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HUDSON RIVER PCB REASSESSMENT RI/FS
COMMUNITY INTERACTION PROGRAM

HUDSON RIVER PCB OVERSIGHT COMMITTEE MEETING
ALBANY, NY
SEPTEMBER 1, 1992

On September 1, 1992, the Hudson River PCB Oversight Committee met in Albany, NY. The agenda and sign-in sheets are attached (Attachments 1 and 2). Committee members attending were:

William McCabe, Deputy Director, ERRD, USEPA Region II, HROC Chairperson
Douglas Tomchuk, ERRD Project Manager, USEPA Region II
Ann Rychlenski, Community Relations Coordinator, External Programs Division, CIP Steering Committee Chairperson
Stephen Hammond, Director, Bureau of Central Remedial Action, NYSDEC
Alan Rockmore, Director, Bureau of Construction Services, NYSDEC
Dr. William Nicholson, Mt. Sinai Medical Center, STC Facilitator
Frank Csulak, Northeast Region Science Coordinator, NOAA
John King, New York State Thruway Office of Canals
Andrew Raddant, USDOI, Fish and Wildlife
G. Anders Carlson, NYSDOH
Judy Schmidt-Dean, Chairperson, Citizen Liaison Group
Tom Borden, Chairperson, Agricultural Liaison Group
Bridget Barclay, Chairperson, Environmental Liaison Group
Darryl Decker, Chairperson, Governmental Liaison Group
Albert DiBernardo, TAMS Consultants, Inc.
Peter Lanahan, GE

Mr. DiBernardo delivered a status report on the reassessment activities, beginning with a review of the schedule (Attachment 3). He highlighted the following target dates:

Phase 2 Work Plan	end of September 1992
Phase 3 Statement of Work	February 1993
Phase 2 completion	August 1993
Phase 3 Report	December 1993

Mr. DiBernardo reported completion of all scheduled geophysical studies and confirmatory sampling. The geophysical report is expected within a week of the HROC meeting date. Coring in the lower Hudson has begun. Harbor coring and cores up to River Mile 43 are complete. Progression of the coring up the river will continue into October. Approximately one hundred samples have been sent to Aquatec Inc. of Burlington, VT, for PCB testing. Two hundred and fifty samples have been sent to two laboratories for grain size analyses.

Collection of water column samples for the method detection limit study will begin in September, and initial bulk water column sampling will begin in October.

Low resolution coring is currently planned for this autumn but may be deferred to the spring pending resolution of several planning issues.

Mr. Lanahan asked Mr. DiBernardo about Dr. Bopp's questions on the applicability of high resolution coring in the upper Hudson. Mr. DiBernardo said TAMS had met with Dr. Bopp, considered his questions, and still feels that the high resolution coring approach for a variety of potential uses is a valid one. Coring results will be addressed on the basis of core-to-core relativity, not from a mass inventory standpoint, and for the purpose of radionuclide dating of PCB deposits. New high resolution cores may be used to assess environmental transformation of PCBs over time by comparing them with archival cores from the same location(s). After verifying some assumptions, TAMS plans to use the high resolution core data for contaminant fate and transport modeling to determine PCB levels in fish.

Dr. Nicholson reported on the July 10, 1992, meeting of the Scientific and Technical Committee (STC), at which proposed Phase 2 activities were reviewed. The Committee report is Attachment 4.

Ann Rychlenski reported on the August 5, 1992, Steering Committee meeting held in Glens Falls, NY. At that time the Steering Committee compiled a number of action items for referral to HROC. Following is a list of those action items and a summary of the responses provided by HROC. In some cases where discussion was extensive, details are provided further on in these minutes.

STEERING COMMITTEE ACTION ITEMS	HROC RESPONSES
To EPA: Request for	
1) a clear statement as to the goals of the reassessment;	The goal is to reanalyze the 1984 Record of Decision and determine whether remediation is appropriate for the PCB-contaminated "hot spots" or sediments in the upper Hudson River south of the Fenimore Bridge to the Federal Dam Troy.
2) a clear definition of the site;	The definition of the site is the entire Hudson River; the investigation is of GE PCB discharges from the Ft. Edward and Hudson Falls capacitor plants.
3) clarification of specific standards used by EPA for PCBs in fish tissue;	EPA is evaluating standards as part of the Feasibility Study. Bringing PCB levels in fish to within acceptable levels will be a goal and an evaluation factor in assessing remedial action alternatives.

STEERING COMMITTEE ACTION ITEMS	HROC RESPONSES
4) a clear statement as to what criteria will be utilized for consideration of non-carcinogenic health risks of PCBs;	There is a 3-stage procedure to develop numbers for non-carcinogenic risk in human health risk assessment. First, EPA accesses the Integrated Risk Information System (IRIS) data base for a parameter. At this time there is no number in the IRIS data base for PCBs. Second, EPA accesses the Health Effects Assessment Summary Tables (HEAST) data base. There is currently no number for non-carcinogenic risks here, either. The Phase 1 Report reflects the third step. A number was proposed by TAMS based on some of the existing studies. This number was reviewed by the Environmental Criteria and Assessment Office (ECAO), was deemed acceptable to use in the human health risk assessment, and was in fact used in Phase 1. If there are no numbers in the IRIS or HEAST data bases by the time the [final] human health risk assessment is done for the reassessment, EPA will again propose a number to ECAO to evaluate. If ECAO accepts that number, it will be used. If ECAO does not accept that number and does not propose an alternative number, EPA cannot evaluate non-carcinogenic human health risks.
To EPA: A question as to 1) whether this site will be broken into "operable units," e.g. Operable Unit 1, the contaminated sediments in the upper Hudson River; Operable Unit 2, contributions to PCB contamination in the lower river;	At this time EPA does not intend to do other operable units at the site.
2) whether agricultural aspects and impact will be addressed during the reassessment, and, if so, during which phase;	EPA is planning to look at the impacts of any remedy proposed for the site, and that is where the agricultural impacts would be analyzed. This would be in the Feasibility Study phase, or Phase 3. This analysis will not include a specific analysis of economic impact to the farmer. Loss/use analysis is typically performed in a siting process, not during consideration of remedial alternatives, which is the subject of the current reassessment.
To NYSDOH: A request for an update from DOH on the recent cancer study conducted in Saratoga Springs, NY;	DOH has had some contact with residents of Schuylerville with perceptions of an increase in the incidence of cancer. Information continues to be exchanged but it has not been determined whether or not a cancer cluster study will be done.
To NYSDOT: A request for information on that agency's activities in and around the Hudson River, specifically the Champlain Canal;	Two permits are being processed. One is called a Water Quality Certification. This is a statewide permit and as such includes the Hudson River. It is a permit for dredging sediments impeding traffic in the canal system, and only in the canal system. The second permit is with the Corps of Engineers, New York City District. This permit covers more than the Champlain Canal, but does include the Canal.
To HROC: A request for a Joint Liaison Group meeting during which members of the STC would be available to answer scientific and technical questions on the reassessment.	This request will be considered, particularly in light of discussions which took place at the Steering Committee meeting held prior to the HROC meeting.

Some discussion occurred regarding contributions to the Hudson River of PCBs from other sources. Mr. Tomchuk said that the sampling program will pick those sources up and take those sources into account, even though the purpose of this reassessment is not to point out new or additional potentially responsible parties. Mr. Lanahan contributed GE's position, which is that EPA's approach will not provide the type of quantitative understanding of the river system which GE feels is necessary to answer the reassessment's questions. Mr. McCabe stated EPA feels there will be enough information to make a quantitative decision. He acknowledged that EPA understands that GE does not agree.

Mr. Borden stated that his Liaison Group is interested in whether, at the end of the study, the contribution of the upper Hudson to the lower Hudson will be able to be determined. Mr. Tomchuk stated that there will be some idea of the contributions to the lower Hudson, but not as certain as if an exhaustive study were done. With the data being collected, a lot of projections and modeling efforts in the upper Hudson can be projected into Area C above the salt front. Projecting below the salt front becomes more difficult. Some of the concerns for Area C and the lower Hudson can be addressed in analyzing the affects of remediation in the upper Hudson.

Bridget Barclay asked if, based on the sampling that has been done, there is any reason to believe that there is any other single remediable source of PCBs to the upper Hudson as significant as the hot spot areas. Mr. Tomchuk said to his knowledge, no, except that in Area B, in the remnant deposit area above the Route 197 Bridge, there may be a source area below Bakers Falls that is not considered part of the "traditional" hot spots. This was reported in the Phase 1 Report. Mr. DiBernardo cited two additional sources: contaminated sediments in Study Area C on which TAMS is proposing to collect data in Phase 2, and finally what is being discharged directly into New York Harbor in Area D. For the latter, EPA's Water Management Division may be able to provide some assistance.

Mr. DiBernardo asked if the 1984 Record of Decision dealt with the upper Hudson, or both the upper and lower Hudson. In the final Feasibility Study, will the lower Hudson be addressed in a relative sense? Mr. McCabe said the portion of the ROD with which the reassessment is concerned is the No Action decision pertaining to the hot spots. Mr. Tomchuk stated that EPA does not plan to make a determination for any action for the lower Hudson as part of this study, although the reassessment will incorporate the effects of the sediments on the lower Hudson as part of its findings.

Considerable discussion centered around the Steering Committee's question on EPA's standards for PCBs in fish tissue. Ms. Barclay's question was how is the problem of PCB levels in fish being characterized? Doesn't EPA have to have some baseline number in mind? Mr. Tomchuk said defining a level of PCBs which would be considered safe vs. one which would be considered a problem would become a remedial action goal against which potential remedial alternatives would be assessed, [rather than an absolute level for which to strive].

Mr. Lanahan proposed that the following questions needed to be answered: How do PCBs find their way into the fish? Which of the PCBs are more harmful? How long do the PCBs bioaccumulate in the fish? He stated concern about what GE perceives as the lack of a quantitative analysis of the data collected now for analyses to be performed later.

In response, Mr. DiBernardo acknowledged that Mr. Lanahan's viewpoint will remain an issue. He said that [part of the reason for] TAMS' collecting new water and sediment samples is to try to find the lowest possible PPT (parts per trillion) level in them, which transcends any value which has been created by a regulatory agency.

Mr. Hammond stressed the use of good science to understand a problem, followed by establishment of a set of goals based on some combination of criteria (ecological risk, human health risk, etc.). When a decision point regarding selection of a remedial action is reached, all factors have to be considered; trade-offs and compromises occur based on monies, resources, etc., and judgement is required. Mr. McCabe pointed out that all Superfund decisions involve weighing many factors.

During the discussion of whether EPA would address agricultural impacts in its consideration of remedial alternatives, Mr. Lanahan mentioned that a state policy exists on the preservation of farmland, and asked if that policy would be an ARAR, or in any way considered. Mr. McCabe said EPA would have to address the policy if it were an ARAR, and even if it weren't, it could be considered. EPA would discuss this with the State.

In answering the Steering Committee's question about its current activities in and around the Hudson River, Mr. King explained that DOT is now officially part of the Thruway Authority (called the New York State Thruway Office of Canals, located at 12201 Southern Boulevard, Albany, NY). The legislative name for the organization is the New York State Canal Corporation. Mr. King discussed the nature of permits being processed, barge activity, and the current dredging activities at some length. Mr. King confirmed that to his knowledge, the Office of Canals was not going to dredge anywhere in the Champlain Canal between Ft. Edward and Troy next year but the Hoosic River.

Ms. Schmidt-Dean inquired as to how a citizen such as herself would find out that the Army Corps of Engineers was soliciting public comment on a permit to dredge in the canal system. The suggestion was made to call Chris Mallory at the Army Corps of Engineers and see how one could get onto the mailing list for notices.

Finally on the agenda was a discussion of revisions to the Phase 2 Work Plan. Mr. Tomchuk stated that many comments are still being considered from the standpoint of what is scientifically valid and what will bring added value to the study, and then proceeded to cover a number of specific items.

Resulting from discussion of additional sediment sampling, particularly in the lower Hudson, and the suggestion not to do the reconnaissance survey originally proposed, Mr. Tomchuk stated that the ecological risk assessment would be more clearly defined in the revised Work Plan and some sediment sampling will be done. At present, sampling is planned at two locations in Area A, four locations in Area B, and eight locations in Area C. Mr. Tomchuk reported that some benthic invertebrate studies would be done in the upper Hudson. The ecological risk assessment focuses on the sediment, which is being analyzed for PCB congeners, total organic carbon, grain size, and heavy metals.

Mr. Tomchuk explained that the Work Plan as presented did not effectively bridge the sections, resulting in the interpretation by some that the sections were separate entities. Mr. Tomchuk stated that all sections were related, and any available information would be used as broadly as possible.

EPA will review its human health risk assessment against Henry Habicht's internal EPA memo to be sure the proposed assessment complies.

Regarding the STC suggestion that some lower river water column sampling be conducted, Mr. Tomchuk agreed that it would be helpful and is proposing to do some limited water column sampling (three locations, two occasions in Area C) for congener-specific analyses. Mr. Tomchuk stated that EPA's Water Management Division was taking samples at some of the sewage treatment plant inflows and outflows, and at some of the other rivers that may be contributing to the lower Hudson in the metropolitan area. Sampling done for the reassessment, including high resolution coring, and information from the Water Management Division will provide a better idea of PCB loadings in Area C than is now available.

Mr. Tomchuk discussed effects on Area C from remediation in Area B.

1) EPA feels that the relationships between sediment and fish in Area B can be projected onto Area C, enabling use of those projections in some modeling efforts for contaminant fate and transport and for PCB levels in fish.

2) EPA's correlation analysis deals with the equilibrium partitioning. It takes a food web approach and essentially puts a "black box" around the traditional food web five-box diagram found in the Thomann model.

3) Resident species, not migratory species, would normally be addressed in the analysis of downriver effects. EPA will assess the feasibility of applying the Thomann model to the study, specifically, at the outset, in relationship to striped bass.

No additional information is available on low resolution coring yet. An addendum to the Work Plan will be issued when that planning is finalized.

EPA will add high resolution sampling in the Batten Kill area, per Mr. Putnam's request (STC member).

Suggestions were made by the STC for some dye studies using a tracer when transect sampling of the water column is done. EPA would like to do these studies but as yet is uncertain as to exactly how they should be conducted.

EPA will be x-raying all the confirmatory cores and some of the high resolution cores from the upper river, but does not propose at this point doing relief peels of the cores as recommended by Dr. Sanders.

Grain size analyses of the suspended sediments in the water column cannot be done because the samples taken do not have enough suspended material to perform the analysis.

STC recommended some changes to the erodibility study (for erodibility of cohesive sediments). EPA will keep this as an option at this time, although it is included as an item in the Phase 2 Work Plan. From the analysis of grain size during the confirmatory sampling, it is apparent that most of the samples are coarse-grained and fairly non-cohesive, so an erodibility study may not be needed.

EPA is continuing to discuss fish collection, but at this point it appears that EPA has sufficient data to make required determinations.

Mr. DiBernardo added that the only other item which may be considered is the addition of two ecological stations in Area D.

Mr. DiBernardo commented on the potential impact on the reassessment of the Thruway Authority Office of Canals' dredging. He also mentioned planned modification of some of the dams and hydro facilities along the upper river, and pointed out that that also would have an impact on the study. Mr. DiBernardo said that if there were too many activities of this sort at once, one might wonder if the reassessment should continue. He will speak with Mr. King regarding canal dredging, and other appropriate Thruway Authority people regarding proposed hydro work. Mr. Tomchuk and Mr. McCabe urged anyone with information on projects which may impact the reassessment to bring that information forward.

Mr. Raddant stressed DOI's support for analysis of the effects of remediation in the upper Hudson on the lower. He pointed out the necessity and benefits of looking past remediation to restoration. He said the legacy of remedial data is that it becomes restoration data, and the more information available on the remediation and the effectiveness of that remediation, the more varied the options will be on future restoration.

In regard to the coring, Mr. Lanahan suggested that TAMS speak to independent authorities to satisfy itself as to how coring could be used among other available study tools, and as to what the limitations of the technique may be. Mr. DiBernardo replied that it is TAMS' basic philosophy that the sediment record is the best basic indicator of what has happened over time, and although there is some risk in the technique, relatively little expense can provide a lot of valuable of information.

In response to Mr. Lanahan's question as to the date of the next STC meeting, Mr. Tomchuk said one would be convened as soon as EPA feels there are issues appropriate for the committee to review.

Mr. McCabe thanked the attendees and adjourned the meeting.

Attachment 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, NEW YORK 10278

HUDSON RIVER PCBs SUPERFUND SITE
REASSESSMENT RI/FS
HUDSON RIVER PCBs OVERSIGHT COMMITTEE
TUESDAY, SEPTEMBER 1, 1992
ALBANY, NEW YORK

AGENDA

Welcome and Introduction	William McCabe, USEPA
Status Update	Albert DiBernardo - TAMS
Scientific & Technical Committee Concerns	Dr. William Nicholson
Steering Committee Concerns	Ann Rychlenski, USEPA
Revisions of the Phase 2 Work Plan Based on Comments	Douglas Tomchuk, USEPA & Albert DiBernardo, TAMS
Adjourn	

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USEPA HUDSON RIVER PCB REASSESSMENT RI/FS

TENTATIVE SCHEDULE

1.	Geophysical Survey/Confirmatory Sampling	Spring 1992
2.	High Resolution Sediment Coring	September 1992
3.	Water Column Sampling	September 1992 through June 1993
4.	Low Resoulution Sediment Coring	Fall 1992
5.	Shear Stress Analysis	Winter 1993
6.	In-situ Degradation	Spring 1993
7.	Ecological Risk Assessment	August 1992 Spring 1993
8.	Health Risk Assessment	Winter 1993

OVERALL CURRENT GOALS

1.	Phase 2 Work Plan - Final	September 1992
2.	Phase 3 Statement of Work	February 1993
3.	Phase 2 Report	August 1993
4.	Phase 3 Report	December 1993

Scientific and Technical Committee Recommendations
Phase 2 Program
July 10, 1992 meeting

At the July 10 meeting of the Committee to review the Phase 2 Work Plan, the following issues or concerns were raised by one or several individuals and were discussed at length. In some cases plans were in place that alleviate some or most of the concern. In none was there a disagreement over the benefit of addressing the issue fully. A wide variety of additional specific comments and concerns were supplied by committee members in their written comments to the Phase 2 Work Plan. Some of these comments were also raised during the July 10 meeting of the Scientific and Technical Committee

Preservation of Core Samples

The need to adequately preserve a complete portion of the various sediment core samples was emphasized. John Sanders discussed some coring methods and preservation procedures, which are provided in detail in his submitted comments (P-4). The committee was informed that the details of core sample preservation are discussed in the Sampling and Analysis Plan/Quality Assurance Project Plan and take into account some of Dr. Sanders' comments. The Sampling Plan can be reviewed when available; in the meantime further contact with John Sanders by TAMS should be maintained.

Water Column Sampling and Analysis

More consideration should be give to collection and analyses of samples downstream from Thompson Island. Sediment loads from tributaries such as the Battenkill and Hoosic Rivers may adsorb PCB's and become "sinks" via downstream disposition at high flow, and "sources" via desorption at low flow. The mechanisms acting in the Hudson differ substantially during high and low flows. Flow-averaged sampling may be inappropriate and misleading in certain circumstances (see submitted comments by George Putman, C-3).

Water column sampling would be desirable in area C. This will supply useful data supplementing the high-resolution coring in that area, provide data for validation of water concentrations calculated from sediment-water column models, and information that would be useful for comparison in any later expanded area C study.

Some additional points:

Use of a dye, such as rhodamine, would be of benefit for the time of travel water column sampling. Transect sampling during "high flow" events should, if possible, commence on the water rise.

Perform grain size analysis on suspended sediments.

Low-resolution Core Sampling

The Committee felt the description of the low-resolution coring program was not sufficiently specific. It was explained that the details of sampling program would be developed after completion of the Phase 2 geophysical program. A detailed low-resolution work plan addendum should be reviewed by the Committee upon its completion.

Sediment Critical Shear Stress

A concern was raised that the device to assess critical stress would induce non-uniform stress. This question should be fully resolved by discussions with Jim Bonner.

PCB Transformation

The degradation and dechlorination of PCB's in river sediments is complicated and not fully understood at this time. Congener specific transformations other than dechlorination can occur which may limit biological degradation. Laboratory experiments of Dr.Y-G Rhee on the dechlorination of PCB's by Hudson River sediment microorganisms indicate that only a fraction of the initial compounds can be accounted for. Without an understanding of such processes comparisons of archived and new cores may be of limited use. Work must proceed cautiously here and utilize relevant developing research.

Research in Areas C and D

There was extensive discussion by the Committee over research plans for Areas C and D. Six high-resolution cores will be taken in Area C and a similar number in D and the New York harbor area. The Phase 2 Plan emphasizes understanding the contribution of Area B to the contaminant burden in Areas C and D. Concern was expressed that we do not fully know the contribution of other sources of PCB to Areas C and D, either from effluent sources to the Hudson or from sediments located in C and D. It was noted that PCB discharge records in Area C will be reviewed and that the EPA's Water Division will be sampling for PCB's at sewage outfalls and tributaries in Area D. Data from this planned sampling program should be available for incorporation in a Phase 2 report. Nevertheless, there remained considerable unease among several committee members with the limited emphasis on Areas C and D.

It is evident that a revision of the Phase 2 Work Plan incorporating an expanded effort in Areas C and D would lead to a substantial and undesirable delay. However, as the Superfund site extends to the Battery, the Scientific and Technical Committee would greatly benefit from an appraisal of the EPA's considerations of possible activites in Areas C and D as they develop,

particularly in how such activities might impact on the current work plans under committee review. This could be done during a designated portion of a future Committee meeting.

Submitted by:
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