

PLANNING RISK COMMUNICATION FOR UMTRA PROJECT GROUNDWATER RESTORATION

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ABSTRACT

The U.S. Department of Energy's (DOE) Uranium Mill Tailings Remedial Action (UMTRA) Project is entering a new phase in which groundwater contamination will become a growing focus as surface remedial action draws toward completion. Planning for risk communication associated with the groundwater project will be a major factor in the successful initiation of the program.

INTRODUCTION

The DOE's UMTRA Project has an exemplary record of risk communication success. Open communication with the public has been a key component of the project since its inception. Under Title I of the Uranium Mill Tailings Radiation Control Act of 1978 (Public Law 95-604), the DOE is remediating 24 inactive uranium processing sites in 10 states. Surface remedial action is either complete, in progress, or in planning at all sites under the Uranium Mill Tailings Remedial Action-Surface (UMTRA-Surface) Project. Public participation activities are ongoing in support of these activities. Success, however, carries its own public communication risks. The greatest risk is complacency. The Project cannot allow UMTRA-Surface communication success to lead to poor planning for communication about the UMTRA-Groundwater Project.

In Fiscal Year 1991, the UMTRA Project entered a new phase. In this phase, groundwater contamination becomes an increasingly important component of the program. Meanwhile, surface remedial action moves toward completion at a growing number of sites. The 1988 amendments to PL 95-604 authorized groundwater restoration at UMTRA Project sites. An Action Description Memorandum (ADM) has been submitted to the Assistant Secretary for Environment, Health and Safety (EH-1) for approval to initiate National Environmental Policy Act (NEPA) compliance activities for the Uranium Mill Tailings Remedial Action-Groundwater (UMTRA-Groundwater) Project. An active, well-planned public information and participation program is required for effective public input to the NEPA decision-making process (1).

In 1991, the UMTRA Project Office Public Information/Public Participation (PI/PP) Department faced this challenge through a self-assessment and planning effort. Steps in the process included:

- Evaluating the current program.
- Looking at other programs for successful approaches to risk communication.
- Incorporating current research on risk communication in the Public Communication Training Program for Project spokespersons.
- Analyzing the risk communication issues likely to arise in the groundwater restoration phase.

- Developing a Strategic Public Communication Plan.

The UMTRA Project faces a particularly sensitive risk communication challenge. The remedial action program was mandated by Congress because human exposure to radon gas in elevated concentrations over long periods of time can increase the risk of lung cancer. Residual radium in tailings piles produces radon gas, some of which escapes into the air. At some inactive mill sites, tailings have been hauled off by local residents for use in construction. Where this has occurred, there is added public health risk. In addition, at some sites contaminants may have leached into groundwater from the tailings.

One challenge for the UMTRA Project Office is to communicate the appropriate level of concern to the affected public. Some UMTRA Project sites present little or no immediate radiation health risk in the communities where they are located; other sites have real risks from current use of contaminated groundwater. Project Office personnel, therefore, must avoid understating or overstating the risk level. This challenge will be intensified as the groundwater restoration phase of the project begins. Groundwater is not well understood by the public in general. At the same time, the public places high value on the ability to feel confident about the safety of groundwater resources.

A Programmatic Environmental Impact Statement (PEIS) has been proposed to initiate the UMTRA-Groundwater Project. The PEIS scoping sessions will present the first opportunity to establish effective public communication about the groundwater restoration program. Scoping sessions are generally one-way communication avenues with the DOE receiving input from the public. Citizens are sometimes frustrated by this process, seeking information as a basis for informed input. To respond to this need, public information meetings are planned in conjunction with scoping meetings. The PEIS will describe the risk assessment procedures that will be used in the groundwater restoration phase. Public information meetings will be held in communities near some of the 24 sites to inform them of the process by which risks associated with contaminated groundwater will be addressed.

An important element in the groundwater restoration program will be the ability to maintain flexibility in technical approach as restoration progresses. This approach will enable cost-effectiveness, but entails an acceptance of a degree of

uncertainty and the flexibility to shift from one restoration design to another based on feedback from monitoring. Public acceptance is viewed as essential to the success of this approach. Failure of the public to understand and accept the approach could lead to loss of public confidence. Conversely, understanding of the approach and its goals is expected to lead to public support.

Planning for the initiation of the groundwater communication program emphasized attention to technical and community differences among sites, the importance of establishing effective public communication at the outset in conjunction with the PEIS development, and clear communication about the technical approach to restoration at the appropriate time. In addition, planning recognized the need to maintain effective communication regarding surface remedial action. The plan also built upon the communication training program developed during 1990 and 1991 (2).

THE PLANNING PROCESS

During 1991, two major UMTRA Project PI/PP plans were formalized.

1. A Strategic Public Communication Plan was prepared to provide continuity and improvement of the ongoing public information and community relations program associated with the UMTRA-Surface Project.
2. A separate UMTRA-Groundwater Project PEIS Public Participation Plan was developed to prepare for a series of public scoping sessions and subsequent public hearings on the draft PEIS.

Development of the plans resulted in a serendipitous side benefit. During late 1991, as the plans were nearing completion, senior management changes were made in both the DOE UMTRA Project Office and the Technical Assistance Contractor (TAC) office. Presentation of the strategic plan served as an efficient vehicle for introducing new management to ongoing and proposed public information activities and developing management support for those activities.

As part of the preliminary planning process, the UMTRA Project PI/PP Department contacted William R. Thomas, Public Affairs Officer at Rocky Mountain Arsenal, Commerce City, Colorado, and Bob Hall, Associate Director for Community Relations of the Colorado Center for Environmental Management (CCEM). Colorado is a key state for the UMTRA Project, with nine of the 24 sites located there. The Rocky Mountain Arsenal community relations program is well respected in the Denver area. CCEM independently conducted public meetings in several Colorado communities as a first step toward identifying ways to improve communication between the DOE and the public. In addition, the PI/PP Department reviewed UMTRA-Surface Project public communication activities in 1990 and 1991 to evaluate which have been most successful in winning public support. Literature on risk communication was also reviewed.

Planning also involved evaluation of past project experience in communicating risks from contaminated groundwater to the public. A particularly successful sequence of project-public interactions occurred in 1990, at a site where numerous domestic wells in a subdivision were found to be contaminated with radionuclides and heavy metals. Techniques used in this sequence were as follows:

Technique 1: Early Public Meetings

Public meetings were held to discuss risks associated with groundwater contamination in current-use domestic wells shortly after data were received. Disclosure of the intent to conduct the risk assessment was judged important to public acceptance of the process (3). At one preliminary meeting, it was emphasized that not all questions could be answered at that time and that a detailed risk assessment would be presented in a subsequent public meeting. It was also emphasized that an interim solution (bottled water) would be implemented while the problem was under evaluation, and that there was a commitment to a permanent solution. It was essential that the scientists making these presentations demonstrated their concern for the issues, along with their technical credibility, and did not present the public with technical jargon and arrogance.

Technique 2: Individual Meetings with Affected Property Owners

At the public meeting, a sign-up sheet was distributed so that individuals with affected wells or properties could schedule a meeting to discuss the level of contamination at their property with the project toxicologist/health physicist and site manager. These meetings were informal and allowed for a more meaningful interaction between the risk communicator and the public for the following reasons:

- It enabled the risk communicator to tailor her discussion to the level and concerns of individual residents.
- The risk communicator spoke more freely without concern of being inappropriately quoted by the media, and the resident spoke more freely without "peer pressure" from neighbors or apprehension for speaking in front of the public and media.
- The focus was not derailed by individuals or organizations who were not directly affected by the contamination and had their own agenda to promote.
- The level of concern and commitment to a solution was more readily conveyed in this face-to-face meeting. This was a two-way exchange, wherein the "public" became individuals to the site manager and risk assessors, and the DOE became human to the public.

Technique 3: Prompt Communication of Risk Assessment Results

A baseline risk assessment was presented at a public meeting two months after the initial public meeting. Immediate release of the risk assessment was considered essential to assure public attention focused on risk issues rather than delay (4). The presentation included a detailed discussion of the process used to calculate risks so that potentially affected individuals could make informed decisions regarding their personal acceptance of risk levels. Risk comparisons were used judiciously to relay the concept of dose and the concept of magnitude, and were not used to convey the acceptability of a risk. Technical and public information staff worked as a team to prepare the presentation.

The risk assessment documents presented risk information candidly and accurately without interjecting personal bias either to minimize or maximize results. They

included a thorough and understandable discussion of uncertainties and the meaning of the risk estimators. For example, reference doses are levels that are considered safe for lifetime consumption, not the level at which an adverse health effect is expected to occur if it is slightly exceeded; likewise, action levels are intended to be health-protective, not the levels at which health effects are expected. The conservatism inherent in risk assessment can be used to demonstrate this point and also can be used to depersonalize the risk results.

Technique 4: Establishment of Public Information Repositories

Public information materials on groundwater contamination were established at the local public and university libraries. Documents available to the public at the repository included the following:

- The baseline risk assessment (after it was presented at public meetings).
- Toxicology and/or health physics data (e.g., Agency for Toxic Substances and Disease Registry toxicological profiles; National Academy of Science and U.S. Environmental Protection Agency drinking water criteria documents; Integrated Risk Information System files; or other documents prepared by what are largely perceived as trustworthy agencies).
- Information or documents regarding current actions and the future direction of the project.
- Names and telephone numbers of contacts for the site.

This information gives individuals the opportunity to review relevant data and come to their own conclusions, while conveying the message that their concerns are respected.

These techniques proved successful in communicating risks on an inherently controversial subject. The success was made evident by a newspaper quote from a usually critical public advocacy group, "Maybe we're seeing a manifestation of the new DOE."

Based on the above research, analysis of past experiences, and ongoing dialogue with UMTRA Project management, a Strategic Public Communication Plan and a PEIS Public Participation Plan were developed. These plans are described below.

STRATEGIC PUBLIC COMMUNICATION PLAN

The UMTRA Project Strategic Public Communication Plan was developed to advance five basic objectives during 1992.

Objective 1: Maintain and Improve Site Communication

The plan calls for site-by-site community relations/media relations planning to be conducted by all UMTRA Project site teams for project activities in 1992. Standardized forms have been developed as a base for assessment and plan development. For some sites, the form will serve as a sufficient planning document. At other sites where substantial public communication activities are present, a more detailed narrative plan may be prepared. Overall, it is intended that site-by-site planning be executed in sufficient detail to provide a coordinated and effective PI/PP program at each UMTRA Project site. It is import-

ant that planning not impact the ability to execute site PI/PP program implementation. The planning activity is designed to increase coordination between PI/PP staff and DOE and contractor site managers.

It is anticipated that public communication activities relating to surface remedial action will focus particularly on sites where remediation construction is in progress and on sites scheduled for 1992 start-up or restart. These sites are Gunnison, Rifle, and Grand Junction, Colorado; Falls City, Texas; Monument Valley, Arizona; Mexican Hat, Utah; and Ambrosia Lake, New Mexico. In these communities, it will be important to coordinate groundwater communication activities with communication on surface remedial action to avoid confusion.

Objective 2: Maintain Consistent Messages

Four major strategies are proposed to accomplish this objective: a project message book; spokesperson guidelines; development and delivery of a workshop on handling questions and answers; and closer coordination between the PI/PP Department and project management, site management, risk communicators, intergovernmental affairs, and remedial action construction contractors in the field.

The project message book will contain brief statements of current project policy on issues of public interest. It will be designed to provide guidance to project spokespersons for answering questions in a way consistent with Project Office policy. The message book will be updated regularly as new issues emerge or policies are revised. Spokesperson guidelines will be distributed with the message book. The guidelines will provide strategies for handling public communication in ways that reflect well on the Project Office, the DOE, and the individual.

Objective 3: Proactive Education/Speaking Campaign

In coordination with the Project Office, site management, technical staff, and the Remedial Action Contractor (RAC), the PI/PP Department will identify willing and qualified speakers who can be available to speak in site communities. Topics will be identified and a library of support modules (overheads and/or videotapes) will be maintained.

Site teams will be encouraged to seek opportunities in site communities to take messages into schools or to civic groups. Efforts will be made to schedule education and speaking opportunities in conjunction with other travel to minimize impacts on travel budgets.

Objective 4: Communication Training

Communication training will be continued and extended in support of 1992 objectives. The "Communicating for UMTRA Project Success" workshop was presented in February 1992 and will be scheduled as needed in the future. A series of mini-workshops on risk communication will also be scheduled. These one- to two-hour workshops will center around videotaped lectures by a nationally-known risk communication expert. Facilitated discussion of the application of key concepts will follow viewing of short sections of the videotapes.

A one-day workshop to enhance skills in public meeting management and handling question and answer sessions will be proposed for site managers, risk communicators,

and others in a position to conduct public meetings on behalf of the Project. Coaching will continue to be provided as needed in support of site managers preparing for public meetings or media interviews. Training centering around mock hearings and meetings will be conducted if needed.

Objective 5: Quick Responses to Crises

Implementing a planned communication approach can sometimes become so engrossing that emerging communication crises are allowed to go unaddressed. The key to effectively address a communication crisis is to recognize it early and respond immediately. On the UMTRA Project, the greatest risk lies in dispersed communication roles. In particular, field communication responsibility is spread among site managers in the UMTRA Project Office, one DOE site manager permanently in the field, contractor site managers, and PI/PP staff.

Early recognition, therefore, is largely a matter of close communication between members of the UMTRA Project team. Assignment of PI/PP coordination responsibility to a Special Assistant to the Project Manager in the Project Office is already improving coordination. A coordination meeting planned for late winter 1992 is expected to further improve communication among field and Project Office managers regarding public information activities. In addition, guidelines have been drafted to clarify public communication roles.

UMTRA-GROUNDWATER PROJECT PEIS PUBLIC PARTICIPATION PLAN

The UMTRA-Groundwater Project PEIS Public Participation Plan is designed to meet NEPA requirements and establish effective two-way public communication at the outset of the groundwater program. Key objectives of this plan include the following:

Objective 1: Coordinate Internal Communications

Regular meetings of an UMTRA-Groundwater Project PEIS working group are planned throughout PEIS development. A key purpose of the working group is to plan and evaluate PEIS public participation activities. The working group comprises representatives of the DOE UMTRA Project Office, the TAC PI/PP Department, and the TAC Environmental Services Department. Working group members will brief management and technical staff routinely on PEIS public participation activities.

Objective 2: Develop Briefing Materials

Written public information materials planned in support of PEIS public participation activities are as follows:

- UMTRA-Groundwater Project brochure.
- UMTRA-Groundwater Project background memorandum.
- PEIS background memorandum.
- Public scoping process background memorandum.
- Site-specific UMTRA-Groundwater fact sheets.

Production of a 6- to 8-minute videotape presenting the UMTRA-Groundwater Project is also planned.

Objective 3: Community Assessment

An initial assessment of community attitudes toward the UMTRA Project and groundwater issues will be formulated by the PEIS working group in conjunction with individual site teams, based on experience on the UMTRA-Surface Project. For sites where surface remedial action is active, working group members will consult with contractor field personnel regarding public sentiment. A preliminary assessment will then be developed to guide initial contact with community members.

Following the preliminary assessment, contact with community leaders will be initiated by Project Office personnel to schedule a briefing on the UMTRA-Groundwater Project and the PEIS and to conduct an interview regarding community attitudes. Wherever possible, the Project spokesperson most familiar to the community will make the initial contact and conduct the briefing and interview. This input will be used to revise the preliminary community assessment. The final assessment will report on findings of the community interviews and will identify any issues unrelated to the UMTRA-Groundwater Project or the PEIS likely to arise during the PEIS public participation program.

Objective 4: Site-Specific Public Participation Planning

Based on the community assessment, site-specific public participation plans will be developed. Assessment and planning will dovetail with similar activities called for in the Project Strategic Public Communication Plan. The plans will establish a sequence of activities as a starting point for public participation in PEIS development at each site. Planned activities will be adjusted as necessary to respond to community concerns. Each plan will include:

- A component to be implemented early in the process to enable public input to the PEIS public participation program.
- Elements designed to provide basic information to the public on the UMTRA-Groundwater Project and the PEIS public participation process.
- Elements that will promote coordination of public participation activities with established state and tribal UMTRA Project participants.
- Elements that will 1.) ensure advance notification of appropriate state and Federal public officials (e.g., Congressional staff, state legislators) of public participation program activities at UMTRA Project sites within their jurisdiction and 2.) offer briefings on program results to these officials.
- Elements that will result in coordination of external communications between the UMTRA Project Office, DOE-Albuquerque, and DOE-Headquarters.
- A component that enables measurement and evaluation of the effectiveness of public participation activities.

Objective 5: Guidelines for Public Scoping Sessions and Public Hearings

The plan provides guidance for conduct of PEIS public scoping sessions and hearings. These include the following:

- Whenever possible, respected members of the community will be used as the meeting or hearing moderator.
- As necessary, a project spokesperson(s) will be available to the public before or during the scoping session or hearing at a location readily accessible to the public to respond to questions related to the UMTRA Project.
- Language translators will be provided at hearings for sites on tribal lands.
- Transcripts of oral and written comments will be made available for public review following the hearing session. The locations where the transcripts will be available for public review will be announced.

CONCLUSIONS

The success of the UMTRA-Groundwater Project will depend greatly on the effectiveness of the Project spokesperson in communicating risk. Project personnel have initiated a careful, ongoing planning process to promote coordinated, consistent risk communication with the public. Assessment of past experience, examination of the body of knowledge pertaining to risk communication, and planning communication activities are important steps in this process.

The resulting plan synthesizes current project policies and objectives with experience gained from past public communications on groundwater contamination. The objective is to promote public understanding of groundwater conditions

at each site, while enabling two-way communication about project approaches to groundwater restoration. The challenge for the UMTRA Project as it enters this new phase will be to maintain effective public communication about on-going surface remedial action, while establishing communication about groundwater contamination on an equally successful footing.

REFERENCES

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