From: Gorin, Jonathan
To: MacMillin, Scott
Cc: John M. Hoffman; Carrie McGowan; Thorn, Paul
Subject: RE: Question on run-off
Date: Wednesday, September 04, 2013 4:57:00 PM

Thanks Scott. I did mean a tidal event, not a spring tide but rather a storm surge. I've been thinking more about this as well. Clearly a storm surge can scour soil and sediments, but I've also seen data that areas such as in the Hudson River or in the Gowanus did not have sediments transported during Sandy, but rather the water rose up and went back down "gently."

Anyway, if you wouldn't mind discussing this for a few minutes tomorrow (anytime but 2:30-3:30) I'd very much appreciate it.

Whatever we decide, I don't see the need to change the RIR.

From: MacMillin, Scott [mailto:SMacMillin@Brwncald.com]
Sent: Wednesday, September 04, 2013 4:43 PM
To: Gorin, Jonathan
Cc: John M. Hoffman; Carrie McGowan; Thorn, Paul
Subject: RE: Question on run-off

Jon,

On further consideration of the prior e-mails and the text of the RIR, I'm not totally comfortable the factual basis for your suggested statement, for several reasons:

1. The context of the statement in the RIR that includes "entrainment of particulate-bound mercury" relates only to mercury migration off of the site via overland flow of surface water runoff, as presented in Section 7.1 (Routes of Migration) and Section 7.4 (CSM). Furthermore, Section 7.4 provides evidence that changes in site drainage since 1976 and cessation in manufacturing activities in 1985 have "dramatically decreased the quantity of overland releases to SBC such that mercury releases to SBC are considered to be historic and not ongoing.

2. In my quick initial read of your e-mail, I misread your "substantial tidal events" as if it was "substantial stormwater events". The surface water runoff, described in No. 1, above, has no direct bearing on tidal conditions. Rather, this would be related to stormwater, primarily prior to changes in site drainage in 1976.

3. By 'substantial tidal events', I presume that you mean either a larger than normal tidal excursion, e.g., 'spring (moon) tide' or an extreme high tide event such as a storm surge. Such a high tidal water event would not necessarily correspond to

higher water velocities in South Branch Creek which would be required to "amplify" the suspension and transport of additional mercury-laden particles from the site.

Based on this above discussion, I think that it is important for us to consider any wording that is inserted into the ROD that is not consistent with the RIR, including the context of the wording. Please contact me to discuss this further.

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T 201.574.4711 | **C** 201.841.0350

Professional Registration in Specific States

From: Gorin, Jonathan [mailto:Gorin.Jonathan@epa.gov]
Sent: Wednesday, September 04, 2013 2:26 PM
To: MacMillin, Scott
Cc: John M. Hoffman; Carrie McGowan; Thorn, Paul
Subject: RE: Question on run-off

Thanks Scott, the RI doesn't need to be, and shouldn't be changed.

I'll put something in the ROD making that relatively minor point - as long as there's no factual problems with it.

From: MacMillin, Scott [mailto:SMacMillin@Brwncald.com]
Sent: Wednesday, September 04, 2013 2:20 PM
To: Gorin, Jonathan
Cc: John M. Hoffman; Carrie McGowan; Thorn, Paul
Subject: RE: Question on run-off

Jon,

Conceptually, I agree with your statement. However, before a change such as this is

added to the Revised Final RIR, the context will need to be considered and, of course, we will need to discuss this with the RP and the project team.

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Professional Registration in Specific States

From: Gorin, Jonathan [mailto:Gorin.Jonathan@epa.gov]
Sent: Wednesday, September 04, 2013 9:27 AM
To: John M. Hoffman; Carrie McGowan; MacMillin, Scott
Subject: Question on run-off

Good morning Scott, good to see you last week.

I agree with the RI that entrainment of mercury to SBC is limited due to the site's limited stormwater run-off flow. I think I should add a sentence about storm events, something like:

Entrainment, however, could be amplified during substantial tidal events.

Factually, what do you think?

jon