

N60508.AR.000262  
NAS WHITING FIELD  
5090.3a

LETTER REGARDING FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
COMMENTS ON WORK PLAN ADDENDUM NUMBER 6 REMEDIAL ACTION PLAN  
IMPLEMENTATION SOIL VAPOR EXTRACTION SYSTEM INSTALLATION AT SITE 7 NAS  
WHITING FIELD FL  
4/28/2008  
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

April 28, 2008

Mr. Tread Kissam  
Department of the Navy  
Naval Facilities Engineering Command Southeast  
NAS Jacksonville  
Yorktown & Ranger  
Building 103  
Jacksonville, Florida 32213

**RE: Work Plan Addendum No. 06, Remedial Action Plan Implementation, Soil Vapor Extraction System Installation at Site 7 – South AVGAS Tank Sludge Disposal Area, Naval Air Station Whiting Field, Milton, Florida**

Dear Mr. Kissam:

I have reviewed the above document dated February 2008 (received on March 21, 2008). The purpose of this Work Plan Addendum was to outline the activities for the system installation at Site 7, the South Aviation Gasoline (AVGAS) Tank Sludge Disposal Area. CH2M Hill (CH2M) will use the procedures outlined in this Work Plan Addendum, in conjunction with the Basewide Work Plan, to complete field activities at Site 7. I have the following comments pertaining to this document:

1. This statement/information is important history to the site. I would like to capture it here in my review of this document. *On December 11, 2007 Mr. Jeff Lockwood, Professional Engineer for the Florida Department of Environmental Protection (FDEP) signed and sealed a Certificate of Approval for CH2M's Remedial Action Plan (RAP) Addendum for the Site 7 – Tank Sludge Disposal Area.*
2. **Section 1.1, Site Description, Page 1-2:** There is no Figure 1-3. This figure looks like it should have been a Site Location Map. It would show a more close up view of the site.
3. This statement/information is important history to the site. I would like to capture it here in my review of this document. It is from this document's *Site Description*. *"Flight operations at the South Field eventually changed from AVGAS-burning airplanes to JP-4 burning helicopters. Consequently, the tank farm was used solely for back-up storage during the fuel shortage in 1973. From 1943 to 1968 the eight AVGAS tanks were cleaned out approximately every 4 years. The tank bottom sludge, probably containing tetraethyl lead (TEL), was buried at shallow depths in the area immediately adjacent to the surrounding tanks. Navy personnel estimated 1,000 to 2,000 gallons of sludge were disposed of in this manner. The tanks were removed and investigations at Site 7 were conducted to evaluate the status of any residual soil contamination."*
4. This statement/information is important history to the site. I would like to capture it here in my review of this document. It is from this document's *Site Background*. *"WRS designed a soil vapor extraction system (SVES) to treat the remaining soil contamination from 20 to 80 feet bls. CH2M has been contracted by NAVFAC SE to evaluate the existing system and*

*treatment design, propose a remedial action approach, and implement the recommended remedial action."*

5. **Section 1.1, Site Description, Page 1-2:** At the end of this paragraph it is said that the average depth to groundwater is approximately 126 feet (bls?), and groundwater flow is generally to the southwest. How was the average depth calculated? Is the water table higher on the north end of the site compared to the south end of the site? A soil sample was collected at soil boring SB-53 in April of 2007 at a depth of 132 feet bls. Was this a soil sample or a sediment sample (dry or wet)?
6. **Section 1.6, Project Deliverables, Page 1-8:** What is the expected run time for the SVES? In this section you indicate running the system for only a one year interval. Why is that?
7. On page 2-2, the Field Equipment Section lists the field equipment that will be set up and readied for use prior to beginning remediation activities. The SVE skid mounted system is mentioned here and is currently onsite. However, checking section 2.1.5 (SVE System Components and Off-gas Treatment) it looks as if the system needs a complete overhaul. What is the current status of this system? Is the one Ametek Rotron EN-14 blower large enough to handle this system?
8. **Section 2.1.2, SVE Treatment Wells and System Field Piping Installation, Page 2-3:** How were the screen intervals for the SVES chosen? Why is the "excessively contaminated soil" definition being used (500 ppm or higher from corrected FID reading, F.A.C. 62-770)? Isn't it more appropriate to use just the leaching value or a site specific leaching value as the "clean up to" number?
9. **Jeff Lockwood's comment 1 from his Friday, October 19, 2007 email to Amy Twitty:** Jeff's Comment 1 asks for a better presentation of the soil and soil analytical data. He is saying that "this report (the RAP Addendum) is a bit sketchy in terms of being able to grasp the extent of contamination". I'm having some trouble with this information as well in both the RAP and the Work Plan. I would like to see a soil boring location map (an easy to see/read figure that shows all of the soil sampling locations), a soil analytical results table which would contain all of the soil samples collected with their corresponding analytical results (or at least the analytical detections per sample), and then possibly figures showing analytical results from specific depths (please see WRS's Figure 2-4 from the Interim Remedial Action Plan for Site 7). I do like the information presented on Figures 2-5 through 2-8 in your response to comments to Jeff's email (figures from WRS's Interim Remedial Action Plan for Site 7) but they are hard to read. Calculating SVE screen intervals might be easier with this information.
10. **Section 2.1.2, SVE Treatment Wells and System Field Piping Installation, Page 2-5:** Table 2-1 lists the "Proposed SVE System Treatment Well Design Characteristics". The screen intervals listed show three distinct zones. Interval 1 is 10-20 (shallow), interval 2 is 40-50 (intermediate), and interval 3 is 60-80 (deep). How were these intervals chosen? Are you only looking at just "excessively contaminated soil"? What happened to also focusing vapor capture from areas where contaminant concentrations exceed their respective leachability SCTLs specified in Table II, Chapter 62-777, F.A.C. (see page 2-3)? In Appendix E of the RAP Addendum four depth ranges are mentioned. The ranges are 0-20, 20-60, 60-80, and 80-126 feet bls. Wouldn't these intervals be more appropriate for the SVES screen intervals? Soils are contaminated above their leaching values (see Table 2 62-777, F.A.C.) to a depth of 132 feet bls (SB-51 @ 130' bls contains benzene at 0.99 mg/kg, SB-52 @ 132' bls contains benzene at 0.99 mg/kg, SB-53 @ 132' bls contains benzene at 0.0219 mg/kg; see Figure 2-4). In keeping with a

three zoned SVES, I propose intervals of 0-45, 45-90, and 90-wt feet bls. Will the blower currently available handle a system designed in this fashion?

- 11. Section 2.1.2, SVE Treatment Wells and System Field Piping Installation, Pages 2-6, 7, and 8:** Figures 2-2, 2-3, and 2-4 depict SVE well locations and the radius of influence for each zone. The SVE well locations may need to be moved in such a way so that vadose zone contamination to the south is also incorporated into the capture zone of the SVES (please see the analytical results for SB-53 and Jeff Lockwood's comment 3 from October 19, 2007 email).
- 12. Section 2.1.2, SVE Treatment Wells and System Field Piping Installation, Page 2-10:** Last sentence of the Well Casing and Screen Section states that "A 6-20 coarse silica sandpack will then be placed to at least 1 foot above the screen." While a 1 foot sandpack may be appropriate for the shallow interval SVE wells, the deeper zones need to have at least a 2 foot sandpack.
- 13. Section 2.1.3, Vadose Zone Monitoring System, Page 2-11:** The VZMP locations may need to be relocated if SVE well locations are changed.
- 14. Section 2.1.4, Soil Sampling, Page 2-14:** Why are we conducting more soil sampling? The design of the system was based on the April 2007 data. Are you expecting a difference in contaminant concentrations from April 2007 to May 2008? Will the design of the system change according to this new sampling data? Collecting additional soil samples (highest FID readings) will become unnecessary if you screen the whole vadose zone. If a check on contaminant concentrations needs to be made then collecting samples for headspace screening using an FID would be appropriate. This technique would allow correlation between the new reading and the April 2007 reading.

Thank you for the opportunity to review this document. If you require additional clarification or other assistance please feel free to contact me at 850/245-8999.

Sincerely,



John Winters, P.G.  
Remedial Project Manager

JJC JJC

ESN ESN

by

