



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  
STEERING COMMITTEE MEETING  
LATHAM, NY  
JULY 14, 1993

Ann Rychlenski, United States Environmental Protection Agency (EPA) Community Relations Coordinator, opened the meeting (Attachment A, Agenda) with introductions of committee members, observers and guest speakers (Attachment B, Sign-in Sheets).

In the poll of Liaison Group Chairs for status reports, Darryl Decker, Chairperson of the Governmental Liaison Group, reported a meeting in March in conjunction with the Saratoga County Environmental Management Council (EMC) which David Adams will address later in this meeting.

Doug Tomchuk, EPA Project Manager, began the Reassessment update. He addressed the question of the impact of data associated with the "new" source of PCBs currently under investigation near Bakers Falls on the Reassessment as a whole. Mr. Tomchuk stated that while EPA is evaluating the data to determine just how it can be used, that evaluation goes beyond the Bakers Falls data to include several other data collection efforts by General Electric. He stated EPA is incorporating the information into the Reassessment as appropriate. EPA is currently proceeding with water column monitoring, development of its ecological assessment survey and sampling process (scheduled to begin in August), and laying the groundwork for upcoming modeling efforts.

Albert DiBernardo, TAMS Project Manager, added that one of the biggest activities currently underway is going through the records General Electric has submitted. Dr. Richard Bopp of Rensselaer Polytechnic Institute is assisting TAMS in the quality assurance review of these data.

Mr. DiBernardo stated that as far as the overall work effort is concerned, the team is "right in the thick of Phase II." TAMS constantly reassesses with EPA what it has proposed to do in relation to new information. Mr. DiBernardo cited as an example the change in its approach to modeling. The approach proposed in the original Phase II Work Plan was a

more simplified approach compared to what will actually be done. TAMS and EPA have decided that it is in the best interests of the project to have outside experts on this work item and went to a national solicitation to find the three firms now involved. Also, the modeling effort proposed is constantly being reviewed as it ties into the rest of the project. Every aspect of the project is being handled in this manner.

Mr. DiBernardo said that there are now ten subcontractors on the TAMS team, each in a very specialized area, a fact which he feels emphasizes the quality that TAMS is committed to providing on the Reassessment. Mr. DiBernardo pointed out that the number of subcontractors and the continual evaluation of the project status and direction does have an impact of the overall pace. Mr. Tomchuk referred to EPA Administrator Carol Browner's mention of a current review of contract procedures being used, particularly in Superfund, and indicated that the number of subcontracts related to the Reassessment coupled with this review of procedures has caused some delays in the schedule.

Darryl Decker asked for examples of what would cause dynamic changes in the modeling. Mr. DiBernardo said that the basic philosophy of the modeling is the same; where the changes have occurred are in the types of models to be used and in the area of the river which will be modeling. The Thomann model will now be utilized in the lower river, updating components of that model with results of its own eco-sampling. Also, once General Electric records have been reviewed and validated, there will be information available for use which was not available previously. The resulting increase in quantity of data will enable much more accurate calibration of the model. Finally, public input on the sampling and on the level of modeling which needs to be done has also been a factor.

Mr. DiBernardo stated that modeling concentration - high detail modeling - in the upper river is going to be the Thompson Island Pool. Below Thompson Island Dam to the Troy Dam will have less detailed modeling.

In response to Carl Deppe, Co-chairperson of the Environmental Liaison Group, who asked who specifically is doing the modeling, Mr. DiBernardo cited Limno-Tech, Inc., of Ann Arbor, MI; Menzie-Cura & Associates, Inc., an ecological bio-uptake specialty firm from Cambridge, MA, and Cadmus Group, headquartered in Research Triangle Park, NC.

Mr. Deppe also wanted clarification on what was meant when "GE data" was referred to previously. Mr. Tomchuk summarized: GE-initiated data collection done at the time of the outset of the Reassessment when EPA had not yet defined the scope of its own data collection; data collected by GE as part of the consent decree and order for the remnant deposit capping; and data GE collected for its own research efforts and the bioremediation field study. These data included information on approximately 5000 samples.

Mr. Deppe expressed a concern that if in fact the "new" source had existed for eight or ten years, all prior analysis may be in error. Mr. Tomchuk stated that if the time period were eight to ten years, EPA then does have a lot of good prior analysis, as much information has

been gathered within that timeframe which can be combined with new information collected as part of the Reassessment project itself.

Before moving on to the speakers' presentations, Mr. Tomchuk said that in order to prevent anyone from being unnecessarily alarmed or upset, he wanted to mention a June 1993 EPA guidance document on "Selected Remediation Techniques for Contaminated Sediment," which contains a case study on the Hudson River PCBs site. Mr. Tomchuk pointed out that the case study is outdated and does not take into account the Reassessment, but only refers to the fact that the 1984 Record of Decision (ROD) is being readdressed.

Ms. Rychlenski introduced David Adams, a member of the Saratoga County Environmental Management Council (EMC) and its representative on the Governmental Liaison Group. On March 9, 1993, the Saratoga County EMC sponsored a meeting of liaison group chairs and co-chairs. Mr. Adams agreed at that meeting to make a statement to the Steering Committee. His remarks appear in Attachment C. An additional point made by Mr. Adams was his desire to be convinced that risk assessment does not end up being a very major part of any decision that is made.

Mr. Tomchuk and Mr. DiBernardo replied as follows to Mr. Adams' major points:

1. The modeling being done for the Reassessment is not a "plug-in" type model. There are different ways EPA and TAMS can work within the model to use available data; many of the fundamental precepts of the model and certain functions are established, however, and both the public and the STC have access to that information at this time.
2. The data used to calibrate and verify the model are some of the assumptions that are critical and that require the project team to review those data and report on what is being done. That will be written up in the Phase II Report.
3. The Phase II Report will not be a complete run of the model. The model will not be up and running and EPA will not have any of the results at that point. The runs of the models will be in the Phase III Report, and there will be an opportunity to comment prior to that.
4. Mr. DiBernardo stated that there are documents that Mr. Adams says don't exist that do, but have not yet been made available to the public. He pointed out that in civil engineering consulting, as opposed other disciplines, the general approach is to formulate what is to be done, do it, and then present it. This project is unusual in the amount of outside input that has been garnered. Mr. DiBernardo stated that although Mr. Adams' approach [of laying all available information on the table for everyone] was not bad, in this case he feels it is much too onerous. There are many more aspects of this job, in modeling and risk assessment, for example, that have to be handled,

and to focus on the mathematics and assumptions may be more appropriate for the public at some time in the future when all the pieces are coming together. He suggests that at this point, the public must assume that EPA and TAMS are trying to get the best people available to do the work; there has to be some confidence in that team; and that team needs to proceed and do the work it needs to do and at the appropriate time, present it to this Committee, the public, and the STC. His recommendation to the Committee would be not to get caught up in getting to the micro level of every aspect of the project.

5. Regarding data collection and Mr. Adams' concern that whether at the end of the data collection efforts EPA will have the information it needs, Mr. Tomchuk stated that the data collection is not just for the model. Most data have dual uses; in addition to these data being incorporated into a model, much is used for other functions, including gaining knowledge of the river. The data fit together to form a picture; no single data item stands alone. He feels confident that the data which has been and will be collected will be sufficient for the model and that the experts on board for that effort will know that.
6. Regarding the STC, Mr. Tomchuk stated emphatically that the STC is not independent. Members were invited to participate because of their expertise, which is particularly applicable to the Reassessment, but all members, said Mr. Tomchuk, have been involved in the Hudson River project on a day-to-day basis and carry with them their company's and/or agency's positions and beliefs. Although STC members try to be as objective as possible, Mr. Tomchuk made it clear that he did not view the STC as an independent body. In answer to a follow-up question from Mr. Decker as to the overall purpose of the STC if it is not to review and comment, Mr. Tomchuk said these scientific experts are not paid reviewers, and that it would be unreasonable to ask them to review all aspects of the project for free. The STC is not an approval committee for EPA's work. The STC helps EPA to ensure that nothing has been overlooked and contributes the expertise of its members to the project process.
7. Mr. Tomchuk further clarified what Mr. DiBernardo had started to discuss regarding control of the project. EPA is conducting this project, not the STC, and EPA will make decisions on the project, some of which will be commented upon after the fact. Every attempt is made to present information as soon as possible, but there is a balance to be maintained between how often and how soon information can be presented and commented upon and the forward progress of the project.

8. The entire STC and the public at large had the opportunity to review the risk assessment assumptions in the Phase I Report. Most of the assumptions have not changed. Discussions are on-going and the assumptions will be reevaluated for the Phase II Report and for whatever work is done in Phase III for evaluating the various alternatives. There will be an opportunity after the Phase II Report to comment again on the assumptions incorporated.

Mr. Decker asked whether as a group, the STC had ever had on its agenda a review of risk assessment assumptions. Mr. Tomchuk said it never was an agenda item but that all STC members had the opportunity to review those assumptions on an individual basis.

Mr. Adams also asked if when the risk assessment was incorporated into a report, if a range of uncertainty would be applied. Mr. DiBernardo said yes, as had been done in Phase I. He also stated that the modeling information may be submitted as a separate document because of the timing, rather than as a part of Phase II. The modeling will be as comprehensive as possible and will be used to help assess the alternatives in the feasibility study (Phase III).

Mr. Adams closed his remarks by urging EPA to suggest modeling as a specific topic for the STC to discuss. Mr. Tomchuk stated that EPA intends to have the people who are working on the modeling get into it, so that they can talk about it. What EPA is planning to do has been written down already; there is no way to have meaningful discussions until work is being done. Mr. Tomchuk agreed that such a meeting would be beneficial to the STC.

Bill Ports, Project Manager at DEC for the Hudson River Reassessment project, suggested a Joint Liaison Group meeting to explain the modeling to the public at a point when there is something useful to discuss. He also suggested holding a Joint Liaison Group meeting concerning fish data. Dr. Ron Sloan, DEC, has agreed to make that presentation after the sampling season is over (probably October).

Judith Schmidt-Dean, Chairperson of the Citizen Liaison Group, at this point commented that "there seems to be a new role for the press all of a sudden." She indicated she was not sure she felt comfortable with press present at what is a working meeting, although it is technically public, because there is a level of involvement that [committee members] have gone beyond, and anyone just stepping in to report really cannot do it. She stated items coming out in the press have been "wild" and "getting out of hand," and expressed her concern about misrepresentation. She asked if this really was an appropriate place for the press to be.

Ms. Rychlenski replied that she was glad Ms. Schmidt-Dean had brought the subject up, as the question was one which EPA had wrestled with previously. Ms. Rychlenski has, over the past year, received a number of calls from members of the press up and down the river stating in effect that they felt "locked out" of these meetings. She has acknowledged to the press that although the meetings are not public, they are certainly open to the public. Ms. Rychlenski stated that this is an open process and whoever wants to attend must be allowed

to do so. She also stated, however, that she has been particularly concerned that committee and liaison group members would feel inhibited in expressing themselves in front of members of the press, and has even addressed the question with her management. Ms. Rychlenski indicated she could only ask that the press deals "responsibly and properly." Ms. Schmidt-Dean pointed out that there is a difference between a news story, a feature story, and an editorial. She said some of the "news releases" from some agencies and independent groups are not news releases but opinions having nothing to do with fact. Mr. Decker stated the Liaison Group/Community Interaction Program (CIP) concept is to promote information to the public through group chairs and co-chairs and through the media, and if the reporting is fair, he feels no one would object. Mr. Decker said he was glad to see the media present, as long as they report the facts.

Mr. Ports took the floor to open DEC's presentation on GE's Hudson Falls capacitor plant site by providing a brief overview which is the opening section of Attachment D. Mr. Ports explained that in March 1993, a ROD was signed for a portion of the site involving contaminated soils (Operable Unit 01). Additional studies will be required to identify potential contaminant pathways to the Hudson River, to locate additional contaminant sources, and to define the extent of the groundwater pollution at the site. DEC is currently negotiating consent orders to have GE do this work, and there is work on-going already. The site and associated areas have been subdivided into three operable units (see Attachment D). At this point Mr. Ports introduced Kevin Farrar, project geologist, who stepped the audience through further details. He began by pinpointing the site as being between a half mile and a mile above the Fort Edward plant, adjacent to Bakers Falls.

Mr. Farrar began by reviewing the general layout of the plant property of itself, reflecting operable units 01 and 02. OU 1 basically refers to the plant property, and OU 2 refers to the groundwater and various conduits to the river. The remedy chosen under the ROD for OU 01 that Mr. Ports had referred to was excavation and land disposal of approximately 3000 cubic yards of contaminated soil, some of it very contaminated (typically about 1000 ppm). The soil will go to one of two TSCA-permitted facilities. It is anticipated all the soil will have been removed by this time next year.

At the time of last year's feasibility study done by GE, DEC did not feel there was not sufficient information to select a remedy for the groundwater contamination at the site. A portion of the OU 02 investigation, therefore, is to more clearly define the extent of the groundwater contamination to enable selection of an appropriate remedy. This investigation is currently underway. Other portions of the investigation are summarized in Attachment D. Pipelines, associated trenches, and utility trenches are being investigated because of their potential to be "preferential migration pathways" for PCB-contaminated waters or liquids. Investigation of the riverbank for possible "seeps" is also being done. The investigation also includes monitoring wells and soil sampling.

Preliminary data have been provided to DEC as a result of this investigation, but cannot be released yet as it has not gone through the required rigorous quality control review. However, Mr. Farrar summarized a number of indications made by these data. It does not appear that pipelines and trenches are significant pathways. Not too encouraging is the fact that there are few wells on the site where PCBs are not found. Most wells are contaminated well above the groundwater standard; some show evidence of free oils/liquids that are heavily contaminated (in front of the building, in front of the tank farm, and by the boiler house). The status of OU O2 is that virtually all data gathering defined under the proposed scope of work has been completed; further investigation is underway as a result to try to more closely define the extent of the significant PCB contamination and to nail down where the source areas are on the site.

Operable unit O3 is the areas in the vicinity of the site which have been impacted by site contaminants. GE has submitted a proposal to DEC to perform an Interim Remedial Measure (IRM) in OU O3. Using a figure from that proposal, Mr. Farrar was able to illustrate seeps identified and sampled by GE consultants in what is called the upper raceway. Varying levels of PCBs in water and oils have been found. The scope of the OU O3 investigation is to go through the mill, look for all the seeps, try to evaluate how the water was flowing through the mill, perform sediment sampling within the mill area and just upstream of the gate structure in the river proper. The key item to be demonstrated is what the distribution of PCBs within the OU O3 sediment system, and to show what the flux of PCB is: how much is coming out of the seeps and how much could have been or is currently entering the river.

Mr. Farrar reviewed schematics reflecting the mill structure and illustrating how the water used to flow through the gates, through the raceway, and into the river once again. Arrows are indicative of seepage coming into the river from the bank. At some time in the near past, there was a failure of the structure within the building which allowed sediment in the upper raceway to flow through the building and get out into the river to be noticed. The central tailrace tunnel is one possible point of egress and sediments in the tunnel have been found to contain significant levels of PCBs. Another raceway somewhat lower also contains sediment with significant levels of PCBs. All areas where sediment accumulation is known are included in the scope of the OU O3 investigation.

Mr. DiBernardo asked the approximate volume of sediments in the raceways which were sampled, and was told that rough estimates would be about 1100 yards in the eastern raceway, approximately 200 yards in the tunnel, and "possibly 700 yards or so" in the lower raceway. Work is still underway. Mr. DiBernardo also asked if it is believed that sediment comes from upstream or from elsewhere in the facility to accumulate over time. Mr. Farrar indicated there is not a significant surface pathway of water from the facility into this raceway, so it does not look like it was soil that washed off the plant to a significant degree. He agreed that it could be soils that came from upstream of the gate structure, coming through with water flowing at a significant rate at the time the gate structures were failing. It could have been partially contaminated sediment which was exacerbated by seeps or other

sources on the site, or clean sediment which did not become contaminated until it entered the upper raceway. Speculation continues over that issue. Mr. Farrar stated that he is less worried about the source of the sediment than the sources of PCBs.

The other two schematics in the attachment are cross section and profile views which further illustrate pathways to the river.

Mr. Farrar concluded his remarks by reviewing GE's proposal for an IRM, also summarized in Attachment D. That proposal is currently under review by DEC. He also showed a number of slides he had taken at the site, including views of the mill, the upper raceway, and a number of the seeps that have been identified.

Mr. Decker asked what causes the spikes in PCB levels. Mr. Farrar stated that the mechanism by which PCBs got or are getting from OU O2 and OU O3 into the river is not well understood yet. The theory of the spike in 1991 is that there was a failure in the building, but even that has not been proven. Other reasons for seeing inconsistent results in the river may be that the mechanism is rainfall related or oil-release related.

Mr. Ports stated that in 1991 a wall next to a bar screen inside the mill structure failed, lowering the water and providing a new path for the water below the pipe, through the bar screen, through the building and potentially into the river. That may be an explanation of the "1991 event."

In answer to a question from Mr. DiBernardo, the collection system proposed for the seepage water is a sump excavated into the sediment at the west side at the north end of the upper raceway and on the west side at the center of the building, also in the upper raceway. The sump will pump liquids up to the plant site area for oil/water separation/settling and for shipping to the Fort Edward plant for permitted treatment. After the sediments are removed, further study will need to be done to see if some other system must be designed to collect the seeps. Design for long-term collection of seeps is not finalized. As far as long-term water quality monitoring of the river, DEC relies on the weekly water quality monitoring done by GE at three stations. This monitoring will continue after the IRM as part of GE's consent decree with the government in connection with the remnant deposit capping.

Mr. Farrar said the sediment removal portion of OU O3 (from tailrace and upper raceway) will happen this summer or fall. As for "straightening out the whole problem," Mr. Farrar acknowledged that it is still unknown whether or not it will ever be completely straightened out, and said at this point the problem has not yet been clearly defined enough to enable selection of an appropriate remedy.

Peter Lanahan, GE Hudson River Project Manager, added several points. He stated that all pathways are being investigated in order to characterize the site as well as possible; GE has been going forward as fast as it can to carry out the work plans and to be responsive to



what the state has suggested. The site itself contains many pathways to the river. GE has located approximately 100 pipes through the use of ground-penetrating radar and electromagnetic survey. Approximately 25 of those pipes are still under analysis. What is anticipated as a \$2-\$2.5 million effort to remove the sediment is underway. Draining of the raceway and isolating the sediments from the river have shown some encouraging preliminary results as to levels of PCBs in the river. These results still have to be verified. Nine new monitoring wells have been installed on the site. Aerial photography is being used to assist in identifying fractures in the rock and other potential pathways to the river. The removal of seven old capacitors discovered by divers in the river has been completed. Research, sampling and data reporting to the state and to EPA continue to take place.

Mr. Ports added that the leaking gate structure has been repaired cooperatively with Niagara Mohawk and Adirondack Hydro Corporation. Also, the Washington County Sewerage Authority has fixed the combined sewer overflow pipe which was leaking sewage through the eastern raceway.

Mr. Lanahan described some of the process of accomplishing the work at the Bakers Falls site. Ms. Schmidt-Dean asked his opinion of what part this [site] should play in the Reassessment. Mr. Lanahan stated that GE's position is that whatever remedies or work done under the state program [at the Bakers Falls site] should be included in the EPA Reassessment. Mr. Lanahan stated that GE's interpretation of a letter from Mr. William Muszynski, Acting Regional Administrator for EPA Region II, said EPA would be looking at the work done under the state order but making a decision on the sediments separately from a decision on anything else. GE feels a decision on what to do with the old sediment cannot be separated from what is occurring in the Reassessment. GE would like to see an evaluation of the remedy decided upon under the state program along with whatever remedy is looked at pertaining to the sediments.

Mr. Tomchuk stated EPA has never tried to say that the input from the Hudson Falls plant site is not part of the Reassessment. EPA will look at, consider, and incorporate the data and use the information from the site in the Reassessment. Mr. Tomchuk pointed out the difference in scale between the assessment and remediation of seeps at a specific site and the type of analysis done to figure out what the large masses of [contaminated] sediments in the river do to contribute to the fish levels [of PCBs]. EPA agrees that the work being done at the [Bakers Falls] site re contamination getting to the river should be done, and is being handled appropriately with a state order for the site; after it (the contamination) gets to the river, EPA picks up on the other part.

Mr. Deppe asked whether EPA will be able to say that there was no contribution from this source prior to 1991, or that this source did in fact exist previously (in 1985 or 1987) and has been contributing PCBs to the fish or to the water column. Mr. DiBernardo responded by saying that the answer is "not that we can't, but that we are embarking on an effort to determine whether or not that can be done." He thinks the big issue with the modeling is whether or not over the time period in which the data were collected is the time period

possibly/probably over which these leaks were seeping into the river. Is that data then useful for calibrating and using in the model to predict some other situation where that doesn't exist? These are the issues being wrestled with; the effort to sort all that out is "what this is all about."

Mr. DiBernardo asked DEC how the new contamination issue at the facility affects DEC's plans for the dredging program. Mr. Ports cited Mr. Jorling's letter written to the Oversight Committee; he stated it stands as written and DEC is waiting to see the outcome of the Reassessment prior to any further action.

Mr. Tomchuk said if all the flow cannot be eliminated from the Hudson Falls plant site, and EPA decides at some point to do something or not to do something with the sediments, a contingency ROD may have to be signed depending on whether the remedy may change based on some conditions with the other portion of the river. Discouraging as this possibility may be, it is a reality that must be faced in light of conditions at the Hudson Falls plant site.

Ms. Rychlenski closed by requesting that any concerns that Steering Committee members have that they want to raise to the Hudson River PCBs Oversight Committee (HROC) should be submitted to her in writing. The next HROC meeting will be in September or October.



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**REGION II**

**JACOB K. JAVITS FEDERAL BUILDING**

**NEW YORK, NEW YORK 10278-0012**

**HUDSON RIVER PCB REASSESSMENT RI/FS**

**COMMUNITY INTERACTION PROGRAM**

**STEERING COMMITTEE MEETING**

**Wednesday, July 14, 1993**

**7:00 p.m.**

**Saratoga Springs Sheraton Hotel & Conference Center  
Saratoga Springs, NY**

**A G E N D A**

**Welcome & Introduction**

**Ann Rychlenski, Community  
Relations Coordinator,  
U.S. EPA, Region 2**

**Liaison Group Reports**

**Liaison Group Chairs,  
Co-Chairs**

**Reassessment Update**

**Doug Tomchuk, Remedial Project  
Manager, U.S. EPA, Region 2  
& Al DiBernardo, TAMS, Inc.**

**Address to Steering Committee**

**Dave Adams, P.E. (as requested  
by the Governmental Liaison  
Group)**

**Update on DEC's General  
Electric Hudson Falls Site  
RI/FS**

**Bill Ports, NYSDEC and  
Kevin Farrar, NYSDEC**

**Closing**

**\*Please note that there will be a discussion period among the  
Steering Committee members following each subject on the agenda.**

**While observers to the proceedings are welcome and may be  
present, discussions will be limited to the members of the  
Steering Committee, and no questions or comments will be taken  
from the observers during the meeting.**

HUDSON RIVER PCB REASSESSMENT RI/FS  
COMMUNITY INTERACTION PROGRAM  
STEERING COMMITTEE MEETING  
SARATOGA SPRINGS, NEW YORK  
JULY 1993

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HUDSON RIVER PCB REASSESSMENT RI/FS  
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STEERING COMMITTEE MEETING  
SARATOGA SPRINGS, NEW YORK  
JULY 1993

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Hudson River PCBs Reassessment  
Presentation to Steering Committee

July 14, 1993

By David D. Adams

First, I want to thank Ann Rychlenski for giving me time to address you today. My name is David Adams. I am a member of the Saratoga County Environmental Management Council (EMC) and am the EMC's representative on the Government Liaison Committee.

The Saratoga County EMC has been following with interest the Hudson River PCBs Reassessment program. On March 9, 1993 the EMC sponsored a meeting of Liaison Chairs and Co-Chairs to evaluate and provide input to EPA regarding the effectiveness of the public participation program. Agreement was reached at this meeting that EPA's response to comments and questions from the public has not always been adequate. It was further agreed that this Steering Committee is an appropriate body to which to present this concern as the Steering Committee is in a position to seek corrective action by virtue of its charter, its membership and its ties to the Oversight Committee. At the March 9 meeting I agreed to make a presentation to the Steering Committee on this concern if allowed to do so.

Let me start on a positive note. Last July and again last Fall I questioned why EPA was not obtaining PCB concentrations in fish samples contemporaneous in space and time with water and sediment samples as a way to help validate the method of predicting future fish PCB concentrations. I was pleased to see in the May 1993 issue of "River Voices" that, between November 1992 and May 1993, EPA has reconsidered this matter and will now obtain contemporaneous PCB concentrations in fish. However, details of this sampling have not been made available to the public or, to my knowledge, the Scientific and Technical Committee (STC).

But other issues remain. I will focus today on the issue most important to me which is EPA's failure to date to make available for public review the method or model which EPA will use to predict future PCB concentrations in fish from data on PCB concentrations in water and sediment. These predictions will be a major factor in EPA's decision regarding the need for corrective action. By model, I mean a complete description of the process of data manipulation including all of the mathematical functions which will be used to process the data, the assumptions made in generating these functions or in their application to this program, and any additional assumptions necessary to use the data in the mathematical functions. A complete model description would also include a discussion of why the mathematical functions and assumptions are applicable.

I first raised this issue to EPA in a July 21, 1992 letter without any reply. In October 1992 I submitted a written question for the joint STC/Liaison Committees meeting of November 5, 1992 asking if the STC had reviewed the EPA model. The answer was

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that EPA had not yet given the model to the STC. Unfortunately the discussion ended there as I was not able to attend the meeting due to a previous travel commitment in Europe. I again raised this issue in an open letter to EPA published in the May 1993 issue of "River Voices". In this same "River Voices", EPA replied that the overall scope of the modeling effort is described in the Phase 2 Work Plan and that the specific details and assumptions will be included in the Phase 2 Report.

I submit that publishing details of the model and the assumptions in the Phase 2 Report which comes after data collection is complete is too late. Quoting from my letter in "River Voices", "Without the specific details of EPA's plan, it is impossible for anyone, especially the STC, to critique EPA's course of action. .... We don't know if the right data or data in sufficient quantity are being obtained." In the May "River Voices", EPA said the sampling plan was evaluated for data sufficiency by the same people who outlined the modeling approach. This is reassuring but if we are to solely rely on EPA's judgment, why do we have the STC and the Liaison Committees? I have been witness to discussion by the STC of the Phase 2 sampling plan and observed their inability to come to grips with the issue because of the lack of EPA's detailed model. This problem also surfaces in some of the discussion recorded in the minutes of the November 5, 1992 meeting. The recent data from the Bakers Falls area of the Hudson River suggests strongly that the PCB levels in fish are predominately controlled by PCB levels in the water. This in turn suggests that any effect of old PCB deposits on fish will depend heavily on scouring events in the River which emphasizes again the need for review by the STC of EPA's model.

I urge you to use all means available to you to persuade EPA to make the details of their model and accompanying assumptions available for public review and that EPA specifically request review of the same, including the sufficiency of the Phase 2 sampling plan, by the STC on an expedited basis.

One last point. I have also suggested to EPA that the STC comment on the method EPA proposes to use in calculating human health risk and that the STC assess the uncertainty range of the final risk assessment. In the May issue of "River Voices", EPA stated that this would not be proper as the methodology is established at the national level. I acknowledge that the methodology is mandated nationally by EPA but I do not agree that this makes my request improper. There may be inputs to the risk assessment which are subject to local definition and as such be fair game for review. In any case, review and comment by the STC would help put the risk assessment in perspective for the affected public when it comes time to review and comment on EPA's recommended action.



G.E. Capacitor Products Division  
Hudson Falls Plant

Presentation  
July 14, 1993

Bill Ports, DEC Hudson River PCB Reassessment (Project Manager)

This 17.8-acre site is on the east bank of the Hudson River in Hudson Falls. GE has conducted capacitor manufacturing at this site since 1952. Operations have consisted of the production of electrical capacitors and storage, blending and refining various types of dielectric fluids. Prior to 1977, most dielectric fluids contained PCBs. Other processes at the plant have involved the use of the solvent trichloroethylene (TCE).

This site is a source of PCBs that have impacted the Hudson River, and appears to be responsible for continuing PCB releases. Sufficient information exists to select a remedy for the PCB-contaminated soils adjacent to the Manufacturing buildings. Additional studies will be required to identify potential contaminant pathways to the Hudson River and locate additional contaminant sources and to define the extent of the groundwater pollution. DEC is currently negotiating a consent order with GE to address these concerns.

The site and associated areas of contamination have been subdivided into three operable units:

OU#1 - An area of soil contaminated by PCBs between the manufacturing buildings and the rail line in the center of the site, for which a remedy has been selected.

OU#2 - All other potential sources of PCBs and migration pathways within the plant site property including groundwater. Area includes entire GE Hudson Falls Plant property.

OU#3 - Areas adjacent to plant property which are contaminated with PCBs or other site contaminants (Mill and raceway structures, shoreline areas, seeps).

Kevin Farrar, DEC, Hudson Falls GE Capacitor Plant Inactive Hazardous Waste Site, (Project Geologist)

Operable Unit 01

**PCB Concentrations**

- Concentrations average 500 - 1,000 ppm
- Range up to as high as 75,000 ppm

**Remedial Program**

- Building 1 Basement (Air Plume) was highly contaminated with PCB oily sludges. Cleaned out in 1989.
- FS submitted Fall 1992.
- ROD signed March 1993. The plan requires excavating and disposing PCB contaminated soils at a permitted land disposal facility.
- Estimated cost \$1.4 million.
- GE will be responsible for all costs and all work will be subject to review and approval by the state.
- The Remedial Design/Remedial Action (RD/RA) Order is still under negotiations. Remedial work will not begin until the order is signed.

**Operable Unit 02****PCB Concentrations**

- PCB concentrations are variable depending on location and media.
  - Groundwater concentration at up to saturation with PCB. Separate phase product observed in four wells.
  - Approximately 15 seeps identified entering the Mill raceway.
  - Soil, pipe bedding, building sumps, etc. are currently being investigated by GE.

**Remedial Investigation**

- Proposed Work includes:
  - A. Pipeline & preferential pathway investigation
    - TV pipe inspection
    - water & bedding sampling
    - location & mapping
  - B. Riverbanks inspection
    - look for seeps
    - look for pipes & discharges

**C. Groundwater study enhancement**

- 9 additional monitor wells
- multiple sets of groundwater samples
- separate phase identification

**D. Potential Source Area Investigations**

- soil samples around wastewater basins
- soil samples in former fuel storage area
- soil samples in former tanks farm areas
- soil samples in former railroad off loading areas.

The investigation is expected to be completed this year. All work will be carried out by GE under state oversight.

**Operable Unit 03****Remedial Investigation**

- Proposed work includes:

**A. Site inspections**

- Allens Mills
- Raceway
- Hudson River nearshore bed adjacent to plant

**B. Seep Sampling and Definition**

- oil and water samples at seeps
- water flowing through mill

**C. Sediment/Soil Sampling - (To define PCB levels)**

- Nearshore river sediments above gate structure
- Eastern Raceway
- Lower Raceway
- Tailrace Tunnel

**D. River water quality Monitoring****E. Analysis of Remedial Alternatives**

**F. The investigative work is expected to be completed this year. All work is to be carried out by GE under oversight. The remedial investigation work for OU3 includes an underwater inspection of the Hudson River bed along its eastern shore upstream of the dam. During the underwater inspection work, which was conducted in late May/early June, seven capacitors and**

two objects which may be capacitors and two objects which may be capacitor parts were discovered in the river bed. Three of the capacitors were removed from the river by GE on May 26, and the remaining four and the two parts were removed by GE on June 4.

### **Interim Remedial Measures**

#### **Phase I:**

Collection of seepage water and oils in the eastern raceway for treatment on a temporary basis.

#### **Phase II:**

Removal of sediments in the eastern raceway from the gate structure south to the Combined Sewer Overflow (CSO).

Removal of sediments in the entire length of the tailrace tunnel.

#### **Phase III:**

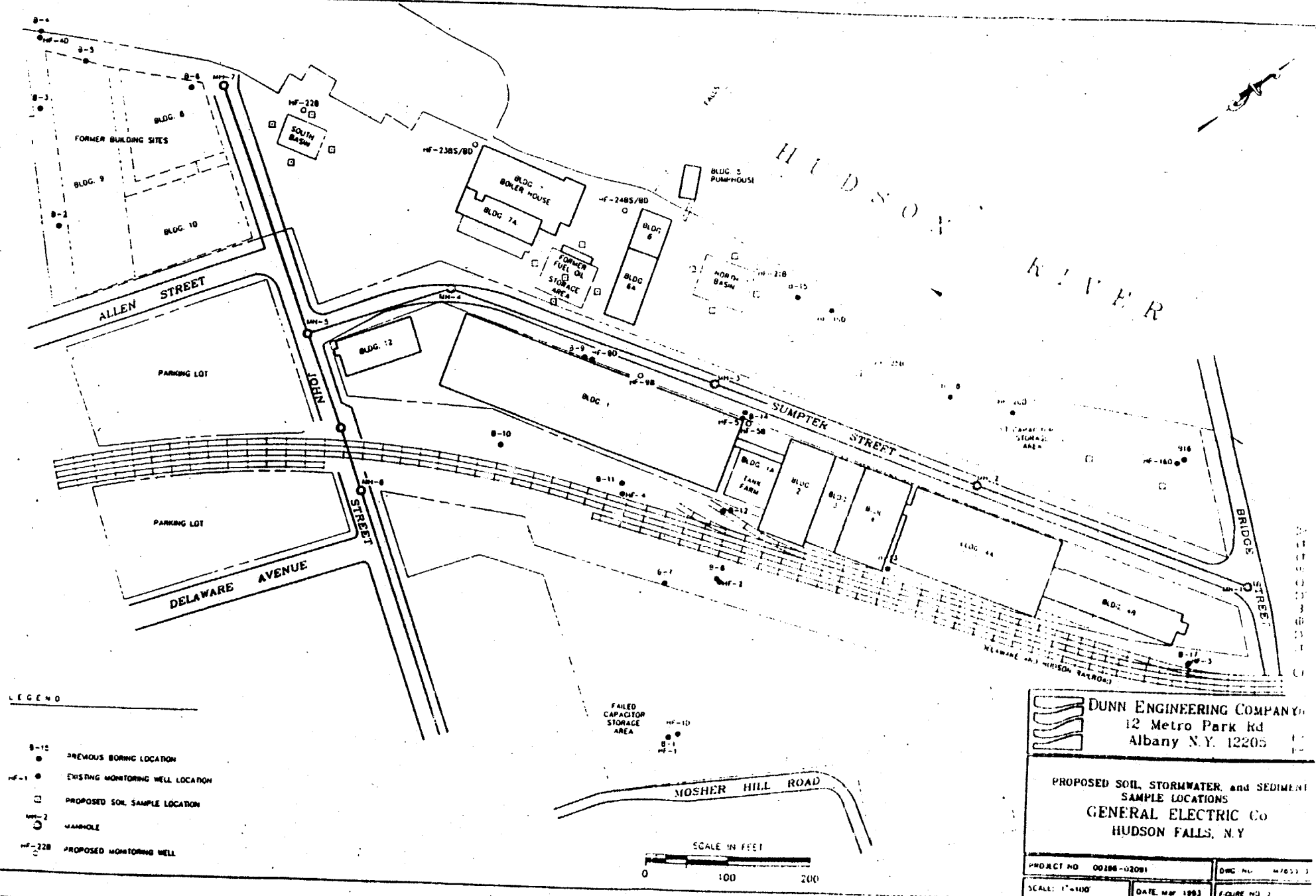
Long term collection of seepage in the eastern raceway for treatment.

Possible damming and seepage collection in the tailrace tunnel.


The IRM is to be completed no later than early 1994. Detailed IRM work plans were received June 24. Phases I and II should be completed prior to the first frost. All work will be carried out by GE under state oversight.

### **Questions and Answers Session**

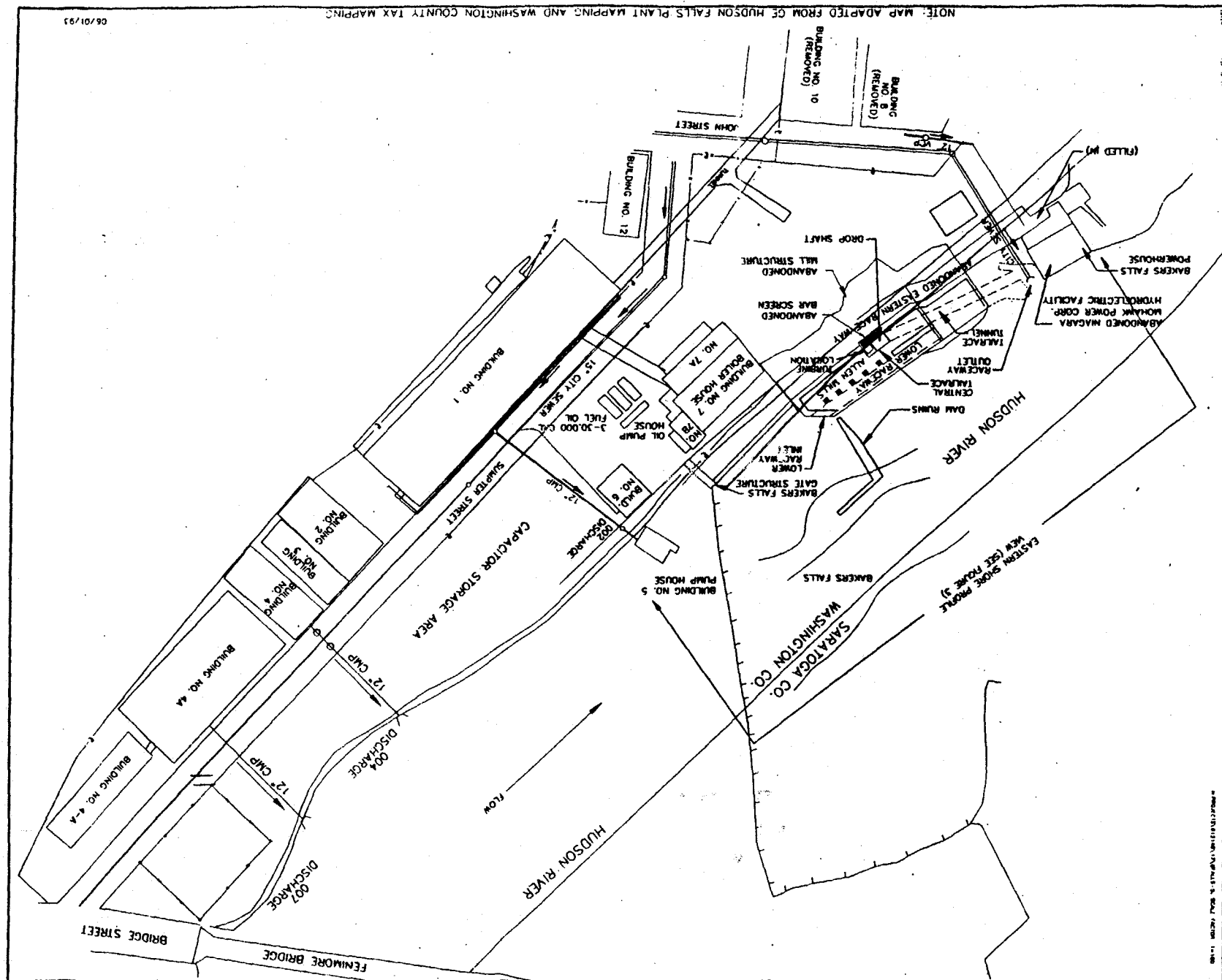
**Bill Ports  
Kevin Farrar**



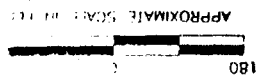
- LEGEND
- B-12 PREVIOUS BORING LOCATION
  - MF-1 EXISTING MONITORING WELL LOCATION
  - PROPOSED SOIL SAMPLE LOCATION
  - MH-2 MANHOLE
  - MF-228 PROPOSED MONITORING WELL

 <b>DUNN ENGINEERING COMPANY</b> 12 Metro Park Rd Albany N.Y. 12205	
PROPOSED SOIL, STORMWATER, and SEDIMENT SAMPLE LOCATIONS <b>GENERAL ELECTRIC Co</b> HUDSON FALLS, N.Y.	
PROJECT NO 00186-02081	DWG No. M/851.1
SCALE: 1"=100'	DATE: MAR 1993
FIGURE NO. 2	

10.10104



GENERAL ELECTRIC CORP.  
BAKERS FALLS  
REMEDIAL INVESTIGATION  
FEASIBILITY STUDY  
OPERABLE UNIT 3  
LOCATION MAP



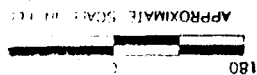
11-9  
612 105 70

LEGEND

FIGURE



612 105 70



GENERAL ELECTRIC CORP.  
BAKERS FALLS  
REMEDIAL INVESTIGATION  
FEASIBILITY STUDY  
OPERABLE UNIT 3  
LOCATION MAP

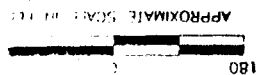
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LEGEND

FIGURE



612 105 70



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**NAVY**

10.10106

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ESTIMATED SCALE IN FLLI

(74) 4912.120.575



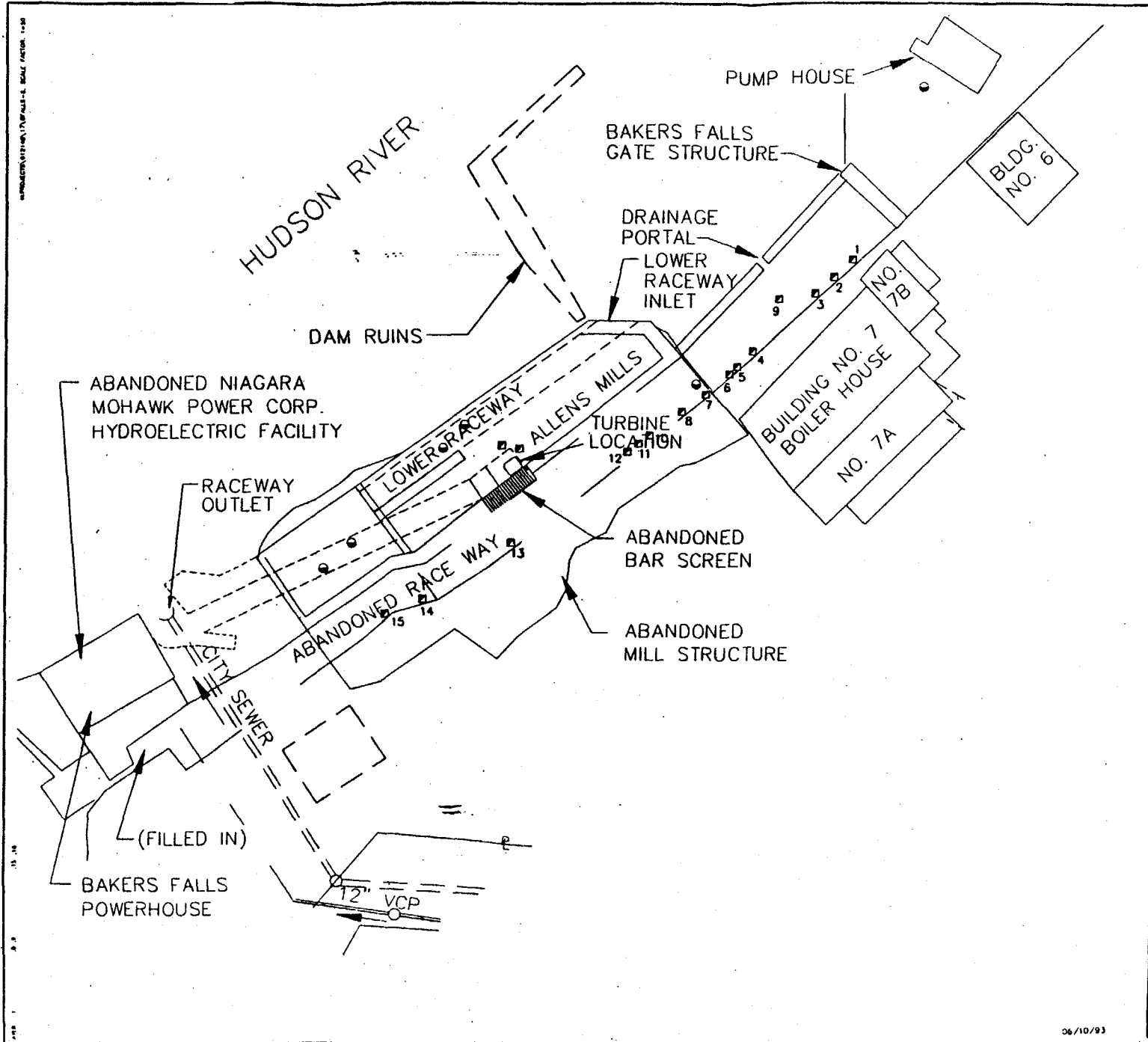


FIGURE 4



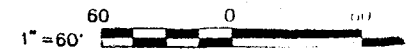
LEGEND

- APPROXIMATE SEEP LOCATION
- APPROXIMATE SEDIMENT LOCATION

8-11  
 10-11  
 11-11  
 12-11  
 13-11  
 14-11  
 15-11

GENERAL ELECTRIC CO

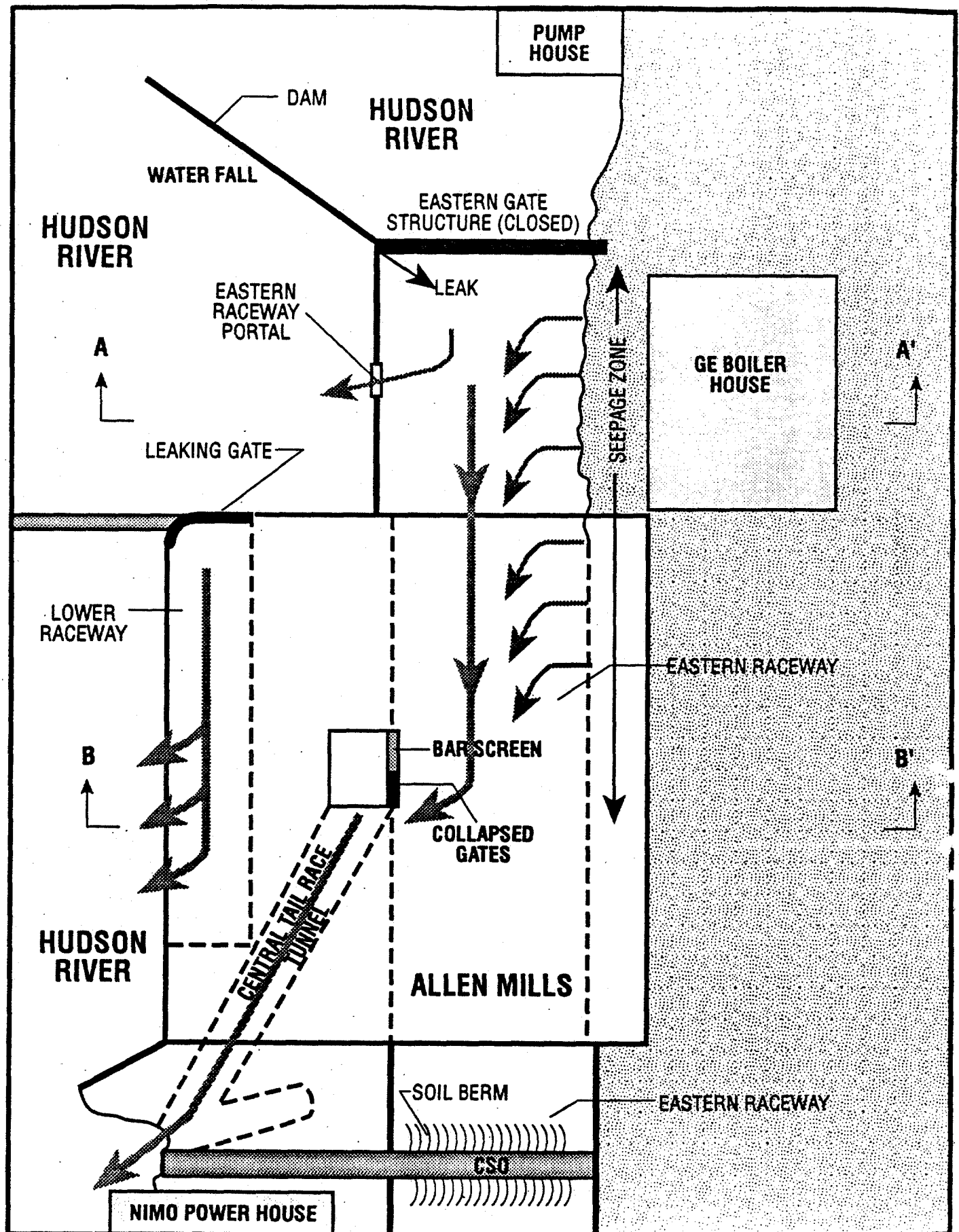
BAKERS FALLS  
 REMEDIAL INVESTIGATION  
 FEASIBILITY STUDY  
 OPERABLE UNIT  
 INITIAL INSPECTION  
 SAMPLING LOCATION



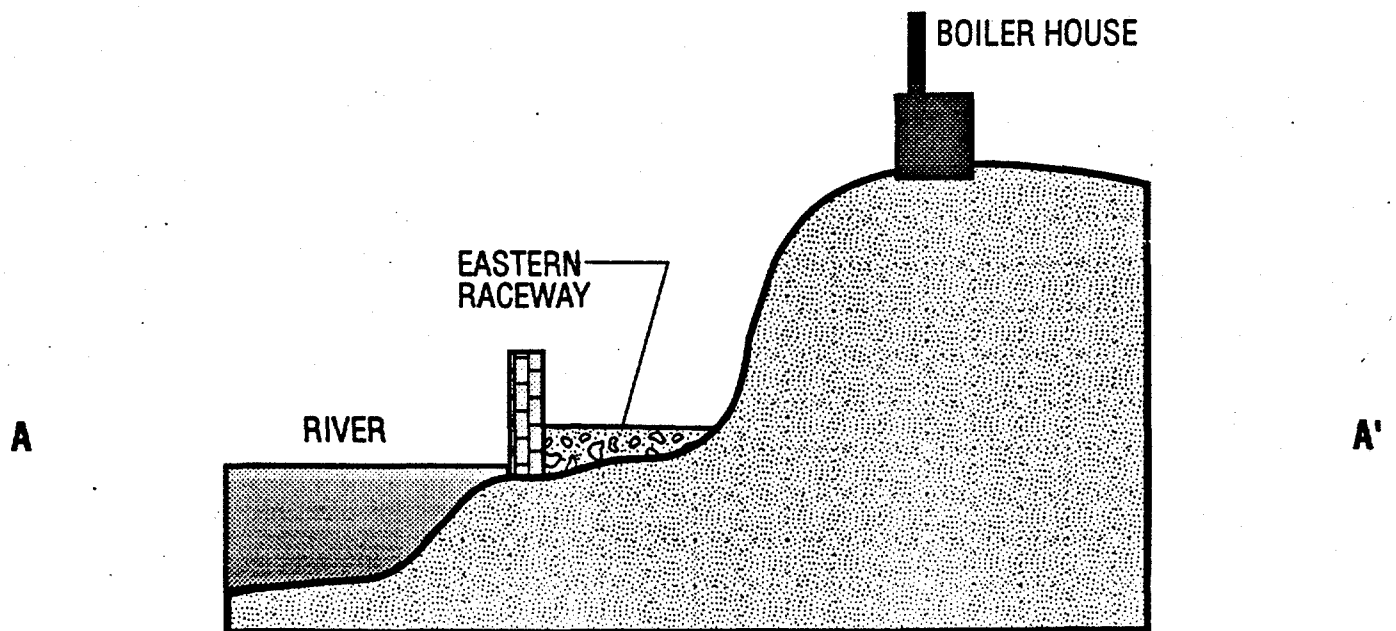
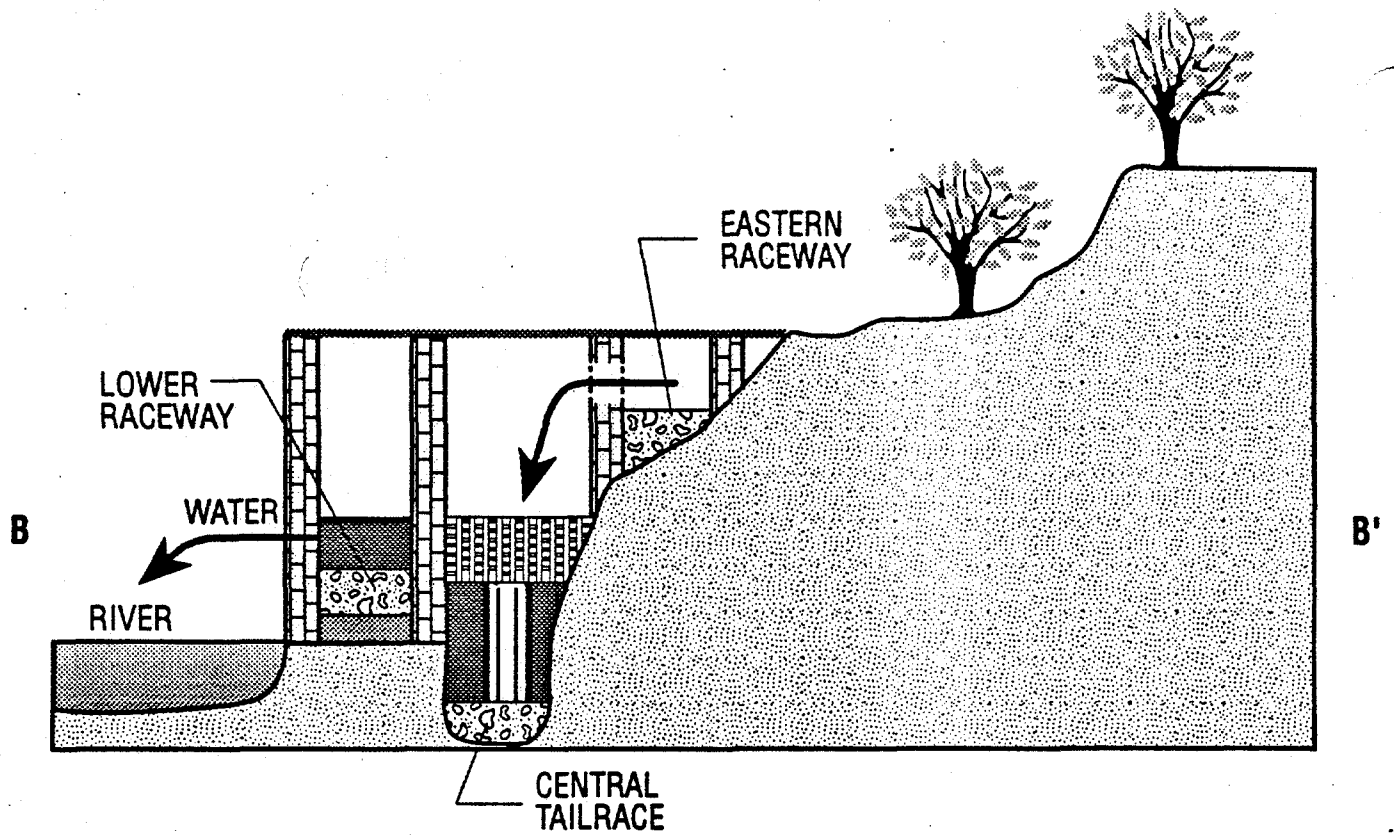
APPROXIMATE SCALE



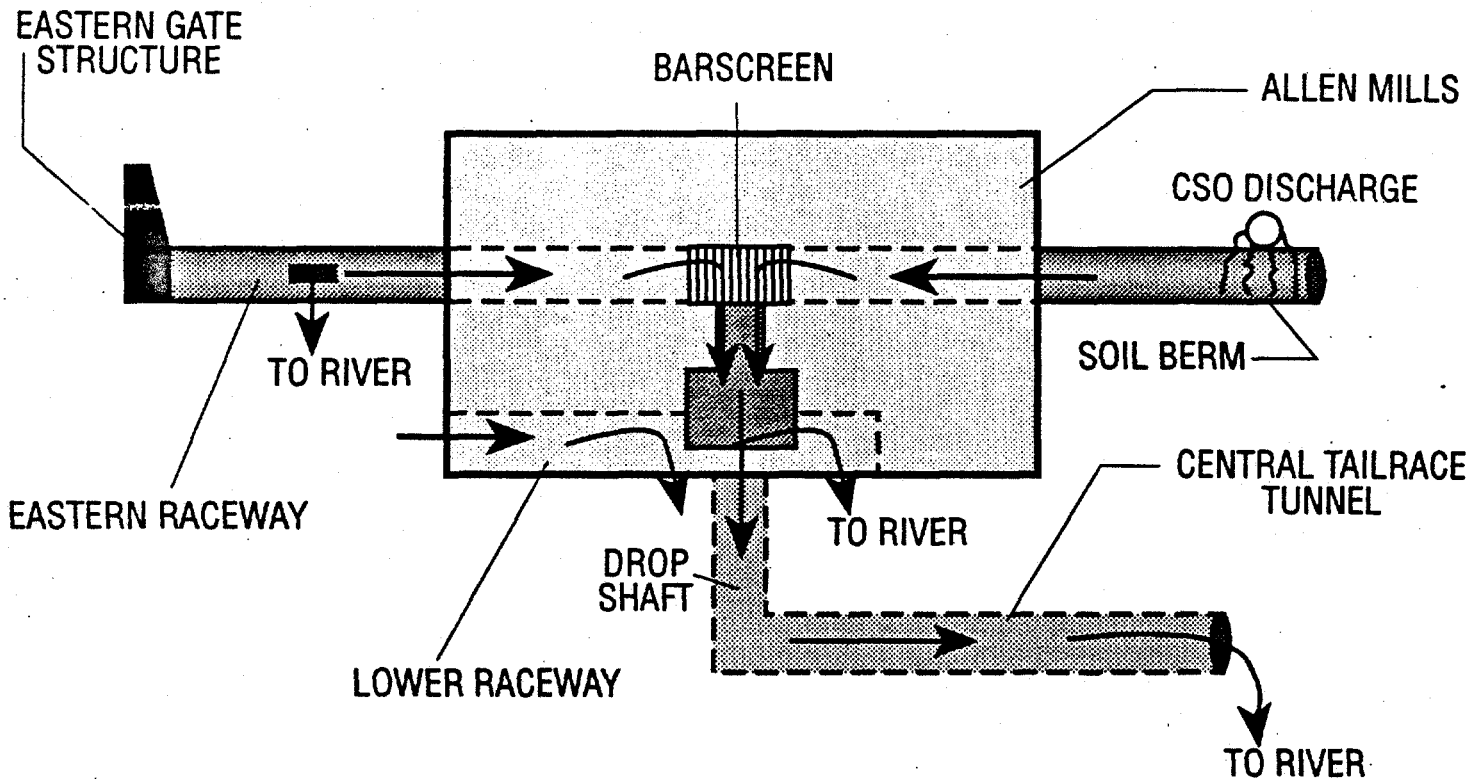




PLAN VIEW



CROSS SECTION



**PROFILE VIEW**