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MCRD PARRIS ISLAND
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EMAIL REGARDING U S EPA REGION IV COMMENTS ON UNDERGROUND PIPES NEAR
SITE 27 EQUIPMENT PARADE DECK MCRD PARRIS ISLAND SC
2/22/2008
U S EPA REGION IV

From: Koroma-Llamas.Lila@epamail.epa.gov
To: [Cook, Charles CIV NAVFAC SE](mailto:Cook.Charles.CIV.NAVFAC.SE)
Cc: charles.cook2@navy.mil; art.sanford@navy.mil; koroma-llamas.lila@epa.gov; [Sladic, Mark](mailto:Sladic.Mark); timothy.j.harrington@usmc.mil; mmcrae@TechLawInc.com; AmickMS@dhec.sc.gov; darrel.pittman@usmc.mil; bowersjb@dhec.sc.gov; Kelly.Taylor2@ch2m.com; barkerjs@dhec.sc.gov
Subject: RE: Search for underground pipes near Site 27
Date: Friday, February 22, 2008 4:43:00 PM

Charles, team

Site 27

I trust Mark will perform a due diligence review, however, I am simply letting you know what things I will be inquiring about, and keeping in mind as I review the Site 27 RI WP Addendum. I will be looking for more on the CSM and determining whether or not EPA agrees with the CSM, as well as the proposed investigation based on that CSM. According to what I found, just because a document does not exist which identifies a structure on a map, it does not mean the structure is not there. But I am all ears for an alternative CSM. Still expecting the Draft RI WP Addendum any day now.....

Also, when you say "Mark related that he felt there was no future constraints on the investigation based on the fact that the building is not over the source area", it raises several issues with me. 1) Mark is just one member of this team, which is why I suggested we have a conference call regarding this, whether it be before the WP submittal or after, or both before and after. I would appreciate one before EPA makes comments, at least. 2) I do not know which "investigation" Mark is referring to. If you mean the Geotech Borings Investigation, I'd say you are right, which is why you got what you got from me on that. If you mean the Remedial Investigation for CERCLA, I disagree. I do not believe we have delineated nature and extent of the contamination at Site 27, be that from Site 27 contaminants, or from Sites 9, 16, or 55 contaminants. I would be shocked if Mark thinks we have. We also need to have those basic fundamental discussions about potential remedies as well. That probably will not result in any concerns at all, or it might. I can't speak for the others on the team, I am simply trying to lay out the roadmap for getting to where we have no concerns about the motor-t facility location and timing of construction. However, in your most recent changes to the SMP milestones you requested pushing out the Site 27 RI Report even further. This seems to be a contradiction with your expressed concerns regarding the Motor -T facility.

Mark's gathering of info on historical pesticide formulation and application practices is a good thing.

Additionally, I am in the process of preparing some feedback for you on the Vapor Intrusion information previously submitted. I will need to know more about the data quality and analysis of our preliminary data, particularly with respect to sampling techniques, detection limits, mass spec confirmation, degradation information, etc. I find it puzzling that there would be no detections of DDE, when DDD is at 3400 and DDT is at 1600. DDE is more volatile than the others, and is therefore a COC for VI, whereas DDT and DDD do not appear to be (although apparently there may be some recent modifications on that based on COE info - DHEC is following up on this.) DDE could be lumped in with the others if not properly analyzed and confirmed. Responses to the well construction issues, sampling techniques, and analytical methods (filtered .vs.

unfiltered) mentioned previously in my notes to you on Site 27 issues may take care of this instead.

Site 3:

Tech Memo - I look forward to it.

Sediment SAP - Don't forget the TOC & grain size. Probably need to talk more about this QAPP meeting. I'd like to know how this is supposed to roll out and EXPECTATIONS for outcomes/outputs from a face-to-face meeting. Not so much concern for this Site 3 event. But for Site 27 and 14/ETC, i am less comfortable. For those sites will there be several of these, or do we in our wildest dreams think we can do it in a day?

PP - I look forward to it.

Site 14, 5, 7: Is this three different OUs? or what? I am confused again..... 1 SOW? Please clarify.

Thanks,
Lila

"Cook, Charles
CIV NAVFAC SE"
<charles.cook2@navy.mil> To
Lila
Koroma-Llamas/R4/USEPA/US@EPA,
02/20/2008 11:13 AM "Sanford, Art F CIV NAVFAC SE"
<art.sanford@navy.mil>, Lila
Koroma-Llamas/R4/USEPA/US@EPA,
<mark.sladic@ttnus.com>,
<timothy.j.harrington@usmc.mil>,
<mmcrae@TechLawInc.com>,
<AmickMS@dhec.sc.gov>,
<darrel.pittman@usmc.mil>,
<bowersjb@dhec.sc.gov>,
<Kelly.Taylor2@ch2m.com>,
<barkerjs@dhec.sc.gov>
cc

Subject
RE: Search for underground pipes
near Site 27

Lila, team
Site 27
I spoke to Mark and he is going to perform a due diligent review to

confirm his understanding of the issues you mentioned. (his understanding being there are no sewer lines in the area) Also Mark related that he felt there was no future constraint on the investigation based on the fact the building is not over the source area. Mark mentioned he is having someone evaluate the original practice of mixing DDT in solvents such as benzene and chloro benzene. If we can get an original composition of the discharged mixture it may help. We can plan a conference call on the issue once Mark has had time to consolidate information . Next week Wednesday ?

Site 3

Technical memo will be completed by next week

Sediment sampling work plan is being drafted , will be complete in two weeks. An evaluation of UFP QUAP is being conducted.

Proposed plan is nearing completion

Site 14,5,7

SOW Prepared for work plan preparation . This work will require QUAP.

V/R

Charles Cook

-----Original Message-----

From: Koroma-Llamas.Lila@epamail.epa.gov

[<mailto:Koroma-Llamas.Lila@epamail.epa.gov>]

Sent: Friday, February 15, 2008 14:51

To: Cook, Charles CIV NAVFAC SE; Sanford, Art F CIV NAVFAC SE;

koroma-llamas.lila@epa.gov; mark.sladic@ttnus.com;

timothy.j.harrington@usmc.mil; mmcrae@TechLawInc.com;

AmickMS@dhec.sc.gov; darrel.pittman@usmc.mil; bowersjb@dhec.sc.gov;

Kelly.Taylor2@ch2m.com; barkerjs@dhec.sc.gov

Subject: Re: Search for underground pipes near Site 27

Importance: High

Thanks Heber !

It may end up just being coincidence from the looks of these photos, however, see thoughts below. Would still like to see what Mark gets when he does his plotting with the OHE in place.

In the mean time, I spoke with Don Vrobley about the confusion over which clay pipe we were wondering about. Here is a quick capturing of what I heard, although, I may not have gotten it all correct:

The discovery of the Old Clay pipes at Site 45 came about as follows:

Don visited the site. Looked at where the plumes were. Discovered a manhole in the area of the northern plume zone. He poured water down the manhole and noticed that it went West, as opposed to the direction of groundwater, and as opposed to the nearest other manholes and drains. He then obtained as-built blue prints from the former drycleaner. Saw an old manhole over near the new drycleaner. However, when he went to look for it, it was not noticeable above ground. He obtained a magnetometer and searched for the invisible manhole and found it. It

had been covered over. To confirm the connection, he ran cameras down the opening of the clay pipe from the Northern Plume area manhole and it went to the newly discovered manhole. So even though we may not SEE manholes which were potentially connected to the Fiber Optic Vault AREA, there may be some connection.

Additionally, Don was able to locate blue prints for facilities over the paved area near the southern plume area. He was not able to locate as-builts. My first thought was "Maybe they were never built." However, Don says as he attempted temporary wells in the area, he met layers of concrete, beneath the paved area, which were likely the old foundations. So even though the only documentation he found was blueprints, it is still likely the facilities existed at some point in time.

More thoughts and discussion on potentials at Site 27 went like this:

Don's first off-the-cuff thoughts on this were that:

1) Looking for manholes - With a metal detector this would not be difficult. However, he emphasized that they are not always as close together as in other places, especially when getting near the marsh.

2) For Tracking Storm Drains - Since storm drains appear to be tidally influenced, it may be possible to track storm drains if we wait for high tide, and then run an electromagnetic survey, assuming the pipes may fill with water and cause a noticeable difference on the scan. This would be more effort than a metal detector, but less than ground penetrating radar : -)

3) For Tracking Sanitary Sewer Lines - Since these are not likely tidally influenced, can't use the same approach. However, John Lang, at USGS, had done a subsurface survey, using electromagnetic conductivity and magnetic susceptibility. When mapped, he saw lines which did not show up as highly conductive on the magnetic susceptibility so it was not a metal pipe, however on the electric conductivity map it showed as a low conductivity line, presumably a clay pipe, being low conductivity because it is filled with air. Therefore, he felt that he saw indicators in the results which may have been old clay pipes. Since we now know where some buried old clay pipes are (i.e. Site 45 old pipes - See Don's Power Point presentation - Slide 11 (I think) , "Sanitary Sewer"), we could test the theory to see if it works and to create a baseline for results to measure against, maybe?. Or what John Lang has may already coincide with those pipes if we look at the map and plot things accurately.

All of these are dependent on whether there is just asphalt on the ground (= no problem) or if there is concrete with rebar underneath the asphalt (= will not work). Maybe Mark knows from his efforts? Or we will know more after geotech borings.....

This brings us to the big question, SO WHAT?

I am simply trying to facilitate discussion to expedite completion of the investigation at Site 27, by building, UP FRONT, a conceptual site model to investigate (not so much just the "exposure pathway" part, but the "where do we look?" part), whether the investigation be in reality or simply hypothetical. Rarely do we see "pesticide plumes migrating". Maybe a short distance, if the product is still commingled with the carrier (usually a petroleum type product such as the -enes we are

looking at). We don't have much evidence of migration, except the BHC hits at 30S - 41S - 43S, and 26S - 46S - 28S. Between these and the apparent "high concentration source" point, we have lower, then higher, then lower again. This could indicate slugs (not likely in my mind), multiple sources (maybe leaking drums stored on parking deck), or some alternative means of transport (pipes and/or drains), or something we have not thought of. Perhaps we investigate all potentials, or pick the most likely, or whatever. Either way, at least we get more focused and hope to avoid multiple trips back.

Bottom lines is, the earlier we complete the RI at 27, the earlier we may be able to say, with confidence, that we no longer need to access the area where the Motor-T is proposed, and therefore, the earlier MCRD can begin construction without any concerns of potential future conflicts with Site 27 remedial efforts, or impacts to the Motor-T from Site 27 contaminants.

Now it may also be that we can do that just as quickly with a sufficient number of temp wells, data from the geotech borings, soil gas readings maybe, etc. It is up to you all to proposed the most effective and efficient approach to delineating nature and extent. I'm just thinking the sooner we know how it got where and where it is/is not, the sooner we move on.

We also need to discuss the "what if's" from down the road. What potential remedial actions might be taken? What degree of delineation do we need to get there? Etc.

This will probably need more discussion. Not sure whether we should do that before or after Mark's submittal of the RIWP Addendum. Not sure what schedule that is on. Either way, I would like it to happen before we submit comments. More to think about.....

Happy President's Day !!!

Be safe,

Lila

"Pittman GS12
Darrel H"
<darrel.pittman@
usmc.mil> To
Lila
Koroma-Llamas/R4/USEPA/US@EPA
02/14/2008 05:31 cc
PM "Thakar GS12 Sharad V"
<sharad.thakar@usmc.mil>,
"Harrington GS13 Timothy J"
<timothy.j.harrington@usmc.mil>
Subject
Search for underground pipes near
Site 27

Lila,

I just got back from visiting with Sharad. We looked through the depots archive of old site maps/blueprints and especially at one from June of 1945. We did not find any underground pipes under or near the vicinity of the old parade deck that is now the paved area of concern.

I have also attached some aerial photos of the site with the existed buildings superimposed for reference.

Additionally, I called Don Vroblesky to check on the source of information for the clay pike that appears in his most recent map of site 45 that you mentioned. He said he needed more specifics as to which pipe we are referring to. Since it was near the end of the day and he was on his way out, I said I would get back with him after talking with you to clear up which pipe we mean, and call him back next week.

I will be out of the office till Tuesday and so will wish you a happy Valentine's Day, and a good long President's Day weekend.

VR/ Heber

Darrel Heber Pittman, Ph.D.
Natural Resources & Environmental Affairs <<...>> Marine Corps Recruit Depot P.O. Box 5028 Parris Island, SC 29905-0028 Phone (843) 228-3615 Fax (843) 228-2616 <<...>> <<...>> <<...>> <<...>> <<...>> [attachment "IR Site 27 2002.jpg" deleted by Lila Koroma-Llamas/R4/USEPA/US] [attachment "IR Site 27 2006.jpg" deleted by Lila Koroma-Llamas/R4/USEPA/US] [attachment "IR Site 27 1955.jpg" deleted by Lila Koroma-Llamas/R4/USEPA/US] [attachment "IR Site 27 1945.jpg" deleted by Lila Koroma-Llamas/R4/USEPA/US] [attachment "IR Site 27 1965.jpg" deleted by Lila Koroma-Llamas/R4/USEPA/US] [attachment "IR Site 27 1972.jpg" deleted by Lila Koroma-Llamas/R4/USEPA/US]