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MCRD PARRIS ISLAND
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EMAIL OF TRANSMITTAL AND U S EPA REGION IV COMMENTS ON DRAFT DATA QUALITY OBJECTIVES WORKSHEETS 10 AND 11 FOR SITE 14 STORM SEWER OUTFALLS MCRD PARRIS ISLAND SC
3/24/2010
U S EPA REGION IV

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Cc:	Meredith Amick; heber pittman; Stacey French; Annie Gerry; Kent Krieg; Claggett, Libby; Sladic, Mark; mac mcrae; Pat Franklin; Churchill, Peggy; Smith, Preston; Harrington GS12 Timothy J (timothy.j.harrington@usmc.mil); Deck, Tom; Tom Dillon; wendtp@dnr.sc.gov; llamas.lila@epa.gov
Subject:	EPA informal feedback RE: Parris Island site 14 dqo Draft WS 10 and 11
Date:	Wednesday, March 24, 2010 5:47:23 PM
Attachments:	Informal Comments on Site14 Draft DQO WS 10 and 11.doc

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Please see attached file for EPA's "informal" comments. They are only "informal" in that I will not request a formal RTC. However, I expect each comment to be addressed in revised worksheets. If there are questions or concerns regarding the comments, please call. Several comments indicate further discussion may be / is necessary before moving on with drafting worksheets. Please ensure these discussions take place prior to your next submittal. Some comments will impact worksheets other than just 10 and 11. Please ensure these comments are applied to those worksheets in addition to 10 and 11.

If it is determined that this informal approach results in comments being missed or not addressed in some way in your next submittal, EPA will only submit formal comments in the future requiring formal RTCs in return.

Thanks,
Lila
404-562-9969

(See attached file: Informal Comments on Site14 Draft DQO WS 10 and 11.doc)

Informal Comments on Site14 Draft DQO Worksheets 10 and 11:

1. For the record it is important to capture how we got here from there, somewhere in Worksheet 10, either 10.1 or 10.3 most likely. While it may be difficult to capture concisely how we got here, I might suggest starting with something like: Although preliminary documents indicated a concern for sediments impacted by outfall releases, the scope of the investigation has been expanded to include outfall "storm" water (SW). Whereas it was hoped that the SW drains would have been covered by a permit, and therefore sampled/investigated under another program, the Base reported that storm water monitoring was not required under the Depot's permit. Therefore, being consistent with other state outfall investigations, the scope was expanded to include SW at the outfall endpoints, regardless of sediment impacts, in order to capture contaminants in the SW which may be indicative of releases upstream. These contaminant releases may or may not be evident in the sediments immediately adjacent to outfalls, depending on their solubility and other fate and transport characteristics, as well as conditions particular to each outfall area (volume of discharge, high energy sediment areas, etc.) …etc., etc. ??

2. The team previously agreed to 100% of process area outfalls being sampled. The initial set of outfalls under consideration for this investigation should include 100 % of the process area outfalls. These should in turn be placed into categories for investigation purposes (as previous comments and feedback had suggested and as discussed at the DQO session), the end result of which *may* ultimately be elimination on a limited case-by-case basis (e.g. high energy sediment areas, inundated outfalls with absolutely no meaningful way to sample SW upstream, etc.)

3. Describe how the "process area outfalls" were defined/identified, and include the Outfalls Table (Table 10-1 and/or 10-2?).

4. Provide the missing tables and figures referenced in the text. Be sure to include sufficient information about the outfalls to guide sampling design (e.g. status of the outfall pipe – as captured in meeting minutes **"no water except for during the rain event, tidally influenced, ongoing drip, buried and inaccessible, and groundwater/surface water. While in the field, it will be determined if the area is depositional or scoured."** Also noted should be whether the outfall discharges to a high energy .vs. low energy sediment area, and whether evidence of depositional sediments were observed, if this info was gathered at the time of inspection or can be gathered from photos taken.

5. If the outfall table(s) is similar to the one in the presentation file, then be sure your description of what the outfall drains makes sense and is specific enough to be meaningful (e.g. outfalls S14OF-715 and 723 are identified as process area outfalls that drain "Site 14" which has been defined as approximately 100 outfalls on MCRD, assumingly including 715 and 723.)

6. As a cross check for 100% process area outfalls, check your list of process area outfalls to see that each of the 60 or so PI "Sites", and/or the 30 or so FFA sites, and/or the 44 SWMUs and 4 AOCs, have been covered by your list of process area outfalls. The site/SWMU/AOC number should either be in the Outfalls Table "Drains" column for one

or more of the outfalls, or it should be explained that the Site/SWMU/AOC is no longer of concern because it has been NFA'd, or completely remediated (we do not have many of these…), or it cannot be sampled for whatever very legitimate reason (see #1 above.), etc. There may be other "process areas" than just these sites, but that would at least be a start. The IAS and/or RFA may give a list of "other areas", but I can't recall. Or you may have already done all this, but it is just not in this package, in which case include it.

7. Last sentence Section 10.1, please replace "present day conditions" with "anthropogenic/background conditions."

8. Section 10.3.1 – Sentence 1: Were pesticides ever put into the storm drain system historically? Sentence 2: If so, add them to the list. Sentence 3: VOCs should not have been eliminated from this list, as evidenced by Site 45. However, the levels at the outfall endpoint may or may not be at levels of concern, depending on the entry point, original concentration, distance traveled, flow rates, etc. Sentence 4 and 5: Replace "Currently" with "Anthropogenic". Non-point source anthropogenic sources are of concern, regardless of whether they are historical or current, with respect to reference data. So shouldn't this list also include PCBs (historical application to dirt roads, atmospheric deposition, etc.), and pesticides (historical and current broadcast applications)? The selection of non-process area outfalls for use as reference data should be made in a manner in which they will most likely result in the representation of impacts from as many of these anthropogenic sources as possible.

9. Section 10.3.2 – Sentence 2: Should also include infiltration of gw through cracks into the system and down the pipes (e.g. Site 45).

10. Section 11.1 - Sentence 2: The FFA currently lists only 30 or so Sites.

11. Section 11.3 – Define the horizontal and vertical boundaries for sediment. Horizontal may be difficult, since each outfall may have differing scenarios, but you could maybe use language like Priscilla used, referencing the depositional sediments in low energy areas, such as to target "…sediments in depositional areas (characterized by fine-grained sediments) located near, but not necessarily immediately adjacent to, the outfalls. This approach would be most useful where stormwater outfalls discharge into relatively low-energy environments, such as small tidal creeks, tidal flats, or vegetated saltmarsh." Also determine if investigation in the top 0-6 inches of sediment is sufficient for an SI level vertical boundary (expanding to 0-3 feet in the RI as needed), or if the vertical boundary would need to be 0 – 3 feet even now in the SI to meet DNR's concern for deep burrowing crabs. Or, we may wish to sample 0-1 for most critters' exposure, and then 1-3 just for the crabs? I am sure cost considerations come in to play here and more discussion may be needed. I suggest talking to Priscilla.

12. Section 11.3, 2nd par – Sentence 1: Delete "non-flowing". Revise Sentences 3 & 4 to address sampling up stream at outgoing low tide beyond the limits of tidal influence for submerged outfalls, and during non-rain events at high tide for outfalls with flowing water representative of gw infiltration upstream, and during rain events at low tide for

water representative of just storm water. Alternatively, provide information as requested above for outfalls tables, and state that the provided data will be used to determine outfall specific sampling needs. Allow for a case-by-case determination that site conditions will not support a reasonable sampling scenario and eliminate the outfall from the investigation. Delete the last sentence. This was not consensus.

13. Section 11.3, 3rd par – Sentence 1: change "due to Non-CERCLA related activities" to "anthropogenic activities…". Delete the last sentence.

14. Section 11.4, 1st par. – Please describe the statistical approach that will be used.

15. Section 11.4, 2nd par – EPA would like to suggest an approach to decision-making that has been discussed before in general by the team, but never really had detail put to it or specific consensus reached about it. These scenarios go beyond the SI and into the RI, since we have had many discussions about "what ifs". Addressing this on into the RI ensures that we have agreement on where we are going and that what we are doing here is not just going to end up being useless. The following language could replace paragraphs 2 & 3 here, if the Team agrees it reflects where we are on this:

"If sediment concentrations and storm water concentrations exceed screening values and reference concentrations, proceed to an RI to investigate the nature and extent of contaminated sediments, determine if unacceptable risks exists, and whether or not contamination can be linked to an upstream point source/site. Where an unacceptable risk exists: If an upstream point source link was made, the sediments/storm water/site will be addressed as a separate site (either existing or new) for further investigation and action. If a link cannot be made, then a decision will be made on a case-by-case basis as to whether the sediments will be addressed as part of Site 14 (e.g. if a logical historical release might be assumed to be the source since this is a low energy sediment area near a process area with known intermittent historical spills or releases, etc., and therefore an action would make sense), or whether the sediments will require no further action due to a lack of identified source (e.g. no clear assumptions can be made, contaminant distribution is fairly homogeneous and similar to what might be expected from fate and transport of contaminants from distances quite removed, etc.) Since there was no link to an existing upstream point-source, the storm water data will be provided to EPA's Storm Water and Non-Point Source Section, and EPA's Monitoring and Information Analysis Section, both in the Water Division, as well as to any interested State offices, for their consideration and use. SW would then be determined to need no further action under the FFA. Where no unacceptable risk exists: Sediments and SW will receive a no further action determination under the FFA in the RI, and the SW data will be provided to EPA and the State for consideration as described above.

Comment [EPA2]: DHEC should be able to identify who might be interested. Perhaps, Ann R. Clark, Director of Outreach, Storm Water, Agricultural and Dams Permitting Division.

If only sediment concentrations exceed screening values and reference concentrations, proceed to an RI to investigate the nature and extent of contaminated sediments, determine if an unacceptable risk exists, and whether or not any source can be identified. Where an unacceptable risk exists: A decision will be made on a case-by-case basis as to whether the sediments will be addressed as part of Site 14 (e.g. if a logical historical release might be

assumed since this is a low energy sediment area near a process area with known intermittent historical spills or releases, etc.), or whether the sediments will require no further action due to a lack of identified source (e.g. no clear assumptions can be made, contaminant distribution is fairly homogeneous and similar to what might be expected from fate and transport of contaminants from distances quite removed, etc.) Where no unacceptable risk exists: Sediments will receive a no further action determination under the FFA.

If only storm water concentrations exceed screening values and reference concentrations, proceed to an RI to determine if the contamination can be linked to an upstream point source/site. If an upstream point source link can be made, the storm water/site will be addressed as a separate site (either existing or new) for further investigation and possible action. If a link cannot be made, then the storm water data will be provided to EPA's Storm Water and Non-Point Source Section, and EPA's Monitoring and Information Analysis Section, both in the Water Division, as well as to any interested State offices, for their consideration and use. SW would then be determined to need no further action under the FFA.

If neither sediment nor storm water concentrations exceed screening values and reference concentrations during the SI, then no further investigation of that particular outfall is required."

16. Section 11.5, – Please describe the manner in which the sampling approach is biased, with respect to the sampling approach (not yet identified to the reader). Note: Outfall selection is not the same as sampling approach. Previous input from Tom Dillon as relayed in my 7/24/09 email indicated that case-by-case decisions may need to be made with respect to how many samples are needed for sediments and where they should be taken. In general, it was agreed that depositional sediments would be the target for sampling. The email read as follows:

"…With respect to limiting the # of samples needed, he agreed in general to more at the process related outfalls and less at the reference areas. However, his expectations might be a bit more than what we had discussed (3 and 1 respectfully). Tom did not offer a specific number of samples needed, but rather stated that it may vary by outfall. In our discussions it was postulated that it may depend on the outfall discharge area size, the nature of the outfall discharge area, the depositional area layout, the size of the serviced area upstream, the amount of flow, etc. We also discussed a transect approach, leading from the outfall and following the depositional area layout (straight if it is straight, meander if it meanders, etc.) It became obvious that when we get to the question of how many samples are needed, we need to make sure the trustees are involved in the conversation to more quickly focus on an acceptable number, or approach to numbering, and to ensure buy-in. …"

Obviously more discussion involving NOAA and SCDNR will be needed regarding the sampling approach prior to drafting it.