



DEPARTMENT OF THE ARMY

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January 14, 2016

Ms. Linda Range
New Jersey Department of Environmental Protection
Bureau of Case Management
401 East State Street
PO Box 420/Mail Code 401-05F
Trenton, NJ 08625-0028

**Re: Response to NJDEP's July 22, 2015 Comments on the May 2015 *Underground Storage Tanks and Response to NJDEP Comments for ECP Parcel 53 (700 Area), Fort Monmouth, New Jersey*
PI G000000032**

Dear Ms. Range:

Fort Monmouth and Parsons have reviewed the New Jersey Department of Environmental Protection (NJDEP) comments on the subject submittal for ECP Parcel 53 (also known as the 700 Area), as documented in your letter dated July 22, 2015. We appreciate this opportunity to work with you on Parcel 53. Responses to your comments are provided below, for your review and concurrence or further comments.

A. General Comment/Statement:

The New Jersey Department of Environmental Protection (Department) has completed review of the referenced report, received May 28, 2015, prepared by Parsons Government Services Inc. (Parsons). Parcel 53, also generally known as the 700 Area as indicated in the submittal, was included within a report previously submitted in 2005 which summarized the results of remedial activities within three areas of the Fort. Comments generated by the NJDEP in September of 2007 included the requirement for documentation regarding UST activities, delineation of soil to residential criteria, and the performance of a ground water investigation. The referenced submittal provides documentation as to the status of "all USTs identified within this parcel", and responds to the September 2007 NJDEP comment letter as regarding RCI 700 Area (generally, Parcel 53).

A. RESPONSE: Acknowledged.

B. Underground Storage Tanks

B1. COMMENT: *The submittal states the parcel is noted as previously containing sixteen (16) underground storage tanks (USTs), all of which have been removed. Nine of USTs had previously received designations of no further action necessary from the Department, as indicated on page 3 and in Appendix D. Based upon receipt and review of the required documentation, it is agreed no additional action is necessary for the following seven USTs:*

UST 700-2 aka 700-BI 2 – steel 1000 gallon #2 fuel UST removed 4/2/04

UST 700-3 aka 700-BI 3 – steel 1000 gallon #2 fuel UST removed 4/4/04
UST 700-5 aka 700-T05 – steel 1000 gallon #2 fuel UST removed 12/24/04
UST 700-17 aka 700-BI 17; #04-04-05-1357-41 – 1000 gallon #2 fuel UST removed 4/2/04
700-18 aka 700-BI 18; #04-04-14-1305-4-04 – steel 1000 gallon #2 fuel UST removed 4/12/04
746B – steel 1000 gallon #2 fuel UST removed 12/13/10
747B – steel 1000 gallon #2 fuel UST removed 12/9/10

B1. RESPONSE: Acknowledged.

B2. COMMENT: *It is unclear, however, how the statement on page 2 of 8, “all of the USTs identified within Parcel 53 have been removed”, is reconciled with the potential UHOT locations represented on Figure 2 of May 2014 Addendum 1 – Environmental Condition of Property Report Unregulated Heating Oil Tank Investigation Report, which appears to indicate the continued potential presence of additional USTs at several locations within the parcel?*

B2. RESPONSE: Previous field verification of UST removal at FTMM included geophysical surveys, test trenches, physical evidence of tanks, and the results of soil sampling and analysis, which provides a higher measure of certainty than the “Potential UHOTs” shown on the May 2014 UHOT Addendum Report. The UHOT Addendum Report was only an assessment of available information (such as real property records and historical maps) that may provide collaborative information in the event that a future tank is found, but is not considered a definitive source of information on yet-to-be discovered UHOTs.

C. Section 2.0: Residential Communities Initiative Activities at the 700 Area

C1. COMMENT: *The report indicates one rationale previously provided for not addressing elevated levels of heptachlor was the exceedances were “only one order of magnitude (OOM) above the non-residential cleanup criteria”. This is not an acceptable argument; see below (Appendix M) for additional detail.*

C1. RESPONSE: Acknowledged; note that the intent of this statement was only to report the Army’s rationale used in the 2007 report. Please see additional response F1 below.

D. Section 3.0: Additional Comparison of Soil Results with Residential Cleanup Criteria

D1. COMMENT: *Additional comparisons were made of existing analytical results to residential standards, however, it is not agreed delineation is “generally” complete. The delineation as required in the Department’s September 2007 correspondence was not performed. As acknowledged in the submittal, delineation along the parcel boundaries remains incomplete. See additional comments immediately below and under Appendix N.*

D1. RESPONSE: Acknowledged; additional soil sampling is proposed to delineate PCBs to the parcel boundary, as described below.

D2. COMMENT: *SVOCs - As has been indicated in previous emails and correspondence, the 1995 Weston background study was not accepted by the Department, for several reasons, and should no longer be referenced.*

D2. RESPONSE: Acknowledged; future submittals for Parcel 53 will no longer reference the 1995 Weston background study.

D3. COMMENT: *It is agreed the source of the PAH exceedences are not yet known. It does not seem likely, however, the source was incomplete burning of cigarettes, wood, food or fossil fuels. The referenced possibility of former asphaltic pavement may be feasible; review of historic aerials should reveal their historic presence, but not whether the analytical results are definitively present due to that asphaltic material. The report also speculates PAHs are perhaps present due to historic fill used to develop Fort Monmouth. Although this is certainly a viable possibility, historic fill is considered an area of concern (AOC) under the Technical Requirements for Site Remediation, N.J.A.C. 7:26E, and must be investigated and addressed accordingly.*

D3. RESPONSE: Parcel 53 sampling results for PAHs to date have not revealed evidence of a release. The wide variety of potential sources referenced in the May 2015 submittal demonstrates that these PAHs have come to be located at the site over time due to site conditions (e.g., runoff from asphalt surfaces) and not due to a CERCLA release. Since there is no indication of a CERCLA release, the Army has no further obligation to address PAHs at this site.

D4. COMMENT: *Although it is stated compliance averaged results of both benzo(a)pyrene and benzo(b)fluoranthene were less than the applicable Residential Direct Contact Soil Remediation Standards (RDCSRS), the averaging was performed incorrectly. Delineation to residential criteria was required in September of '07 but was not performed; current regulations [N.J.A.C. 7:26E-4.2(a)] and guidance ("Technical Guidance for the Attainment of Remediation Standards and Site-Specific Criteria") require delineation to not only residential standards, but to the impact to ground water soil remediation standards as well. Additionally, the arithmetic mean method is only for use when there are 9 or fewer samples (rather than the 57 samples at Parcel 53) or two or fewer distinct values, neither of which applies in this situation.*

D4. RESPONSE: Agreed; future reporting of compliance averaging results for FTMM soil data will conform to the current technical guidance document referenced above and future project-specific agreements with NJDEP. Future data will also be compared to the default impact to groundwater soil screening levels as provided in the November 2013 NJDEP guidance document entitled "Development of Impact to Ground Water Soil Remediation Standards Using the Soil-Water Partition Equation."

D5. COMMENT: *Although delineation remains incomplete, PAHs have been identified in several areas of the parcel above RDCSRS. Delineation to all applicable standards is required, and exceedences must be addressed.*

D5. RESPONSE: See response D3, above.

D6. COMMENT: *Pesticides- As above, the background study included in the 1995 Weston report was not accepted by the Department; the study should no longer be referenced.*

D6. RESPONSE: Acknowledged; future submittals for Parcel 53 will no longer reference the 1995 Weston background study.

D7. COMMENT: *Elevated levels of heptachlor, heptachlor epoxide, chlordane and 4,4-DDE were noted within the parcel. Although it is stated compliance averaged results of all but heptachlor were less than the applicable RDCSRS, as above, the averaging was incorrectly performed. Delineation to residential criteria was required in September of '07; current regulations [N.J.A.C. 7:26E-4.2(a)] and guidance ("Technical Guidance for the Attainment of Remediation Standards and Site-Specific Criteria") require delineation to not only residential standards, but to the impact to ground water soil remediation standards (IGWSRS) as well. Also, as above, the arithmetic mean method is only for use when there are 9 or fewer samples.*

D7. RESPONSE: Agreed; future reporting of compliance averaging results for FTMM soil data will conform to the current technical guidance document referenced above and future project-specific agreements with NJDEP.

D8. COMMENT: *Although delineation remains incomplete, pesticides have been identified in several areas of the parcel above applicable standards. All exceedances must be delineated and addressed.*

D8. RESPONSE: All results from sampling for pesticides are consistent with levels that would be found from the regular use of properly applied pesticides. Additionally, there is no historic evidence of pesticide storage or a spill within Parcel 53. Therefore, there is no release of pesticides that is the responsibility of the Army.

D9. COMMENT: *PCBs - The PCBs exceedances are located in Parcel 51, rather than Parcel 53; please confirm this portion of Parcel 51 is to be considered in this review? As such, the above comments remain applicable to these areas as well. The compliance averaging was incorrectly performed. PCBs are present at 0.25 ppm and 0.68 ppm, above the RDCSRS ; delineation to the south, toward the parcel boundary, is incomplete. Delineation to RDCSRS/IGWSRS is required. PCBs were reported analyzed in 49 samples, greater than the 9 or fewer samples allowed for use of the average mean method of compliance averaging. All exceedances must be delineated and addressed.*

D9. RESPONSE: The area with PCBs exceedances in soil near Buildings 787, 788 and 789 is actually within Parcel 51 (instead of Parcel 53, as NJDEP has noted). This area has subsequently been designated as Parcel 98 to minimize future confusion. For clarification, the Army requested the NJDEP's review of analytical data within Parcel 98; data from this area was included in the 2005 RCI Report and designated (along with data from Parcel 53) as the "700 Area." However, PCB data from Parcel 98 will be grouped separately from Parcel 53 data during future compliance averaging. The Army proposes additional soil sampling to delineate PCBs in soil within the Parcel 98 area; sample locations and a tabulated summary for proposed sampling will be provided under separate cover. We anticipate that PCBs exceedances will be addressed using compliance averaging, which will conform to the current technical guidance document and future project-specific agreements with NJDEP.

E. Section 4.0: Groundwater Investigation at 700 Area

E1. COMMENT: *See comments under Appendix P.*

E1. RESPONSE: Acknowledged; see Response I1.

F. Appendix M: 700 Area Excerpts from the 2005 RCI Remedial Action Report

F1. COMMENT: *Attachment M contains excerpts from the October '05 RAR referenced above. Page 18 appears to indicate the March 1999 Historic Pesticide Contamination Task Force document exempts heptachlor from remediation as the exceedances are only one order of magnitude above the NRDCSCC. Heptachlor is not exempted from remediation by the referenced March 1999 (which includes no reference to order of magnitude/OOM), and the statement is an inappropriate application of OOM.*

F1. RESPONSE: Concur. The 2005 RAR will not be revised; however, future submittals will not include this argument.

F2. COMMENT: *As stipulated by N.J.A.C. 7:26E-3.2(a)5 – “An evaluation to determine if there is an order of magnitude difference between the concentration of any contaminant in any area of concern and any remediation standard applicable at the time of comparison to the area of concern if there is a prior final remediation document for the area of concern. If there is an order of magnitude difference, then the person responsible for conducting the remediation shall evaluate the protectiveness of any existing engineering or institutional controls on the area of concern and otherwise determine whether additional remediation may be required at the area of concern to ensure the area of concern remains protective of the public health, safety and the environment.”*

The analytical results are greater than an OOM above both the former NRDCSCC as well as the current NRDCSRS, and more importantly, this area had no final remediation document (neither approved RAW or NFA).

F2. RESPONSE: Since the levels of pesticides are consistent with properly applied pesticides, and therefore not a CERCLA release for which the Army is responsible, there is no need for remedial action here or a final remedial document.

G. Appendix N: Comparison of RCI Area 700 Soil Results with Residential Cleanup Criteria

G1. COMMENT: *In the Department's September 2007 comment letter, it was stated contamination must be delineated to the residential criteria. No additional delineation efforts, however, have been performed. Rather, a comparison of previously existing data to current RDCSRS was made. Figures 6 and 7 note numerous areas which exceed the RDCSRS for various constituents, several of which locations are situated proximate to the various boundaries of Parcel 53. Based upon a review of the sample locations and results (plotted by this office), and as stated on Page 5 of Section 3.0, it is unclear that contamination above RDCSRS is limited to Parcel 53 boundaries. Delineation to RDCSRS remains incomplete; specifically delineation is incomplete at all perimeter boundaries, including but not necessarily limited to benzo(a)pyrene to the north of B2; heptachlor to*

the north and east of B1; heptachlor, heptachlor epoxide and chlordane to the west of B20; DDE to the south of B39; benzo(a)pyrene to the south of B38; heptachlor, heptachlor epoxide and chlordane to the east of B13; and benzo(a)pyrene to the east of B7.

G1. RESPONSE: See responses D3 and D8, above.

G2. COMMENT: *Page 5 references location B49, and Enclosure 1 includes data from sample locations B44, B46 and B49, however, Figure 19 of the January '07 ECP, titled "ECP Parcels", indicates these locations, while in the 700 Area, are actually located in Parcel 51, west of Parcel 53. As the Report is titled Parcel 53, please clarify.*

G2. RESPONSE: See response D9 above.

H. Attachment O: Compliance Averaging of RCI Area 700 Soil Results

H1. COMMENT: *As indicated in the comments above, the compliance averaging was not performed in accordance with the Department's Technical Guidance for the Attainment of Remediation Standards and Site-Specific Criteria, and is therefore not approved.*

H1. RESPONSE: Noted.

I. Attachment P: Area 700 Groundwater Monitoring Results

I1. COMMENT: *Attachment P includes a large scale contour map with monitor well locations, with Parcel 53 outlined, indicating the presence of several monitor wells along northern and eastern borders of the parcel, as well as ground water flow maps and analytical results of sampling collected from five monitor wells in 2009 and 2010 for VOA+15 only. Very minimal discussion was included in Section 4.0, stating the wells were installed in December 2009 to assess the potential for ground water contamination from the USTs in the area, however, it is unclear what specific USTs or other areas of concern the wells were to assess. Nor was there any discussion as to triggers for the performance of a ground water investigation present at the various areas of soil contamination noted throughout the parcel, e.g. was ground water encountered within 2' of contamination, what type of soils were encountered.*

I1. RESPONSE: The Parcel 53 monitor wells were installed to assess the potential for groundwater contamination from USTs formerly present within the Parcel as a whole. Of the USTs that were recently approved for NFA by NJDEP, only two had reported releases (700-17 and 700-18), and of those two, groundwater was sampled only from UST 700-17. The following observations from UST 700-17 are provided as further support that additional groundwater assessment is not required:

- Contaminated soil was observed and removed from the excavation in 2004 prior to soil sampling;
- Soil samples were collected from a depth of 5.0 to 5.5 feet below ground surface (ft bgs), and were all non-detected (ND) for Total Petroleum Hydrocarbons (TPH);

- Groundwater was encountered at 11 ft bgs and sampled from the excavation, and results were ND for TPH;
- Fine- to medium-grained sandy soils were encountered, as is typical for the Main Post.

Given the uniformity of site conditions across Parcel 53, it is concluded that any residual soil contamination from Parcel 53 USTs would be located considerably higher than 2 ft above the groundwater surface. Based on these observations, there were no indications of a contaminant release to groundwater, and therefore additional groundwater evaluation for the 700 Area is not warranted.

We look forward to your review of these responses and approval or additional comments. As previously indicated, a work plan for additional field soil sampling for PCBs at the Parcel 98 area will be provided under separate cover.

The technical Point of Contact (POC) for this matter is Kent Friesen at (732) 383-7201 or by email at kent.friesen@parsons.com. Should you have any questions or require additional information, please contact me by phone at (732) 383-5104 or by email at john.e.occhipinti.civ@mail.mil.

Sincerely,



John E. Occhipinti
Fort Monmouth Site Manager

cc: Delight Balducci, HQDA ACSIM
Joseph Pearson, Calibre
James Moore, USACE
Jim Kelly, USACE
Cris Grill, Parsons