



## State of New Jersey

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BOB MARTIN  
Commissioner

July 22, 2015

John Occhipinti  
BRAC Environmental Coordinator  
OACSIM – U.S. Army Fort Monmouth  
PO Box 148  
Oceanport, NJ 07757

Re: *Underground Storage Tanks and Response to NJDEP Comments for ECP Parcel 53 (700 Area) dated May 2015*  
Fort Monmouth  
Oceanport, Monmouth County  
PI G000000032

Dear Mr. Occhipinti:

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).

### **Underground Storage Tanks**

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

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?

### Section 2.0

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.

### Section 3.0

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.

#### *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.

It is agreed the source of the PAH exceedances 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.

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.

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.

#### *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.

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.

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

#### *PCBs*

The PCBs exceedences 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 exceedences must be delineated and addressed.

#### **Section 4.0**

See comments under Appendix P

#### **Appendix M**

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.

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).

## **Appendix N**

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.

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.

## **Attachment O**

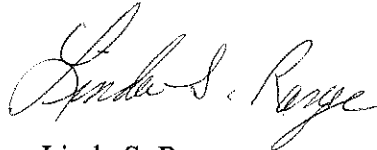
As indicated in the comments above, the compliance averaging was not performed in accordance with the Department's *Technical Guidance for the Attainment of Remediation Standards and Site-Specific Criteria*, and is therefore not approved.

## Attachment P

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.

Please contact this office if you have any questions.

Sincerely,



Linda S. Range

C: Joe Pearson, Calibre  
James Moore, USACE  
Rick Harrison, FMERA  
Joe Fallon, FMERA  
Frank Barricelli, RAB