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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II

JACOB K. JAVITS FEDERAL BUILDING

NEW YORK, NEW YORK 10278

HUDSON RIVER PCBs REASSESSMENT RI/FS
COMMUNITY INTERACTION PROGRAM
JOINT LIAISON GROUP MEETING
LATHAM, NEW YORK
MARCH 31, 1993

MINUTES

The purpose of this Joint Liaison Group meeting was to discuss EPA's "Decision Making Process in Superfund," emphasizing the nine criteria EPA uses to arrive at a remedial decision for Superfund sites. Mr. William McCabe, Deputy Director, NY/Caribbean Programs, Emergency and Remedial Response Division, USEPA Region II, made the presentation after a short introduction by Ann Rychlenski, Community Relations Coordinator for the Hudson River PCBs Superfund Site.

The agenda, sign-in sheets, and a copy of the handout accompanying Mr. McCabe's presentation are attached to these minutes. Mr. McCabe began by stating that the goals of the Superfund program as found in the National Contingency Plan are to select remedies that are protective of human health and the environment, maintain protection over time, and minimize untreated waste. Key factors written into the law are use of permanent solutions to the maximum extent practicable, and treatment that reduces mobility, toxicity and volume. Treatment should address the principal threat at a site; engineering controls are used to address low-level threats; and institutional controls (such as fencing an area, posting warning signs, etc.) are used as supplements to active treatment and engineering controls. Another goal is to promote the use of innovative technologies. Mr. McCabe emphasized that the innovative technologies being applied at Superfund sites have been proven in other areas and are researched for their ability to be adapted for possible use in site remediation. A final goal is to return groundwater to beneficial uses (generally drinking water quality) within "a reasonable time period."

A scope of the work to be done and a Remedial Investigation (the field effort and a baseline risk assessment) lead to the Feasibility Study. During the Feasibility Study, EPA develops and screens remedial alternatives based on their implementability, effectiveness and cost, identifies Applicable or Relevant and Appropriate Requirements (ARARs), and performs a detailed analysis of the alternatives which pass the initial screening, based on nine specific evaluation criteria. Following this rigorous analysis, EPA recommends the alternative best suited for the cleanup in a document called the Proposed Plan.

The Proposed Plan, which is released to the public at the same time as the final Feasibility Study, includes site background and a description of risks and contaminants at the site. It also contains the analysis of the feasible alternatives for remediation based on the nine criteria, and presents the recommended alternative. A 30-day public comment period, which could be extended to 60 days, follows release of the Plan. During this period a public meeting is held, and written and oral comments are taken. The Record of Decision (ROD), which is signed after the public comment period, takes all public comment into consideration and includes a Responsiveness Summary to address these comments. This decision-making process is not site specific but is applied to all Superfund sites nationwide.

The nine criteria (see Attachment 3, pages 3 and 4) are divided into three categories: threshold, balancing and modifying. By law, the threshold criteria must be met by whatever remedy is selected for the site, so all alternatives must meet these criteria or they do not get further consideration. The balancing criteria are the next five on the list of nine, with the first two (long-term effectiveness and reduction of toxicity, mobility and volume of the contamination) being considered more strongly because of the statutory mandates explained earlier. Remedial alternatives under consideration are analyzed to determine which best meets requirements of these five criteria. The final two criteria, state and community acceptance, are called modifying criteria and could affect the selected remedy. (In the case of New York State, EPA works with the state throughout a remedial project and usually has the State's acceptance at the time the Proposed Plan is published.)

Questions for Mr. McCabe enabled him to clarify several items. Regarding community acceptance, Mr. McCabe defined the "community" as everyone, including private citizens, government officials and agencies, potentially responsible parties, etc. Everyone has an opportunity to comment on the Proposed Plan and all significant comments are addressed. In the case of divergent viewpoints regarding the recommended remedy, the Record of Decision would indicate those viewpoints.

In response to the concern over whether or not New York State would agree with the decision, Mr. McCabe feels, based on Commissioner Jorling's letter and because the decision that will be made will be "based upon the best science," that the State has "an open mind." Mr. McCabe and other EPA representatives briefly discussed various hypothetical scenarios involving state concurrence and non-concurrence with EPA's decision.

Sharon Ruggi had several questions. She asked if in all cases all evaluation criteria were applied in the same manner. She stated it appeared to her that the original study and 1984 ROD were handled differently. Mr. McCabe and Doug Tomchuk explained that the 1984 ROD was in place prior to many current laws and to the nine evaluation criteria which are now specified. At the present time, however, reassessments are handled the same way as any other investigation. In response to Ms. Ruggi's question about whether or not cost effectiveness is weighted differently based upon whether the government or private industry were to pay for the cleanup, Mr. McCabe pointed out that at the time the cost of potential alternatives is

considered, no one knows who will ultimately pay, so there could be no difference in the way cost is assessed.

A lengthy discussion on innovative technologies and EPA's emphasis on their use followed. How are these technologies defined? What are some specific technologies which may be applied to the Reassessment? Innovative technologies are essentially those technologies which are not currently commercially available, or available on a limited basis. They are not "emerging" or experimental technologies; rather they are proven technologies which have been used elsewhere, usually in private industry, and have recently been applied to the hazardous waste field. In EPA's Technology Innovation Office a program called SITE exists whereby the government works with industry to promote, monitor and assess the applicability of these new technologies to hazardous waste remediation.

Mr. Tomchuk cited several such technologies that may be applicable to PCB remediation, including bioremediation, K-PEG systems (polyethylene glycol reduction systems to remove chlorine from PCBs), and propane extraction of PCBs from sediments. Mr. McCabe stated that generally, for soils, anything but incineration is considered innovative at this time. As technologies become more commonly used for hazardous waste remediation purposes, they are recategorized from "innovative."

Kate Reilly pointed out that the ROD, often considered the end of the process, is really only the beginning. She questioned the extent of EPA's accountability in the design and construction phases of remediation. Mr. McCabe stated that in the ROD, very clear objectives for the site in question are specified, and at all sites where contamination is left on-site above health-based levels for any reason, a review is conducted every five years starting from the initiation of construction to assess whether or not the remedy is still protective of human health and the environment.

EPA does not, however, produce a schedule beyond stating an anticipated timeframe for construction and implementation of the remedy. This timeframe does not include the time required for design, negotiations with the responsible parties, and procurement of contracts, all of which can take up to two years before construction begins.

In response to other questions, Mr. McCabe affirmed that if, before construction, a significant scientific change occurred which had a potential impact on the implementation, EPA would look at decisions involving whatever had changed and act accordingly. He stated he did not foresee that changes in administration either on the regional or national level would have any impact on the Reassessment. Regarding recent newspaper articles in which an unnamed EPA spokesperson had been quoted as saying that animal studies do not reflect what would happen to humans regarding health risk, both McCabe and Mr. Tomchuk stated that that was "a viewpoint only." Common toxicological practices, which are nationally scientifically acceptable, use animal studies with conservative assumptions built in relating that information to humans. This approach will continue to be used until the state of the science changes.

Mr. Tomchuk followed the questions on decision-making with a project status report. He touched upon the reports of the new PCB source area at or near Bakers Falls. New York State Department of Environmental Conservation (DEC) and General Electric (GE) are investigating the source, and while the data will be incorporated as appropriate into the Reassessment study, the Reassessment will not deal directly with investigating that source.

GE has provided EPA with a list of data, including information gathered from approximately 5000 samples, which the company plans to present to EPA in the near future. Much of that data will elaborate on the new source. The Feasibility Study Work Plan has been drafted but is being held until the Bakers Falls source data can be looked at to be sure any impact of that data is incorporated into the planning.

Modeling efforts are beginning and will assist in understanding the vast amounts of data that have been collected and in determining what projections can be made. The professionals doing the modeling for the Reassessment are those who have done modeling at the Green Bay/Fox River (WI) site. That site was a demonstration project designed to show the effectiveness of using these types of models in hazardous waste situations.

Peter Lanahan of GE pointed out that what turned out to be the newly identified Bakers Falls source had been mentioned in the Reassessment's Phase 1 Report. He stated that at the outset of the Reassessment, GE undertook its own extensive study of the river, discovered levels of PCBs in the river elevated beyond the low levels mentioned in the Phase 1 Report, and began efforts to trace the source, which was ultimately identified and reported to EPA.

DEC's Bill Ports explained the approaches being taken to pin down the source and some of the hazards being confronted, particularly weather and the unsafe structural condition of the old mill being studied. He stated there appeared to be a seasonal trend to the PCB fluctuations, with a rise over the summer months and a decline in the winter. Mr. Lanahan added that current PCB levels entering the river are near the non-detect level and then further described the efforts to investigate the source, including possible exploration of newly-discovered subterranean caves along the river.

Mr. Tomchuk responded to a question regarding PCB sources and monitoring below the Mohawk River by reiterating the original Scope of Work. He stated that the objective of the Reassessment is to look at remedial options for PCB-contaminated sediments in the upper Hudson. Associated with this will be assessment of the effects of any remedial action on PCB levels in the upper Hudson as well as in the fresh water part of the lower Hudson. Once the salt water portion of the Hudson is reached, New York City inputs affect any analysis. Up-river input, while important to identify and stop, will not impact EPA's ability to make a decision regarding remediation of the sediments. As many external sources as possible are being factored in to the analysis at this point.

A question was raised regarding the ability to do effective modeling in light of the new source(s). Mr. Tomchuk acknowledged that it is a concern. He stated EPA was trying to address this question with the current sampling program. He feels that modeling is in fact the way to sort through the data to determine the impact of the various PCB contributions, and emphasized the use of both current and extensive historical data. Mr. Tomchuk said that while interpretations have uncertainties, for many of the assumptions in the models it is possible to perform "uncertainty analyses" to develop a range of accuracy.

Mr. Ports reviewed DEC's findings that reported higher levels of PCBs in fish flesh, 1992 over 1991, which, he stated, coincided closely with water samples taken by GE showing elevated PCB levels. Fish sampling in the same areas and of the same species will also be done in 1993.

In response to Ms. Garlanda's question on sampling, Mr. Tomchuk stated EPA is currently doing water column transect sampling, which is the only EPA sampling program (involving 11 locations) in effect at this time. General Electric is doing water monitoring at four locations as part of the remnant deposit capping project, has taken water and sediment samples near Bakers Falls in the area of the old building, and will sample in and around the mill structure itself. EPA estimates that in May it will undertake fish sampling at 15 upper and lower river locations, preceded by surficial sediment samplings at the same locations. DEC's prior fish sampling has not been done on a congener-specific basis.

A discussion ensued on the possibility of future monitoring and periodic reviews of the Hudson River site by EPA, based upon hypothetical remedial decisions. This was followed by a brief discussion of financial responsibility for remediation. Mr. McCabe reviewed state and PRP responsibility. He indicated the identification of GE's facilities as the sources of the contamination under investigation, and discussed GE's role as the potentially responsible party. Kate Reilly ended the evening by thanking EPA for its "patience and thoughtful answers."

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HUDSON RIVER PCB REASSESSMENT

COMMUNITY INTERACTION PROGRAM

Joint Liaison Group Meeting
Wednesday, March 31, 1993
7:30 p.m.

Holiday Inn Express, Latham, New York

AGENDA

Welcome & Introduction	**Ann Rychlenski, Community Relations Coordinator, U.S. EPA, Region 2**
Presentation on EPA's "Decision Making Process"	**Bill McCabe, Deputy Director, Superfund, U.S EPA, Region 2**
Discussion of Presentation & Questions & Answers	**Bill McCabe**
Project Update	**Doug Tomchuk, Remedial Project Manager, U.S. EPA, Region 2**
Closing	**Ann Rychlenski**

Also in attendance for U.S. EPA: **Paul Simon, Section Chief, Office of Regional Counsel**

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LATHAM, NY
MARCH 31, 1993

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Wally Beaver	Beaver Communications Glens Falls, NY	GE
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EPA'S NINE CRITERIA

1) OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT.

2) COMPLIANCE WITH APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS (ARARS).

3) LONG-TERM EFFECTIVENESS

4) REDUCTION OF TOXICITY, MOBILITY OR VOLUME

5) SHORT-TERM EFFECTIVENESS

6) IMPLEMENTABILITY

7) COST

8) STATE ACCEPTANCE

9) COMMUNITY ACCEPTANCE

THE EPA DECISION MAKING PROCESS

FEASIBILITY STUDY

. Using the data from the RI (Remedial Investigation), EPA conducts a feasibility study to evaluate alternatives, often referred to as cleanup options, for cleaning up a site. Every possible alternative is carefully screened and analyzed.

IDENTIFICATION AND SCREENING OF CLEANUP ALTERNATIVES

. Alternatives that survive initial screening processes are evaluated in great depth with respect to a list of nine (9) criteria.

ANALYSIS OF ALTERNATIVES

. Upon completion of this rigorous analysis, EPA makes a recommendation for the alternative that is best suited for the cleanup in a document known as a Proposed Plan. All documents are made available to the public and a comment period begins. The minimum time given for a public comment period is 30 days. Upon timely request, public comment periods may be extended. During the public comment period, EPA must provide the opportunity for a public meeting.

At the conclusion of the public comment period the EPA must prepare a resonsiveness summary that includes a synopsis of the written and oral comment make by the public and agency responses to those comments.

RECORD OF DECISION (ROD)

. Based on the results of the Remedial Investigation (RI), Feasibility Study (FS) and public comments, the Regional Administrator selects the remedy for site cleanup. The remedy is written up in a document known as the Record of Decision or ROD.

EVALUATION CRITERIA

EPA uses **nine criteria** to evaluate how effective a proposed remedy will be. The **nine criteria** are divided into three (3) categories -- **Threshold, Balancing and Modifying.**

THRESHOLD

- **Overall Protection of Human Health and the Environment**

- **Compliance With Applicable or Relevant and Appropriate Requirement (ARARS).**

In order to ensure that all possible cleanup standards are met, EPA must make certain that the proposed remedy is in compliance with all other existing environmental laws, including state laws, that fit the problem.

BALANCING

- **Long-term Effectiveness**

- **Reduction of Toxicity, Mobility or Volume**

These two criteria are emphasized as part of EPA's preference for finding solutions that are permanent, and require as little long-term care and maintenance as possible.

- **Short-term Effectiveness**

This criteria focuses primarily on problems that may arise in implementing the proposed remedy -- such as heavy truck traffic in a community, or dangers associated with excavating large volumes of contamination.

- **Implementability**

Implementability examines the engineering and administrative problems that may arise in implementing a proposed remedy.

- **Cost**

MODIFYING

- **State Acceptance**

- **Community Acceptance**

Before any proposed remedy can be selected, it must take into consideration the concerns and preferences of both the public and the state. While public comment and input should be a part of the entire superfund process, it is especially important that the community make its needs and concerns known during the public comment period for a Proposed Plan.