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NRL CHESAPEAKE BEACH
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RESPONSES TO COMMENTS REGARDING DRAFT SAMPLING AND ANALYSIS PLAN SITE
INSPECTION FOR PERFLUORINATED COMPOUNDS IN GROUNDWATER NRL
CHESAPEAKE BEACH MD
1/18/2017
CH2M HILL

NAVFAC LANT Chemist
UFP-SAP Review

Reviewer: Ryan Mayer/NAVFAC Washington

Document: Draft SAP - Site Inspection for Perfluorinated Compounds in Groundwater, NRL-CBD

Date: 18-Jan-17

Comment Number	Worksheet and/or Section	Comment	Response to Comment	Ryan Response to Comments	Round 2 Response
1	Worksheet 2	Add CERCLA as the Regulatory Program	CERCLA has been added as the Regulatory Program and spelled out in acronyms and abbreviations		
2	Worksheet 2	Add Maryland Department of the Environment (MDE) as an organizational partner	MDE has been added as an organizational partner		
3	Worksheet 3	Include Peggy Williams as a state regulator for MDE	Peggy Williams has been added along with her contact information.		
4	Worksheet 6	OLF Coupeville will have 14 days for work plan review?	This was an inadvertent carryover from a version for another base. Deleted.		
5	Worksheet 9	Consider rewording: "If PFCs are present in groundwater, and the evaluation of groundwater then these data will be used as confirmation of a release of PFCs, and off-base drinking water samples will be collected downgradient of any areas where PFCs were detected in groundwater."	Deleted "and the evaluation of groundwater"		
6	Worksheet 9	Remove "data gaps," as an objective there will always be data gaps. Consider rewording/phrasing	Reworded to state: "...developed to provide additional spatial coverage, confirm the depth of groundwater and flow direction."		
7	Worksheet 10	Change some to all: Based on the Calvert County well construction documents, "some" of the residential areas near NRL-CBD are not connected to municipal water, and use private wells for drinking water supply."	There is a neighborhood near NRL-CBD that is connected to municipal water. No change.	Not clear on what is being conveyed in the sentence, however, to further clarify my comment. Agree that some residents are on 'municipal' water supply, however, these residents are further from base property, and the 'municipal supply is a deep well screened in the aquia aquifer. Residents immediately outside the property are 'all' on private wells.	Text has been revised to: <i>"Based on Calvert County well construction documents, the residential areas immediately adjacent to NRL-CBD are not connected to municipal water..."</i>
8	Worksheet 14	Should there be a brief section in the UFP-SAP that discusses certain materials to avoid?	See SOPs in Appendix A.		

Reviewer: Peggy Williams/MDE

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Comment Number	Worksheet and/or Section	Comment	Response to Comment	Ryan Response to Comment	Round 2 Response
1	General Comment	Please detail the precautions that will be taken to prevent cross-contamination of field samples with non-site-related sources of PFCs.	See SOPs in Appendix A; text has been added to Worksheet 14 to point the reader to those SOPs.		
2	General comment	Suggest referring to the different well depths as "water table" (like those wells immediately surrounding the fire training area, of approximately 20 feet depth), "shallow" (those at the base of the surficial aquifer), and "deep" (under the impermeable or less permeable unit); or, "shallow," "medium," and "deep."	Shallow and deep wells are being installed and are referenced as such throughout the text. Added shallow and deep to Worksheet #17.		
3	Worksheet 9	Page 27, 2nd paragraph - the sentence that starts "If PFCs are present in groundwater, and the evaluation....." seems to be incomplete or some of the text should have been deleted. Please revise.	Text has been re-worded (see also response to RPM comment #5)		
4	Worksheet 10	the Navy states that the domestic wells north of the NRL-CBD are "believed to be screened in the Piney Point Aquifer," and that this is below a confining unit, "believed to be laterally continuous and fully confining." Furthermore, the Piney Point aquifer is generally known as a "naturally protected confined aquifer," according to Source Water Assessment Reports of the area. After reviewing this literature, the Department agrees that these domestic wells are likely drawing water from the Piney Point/Nanjemoy system, but that it cannot be definitively stated that this zone is under a fully confining and laterally continuous unit. The only way to make that determination would be to conduct pumping tests to check for interconnectivity between shallower wells screened in the unconfined zone and deeper wells under the unit believed to be confining and laterally continuous. Pumping tests for this purpose do not appear to be included in the scope of work in this SAP. If the Navy conducted these tests to show quantitatively that no communication exists between the two zones, then it could be confidently stated that no migration of potential PFCs is possible between the shallow water bearing units and the Piney Point/Nanjemoy system. This would be an added conservative measure, in addition to samples showing non-detect PFC results in off-site private wells.	Upon completion of the well installation and groundwater sampling, if results are inconclusive, pump testing will be considered prior to collecting drinking water samples. This will be discussed with the Team.	Not sure I would support pump tests should this increase risk of potential contamination from one aquifer to another.	Comment noted.
5	Worksheet 14	The Navy used the term "aquitard" to refer to the unit separating the surficial aquifer from the drinking water aquifer/Piney Point, whereas on page 29 it is referred to as a confining unit, "believed to be laterally continuous and fully confining." Please clarify.	Aquitard is a commonly used term on the west coast. The author of this SAP is a geologist in CA. Updated to confining unit.		
6	Worksheet 19	On page 49, Analytical SOP Requirements Table - Appendix C is referenced where the SOPs are located. Appendix D is the correct reference location. Please revise.	This has been corrected.		