OPENING AND OPERATING A NUCLEAR DISPOSAL FACILITY: LESSONS LEARNED IN PUBLIC OUTREACH

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ABSTRACT

Addressing the issue of nuclear waste is no small task for professional communicators. Communications need to strike the right balance between presenting scientific facts and responding to public issues, describing risks without creating unnecessary anxiety, and listening to and addressing public concerns. The U.S. Department of Energy's (DOE) Carlsbad Field Office (CBFO), which operates the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico, has more than 25 years of experience in communicating about deep geologic disposal of nuclear waste. While a single formula for success is unrealistic, the CBFO has identified 14 steps in its stakeholder outreach program that together provide a model for similar projects dealing with controversial issues. The fundamental lessons are to listen, learn, and adapt.

BACKGROUND

The need for the WIPP can be traced back to the Manhattan Project of World War II in the 1940s. The United States government produced the first significant quantities of transuranic material while developing the first nuclear weapons. Although the government has idled its plutonium-producing reactors and warhead manufacturing plants, transuranic waste continues to be generated as the DOE cleans up former nuclear weapons facilities. The resulting problem is what to do with radioactive transuranic waste that continues to be generated and is in temporary storage across the country.

In 1957, the National Academy of Sciences first suggested salt beds for disposing of radioactive waste (1). After a follow-up National Academy of Sciences report in 1970 (2), the Atomic Energy Commission, predecessor to the DOE, favored a site near Lyons, Kansas. The site had 250 million-year-old salt beds, a low probability of an

14 Essential Steps

In communicating about the Waste Isolation Pilot Plant

1. Form a dynamic team
2. Undertake careful planning
3. Develop effective messages
4. Identify audiences
5. Establish partnerships
6. Encourage third-party voices
7. Inform people inside and outside the organization
8. Involve the public
9. Develop tools for success
10. Train for success
11. Evaluate effectiveness
12. Make your organization flexible
13. Learn from success and failure
14. Look to the future

earthquake, and a simple, flat bedding structure. In 1972, the Atomic Energy Commission abandoned the Lyons site because of concerns about well drill holes near the site, risks of salt dissolution, and political opposition. At this point the focus began to shift to southeast New Mexico. A site near Carlsbad, New Mexico shared many of the favorable characteristics and few of the concerns that led to the decision to abandon the Lyons, Kansas site. In fact, Carlsbad area leaders actively pursued the project as a means to diversify the economic base of the region.

The 650-meter-deep (2,150-foot-deep) waste repository ultimately became a reality, but not without challenges. Despite favorable scientific and local political conditions, roadblocks remained along the path to opening the WIPP. The first-of-its-kind repository is often referred to as the most regulated parcel of desert in the world. With no previous example to follow, the CBFO successfully complied with stringent certifying and permitting processes stipulated by the U.S. Environmental Protection Agency and the state of New Mexico.

THE CHALLENGE

The communication challenge was daunting, not only in the WIPP's host state, but also at 23 sites across the country that were preparing waste to ship to the WIPP. Although the Carlsbad community was generally very supportive of the project, anti-WIPP sentiment was strong in northern New Mexico and among some stakeholders along waste transportation routes. Specifically, stakeholder issues included:

- **Safety and health of nearby residents and workers.** Safety and health is a two-edged sword. Workers and residents near both the WIPP site and the transuranic waste sites wanted the CBFO to ensure that their health and safety would be protected. Thus, some stakeholders near the transuranic waste sites were very supportive of removing the waste from their environment, while others, in the more distant areas of New Mexico, opposed bringing waste into the state.
- **Protection of the environment.** Environmental protection is also a two-edged sword. Areas around some transuranic waste sites had been contaminated to a greater or lesser degree over the years, and those sites have a long history of campaigning to clean up their environment. Likewise, northern New Mexico residents opposed the importation of waste into the state in part because they had seen contamination at the DOE sites, including a nearby DOE national laboratory. Meanwhile, although the local community actively supported the project, they also wanted the CBFO to ensure their environment would be protected.
- **Transportation of the waste from the sites to the WIPP.** Transporting the waste through "bystander communities" was a problem that sprawled across 30 states and 10 Native American tribes and pueblos. Many of these communities were not trained or equipped to respond to a nuclear waste accident, and some residents were fearful of exposure from the passing trucks.
- **Continuation of the nuclear cycle.** Some stakeholders opposed opening the WIPP because they saw it as one component of perpetuating the use of nuclear

power and potentially another build-up of nuclear weapons. Continue to confound waste disposal at the back end of the nuclear fuel cycle, the reasoning goes, and eventually it will obstruct reactor operations at the front end.

- **Lack of environmental radiation protection standards.** Until 1993, a specific set of federal regulatory guidelines had not been established for the WIPP. After the U.S. Environmental Protection Agency implemented these stringent standards, official and public confidence in the safety of and support for the facility climbed measurably.

Combined, these challenges resulted in an eleven-year delay in the opening of the WIPP. The positive result, however, was that when the facility opened in 1999, stakeholders had had numerous opportunities to learn about and comment on it, and scientists and oversight groups had examined, studied, evaluated, and approved the performance potential of the repository. In addition, regulators had crafted a strong regulatory framework to direct management of the waste, and lawmakers had written stringent laws in response to public concerns. The project was firmly rooted in the regulations and law after having dotted every "i" and crossed every "t."

FOURTEEN STEPS TO EFFECTIVE COMMUNICATION

Good science, strict compliance with laws and regulations, and the ability to communicate effectively are all essential to a successful project. But perhaps the most undervalued component is good communication, because no matter how good the science is, or how compliant the procedures are, they all go for naught if people don't believe the science. Reflecting on its communications successes and failures, the CBFO has identified 14 steps considered integral to its continued communication effort.

Form a Dynamic Team

The CBFO Office of Public Affairs leads a dynamic team of communicators from multiple organizations, supplemented by other technical staff, as needed. Leading to the opening, the Westinghouse Waste Isolation Division and the CBFO Technical Assistance Contractor provided daily communications resources to the effort. DOE Headquarters also provides support and is an active partner on the team.

Despite the multiple organizations, the team works together without barriers that typically emanate from contractor corporate identity. The most striking example of this is in implementation of the emergency response Joint Information Center (JIC). The JIC is activated during emergencies to provide accurate and timely information to the public. Upon activation, all other outreach activities cease, and every communicator on the project has a role. Ongoing staff training and practice drills have prepared the team to work effectively. Although the JIC has had no call to be activated for a serious WIPP emergency, it was activated after a catastrophic natural gas pipeline explosion near Carlsbad that killed 12 people, including a WIPP employee on an outing with her family. The JIC supported public information activities of the New Mexico State Police, U.S. National Transportation Safety Board, and El Paso Natural Gas Company for several days. The team functioned extremely well, and from the outside the WIPP support was

virtually invisible because the team worked together and with the responding organizations so effectively.

Undertake Careful Planning

A fundamental question to ask when planning public outreach is "What does success look like?" This approach requires the communicator to conceptualize the big picture – the vision – develop goals and actions to achieve the vision, and track activities that lead to the accomplishment of each goal. An example is the CBFO's *Stakeholder Outreach Plan*. The stated goal is to facilitate operation of the WIPP through effective two-way communication. The plan includes eight strategies for achieving the goal, each of which has a corresponding list of actions to be taken and performance measures to evaluate success.

The CBFO has used this high-level planning document to guide its long-term efforts. In addition, it has developed specific, detailed strategies for successfully conducting discrete events and activities. Planning, communication, and coordination among team members are essential to ensure all details are addressed. The CBFO approaches complex public events at the WIPP by establishing task-specific planning matrices that the core team uses to coordinate the entire activity. For example, during planning for the WIPP Grand Opening celebration in April 1999, the CBFO hosted the Secretary of Energy, two U.S. Senators, a U.S. Representative, and several hundred other invited guests, including public officials, employees, and members of the public. The team established and regularly updated the detailed planning matrix, which documented each activity, timing requirements, status, and staff assignments. During the weeks prior to the event, the team began each day with a review of tasks accomplished and remaining, and identification of new issues requiring resolution.

Even smaller efforts can benefit from careful planning. Any new communications activity at the CBFO typically begins with a proposal to address the activity's purpose, intended audiences, messages, activities, assignments, and timeline.

Develop Effective Messages

Many public relations programs operate on the premise that if you repeat information often enough, people will "get" the message. For weighty issues such as siting a nuclear waste disposal facility, communicators must find the points where public concerns intersect with the agency's vision and direction. That is, messages must be both understandable and focused so that the vision and direction are clear – while responding directly to stakeholder concerns. This means that *communication channels must be two-way streets.* Essentially, the objective is to convey the message *and* receive and act on stakeholder input. If a message supports your vision but doesn't respond to stakeholder interests, it most likely will fall on deaf ears, and opportunities to reach stakeholders will be lost. Likewise, if the agency doesn't listen, existing barriers may remain, and even be reinforced.

The communications team developed the following messages that met the two-way test:

- **Get the waste off the hill** validated the DOE's goal of removing transuranic waste from New Mexico's Los Alamos National Laboratory to the WIPP, while concurrently supporting the cleanup of the laboratory.
- **Reduce the risk** supported the DOE's vision of cleaning up waste storage sites around the country, thus eliminating the low-probability risk to people living near those facilities, while reinforcing the goals of site communities to move the waste "out of their backyard."
- **Benefit to the nation** conveyed the DOE's intention of safely moving waste from temporary aboveground storage to permanent disposal more than 600 meters underground at WIPP, which responded to stakeholder desires to protect public health by removing this waste from the accessible environment.

Identify Audiences

Identifying your organization's many audiences is the first essential step toward understanding and addressing the goals and concerns stakeholders may have regarding a project. The CBFO defines stakeholders as anyone who has an interest in or might be affected by its plans and actions.

The next essential step is taking the time to *listen* to the specific stakeholder concerns of each audience. Find out what stakeholders already know about the project, what they want to know, how best to get the information to them, what concerns them, and how they might want to be involved in future decisions. Often, communicators assume that they know what stakeholders with opposing views want (i.e., more media coverage for their cause and themselves, clogging of the nuclear energy cycle, preventing further use of nuclear energy). These assumptions can become barriers to genuinely listening to stakeholder concerns and goals, and to perpetuating the belief that the agency doesn't want to hear from its stakeholders.

At the WIPP, a complex array of specific audiences closely follows activities of the CBFO. These audiences include regulators, oversight groups, elected and appointed government and tribal officials, governmental associations, media, special interest groups, employees, local and statewide residents, citizens along transportation routes, stakeholders near DOE waste storage sites, and the international nuclear waste community. Combined, these audiences are considered CBFO's stakeholders, but when speaking or writing about specific issues, the office seeks wherever possible to address each particular audience's information needs.

Establish Partnerships

No one achieves long-term success alone. The CBFO is fortunate to have established partnerships with communities, sites, states, tribes, and government consortia across the country. Some of these partnerships began many years ago, such as the one with the city of Carlsbad, which encouraged the federal government to locate the project in the vicinity

of Carlsbad. Community leaders continue to support the WIPP by serving as project advocates, proactively keeping lines of communication open with each new Secretary of Energy and with New Mexico's congressional delegates and state elected and appointed officials. Community leadership is also actively involved in WIPP's public meetings and hearings to voice the interests of local citizens.

However, mutual agreement is not necessarily a foregone conclusion. In the mid-1990s, community leaders expressed concern about an appreciable cut in the WIPP's programmatic budget. They expressed dissatisfaction to the local CBFO manager, who said he had done all he could to change the funding decision. Not willing to take no for an answer, the leaders took their case to Washington, D.C. and got the budget cut reversed. More recently, they have disagreed with the DOE on the amount of regional economic development support that should be required of the WIPP's new management contract. Despite these differences, the community and the CBFO continue to work together closely to keep the project on track and an important part of the local economy.

The WIPP project also has established successful partnerships with states, tribes, transuranic waste sites, government consortia, and congressional delegates from host states to DOE waste sites (e.g., Colorado and Idaho). Examples follow.

- **The New Mexico Governor's Task Force on Radioactive Waste.** The CBFO has worked closely with the task force coordinator to create meeting and informational exhibit opportunities in most communities along the New Mexico transportation corridors.
- **Transuranic waste sites.** The CBFO has established both technical and public affairs partnerships with DOE staff and contractors at the transuranic waste sites. The partnerships help the CBFO communicate more effectively with stakeholders at other sites and with transuranic waste managers responsible for preparing, characterizing, and shipping their waste to the WIPP.
- **State government associations.** The CBFO has partnered closely with both the Western Governors' Association and the Southern States Energy Board to plan and coordinate the transportation and communications programs along the designated transportation routes. The plans include extensive training of emergency responders and key hospital personnel, provision for specialized equipment, and joint information and outreach initiatives to the public.
- **Native American tribes and pueblos.** The CBFO has signed cooperative agreements with four tribal governments to date, providing federal funding for emergency response preparations, including technical assistance and training. WIPP waste shipments will eventually cross the boundaries of ten different tribes.

Encourage Third-Party Voices

Everyone has heard the saying, "consider the source." Each of us intuitively knows that some information sources are more credible than others, and that some are not very credible at all. The same information presented by two different sources can be received

in dramatically different ways. For example, the DOE has put extensive effort, thought, and study into developing its national transportation program and is confident that it is well maintained and safe. It has shipped hazardous and radioactive materials around the country for many years with no accidents that have resulted in a release of radioactive materials. Yet, many stakeholders continue to express doubt about the CBFO's ability to ship transuranic waste safely.

In contrast, a 1989 report prepared by the National Academy of Sciences noted (3), "The system proposed for transportation of transuranic waste to WIPP is safer than that employed for any other hazardous material in the United States today and will reduce risk to very low levels." This nationally recognized organization of the country's top scientists makes this point much more effectively – and credibly – than the DOE can.

Another third-party voice on the WIPP has been the Washington, D.C.-based Environmental Health Center, a division of the private-sector National Safety Council. This independent organization has evaluated and published several informational backgrounders about safety of the WIPP and its transportation system (4). The Environmental Health Center's voice brings stakeholders the scrutiny and perspective of another autonomous perspective, which also has broadened the WIPP's suitability to the public.

Credible third-party perspectives can take a variety of forms, including scientific peer reviews, community testimonials, newspaper editorials, and statements from professional organizations and knowledgeable government associations, such as the Western Governors' Association.

A requirement in fostering objective third party points-of-view is to treat the relationship with arms-length, hands-off respect. That is, the third party cannot be expected – and should not be asked – to follow a "party line." Mutually ensuring the accuracy of all project information is essential. However, stepping over the line of independent perspective undermines the credibility of both the proponent and the third party.

Inform People Inside and Outside of the Organization

The CBFO places very high value on making useful information about the WIPP available to the public. In prior years, the DOE was often less open about its operational activities. The "old way" of doing business has changed, and openness is now recognized as essential. Readily available, trustworthy information is the first step toward successful communications.

CBFO does not expect all stakeholders to agree with its viewpoint. People can have honest disagreements. But the more accurate information that is available, the more likely common areas of agreement can be found and the sooner work can begin on resolving areas of disagreement. Informing people is accomplished through many different avenues, ranging from news releases to newsletters and from tours to public meetings.

Information must be tailored to the interests of key stakeholders, such as partnership organizations, regulators, and oversight groups, but one group often gets overlooked – employees. Employees make up one of the most important stakeholder groups, because 1) employees are keenly interested in keeping the facility operating smoothly and safely and 2) informed employees can be very effective ambassadors to others in the community and beyond.

One tool that has been particularly effective at the WIPP has been the daily internal electronic newsletter, called *WIPPtoday*, that the management and operating contractor publishes on the project's Intranet. The publication is timely and lively, and employees know they will find the latest information there. The contractor sends updates by e-mail on any major developments. In addition to being quick, *WIPPtoday* involves no printing, copying, or paper costs.

The CBFO also has used another electronic newsletter, *WIPP Watch*, to inform its more distant stakeholder-partners about late-breaking news. The CBFO used this publication in the final months leading to opening, when rumors and incorrect information about court rulings and regulatory decisions could have confused or even unhinged cooperative efforts. These e-mail publications allow the CBFO to tell its story quickly, without having to be concerned about misinterpretation and perhaps distortion that may occur in the mass media.

Involve the Public

The next important step is stakeholder involvement. Many laws require – and people expect – public involvement in the decisions that their government makes on their behalf.

The purpose of involvement is to ensure that other opinions and ideas are considered in the decision-making process. Those opinions and ideas may be contrary to the project's purpose or perspective, but thoughtful public comment can identify new ways to address issues that may have not been considered before. For instance, early models of a shipping container for the WIPP were revised when an oversight group raised concerns about whether the design would be able to remain leak-tight in an accident. What resulted was the TRUPACT-II, a robust shipping container certified for DOE use by the U.S. Nuclear Regulatory Commission.

In 1995, the CBFO sought public involvement through a series of meetings on the System Prioritization Method, a computerized model used to evaluate performance requirements of the WIPP prior to preparation of the WIPP Compliance Certification Application. Through this effort, the number of essential technical experiments was pared from 23 areas of study to 8. Public involvement was also key to the issuance of favorable records of decision on the Environmental Impact Statement of 1980 (5), the Supplement Environmental Impact Statement in 1990 (6) and the Supplemental Environmental Impact Statement II in 1997 (7). The CBFO held meetings at the beginning of each EIS process to determine what the analyses should include, and publilc

hearings at the end, to seek comment directly on the draft documents before final decisions were made.

Most recently, the CBFO has held several public meetings on various proposed modifications to the WIPP's hazardous waste facility permit issued by the state of New Mexico (8). After receiving numerous public suggestions on one proposed modification, the CBFO withdrew its request, made substantive changes responding to the stakeholder advice, and has plans to submit a revised modification request.

Develop Tools for Success

WIPP communicators have an array of tools to meet a variety of needs. Below are some communication tools that have been successful at the WIPP.

- **Disposal Decision Plan** (DDP) - Although this one-page project schedule looked intimidating at first glance, it became the roadmap to opening the WIPP. As a catalog of the major milestones to be achieved prior to opening of the WIPP, the DDP presented a capsule view of the CBFO's vision, roadmap, and timeline for where it was headed. Internally and externally, people referred to it often. The CBFO periodically updated and redistributed the plan to reflect new programmatic realities. The DDP called for 48 public meetings over a four-year period. (9)

- **Santa Fe Information and Outreach Office** - For many years, stakeholders in northern New Mexico seemed to be the most opposed to the WIPP, despite the fact that residents near the Los Alamos National Laboratory, which is in their part of the state, would benefit by sending waste to the WIPP. The CBFO's solution was to go directly to the people: it opened and staffed a WIPP information and outreach office in downtown Santa Fe. WIPP staff is readily accessible for exhibit opportunities and group presentations, and residents can stop in any time and get accurate, timely information about the WIPP project. The CBFO credits this office with a significant reduction of opposition to the WIPP, as noted in recent independent polling data by the University of New Mexico. (10)

- **Tour Program, Speakers Bureau, Exhibits, and the Road Show** - For many, seeing is believing, and people have been impressed after taking a guided tour of the WIPP at the level of public safety and environmental protection it offers. A special exhibit, called the Road Show, is an actual WIPP truck and trailer complete with demonstration-only TRUPACT-II shipping containers. The truck drivers answer questions about the containers, the DOE's satellite tracking system, and the safety procedures they must follow. The CBFO also makes qualified speakers available to any group that requests a presentation about the WIPP or National Transuranic Waste Program.

- **Publications** - Regular publications are a key tool for keeping people informed. The CBFO distributes monthly calendars (11) for stakeholders that include

information and involvement opportunities. Each month, a feature item highlights the latest activities at the WIPP of interest to stakeholders. The CBFO also publishes a quarterly stakeholder newsletter, *TRU Progress* (12), which provides more in-depth information about recent events and upcoming activities.

An array of fact sheets focuses on particular meetings or topics, some on routine information, some on milestones achieved, and some on specific events. For example, shortly after the opening of the WIPP, the CBFO discovered a spot of contamination on the outside of one of the TRUPACT-IIs bringing waste to the WIPP. After investigation, it ascertained that the contamination came from naturally occurring radioactive material (NORM). The CBFO prepared a fact sheet on this event and the source of radiation, noting that it was cleaned up by simply swiping the outside of the shipping container.

In addition, the CBFO uses special publications effectively. When the CBFO submitted its 80,000-page WIPP Compliance Certification Application to the U.S. Environmental Protection Agency, it was searching for a way to present the information to stakeholders. The solution was a *Citizens' Guide to the Waste Isolation Pilot Plant Compliance Certification Application* (13). The 40-page guide described highlights of the application in non-technical language. After the opening of the WIPP, the CBFO prepared a special publication (14) to provide historical documentation of the decades-long journey. Titled *Pioneering Nuclear Waste Disposal*, this publication also used non-technical language to convey complex issues to the general public.

The CBFO sent these publications to key stakeholders and posted them on the WIPP Home Page. The Internet is rapidly becoming a primary source of information for stakeholders, but printed copies are also available upon request through a toll-free call to the WIPP Information Center for those who do not have Internet access.

C **Media relations** - Effective media interaction depends on building considerate, trustworthy, and professional relationships with editorial boards and reporters. The CBFO operates on the premise that good relations begin with sensitivity to media deadlines – when news collecting stops and the cameras and presses must roll. The CBFO also regularly provides photos, graphics, and useful information about the project to make reporters' work easier.

Thinking ahead can lay the groundwork for effective coverage. For example, the CBFO hosted a WIPP Media Day for reporters from national television networks and regional publications in advance of the WIPP's opening. In addition to providing comprehensive media packets, the CBFO offered presentations and demonstrated waste-handling processes so that reporters could ask questions, take photos, capture video footage, and most important, understand the facility before it opened.

A second way to demonstrate sensitivity is to recognize the basic needs reporters have in reporting their stories – and nowadays, that could include assistance with phone jacks and downlinks for transmitting big stories. The CBFO has discovered that sensitivity also requires an understanding that news may not always be reported the way DOE wants and when it wants it. If an organization's efforts are effective, it should have an opportunity to present its position, even if a story doesn't go its way.

Building trust, the second important component of good media relations, requires telling the truth and nothing but the truth, and to be forthcoming with facts that the organization may not be comfortable communicating. Reporters who feel that an organization is "spinning" the news will be much harder on that organization than if its representatives had been open to begin with. An organization is not required to reveal classified information, but it should beware of placing that label on information that would create embarrassment if it were revealed, as opposed to compromising security. If the information is only embarrassing, good communicators will step forward and take whatever criticism comes their way.

Train for Success

Success is no accident. Careful planning is one thing, but practicing what one plans is quite another. The CBFO has provided WIPP communicators with ongoing training through which they have practiced the skills required to be successful. For example, communications staff participate in emergency response exercises several times per year and are graded annually to ensure readiness in the event of an emergency.

One example of successful preparation was activation of the JIC in August 2000 after a natural gas pipeline exploded near Carlsbad, New Mexico (mentioned earlier). The JIC provided emergency communications support to the New Mexico State Police, El Paso Natural Gas Company, and U.S. National Transportation Safety Board. Good communications were critical, as there was interest by a very large extended family related to the victims, plus local, regional, and national media. The CBFO support to these organizations helped them carry out their communications activities flawlessly and sensitively.

In addition to training staff, the CBFO also has undertaken a comprehensive emergency response training program along transportation corridors throughout the U.S. To date, more than 17,000 people have been trained in 16 states and nine Indian tribes.

Evaluate Effectiveness

Evaluating the effectiveness of communications is essential if communicators are to know whether they were productive or just busy. Each outreach activity or event should have a feedback mechanism built in. The CBFO has conducted surveys about several programs, such as the quarterly newsletter and the monthly calendar. But formal surveys are not the only means of obtaining feedback. For example, each page of the WIPP Web

site is set up to encourage stakeholders to e-mail the WIPP Information Center. In fiscal year 2000, the Information Center fielded more than 200 requests for information by e-mail. That represents about 200 people who might be able to tell the CBFO if their information needs were met and how to make access to information easier.

Make Your Organization Flexible

In today's rapidly changing world, organizations must remain flexible and nimble to respond to changing circumstances. Although careful planning is important, plans should not become a straight jacket to restrict creativity and new solutions. In fact, a good plan is adaptable, allows for the unexpected, and has the tools to deal with unanticipated events.

Such tools might be minor, such as making a simple change in the planned traffic patterns in an exhibit area to allow better exposure. Or they might be significant, such as the opening of the CBFO's Santa Fe information and outreach office to interact with concerned area stakeholders directly. In any case, proponents must continually 1) ask themselves how things might be done better and 2) listen to colleagues, stakeholders, and their own intuition to identify ways to improve on their "best."

Learn from Success and Failure

Instituting a "lessons learned" mechanism should be an ongoing effort to foster continuous improvement and to avoid making the same mistake twice. Handled well, lessons learned encourage thoughtful observation and communications that work more effectively. Below are some of the lessons learned in communications at the CBFO.

- **Involve people in decisions early and often.** The CBFO conferred successfully with the City of Santa Fe over a period of several months to work out a mutually acceptable agreement about temporarily shipping waste through the city prior to the completion of a highway project bypassing the city. Without this constructive involvement, such an agreement would not have been possible.
- **Have a plan that focuses and galvanizes team effort.** Of all the CBFO documents prepared during preparations for opening the WIPP, the DDP was probably the most-used information product. Many managers and staff carried it in their pockets. The CBFO updated it whenever change necessitated and provided the revisions to regulators, oversight groups, officials, and other stakeholders. It left no mystery as to the next steps anticipated and was the heart of the CBFO's openness on the WIPP.
- **Establish regular communications with stakeholders.** Don't wait until something's wrong. Shortly after the 1993 establishment of the then-Carlsbad Area Office, the manager initiated an ongoing public dialog on the merits of the WIPP. That worthwhile process ultimately was critical to approval for opening the first-of-its-kind repository.

- **Remember internal "ambassadors" and working partners.** The internal electronic newsletter *WIPPtoday* provides employees with an ongoing source of information both to bolster their own comfort level regarding the current status of the WIPP and to help them relay correct information to the friends, family, and neighbors. Working partners—in this case the transuranic waste site public affairs teams, the government consortia, and the local governments—became strong advocates in the campaign to open the WIPP.

- **Respond to people's concerns.** Throughout the process of certifying and opening the WIPP, the residents of northern New Mexico expressed strong concerns about the repository. In response, the CBFO established and staffed the public outreach office in Santa Fe. This initiative laid the groundwork for more readily accessible information about the WIPP and ultimately helped improve public perceptions of the WIPP, according to polls conducted by the University of New Mexico Center for Public Policy.

- **Make publications reader-friendly.** Translate technical language into readable, easy-to-understand formats, and use interesting graphics and color to present clear, unambiguous messages. The CBFO earned praise and thanks from regulators and stakeholders for its *Citizens' Guide to the Waste Isolation Pilot Plant Compliance Certification Application*, an easy-to-read 40-page booklet that summarized the DOE's 80,000-page technical request for WIPP certification made to the U.S. Environmental Protection Agency.

- **Recognize the importance of personal interactions.** Despite the speed and convenience of the Internet and e-mail, nothing replaces person-to-person communications. Holding informational meetings for stakeholders and communicating directly by telephone both demonstrate that you care about their concerns. In November 2000, the CBFO met with a group of stakeholders who had wanted to attend an internal workshop for key state regulators from around the country. The workshop was not intended as a public meeting, but representatives of the CBFO met with concerned stakeholders to report on results of the workshop and to hear their issues. Despite strong feelings about the issues, stakeholders were cordial and candid, and the extra meeting provided an opportunity for the stakeholders to express their concerns directly to the CBFO.

- **Become a partner on the technical team.** All too often, communicators are brought in at the end of a planning process and asked (in some cases) to "make a silk purse out of a sow's ear." Communications and involvement planning must be integral to the entire planning process. The CBFO has demonstrated that it embraces this concept by assigning communications staff to the project technical teams as they plan a range of initiatives to "fill the pipeline" to the WIPP.

Look to the Future

One of the most useful practices communicators can adopt is to pause from what they're doing and think about the future. What's on the horizon? How does what they're doing

now affect what they'll be doing in the future? Who needs to be involved in decisions early? Answers to these questions can help communicators be successful.

The WIPP has several challenges looming on the horizon, including:

- **Receipt and disposal of remote-handled transuranic waste.** The initial transport of remote-handled transuranic waste for disposal at the WIPP is planned for 2002. Public and media interest will be high.

- **Rail shipments of waste.** Based on a recommendation of the National Academy of Sciences, the CBFO is evaluating the use of shipments by rail using specially built rail cars.

- **Central waste analysis confirmation.** The CBFO is developing plans to conduct test-sample confirming analysis of the waste set for disposal at the WIPP, which will accelerate the cleanup of 18 small quantity sites waste storage sites around the nation. This time- and cost-saving initiative will require extensive public interaction.

- **Underground experiments.** In addition to offering WIPP as an international repository demonstration and training facility, the CBFO is also considering a variety of scientific experiments in the WIPP underground not related to waste disposal. These include astrophysics and other particle physics experiments that will benefit from the WIPP's deep geologic configuration. This new initiative is an important expansion of CBFO's primary mission of transuranic waste disposal. Very likely, stakeholders will have an active interest in this initiative, and a new group of stakeholders will emerge from the scientific community.

Each of these issues will present unique challenges when communicating with stakeholders. The CBFO, its contractors, and their partners are actively involved in planning for all these initiatives.

CONCLUSION

In the end, what do communications have to do with opening and operating a nuclear disposal facility? Everything! On its technical merits alone, the WIPP very well could have begun operations in 1988 as originally scheduled. The challenge, however, is that many people have a strong concerns about anything related to nuclear energy. To respond to these concerns, the DOE and its regulators established a framework of stringent regulations and procedures that extended the facility's pre-disposal period for many years.

In the meantime, professional communicators shared information with – and sought input from – the public, regulators, elected officials and others until finally every regulation had been met and every legal challenge to opening the WIPP had been exhausted. Polling data collected by the University of New Mexico show that public support of the

WIPP since 1997 has increased, especially when the survey question was revised to indicate that the WIPP was already open. In this case, 52 percent were in favor of the WIPP, while those opposed declined from 50 percent to 38 percent. (10)

The work of professional communicators at the WIPP is far from complete. In the last year, the National Academy of Sciences issued an interim report that recommends review and revision of waste management procedures, with reduction of risk and cost as the guiding principles. As the WIPP project continues to operate, develop, and improve, the need for effective communications will continue. Over the years the communication tools the CBFO uses may change, but people will still want to know what's going on, what changes are being made, who's making sure work is being done safely, how all of this affects them, and to whom they can express their concerns.

The CBFO communications team intends to continue answering these questions and involving its stakeholders.

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