Program with several goals in mind. High-level managers, both at the corporate and local levels, want the plant to be seen as a positive force and valued member of the community. They believe there is a direct correlation between how the company is perceived by the community and its economic performance. The company depends on community cooperation to attract employees and to carry out many of its activities. Managers also believe that the company can serve an important role by providing information to the community.

The Bristol plant's CAC was created to help the company achieve the goals of its Community Relations Program. The CAC meets monthly, and the meeting agenda is developed in advance by CAC members and Rohm and Haas' public affairs manager. The Bristol plant's CAC is chaired by the mayor of the Bristol Borough, and includes a number of local elected officials. Participants also include representatives from local and regional groups such as the League of Women Voters, the Chamber of Commerce, and the Croydon Civic Association. Although a community representative serves on the committee, the group is intended less as a forum for citizens than for identifiable interest groups. Environmental groups are not represented on the CAC, but the public affairs manager says this is because there are no environmental organizations in the immediate area.

When the CAC was initially formed, plant managers selected the committee members. Now the participants themselves elect new representatives when their three-year terms expire or when a member leaves the group. The Bristol Plant Manager and the Manager of Public Affairs play active administrative roles in the advisory group.

Role of the CAC

The by-laws of the CAC state that it serves as an advisory body. According to the Manager of Public Affairs, the CAC's role includes identifying key community issues and providing the plant with an opportunity to talk about its activities. Managers at the plant view the CAC process as a way to discuss issues in a positive, informal manner. Managers stress that the CAC is not part of the plant's management structure and does not rule on managerial decisions. The company wants to avoid having the community determine its priorities, but wants the community to be assured that the company is acting with their concerns and interests in mind.

The Bristol plant's CAC addresses issues raised by participants and also responds to issues presented by the company. The CAC has discussed a proposed solid waste incinerator, remediation of a landfill, and the location of a truck terminal. The truck terminal issue was brought to the CAC by the company after a community attitude survey identified it as a community concern.

Managers at the Bristol plant participate in CAC meetings, update the CAC on current affairs, and lend

their administrative support to the CAC. Opinions vary on the degree to which the company considers and responds to the CAC's input. Plant managers say that generally the CAC's comments are a factor in company decision making. When possible, plans are modified to meet CAC concerns. The company, however, has not always acknowledged when the CAC has influenced its decisions.

Outcomes

There have been several outcomes of the CAC process:

- *The company's positive experience with its Community Relations Program has led to more openness with the community and its workers. The CAC has given managers at the Bristol Plant a better sense of community issues, including what information the surrounding communities need, how the company can provide the needed information, and what it takes for the community to feel comfortable with the company's activities. Managers at the Bristol Plant report that they are now better equipped to anticipate community concerns and, as a result, address them in a proactive*

manner. This approach has been part of an overall culture shift within the company.

- *The Bristol plant developed internal communication mechanisms to make it easier for the company to know and respond to community concerns.* Managers are alerted directly about any CAC issues that relate to their operations. The Plant Manager holds monthly meetings with employees to relay the concerns of the CAC and discuss other community relations issues. Departmental and staff meetings are also used to communicate information about community needs and concerns.
- *Employees of the Bristol plant serve as ambassadors to the community.* Plant employees play an important role in facilitating communications between the company and the surrounding communities. Because workers, as community members and employees, serve in a dual role, they serve as conduits for information about plant activities and community issues.
- *The CAC has made recommendations for how the company could work with the community.* For example, the CAC asked the company to inform the community about the incinerator issue. To accomplish this task, the

CAC suggested that the company run ads in the local paper to explain issues over which there was public confusion. Another example is that, at the suggestion of the CAC, the company instituted a policy of contacting the township and police dispatcher whenever a situation arises that could prompt complaints, concerns, or questions from the surrounding communities.

The Bristol plant conducted surveys in 1985, 1988, and 1990 to assess long term community attitudes about the plant. Survey results are inconclusive as to whether community relations activities improved public perceptions. Measuring the impact has been difficult when a general distrust of the chemical industry exists and more public attention has been focused on environmental issues in recent years. Also, it is uncertain whether relations would be worse if the Bristol plant's community relations activities had not taken place. Nonetheless, the Bristol plant's efforts have led to better communication between the company, its workers, and the community.

Source

This case study was adapted from Caron Chess, Michael Greenberg, Michal Tamuz, and Alex Saville,

“Building Trust from the Inside: Behind the Scenes of the Risk Communication Program of Rohm and Haas’ Bristol Plant,” Environmental Communication Research Program, Rutgers University, November, 1992.

Shell Oil Company's Community Advisory Panel: A Friendly Sounding Board—Martinez, California

Since 1990, Shell Oil's manufacturing facility in Martinez, California has operated a Community Advisory Panel (CAP), which was originally formed to ease the permitting process for a large facility expansion. The group continues to serve as a vehicle for Shell to address community concerns. This case addresses the following issues:

- *How a CAP can serve as a sounding board for the company's plans and persuade the company to make positive changes, even if it is not inclusive enough to resolve all controversy surrounding a plant.*
- *How a CAP might shy away from taking formal positions or recommendations.*
- *How a company learned to be more forthcoming about sensitive information with its CAP.*

Background

Shell thought it had a good reputation in Martinez, but certain factors showed that its good standing in the community was precarious. Foremost, Shell had a large oil spill in 1988, leading to protests by environmental activists and heightening community environmental awareness. In addition, numerous professionals were moving into Martinez, and this population had less appreciation than the existing working class population of Shell's role as a large employer.

In the early 1990s, Shell made plans for a billion-dollar upgrade and expansion to launch its Clean Fuels Project, a facility to produce reformulated fuel. Shell feared this could lead to community protests and anger. A county supervisor suggested the idea of a CAP, and at the same time, the Chemical Manufacturers' Association was promoting the idea of CAPs in general. The idea sat well with Shell managers and their desire to be leaders in the environmental arena.

Goals

The goal of the CAP was to improve company relations with the community through two-way communication. The CAP's main function is to sensitize the company to

troubling or important community issues, and to serve as a sounding board for messages that Shell wants to relay to the rest of the community.

Participants

Shell selected participants to create a cross-section of the local community. The CAP has 12 members, including a scientist, two environmentalists, a businessperson, a school board member, two Shell retirees, an employee of the County, a high school student. The group also includes the plant manager and other managers from the facility. The three neighborhoods surrounding the plant are represented. Initially, five participants were selected by the mayor and the county supervisor, then those five recruited the other seven.

Role and Procedures of the CAP

The group has an advisory role and operates informally and amicably. The group agreed to keep all meetings closed to the public, to encourage honest communication. Shell has been very open with communication, and has spent considerable meeting time presenting information to the other members. The CAP has a professional facilitator. Overall group dynamics have been congenial and trusting, and consensus has come easily.

Decisions are intended to be made by consensus, but in practice the group does not generate formal recommendations or positions. At one meeting, the members present reached a consensus decision to formally oppose an environmental group's proposal for a county-wide "community inspector" position. During a later public hearing, Shell cited this consensus, and CAP members who had not been present for the decision reacted angrily. Another member, who had been present, spoke up at the public hearing and said she changed her mind on the matter. After this uncomfortable chain of events, the CAP decided to avoid taking positions. Instead, they express a variety of views, questions and

concerns, and the company responds based on all of the feedback.

The CAP has urged Shell to hold several public meetings. CAP members attend, but do not actively participate. There are no frequently used, formal mechanisms for CAP members to obtain input from the broader community.

Costs

Shell has not kept separate records of CAP costs, but direct costs include food for meetings, photocopying, and the facilitator's fees.

Issues Addressed

Central to CAP discussions are environmental issues, such as the Clean Fuels Project facility and discharge of selenium into a strait. However, the group also addresses other issues, like company philanthropy and ways of effectively communicating with the community.

Challenges

The CAP has coped with several challenging situations.

Disclosure. In one case, the company did not fully tell the CAP of a controversy surrounding its vapor recovery system, until the controversy became public. After the CAP complained, the company learned to be more forthcoming with the CAP about potentially controversial issues.

Technical information. Another challenge is the wide discrepancy among members in understanding technical information. Some members rely on their more knowledgeable colleagues to detect problems and raise concerns. Other members seek assistance from people they know outside the CAP, and Shell has a standing offer to pay for an independent technical expert.

Attendance. Maintaining participants' interest has been difficult, so the CAP voted to add new members to raise enthusiasm.

Communicating with the broader community. In the beginning, the company hoped that CAP members would actively communicate with the broader community to elicit the community's views. However, CAP members feel it is inappropriate to serve as conduits for

communication in this manner, worrying that they may be seen as company spokespersons.

Failure to address some viewpoints. Several local environmental groups have continued to press the company for greater accountability. These groups are not represented in the CAP. While the CAP represents a range of segments of the community, it does not aim to build consensus across the full range of interests in the community or to draw in Shell's strongest detractors. Rather, it functions harmoniously and informally to provide community input, serve as a sounding board for the company's ideas, and improve Shell's communication and problem solving with the community.

Outcomes

The CAP can claim a number of accomplishments:

- *The group persuaded Shell to hold a public meeting at an early stage of planning for the Clean Fuels Project expansion, and provided input on various aspects of the expansion, such as landscaping and traffic flow.*

- *The CAP helped bring about an annual “report card” meeting, where representatives of all the agencies regulating Shell gave a public presentation on Shell’s environmental performance.*
- *The CAP helps Shell communicate to the public more effectively. The CAP works with Shell on brochures and presentations to make sure these communications are easy to understand and do not sound defensive.*
- *The CAP has encouraged Shell to target more of its philanthropic giving to the local community, including schools.*
- *The CAP played a moderating role in a local dispute, when a neighbor of the plant complained about asphalt being spread on the ground near the plant (an erosion-control practice). With nudging from the CAP, the company agreed to restore the area by removing the asphalt.*
- *The CAP helps the company welcome and use community input rather than fearing it. Shell managers say they think about the CAP’s reaction—and, by extension, the public’s reaction—before making major*

decisions. Shell managers also say they are now “less afraid of the public.”

Success Factors

A number of factors have helped make the CAP successful.

- The commitment and participation of the facility’s top management have been key.
- A professional facilitator and the ability of group members to resolve internal conflicts have also been helpful.
- Shell’s willingness to pay for an independent technical expert has increased trust.
- Finally, it was beneficial to form the CAP at a time when there was not a crisis—this made building good relations easier.

However, the exclusion of environmental representatives defines the limits of the CAP's ability to resolve important issues.

Source

This case study was adapted from Nevin Cohen, Caron Chess, Frances Lynn, and George Busenberg, "Improving Dialogue: A Case Study of the Community Advisory Panel of Shell Oil Company's Martinez Manufacturing Complex." New Brunswick, NJ: Center for Environmental Communication, Rutgers University, 1995.

Sybron Chemicals' Neighborhood Involvement Council: Building a Relationship With Neighbors—Birmingham, New Jersey

The Sybron Chemicals Neighborhood Involvement Council (NIC) was established in 1989, a year after a series of incidents compelled the company to examine its environmental practices and relationship with the surrounding community. This case study illustrates:

- *How a company overcame a crisis of public confidence through its community relations efforts.*
- *How a community engagement process was used to build a lasting relationship between a company and its neighbors.*
- *How a company narrowly defined who it considers to be a community stakeholder, and how this approach affected the community engagement process.*

Key Events

Sybron Chemicals, a manufacturer of specialty chemicals, has 17 facilities worldwide. The company's headquarters

and one of its plants are located in Birmingham, New Jersey, a semi-rural community 20 miles east of Philadelphia.

It was at the Birmingham facility in October of 1988 that Sybron accidentally released forty pounds of ethyl acrylate, an extremely strong-smelling chemical, into the air. Within two hours, citizens began calling local officials to complain about the smell. Several area residents went to the hospital for treatment of eye irritation. Because the local fire department lacked information about the situation, they evacuated 60 residents from their homes and took them to the local fire station. This incident was featured prominently on the local news the next day.

Two other incidents occurred shortly after the ethyl acrylate release. The following day, another spill occurred. Although it was much smaller, those living near the facility could smell the chemicals. Several months later, there was a flash fire at the plant in the middle of the night. Two workers were severely injured. Local residents were awakened by the sound of medical evacuation helicopters. Together, these three incidents profoundly changed the company's image in the community.

Sybron had maintained a low profile in the community, but now found itself faced with a crisis of public confidence. Township officials convened public accountability sessions, and members of the public called for the plant to be closed. A group of citizens traveled to Washington, D.C. to speak with elected officials about their health and safety concerns. New Jersey's Senator Lautenberg called for an investigation of the plant. On the state level, the New Jersey Department of Environmental Protection (NJDEP) scrutinized the company's regulatory compliance, and demanded that it conduct an environmental risk assessment.

Deciding to Collaborate

As a result of these events, the Vice President of Manufacturing convened a team of top managers to develop and implement a community relations program. The team hired an outside public relations consultant to advise them on risk communication and management issues. In working with the consultant, the team came to believe the company's survival was partially dependent on developing a positive relationship with the surrounding community. A community relations program was viewed

as necessary to achieve the company's overall goal of staying in business and growing.

The goal of Sybron's Community Relations Program is to build a relationship with the community; the company wants to demonstrate that it cares about its neighbors. To this end, Sybron's Community Relations Program has several parts: the Prompt Inquiry and Notification System (PINS); the Neighborhood Involvement Council (NIC); community surveys; a quarterly community newsletter; plant tours and open houses; and training for community volunteers in odor identification and reporting. Company managers consider all of the components integral to communicating with the community; the program as a whole is greater than the sum of its parts.

Participants

Sybron strictly defines its neighbors as the 600 residences located within 1.5 miles of the plant. Most residents of the lower-middle class neighborhood have lived there for years; some are workers at the plant. Eighty-five percent of the company's community relations efforts are targeted to this population. The company views them as the most

affected by plant activities and the most likely to impact its operations.

Sybron explicitly excludes environmental and activist groups from its Community Relations Program. Termed “anti-groups” by the public relations consultant, these groups fall outside of the company’s definition of a plant neighbor. Managers make a distinction between neighbors who need to know and outsiders who do not possess that right. The company believes that if it builds a close relationship with the neighborhood, the residents will act as a buffer between the company and environmental or other citizens’ watchdog groups. This approach is based on the theory that activist organizations are effective when they enter communities where there is no relationship between the community and the company or when the company lacks credibility within the community.

Convening the Process

In the summer of 1989, Sybron convened the NIC by inviting all of its PINS program subscribers to join. Eleven people attended the first meeting and a core group of regular participants soon developed. Over time, the council has grown in size, partly because the first elected

chairperson actively recruited members. The NIC was initially composed of senior citizens, but now more younger neighbors attend. The Council also includes the chairperson of the Local Emergency Planning Committee. While Sybron extended invitations to the neighborhood's most vocal detractors, none of them became NIC members.

The NIC is a forum for two-way communication between the company and its immediate neighbors. Two or three managers attend every meeting. The company goes to the NIC when it wants to present information and learn of neighborhood opinion. When NIC members have concerns about plant operations, they bring issues to NIC meetings or contact managers directly. Members of the NIC have developed relationships with individual plant managers as a result of the meetings, and speak with them on an informal basis.

Outcomes

Since its establishment, the NIC has addressed a range of topics and has participated in a variety of activities. It has heard presentations from representatives of the municipal waste water treatment plant, the NJDEP, and Sybron's

regulatory compliance department. Members participated in a tour of Sybron's waste water treatment facility. The NIC brought up the issue of company trucks turning on private property, and has initiated projects to upgrade Sybron's ballpark and restore an historic schoolhouse on company property.

Sybron, according to its own estimates, has spent more than \$1,000,000 on environmental improvements and community relations activities since 1989. Managers and academics who have studied Sybron's Community Relations Program have made the following observations:

- *Sybron's Community Relations Program has been accompanied by meaningful plant improvements.* While the company increased communication with its neighbors, it also improved its performance through such initiatives as the odor abatement and safety upgrade programs.
- *Relationship-building has been the focus of Sybron's Community Relations Program.* Communication and trust have increased between Sybron and its neighbors as a result of the company's efforts. Individual

relationships have developed, and the two groups have been willing to learn from each other.

- *The NIC has been less technically oriented and less critical than originally anticipated.* Managers report that little discussion occurs over the substantive issues brought before the group. One manager expressed surprise that the Council raised so few questions about information presented on plant emissions. Another manager suggested that NIC members lack sufficient knowledge to probe the company's operations more deeply.
- *The amount of influence the NIC has on Sybron operations is difficult to ascertain.* It appears to be issue-specific, largely dependent on whether the neighborhood is directly affected by the plant's activities. Managers consider what NIC members say, but it is unclear what happens when interests diverge.
- *It is debatable whether the NIC operates independently from Sybron.* The NIC's brief guidelines were developed by Sybron's consultant before the NIC was established. Opinions differ as to whether the NIC chair or Sybron personnel actually conduct the meetings. The

Vice President of Human Resources, who serves as the secretary of the group, works with other managers to develop the meeting agenda. The chair of the NIC is not always consulted. Members do, however, raise issues that are not on the agenda and invite their own speakers to meetings. Both the company and NIC members brainstorm issues to be addressed in the coming year at the annual banquet.

Overall, Sybron managers consider the Community Relations Program a success. In 1990, Sybron received the Silver Anvil Award from the Public Relations Society of America for the best community relations program in the U.S. Additional factors contributing to the success of the program include the active involvement of senior managers, widespread support among company leaders, and sound advice from the public relations consultant.

Source

This case study was adapted from Caron Chess, Alex Saville, Michael Greenberg, and Michal Tamuz, "From Crisis to Credibility: Behind the Scenes of the Risk Communication Program of Sybron Chemicals,

Inc.,” Center for Environmental Communication,
Rutgers University, July, 1991.

Vulcan Chemical Company's Community Involvement Group: A Single-Issue Forum Expands—Wichita, Kansas

Vulcan Chemical Company's chlor-alkali manufacturing facility in Wichita, Kansas, has had a Community Involvement Group (CIG) since 1988. The group addresses community concerns about the environmental impact of the plant on the community. This case illustrates the following issues:

- *How activism can lead to a productive, cooperative dialogue between a plant and the community.*
- *How a group formed to address a specific, controversial issue can evolve to address environmental issues more broadly and proactively.*
- *How having many technically sophisticated members can be both an advantage and a disadvantage.*
- *How it is difficult for members of an ongoing input group to formally represent or communicate with constituencies.*

Background

Several events occurred in the late 1980s that indicated Vulcan was perceived as an environmentally unfriendly neighbor. An article was published in *USA Today* putting Vulcan on a "top polluters" list, and there was activism against the plant from the neighborhood and from environmental groups. When Vulcan planned to build a hazardous waste incinerator at the site, community opposition increased and the public meetings Vulcan held to explain the decision turned into shouting matches.

While the facility searched for a better way to respond to community opposition, a group of environmentalists discussed the possibility of a dialogue with the facility. One group recommended a facilitator, who worked with Vulcan to establish the CIG process (and later managed the meetings). Vulcan initially hesitated about creating a CIG but finally decided to take the leap. The then-assistant plant manager was a key champion of forming the CIG.

Goals

The CIG was originally formed to resolve the controversy surrounding the planned incinerator, and to improve relations with the community. Soon after the CIG formed, Vulcan dropped its plans to build the incinerator. The CIG's input may have contributed to Vulcan's decision, but the facility cited cost as the main reason for changing plans. At that point, the facility decided to continue the CIG because of other environmental issues, and because regulators looked upon it

favorably. The group revised its purpose to promoting two-way communication with the community and resolving concerns about the plant's environmental impacts.

Participants

A steering committee of key people from the incinerator controversy chose CIG members with scientific backgrounds who represented the immediate neighborhood as well as the broader Wichita community. The resulting membership of about a dozen active members includes representatives from the Sierra Club, the Wichita/Sedgwick County Health Department, the Kansas Natural Resource Council, industry, local universities, close neighbors, and residents of surrounding communities. The facility is usually represented by the Plant Manager, the Environment, Health, and Safety Manager, and occasionally the Manager of Public Affairs.

Selecting people with scientific or technical backgrounds has proven helpful, but also has some disadvantages. On one hand, the group has credibility with the company, and can make sense of the voluminous technical data. On the other hand, it is unclear whether the group truly represents the community. In addition, because not all members have equivalent expertise, the less-knowledgeable members have been more inhibited in expressing their views. Finally, discussions sometimes get mired in fine technical points.

Role and Procedures of the CIG

The CIG meets monthly, spending a great deal of time listening to facility presentations on technical issues, so the group can develop well-informed views. The group is advisory only. In principle, it operates by consensus, but it rarely generates formal recommendations or positions. Instead, the emphasis is on exchanging information and opinions and achieving mutual understanding. Group interactions are generally informal and collegial.

Costs

Vulcan estimates that the direct costs of the CIG have been about \$20-30,000 per year, which pays for the facilitator, meeting space, photocopying, postage, and technical studies.

Challenges

The CIG has faced several challenges.

Communicating with the broader community. Initially, the facility expected that the CIG members would be true *representatives* of their community by reporting back to their “constituencies”—their neighbors, or the people in the organizations they represented—about the discussions. However, the members have been reluctant to formally report back, either because they do not know how or do not want to appear to be public relations vehicles for the facility.

Thus, while CIG members feel they have a good sense of the community's concerns about the facility, they have not actively disseminated information or discussed changes in their attitudes, other than through informal conversations with their acquaintances and families.

Attendance. The group has also faced low participation, particularly in recent years—only about half of the members come to a typical meeting. Perhaps the group has satisfactorily addressed the most pressing environmental issues, so there is now less motivation to participate.

Issues Addressed

The group has dealt with several environmental issues. They have discussed major issues, like Vulcan's use of deep wells for hazardous waste disposal, and how to make Vulcan's sodium chlorite facility safer. Smaller issues have included health risk assessment of a landfill and communication of Toxics Release Inventory data.

The facility's unwillingness to share sensitive business information has not been an appreciable problem, because CIG members generally have not requested this information. The group has been more interested in operational and environmental information, which Vulcan is willing to share.

Outcomes

The Community Involvement Group has accomplished tangible and intangible results:

- *The group helped persuade the facility to make significant environmental changes.* On the deep well issue, Vulcan agreed to pay for an independent technical consultant, selected by the CIG, to critically examine Vulcan's original safety assessment of the well system. Ultimately, the CIG persuaded Vulcan to phase out the wells and build a plant that converts the waste into re-sellable material. The CIG also helped influence Vulcan to install an extra scrubber at the sodium chlorite facility.
- *The CIG has improved Vulcan's community involvement.* The CIG has helped the facility communicate better with the public and solicit community participation earlier in the planning of new facilities. This has helped propel Vulcan into a position of environmental leadership. For example, Vulcan received an award for its pollution reduction efforts from the national group Renew America.
- *There seems to be less community suspicion of the plant.* Anecdotal evidence suggests the community has greater confidence in the facility's environmental management. For example, environmentalists no longer protest at the facility.
- *The CIG helps Vulcan reach sound decisions.* A strategy for environmental plans was

developed with the CIG's input.

- *The CIG serves as a good sounding board for the facility.* Vulcan uses the CIG to better understand how the community will react to the facility's actions.

Success Factors

The CIG's success has been possible because of support from top management, openness in sharing data, use of a professional facilitator, and Vulcan's willingness to fund independent technical consultants.

Source

This case study was adapted from Nevin Cohen, Caron Chess, Frances Lynn, and George Busenberg, "Fostering Environmental Progress: A Case Study of Vulcan Chemical's Community Involvement Group." New Brunswick, NJ: Center for Environmental Communication, Rutgers University, 1995.

The Lead Steering Committee: A Community Takes on Heavy Metal— Bartlesville, Oklahoma

Heavy metal contamination from the National Zinc smelter site has been a major concern for the small town of Bartlesville, Oklahoma, for decades. In 1991, the Oklahoma State Department of Health (OSDH) convened the Lead Steering Committee as a component of its three-part community involvement strategy to facilitate area remediation efforts. This case study illustrates the following issues:

- *How a collaborative process can address community controversy over contamination cleanup.*
- *How a collaborative process can help build relationships within a community and with state and federal regulatory agencies.*
- *How a collaborative process can serve as a model for further collaborations.*

Background

The National Zinc smelter site spans portions of Oklahoma's Washington and Osage Counties. Smelting operations have been conducted at the site since 1907 and were the source of widespread off-site contamination until 1976. When the original smelting process was updated in 1976, particulate emissions decreased by 99.7%. Lead, cadmium, and arsenic were the main contaminants produced by the original smelting method.

The west side of Bartlesville, closest to the smelter site, has experienced most of the heavy metal contamination and its effects. This portion of the city is home to several thousand residences, retail businesses and office buildings, light industry and agricultural operations, and several schools, parks, and playgrounds.

The community's perception of the west side is that it is populated by a larger percentage of residents belonging to ethnic and racial minorities. In fact, 1990 census figures indicate that minority representation is equally distributed throughout the city. A similar perception exists in relation to community housing. While the majority of housing on both sides of the river is middle income, the perception exists that residents with the highest income levels live on the east side.

Key Events

Perceptions over whether minority and low-income neighborhoods were disproportionately experiencing the contamination may have helped fuel the conflict that brewed within the community over cleanup of the contaminated area. While the smelter had long existed as a source of community interest, citizen activism grew during the early 1990s. Citizens formed a community

task force in 1990 to investigate complaints of odors coming from the smelter. Community concern was elevated in 1991 by a series of articles about the pollution and health risks in the *Tulsa Tribune*.

Increased citizen action led to more state and federal involvement. Citizens complained to the OSDH about health problems they believed were related to smelter activities. The Oklahoma Toxics Campaign organized a local environmental activist group, Citizens Against Toxics, which contacted U.S. Senator David Boren. In response, he asked two federal agencies to investigate—the Environmental Protection Agency and the Agency for Toxic Substances and Disease Registry (ATSDR).

In 1991, remediation activities began under the Superfund removal program. The first step of the short-term cleanup process was to determine the type and area of contamination. By this time, the community was deeply divided over several issues, including 1) how much the contamination threatened human health, and 2) the potential impact the cleanup would have on the economy. Additionally, there were now four agencies involved in the process—OSDH, EPA, ATSDR, and the Oklahoma Department of Environmental Quality (ODEQ). Community debate ensued over what should be the extent of state and federal government involvement.

Deciding to Collaborate

In the fall of 1991, the ODEQ and the OSDH decided the conflict within the community had reached a point where it had to be addressed. Action needed to be taken to mitigate the public controversy over the contamination and the cleanup process. As a result, the ODEQ and the OSDH developed a public participation process to serve as part of the short-term cleanup effort. The Lead Steering Committee was a major component of this effort. The two other aspects included holding public meetings to release information about the site, and establishing an office to serve as the single point of contact for the public, press, and other agencies.

Convening the Process

The members of the Lead Steering Committee were appointed by the OSDH. A broad set of community interests were represented, including the city and county government, the Chamber of Commerce, area industry, public and private schools, community environmental groups, community service organizations, news media, and citizens-at-large. A local pediatrician was elected by the committee to serve as chair. While the initial group consisted of 24 participants, only 10 remained active throughout the process.

The Lead Steering Committee was established with three objectives:

- To serve as the local forum for managing public information and community involvement;

- To provide a mechanism for input to and from all of the involved groups; and
- To assist the OSDH in coordinating the project.

Role of the Lead Steering Committee

Overall, the committee's role was to serve as a vehicle for two-way communication between stakeholders and provide advice on the cleanup. The committee's duties included providing input, participating in discussions about technical issues, and making recommendations about project goals. Having clear goals and objectives was a key factor in ensuring the committee's success. Citizen members were concerned about indemnification from tort liability, so they limited their activities to fall within the parameters of the group's objectives.

In 1992, cleanup began; areas of high access to children, including schools, day care centers, and playgrounds received priority. In 1993, cleanup was extended to residences with high levels of soil contamination and areas where housing residents had elevated blood lead levels. In 1994, removal work began by the Potentially Responsible Parties (PRPs) at the site, as directed by an EPA Unilateral Administration Order. Shortly thereafter, the ODEQ prepared a Record of Decision. In June of 1995, the ODEQ and the PRPs signed an agreement directing remedial action to begin at the site.

Outcomes

There were several outcomes of the Lead Steering Committee process:

- *The Lead Steering Committee successfully functioned as a mechanism for two-way communication and the exchange of information among stakeholders.* As the cleanup process went through its phases, active committee members provided continuity to the project. They became highly knowledgeable about the site, contaminants, potential health effects, and the Superfund process. Public controversy was reduced as a result of their efforts.
- *Citizens built relationships with each other.* Many committee members, although all long-term residents, did not know each other before serving on the Lead Steering Committee. In fact, many of them viewed one another as "the opposition." By working together over time they were able to acknowledge personal values and goals and transformed them into community goals.
- *Members of regulatory agencies built relationships in the community through their work with the committee.* As committee members became better acquainted with OSDH and ODEQ personnel, trust increased. Community members no longer viewed regulatory staff as "outsiders." Ultimately, this helped facilitate the cleanup because decisions were more likely to be endorsed by the entire community.

- *The Lead Steering Committee served as a model for other community participation processes.* In 1994, three organizations, traditionally at odds with each other, formed a coalition to obtain and administer a Technical Assistance Grant offered by the PRPs at the site. The coalition consisted of representatives from an environmental activist organization, a group opposed to listing the site on the National Priorities List, and a group dedicated to improving business opportunities in the contaminated area. The Lead Steering Committee and the city council were also represented as ad hoc members.

The Lead Steering Committee was primarily formed to address the conflict in Bartlesville over the contamination and the cleanup effort. The public participation process was instrumental in reducing controversy over substantive matters, bringing together a divided community, building relationships among committee and regulatory agency members, and providing a model for future collaborative efforts.

Source

This case study was adapted from Montressa Jo Elder, “The Process of Community Involvement—A Case Study: The Bartlesville, Oklahoma, Lead Project,” *Toxicology and Industrial Health*, Volume 13, Nos. 2/3, 395-400.

Intel's Project XL Stakeholder Group: A Difficult Consensus on Difficult Issues—Chandler, Arizona

From January to November 1996, Intel's Fab 12 facility, which manufactures semiconductors in Chandler, Arizona, negotiated an agreement with multiple stakeholders (regulators at all levels and community members) to participate in EPA's Project XL ("Excellence and Leadership"). Project XL is an alternative-compliance program which offers regulatory flexibility in exchange for 1) a plan for achieving "superior environmental performance," i.e., better results than full compliance with existing regulations would produce, and 2) stakeholder involvement in developing and implementing the company's participation plan. This case addresses the following issues:

- *How a stakeholder group struggled and reached consensus on complex environmental and regulatory issues.*
- *How national interests became involved in a process that was conceived as local.*
- *How all participants—especially community members participating as individuals without organizational support, can be subject to intense social pressure from stakeholders and the community to reach consensus.*
- *How a consensus-based stakeholder negotiation process both succeeded and stumbled, particularly when consensus appeared to be out of reach.*

Background

Intel managers were primarily motivated to join Project XL because of the delays caused by frequent permit revisions in a fast-changing business, and because the four levels of regulation—municipal, county, state, and federal—overlapped and were inefficient. In addition, these permits and regulations seemed ineffective, because they did not appear to be achieving environmental results proportional to the resources involved in their compliance. Project XL promised to streamline the environmental compliance process, and Intel as well as the EPA wanted to showcase this new alternative-compliance model and promote more efficient and effective regulatory processes.

Project XL requires participating companies to reach agreement with stakeholders on a plan to achieve superior environmental performance. Intel's Arizona site already had a Community Advisory Panel (CAP) for over four years, and prided itself on a history of good relations with the community. The XL process included 1) a stakeholder negotiating group, 2) monthly public meetings which Intel publicized widely, 3) updates to workers and opportunities for them to comment, 4) some briefings of national and local environmental groups by Intel, and 5) posting of

information on Intel's website with an invitation to comment.

Participants

The 15-member stakeholder group included several members of the local community, selected from the environmental subcommittee of the CAP; regulators from all four levels of government; an Indian tribal representative; and Intel representatives. While environmental organizations were not represented, one of the members was a community activist and another an environmental consultant. The full stakeholder group, called the Executive Committee, had four subgroups: 1) the Air/Planning Group, 2) the Regulatory Efficiency Group, 3) the Recycling Group, and 4) the Legal Working Group.

Procedures and Issues Addressed

The stakeholder group worked to achieve consensus of all participants, including the community members. This stands in contrast to other Project XL stakeholder groups, where the community input is advisory, and only the facility and regulators have decision-making power. The Executive Committee met regularly, aided by a professional facilitator. The subgroups met in between the plenary meetings.

The Executive Committee meetings were held at the Fab 12 facility. At first, there was no provision for public attendance at these meetings. Later, when people asked to attend, protocols were established for meeting observers. Since all visitors to the facility had to get pre-approval and security clearances, these requirements were among the protocols. Representatives of national and regional environmental groups followed these protocols and observed some meetings.

According to the National Academy of Public Administration,

[The] endeavor was careful, complete—and stressful. The group began by establishing ground rules and allowing sufficient time for lay stakeholders to learn about air pollution and other technical issues, for the government participants to negotiate jurisdictional issues, and for Intel to learn what the community cared about most deeply—water conservation and a protective buffer zone between the fabrication buildings and adjacent residential areas (from *Resolving the Paradox of Environmental Protection: An Agenda for Congress, EPA, and the States*, p. 90).

The discussion focused largely on air emissions from the facility, but other environmental issues were also discussed. The group worked late nights on many difficult issues, and in the end all stakeholders signed on to the Final Project Agreement (FPA).

Agreement

The FPA was complex, but included a few key elements:

- The centerpiece was a facility-wide emissions cap, in place of individual limits for different air emissions sources. This cap was under an air permit which could apply to future facilities built at the site, without the need to seek permit modifications—a significant regulatory concession. The provisions of that permit were binding.
- Intel made other commitments, some embedded in the enforceable air permit, and others not legally binding. These included 1) increasing water and waste conservation and recycling, 2) increasing property line setbacks to widen the buffer zone around the facility, 3) reducing vehicle miles traveled by employees, and 4) donating computer equipment and training.
- Intel agreed to publish environmental reports containing information usually provided to regulators plus other information, but consolidated into a single document, in an easy-to-read format. The purpose of the reports is to enable the public to hold Intel to its goals and commitments, including those that are not legally binding.

An initial goal of establishing a single point of contact for all regulating agencies from local to federal soon turned out to be impossible for several legal and political reasons.

Costs

The process took much longer and was much more intense (in terms of hours per week) than expected. It lasted 11 months, whereas it was originally expected to last only six. For this reason, the costs were higher than expected—in terms of money, time, and stress. Participants found the process extremely draining, and most felt pressure at some point to overcome their objections and move towards consensus. In financial terms, Intel managers figure the company may make up the costs over the course of the five-year air permit through the reduced costs of permit revisions. However, they decided early on that the project was worth the price to demonstrate this new environmental management model.

Challenges

Numerous other challenges made the process trying. Intel originally understood the term “stakeholders” to mean *local* stakeholders. However, part of EPA’s and Intel’s intent was for this Project XL negotiation to serve as a model for others throughout the country. Therefore, national and regional environmental groups followed the process closely.

Some of these national groups felt there was a significant imbalance of power in the process, contending that the community participants were outgunned by Intel and governmental participants, particularly in terms of staffing, knowledge, and resources. They argued that measures such as providing funds for community participants to hire a technical expert would

have helped even the playing field. (EPA later decided to provide funds for independent technical assistance to XL stakeholder groups.) These groups saw the FPA as unbalanced as a result, providing too much leniency for Intel and not truly achieving superior environmental performance. On the day the FPA was signed, the environmental groups, along with representatives of several community and labor groups, published an open letter stating their concerns and opposing the FPA. The EPA responded with a letter addressing the concerns raised by these organizations.

One source of conflict was defining and objectively measuring “superior environmental performance.” The national groups had a more stringent interpretation than the stakeholder group. Did the phrase mean superior to the facility’s *actual* past performance, or to what was *allowed* at a maximum under current regulations and permits? (This was further complicated by the fact that Fab 12 was a new facility that began operation while the negotiations were taking place.) Also, comparing environmental performance with the FPA and without it was like comparing apples and oranges, because different chemicals and different media are involved. The disagreement about assessing superior environmental performance and the process for achieving it is evident in the contrast between the stakeholder group members’ consensus on the FPA and the national groups’ letter of opposition.

The role of stakeholders was another source of disagreement. Some believe stakeholder participation in the XL process in effect replaces government oversight, so the composition, capacity and procedures of stakeholder groups are critically important. Others believe stakeholder involvement is not a substitute for government oversight, so stakeholder groups should only be advisory and not subject to extensive procedural rules.

During the process, some of the national groups took up their concerns directly with EPA headquarters, surfacing a procedural ambiguity in the stakeholder negotiations. The stakeholders assumed that the EPA regional representative in the group had authority to sign on behalf of the EPA as a whole. Instead, in an attempt to address the concerns of the national groups, EPA headquarters claimed authority to review the FPA. In the end, they did not exercise this authority, but many stakeholders were frustrated by the lack of clear accountability.

Throughout the process, one participant—a community member participating only as an individual—was particularly hesitant about signing the FPA. This surfaced a procedural ambiguity over the definition of “consensus.” Some understood it to mean that each *individual participant* had to approve the agreement; others understood it to mean that each *stakeholder group* (government, industry, and community members) had to approve it. The latter definition would have allowed the agreement to go forward without this individual’s signature. Feeling pressure from all sides, he did ultimately sign the FPA reluctantly.

Benefits

In spite of these difficulties, the negotiation and public involvement process seems to have largely achieved its purpose—greater regulatory flexibility, and environmental results that some argue are superior to what would have happened otherwise. In addition, since it was an early, experimental XL effort, all parties and the public probably learned from the process.

There were also some unforeseen benefits. Some participants say the process helped regulators understand how their various programs complemented or conflicted with each other and may have catalyzed greater coordination. Also, a community member said that the public participation component helped educate the public, yielding other long-term benefits. The participants' stamina and perseverance, and the willingness to risk something innovative, are to credit for these successes.

Summary of Outcomes

In summary, the Fab 12 Project XL stakeholder group achieved the following:

- A consensus FPA providing for superior environmental performance (in the participants' view), with streamlined regulatory procedures for the company.
- An early test of the innovative regulatory model represented by Project XL.
- Improved public communication and public accountability regarding the plant's environmental performance.

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New Bedford Harbor Superfund Community Forum: Progress Without Complete Consensus—New Bedford Harbor, Massachusetts

From December 1993 until June 1998, a multi-party mediation was held by the Massachusetts Office of Dispute Resolution (MODR) to determine how to clean up the New Bedford Harbor Superfund Site. This case study concentrates on the period up to November 1994, when the group, called the Forum, reached its first of three recommendations. The case illustrates the following:

- *How even bitter rivals can, with third-party assistance, collaborate, negotiate, and reach consensus.*
- *How allowing participants considerable control over procedural matters can help build cooperation in highly contentious settings.*
- *How televising meetings can enhance public trust of the process, but may still be inadequate for enabling the public to follow the substance of long-term negotiations.*
- *How environmental justice activists helped re-ignite a previously settled matter—and how they played a constructive role in the ultimate resolution of the issue.*

Background

Manufacturers of electrical capacitors released polychlorinated biphenyls (PCBs) into the New Bedford Harbor for decades, earning it a place on the Superfund National Priorities List in 1982. Previously during 1987–90, there was a stakeholder negotiation on cleaning up the site. This initial group, which worked closely with the EPA and the Massachusetts Department of Environmental Protection (DEP), included citizens, businesses, local environmentalists, and city council members. Members of the local Portuguese and Cape Verdean communities were included. The group voted six to three to dredge the harbor and destroy the PCBs through incineration. The EPA adopted this approach in a 1990 Record of Decision (ROD). Of the three parties who voted against the outcome, two were businesses liable for paying shares of the cleanup cost, and may have favored a less-expensive option. Overall, the stakeholders favored incineration, believing it was the safest available method for destroying the PCBs.

Triggering Events

In 1991, as the EPA prepared to implement the ROD, a ground swell of opposition to incineration arose in spite of the inclusive decision-making process. Two trends were shaping at that time which may explain the reaction: first, there was growing opposition nationwide to using

incineration (which was increasingly being employed as an alternative to landfills), and second, the environmental justice movement was gaining strength.

The opposition was spurred on by 1) journal and newspaper articles raising fear about incineration and citing the case as an example of environmental racism, and 2) national organizations initiating activities in the New Bedford area. The first stakeholder group was criticized as being a “mouthpiece” for the EPA and industry and as lacking minority representation. Senator Edward Kennedy and Congressman Barney Frank threw their support behind the protesters.

The controversy reached a climax in 1993. Protesters threatened to block the path of construction equipment, and the New Bedford City Council passed an ordinance that, in effect, made construction impossible. The EPA filed suit against the town in September 1993, and a court order rendered the ordinance unenforceable. The EPA threatened to fine the city \$25,000 for each day it delayed the dredging, and one community group filed its own Intent to Sue with the EPA.

Deciding to Collaborate and Convening the Process

None of the parties welcomed a protracted fight, so they found the idea of mediation an attractive option. The Massachusetts DEP had experience with alternative dispute resolution, and the Massachusetts congressional delegation supported the use of mediation as well.

MODR, led by Jane Wells, conducted a lengthy process of interviewing stakeholders, persuading groups to participate, explaining MODR’s role, and negotiating who should be at the table. The Forum came to include representatives of three citizens groups (from the three affected towns), local government officials, state elected officials, DEP, EPA, and the National Oceanic and Atmospheric Agency.

MODR was responsible for convening participants, arranging meeting logistics, and overseeing the whole process. Because of citizens’ concerns that MODR—a state-funded agency—might impose a particular mediator, MODR arranged for the stakeholders themselves to screen and select an independent mediator. The mediator selected was J. Michael Keating of Rhode Island.

Procedures

The mediator’s first task was to meet separately with each of the parties. The first joint meeting was then held to establish ground rules and procedures. One early decision was to make the process truly public by videotaping the meetings and broadcasting them on a local cable channel. At that meeting, the EPA agreed to delay the start of dredging, and the community group that had filed the Notice of Intent to Sue agreed to put the suit on hold.

The next stage was a four-month evaluation process. Over a dozen vendors of alternative technologies made presentations, and Forum members questioned them extensively.

As the meetings continued, the mediator and MODR drafted a proposed “Framework of Resolution” which helped focus the remaining negotiations. The document listed emerging agreements on principles that would guide decisions, and identified points of disagreement.

Negotiation and Agreement

During this four-month evaluation, the group agreed to search for a solution that would avoid on-site incineration. Two innovative technologies emerged as preferred alternatives, and the Forum recommended that site-specific tests of both technologies be implemented.

However, a serious disagreement occurred over what to do if neither of these methods passed the test. The agencies wanted a reliable, safe back-up that was already tried and true. One of the back-up options was off-site incineration, which the citizens opposed. After extensive discussion, the Forum agreed to defer the question of back-up technologies until the tests were finished. They also agreed to try to reach consensus on primary and back-up technologies before the EPA amended the ROD. The agreement was completed in November 1994.

Challenges

The Forum faced two significant challenges:

Technical information. During the evaluation stage, citizens group representatives had difficulty comprehending the vendors’ presentations, which used highly technical terms. The citizen members solved this problem by using the EPA’s Technical Assistance Grant to hire a technical consultant through an environmental justice organization. With the consultant’s help, the citizens became more active in scrutinizing the vendors.

Communication with the public. Another challenge was communicating back to the local public. The televised meetings were too lengthy for most people to follow, and there were no concise updates or formal mechanisms for the Forum to inform the public and gain their support.

Later Stages

The mediation resumed and reached other interim agreements, culminating in a final recommendation in June 1998. By that point, no approved method of destruction other than incineration had emerged, but one alternative (solvated electron technology) was nearing approval. Members leaned towards a combination of a new on-site separation method and off-site destruction, with hopes that the new destruction method would be approved in time—satisfying the goal of eliminating the contaminants without incineration.

However, at a public meeting held just before making a final recommendation, attendees opposed on-site separation because of its possible side effects, which included toxic emissions, noise, and dust. They favored the next-best option, which was to dewater the waste and send it to a landfill. In response to this input, the final June 1998 recommendation expressed a majority preference for the landfilling option, though a minority still urged the separation and destruction option, with continuing efforts to use a non-incineration method of destruction.

Outcomes

Forum members were unanimously disappointed by the lack of approved alternatives to either landfilling or incineration, and it is unclear to what extent they felt the effort was worth their time. Nevertheless, the Forum can claim a number of accomplishments:

- Stakeholders reached consensus on the principle that a method of destroying the PCBs that avoided either landfilling or incineration would be ideal.
- The Forum provided the best opportunity for finding that ideal outcome.
- Because of the thorough research on alternative technologies, most of those involved felt the resulting majority recommendation pointed to the best cleanup option available at the time.
- The Forum's work may have advanced the goal of finding non-incineration technologies for other contaminated sites in the future.
- The Forum succeeded in eliciting the cooperation of previously bitter foes.

Success Factors

Several factors contributed to the Forum's achievements:

- The fairness and credibility of the process was enhanced by use of a skilled, independent mediator, oversight by MODR, and stakeholder control of procedural matters—including selection of participants, selection of the mediator, and establishment of the agenda.
- The televised meetings and ongoing political attention prevented perceptions of back-room bargaining.
- Independent technical advice through an environmental justice organization helped level the playing field in terms of technical understanding, and helped prevent charges of environmental racism.

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The Silicon Valley Pollution Prevention Center: A Constructive Engagement Center—San Jose, California

The non-profit Silicon Valley Pollution Prevention Center (SVP2 Center) was established as a result of the 1993 settlement agreement between the Coalition for Effluent Action Now in South Bay (CLEAN South Bay) and the City of San Jose, California. This case study illustrates the following issues:

- *How a collaborative process evolved out of an adversarial approach to pollution prevention.*
- *How a non-profit organization can serve as an ongoing collaborative forum for members of government, industry, and non-governmental organizations to address pollution prevention issues.*
- *How a collaborative forum can serve individual interests while participants pursue a common goal.*

Deciding to Collaborate

In January 1983, CLEAN South Bay, a coalition of seven environmental organizations, filed suit in the U.S. District Court for the Northern District of California alleging regional permit violations under the Federal Clean Water Act. At issue was the discharge of wastewater containing excessive concentrations of copper, nickel, silver, and chromium from the San Jose/Santa Clara Water Pollution Control Plant into the South San Francisco Bay. The complaint named the City of San Jose, the City of Santa Clara, the mayors of the two cities, and the Director of the San Jose/Santa Clara Water Pollution Control Plant as defendants.

As the administering agency and operator of the San Jose/Santa Clara Water Pollution Control Plant, the City of San Jose entered into settlement negotiations over the lawsuit with CLEAN South Bay. During the process, coalition members promoted pollution prevention as a reasonable alternative to providing more advanced treatment at the plant. An agreement was reached between the two parties to establish a center for pollution prevention. The agreement excused the lawsuit and released the city from further enforcement actions concerning copper, nickel, and silver by CLEAN for a period of five years.

Convening the Process

In March 1994, the San Jose City Council approved the establishment of a convening board and working council to carry out the start-up functions of the SVP2 Center. The convening board recruited a permanent board, developed incorporation documents, and defined roles and functions of the organization. Members of the convening board consisted of nine representatives, three each

from local government, industry, and environmental groups. Group decision making involved a voting process that required the support of seven out of nine members for approval.

At the November 30, 1994, meeting the convening board nominated permanent board members and unanimously recommended that they be approved by the San Jose City Council. The Center was formally incorporated with the State of California on December 2, 1994.

A nine-member board of directors governs the SVP2 Center; three members each from government, industry, and environmental organizations. The City of San Jose appoints the board members that represent government and industry. CLEAN South Bay selects its own environmental representatives. Board members serve three-year terms. An Executive Director works with the board to oversee daily operations of the Center. The board votes through a two-thirds (six out of nine) majority rule, with the provision that every majority must have the support of at least one member from each group.

The original settlement agreement envisioned collaboration through the Center only as a short-term endeavor, but the Center has since taken on a more permanent role. The original framework for the Center was for each represented group to select one major area of focused work, consistent with the Center's purpose, to be performed by the Center during its first three years of operation. Once the work was complete, the Center would dissolve. However, in lieu of this approach, the board early on decided to hire an Executive Director, initiate a strategic planning process, and use the seed money to establish a sustainable pollution prevention center to serve the community on a more permanent basis.

Financial support for the Center is provided by San Jose-Santa Clara Water Pollution Control Plant funds. The City of San Jose, as fund administrators, agreed to provide \$375,000 to the Center for initial start-up and operations costs for three years. The Center is additionally funded through grants and contributions. The city has also established a \$2 million Pollution Prevention Capital Fund to provide industrial dischargers with financial assistance to invest in pollution prevention measures. The Executive Director of the Center hopes the city will decide the collaborative approach is useful, recognize there are clear economic incentives to pollution prevention, and re-designate the capital fund as a trust fund for the Center to sustain its activities.

Collaboration Goals

The purpose of the SVP2 Center, as described in the settlement decree, is "To coordinate, develop, and transfer information on pollution prevention measures that will reduce toxic pollution in the San Francisco Bay, south of Dumbarton Bridge." The Center describes its function as, "educating the public, industry, business, and government in Silicon Valley about the causes and sources of pollution, and to identifying and promoting methods to prevent pollution."

Consistent with its purpose, the Center's goals are the following: 1) To foster institutional understanding and cooperation; 2) to emphasize pollution prevention from all sources; 3) to promote research, development and use of pollution prevention measures; and 4) to provide an information and referral service.

The Center's work priorities are established annually by the board of directors. The program is then developed by the board and its Program Options Committee. In 1997, strategic issues were identified as transportation-related impacts to water quality; industrial water efficiency and reuse; dioxin prevention; and convening the annual State of the South Bay Symposium. To date, the SVP2 Center has engaged in a variety of projects, including community education; business outreach; working with academic institutions to encourage pollution prevention education in science, engineering, and business curricula; an on-line resource center; and sponsorship of the State of the South Bay Symposium. The purpose of the symposium is to bring local decision makers together to assess the progress of the various pollution prevention programs designed to protect the South Bay and its streams and watersheds.

Challenges

A big challenge all participants face is how to go back and forth between their Center work and their own constituencies. Industry and government, in particular, must recognize their complicated operating structures in comparison to the environmental representatives who are not as limited by bureaucratic structures and who, for this reason, bring vision to the meetings. According to the Executive Director, environmental groups may have more flexibility in their operating structures, but may have less resources to analyze and respond to proposals by government or industry on waste management issues.

Outcomes

In spite of the challenges individual members face in participating, the SVP2 Center provides a creative and innovative model for collaboration among stakeholder groups. The most notable features of the process include:

- *Each group represented on the board of directors has compelling reasons to participate in the work of the SVP2 Center.* The Center provides a collaborative forum for all three groups to forward their own interests. Industry representatives recognize the economic benefits of pollution prevention. Representatives of environmental groups work to integrate workplace health, safety, and environmental protections into pollution prevention processes. Representatives of local government, including the Water District, realize that development and waste management issues are connected. The Center provides them with the opportunity to address these often challenging issues with concerned stakeholders.
- *The organizational structure of the SVP2 Center has continued to evolve, reinforcing the collaborative nature of the effort.* The board of directors is currently reexamining the organization's by-laws. In particular, the board is looking at its decision-making structure. Trust among participants has developed to the extent that the two-thirds voting structure can now be relaxed. This step can be interpreted as a sign of the board's willingness to further embrace a collaborative, rather than adversarial, approach. It is also a testament to developing relationships between participants.

- *The SVP2 Center has gone beyond the original intent of the effort, serving as an ongoing collaborative forum.* The Settlement Agreement did not anticipate that the Center could continue to play a vital role for collaboration among the three sectors and be a catalyst for continuous improvement in pollution prevention. The original plan was for the effort to cease once its initial work in the three areas of focused activity was complete. Almost four years after its incorporation, however, the Executive Director and several board members believe the Center is playing an important role by serving as a neutral forum for reaching agreement on pollution prevention alternatives. The SVP2 Center's biggest challenge now is how to sustain the ongoing effort.

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Romic Environmental Technologies Corporation: Collaboration and Confrontation in East Palo Alto—East Palo Alto, California

Romic Environmental Technologies Corporation has a strong presence in culturally diverse East Palo Alto because, unlike most of Silicon Valley, there is no industrial buffer zone between the company and its bordering neighborhoods. Largely for this reason, members of the community have paid close attention to the company's activities over the years. Their efforts have resulted in two different processes for collaboration between the company, community activist groups, individual citizens, workers, and government regulators. This case study illustrates the following issues:

- *How different Constructive Engagement processes can occur concurrently to address community and worker health, safety, and environmental concerns.*
- *How the potential benefits of a Constructive Engagement process may be very different depending on one's perspective and goals.*
- *How collaboration between community organizations and government regulators can help both groups achieve their health, safety, and environmental goals.*
- *How the role of a company-initiated Citizen Advisory Panel evolved from addressing issues of immediate community concern to broader, long-term issues.*
- *The choices community members face in deciding whether to participate in a company-initiated Citizen Advisory Panel and what considerations guide their decisions.*

Background

Residents of culturally diverse East Palo Alto have long been concerned about the potential for industrial accidents, the long-term effects of contamination, and worker exposure to toxic substances. In an effort to promote community and worker protection, environmental justice groups and activist organizations in Silicon Valley have closely monitored the activities of Romic, a company who specializes in hazardous waste recycling and disposal. They have targeted facility operations, as well as government agencies, responsible for enforcing health, safety, and environmental regulations.

In the mid-1990s, community activism regarding Romic's operations in East Palo Alto focused on two major issues. One of the most contentious matters among citizen groups, regulatory agencies, the City of East Palo Alto, and the company was the historic lack of an Environmental Impact Report (EIR). Romic applied to the California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control to renew its operating permits. The agency reviewed the

application and, at that point, determined a negative declaration—no EIR was needed. Citizen groups felt that because East Palo Alto lacks political and economic clout, state agencies were remiss in mandating Romic to comply with regulatory requirements. The company contended that, despite the agency’s willingness to issue a negative declaration, it requested that a full environmental analysis be performed, including a Health Risk Assessment of its operations. The City of East Palo Alto, economically dependent on the company, was caught in the middle of the controversy.

Concerns about Romic’s operations were furthered by a specific event at Romic’s Redwood City facility. On February 15, 1995, Rodrigo Cruz, a Romic employee, suffered brain damage while removing toxic sludge from a railroad tank car. Seeking support after the incident, Cruz affiliated himself with the Santa Clara Center for Occupational Safety and Health (SCCOSH), a citizen and worker watchdog group. Members of another organization, WATCH (Workers Against Toxic Chemical Hazards), soon launched a “Campaign for Justice for Rodrigo Cruz.”

As part of the campaign, WATCH, a network of Filipino electronics workers, formed an alliance with the Ujima Security Council in East Palo Alto. The latter group was composed of African-American and Latino residents from the communities surrounding Romic’s East Palo Alto facility. The combined efforts of these groups focused the attention of government agencies on the East Palo Alto facility. In 1996, the California Occupational Safety and Health Administration (CalOSHA) conducted an investigation of the site. Investigators issued 22 citations against the company for health and safety violations. Although WATCH and its allies felt the fines levied on Romic were minor compared to the violations, the company eventually settled with CalOSHA subsequent to further administrative procedures. The agency issued a separate set of citations against Romic for the Rodrigo Cruz incident.

For JoLani Hironaka, Executive Director of SCCOSH, both of these issues challenged government agencies to live up to their regulatory and enforcement responsibilities to workers and the community. They also required Romic to address the impacts of its operations on the community.

Deciding to Collaborate

The events that followed provide an example of how collaboration can occur between community groups and government agencies. Although the community groups that led the workers’ rights campaign had drawn public attention to the issue, they were not satisfied with the outcome of the Rodrigo Cruz incident. They felt there were gaps in enforcement, and had ongoing concerns about the response of government regulators, including CalOSHA, California EPA, and the Air Quality Management District. One issue for them was whether and how the Resource Conservation and Recovery Act (RCRA) applied to the Cruz case.

Because SCCOSH had a good working relationship with an influential individual within EPA Region IX, the group contacted the agency for assistance with the Cruz issue. SCCOSH felt it had important information about the situation and sought a forum to communicate its concerns. As a result of SCCOSH’s effort, the EPA agreed to convene a series of three informal meetings

involving community groups and state and federal agencies. EPA Region IX used its influence with the other government agencies to encourage their participation in the process.

The meetings convened by the EPA were heavily attended by community activists from Redwood City and East Palo Alto. The forum gave community groups access to government regulators and an opportunity to provide information to them about the Cruz incident. One unique aspect of the collaboration was that representatives from several government agencies, including CalOSHA, California EPA, and the Air Quality Management District, attended the meetings. Although not all of the agencies were represented at all three meetings, the collaboration provided an opportunity for community groups to communicate with several agencies at once. After hearing their concerns, the government agencies agreed to investigate the incident further.

Romic's Citizen Advisory Panel

While community groups saw collaboration with government agencies as integral to achieving their goals, Romic had its own approach for addressing community concerns. In 1995, Romic convened a Citizen Advisory Panel (CAP) in response to suggestions from local residents. Romic's CAP, which meets monthly, serves in an advisory capacity to the company. The CAP has a facilitator that is funded by the company, but serves at the pleasure of the CAP. The goals of the CAP include the following:

- To further enhance two-way communication between the multilingual, multicultural East Palo Alto community and Romic Environmental.
- To identify and work together to address issues of concern to the community and Romic Environmental.
- To build, maintain and enhance a climate of trust and mutual respect between Romic Environmental and the East Palo Alto community.
- To help establish East Palo Alto as a leader in the field of industrial ecology and a model of sustainable living.

According to the facilitator of Romic's CAP, Tom Stewart of Dynamic Networking, before the CAP was formed the company knew less about the issues important to the community. Over time, as the community's perception of and relationship with the company have changed, so has the work of the CAP. While issues such as odor monitoring, waste discharge, and emissions still capture the CAP's attention, only 10% of the CAP's time is devoted to single issues such as these. Where the CAP initially served as a forum for the company to react to community concerns, the emphasis now is on how the company can function as a good corporate citizen.

Romic's CAP addresses a broad spectrum of issues, often focusing on community activities and corresponding needs. One example is an emergency response resource guide the CAP developed for the city. After the 1989 Loma Prieta earthquake, residents and city officials realized there was no community response mechanism to deploy in emergency situations. While the City had

prepared an emergency response plan, it lacked the funds to prepare the accompanying document that matches needs to available resources in the immediate community. This issue was brought to the CAP by members who also serve on the Public Safety Commission. For the CAP, the matter also raised questions about how a natural disaster (or other event) would affect Romic's operations and the facility's safety. Because the city did not have the resources to develop a response mechanism, the CAP undertook the project. As an outgrowth of that experience, when flooding occurred in the area in the winter of 1998, the city had a plan to sandbag the community. Romic, with a heightened sense of community needs as communicated by its CAP, contributed sand, bags, and personnel to fill and stack the bags.

Once a year, an internal evaluation process takes place to assess the performance of Romic's CAP, the CAP's facilitator, and the company. After individual members complete their evaluations, a subcommittee is formed to compile the results and write recommendations. After a review process, these recommendations become the basis for modifications to the CAP process.

Community Participation

The East Palo Alto residents who participated in the EPA meetings do not serve on Romic's CAP (whether they have been invited to attend or not is a matter of some dispute). For them, the CAP process does not have credibility and does not provide them with the means to achieve compliance. According to JoLani Hironaka of SCCOSH, Romic's CAP process has not been responsive to specific questions concerning whether the company is meeting its minimal legal obligations to the community. Members of SCCOSH, WATCH, and the Ujima Security Council have also expressed concerns about how members of Romic's CAP were selected. They view Romic's CAP as controlled largely by the company itself. Further, a former CAP member believes that the company failed to provide meaningful technical information to the group.

The CAP facilitator has a different perspective on community participation. He points out that new members of the CAP are selected by current members in a closed session which company representatives do not attend. CAP decisions are made by majority vote. The company is represented in a non-voting capacity.

Current community members of Romic's CAP view participation as a valuable and worthwhile activity. The membership of the CAP now includes public officials and representatives of neighborhood associations, with an emphasis on community members living near the facility. Lois Frontino, a member of Romic's CAP since its inception, views involvement as an opportunity to learn about Romic and its activities. It also provides Romic with the opportunity to talk to people, create community awareness, and develop community understanding of the company's activities. For Moses Webb, a Public Safety Commissioner and CAP member, participation is motivated by the belief that a company has obligations to the community and must be willing to meet residents' concerns.

Outcomes

The two collaborations between Romic, community activist groups, community members, workers, and government agencies illustrate the following:

- *Enhanced communication between workers, community groups, and government agencies can strengthen existing regulatory mechanisms.* Collaboration between community groups and government agencies can help enforce environmental, health, and safety regulations when government personnel are willing to respond to community efforts. Whether through an institutionalized or informal process, community groups can raise issues and provide important information to government regulators. For community groups, such a process provides accessibility to regulatory staff. Worker health and safety inspections and analysis of process hazards can guide environmental enforcement to be more focused, efficient, and ultimately more effective.
- *Communication between regulatory agencies can be enhanced through a collaborative process.* Collaboration between community groups and government agencies can have the added benefit of increasing communication between different regulatory agencies. The process can provide a forum for state, regional, and federal agencies to coordinate enforcement efforts and promote environmental justice.
- *Community and worker health and safety issues can be addressed through a collaborative process.* The community groups that collaborated with the government agencies strongly believe that community and worker health and safety issues are linked. They feel that regulatory divisions between the two groups artificially separate them, and that they are better able to protect both by addressing them together. By having a forum to raise their concerns, they were able to bring the worker and community agendas together.
- *Goals are important when deciding what kind of collaborative process to engage in.* The community groups that participated in the dialogue with the regulatory agencies were able to focus on compliance. They believed these issues should take precedence. For those participating in the collaboration with the company, their focus is on how the company can meet other community needs. While Romic's CAP still addresses issues related to company operations, its focus is on building a relationship between the company and the community.
- *Goals of a collaborative process can change over time.* Whereas Romic initially convened its CAP to address specific community concerns, the group now functions in a proactive manner. Its focus now is on how Romic can serve as a corporate citizen of East Palo Alto.

The relationship between the community of East Palo Alto and Romic is long and complex. While community residents and activist groups have chosen different avenues for bringing their concerns to the attention of the company and government regulators, their ongoing efforts illustrate how different collaborative strategies can be used to protect the environment, community, and workers.

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Sheldahl Inc.: Citizens' Groups, a Labor Union, and a Company Cooperate—Northfield, Minnesota

In 1989, citizens of Northfield, Minnesota and workers from the Sheldahl manufacturing facility banded together in an effort to reduce exposure to the chemical methylene chloride. This case illustrates the following:

- *How collaboration between workers and citizens' groups led to binding commitments of the facility to a toxic-use reduction plan with firm deadlines.*
- *How a number of factors make neighbor-labor cooperation difficult.*
- *How the slower approach of toxic-use reduction (rather than recapture-and-recycle) emerged as the approach that nearly all stakeholders favored after they communicated their concerns to each other.*

Background

Sheldahl uses methylene chloride in manufacturing flexible electronic circuit boards. In 1989, the Natural Resources Defense Council published information based on the Toxics Release Inventory (TRI) data collected by the EPA as part of the Community Right to Know Act. It listed Sheldahl as the 45th largest emitter of airborne carcinogens in the country. A public outcry from Northfield residents ensued. At about the same time, by coincidence, Sheldahl's state air emission permit was up for renewal, and, also coincidentally, the facility's contract with the Amalgamated Clothing and Textile Workers Union (ACTWU) local was up for negotiation.

The union was already aware of the increasing evidence that methylene chloride causes cancer. At the union's urging, Sheldahl had been studying and monitoring methylene chloride since 1984, and had instituted some measures to reduce workers' exposure to the chemical. In 1985, the EPA designated methylene chloride as a "probable human carcinogen."

Goals

The workers wanted to further reduce their exposure to the chemical, but they also wanted to keep the facility open and maintain their jobs in Northfield. Sheldahl's somewhat shaky financial state at the time, and the fact that some jobs had already been transferred to another site, added to the workers' sense of insecurity. Meanwhile, the residents wanted to eliminate the facility's emissions of methylene chloride as fast as possible, and a few activists wanted this "at any cost"—even if it meant closing the facility. Union members and other Northfield citizens thus had some shared and some conflicting interests.

Triggering Events

Sheldahl seems to have foreseen the stir that the TRI data publication would create. After the community outcry, Sheldahl held a public meeting at the City Council's request and unveiled a toxic-use reduction plan. The plan entailed reducing emissions by 90% over five years by curtailing use, largely through substitution of methylene chloride with safer substances. Sheldahl did not, however, firmly commit to this plan, saying reductions beyond the first year would depend on a variety of factors beyond their control.

Shortly thereafter, in early summer, a group of Northfield citizens called a public meeting of their own, and decided to form Clean Air in Northfield (CAN). Simultaneously, a dozen science faculty and students from two Northfield colleges—Carleton and St. Olaf—formed the Air Toxics Study Group (ATSG), to study Sheldahl's emissions and what to do about them. The ATSG was one of Carleton's Technology Policy Projects (part of the Environmental and Technology Studies Program), designed to lend academic resources to technology policy controversies. It soon established connections with CAN, Sheldahl, the Minnesota Pollution Control Agency (MPCA), and workers at the facility.

Deciding to Collaborate

The first meeting between CAN members and union leaders was contentious, with the union accusing the community leaders of wanting to shut down the facility, and some activists accusing the workers of withholding knowledge that the facility was emitting a carcinogen. At this point, the citizens favored a *recapture-and-recycle* strategy to reduce the amount of the chemical emitted from the facility. The workers favored a *toxic-use reduction* strategy, similar to what Sheldahl was already proposing. Each option required a large capital expenditure by Sheldahl, but the latter would take more time.

A turning point in the relationship between CAN and the union came when Eric Frumin, the union's National Director of Occupational Safety and Health, visited and spoke at a joint meeting of CAN, ATSG, and union leaders. In addition to stressing the research increasingly showing dangers of methylene chloride, he deplored the recapture-and-recycle strategies favored by CAN, likening this to "putting a cork in the bottle"—leaving workers inside the bottle with the chemical. He argued that even so-called "closed-system" recycle-and-recapture technologies do not live up to their promise to stay closed and protect workers. He largely succeeded in persuading the CAN and ATSG members that toxic-use reduction was the best strategy to protect both workers and the surrounding community. The three groups were on the road to cooperation, and held a series of joint meetings over the next few months.

Meanwhile, CAN was pressuring the Minnesota Pollution Control Agency and the local Environmental Quality Control Commission to regulate Sheldahl more stringently. At the request of MPCA, Sheldahl hired an engineering firm to assess the health risks of methylene chloride emissions to residents. The firm found that Sheldahl exceeded the safe level of exposure for people outside the facility, and proposed to install fans in the exhaust stacks to disperse the chemical more widely over the community and thereby reduce the maximum concentration. The

MPCA and ATSG cooperated to defeat this plan. In addition, a Carleton student wrote a report showing that workers at the facility were exposed to 50 parts per million of methylene chloride. When this was publicized in the local paper, the community had the eye-opening experience of comparing that to the long-term exposure limit of .006 parts per million that the MPCA considers safe for citizens outside the facility.

Negotiation and Agreement

Buoyed by this public attention to methylene chloride, the ACTWU workers decided to include the issue in its collective bargaining with the company. They pressed Sheldahl to put firm time commitments on their proposed toxic-use reduction plans. The resulting agreement, signed on November 1, 1989, included commitments from Sheldahl to:

- Reduce methylene chloride use by 64% by 1992;
- Eliminate 90% of methylene chloride emissions by 1993;
- Hold progress meetings with the union and community groups;
- Conduct quarterly testing for employee exposure to methylene chloride; and
- Make the search for a non-toxic alternative to methylene chloride a top priority.

Next, the MPCA held a hearing, requested by CAN, on renewing Sheldahl's air permit. CAN lobbied for faster reductions than those in the agreement, and they also continued to lobby for a recapture process, despite union opposition. As it turned out, the MPCA issued a new permit that locked in the collective bargaining agreements, and further required Sheldahl to eliminate all methylene chloride use by 2000.

As of January 1992, implementation was ahead of schedule (methylene chloride use was down 75%, instead of just 64%), and the facility was developing a water-based, non-toxic substitute.

Success Factors and Challenges

The involvement of the ATSG aided success by helping the CAN members make sense of the technical aspects of the issue, serving as a moderating influence, and suggesting safety measures the plant could take.

However, the main key to success in this case—and also the main challenge—was the cooperation between the union and CAN. It was challenging for several reasons.

- While they all shared an interest in reducing toxic exposure, the workers also worried about losing their jobs, and thus were reluctant to push the company to take the drastic measures some community activists were urging.

- People tend to think of “workers” and “community” as separate entities. Government also tends to treat them as separate entities, so their concerns are handled by separate government agencies (for example, the TRI data did not address worker exposure).
- In this instance, social class may have widened the divide between the workers and the affluent community surrounding the plant.

Despite these difficulties, the community and the union achieved a significant degree of cooperation. This resulted from the following:

- A shared belief that collaboration could be beneficial, and a commitment to build on common interests.
- The personal visit by Eric Frumin of the ACTWU’s national office. He persuaded many in the community that the toxic-use reduction strategy would best serve the long-term interests of both the workers and the nearby residents.
- Frequent meetings between the groups.
- Inclusion in each other’s efforts. CAN routinely invited someone from the union to attend its meetings, and the union’s collective bargaining agreement included a provision for community representatives to monitor Sheldahl’s implementation progress.

While they never were in 100% agreement—evidenced by the community groups’ continued agitation after the collective bargaining agreement was signed—their cooperation helped bring about important environmental results.

Outcomes

In summary, the cooperation among the union, the two community groups, and the facility resulted in a collective bargaining agreement comprising environmental commitments and community involvement. These were reiterated and strengthened in the air permit. To varying degrees, these outcomes benefitted all parties:

- *The facility’s original plan of toxic-use reduction was accepted and codified* in the collective bargaining agreement and the air permit.
- *Sheldahl would be investing long-term in the Northfield facility and keeping jobs there*, rather than moving them elsewhere.
- *The union advanced an approach that would benefit workers as well as the community.*
- *The community was guaranteed a reduction of methylene chloride emissions*, with complete elimination by 2000.

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Note: Barry (Mike) Casper is a professor at Carleton College and was a member of the Air Toxics Study Group.

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