**Community Advisory Group (CAG) Meeting**
**Hudson River PCBs Superfund Site**
**Meeting Summary**
**Saratoga Town Hall, Schuylerville, NY**
**Thursday August 20, 2015**
**1:00 PM – 4:00 PM**

**CAG Members and Alternates Attending:** Peter Goutas, Manna Jo Greene, Abigail Jones, Roland Mann, David Mathis, Althea Mullarkey, Merrilyn Pulver-Moulthrop, Andrew Squire, Lois Squire, Julie Stokes.

**CAG Liaisons Attending**: Michael Cheplowitz (USEPA – Region 2), John Davis (NYSAG), Kevin Farrar (NYSDEC), Joan Gerhardt (Behan Communications), Gary Klawinski (USEPA – Region 2), Deepali McCloe (Ecology & Environment, Inc.), Tegan Kondak (Ecology & Environment, Inc.), George Lukert (Ecology & Environment, Inc.), Larisa Romanowski (USEPA – Region 2).

**Others Attending:** Amy Bracewell (NPS), James Candiloro (Resident), Justin Deming (NYSDOH), Donna Davies (NPS), Pam Doody (Anchor QEA), Marie Foster (Resident of Schuylerville), Rob Foster (Towpath, Schuylerville), Audrey Van Genechten (NYSDOH), Danny Lao (NYSDOH), Brian Neavy (Albany), Paul Post (Saratogian), James Savoie (NYSCC), Stephen Williams (Daily Gazette), Tomas N. Wood III (Town of Saratoga, Supervisor).

**Facilitators**: Patrick Field and Tushar Kansal.

**Members Absent:** David Adams, Cecil Corbin-Mark, Chris DeBolt, Laura De Gaetano, Darlene DeVoe, Rich Elder, Richard Fuller, Brian Gilchrist, Robert Goldman, Robert Goldstein, Timothy Havens, Gil Hawkins, Jeffrey Kellogg, Richard Kidwell, Edward Kinowski, William Koebbeman, Aaron Mair, Thomas Richardson.

**Action Items:**

*EPA*

- Prepare a detailed presentation of the fish special study for the next CAG meeting.
- Distribute or post slides of the Sediment Special Studies presentation.

CAG

- Submit written comments on the removal of equipment to EPA.

CBI

- Coordinate scheduling of the next CAG meeting in September or early October.

**Welcome, Introductions, Review April 2015 Meeting Summary**

The facilitators welcomed the group, led a round of introductions, and reviewed the agenda, noting a change to hear the fish special study update before the dredging season update. After reviewing the April 2015 draft meeting summary, a member suggested removing the deed restriction discussion on page 9, since she thought it had not yet been discussed. After the meeting, the facilitators reviewed their April meeting notes and found that the topic had been briefly discussed. The facilitation team added a sentence to the April summary indicating that the

April meeting is not the last time the topic will be discussed. CAG meeting handouts and presentations are available on the project website:
http://www.hudsoncag.ene.com/documents.htm

**Fish Special Study Update**

Gary Klawinski, EPA, provided an overview of the fish special study, which investigated whether the analysis of fish tissue samples collected and then processed with "rib in" or "rib out" would result in differences in detected PCB concentration levels. Data for this study was collected in spring 2014.

The State Department of Environmental Conservation (DEC) has collected fish tissue samples in the Hudson River. Prior to 2004, DEC collected tissue samples and processed them with "rib in." Between 2004 and 2014, GE collected tissue samples and processed them with the "rib out." When this difference was identified, EPA requested that GE switch from "rib out" to "rib in" processing in 2014.

EPA processes "rib out" tissue samples at most other sites. Mr. Klawinski added that the data is not incorrect, but must be viewed in the right context. The amount of fat varies on any fish, and tissue samples can be analyzed in various ways such as wet weight, lipid normalized, etc. Lipid normalized, which is the analysis method used by EPA, corrects for the amount of fat. "Rib in" samples include the fatty tissue around the ribs while 'rib out' does not. EPA samples also include the belly flap, another fatty tissue area where PCBs tend to concentrate.

A CAG member and the liaison from the New York State Attorney General's (NYSAG) office expressed concern about fish tissue sampling and decisions made based on tissue analysis. The member asked for a more detailed presentation of the study, stating that the success of the remediation hangs on whether or not fish PCB concentrations fall to the point where people can eat fish from the river. The NYSAG liaison commented that DEC had processed fillets in a standardized way since the 1970s and in 2004 GE took over sampling at many Hudson River sites. After several years, DEC noticed some issues with the data and presented their concerns to EPA. Upon review, EPA determined that GE was using a different method to fillet the fish than the standard DEC method. The NYSAG liaison said the GE fillet method has a systematic low bias in tissue concentrations and that samples collected using DEC's fillet method result in 75% higher PCB concentrations, on average, than samples processed using GE's fillet method. The NYSAG is now evaluating the decisions that were made on that basis and whether the decisions need to be revisited. A liaison from the New York State Department of Health (NYSDOH) commented that the DEC has been continually responsible for collecting and analyzing fish tissue data in the lower reaches of the river (where some people keep fish they catch), versus this upper reach which is supposed to be only catch and release. Additionally, the fish advisories are in place based on NYSDEC data. Yet another member noted that some people in the upper reaches are eating Hudson River fish. Mr. Klawinski said he was unaware of any significant decisions made between 2004 and 2014 that were based on wet weight fish data

A member asked whether the difference in PCB concentrations casts doubt on the Record of Decision (ROD) decisions that were made. Mr. Klawinski said that it does not, since the 2002 ROD was based on previous data. He added that EPA is completing a technical review of the data, reemphasized that the data should not be called into question since the lipid normalized analysis methodology was used, and said that given the lipid-normalized analysis methodology and ongoing dredging, this should not affect the five-year review. He said the most important thing is what happens to fish tissue PCB concentration levels once dredging is complete.

Members also made the following points: The human health risk assessment showed the risk of developing cancer is 1/100,000 if someone eats one fish per week for 40 years, so the risk is small and the issue of tissue concentrations and sampling collection methodology should not be made a bigger issue than need be. Another member stated, however, that the risk is higher for children than it is in the general population. Fishermen think EPA and GE are taking all the fish in the river for sampling and that this is why the fishermen have not been catching many fish. CAG members would like at least a fact sheet, if not a technical memo, about the special fish study findings.

**2015 Dredging Season Update**

Mr. Klawinski provided the 2015 dredging season update. His points are summarized below.

*Dredging to date:* Approximately 176,000 cubic yards (cy) of sediment were removed in 2015, resulting in the removal of approximately 2.7 million cubic yards on the whole project to date. Thirty-four acres were dredged in 13 weeks during the 2015 season; some challenging areas slowed operations. Some capping was completed in areas where two dredging passes were not able to sufficiently remove the contaminated sediment. Ten TSCA trains and 3 non-TSCA trains have been shipped to disposal facilities this season.

*2015 Dredging Areas by Certification Unit (CU)*:

- CU 60 – Dredging from the land was required due to the CU's proximity to the dam. Dredging is complete and backfill ongoing.
- CUs 64, 65, 66 – Dredging of these CUs in the land-locked area began in 2014 and is not yet complete. Backfill is ongoing.
- CU 96 – Timber cribs were documented as a cultural resource and removed from CU 96. Dredging is complete and backfilling ongoing.
- CU 99 – Dredging in CU 99 is complete and minor adjustments are being made to backfilling plans.
- CUs 94, 95 – Dredging in CUs 94 and 95 only recently began, as operations were delayed due to bald eagle nesting. Shallow bedrock also presented an additional challenge and required milling out the top part of the bedrock to gain access to the backside of the island. A temporary causeway was constructed for access. Dredging is expected to conclude in mid-October and be followed by backfilling.

*2015 Monitoring*: There have been no exceedances of air or water quality standards this dredging season. Some noise and light complaints were received; monitoring was put in place and the complainants have been contacted.

*Habitat Planting*: More than 60,000 Submerged Aquatic Vegetation (SAV) plant units were installed on 5.6 acres. More than 30,000 Riverine Fringing Wetland (RFW) plants will be planted on 2.9 acres. RFW seeding is complete on 0.75 acres; an additional 3 acres will be seeded.

*Processing facility decommissioning and demobilization:* "Decommissioning" is the removal of infrastructure and restoration of the site. EPA is reviewing the preliminary decommissioning plan; decommissioning of the processing facility has not started. "Demobilization" is the decontamination and removal of equipment that is no longer needed; this is typical project activity. Some demobilization of river support facilities and equipment has occurred every year. For example, dredges and barges that are no longer needed are being decontaminated. The

northern processing unit is being taken apart because it is no longer needed to deal with any small volume of remaining material to be processed.

*Next Steps*: Dredging and backfilling will continue until October near Quack Island, at which point the dredging for the ROD should be complete. RFW planting will continue this fall and in 2016. EPA will provide comments to GE on the decommissioning plan; most of the processing facility decommissioning is anticipated to occur in 2016. Long term monitoring will continue and clean up will be evaluated on an ongoing basis. Five-year reviews will be completed.

CAG member discussion focused on the following topics:

*Definitions of decommissioning and demobilization, and associated plans:* CAG members described decommissioning and demobilization as essentially the same thing, noting that EPA's description of demobilization is really decommissioning one piece at a time. CAG members requested EPA provide the legal definitions of decommissioning and demobilization and the opportunity to review the operations and maintenance and decommissioning plans. Mr. Klawinski said that equipment has been moved on and off the facility for a long time, but the difference now is that some of the equipment will not come back. He added that a lot of equipment must be removed by the end of the year and the big challenge will be what to do with the contaminated facility. He said the decommissioning plan is not public yet because it is still in draft form, and that a full demobilization plan does not exist, but there are several documents outlining demobilization. Additionally, GE reports weekly to EPA and DEC about where their equipment is located and their plan for the week so the agencies can verify that GE can complete the work with the equipment onsite.

*Decommissioning and demobilizing process and timeline:* Members expressed concern that machinery was being removed from the processing facility while dredging is ongoing. They commented that removing the northern wharf dewatering equipment severely limits the use of the dewatering facility. They said many questions remain unanswered about CU 00, the 136 acres, navigational dredging, and other areas that may need to be dredged, and that decommissioning the facility stands to harm the public, since the facility could still be used if left intact. For example, the Canal Corps could use the facility while dredging the navigational channel or, if it is taken down, they will have to build their own facility with taxpayer money. Members urged GE to work towards a mutually beneficial solution and EPA not to prematurely allow GE to begin decommissioning; someone suggested that decommissioning be held off until spring 2016. Mr. Klawinski emphasized that the dewatering facility is a functioning facility. He said the southern wharf will still be in operation and that he expects GE to request permission to clean it up and remove it in October. In response to a question, he added that EPA is in open communications with GE, the Attorney General's office, the Canal Corps, and DEC, though not all parties agree with the EPA on all the issues. A US Fish and Wildlife (USFWS) liaison stated that the Trustees have spoken to EPA about the decommissioning plan and were invited to submit comments.

*Agricultural and other local impacts*: A member commented that he has suffered economic loss due to the inability to draw water from a spring and said he had been ignored and disrespected by EPA. Mr. Klawinski said the member had gone through the proper channels and that EPA had no further comment. People discussed their expectation that every effort be taken to not impact local people negatively and to take care of those who are impacted. A GE liaison noted that GE has been paying property

taxes on the dewatering facility and school taxes. A USFWS liaison added that the Trustees published a report about the lost use of surface water as a potential damage of natural resources and they will need to look at impacts on local agriculture.

*Habitat planting and long term monitoring*: After work done in 2016 to plant final RFW areas, replanted habitat areas will go into long term monitoring and, once the benchmark requirements are met for planting, the work will be complete. Gary added that there is long term monitoring for surface sediment, fish, water, benthic organisms, and more. A member asked what GE's responsibility would be if an area that had been dredged and backfilled is re-contaminated. Mr. Klawinski said that sampling of surface sediment and flood mud would address these considerations and that GE will submit a plan for this to EPA in February. He added that EPA will present this plan to the CAG and CAG members will be able to provide input.

**Follow up Presentation to Discuss Floodplains RI/FS Workplan**

Mr. Klawinski presented information requested by the CAG on the Floodplains RI/FS Work Plan. The headings in italics below refer to the list of questions submitted on behalf of the CAG to EPA for additional information. More information is available on the project website in the slide deck titled EPA Floodplain Questions. Skeo Solutions will present additional information on the floodplains RI/FS at the next CAG meeting.

The floodplains RI/FS work plan is final and EPA is currently reviewing the Floodplain Characterization Report submitted by GE. This fall EPA will collect samples in the floodplain to verify the characterization; additional samples will likely be collected in the spring. A floodplain is defined as anywhere water could have moved up to from the waterline and deposited PCBs.

*Question 4, Permanent Actions/Potential Actions*
Actions taken to address floodplains contamination could be both temporary and permanent and might include: excavation, capping, institutional controls, monitored natural attenuation, and potentially some innovative approaches. Remedial actions are based on exposure and the associated risk as related to land use and PCB concentrations; actions are also based on what is feasible in any given area. There are not specific limits to permanent actions; remediation options are evaluated in the Feasibility Study against specific criteria. EPA will look at all feasible remedial options, including innovative remedies; no options are closed off.

EPA will release the RI/FS publicly and there will be scope for community input on potential remedial options. At the proposed plan stage, the public will have the opportunity to tell EPA which remedial options they prefer be implemented.

*Question 5, Confidentiality and Notification*
Most of the properties in the floodplain are private properties, although a few are publicly owned. EPA will work with property owners to maintain confidentiality and will keep public and elected officials informed. Once EPA has an understanding of the locations of the contamination, they will create general maps showing those locations without violating privacy.

*Question 6 and 7, Overview and Public Comment*
The RI/FS process consists of a Remedial Investigation (RI), a Human Health Risk Assessment (HHRA) and Ecological Risk Assessment, and a Feasibility Study. A Proposed Plan is developed based on the recommendations reached through the RI/FS process. Public comment is solicited on

the Proposed Plan. A Record of Decision is then prepared and followed by implementation of the selected remedy. At this time, GE has agreed to complete the RI/FS.

EPA is preparing a community involvement plan that will explain the opportunities for public involvement in the cleanup decision making process. Input will be welcomed on the plan.

*Hudson River Floodplain Delineation*
The group reviewed and discussed a map of the approximate area of the Hudson River Floodplain. The map showed the 100-year floodplain with the reaches in reverse order. EPA continues to define the actual area of the floodplains by collecting more accurate data, since existing flood maps are not always accurate. The baseline of the EPA floodplain area is the 100-year floodplain; topography and aerial photography of the spring 2011 flood will help determine the extent of the floodplains. Aerial photography could augment or detract from the extent of the delineated floodplain in different locations, but only by a matter of feet on each side. Floodplains and backwaters are included in the remedial investigation. Backwaters are defined as areas where water is pushed up into areas when the river floods. Portions of the Old Champlain Canal are also included in the floodplain delineation when they are believed to be contaminated, however, areas of the canal that are not believed to be contaminated are not included.

*Question 8, Site Specific Concerns*
EPA will carefully consider each parcel on its own merits and take into consideration issues such as reasonably anticipated future use, the unique features of properties, and potential property use restrictions, etc. Remedial actions are evaluated in terms of being protective of human health and the environment. EPA will strive to make sure there are no situations where known areas of contamination are not addressed. Members commented that it is important to make sure property owners' interests are respected. A DEC liaison commented that DEC's perspective is that if a restriction is placed on the property then the owner should be compensated. A member commented that community involvement throughout the process is critical.

*Question 9, Future Uses*
The future uses of sites are sometimes difficult to determine. EPA anticipates considering planning documents, zoning, and other land use and property information to determine future uses. EPA will be in communication with property owners and elected officials. Parcel designations include residential, agricultural, commercial/industrial, recreational and school. Vacant land is considered based on zoning and use.

*Question 10, Legacy Contamination*
There is residual contamination in some areas that are difficult to remediate (e.g., a wooded wetland area). The likelihood of contamination leaving the floodplain and entering the river seems low. Annual flood mud sampling is completed to identify movement of PCBs.

*Question 11, PCB Concentrations and Sampling*
A statistical approach will be used to estimate PCB concentrations based on the likelihood of flooding. A Field Sampling Plan will identify soil sampling locations based on data gap needs. Two additional rounds of floodplain soil sampling will be completed, and biotic sampling is also anticipated.

Portions of the Old Champlain Canal will be sampled if it is located in the floodplain; deep sediment samples will be collected to account for deposition in select areas. Members noted the concern around the Old Champlain Canal is with stormwater and flooding. A member asked if flooding from the canal related to stormwater but that is not direct flooding from the river, would

be included in the floodplain remediation. Mr. Klawinski said EPA will meet with the municipality and whoever is in charge of the system to better understand it. He added that it may be included.

*Question 12, Modeling*
EPA is using some already completed modeling, but modeling is not being performed in general. The EPA is using statistical calculations and other analyses to determine ecological and human health risk. Stormwater may also be considered.

*Question 13, Ecological Risk Assessment*
Some research will be performed related to the ecological risk assessment. Additional sample analyses, analyses of terrestrial and aquatic biota, a toxicity evaluation, and literature search will be completed. EPA will also take into consideration approaches used at other sites.

*Cultural Resources*
The group discussed the locations of cultural resources in the floodplains. Mr. Klawinski said that cultural resource surveys have been completed anywhere that sampling was completed. GE also submitted a plan in regards to cultural resources considerations. Cultural resource impacts are not a concern when taking small core samples. Regardless, the normal process for cultural resources will be followed for any other type of action and an MOA would be put into place if impacts to cultural resources were to occur. A member of the audience requested a complete Level A Assessment in this context due to working in an adaptive management context. Mr. Klawinski said that he understood the comment but that EPA would not do that for sampling, only for more intrusive activities.

**Review of Sediment Special Studies**

The review of sediment special studies was skipped due to insufficient time. The slides will be distributed and a phone call can be organized if CAG members have questions.

**Brief Updates and CAG Business**

The following brief updates and announcements were made:

- We are seeking additional members to serve on the Administrative Committee. Please contact Ona Ferguson (oferguson@cbuilding.org) or Eric Roberts (eroberts@cbuilding.org) if you are interested.
- Terrie Boguski, Skeo Solutions, will be at the next CAG meeting to answer the questions asked by the CAG about the floodplains remediation work plan.
- Skeo Solutions will also conduct a process review as the remediation moves from in river to the floodplains. Kirby Webster will contact CAG members to schedule interviews.
- The next CAG meeting is currently scheduled for October 29. Members requested a CAG meeting in early September or October about the Fish Special Study and Sediment Special Study, then convening again on October 29 with the Terrie Boguski from Skeo Solutions. EPA suggested that late September may be the earliest they could be prepared for a more detailed presentation on the Fish Special Study.
- Amy Bracewell, the new Superintendent of Saratoga National Historical Park, joined the meeting at a CAG member's request. Ms. Bracewell said she looks forward to participating.
- Riverkeeper is launching a 'selfie campaign' asking people to post pictures of themselves and why they love the Hudson River. Contact Abigail Jones for more information.

- The USFWS published a new fact sheet on freshwater mussels. In 2013, they completed a pilot study on the impact of dredging on mussels, and they are now completing a follow up study. More information is available on the USFWS website.