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LETTER REGARDING CLARIFICATION ON REGULATORY COMMENTS ON ADDENDUM 1
FINAL WORK PLAN FOR SITE CLOSURE AT TANK FARM 3 NS NEWPORT RI
7/22/2009
TETRA TECH EC



TETRA TECH EC, INC.

July 22, 2009
2854-31-09-006

Mr. Paul Kulpa
Rhode Island Department of Environmental Management (RIDEM)
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908-5767

Subject: Comment Letter on Addendum 1 of the Final Work Plan for Site Closure for Tank Farm 3

Dear Mr. Kulpa:

In response to your comment letter dated November 7, 2007, the Defense Energy Support Center (DESC) is providing clarification regarding the status of the petroleum-related investigation and remediation activities at Tank Farm 3. As documented in the Site Investigation and Remedial Action Report (SI/RAR), which was submitted to RIDEM on May 26, 2005, DESC has completed the investigation and remediation activities at Tank Farm 3. As documented in this report, petroleum-impacted soil resulting from DESC's use of the property as a bulk fuel storage facility was identified and remediated to the extent practicable. This field effort was conducted from 2004 to 2005 in accordance with the Final Work Plan for Site Closure for Tank Farm 3, which was submitted to RIDEM in May 2003. As such, Addendum 1 of the Final Work Plan for Site Closure for Tank Farm 3 is withdrawn; however, responses have been jointly prepared with the DESC and the Navy and are provided for informational purposes.

As you are aware, the DESC was licensed by the Navy to use Tank Farm 3 to store and distribute petroleum fuel products, and operated at Tank Farm 3 from 1974 until 1998 when the tank farm was administratively closed by the DESC. Presently, DESC and the Navy are making a collaborative effort to convey this property back to the Navy. Any further environmental issues would be addressed under the Navy's Environmental Restoration Program, if necessary.

If you have any questions or require further information, please feel free to contact Larry Kahrs, the DESC Program Manager for Tetra Tech EC, at 617-457-8247 or larry.kahrs@tetrattech.com.

Sincerely,

Diane Stokes, P.E.
Project Manager

Attachments

Response to Comments
Comment Letter from RIDEM, November 7, 2007



cc: Hasan Dogrul, DESC
John O'Donovan, DESC
Cornelia Mueller, Navy
Winoma Johnson, Navy
Roberto Pagtalunan, Navy
Larry Kahrs, Tetra Tech EC
Brian Blanchard, Tetra Tech EC

TETRA TECH EC, INC.
DEFENSE ENERGY SUPPORT CENTER CONTRACT NO. SP0600-04-D-5403
DEFENSE FUEL SUPPORT POINT - MELVILLE
PORTSMOUTH, RHODE ISLAND

ANNOTATED RESPONSES TO REVIEW COMMENTS

The Rhode Island Department of Environmental Management (RIDEM) Office of Waste Management reviewed the Addendum 1 Work Plan for Site Closure, Tank Farm 3, Defense Fuel Support Point – Melville, Portsmouth, Rhode Island dated October 19, 2007. RIDEM comments are provided in italic type followed by responses in bold type which have been jointly prepared by the DESC and the Navy and are provided for informational purposes.

Reviewer: P. Kulpa - RIDEM

Date: November 7, 2007

General Comments:

Comment 1: It appears that the Building 188, Transformer Vault has already been investigated and sampled. Please confirm. If it has not been investigated please include this location in the work plan.

Response: The area surrounding Building 188 was investigated during site investigation activities conducted from May 2004 through April 2005 in accordance with the Final Work Plan for Site Closure Tank Farm 3 (Tetra Tech 2003). No remediation was required in this area. Field activities and findings were documented in the Draft Site Investigation and Remedial Action Report (SI/RAR), which was submitted to RIDEM on May 26, 2005.

Comment 2: It appears that Building 230 Transformer Substation has not been investigated. Please modify the work plan to include an investigation of this sub station.

Response: Building 230 is an active electrical substation and is not part of the Tank Farm 3 property.

Comment 3: Building 108 Pump House is located on the western side of the site. This investigation should include a review of historical engineering plans to ascertain potential sources of contamination and appropriate sampling, which should then be included in the work plan.

Response: This pump house is not part of the Tank Farm 3 property.

Comment 4: During the initial investigation of Structure 228 engineering plans were not reviewed and as such sampling was limited. Please review engineering plans to ascertain if PCB transformers, PCBs, mercury or other switches are or were present, if sumps or floor drains are present, if UICs, USTS or ASTs are or were present or whether other sources of contamination are present. Finally, due to the nature of the protective coating at the structure samples for lead should be collected from the perimeter.

Response: DESC's environmental investigations were focused on petroleum-related impacts. Structure 228 was investigated for petroleum impacts to soil in accordance with the Final Work Plan for Site Closure Tank Farm 3 (Tetra Tech 2003). As documented in the Draft SI/RAR (Tetra Tech 2005), pipes entering and exiting on the north and

south sides of the building were excavated to expose the piping for visual inspection and soil sampling. Excavation between the pipes was then completed by hand. Soil samples were collected directly beneath the pipes at the point where they entered the building and were analyzed for TPH. None of the samples exceeded the RDEC or ICDEC for TPH. Any further environmental issues would be addressed under the Navy's Environmental Restoration Program, if necessary.

Comment 5: During the previous investigation samples were collected from the drainage swales. One swale located north of Tank 69 was not sampled as it discharged beyond the security fence. It appears that the discharge location is on Navy owned land; therefore please modify the work plan to include sampling of this swale.

Response: As documented in the Draft SI/RAR (Tetra Tech 2005), this asphalt-lined swale, located north of Tank 69, was visually inspected in 2004. The swale leads to a concrete headwall and buried 12-inch drainpipe that discharges beyond the security fence. There was no visual or olfactory evidence of petroleum releases.

Comment 6: It appears that a limited removal action was conducted in area of concern 17. This area encompasses a small construction debris landfill. Please perform a metal survey in this area to determine the extent of the fill area and excavate additional test pits to characterize the site.

Response: DESC's environmental investigations were focused on petroleum-related impacts. As documented in the Draft SI/RAR (Tetra Tech 2005), DESC investigated AOC-17, which is located to the north of Tank 69, due to the presence of a dark-toned area of soil (potentially staining). Confirmatory sampling results indicated petroleum-related compounds were below the ICDEC. Work was conducted in accordance with the final work plan (Tetra Tech, 2003). Any further environmental issues would be addressed under the Navy's Environmental Restoration Program, if necessary.

Comment 7: During the previous investigation a number of areas were found to contain petroleum related contaminants above RIDEM standards. As the extent of contamination in the areas that exceeded need to be determined please modify the work plan to include additional test pitting efforts in these areas.

Response: As documented in the Draft SI/RAR (Tetra Tech 2005), soil sampling demonstrated that concentrations were below the ICDEC for TPH, the contaminant of concern for DESC's petroleum operations, except at two areas (AOC-1 and AOC-4). ICDEC for TPH could not be achieved at AOC-1 (sand pit filter) due to the instability of the excavation. Also, Testpit 3 in AOC-4 (staining adjacent to former sludge pits) was excavated to a depth of 5 to 6 feet bgs. Soil was inaccessible below this depth; however, the TPH concentrations in confirmatory samples were still above the ICDEC. As these areas were inaccessible due to existing site constraints, DESC did not implement any additional remedial activities. Any further environmental issues would be addressed under the Navy's Environmental Restoration Program, if necessary.

Comment 8: Please modify the work plan to include the investigation of all of the tanks, pump chambers, pipelines, gate boxes and release areas.

Response: DESC has completed all petroleum-related investigation and remediation activities at Tank Farm 3. In summary, DESC fueling operations at Tank Farm 3 were discontinued in the mid-1990s. The tanks, pipelines, and accessible appurtenances

were cleaned and decommissioned in 1996 and 2000. For further information regarding these activities, see the following reports: Tank Closure Assessment Report (GZA 1998) and the Closure Report for Underground Storage Tanks at Tank Farm 3, which was submitted to RIDEM on August 7, 2001. In addition, comprehensive environmental investigation and remediation activities were conducted by DESC from May 2004 through April 2005 in accordance with the Final Work Plan for Site Closure Tank Farm 3 (Tetra Tech 2003). Field activities were documented in the Draft SI/RAR (Tetra Tech 2005), which was submitted to RIDEM on May 26, 2005.

Comment 9: Previously, in an effort to expedite the investigation, remediation and close out of the sites and reduce the overall cost the Office of Waste Management and the Defense Logistics Agency agreed to an approach which allowed for removal actions to be performed during the investigation. This resulted in efficient use of resources, as the equipment employed during the investigation would also be used during the removal action without having to go through mobilization and demobilizations cycles. Further, it avoided the need to submit separate remedial investigation work plans, remedial action works plans remedial investigation reports and remedial action reports for review and approval. In concert with this approach please include provisions for removal actions to be conducted concurrently with the investigation.

Response: DESC has completed all petroleum-related investigation and remediation activities at Tank Farm 3 in accordance with the final work plan (Tetra Tech 2003) and as documented in the Draft SI/RAR (Tetra Tech 2005), the Tank Closure Assessment Report (GZA 1998) and the Closure Report for Underground Storage Tanks at Tank Farm 3 (Tetra Tech 2001).

Specific Comments:

Comment 10: Sections 1.0-2.2: In an effort to expedite review of the work plan and in an effort to facilitate review of this document, comments will not be generated on statements made or conclusion drawn in Sections 1.0-2.2. Instead the attached comments will focus on the procedures to be employed during the proposed sampling events.

Response: Comment 10 has been noted.

Comment 11: Section 3.1, Groundwater Monitoring, page 4: The work plan calls for gauging all of the wells for free product and then collecting groundwater samples from select wells. The Office of Waste Management agrees with the proposal to gauge the wells for free product. In regards to the collection of dissolved phase groundwater samples, these samples must be collected after the investigations discussed above are performed on the tanks, the pipelines, release areas, structures, etc. This information would then be used to guide future groundwater-sampling activities. Therefore, please modify the work plan to state that dissolve phase groundwater samples will be collected once that aforementioned investigations are completed.

Response: DESC has completed all petroleum-related investigation and remediation activities at Tank Farm 3 in accordance with the final work plan (Tetra Tech 2003) and as documented in the Draft SI/RAR (Tetra Tech 2005). Presently, DESC and the Navy are making a collaborative effort to convey this property back to the Navy. To

support this effort, DESC recently completed a groundwater monitoring event as per the Navy's request. The Navy will provide these data to RIDEM upon request.

Comment 12: Section 3.2, Sediment Sampling, page 4: The work plan calls for the collection of a sediment sample in the vicinity of Oil Water Separator Outfall # 005. Please included the outfall associated with the former sand filter burning chamber and the drainage swale identified as DS-3. In all cases test holes must be dug in the vicinity of the outfalls and inspected for evidence of petroleum contamination. Samples would be biased towards locations which exhibit petroleum contamination or if this is not evident depositional areas.

Response: DESC completed petroleum-related investigation and response actions for Outfall #005 as part of the Lawton Brook emergency response actions conducted by DESC in 2008 under the direction of RIDEM's Office of Emergency Response (OER). As documented in the Emergency Response Completion Report, which was submitted to RIDEM OER on January 30, 2009 (Tetra Tech, 2009), a section of pipe chase starting at Outfall #005 and continuing 300 feet to the south along the northbound lane of Burma Road was removed. Response actions also included removal of soil from beneath the excavated chase as well as removal of rip rap and soil surrounding the ring drain outfall (i.e., Outfall #005). Once impacted media were excavated, the ring drain outfall area was reconstructed. Subsequently, there were no observances of product or sheen from the outfall, and on November 17, 2008, OER directed DESC to remove the Navy-placed booms.

Regarding the sand filter pit, please refer to Response to Comment 7. This AOC was extensively investigated during the field activities summarized in the Draft SI/RAR (Tetra Tech 2005). Soil removal was constrained by the existing infrastructure and TPH concentrations in excess of the ICDEC remain. As this area is inaccessible due to existing infrastructure, DESC will not implement any additional remedial activities. Any further environmental issues would be addressed under the Navy's Environmental Restoration Program, if necessary.

Regarding swale DS-3, this swale was investigated as documented in the Draft SI/RAR (Tetra Tech 2005). The area was heavily vegetated with no evidence of recent water flow. Surface soil samples were collected from a depth of 1 foot and analyzed for TPH DRO and GRO. Results were below the ICDEC and RDEC.

Comment 13: Section 3.3, Structure 227 Investigation, page 4: The proposal calls for the investigation of Structure 227 to ascertain if lead batteries are present. Structure 227 is an Electrical Control House. As such the investigation should include, but not be limited to reviewing historic engineering plans and ascertaining whether PCB transformers (historical engineering plans depicts a 1000 KVA pad transformer at this location, depending upon it's location concrete and soil samples will have to be collected and analyzed for PCBs), PCB, mercury or other switches are present, if sumps or floor drains are present, if UICs, USTs or ASTs are present or whether other sources of contamination are present. It is recommended that historical engineering plans be reviewed as this may provide information concerning potential sources of contamination at this location. Finally, due to the nature of the protective coating at the structure, samples for lead should be collected from the perimeter.

Response: Structure 227 is an electrical control house and as a courtesy to the Navy was investigated for the presence of PCBs in surface soil as documented in the Draft

SI/RAR (Tetra Tech 2005). Presently, DESC and the Navy are making a collaborative effort to convey this property back to the Navy. Any further environmental issues would be addressed under the Navy's Environmental Restoration Program, if necessary.

Comment 14: Section 4.5.1, Groundwater Sampling Protocol, Structure 227 Investigation, page 6: Please be advised that if free product is observed in a well it will not be necessary to sample the well for TPH or other constituents as the presence of free product will indicate that the groundwater at this location is not in compliance with RIDEM Regulations and remedial action will be warranted.

Response: Comment 14 has been noted.

Comment 15: Section 4.5.1, Groundwater Sampling Protocol, Structure 227 Investigation, page 6: Please confirm that the wells will be gauged for free product prior to purging and checked for free product after purging.

Response: Comment 15 has been noted.

Comment 16: Section 4.5.1, Groundwater Sampling Protocol, page 6: The report proposes analyzing groundwater for TPH GRO/DRO via Method 8015. Please be advised that all samples for DRO must be analyzed using an extractable procedure capable of detecting heavier oils. Further standards for the known fuels used at the site (various jet fuels including military jet fuel, aviation gasoline and diesel) must be run during the analysis.

Response: Comment 16 has been noted.

Comment 17: Section 4.5.1, Groundwater Sampling Protocol, page 6: Aviation gasoline was stored at the tank farms. Therefore please include analysis for lead in the groundwater sampling.

Response: Presently, DESC and the Navy are making a collaborative effort to convey this property back to the Navy. To support this effort, DESC recently completed a groundwater monitoring event as per the Navy's request. Groundwater samples were collected for total and dissolved lead analysis. The Navy will provide these data to RIDEM upon request.

Comment 18: Section 4.5.2, Sediment Sampling, page 6: The section of the work plan deals with the collection of sediment samples from the brook. In order to address release via surface run off or other mechanisms the entire length of the stream adjacent to the tank farm must be inspected for evidence of contamination. Test holes must be dug every 100 feet biased towards depositional areas. If evidence of petroleum is present a sample must be collected. Further, as Lawton Brook was dammed and the water levels behind it fluctuated, and as TPH contaminated soils and sediments were found away from the brook at Tank Farm # 4 which had a similar dam, the wetlands in the vicinity of Lawton brook must be inspected for evidence of petroleum contamination. If field observations are unable to ascertain if petroleum contamination is present four additional sediment samples must be collected in depositional areas adjacent to the site.

Response: DESC has completed all petroleum-related investigation and remediation activities at Tank Farm 3. TPH screening of all drainage features with the potential to discharge surface water away from Tank Farm 3 was conducted in accordance with

the Final Work Plan (Tetra Tech 2003). Findings were documented in the draft SI/RAR (Tetra Tech, 2005). Results indicated that all sample locations were below the ICDEC and RDEC for TPH.

Note that during the emergency response action described in Response to Comment 12, a major release of aluminum sulfate (alum) sludge by the Portsmouth Water Department temporarily stopped the emergency response work at Lawton Brook and severely impacted with the brook and its outlet to Narragansett Bay. This release was not in compliance with the town's RIPDES permit and based on discussions between Tetra Tech (DESC's contractor) and the Portsmouth Water Department during initial investigation of the release, this activity had occurred on numerous occasions (i.e., quarterly). As such, any future sediment sampling conducted in the brook may be impacted by these releases of alum sludge. Note that Tetra Tech provided all documentation of this event to John McIlmail of RIDEM's Office of Criminal Investigation on September 8, 2008.

Comment 19: Section 4.5.2, Sediment Sampling, page 6: The report proposes analyzing sediment samples for TPH GRO/DRO via Method 8015. Please be advised that all samples for DRO must be analyzed using an extractable procedure capable of detecting heavier oils. Further standards for the known fuels used at the site (various jet fuels including military jet fuel, aviation gasoline and diesel) must be run during the analysis.

Response: Comment 19 has been noted.

Comment 20: Section 4.5.2, Sediment Sampling, page 6: Please include lead and arsenic to the list of constituents to be analyzed in the sediments.

Response: Please refer to Response to Comment 18.