

----- Message from "Gary Buchanan" <Gary.Buchanan@dep.state.nj.us> on Thu, 01 May 2008 10:19:14 - 0400 -----

To: "Frank Faranca" <Frank.Faranca@dep.state.nj.us>
"Anne Pavelka" <Anne.Pavelka@dep.state.nj.us>, "Edward Demarest"
<Edward.Demarest@dep.state.nj.us>, "Eileen Murphy"
cc: <Eileen.Murphy@dep.state.nj.us>, "John Boyer"
<John.Boyer@dep.state.nj.us>

Subject: Fwd: Re: Delta

Frank, I reviewed the DuPont responses and they are acceptable with the following significant exception: Based on DuPont's response and analysis, I conducted a much closer inspection of the NJDEP 2002 data from the Passaic Region. It is clear that fish in Pompton Lake are elevated in mercury relative to the rest of the watershed. All the weight of evidence points to the Acid Brook Delta mercury (i.e., DuPont) as the source of elevated mercury in the fish. Of particular note is the elevated levels of mercury in fish directly downstream of Pompton Lake. This raises a flag about downstream transport of mercury. Something to discuss in the future.

Please see the attached 4-page response to DuPont.

Regards,

Gary

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From: "Albert J Boettler" (Albert.J.Boettler@USA.dupont.com)
Subject: Re; DuPont Pompton Lakes Delta
Date: Thu, 01 Feb 2007 16:00
To: "Pavelka, Anne" (Anne.Pavelka@dep.state.nj.us)
cc: "Demarest, Edward" (Edward.Demarest@dep.state.nj.us)
To: "Faranca, Frank" (Frank.Faranca@dep.state.nj.us)
cc: "Boyer, John" (John.Boyer@dep.state.nj.us)
cc: "Buchanan, Gary" (Gary.Buchanan@dep.state.nj.us)
cc: "" (Park.Andy@epamail.epa.gov)
cc: "" (Tornick.Barry@epamail.epa.gov)

File item: [1-22-07 Response to NJDEP's PLW Delta Comments_rev3.doc](#) (30208)

File item: [deltasurface\(28X40\)rev_1.pdf](#) (638782)

File item: [Mime.822](#) (920981)

Frank,

Here are our responses to the NJDEP draft comments from Ed. We took that opportunity to discuss the sampling program that NJDEP requested and we accepted. Round 19 is complete and will give us a fairly good indication of the sediment in the channel going to the dam. We will share these results with you once we get all the results and have a chance to evaluate. Round 20 will be scheduled when we are assured that we will have good weather for at least a week or so. Round 21 will also come later. It requires different equipment. It is in the proposed excavation area.

If you have any questions, email me or call me. I will be sending you five full size sampling location figures as we discussed yesterday. You can distribute to the appropriate people. (Andy, I will send you a copy of the figure, too.)

Thanks,
Al

(See attached file: 1-22-07 Response to NJDEP's PLW Delta Comments_rev3.doc) (See attached file: deltasurface(28X40)rev_1.pdf)

http://www.DuPont.com/corp/email_disclaimer.html

[DEP comments in black; DuPont response in blue]

MEMORANDUM

COMMENTS

p. 1 (1.0 Introduction): It is stated that both parties agreed to perform a site-specific ecological study instead of using the generic National Oceanographic and Atmospheric Administration (NOAA) effects range (ER) levels for delineation, to allow for the most scientific understanding of the impacts of sediments containing mercury in the delta. It is further stated that the required delineation has been completed.

The study of bioavailable mercury was never a surrogate for sediment delineation to background conditions and/or sediment benchmarks as pursuant to N.J.A.C. 7:26E-. The eventual requirement to delineate Hg to the 2ppm Severe Effects Level (SEL) was set as a pragmatic delineation goal (Lake sediment background is < 0.5 ppm). Note that delineation is not complete as per the Work Plan submitted by DuPont (see comments below) nor the NJDEP required Work Plan provided to DuPont on 6/12/06 by the NJDEP Case Manager.

DuPont proceeded with a site-specific ecological study to obtain a scientific understanding of the impacts of delta sediments to ecological receptors and the environment. This understanding of site-specific existing conditions provides the essential information for risk management and remedial action decisions. The information obtained from this extensive study was used to develop site-specific cleanup criteria that were used to delineate the remedial action area. DuPont recognizes the

agency's issues related to delineation per the Tech Regs, and thus DuPont agreed to supplement its previous extensive sampling with the additional Pompton Lakes sampling suggested by NJDEP. See the attached sampling map for the 51 locations proposed by NJDEP and the timing for the three additional rounds of sampling, Rounds 19, 20 and 21.

Round 19 sampling was completed on Thursday, January 18, 2006. Round 19 included the following core locations:

- Two locations at southern limit of DuPont Transect I (locations POM-E-537-475 and POM-E-537-476);
- DEP Transects M, O, Q and S (adjacent to the dam);
- DEP requested cores between Dupont Transects D and E; and,
- Cores adjacent to the shore of Pompton Lake but outside the excavation area.

The total number of core locations sampled in Round 19 was 29.

Round 20 will be scheduled after the results of Round 19 are evaluated and the weather has improved enough to schedule the sampling (i.e., there is no ice on Pompton Lake). Round 21, the shoreline sampling in the proposed excavation area, will be scheduled for the summer of 2007. Because of the shallow water near the shore, this sampling will require different type of sampling equipment (i.e., a different boat).

p. 6 (2.2 Chemical and Biological Process, last paragraph): It is stated that delta sediment mercury appears to be tightly bound to fine-grained particles as indicated by the Toxicity Characteristic Leaching Procedure (TCLP) data; however, biological processes in the upper few centimeters of sediment are able to mobilize some mercury in the form of methyl mercury, which then enters the food chain. Mercury levels in Pompton Lake fish are not uncharacteristic of levels found in fish from other Lakes and Reservoirs in Northern New Jersey (Exponent, 1999). The above language is misleading because it is based on fish tissue mercury averages throughout the lake and not based on comparisons of Acid Brook delta fish data to in-lake reference area tissue data. Nor does the statement note the high Hg levels in delta SW and sediment or in algal mats, etc., compared to in-lake reference locations. Nor is it noted that high ambient Hg (at, near or above levels of concern) in SW, sediment and fish tissue) is present in northern New Jersey lakes. This has prompted the NJDEP Mercury Task Force to recommend remediation of all local sources/repositories in environmental media (NJDEP Mercury Task Force).

We acknowledge that this Remedial Investigation Report (RIR) did not present all of the earlier reported findings from the Phase II Ecological Investigation Report. The intent RIR was to focus on the delineation and the results of the activities conducted in support of the remedial action since 2002. Section 2 presented a brief overview of the site conceptual model but did not elaborate on any single component. Section 2 provided a very general text that stated the model focused on ecological receptors and that some mercury in the form of methyl mercury mobilizes and enters the food chain. It was not our intent to be misleading, rather just provide a general overview of the SCM.

pp. 7 (3.1 Analytical Methods and QA//QC), (3.4 Delta Sediments): It is stated that approximately 10% of the XRF samples were sent to Lancaster Laboratory, Inc. for additional confirmation analyses.

It shall be clarified if all the final delineation samples along each transect, consisting of 2 consecutive sample results \leq 2 ppm, were confirmed via laboratory analysis.

The cores collected in December 2003 were analyzed by the PLW XRF with 10% sent to Lancaster Laboratory, Inc. for additional confirmation analyses. All of the delineation samples were sent to Lancaster Laboratory, Inc. for analyses. All samples outside the 800 ft radius, including all delineation samples, were sent to Lancaster Laboratory, Inc. (a New Jersey certified laboratory) for analysis

pp. 9, 12 (3.4.3 Delineation), (4.1 Conclusions): It is stated that horizontal sediment Hg delineation was completed as requested by the NJDEP, and that no additional sediment delineation sampling is required for Pompton Lakes. Transects E and I were completed/terminated because the sediment “pinched out”.

The termination of sediment transect sampling due to the “pinching out” of sediment was not a parameter in the Work Plan. The termination of sampling is not appropriate if potential exists for sediments/suspended solids migration to downgradient depositional areas via water currents and/or wind action. As per the NJDEP memorandum sent to DuPont on 12/20, further delineation as per specified is required.

The Work Plan did not mention termination of sediment as a parameter, however the goal was to sample sediment, and if none existed to sample after several consecutive step outs, sampling was stopped. As was discussed above, Round 19 included advancing two sediment cores on DuPont Transect I, (locations POM-E-537-475 and POM-E-537-476).

p. 10 (3.5 Bathymetry), p. 12 (4.2 Recommendations): It is stated that DuPont will have OSI further extend that bathymetric survey to the limits of the delineation and proposed remediation after NJDEP has approved this RIR and commented on the Acid Brook Delta Remedial Proposal. It is also proposed to perform shoreline sampling at an appropriate frequency.

These proposals are acceptable but shall not preclude any additional sediment delineation work required as per the 12/20/06 NJDEP memorandum.

The work as per the 12/20/06 NJDEP memorandum will be implemented in two phases, the first starting (Round 19) was completed on January 18, 2006. . Once results from the first are received the second (Round 20) will be implemented upon completion of the review of Round 19 analytical results and when Pompton Lake is again accessible to the sampling vessel (i.e., there is no ice on the lake).