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April 15, 2015 ***VIA ELECTRONIC & US MAIL***

Ms. Stephanie Vaughn
ATTN: Lower Passaic River Remedial Project Manager
Emergency and Remedial Response Division
U.S. EPA, Region 2
290 Broadway, 19th Floor
New York, New York 10007

Re: Monthly Progress Report No. 95 – March 2015
Lower Passaic River Study Area (LPRSA) Remedial Investigation/Feasibility Study (RI/FS)
CERCLA Docket No. 02-2007-2009

Dear Ms. Vaughn:

de maximis, inc. is submitting this Monthly Progress Report for the above-captioned project on the behalf of the RI/FS Agreement Settling Parties (Cooperative Parties Group or CPG) pursuant to the Administrative Settlement Agreement and Order on Consent (Settlement Agreement or AOC). The Progress Report satisfies the reporting requirements of Paragraph 42 of said Settlement Agreement.

(a) Actions which have been taken to comply with this Settlement Agreement during the previous month.

Meetings/Conference Calls

- On March 11, EPA and CPG representatives met to discuss the mapping methods employed by the CPG to map contaminants of concern (COCs) for the 17-Mile RI and the Chemical Fate and Transport (CFT) modeling. The EPA stated that Thiessen polygons were appropriate to map COCs in the LPR sediment, but that EPA's concerns about uncertainty with the mapping had to be resolved. The CPG agreed to work with EPA to resolve these matters and it was agreed to continue the dialogue.

Correspondence

- On March 3, EPA and CPG exchanged emails regarding presentation materials for the scheduled March 11 COC Mapping meeting.
- On March 3, CPG provided a partial response to modeling information requested by EPA on February 23.
- On March 5, CPG provided EPA a proposed agenda for the COC Mapping meeting.
- On March 5, CPG provided information to EPA requested on February 23 regarding the food-chain processor files.

- On March 9, EPA provided CPG with presentation materials for the COC Mapping meeting.
- On March 16, CPG submitted the February Monthly Progress Report to EPA.
- On March 17, EPA provided final approval of the revised Feasibility Study Work Plan (FSWP).
- On March 17, EPA requested additional information on bathymetry survey data and GIS shape files.
- On March 19, EPA requested and was sent duplicate laboratory data packages associated with the 2010 Small Forage Fish Tissue Chemistry Data Report, the Fall 2009/2010 Benthic Sediment Chemistry Data Report, the Fall 2009 Benthic Bioaccumulation Tissue Data Report and the Fall 2009 Benthic Toxicity Data Report.
- On March 25, CPG submitted GIS COPC mapping files to EPA as requested on March 17.
- On March 26, CPG posted the revised Low Resolution Coring Supplemental Sampling Program (SSP1) Report to the EPA's SharePoint site.
- On March 27, CPG uploaded the FS RAO-PRG Technical Memorandum to EPA's SharePoint site.
- On March 27, EPA requested additional information regarding the Bioaccumulation Model from CPG.
- On March 31, EPA requested additional information on the Bioaccumulation Model setup and calibration.

Work

- CPG Modeling Team continued work on the RCATOX CFT Model Code initial conditions and long-term calibration runs.
- CPG Modeling Team continued work on the Bioaccumulation Model calibration.
- CPG Modeling Team initiated work on refinement of the Newark Bay component of the LPRSA Model.
- CPG Modeling Team responded to EPA modeling and COC mapping information requests.
- CPG resubmitted laboratory data packages associated with 2009 – 2010 biota analytical results.
- CPG continued responding to EPA comments received on previously submitted RI/FS deliverables.
- CPG continued review of sediment characteristics and potential target remedy locations in support of initial FS evaluations.
- CPG continued development of appendices and supporting documents for the FS.

(b) Results of Sampling and Tests

- None.

(c) Work planned for the next two months with schedules relating to the overall project schedule for RI/FS completion

- CPG will continue responding to EPA comments on previously submitted RI/FS deliverables.
- CPG Modeling Team will continue responding to EPA requests for Bioaccumulation and CFT modeling information.
- CPG Modeling Team will continue review of EPA's November 21, 2014 comments on Sediment Transport Model code, input and output files submitted July 30, 2014 and respond to comments on recently submitted (December 12, 2014) updated AOC and RCATOX CFT model codes, input and output files.
- CPG Modeling Team will continue documentation and calibration of the CFT Model and projection runs.
- CPG Modeling Team will continue documentation and calibration of the Bioaccumulation Model.
- CPG will participate in the 17-Mile LPRSA modeling calls with EPA and EPA consultants as required.
- CPG will complete development of the FS and FS appendices and supporting documents.

(d) Problems encountered and anticipated problems, actual or anticipated delays, and solutions developed and implemented to address actual or anticipated problems or delays.

- On October 23 2013, Region 2 provided a letter which purports to provide their understanding of the modeling being conducted by the CPG in support of the Sustainable Remedy (SR) and RI/FS. The CPG did not agree with some of the statements made in this letter and provided a response on November 22, 2013. The CPG received a response to its November 22, 2013 letter from the Region on April 1, 2014. The CPG does not agree with the responses and positions taken by the Region in this letter and is composing a response.

  A meeting was conducted on November 14, 2013 to brief Region 2 on the working version of the LPR/NB Model used for the evaluation of the SR. The November 14, 2013 meeting addressed OSRTI's July 24, 2013 request that Region 2 understand the modeling conducted by the CPG. The CPG agreed with Region 2's proposal to conduct routine and regular oversight meetings of the development of the LPR/NB Model for the LPRSA RI/FS with the Region.

  The CPG participated in modeling oversight meetings with USEPA on February 13, 2014 and March 13, 2014. The CPG declined to participate in the scheduled April 10, 2014 oversight meeting when Region 2 stipulated a requirement that Tierra/Maxus/Occidental (TMO) participate in the April 10 meeting and future modeling oversight meetings. The

Region also required the CPG to provide its work materials to TMO in advance of the April 10 meeting, which the CPG declined to do since TMO is no longer a member of the CPG and is no longer contributing to the costs of the LPRSA RI/FS.

On December 19 and 20, 2013, the CPG provided (1) the following modeling information used in its working version of the LPR/NB Model to evaluate targeted and bank to bank remedies that was requested as a result of the December 9, 2013 EPA HQ-CPG meeting to Region 2 and (2) requested that EPA provide its latest modeling code and associated material to the CPG. The CPG provided the following:

- The hydrodynamic model inputs/outputs and linkage files for the calibration period WY1995-WY2012
- The sediment transport inputs/outputs for the calibration period WY1995-WY2012
- Code version used for sediment transport calibration runs
- OC linkage program, script to pre-process inputs and develop OC linkage file, and example OC linkage file for WY1996
- CFT model inputs, outputs (zipped) and run scripts for the 45 years projection period for 2,3,7,8-TCDD for requested projection alternatives:
  - Alt 1: MNR
  - Alt 2: Targeted removal (500 ppt) (this is the same as Alt 2a)
  - Alt 3: Cap/Dredge with EPA schedule
  - Alt 4: Full dredge with EPA schedule
  - Alt 5: Cap/Dredge with realistic schedule
  - Alt 6: Full dredge with realistic schedule
- CFT model inputs, outputs and run procedures for the long-term (WY1995-WY2009) and short-term (WY2010-WY2012) calibration periods for 2,3,7,8-TCDD, for the same model version as used in the above projections
- The RCATOX model code version used in all of the above simulations
- Temporal plots of the mean 0-15 cm sediment 2,3,7,8-TCDD concentrations for RM 0-8 and RM 0-17 as shown in the July EPA-HQ meeting
  - As noted during the November 14 EPA/CPG modeling meeting, Alternatives 1, 2, and 5 were re-run in October due to an input error in the dredging schedule implementation. The updated results are shown on these plots
- Bioaccumulation Model Template - Steady State
- Bioaccumulation Model Template - Dynamic
- Dynamic Bioaccumulation Model Input Template

The model codes, inputs and outputs are consistent with the model version described in the November 14, 2013 modeling meeting, and shown during the December EPA-HQ meeting. The above-referenced modeling information provided EPA a detailed understanding of the work being conducted by the CPG as it pertains to the LPRSA RI/FS and its development of the Sustainable Remedy. The CPG did not receive the

EPA modeling codes, input files and other information that it requested on December 20, 2013 and January 3, 2014 until March 12, 2014.

Region 2 has initiated several directives to provide modeling code, COPC maps, input and output files for work as yet uncompleted. On July 2, the Region directed the CPG to provide a number of items by July 18. On July 18, the CPG provided a proposed schedule for providing the identified by Region 2. In response to these various requests from Region 2, the CPG has submitted since July 30, 2014 the following 17-mile LPRSA RI/FS modeling materials to the Region and its modeling oversight contractor for review and comment:

- July 30, 2014 – The CPG provided its Sediment Transport Modeling Code, input and output files to the Region. The CPG received the Region's comments on November 21, 2014.
- August 12, 2014 - The CPG provided Region 2 with updated 2,3,7,8-TCDD and Tetra-PCBs bed maps. The CPG has not received the Region's comments to date.
- August 20, 2014 – The CPG submitted to Region 2 the Sediment Transport Technical Memorandum which is the companion to its July 30 sediment transport submission. This memorandum fulfills in part the Region's request for a memorandum discussing each model component. The CPG received comments on November 21, 2014.
- September 22, 2014 – The CPG submitted a technical memorandum to Region 2 which addressed to the best of the CPG ability the Region's requests for :
    - Updated modeling schedule that the CPG believes is realistic and achievable; and,
    - Clarification of bioaccumulation modeling work.

In addition, the Region 2 and CPG modeling teams participated in a September 10, 2014 teleconference which was conducted to answer the Region's questions regarding the updated COPC Maps provided by CPG on August 12, 2014. The Region provided comments on the CPG's July 2014 sediment transport code on November 18. The Region and CPG conducted conference call to discuss the status and schedule of the 17-mile LPRSA RI/FS Model. The CPG submitted updated LPRSA CFT code, input and output calibration files on December 12, The CPG provided updated Bioaccumulation Model input and steady-state output files to EPA on February 11, 2015.

In addition, the Region directed on July 24 that the CPG provide a schedule by July 28 for the completion of the Newark Bay modeling. As noted in the CPG's July 28 response, the CPG cannot provide a schedule for completing the modeling for the Newark Bay RI/FS until data collection is completed. Region 2 provided a response that directed the CPG complete and submit modeling codes and input files for Newark Bay by January 15, 2015. As the EPA and its modeling team have experienced in its development of the 8-mi Proposed Plan/FFS model between 2007 and 2014, the

satisfactory completion of these models are complicated and arbitrary deadlines may not be possible to attain.

The Region and the CPG met on December 17, 2014 to discuss the schedule, scope and process to complete the Newark Bay modeling; there was general agreement between the EPA and CPG on the scope, schedule and process to complete the NBSA modeling.

- Region 2 provided comments on July 11, 2011 which disapproved the revised risk assessment planning documents and required submission of revised documents within 30 days. Additionally, Region 2 provided a technical memo on July 25, 2011 on fish and crab consumption rates for the LPRSA Human Health Risk Assessment. The CPG filed a notice of dispute resolution in accordance with Section XV of the AOC on July 25, 2011 in response to Region's July 11, 2011 directive letter and July 25, 2011 technical memorandum. The revised RARC and TRV deliverables were submitted on August 9, 2011. On September 6, 2011 the CPG submitted a position paper in response to EPA's July 11, 2011 comments and July 25, 2011 technical memorandum. Dispute resolution meetings were held on December 1, 2011 and January 13, 2012. Region 2 provided the results of the dispute resolution to the CPG on February 7, 2012 and the CPG implemented the changes specified in the July 2011 directive comments and the results of the dispute resolution in the revised RARC which was submitted on April 13, 2012. Region 2 provided comments on the revised RARC on August 30, 2012; the CPG met with Region 2 on January 7, 2013 to discuss remaining background and reference issues and had a telephone call with EPA on January 28 to discuss cooking loss.

  Background and reference definitions were received by the CPG on June 28, 2013. It is the CPG's understanding that the issuance of the revised definitions was held-up by the NJDEP, NOAA and US FWS which did not accept definitions that were otherwise acceptable to the Region and the USACOE, and which appeared to be acceptable to the CPG based on the CPG's understanding of the revised definitions. Following CPG review and discussions and clarifications with the Region on August 8, the CPG resubmitted the revised final RARC, incorporating the June 28 definitions, on October 29 to Region 2 for final approval. The CPG received additional RARC comments on January 31, 2014, and the CPG is currently responding to these comments.

  During a December 3, 2013 telephone conversation and a January 29, 2014 EPA-CPG RI/FS meeting, the Region indicated that it was doing an internal review to establish reference conditions in order to standardize identification and use of reference sites within the Region. The EPA strongly implied in both conversations that the results of this work would be shared with the CPG. In an email dated March 26, EPA suggested that the background and reference approach previously discussed would not change and the CPG should submit the BERA prior to final resolution of the background reference analysis. Moreover, the Region stated that it would comment and address the outstanding reference issue during its review of the BERA and HHRA. Region 2

provided NOAA's proposed reference approach on May 27, 2014 and conducted a teleconference with the CPG on May 29. The CPG expressed its concerns with the NOAA approach and the fact that it is inconsistent with EPA's guidance for developing reference conditions as well as the discussions between the CPG and EPA since 2011. The reference condition approach developed based on EPA and CPG discussions since 2011 will presented in the draft BERA submitted by the CPG. The CPG submitted the draft LPRSA BHHRA on June 6, 2014 and the draft LPRSA BERA on June 13, 2014.

In addition, the risk assessments prepared as part of the FFS and Proposed Plan for the lower 8 miles do not conform to the Region 2-approved Problem Formulation Document (PFD) for the 17-mile LPRSA RI/FS. Due to the overlapping nature of the lower 8-mile study area and the 17-mile LPRSA, the CPG is currently reviewing both documents to understand the differences between the Region's document and the BERA being prepared for the RI/FS by the CPG. Moreover, the NRRB's April 11, 2014 comments on the Region's ecological risk assessment, amplify that there are fundamental and significant differences between the work that CPG was directed to do by Region 2 and what the Region did in preparing its ecological risk assessment for the Proposed Plan for the lower 8-miles. The CPG has addressed a number of its concerns regarding the EPA directives on the BHHRA and BERA in its transmittal letters accompanying the draft documents.

- The CPG was directed in 2009 by EPA to develop a single QAPP for surface water sampling for both the LPRSA and NBSA. At that time, the TMO parties were still members; the TMO parties left the CPG in May 2012. However, Occidental is the respondent to the NBSA AOC. The CPG followed the direction of the EPA and performed three separate programs, including developing QAPPs for the Physical Water Column Monitoring and Small Volume and High Volume Chemical Water Column Monitoring programs (in fact the High Volume program was implemented after TMOs departure). The CPG voiced its concerns to EPA that this involved both (1) different operable units of the Diamond Alkali NPL site and (2) different respondents to the respective AOCs - EPA did not address the CPG's concerns. In order to effectuate EPA's directive for synoptic sampling in the River and Newark Bay, the CPG agreed to allow Tierra, on behalf of Occidental, to use the CPG's contractor. However, subject to the terms of a letter agreement between the CPG and Tierra, the responsibility for the work in Newark Bay would be solely Tierra's. After authorizing and paying for Newark Bay work, Tierra stopped responding to the CPG's contractor task authorization requests starting in March 2013 and has not made any payments since mid-May 2013. As a result of Tierra's failure to pay, the CPG's contractor is owed over $1 MM in outstanding invoices and an estimated $1.5 MM in labor and expenses associated with NBSA sampling (for a total of $2.5 MM). In August 2013, with EPA's approval, the CPG paid over $1 MM in outstanding invoices from the LPRSA Trust. Until the remaining invoices are paid and the CPG is compensated for its payment, the CPG and its contractor will not provide any NBSA data to TMO and believes that EPA should take the same position.

- On March 3, 2009, pursuant to EPA's November 13, 2008 comments provided to CPG, a revision to the August 2008 Feasibility Study Work Plan (17-Mile FSWP) was submitted. The CPG received comments on December 13, 2013 and met with EPA on December 17, 2013. The CPG submitted a revised 17-Mile FSWP on January 31, 2014. EPA provided comments on April 3, 2014 for the revised 17-Mile FSWP. The CPG prepared a response to comments and submitted its third revision to the 17-Mile FSWP on August 11, 2014. The Region provided additional comments on October 30, 2014; the Region and the CPG conducted a teleconference on November 7, 2014 to discuss the comments. The CPG prepared a response to comments and submitted its fourth revision to the 17-Mile FSWP on December 23, 2014. The Region provided comments on the fourth FSWP version on February 2, 2015 and provided conditional approval pending incorporation of the comments. The CPG submitted the revised FSWP to EPA on February 19, 2015 and EPA issued final approval on March 17, 2015. The CPG submitted the FS RAO-PRG memorandum to EPA on March 27.

- There are number of reports and technical memos (both original and revised submissions) that have been submitted to Region since 2011 that the CPG is awaiting either approval or Region 2's comments. These reports include:

    1. Lower Passaic River Surface Sediment Concentration Mapping Technical Memorandum – submitted May 2013
    2. Upstream Reference Benthic Data Report – submitted August 2013
    3. Background Sediment Data Report – submitted October 2013
    4. Baseline Human Health Risk Assessment – submitted June 2014
    5. Baseline Ecological Risk Assessment – submitted June 2014

  The CPG has received the Region's comments on a number of previously submitted reports and is in the process of addressing revising and resubmitting these reports. Please advise the CPG of the Region 2's schedule for action on these remaining documents.

If you have any questions, please contact me or Rob Law at (908) 735-9315.

Very truly yours,
de maximis, inc.

Willard F. Potter
CPG Project Coordinator

cc: Sarah Flanagan, EPA Office of Regional Counsel
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