EPA COMMENTS 8/6/15

Combined Sewer Overflow/Stormwater Outfall Investigation Phase I Evaluation/Recommendation Report
Revision 0, Dated October 2014

No.	General Comments
1	For the LSM particulates, did the smaller than anticipated sample size resulted in more of the COCs being reported as non-detected when compared to the HSM particulates samples? Can some adjustments be made on the sample collection methods to account for low TSS in order to be able to generate a larger sample size for the LSM particulate samples?
2	There were hits reported for the field blanks. What was the effect of the field blank results in reducing the number of analytes being reported after validation process? Did this in turn affect the evaluation process that was used? Did the field and/or decontamination operations contribute to the field blank results?
3	From the detailed evaluation sheets provided in the appendices, the LSM particulate results appear to be reporting higher contaminant concentrations when compared to the HSM particulate results for hydrophobic contaminants such as PCDD/PCDF, PCB congener and organochlorine pesticides. Although sample heterogeneity could account for part of the results, it is not clear if different particle sizes from the two sample collection methods contributed to the results. Comparing the HSM dissolved to the LSM dissolved, it appears to be that the LSM dissolved samples reported lower concentrations versus the HSM dissolved samples.
4	Page numbers in Sections 2, 3, and 5 are wrong. They begin as page 1-1 in Sections 2 and 3 and as 4-1 in Section 5. These erroneous page numbers are also reflected in the table of contents. Please correct the page numbers in the text and table of contents. The correct page numbers are used for identification of the specific comments below.
5	To better facilitate sample identification and cross-checking to event/attempt, please add the sample identification suffix for each event/attempt (e.g. for Event 1, Attempt 1: PRICSOCLY**-01A) to the tables in Appendices A through J and Table 2-1, *Summary of Samples Collected and Analyzed*. In Table 2-1, a "Sample Identification" column can be added, and in the tables in the appendices, a sample identification line can be added under the event description in the header.

No.	Page No.	Specific Comments
6	Page ii, Table of Contents	Please include page numbers for the tables in the table of contents since they are incorporated into the body of the document.

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7	Pages iv through v, Acronyms and Abbreviations	Please correct the following errors: - COPC and COPEC are defined differently in the text than in the list of acronyms and abbreviations ("contaminant" rather than "constituent"). - PVSC is not defined in the text, and the last word should be "Commission", not "Commissioners". - "Phase I Report" and "POTW" are not in alphabetical order in the list of acronyms and abbreviations. - "Publicly" is spelled incorrectly ("publically") in the definition of POTW in the text.
8	Page 1-1, Section 1, fourth paragraph, first sentence	Please include an in-text citation for the USEPA Combined Sewer Overflow/ Stormwater Overflow Sampling and Analytical Plan, i.e. "(USEPA 2008)".
9	Page 2-4, Table 2-1	Please make the following revisions to the table: - Please link footnote 2 to both events/attempts during which the grab samples were collected. Currently, the footnote is only linked to Event 2, Attempt 2. - Please add some explanation of how Events/Attempts were defined. For example, it is not intuitive that Event 1, Attempt 3 is part of Event 1 since it occurred after both Event 2 attempts.
10	Page 2-5, Section 2.4	Please correct the following errors in this paragraph: - In the third sentence, the "I" should be "in"; the word "and" before "…but dedicated…" should be deleted; and the "i.e." in the first set of parentheses should be "e.g." ("i.e." implies that the decontamination described was only performed between Attempts #1 and #2 of Event #1). - The last sentence needs to be clarified. The word "However" at the beginning of the sentence does not appear to serve any purpose. It is also unclear whether the "gross cleaning" described is in addition to the decontamination described in the preceding sentence, or if it is the same thing. If these two sentences describe the same decontamination process, please combine and simplify the sentences. If the "gross cleaning" is a different process than what is described in the preceding sentence, please state whether this process is defined in the QAPP.

11	Page 3-1, Table 3-1	Please clarify the following inconsistencies in the table: - Table 3-1 indicates that samples were not collected for cyanide or TEPH analysis using LSM; however, Table 2-1 shows that such samples were collected during Event 1, Attempt 2 and Event 2, Attempt 2. - Table 3-1 indicates that samples were not collected for VOC analysis using LSM; however, Table 2-1 shows that such samples were collected during Event 1, Attempt 2 and Event 2, Attempt 1. - Table 3-1 indicates that samples were not collected for POC analysis using HSM; however, Table 2-1 shows that such samples were collected during Event 2, Attempt 2. - Please list the sampling methods in the same order as Table 2-1 for consistency (i.e. HSM, then LSM, then whole water). - Please add a footnote to clarify what the Xs and dashes mean and ensure that there are no blank cells in the table.
12	Page 3-2, third and fourth bullets and last paragraph	For steps 3 and 4, please clarify how the preferred sample collection method was determined if more than one method produced greater than 10% positive results for a given analytical group. In addition, please clarify what "greater than 10% positive results" means. For example, for step 3, would a sampling method need to demonstrate 10% detections for all COPCs/COPECs in that analyte group, or only some of them? How would two different sampling methods be compared if they both had 10% detections for some, but not all, COPCs in that analyte group? It would be helpful to include a table somewhere in this document listing the COPCs/COPECs in each analyte group. For step 4, please clarify that this step was only applicable if a preferred sample collection method could not be determined based on step 3. In addition, please remove the words "of the" before "positive results" since this gives the sentence a different meaning than "10% positive results". This correction also applies to the first sentence after the bullets.

13	Page 3-3, Phase I Evaluation Process flow chart	As presented, the flow chart serves to muddy rather than clarify the evaluation process. Please clarify that the first two boxes were applied to each analyte group separately (e.g., by adding text such as "for this analyte group" at the end of the sentences; alternatively, add a subheading to the flow chart or a footnote below the flow chart specifying that this process was carried out for each analyte group using each sampling method). Please delete the word "One" at the beginning of the text in the third and fourth boxes since this evaluation was only completed for one sample collection method at a time. The third and fourth boxes also suffer from the same ambiguity identified in the third and fourth bullets on the previous page. Please clarify what it means for a given sample collection method to attain "≥ 10% positive results". Please also note and correct the inconsistency that the flow chart specifies greater than or equal to 10%, whereas the description on the previous page reads "greater than 10%". Finally, as noted on the previous page, please clarify what the process was if, based on this flow chart, more than one preferred sample collection method was ascertained for a given analyte group. In addition, please correct the typo, "anlaytes", in the third box and remove the red underlines from the third and fourth boxes.
14	Pages 4-3 through 4-9, Section 4.2	Throughout Section 4.2, for each sample collection method, the discussion of "Implementability" is separate from the discussion of "Ability to Generate Target Sample Mass/Volume". However, ability to generate sufficient sample is part of the definition of implementability as defined in this report. Please either combine the two discussions for each sample collection method into one discussion of implementability or change the "Implementability" header for each sample collection method to "Implementation Challenges" or something similar.
15	Page 4-4	Data from the first sampling event, when the "fines" and "non-fine paper-like material" were not homogenized, should be included in this report for completeness and because they may provide limited comparative information on the individual components. They do not have to be factored into the Phase I evaluation.
16	Page 4-4 to 4-5	How often was contingency sample mass actually used by the laboratory?
17	Page 4-6, Section 4.2.2.1, fourth paragraph	In the discussion of the torn Teflon® liner, please provide the protocol for capturing sample water trapped between the torn liner and the secondary liner.
18	Page 4-7, Table 4-1	Please confirm whether the volumes listed in Table 4-1 were the volumes actually filtered to obtain the mass quantities listed for each sample/analytical group shown in Table 4-2. Please add the actual volumes filtered into Table 4-1 alongside the minimum volumes required. In addition, please clarify why some analyte groups collected using LSM per Table 2-1 (cyanide, VOCs, and TEPH) are not represented in Table 4-1. Finally, please revise the title of Table 4-1 (here and in the table of contents) to clarify that it applies only to LSM bulk samples for laboratory filtration.

19	Page 4-8, Table 4-2	Please clarify why some analyte groups collected using LSM per Table 2-1 (cyanide, VOCs, TEPH, TSS, TDS, and DOC) are not represented in Table 4-2. In addition, please clarify why Event 2, Attempt 1 is not included in the table. Finally, please clarify in footnote c why PCDD/PCDF and PCB congener samples analyzed for Event 1, Attempt 1 are not part of the data evaluation (a reference to Section 4.2.1.1 would suffice), and add a link to this footnote in the table as was done with footnotes a and b.
20	Page 4-9, Section 4.2.4, first and second paragraphs	The last sentence in the second paragraph of Section 4.2.4, which states that the ability to ship the grab samples on the day of collection was "contingent on the time of sample collection", is inconsistent with the first sentence in Section 4.2.4, which implies that all grab samples were shipped on the day of collection. Please revise for consistency.
21	Page 4-10, last sentence	Please delete the word "required" before "targeted mass". If the targeted mass for LSM particulate samples was a requirement, and this target was not met, it would follow that LSM did not meet the criteria for implementability.
22	Pages 5-1 through 5-2, Table 5-1 and bullets	Please double-check the following inconsistencies and revise as appropriate: - LSM Particulate – SVOCs: The second row in Table 5-1 indicates that 9 results were affected, but the second bullet after the table indicates that 11 results were affected. - HSM Dissolved – SVOCs: The third and fourth rows in Table 5-1 indicate that 16 results were affected, but the first bullet on page 5-2 indicates that 18 results were affected.
23	Page 5-2, second bullet	Please revise the second "Event #1, Attempt #2" to read "Event #2, Attempt #1".
24	Pages 5-2 through 5-9, Section 5.2	The language used throughout this section regarding the criteria for selecting preferred sample collection methods ("at least 10% more positive results") is inconsistent with the language used in Section 3 ("greater than 10% positive results" or "greater than 10% of the positive results"). Please revise for consistency.
25	Page 5-2, Section 5.2.1, second sentence	According to Table 2-1, samples were also collected for PCDD/PCDF analysis using the whole water method during Event 1, Attempt 2. Please revise for consistency.
26	Page 5-3, Section 5.2.2, second sentence	According to Table 2-1, samples were also collected for PCB congener analysis using the whole water method during Event 1, Attempt 2. Please revise for consistency.
27	Page 5-4, Section 5.2.3, last sentence	Please revise the phrase "…PCB congeners is summarized in Table 5-3 below" to read "…Aroclor PCBs is summarized in Table 5-4 below."

28	Page 5-5, Section 5.2.4, second bullet, second sentence	Please replace "primary samples" with "duplicate samples" in this sentence.
29	Page 5-6, first bullet	Please confirm the statement that "three samples were rejected due to data usability issues". The Appendix E tables do not reflect rejected SVOC results for the Event 1 original sample.
30	Page 5-6, first sentence after bullets	Please revise the phrase "…organochlorine pesticides is summarized in Table 5-6 below" to read "…SVOCs is summarized in Table 5-6 below."
31	Page 5-6, Section 5.2.6, third sentence	Please revise the phrase "…for SVOC data" to read "…for SVOC SIM data".
32	Page 5-7, Section 5.2.7, first paragraph	In the seventh sentence, please include an in-text citation for the USEPA correspondence, i.e. "(USEPA 2014)", since it is cited in Section 7. Please revise the eighth sentence, "Data from all three sampling events/attempts has have been used in this evaluation", to read "Data from all three sampling events/attempts have been used in this evaluation." In addition, please clarify whether this includes the HSM particulate herbicide results from Event 2, Attempt 2, despite the noted failed laboratory control sample.
33	Page 5-7, Section 5.2.7, second paragraph	Please state what effect the "larger than acceptable level of uncertainty" had on the evaluation of chlorinated herbicide data.
34	Page 5-8, Section 5.2.8, second paragraph, second sentence	Please delete "Following are" before "A summary of the findings…"
35	Page 5-8, Section 5.2.8, bullet	Please explain why the recommended sample collection method for cyanide is inconclusive if positive results were observed in both HSM and whole water samples.
36	Page 5-9, first paragraph	Please add a statement regarding whether the whole water sample collection method was selected as the recommended method for VOCs.
37	Page 5-9, Section 5.2.10, bullet	Please explain why the recommended sample collection method for TEPH is inconclusive if positive results were observed in both HSM and whole water samples.
38	Page 7-1, Section 7	Please correct the following errors in the list of references: - There is no year given for the third reference. - The abbreviation for Tierra Solutions, Inc. (Tierra) should be included in the fourth reference since it is abbreviated in the next line.

39	Appendix D, page 1 of 8	The sample collection methods “HSM dissolved plus HSM particulate” and “HSM particulate” list “NA” under “Number of COPCs/COPECs listed in the FFS identified?” However, the table on page 2 of 8 has results for five of the COPCs/COPECs listed. Please confirm and revise the table and any corresponding information presented in the report or conclusions drawn as necessary.