de maximis, inc.

186 Center Street
Suite 290
Clinton, NJ 08809
(908) 735-9315
(908) 735-2132 FAX

November 11, 2015

Stephanie Vaughn
17-mile LPRSA RI/FS Remedial Project Manager
U.S. Environmental Protection Agency, Region 2
290 Broadway
New York, NY 10007-1866

Via Electronic Delivery

Re: Lower Passaic River Study Area (LPRSA) 17-mile Baseline Human Health Risk Assessment (BHHRA) – May 2007 Administrative Agreement and Order on Consent for Remedial Investigation/Feasibility Study – CERCLA Docket No. 02-2007-2009 (AOC)

Dear Ms. Vaughn:

The Lower Passaic River Cooperating Parties Group (CPG) is writing to confirm the discussions held during the October 22, 2015 teleconference between USEPA Region 2 (Region 2) and CPG representatives to discuss the Region's responses to the CPG's August 2015 "Response to Comments" (RTCs) on the draft 17-mile LPRSA BHHRA.

There were a number of the Region's responses that required additional clarification and there were some CPG RTCs that were not accepted by Region 2 in its October 16, 2015 responses (Comment/Response 4, 14, 15, 39&40, 53&82, 87c, 114, 127e, 151, and 154). This letter also addresses the Region's October 30 email that provides responses to Comment 42 and additional follow-up to Comment 154.

The following summarizes the CPG's understanding of the agreements and identifies comments/responses where further action is needed:

- Comment/Response #4 – CPG and Region 2 agreed that other diets besides the RME[1] may be referred to as "alternate diets".
- Comment/Response #14 – CPG and Region 2 agreed the 17-mile BHHRA will be revised to include body weights for all child receptors based on year-specific data, and a footnote regarding the availability of only age range data for body surface area will be added.

[1] The RME diets are: 1) mixed fish diet that includes carp, eel, perch, bass and catfish; and 2) crab muscle & hepatopancreas (Comment #4).

- Comment/Response #15 – CPG and Region 2 agreed that the 17-mile BHHRA will continue to present two sets of PCB risk/hazard estimates. One set will be based on Total PCBs calculated using PCB and Aroclor toxicity factors, which is consistent with the June 2014 BHHRA. The second set will be based on the sum of PCB-TEQ (calculated using dioxin toxicity factors) and non-dioxin-like PCBs (calculated using PCB and Aroclor toxicity factors). This approach differs from the draft 17-mile BHHRA in that non-dioxin-like PCBs will also be included in the risk/hazard totals for each receptor scenario. Both sets will be presented in the risk characterization and executive summary, and the uncertainty associated with the approaches will be discussed in the uncertainty analysis.
- Comments/Responses #39 & #40 – CPG agrees to revise the discussion of recreational activities as requested by Region 2.
- Comment/Response #42 – On October 30, 2015, Region 2 provided further comments on CPG's responses to this comment via an email from Stephanie Vaughn to Robert Law:

  1. The modification requested by Region 2 will be incorporated. However, CPG does not agree that baseline consumption in the LPRSA would be as high as Region 2's RME consumption rates. The CPG's CAS found current fish consumption rates to be approximately three to four-fold lower than Region 2's directed baseline rate for the RME adult angler. Based on the findings of NJDEP's angler surveys of the Newark Bay Complex, as well as published literature, it is unlikely that LPRSA consumption in the absence of an advisory, but with all other site conditions remaining the same, would be three to four times higher than current consumption. Several studies of the Newark Bay Complex have found advisory-aware anglers continue to consume fish and crab (May and Burger 1996; Burger et al. 1998; Pflugh et al. 1999; Burger et al. 1999; Burger 2002). For these anglers, consumption is not expected to be suppressed by the presence of the advisory. Other studies have also found non-compliance with advisories despite awareness (Knuth 1995; Campbell et al. 2002; Shilling et al. 2010), indicating the presence or absence of an advisory can have limited impact on consumption for anglers who choose to eat self-caught fish. In a survey of New York state anglers who fished Lake Ontario, which is subject to a partial advisory, 32% said they would eat more fish if there were no advisories, although the increase was modest for most (Connelly et al. 1996). The authors concluded that increased (baseline) consumption would be only slightly higher than current consumption (Connelly et al. 1996). For these and other reasons previously documented in comments and dispute resolution, CPG maintains that

Region 2's RME rates overestimate both current and baseline consumption at the LPRSA.

2. As discussed in CPG's response to comment #127, the text in this section will be revised. Per CPG's response to 1 above, references to the CAS will note that the data represents current conditions in the presence of a consumption advisory.

3. The addition of the phrase *"under current conditions"* at the end of the section on "Crab Consumption Rate" is not supported by the available data. Despite having the same "Do Not Catch, Do Not Eat" crab advisory, the level of crabbing activity in Newark Bay and the LPRSA is not the same. A number of NJDEP surveys have found Newark Bay to be frequented by crabbers (Pflugh et al. 1999, Burger et al. 1999, Burger 2002, Pflugh et al. 2011). In contrast, very little crabbing activity has been found in the LPRSA (Desvousges et al. 2001; AECOM 2014). As the disparity in current crabbing activity (and crab consumption) cannot be attributed to the common advisory, it is reasonable to expect that baseline crab consumption in the LPRSA would also be lower than in Newark Bay. For this and other reasons previously documented in comments and dispute resolution, the CPG maintains the crab consumption rates based on Region 2's analysis of the Newark Bay study significantly overestimate current and baseline crab consumption risks in the LPRSA. The CPG does not agree the text should be revised.

- Comments/Responses #53 & #82 – CPG clarified that one set of mixed fish diet EPCs will be used in the risk calculations and RAGS Part D tables.
- Comment/Response #87c – Region 2 will get back to CPG with clarification on the application of the chlordane relative potency factors, specifically whether they apply to non-cancer only, and whether the average of male and female should be used.
- Comment/Response #114 – CPG will remove the section on other sources of risk from the revised BHHRA.
- Comment/Response #127e – CPG will remove reference to the fish consumption rate used in the development of water quality criteria.
- Comment/Response #151 - CPG and Region 2 agreed that CPG can revise the paragraph on threshold MOA for dioxin and Region 2 will provide the revised language to NCEA for review.
- Comment/Response #154 – CPG will provide edits to the Region's suggested replacement language discussing Tier 3 slope factors for dioxin, which Region 2 agreed to consider. In the October 30, 2015 email from Stephanie Vaughn to Robert Law, Region 2 suggested replacing the last paragraph of its Attachment 2 (regarding arsenic) with the following sentence, *"EPA is currently reviewing the*

toxicity of inorganic arsenic through the Integrated Risk Information System (IRIS) process". CPG suggests placing this new sentence at the end of the third paragraph under Section 7.3.2.3 (High to Low Dose Extrapolation), which discusses arsenic toxicity.

- Delivery Schedule – CPG and Region 2 agreed on December 18, 2015 for delivery of the revised 17-mile LPRSA BHHRA.

Please confirm the Region's agreement with the results of the discussion as outlined above.

Although the revised 17-mile BHHRA will reflect the changes summarized above and in prior responses to the Region's June 5, 2015 comments, it should not be construed that the CPG agrees with all the changes that Region 2 has directed. The CPG is incorporating the Region's directive changes into the revised 17-mile BHHRA under protest.

The CPG requests that Region 2 include this letter into the Administrative Records for the 17-mile LPRSA operable unit of the Diamond Alkali Superfund Site and the Region's 8-mile FFS and Proposed Plan.

Please contact Bill Potter or me with any questions or comments.

Very truly yours,
de maximis, inc.

Robert H. Law, PhD
CPG Project Coordinator

cc: Ray Basso, EPA Region 2
Walter Mugdan, EPA Region 2
Sarah Flanagan, EPA Region 2
CPG Members
William Hyatt, CPG Coordinating Counsel
Willard Potter, CPG Project Coordinator

PAPER