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LETTER REGARDING U S EPA REGION IV COMMENTS ON DRAFT CONCEPTUAL SITE MODEL FOR SITE 27 EQUIPMENT PARADE DECK MCRD PARRIS ISLAND SC
8/21/2009
U S EPA REGION IV

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
Atlanta Federal Center
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August 21st, 2009

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

4SD-FFB

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And

Commanding General
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SUBJ: EPA Review of the Draft Site 27 Conceptual Site Model (CSM) (June 2009)

Dear Sirs:

EPA has reviewed the Draft CSM for Site 27 and offers the following comments:

GENERAL COMMENTS:

1. In Section 1.4.3.6 the text mentions the initial MIP/EC data. Reportedly, the MIP data has not been included historically because the correlation to actual concentrations was questionable. However, upon review of the report, it states there was good correlation for BTEX above 100 – 1000 ppb, although it is vague on the correlation of other contaminants. Regardless, the PID/FID hit locations appear to correlate with where contamination has been found since the time of the MIP activity, therefore, there must be some correlation for something in the LNAPL soup. Please include the MIP data

summary report in the CSM and reference it in the text. Be sure to include a map showing the locations of the MIP data points in relation to the other site investigation locations. Be prepared to discuss the potential for use of MIP data to obtain more detailed vertical delineation while getting the horizontal delineation we need most.

2. In Section 4.0, Nature and Extent of Contamination, the text discusses the screening levels used for soils and groundwater. However, the Conceptual Site Model, Site 27 – Equipment Parade Deck June 2009 (CSM) does not present an exposure model to include primary and secondary source(s), primary and secondary release mechanism(s), and all potential pathways, receptors, etc. An exposure model flow diagram would enhance the CSM by helping to better communicate information about the site risks by illustrating the inter-relationship from the original sources to final receptors. An agreement upon potential pathways and receptors is critical to the ability to agree on screening values.

3. The text discusses the nature and extent of contamination in Section 4.0, Nature and Extent of Contamination, by comparing the contaminant levels that have been detected in surface soil, subsurface soil, and groundwater to screening criteria developed for evaluating risks to human and ecological receptors. The screening criteria are presented in the soils and groundwater bulleted sections on Page 4-2. Although the nature and extent of contamination is discussed in the text and illustrated in figures presented in the CSM depicting soil and groundwater contamination, the conditions requiring a response are not clearly presented. The CSM would benefit by the addition of specific problem statements for surface soil, subsurface soil and groundwater. The problem statements would clearly and concisely communicate what specific problem(s) need to be addressed by specifying the condition requiring a response.

4. Section 4.0, Nature and Extent of Contamination, discusses the elevated levels of contaminants that have been detected in subsurface soil at the site with respect to potential human health and ecological risks. However, an evaluation of elevated soil concentrations and the potential for contaminant leaching and migration to groundwater was not discussed as a problem warranting action. For example, total DDT concentrations detected in surface soil and subsurface soil were screened against both the residential and industrial human health regional screening levels (RSLs) which are 1.4 milligrams per kilogram (mg/kg) and 5.1 mg/kg, respectively. However, the risk-based soil screening level (SSL) for total DDT is 0.087 mg/kg at a dilution attenuation factor of 1 (DAF 1). Total DDT concentrations in soil greater than the 0.087 mg/kg SSL would impact groundwater at concentrations greater than the total DDT tapwater RSL of 0.2 micrograms per liter (µg/L). In Section 4.3, Groundwater, the first paragraph on Page 4-12 indicates the total DDT tapwater RSL was used as a screening criteria to identify groundwater contamination since no maximum contaminant level (MCL) exists for total DDT. Additional discussion is needed in the CSM to explain why contaminant migration from soil to groundwater at unacceptable levels does not constitute a problem warranting action.

5. The discussion presented in Section 4.0, Nature and Extent of Contamination, Page 4-1 and the information presented in Table 1-1, Summary of Previous Investigation Samples,

indicates the list of analyses that have been performed for soil and groundwater samples collected during previous site investigations has not been consistent. The table indicates target analytes such as semivolatile organic compounds (SVOCs) and target compounds such as metals were not included for analyses during some of the previous investigations. The CSM does not discuss or explain why these analyses were not conducted since a risk assessment has not been completed to determine which constituents will, or will not be considered chemicals of concern (COCs). Section 4.1, Surface Soil, on Page 4-5 and Section 4.2, Subsurface Soil, on Page 4-7, indicates limited samples were analyzed for SVOC and metals. Additionally, as indicated in Table 1-1, groundwater samples collected during the 2008 investigation were not analyzed for SVOCs and analysis of metals in groundwater was also very limited. The inconsistency in laboratory analyses results in a data gap and uncertainty in whether these constituents are at levels in soil and groundwater that are greater than screening criteria and indicating a potential problem. The CSM should be revised to address this data gap issue regarding omission of laboratory analyses.

6. In Section 4.0, Nature and Extent of Contamination, on Page 4-2 the text indicates the Oak Ridge National Laboratory (ORNL) January 2009 human health screening criteria will be utilized. There is a more recent version of the ORNL January 2009 RSL Table. The United States Environmental Protection Agency (EPA) updated the RSL Table in April 2009 and released the final version in May 2009. Revise the CSM by updating the text in this section to indicate the April 2009 (or most recent) RSL Table (ORNL) screening values will be utilized for human health risk evaluations.

7. Subsurface contamination has been identified as discussed in Section 4.2, Subsurface Soil, on Pages 4-7 and 4-8. Vertical profiles or cross sections of the site illustrating the subsurface contamination were not presented in the CSM. In order to effectively communicate the vertical and horizontal extent of contamination in profile, the CSM should present cross sections of soil contamination which are supported by currently available boring logs.

8. The vertical and horizontal extent of contamination should be further delineated by whatever technical approach is determined to be the most cost effective and efficient means and which provides data of sufficient quality and quantity to support selection of a removal approach. The CSM maps should then be updated according to results.

9. Section 4.4 Throughout: There are several points in the Navy's text which are not necessarily how EPA R4 would view the soil and groundwater contamination at this site (or any CERCLA site for that matter). Overall, this text could be more to the point and better reflect the actual RCRA regulations. The Navy should consider a significant rewrite of this section.

10. The text in Section 4.4 should be revised to reflect that the <u>so-called free product is a waste material</u> since it clearly has been abandoned/released into the environment. Any contaminated media (soil and groundwater) that is generated can also be considered a solid waste unless the levels of contamination are so low they could be used without

restrictions (i.e., below health based standards or background levels). Under EPA contained-in policy, the soil and groundwater that contain RCRA hazardous waste must be managed as hazardous waste unless EPA and SCDHEC approve a "no longer contains determination" and contaminated media meets any LDRs before placement (i.e., disposal).

11. Otherwise, if the Navy wishes to pursue a finding that the LNAPL is not a waste material, complete footprint analysis of the waste material will be necessary.

12. More detailed EPA attorney feedback on Section 4.4 is provided at the end of these comments. (See below.)

13. The discussions presented in Section 5.0, Chemical Fate and Transport Analysis, provide mostly general and generic information on the physical and chemical properties of organic compounds detected at the site. The CSM does not provide an analysis or interpretation of the fate and transport of the light non-aqueous phase liquid (LNAPL) and its impact on groundwater contamination at the site. The CSM should be revised to clearly explain, based on site specific data and information, why a “problem is a problem”. The CSM should discuss how and where contaminants are expected to move and what impacts such movement will have in the future.

14. Section 5.4: Potentially critical to future site decisions may be the difference in fate and transport of organic contaminants which remain if the LNAPL is either treated in-situ, fixed in place, or removed. If any differences in fate and transport for the remaining contaminants could be anticipated, please be prepared to explain those in future removal documents.

15. Section 6.0, Proposed Sampling, is not appropriate content for a CSM document. Comments provided herein on this Section are to be considered preliminary and are general in nature. Official comments will be provided when a DQO scoping document and/or Sampling and Analysis Plan is submitted for formal review.

16. In Section 6.0, Proposed Sampling, the two bulleted items located at the top of Page 6-1 state that soil samples will be collected to “further define soil contamination” and to “determine if contamination exists in the area of the proposed Motor-T construction project.” However, the text does not clearly communicate what action levels or screening thresholds will be used to determine the presence of “soil contamination”. Revise this section to clearly indicate the action or screening levels that will be used to determine soil contamination. (Comments on the pathways and receptors discussed earlier should also be considered here.)

17. Furthermore, the objectives stated here should be restated to reflect the need to obtain sufficient delineation of the LNAPL and contaminated soils to support selection of a removal process.

18. Sampling for the Motor-T facility may be premature at this point. Depending on the objectives and results of the future removal action, additional characterization may or may not be required in the area. Initial sampling could be conducted if this meets a Navy need. However, EPA reminds the Navy that construction of the Motor-T facility should not begin until it can be shown that construction of the facility will not impede the investigation or the remedy phases of Site 27/55 remediation.

19. Sampling of the Motor T-facility may be premature at this time since reportedly the Navy has not finalized a location for the facility footprint. Also, recall that during construction, the laydown areas as well as the actual footprint areas need to be located such that Site work can continue unimpeded. Sampling conducted solely based on one potential footprint area may leave data gaps for future clearance.

20. The text in Section 6.1, Fiber Optic Vault Area Samples, on Page 6-1 indicates an "Interim ***Remedial*** Action (IRA)" will be conducted to facilitate the overall remediation at Site 27. However, during previous discussions with the Marine Corps Recruit Depot (MCRD) Parris Island team at the recent meeting held on July 14-15, the Navy indicated an engineering evaluation/cost analysis (EE/CA) would be conducted to support a future ***removal*** action. The regulatory path for this next phase of response actions should be clearly communicated since the remedial and removal response action paths are very different.

21. More detailed feedback on the next phase of delineation sampling in preparation for a removal action is provided below Mr. Buxbaum's feedback. This feedback takes into consideration not only this CSM, but also the Removal Contractor's Pre-IRA Data Requirements memo. HOWEVER, recognize this material appeared to be slanted towards a predetermined selected removal process, but CERCLA requires an EE/CA be developed to select a removal process. As mentioned above, the next phase of delineation should be conducted to support development of the EE/CA.

EPA Attorney Feedback on Section 4.4

22. David Buxbaum shared the following thoughts regarding Section 4.4 and is willing to answer any questions there may be:

The text excerpts below should be deleted or revised to reflect that the <u>so-called free product is a waste material</u> since it clearly has been abandoned/released into the environment. Any contaminated media (soil and groundwater) that is generated can also be considered a solid waste unless the levels of contamination are so low they could be used without restrictions (i.e., below health based standards or background levels). Under EPA contained-in policy, the soil and groundwater that contain RCRA hazardous waste must be managed as hazardous waste unless EPA and SCDHEC approve a "no longer contains determination" and contaminated media meets any LDRs before placement (i.e., disposal).

Re-use is not an option for this oily waste since it is not pure commercial product and it is mixed with soil and groundwater contamination along with other hazardous substances. Consequently, EPA considers the LNAPL to be remediation waste and once generated for storage/disposal must be characterized as required under RCRA for solid wastes that do not have any exceptions. I agree that the waste may be considered hazardous waste either because it fails TCLP for toxicity (or another characteristic) or because it is from a Listed source.

In general, if free-product that is recovered from a spill/release can actually be re-used (by reblending or refining), then the free-product is not a solid waste. However, if the free-product must be disposed of, then the free-product is handled as a solid waste, and may be a hazardous waste. Note that actual reuse of the free-product is required, not a speculative "maybe". In this case, re-use does not appear to be likely.

Therefore, the contaminated media and free-product are not contaminated with listed waste. There is even uncertainty if the contaminated media and free-product are contaminated with any solid waste.

It would be much more useful to the reader to summarize the conclusions for the oily waste based on the analytical data. For example, the text below should be revised to simply state that: "The oily waste found in the wells is considered a characteristic waste (D047) for toxicity due to high concentrations of the RCRA hazardous constituent, 1,4-dichlorobenzene."

1,4-dichlorobenzene would be greater than the TCLP criteria.

The RCRA LDR regulations are complicated yet at the same time straightforward. For example, a generator of hazardous waste must determine if the waste has to be treated before it can land disposed [Ref. 40 CFR 268.7(a)]. If a generator determines they are managing a waste or soil contaminated with a waste that displays a characteristic..., they must comply with the special requirements of 268.9 of this part in addition to any applicable requirements of 268.7. [Id]

Under 40 CFR 268.40(e), for characteristic wastes (D001-D043) that are subject to treatment and not managed in CWA NPDES wastewater treatment system, all underlying hazardous constituents (as defined in 40 CFR 268.2(i)) must meet Universal Treatment Standards (UTS) found in 40 CFR 268.48, Table UTS prior to land disposal.

Underlying hazardous constituent means any constituent listed in Section 268.48, Table UTS, except fluoride, selenium, sulfides, vanadium, and zinc which can reasonably be expected to be present at the point of generation of the hazardous waste at a concentration above the constituent-specifc UTS treatment standards.

The alternative LDR treatment standards for soil at 40 CFR 268.49 should be considered for any contaminated soil (e.g., well cuttings or excavated hot spots) that is considered hazardous waste due to high concentrations of a hazardous constituent(s) that would be generated by this response action.

General Comments on CSM Section 6 and Pre-IRA Data Requirements memo

Since it was unclear what the ultimate objective of the Navy is with this removal action, it is difficult to make specific recommendations or provide specific feedback. Once the team reaches consensus on what the final objective of the removal action is, it will become more clear what needs to happen. Different objectives would require different data requirements. Therefore, once that clarification has been made, certain portion of this feedback may change. In the meantime, certain assumptions were made in order to provide some feedback and initiate discussions of data needs.

1. Based on the Pre-IRA Memo, it was stated that the Navy was planning to remove the contamination source material either through source zone excavation and/or through LNAPL removal. Contaminant removal activities would follow the site characterization efforts to delineate LNAPL and source zone(s) mainly through soil core sampling and screening activities. In our review, the following assumptions were used,

a. The purpose of the LNAPL delineation is to plan the excavation of LNAPL- and DDT-contaminated soil and/or LNAPL removal, and to estimate contaminated soil volume and associated costs for excavation and disposal.

b. The removal activities would involve (1) a pre-determined criteria, such as the delineation criteria proposed in the Pre-IRA memo for DDT and TPH, (2) removal of LNAPL for a source removal action in the vicinity of the Fiber Optic Vault, and (3) removal of contaminated soil based on observations made during excavation including “LNAPL staining”.

c. The sampling approach proposed in the Pre-IRA memo is the most current approach. This approach differs somewhat from an approach described in the CSM.

d. DDT and LNAPL most likely co-exists in the subsurface due to the co-solvent effect of the LNAPL. However, DDT may exist in areas that do not currently indicate heavy TPH contamination.

2. In general, it is recommended to pressure grout each exploratory boring with a cement-bentonite mixture as soon as the appropriate core or screening method has been completed.

3. Data and information suggests that a significant volume of LNAPL may exist at this site. LNAPL recovery efforts that precede contaminated soil excavation may be more efficient in the overall site remediation approach. For example, soil excavation at or near the water table interval may result in the accumulation of LNAPL in the excavation pit. The soil, water, LNAPL slurry will likely present technical challenges in LNAPL removal, and may represent health and safety hazards. It is recommended that this issue be investigated more fully.

Specific Comments on Section 6

1. The extent of the proposed sampling described in the Pre-IRA memo is based on several previous investigations and information suggesting the presence of LNAPL-impacted soil

and ground water in the vicinity of the Fiber Optic Vault. The proposed grid layout covers the general area presumed to be impacted by LNAPL. Several modifications to the proposed sampling grid may be considered to help improve the effectiveness of the site characterization activities.

a. The Pre-IRA memo states "additional infilling and/or step-out soil borings may be required" if contamination is unable to be defined by the proposed soil boring grid locations. It is recommended that a plan for additional sampling locations be established prior to the field work to ensure a consistent and well-planned approach is used. This will minimize data gaps, last-minute decisions, and uncertainty. It is recommended that aquifer coring activities commence at locations where LNAPL has been previously observed. Assuming heavy contamination is observed and/or measured (i.e., greater than the delineation criteria), step-out locations extending beyond that location will help establish the areal extent. A finer resolution grid of step-out distances (10-15' step-out) involve more samples, but has greater probability of detecting contamination. This approach improves the accuracy of (1) contaminant delineation, (2) estimated volume of soil, and (3) associated excavation and disposal costs. Larger step-out distances (25-50') involves fewer samples, lower probability of detection, lower resolution in contaminant delineation, and greater uncertainty in estimated soil volume and excavation and disposal costs. It is recommended that a strategy be established for the step-out procedure prior to field deployment. Some decisions should be made in the field, assuming contamination trends cab be established.

Previously, soil/aquifer cores were collected and analyzed for contamination. Some of these cores exhibited elevated levels of contamination (i.e., above acceptable levels). Assuming the exact locations of these aquifer cores can be identified, it is recommended that these locations represent the starting point for the grid locations proposed in Figure 1 of the Pre-IRA memo. The main objective of this recommendation is to avoid reproducing data that already exists and to economize soil core and step-out locations in the proposed site characterization activity.

b. Soil core locations may need to be expanded to the south of the currently proposed grid locations. Figure 6-1 of the CSM indicates that PAI-27-MW64S had an odor and the CSM indicates some gw flow in the southeast and southwest directions. Additionally, the Technical Memorandum indicates that this location had a sheen and an odor. It is not clear why these descriptions are different. While odor does not necessarily indicate NAPL presence, the presence of a sheen indicates LNAPL. Figure 4-7 of the CSM indicates that DDT extended past PAI-27-MW064S suggesting that mobile LNAPL may have extended in this direction, or even extended to, or past this location. It is assumed that DDT was either transported to this location via the groundwater plume migration or, given the odor/sheen, transported to this location as a cosolute in LNAPL. If LNAPL potentially extended to this location (i.e., the NW corner of Building 405), the proposed sampling grid would also need to be extended toward this location. Assuming LNAPL was indeed present at PAI-27-MW64S, as the information suggests, it is recommended that the sampling grid also be extended this direction.

2. The proposed sampling approach and techniques described in the Pre-IRA memo regarding LNAPL delineation may potentially be improved and made more efficient if some additional strategies and screening methods are considered.

a. The proposed LNAPL delineation approach involves the collection of soil cores, field screening of the cores, and confirmation of contamination via laboratory analysis. It is recommended to consider the use of direct push downhole sensing such as laser-induced fluorescence (LIF) or membrane interface probe (MIP) prior to the collection of soil cores. The MIP Report indicated that MIP may be appropriate for use at the site. There may be some areas inside or outside the proposed soil sampling grid where uncertainty exists regarding contamination. These techniques could be used to rapidly screen the subsurface and identify (1) areas to eliminate from soil coring, and (2) areas that contain high concentrations of contamination where soil core activities should be focused. While downhole sensors may not be applicable to DDT delineation, they would be appropriate for the LNAPL. Delineation of LNAPL would therefore provide a good indicator for the presence of DDT and other pesticide contaminants. It should be noted that the same GeoProbe rig and crew used for the MIP or LIF screening activities could also be used for the collection of aquifer cores. Ideally, real time data from preliminary field screening efforts could be used to focus aquifer core collection activities during the same mobilization.

b. The Pre-IRA memo proposes the use of several techniques to screen and/or measure LNAPL and DDT including, (1) soil vapor screening with a FID, (2) visual observations for hydrocarbon staining or sheens, (3) odors, (4) DDT soil field screening test kits, (5) TPH screening field test kits, (6) laboratory analysis confirmation samples, and (7) observation of sheens or LNAPL in boreholes left open. Although this list of screening and measurement techniques is extensive, there are two other techniques to consider or substitute in this list that may improve the screening. These include hydrophobic dyes for NAPL detection, and UV fluorescence as an indication of petroleum contamination. For example, Oil Red O dye is a powder that will dissolve in NAPL but not water and will show up as a red dye (in NAPL). Oil Red O has fewer health risks relative to other dyes (i.e., Sudan IV), requires less stringent personal protection, is cheap, and can be purchased commercially.

c. The Pre-IRA memo proposes sampling at 0-1’ bgs for surficial samples, 4-5’ bgs for mid-depth samples, and at 7-8’ bgs for samples at or above the water table interface. It is not clear if the deepest proposed samples would include the interval just below the shallowest clay layer where previous work has indicated the presence of contamination. If not, it is recommended that consideration be given to sampling that interval.

3. Several issues are presented below to consider with respect to complexities associated with LNAPL and DDT contaminant fate and transport, site characterization data interpretation, and refinement of the site conceptual model.

a. Preferential flow paths and regions of greater permeability (i.e., subsurface utility corridors) can impact LNAPL migration. The excavation for the Fiber Optic Vault and the subsurface soil/aquifer material it displaced may have altered the localized ground-water and LNAPL behavior in a potentially unpredictable way. The excavation and alteration of the subsurface appears to have acted as an accumulation point or sump for nearby LNAPL. For example, the backfill material around the vault may be comprised of permeable material conducive to LNAPL transport. Or the fill material may be excavated material later deposited at

the surface. However, it is not clear whether this represents a real effect, or whether other factors contributed to the LNAPL accumulation condition.

It is presently unclear whether the Fiber Optic Vault was the location of the initial LNAPL release. Various figures suggest that the Fiber Optic Vault may be close to the source area. The Fiber Optic Vault was reported to be 7' deep and it is possible that the excavation was deeper. This excavation may have penetrated a clay layer, and allowed LNAPL to migrate beneath such a clay layer. Overall, a better understanding why LNAPL accumulated at this location would likely lead to information useful in the design of an LNAPL recovery system, and identification of the source area(s).

b. There are several site factors that introduce considerable complexity in LNAPL fate and transport, and in the interpretation of site characterization data and information. Site factors include well screen intervals, elevations of clay or low permeable layers, and time dependent (fluctuation) water table elevations. The ground-water elevation data from 2002, 2003, 2007, and 2008 indicate a somewhat large decline in ground-water elevations occurred between 2002 and 2008, yet recent 2009 measures taken after a summer of extensive rains (at Site 45 across the island) indicated the water table was at 1 foot bgs. There are likely to be significant seasonal changes in ground-water elevations. LNAPL floating on the water table will rise and fall with the water table leaving a residual. LNAPL discharge into well screens may therefore be derived from different vertical intervals and by different transport mechanisms. These compounding factors impact the vertical interval over which LNAPL may be found in the well (and thickness) but the elevation may not actually represent the vertical interval over which it actually resides in the aquifer. Specifically, it may be possible that LNAPL observed in wells may be derived from contaminated intervals above, and/or below the LNAPL elevation in the well. It is recommended that LNAPL elevations observed (measured) in wells be scrutinized with respect to LNAPL in the aquifer.

c. It is recommended that tables reporting on ground-water analysis and floating product results also provide the monitoring well screen lengths (i.e., depth below ground surface and elevation relative to msl) and the water levels (all in the same table). This will help in understanding the hydrogeologic context of the observations and results. This was done in the Technical Memorandum, but not in some other site documents.

d. LNAPL thicknesses observed in wells and piezometers can be affected by rising and falling water elevations (see 3.b above), potentiometric ground water elevations, pore size distribution of the porous media, diameter of the well screen, well screen interval, historic changes in water table elevations, etc. and the overall effect can be to alter the LNAPL thickness in wells.

e. LNAPL has been found in shallow wells PAI-27-MW11S and PAI-27-MW06S, and deep well PI-055-MW13D (33-36' bgs). A sheen was encountered in intermediate well PI-055-MW12I. Several site documents indicate that LNAPL has been encountered in soil borings beneath the shallowest clay layer (7-8' bgs). PI-055-MW13D (33-36' bgs) is screened deep and LNAPL presence seems improbable or involves a unique and complex set of LNAPL transport conditions. LNAPL in this well may be due to drag down of contamination during well

construction, and/or improper sampling, and thus, may not reflect naturally occurring LNAPL transport to that depth.

f. The CSM Section 5.0 Chemical Fate and Transport Analysis discusses the impact that the floating product could have on the transport of the contaminants found at the site. Existing DDT distribution acknowledged in this section includes more widespread transport than would be projected by dissolved-phase transport and fate processes (i.e., contaminant physico-chemical properties, transport processes, and the mobility index approach. This suggests that the distribution of pesticide contaminants has been primarily through co-solvency facilitated transport in the LNAPL.

Currently, it is unclear whether LNAPL distribution is an absolute indicator of DDT distribution. Measurement of DDT in LNAPL and LNAPL contaminated aquifer material using the DDT test kit will provide valuable information on this matter. It is assumed that DDT and LNAPL most likely co-exists in the subsurface due to the co-solvent effect of the LNAPL. However, DDT may exist in areas that do not currently indicate heavy TPH contamination. This assumption should be evaluated. Random checks of LNAPL-uncontaminated soil in areas that lie outside the proposed LNAPL-delineated area would help assess whether DDT was disposed independently of the LNAPL.

EPA appreciates the coordination efforts put forth by the Base and Navy in developing a Conceptual Site Model for Sites 27/55. If there are any questions on these comments and feedback sections, please do not hesitate to contact me at (404) 562-9969.

Sincerely,

Lila Llamas
Senior RPM

cc: Meredith Amick, SCDHEC
Sommer Barker, SCDHEC
Mark Sladic, TtNUS