

# OPTIONS FOR CITIZEN PARTICIPATION AND INDEPENDENT TECHNICAL OVERSIGHT OF ST. LOUIS-AREA RADIOACTIVE WASTE SITES

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## ABSTRACT

This paper examines options for improving public participation in St. Louis-area radioactive waste cleanup decision-making. Emphasis is placed on the potential role of a local citizen advisory board. Independent technical oversight is also discussed. Information was gathered between May and December 1992 by interviews and attendance at local waste site-related meetings. It is concluded that there is a need for enhanced citizen participation and independent technical oversight of DOE St. Louis-area cleanup operations; options must take into account the sizable number of municipal, county and DOE jurisdictions that are involved.

## INTRODUCTION

On December 2, 1942, the world's first self-sustaining nuclear reaction was triggered by Enrico Fermi in a squash court beneath the University of Chicago. The uranium used in this history-making experiment had been hurriedly and secretly purified just months earlier at a chemical plant in downtown St. Louis, thus generating what is now the oldest radioactive waste in the United States and initiating the St. Louis metropolitan area's involvement in the U.S. nuclear weapons complex. Fifty years later, the remaining local legacy of this involvement totals approximately 2.3 million cubic yards of radioactive waste spread over five sites in St. Louis City and two counties, St. Louis and St. Charles.

Just as the volume of St. Louis radioactive waste grew and spread in earlier years, so too has the complexity of dealing with the waste. The Department of Energy (DOE) has primary responsibility for monitoring and cleaning up the sites, but other federal, state and local government agencies as well as a number of concerned citizens and elected officials are also involved. Although safe cleanup is their common goal, a maze of environmental regulations, competing interests, opposing ideas, scientific uncertainties, and technical disagreements serve to divide participants in this process. Differing values and scientific interpretations (how safe is safe enough? how clean is clean enough?) make the path even less straightforward.

The purpose of this study is to discuss limitations to and suggest options for improving effective public participation in St. Louis-area radioactive waste site decision-making. Emphasis is placed on the potential role of local citizen advisory boards. Independent technical oversight is also discussed.

Information for this paper was gathered through personal or telephone interviews conducted by one of us (Witt) between May and December of 1992 with several locally-involved parties including representatives of the DOE and its contractors, the State of Missouri Department of Natural Resources (MoDNR), EPA Region VII, and the St. Louis County Health Department, as well as private citizens. Unless otherwise specified, quotations and paraphrasing in the text that follows refer to these interviews. Additional information was obtained at a variety of local radioactive waste-related meetings.

## BACKGROUND

Geography is a critical component complicating radioactive waste cleanup in the St. Louis region. Physical and political boundaries, geological characteristics, and locations of drinking water supply sources take on added importance in relation to waste site locations. History is also a factor: past mismanagement of local radioactive waste has compounded present difficulties and has bred distrust of the DOE and other agencies.

The DOE has divided St. Louis-area sites into two major programs, the Formerly Utilized Sites Remedial Action Program (FUSRAP) and the Weldon Spring Site Remedial Action Project (WSSRAP), each managed separately. The sites associated with FUSRAP are located in St. Louis City and County, whereas WSSRAP is in St. Charles County. Unless otherwise noted, the background information that follows was drawn from DOE-issued factsheets.

### St. Louis City and County Sites

There are three FUSRAP sites in St. Louis County: the St. Louis Downtown Site, the St. Louis Airport Site, and the Latty Avenue properties. A fourth St. Louis County site, Westlake Landfill, is not included in FUSRAP because the waste is privately owned.

### St. Louis Downtown Site

From 1942 to 1957, Mallinckrodt Chemical Works processed uranium ore in a downtown St. Louis neighborhood for the Manhattan Engineer District and the Atomic Energy Commission (AEC), the forerunner of the DOE. During these operations, buildings, equipment, and parts of the complex and surrounding properties became radioactively contaminated, primarily with thorium-230 but also with uranium-238 and radium-226. Some of these buildings continue to be used by Mallinckrodt for chemical production operations.

### St. Louis Airport Site

Starting in 1946 and for 11 years, radioactive waste from the Mallinckrodt downtown site was hauled to a 21-acre storage site near Lambert-St. Louis International Airport. This site is located in Florissant near Cold Water Creek, a small stream which runs through several nearby neighborhoods. In 1966, Continental Mining and Milling, a private

Chicago-based firm, bought part of this waste for the commercial value of its uranium and other metals. In the late 1960s, the site's storage facilities were torn down and remaining debris was buried on-site under 1 to 3 feet of soil. Cold Water Creek is now being monitored for contamination.

#### **Latty Avenue**

In 1966, Continental Mining hauled the radioactive residues it purchased one-half mile north to a site on Latty Avenue in the municipality of Hazelwood. Because open trucks were used, the haul route and adjacent private properties became contaminated. In 1967, Cotter Corporation, Continental's successor firm, began hauling Latty Avenue waste to its property in Colorado. In the 1970s, the contaminated soil and debris remaining on-site was consolidated into piles now known as the Hazelwood Interim Storage Site.

#### **Westlake Landfill**

The trucking firms hired by Cotter to haul waste to Colorado illegally dumped forty-three thousand tons of the Latty Avenue waste into two parts of Westlake Landfill. Located in the flood plain of the Missouri River, this 200-acre former limestone quarry is within the jurisdiction of the municipality of Bridgeton. Westlake Landfill was included on a 1992 Nuclear Regulatory Commission list of 46 radioactive sites nationwide where cleanup has lagged despite serious contamination (1).

In 1989, the EPA placed the Airport and Latty Avenue sites on the National Priorities List (NPL), thus authorizing cleanup to begin under the Superfund Act (CERCLA). The St. Louis Downtown Site and Westlake Landfill are also Superfund sites, although not on the NPL.

#### **St. Charles County Sites**

The 226-acre Weldon Spring site in St. Charles County has two components: 1) a chemical plant area with raffinate pits and 2) a quarry. Cleanup cost estimates for the entire site range from \$650 to \$800 million.

#### **Chemical Plant Area and Raffinate Pits**

During World War II, the U.S. Army operated an ordnance plant at Weldon Spring to produce TNT and DNT. In 1955, the AEC acquired the property and processed uranium and thorium there until 1966. The AEC stored most of the waste generated by the processing plant in adjacent raffinate pits, although some thorium waste was disposed of in a nearby quarry. The chemical plant area and raffinate pits attained NPL status in 1989.

#### **Quarry**

The quarry contains approximately 3 million gallons of water contaminated by mixed hazardous and radioactive waste, as well as bulk waste. Pollutants identified include uranium, radium, thorium, polonium, actinium, lead, TNT, DNT, arsenic, and other toxic substances. In 1987, the Weldon Spring quarry was placed on the National Priorities List because it was determined that contaminated quarry water threatened the purity of a nearby St. Charles well-field. In November 1992, construction of a water treatment plant was completed. As part of an interim remedial action, this plant will treat the contaminated quarry water and discharge it into the Missouri River nine miles upstream of St. Louis City and County water supply intakes.

### **CITIZEN INTEREST**

Except for the sustained interest of a handful of individuals, citizen interest in local radioactive waste issues has generally peaked and waned over the years in St. Louis. Interest in the press and among locally-elected officials has followed essentially the same pattern. An EPA representative interviewed notes that there has been a lot of citizen interest over time, but "since the DOE has taken a more proactive approach to community relations, some interest has died down." This trend is especially evident at Weldon Spring where DOE relations with St. Charles Countians Against Hazardous Waste, a local environmental group, have improved markedly over the past five years.

Despite periods of general complacency, new developments still tend to attract public attention. According to agency officials interviewed, health risks are always of primary concern to the public, but proposals to consolidate waste tend to generate the most heat. For example, in 1982 when DOE proposed making Weldon Spring a permanent disposal site and hauling in out-of-state waste, two thousand people showed up at a meeting in protest. Local landowners wanting waste removed from their property also tend to be highly interested, according to one DOE official, although this is often a lower priority than avoiding having someone else's waste added to their own.

The same DOE official noted that interested citizens are generally in one of three categories. First, there are contaminated property owners who tend to be concerned insofar as business, land use or real estate values might be affected, although "some, amazingly, don't seem to care." Second, there are people who live very near a waste site who are concerned about the potential for contaminated waste trucking and consolidation in their area. Third, there are individuals in the larger community who may not be directly impacted but who are interested in broader issues as well as local waste cleanup. This group tends to be the most vocal and active. Still, he notes, a lot of people are just not that interested. "They have other priorities or are apathetic."

### **OBSTACLES TO EFFECTIVE CITIZEN PARTICIPATION**

Even among those citizens who are concerned, there are several practical obstacles to participation. According to one local activist, "It's hard for citizens to understand this technical stuff. They feel they aren't educated enough." Simply keeping up with documents is a huge task, she notes. Time limitations are an important factor: at a mid-December 1992 public hearing on the newly-issued Weldon Spring Remedial Investigation/Feasibility Study, several technically-educated citizens who planned to review this substantial stack of documents for St. Charles Countians Against Hazardous Waste had to request an extension of the 60-day comment period because they also had full-time jobs and holiday commitments. An EPA employee acknowledges that to participate effectively "requires a lot of time and effort and technical training that most people don't have."

Another problem is that although there are a wide variety of opportunities for members of the community to learn about and comment on DOE site-related activities, few opportunities exist for local citizens to actually participate in decision-making processes. At Weldon Spring, for example, DOE officials boast a community relations program that has included such things as newsletters, fact sheets, a document



repository, site tours, technical workshops, expositions, and an open house, in addition to the legally-required public hearings and comment periods (2). Yet public relations and community outreach and interaction mechanisms such as these differ significantly from what can truly be called empowering citizen participation mechanisms.

Good citizen participation mechanisms would give citizens more than the opportunity to feel good about (public relations), learn about (community outreach), or talk about and comment on (community interaction) cleanup decisions that are made for them. Such mechanisms would give citizens both the opportunity and the power to meaningfully affect cleanup plans and the way in which they are carried out. They would involve the public in debates over the relative importance of issues and in the formulation of plans of action before decisions are reached (3).

Still, even were such opportunities more readily available, effective citizen participation would remain difficult. Citizens need to be able to figure out the right questions to ask during critical decision-making phases, to formulate viable alternatives to unpopular proposals, and to not feel intimidated by the technical expertise of agency officials. This requires a certain degree of technical know-how and confidence.

Both EPA, in the form of Technical Assistance Grants, and DOE offer limited funds to citizen groups to hire their own technical consultants. Francis Howell High School next to the Weldon Spring site received a grant from the DOE to perform independent air monitoring during cleanup operations. St. Charles Countians Against Hazardous Waste were given a grant by the EPA to finance technical review of the Weldon Spring Remedial Investigation/Feasibility Study for the site clean-up, though timely reimbursement for past activity has reportedly been a problem. By contrast, the St. Louis County Council had to use its own funds to hire technical consultants to review Weldon Spring quarry water treatment plans (4).

Even were funds more available so that local groups would not have to compete for grants, it would remain difficult for every interest group in the region to find its own independent, technically-qualified experts. According to one local activist, it is hard to find experts who will speak out against the federal government. And even then, "expert" opinions often conflict, and the problem becomes one of whom to believe.

Still, not all difficulties revolve around technical issues. When DOE proposals appear to solve one local area's waste problem at the expense of another, as with the quarry water treatment plant, or should plans emerge for FUSRAP waste consolidation, citizen interests tend to divide along geographical lines. There is no regional forum for citizens to come together, discuss available options, determine acceptable risks, and formulate plans with which more groups are comfortable. As one DOE official interviewed observed, "A political consensus of values is needed."

## POTENTIAL ROLE OF A CITIZEN ADVISORY BOARD

### Purpose

One option for improving the effectiveness of citizen participation in the St. Louis area is the establishment of a citizen advisory board with participation by locally-elected public officials, interested citizens and independent technical experts. Such a group could serve several useful functions from increasing citizen interest and information dissemination to consolidating local technical expertise for improved

technical oversight and understanding. A County Health official suggests that a citizen advisory board could act as a liaison between local citizenry, project people and government officials. It could keep an eye on work plans and projects to make sure they stay on track and provide input on major changes.

An EPA representative acknowledges that a citizen advisory board could be a good idea if it had representative membership and consistent involvement. He notes that the DOE tries through workshops to keep the public apprised of what's going on and to prepare them for what's coming up, but it doesn't get the participation that it might. "It would be good to have a designated citizen work group to count on to participate." One DOE official interviewed agrees that a citizen advisory board could serve a productive role. He says that the DOE would benefit from a credible third party group and that it would be good for members of the public who want to participate or who want another source (after DOE and local environmentalists) for credible, independent information. He suggests that it could act as a sounding board or review board and that the DOE might be willing to provide funds, consultants, and/or report to such a board.

A St. Louis environmentalist notes that a citizen advisory board could help the local situation in several ways. Such a group could review documents, look for alternative sites for St. Louis waste, and meet with groups such as the Army Corp of Engineers regarding Coldwater Creek. Worker safety violation whistleblowers could call such an advisory board anonymously. The group could act as a clearinghouse for information and sort out rumors. It could bring more people into the situation and provide citizen voices to demand expedited and safe cleanup of local radioactive waste. If a citizen advisory board carried weight with elected officials, this person suggests, the DOE would listen.

### People

Ideally, who should be appointed to a citizen advisory board for it to be effective? According to those interviewed, a mixture is needed. Community leaders, technical specialists, affected homeowners, "powerful business people," elected officials, academics, medical persons, environmentalists, "regular people," and "plain old citizens" are among those recommended. "It should reflect different views," responds one person. "There has to be a commitment by members to actually read materials," advises another; "That's what limits public participation. It's one thing to come to meetings and object to plans and another thing to take the time to read and understand them." One interviewee recommends limiting the number to 7 to 11 people, "or it would be too unwieldy." A small number makes it easier to get together, do tours, etc. If you get too many people on a board, he notes, some tend to be inactive and just use membership to look good on their resume. Above all else, stresses another interviewee, advisory board members should be "open-minded people -- people who don't necessarily have an agenda except for figuring out what makes sense and getting on with it."

### Precautions

Reservations about a citizen advisory board not "getting on with it," i.e., slowing cleanup progress, were expressed by several of those interviewed. An EPA official suggests that board members should be responsible for maintaining a schedule like the one MoDNR, EPA, and DOE agree to. "They should make a turn-around time commitment so people

are not held in limbo waiting on them." One DOE contractor notes that it would be a problem if the group had the authority to stop operations and became polarized. A MoDNR employee concurs with this view, saying that an advisory board should not have veto power over plans; only elected officials should have this role. Problems would arise, comments another DOE official, if a citizen advisory board "were less of a fact-finding, truth-seeking group and more of a forum for special interest advocacy groups." He emphasizes the need for a balanced group "without an axe to grind."

A County Health Department official notes that too often there is a tendency for advisory boards to try to drive projects technically, and when members don't have the necessary expertise, "the project can get off track very easily and wander into Never-Never Land." He suggests that a board's appointing authority should lay out clear guidelines for the group as to what they should try to do and what they should not try to do. The group should question but not try to redesign the project.

### **Practicalities**

In the St. Louis area, the geographical spread of radioactive waste sites over several political boundaries creates a practical problem as to who might be the appointing authority for a single metropolitan-area advisory board. It would be much simpler to establish separate advisory boards for St. Louis City, St. Louis County, and St. Charles County. In fact, the St. Louis [City] Board of Aldermen and the St. Louis County Council each passed a resolution chartering its own "Radioactive and Hazardous Waste Oversight Commission" in the summer of 1992. Members have been appointed to the County Commission, but the group had not met by the end of the year, nor had any action been taken by the Mayor of St. Louis on the City resolution. Although these two Commissions have the potential for enabling citizens and their elected officials to participate much more effectively in waste management decision-making processes, the problems of resolving City-County and County-County conflicts and of having access to a critical mass of independent technical expertise will remain.

### **Another Problem is one of Authority**

The DOE is under no official obligation to be responsive or accountable to citizen advisory boards sponsored by local or state governing bodies. As a matter of practical courtesy and political astuteness, the agency is likely to cooperate with requests for information and to listen carefully to concerns forwarded by local elected officials, but DOE officials need not change plans if there are no legal grounds to do so. Still, these grounds may eventually exist. The Office of Technology Assessment of the U.S. Congress has suggested establishing citizen advisory boards at each DOE weapons complex site (5). With effective local participation, such Congressionally-mandated boards could put real muscle behind their recommendations. An amendment to the 1993 Defense Authorization Act to establish these boards passed the Senate but was killed in conference.

### **THE ROLE OF INDEPENDENT TECHNICAL OVERSIGHT**

The topic of independent technical oversight, i.e., oversight not tied to a government agency and directly accountable to citizens or their elected representatives, is an understandably sensitive one among government agency officials. Sug-

gesting the need for another layer of technical review or environmental monitoring beyond that already performed by these agencies can easily be interpreted as questioning the professionalism or technical expertise of agency employees and contractors.

In a recent interview at Weldon Spring, a DOE official commented that at least ten different organizations review everything they do, and "that's plenty." It's tough to resolve technical issues with that many groups, he explains. "It extends the schedule enormously." He notes that if people knew what went into technical review, they would have the comfort that they don't have now. "Maybe that's the key." Without technical expertise, he acknowledges, it is difficult for the public to have confidence that what DOE is doing is technically correct. They lose confidence, he notes, when DOE fights with the State and EPA, "so it's important to have regulatory bodies stand up and say 'we've reviewed this and we agree with it.'" He says that this has helped with St. Charles Countians.

Still, while this presentation of a united front helps comfort some local citizens, others become uneasy when there appears to be a cozy relationship between the historically distrusted DOE and the government agencies that oversee it. Some citizens also question whether state and local agencies such as MoDNR and the St. Louis County Health Department have the resources or expertise to critically evaluate questions dealing with radioactivity.

Distrust and doubts such as these led the St. Louis County Council to vote to contract an independent technical consulting firm to review and evaluate Weldon Spring quarry water treatment plans. One Council member favoring this proposal expressed total distrust of the DOE at the June 18, 1992, meeting of the Council's Justice and Health Executive Committee; another cited a general need for local government to oversee federal agency activities in the area. The minority view was that County money shouldn't be appropriated for such oversight because it would be needless duplication of already adequate safeguards; local Health Department review was enough.

On November 24, 1992, the consultants presented their report to the Committee. When asked whether they thought the independent technical review was a constructive exercise, one of the two consultants responded that at least they are able to give the public and County an impartial, professional opinion. He commented that "because of public attention" DOE had improved its water treatment plans through considerable revisions over the past few months and that this shows the "importance of public involvement and interaction." The other consultant commented that without independent technical oversight, the situation is akin to the fox guarding the hen house. "We're like Howard Cosell," he quipped, "we can call 'em as we see 'em." He also noted that while others may have had trouble getting answers from DOE, they [the consultants] were able to go in as "brother [sic] engineers." A Council member added that it is not a waste of tax dollars when local government checks up on the federal government, that it's about time --- the public is demanding it.

The Chairman of the Committee agreed that hiring an independent technical consultant was a constructive contribution to the cleanup process, observing that the County and independent consultants had brought about reasonable changes and had made the DOE more accountable to the public. At an interview a week later, a DOE Weldon Spring



official discussing the water treatment plant acknowledged that "scrutiny probably makes us do a better job."

At the DOE Waste Isolation Pilot Plant (WIPP) in New Mexico, such scrutiny is institutionalized. In 1978, Congress established the Environmental Evaluation Group (EEG) to perform on-going evaluations of scientific and technical aspects of the WIPP transuranic waste disposal facility. Formally associated with the State of New Mexico and funded by the DOE, EEG has a full-time technical staff of nine professionals and an annual budget of about \$1.5 million (6). This critical mass of human and financial resources provides the site with sustained, independent technical oversight, a situation that contrasts strongly with the piecemeal approach that has prevailed in the St. Louis area.

### CONCLUDING REMARKS

St. Louis-area radioactive waste sites have not received the attention of other major DOE sites, in part because for some time they have not been active production components of the U.S. nuclear weapons complex. Yet, St. Louis is a major population center of 2.5 million potentially affected people and cleanup represents a taxpayer investment on the order of \$1 billion. With stakes such as these, a high level of citizen participation and independent technical oversight is well warranted.

Unfortunately, geographical fragmentation makes effective citizen participation especially difficult in the St. Louis area, and independent technical oversight suffers because local institutions lack the resources to mount a comprehensive effort. Less ambitious but still promising mechanisms such as the two newly-established Radioactive and Hazardous Waste Oversight Commissions, one for St. Louis City and one for St. Louis County, may fail to fulfill their potential because of lack of funding.

In the meantime, remedial action is moving forward at Weldon Spring: in January, 1993, the DOE released the first batch of treated quarry water into the Missouri River, and a Record of Decision on final site cleanup plans is planned for the summer of 1993. FUSRAP is less far along, but it too is making progress: interim cleanup measures have been proposed for the North County sites and data collection for the FUSRAP Feasibility Study is nearly complete.

However, controversial issues will continue to arise. Deciding if, where, and how to consolidate local FUSRAP waste is likely to be a formidable task. At Weldon Spring there is need for continuous independent monitoring of treated quarry water to insure that permit requirements for discharge into the Missouri River are met as treatment plant elements require servicing and maintenance. Review and revision of

permit requirements may be advisable as new information on or requirements for discharge of currently unregulated pollutants emerge. The DOE's proposal to build an engineered facility on the Weldon Spring site to permanently store all site waste could encounter resistance.

Citizen advisory boards, involving local officials and interested citizens, with access to independent technical capability have the potential to both protect the public and facilitate waste cleanup. One possibility for the St. Louis area is that either one regional or two project-oriented boards (for WSSRAP and FUSRAP) be created to advise DOE site managers. It is essential that such boards have adequate financial resources and a strong mandate to provide independent advice or their recommendations may not be taken seriously by the DOE. The WIPP project's Environmental Evaluation Group is an effective technical oversight group because, although it is funded by the DOE, it is chartered by federal legislation and is associated with the state. Some such mechanism is needed in the St. Louis area, and federal legislation may be required to bring it about. Although good community relations can grease the skids to community acceptance, it is no substitute for effective citizen participation in the difficult decisions that lie ahead.

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