NITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
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NEW YORK, NEW YORK 10007 -1866

October 23, 2015

BY ELECTRONIC MAIL

Robert Law, Ph.D.
demaximis, inc.
186 Center Street, Suite 290
Clinton, New Jersey 08809

Re: Lower Passaic River Study Area, 17-Mile RI/FS
Benthic Community Exposure Depth

Dear Dr. Law:

On June 1, 2015, the U.S. Environmental Protection Agency (EPA) sent a letter to the Cooperating Parties Group (CPG) in response to its proposal to use 2 centimeters (cm) as the benthic community exposure depth for the Lower Passaic River Study Area (LPRSA). In that letter, EPA explained our conclusion that the use of average model results from the 15 cm horizon is most appropriate to represent contaminant concentrations in the benthic community exposure zone for use in the bioaccumulation model for the 17-mile Remedial Investigation/Feasibility Study (RI/FS). EPA also acknowledged in that letter that varying depths of benthic community exposure less than 15 cm may be appropriate for parts of the LPRSA and stated that we would be willing to discuss with the CPG additional studies that could be conducted to evaluate this possibility.

On June 12, 2015, the CPG responded to EPA's June 1, 2015 letter, invoking dispute resolution with respect to EPA's conclusion that existing RI data from the top 6 inches of sediment, and model concentration simulation results for this depth interval, should be used to represent contaminant concentrations for this parameter.

EPA responded to the June 12, 2015 notice by letter dated June 25, 2015, asking the CPG for a more detailed written statement of objections and indicating that EPA would work with the CPG to attempt to resolve the dispute. EPA also indicated that on receipt of the detailed written statement, EPA could determine whether to extend the Negotiation Period called for in Paragraph 64 of the Administrative Settlement Agreement and Order on Consent (AOC) for the RI/FS.

The CPG responded on July 2, 2015, not with a detailed statement, but with a request for additional information reviewed by EPA in preparing its June 1, 2015 letter. On July 9, 2015, EPA provided additional information and again requested a detailed statement. To date, the CPG has not provided a detailed statement. However, EPA has allowed the Negotiation Period to continue, and this letter confirms that we remain in this extended Negotiation Period.

On August 18, 2015, you contacted me to initiate a discussion regarding additional sampling, as suggested by EPA in its June 1, 2015 letter, and on August 26, 2015 the CPG presented its

proposed additional sampling program to EPA via teleconference. The CPG requested that we let it know quickly if EPA could support the program as described or if we had significant reservations. Responding to this request, EPA informed the CPG on September 1, 2015 that a more robust program that includes sediment sampling would need to be developed if EPA were to support it.

The CPG then asked EPA to review draft Quality Assurance Project Plan (QAPP) worksheets it was developing for this work prior to deciding whether the scope of the program is sufficient. The CPG submitted those worksheets on September 17, 2015, and EPA has now reviewed the worksheets in sufficient detail to make that determination. Ray Basso and I discussed our feedback with you on October 8, 2015, and you asked that we provide our major concerns in writing. These are laid out below.

1. A much more robust, multi-season, possibly multi-tidal sampling program is needed. At a minimum, a fall and spring event would be needed, and full seasonal coverage is preferred. As you know, there is a high degree of variability associated with these data and any sampling conducted must be able to reduce, or at least determine the bounds on, this variability. From a biological perspective, seasonal differences include, but are not limited to, spawning, storage of food reserves, release of larvae, vertical and horizontal migration, and ultimately larval or juvenile settlement. In addition, as evidenced by our recent experience at RM 10.9, the surface sediment layer is subject to short-term deposition and remobilization and/or consolidation on a regular basis;

2. Sediment sampling must be part of the program. There are several Data Quality Objectives for the sediment sampling, including:

    a. Correlation of sediment concentrations with benthic invertebrate tissue concentrations, to determine if tissue concentrations are consistent with specific depth profiles. For example, if benthic invertebrates are collected from 2-4 cm and analyzed, but their concentrations do not correlate with the sediment concentrations from that same interval, this may indicate that they are becoming contaminated from another interval. Please keep in mind that some benthic, infaunal invertebrates can migrate vertically, so direct correlations between tissue and sediment concentrations must consider species in question and their behavior;

    b. Estimation of exposure to benthic invertebrates for intervals containing feeding voids but no benthic invertebrate tissue; and

    c. Provision of quantitative data for use in the models so that the bioaccumulation model and fate and transport model have data collected from similar profiles.

3. EPA is still completing its review of the bioaccumulation model, and on October 21, 2015 received additional information from the CPG it needs to complete the review. This highlights another concern that we will need to address going forward; the integration of the exposure depth sampling program with the development and approval of the bioaccumulation model.

EPA appreciates the effort the CPG put into developing this program, which includes the direct measurement of biomass data and benthic organism tissue concentrations. However, even with

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these important measurements, the program is not sufficient to resolve the unknowns that the program is attempting to answer. The question of where benthic organisms are feeding is a highly complex one in any water body, and trying to make this determination for use in future projections in a tidal estuary impacted by contamination is even more difficult. EPA suggested that additional studies could help resolve this issue, and we still think this is the case. However, we now understand that the study that would be needed to resolve the issue is much more complex than originally understood, and there is no guarantee that at the end of a multi-year program a clear answer would present itself. As such, EPA continues to support the use of results from the 15 cm horizon to represent concentrations in the benthic community exposure zone.

In its October 16, 2015 letter, the CPG questions EPA's basis for allowing for any Partner Agency review of the CPG's proposed sampling program. As the CPG is aware, the Partner Agencies are an integral part of the RI/FS process, and have been so since its inception; they are involved with all aspects of the RI/FS development and review, and this involvement does not need to be stated explicitly for each issue. The October 16 letter also expresses displeasure at the amount of time it has taken EPA to provide feedback on the proposed sampling program. Please note that, while apparently the CPG has been working on developing this program all summer, EPA did not become aware of the CPG's plan until late August, and did not receive anything formal to review until September 17th. As is noted above, EPA told the CPG on September 1st, prior to the submittal of the draft QAPP worksheets, that a more comprehensive program would be needed, and repeated this comment when we spoke on October 8th. EPA never affirmed that the CPG would be able to undertake the fieldwork this fall. Finally, as is stated in the previous paragraph, EPA disagrees that this issue should hold up completion of the RI/FS and continues to support the use of existing data.

As described above, EPA has informally extended the Negotiation Period for the dispute resolution invoked by the CPG on June 12, 2015. We are willing to continue this extension while we continue the ongoing discussions that EPA has already engaged in with the CPG on this topic. However, given that the CPG is now expressing deep dissatisfaction with this process, we question whether these discussions are achieving the intended purpose of resolving the disagreement between EPA and the CPG. Unless we hear from the CPG to the contrary, we are expecting to take the next steps needed to present this dispute to the Director of the Region 2 Emergency and Remedial Response Division.

We look forward to hearing from you.

Sincerely,

Stephanie Vaughn, Project Manager
LPRSA 17-Mile RI/FS

cc: R. Basso, EPA
W. Mugdan, EPA
S. Flanagan, EPA
W. Hyatt, CPG

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