

03 October 1996

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MEMORANDUM

From:

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To:

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Subj: NSA MEMPHIS BRAC CLEANUP TEAM (BCT) MEETINGS, AUGUST AND SEPTEMBER 96

Encl: (1) Minutes from 26-28 August BCT Meeting
(2) Minutes from 10 September BCT Meeting
(3) CERCLA 120(h) as amended by the FY97 National Defense Authorization Act

1. Enclosures (1) through (3) are forwarded for your review and information. As a reminder, the next BCT is scheduled for 21-23 October. A RAB meeting is scheduled for the evening of 22 October.

2. Follow-up assignments are summarized below:

EnSafe (Lawson Anderson/Robert Smith/Keith Johns):

- Construct a 3-D map of the TCE-contaminated areas in the vicinity of Hangar N-126 and the surrounding apron.
- Provide the following documents to the BCT for review before the October meeting:
 - Assembly B
 - Assembly C
 - SWMU 1
 - SWMU 8
 - SWMU 10
 - SWMU 60

Technical memorandum on petroleum contamination at the North Fuel Farm (tanks 336 & 337)
Dr. Rouhani's report

CAMP (revised to include summaries for each SWMU proposed for NFA describing why NFAs are being sought).

- Finalize Environmental Update (for community relations purposes) to be distributed several weeks before the next RAB.
- Coordinate with Rob Williamson to develop "before, during, and after" photograph presentation for October RAB of tank, pit, and drywell removals.
- Contact laboratory to have analysis rerun on DynCorps' PCB sample from ditch near SWMU 57.
- Prepare a proposal (with rationale) for groundwater sampling.
- Coordinate with NSA Memphis to remove the soil piles at SWMU 8 (NSA Memphis will arrange for DynCorps to load and ship to BFI Landfill as non-hazardous waste).
- Develop work plan for additional samples from SWMU 2 (south side of Big Creek).
- Proceed with development of Assembly E RFI report (sans SWMU 2).
- Proceed with development of the work plan for CMS.
- RFI/CMS responsibilities
 - Determine if there are two types of plumes (TCE vs Benzene)
 - Define pathways
 - Define extent of groundwater contamination
 - Project any current and future receptors
 - Perform mass balance to determine volume of solvents potentially in groundwater
 - Determine if we need to conduct pump test
 - Gather data for Frank Chapell.
 - Start CMS work plan
 - Bioremediation modeling
 - Determine length of time for bioremediation to work
 - Evaluate Pump and Treat as containment option
 - Evaluate cost effectiveness of pump and treat
 - Seek concurrence from state on enforcement discretion

EPA Region IV (Brian Donaldson):

- Review deliverables to be discussed at the October BCT:
 - SWMU 60
 - Technical Memorandum on North Fuel Farm
 - SWMU 8
 - Dr. Rouhani's report
- Submit Technical Memorandum with Risk Assessment from fish tissue sampling from SWMU 9 (sewage lagoons) to EPA Risk Assessor for review.
- Confer with Region IV PCB personnel to discuss PCB levels in the ditch near SWMU 57/PCB soil cleanup levels (NSA Memphis will post signs in the area pending outcome and recommendation)

NSA Memphis - Environmental (Tonya Barker/Rob Williamson):

- Ensure service call with DynCorps to have tank pit at SWMU 19 (Navy Exchange Gas Station) capped with asphalt is completed.
- Complete the disposal of IDW from Assembly E investigation.
- Coordinate with TDEC to ensure all data needed to conduct radiation survey is provided.
- Arrange for the cleanup of SWMU 66 by DynCorps, including the recycling of CFC from disposed refrigerators.
- Confirm the source of PVC pipe discharging to drainage ditch where PCBs were found (near Bldg S-75), as well as operation of former building in this area.
- Arrange for the disposal of the soil piles at SWMU 8 (EnSafe to arrange for a contractor to remove the piles).

SOUTHDIV (David Porter):

- Coordinate with counsels on the innovative transfer of property.
- Develop a proposal for parcels to transfer once the EIS is complete. Begin coordination for the development of a Finding of Suitability to Transfer (FOST) for the parcels.

SOUTHDIV (Mark Taylor):

- Coordinate with Lawson Anderson and develop a proposal (with rationale) for ground water sampling.
- Revise budget to include a fence around SWMU 2 while investigations and remediation are conducted.

TDEC (Jim Morrison):

- Coordinate radiation survey by TDEC personnel with Rob Williamson for early to mid October.
- Review deliverables to be discussed at the October BCT:
 - SWMU 5
 - SWMU 60
 - Technical Memorandum on North Fuel Farm
 - SWMU 8
 - Dr. Rouhani's report
- Develop a checklist/criteria for abandoning wells (e.g., NFA, future needs such as water levels, etc.)

USGS (Jack Carmichael):

- Coordinate with Tim Diehl (USGS Nashville), Rob Williamson, and Robert Smith to recon area south of Big Creek for access locations for Geoprobe survey.
- RFI/CMS responsibilities:
 - Quick modeling of plume
 - Perform mass balance to determine volume of solvents potentially in groundwater
 - Determine if we need to conduct pump test
 - Identify type of data Frank Chapell requires for bioremediation analysis
 - Gather data for Frank Chapell
 - Have Frank Chapell tell the BCT what levels of TCE the bio system can handle
 - Complete steps to calibrate groundwater model
 - Establish reasonable action levels to define plume boundary
 - Use modeling to project plume over time

3. Enclosure (3) provides a copy of CERCLA 120(h) as recently amended by the FY97 National Defense Authorization Act. The amendment deletes the phrase "stored for one year or more" in the definition of uncontaminated (i.e., it now defines uncontaminated as property where no hazardous substances and no petroleum products or their derivatives were known to have been released or disposed of. The amendment also adds a deferral for cleanup, requiring EPA and State approval, to allow for the transfer of dirty property prior to having a remedy in place.

4. Please call/e-mail if you have comments and/or questions: (803) 820-5610, DSN 583, e-mail: dlporter@efdsouth.navfac.navy.mil.



**MINUTES
BRAC CLEANUP TEAM MEETING
26-28 AUGUST 1996**

The BCT meeting commenced at 1110 on 26 Aug 96 in the Conference Room of the Environmental Division of the Naval Support Activity Memphis. The following attended:

Lawson Anderson, EnSafe
 Tonya Barker, NAVSUPPACT
 Steve Beverly, SOUTHDIV
 Jack Carmichael, USGS
 Brian Donaldson, EPA Reg IV (New address: 100 Alabama Street, SW,
 Atlanta, GA, 30303. (404) 562-8664)

Norman Heming, EPA Reg IV
 Jim Morrison, TDEC, Superfund
 David Porter, SOUTHDIV
 Robert Smith, EnSafe
 Mark Taylor, SOUTHDIV
 Rob Williamson, NAVSUPPACT

Post-It* Fax Note	7671	Date	9/17/96	# of pages	8
To	DAVID PORTER		From	ROB WILLIAMSON	
Co. Dept.	SOUTH DIV, ENV, BEC		Co.	NAVSUPPACT Memphis	
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The meeting began with a review of the progress on action items from the BCT meeting in July.

1. **CAMP Revision:**

- a. The BCT decided to review and revise the CAMP every two months. The schedule needs to be reworked, including, at a minimum, revision of SWMU #60.
- b. Brian Donaldson expressed his concerns about the classification of SWMU #45. He asked that EnSafe explain the reason that the CSI was completed as an IM, with an asterisk footnote.
- c. Jim Morrison expressed concern about the classification of SWMUs #66 and #67. He also wanted to see the Southside Padeye area adjacent to the former hangers and the taxiway/anchor points for aircraft, included. The rest of the BCT agreed to categorize it as a "grey area."

2. **Lawson Anderson covered his action items:**

- a. Concerning the three-dimensional map, Lawson will acquire a map of old facilities. He will have the map by the next BCT meeting.
- b. Dr. Rhouhani will be at EnSafe on Wednesday, 28 Aug to discuss the sampling strategy and remediation options for the contaminated groundwater on the Northside.
- c. Lawson said that he had received comments from almost everyone for the workplans on the Gas Pits. Jim Morrison said that based on his review, the workplan was approved. EnSafe will finalize. Also, EnSafe will include the page numbers and sections where changes were made.
- d. The technical memo is one-half complete. It will be ready by next week. SWMU #60 is being produced today.

- e. EnSafe recalculated the background levels, based upon 13 sites. They did calculations on upper threshold. Since the results came out the same, they will stick with what they have been doing. He said that Brian Mulhearn will have the results tomorrow.
- f. Updated color copies of maps are available.
- g. New environmental update has been drafted. EnSafe will send it to David Porter and discuss it at next meeting.
- h. EnSafe and the base have coordinated for before and after photos of removals of SWMU 66, Tanks, Gasoline Pits, and Drywells for use at next RAB meeting.
- i. Concerning SWMU 57: EnSafe will conduct follow-up sampling at exact spot of DYNCORP's PCB hit and in ditches in vicinity. Screening results did not match the PCB results that DYNCORP received. EnSafe will send the follow-up sampling results to lab with a 48-hour turn around time to expedite. Robert Smith will meet with Rob Williamson and Jim Heide at the site on Thursday or Friday.
- j. Concerning proposal for ground water sampling, Jim Morrison said that he would like to see the 5ppm standard for TCE for contamination from multiple sources. David Porter said that the first draft of the EIS will be done in about two weeks; NAVSUPACT never became and NPL site; the EIS drives everything else, but it won't be completed until the end of the year. The ground water may not be a SWMU, but rather an area of concern.

3. The BCT broke for lunch and reconvened at 1330. The BCT was joined by Tennessee attorneys David Jensen and Greer Tidwell. Norman Heming started off the meeting by stating the current position of the EPA concerning options for transferring property with contaminated groundwater beneath the apron area on the Northside. Norman stated that in October we will be able to transfer contaminated property by separating the soil from the groundwater, as long as the State agrees. This is a new position by EPA. He stated that this is what Congress is doing, and that we could go ahead with the transfer.

Norman also stated that TOSCA laws may prohibit transfer of PCB material greater than 50 ppm into the stream of commerce. Steve Beverly said that the deed language would have to go through the Asst. Sec. of the Navy. Steve Beverly said that he will look at the State Law to see if it is a state law; he said we should tackle the ground next, then the groundwater. An option might be to make it an operable issue. According to Norman Heming, the Prospective Purchaser Agreement is an alternative. There is not a mechanism to reclassify the drinking water standard. Greer Tidwell said that it wasn't an absolute that we had to clean up to the drinking water standard. We would have to prove that the State Cleanup driver is not a Safe Drinking Water standard. The BCT agreed that we should defer this alternative for now. EPA will look into definition of the drinking water and the associated standard. The attorneys agreed to do the following:

- a. Steve Beverly will check into the laws concerning separation of water from soil and report his findings to Greer Tidwell.
- b. Norman Heming will look into the EPA policy for any latitude for transfer of uncontaminated property through the Prospective Purchaser option. He will also send out a copy of the new law on transfer by October.
- c. The CMS will address the option for a containment policy.

- d. Steve Beverly will look at the permit, as a next step, or the prospect of cutting the area up into parcels.
- e. Steve Beverly will consult with the Real Property Division of SOUTHDIV by the end of the month.
- f. Greer Tidwell said that the State is ready to issue a Prospective Purchase Agreement (permit).

4. Following the meeting with the attorneys, the BCT resumed the review of action items.

- a. Lawson Anderson indicated that a discussion about the extent and volume of contamination at SWMU #60 is contained in the SWMU #60 report.
- b. EnSafe sampled the soil pile for TCLP, and the results should be available by 5 Sep. NAVSUPACT Memphis will arrange for a contractor to remove and dispose of SWMU #8 after the results arrive.
- c. EnSafe will conduct tissue sampling of fish in the golf course ponds and Navy Lake starting tomorrow. Lawson said that the electric sampler is too expensive; the lakes are a grey area. Lawson and Mark Taylor will coordinate funding for this project.
- d. EnSafe will incorporate former aircraft parking aprons into south side (DERA) Grey Area Investigation.
- e. Lawson Anderson acknowledged that everything else on his list related to the Corrective Measures Study (CMS). There are two types of plumes. EnSafe is gathering data for Frank Chapelle. He said that the CMS will be done after SWMU #7 report comes out.

The BCT concluded its meeting on 26 Aug 96 and reconvened at 0800 on 27 Aug 96.

5. Brian Donaldson covered his status of document reviews. SWMU 60 is in production. He had some comments on Assembly D. We went over the comments on the CAMP yesterday. He said that the Assembly F Work Plan was final. The gas pits work plan has already been addressed. He sent the Technical Memorandum for SWMU 9 to an EPA Risk Assessor. He completed a conference call with Rob and Jim Morrison and his radiation expert. Rob promised Jim a consolidated list of possible radiation survey sites by next Wednesday. He did some research for selected remedies at other sites with similar concentrations. He will make that information available to the BCT. It dealt generally with pump and treat.

6. NAVSUPACT Memphis:

- a. Rob Williamson indicated that the new contractor for the NEX gas station tank removal and installation is planning to complete the project that the previous contractor failed to finish. Jim Morrison wanted to go look at the site to ensure that it was well protected. After inspecting the site, Jim Morrison agreed to allow the new contractor to complete the project.
- b. The base has initiated the documentation through DRMO to acquire a scrap metal contractor to buy more than 1000 drums generated during the Assembly A investigation.

c. The base has posted "Catch and Release" signs at the golf course pond. Fishing is not authorized, by regulation, in the ponds on the golf greens.

d. Rob said that he would produce a complete list of locations for the TDEC radiation team to survey no later than next Wednesday, 4 Sep 96. Per discussion with Jim Morrison, Brian Donaldson, and the TDEC Radiation team, Rob had to acquire a list of places on base where welding was performed. The primary radiation hazard was from the thorium dioxide in welding rods.

e. DYNCORP has completed the spraying of the area around SWMU #66 for their estimators to complete their estimate. A response to the government should be forthcoming within the next few days.

f. Rob indicated that he had informed Roger Aitken and Don Litton that there was no BRAC money to complete the demolition of N-121. The BCT asked Rob to check on asbestos removal in N-121. The sampling of the soil beneath the foundation for N-121 will be deferred until Rob acquires a plan and timeline for demolition.

g. Rob Williamson and EnSafe are taking before and after pictures of SWMUs 3, 7, 18, 66, and dry wells and gas pits for presentation during the October RAB meeting.

h. The base will arrange for the removal and disposal of the soil at SWMU #8 after EnSafe receives the sampling results on 5 Sep 96.

7. SOUTHDIV (David Porter):

a. David Porter completed the conference call and arranged the meeting with attorneys from EPA, TDEC, and SOUTHDIV today.

b. David needs to get with the Industrial Transfer Board; much depends on the extent of contamination at the northwest corner of the plume. He is still working on it. SOUTHDIV has money for the FOST.

8. SOUTHDIV (Mark Taylor):

a. Mark indicated that the issue about developing a proposal with rationale for sampling ground water would be deferred.

b. He indicated that all other plan work was done. He and David need to get with their budget people to get the work done.

9. TDEC (Jim Morrison):

a. The radiation survey should occur in mid-October after Jim receives the Radiation Survey list from Rob by next Wednesday.

b. Jim gave verbal approval of the workplan for the removal of the gas pits.

c. He is ready to discuss the deliverables for SWMU 1, Assembly D CSI, and Assembly F Work Plans. He has not had an opportunity to review SWMU 5, and SWMU 60 has not been submitted yet. He located SWMU 5 report and will discuss it tomorrow. The CAMP has already been discussed.

10. USGS (Jack Carmichael):

a. Jack indicated that it is not looking promising for additional work from the Kansas Geological Survey.

b. Concerning the RFI/CMS, Jack wants to wait until late September to address quick modeling of plume. He did not think the mass balance for determining volume of solvents in groundwater was going to work. Jim Kingsbury spoke with Frank Chapell. Jack did not think that we had a good handle on the "redox" (reduction oxidization). We need to continue. The BCT will speak with Frank Chapell in Dallas about several items listed. Jack will complete steps to calibrate groundwater model in late September. Concerning reasonable action levels, the State wants to determine the levels that are not going to attenuate naturally; they would look at either pump and treat or containment. These issues will come out in a CMS, which will be produced in 1997. Some of the components of the CMS are being developed now. Dr. Rouhani, according to Lawson Anderson, feels that natural attenuation is already occurring, since DCE is present.

The BCT continued with the agenda.

11. See item 2.1. above. The BCT made a site visit to the ditches and the outfall.

12. Fiscal Year 97 Execution Plan: David Porter provided members with a copy of the FY97 Execution Plan. The plan will fund \$4.6 million for Memphis. (This does not include the proposed reductions which Mr. Denzin was trying to resolve with Mark and with base environmental personnel. It only represents BRAC funding. He said that although there is money allocated to clean out the tanks, repair and lining of one of the large tanks would be the city's responsibility. We would handle the soil around the piping of the large tank as a VCA (voluntary corrective action). This will be a contract modification.

13. Mark and Lawson discussed the groundwater monitoring requirements for FY97. Dr. Rouhani will have some input into this. We will continue to monitor SWMUs 15, 21, 7, and 3. The results will be addressed in the RFI report. Brian said there was no need to continue sampling at SWMU 8 and 60 and that nothing more was required at SWMU 8. Jack Carmichael wanted to keep one well open at SWMU 8. EnSafe will develop a list of wells to be abandoned, based on input from criterion from Jim Morrison.

14. The regulators discussed review comments:

a. SWMU 1: Jim Morrison thought that they were done with this SWMU. He would like to see an executive summary based on the facts. The executive summaries are not complete enough to draw proper conclusions.

b. SWMU 3: NFA: Jack will provide a list of water wells where the USGS has been measuring. Brian wants to wait until demolition and sampling of N-121.

c. SWMU 5: Leave the wells; they may be needed to show natural attenuation. Brian wanted to hold his comments until Wednesday's meeting.

d. SWMU 60: Brian will decide after he sees the RFI report on this SWMU from EnSafe, concerning wells in the fluvial deposits and the loess.

e. Assembly D: There were some contradictions in the Executive Summary about exceeding RBCs and being authorized to lease the property. According to Jim Morrison

and Brian Donaldson, on page ix. 2nd paragraph, there were some speculative comments without justification. Lawson said that the changes would be incorporated.

f. The BCT asked EnSafe to produce green covers on their final documents, beginning on 20 Sep.

15. The BCT met with representatives from Morrison Knudsen (MK), SOUTHDIV, TDEC, and EnSafe about upcoming UST removals. The following people, in addition to the BCT members, attended this conference (less the attorneys listed earlier):

Jimmy Jones, SOUTHDIV
R.C. Davis, Jr., SOUTHDIV
Lauri Newkirk-Paggi, SOUTHDIV
Randy Wilson, NAVSUPACT Env.
B. Venky Venkatesh, MK
Richard Lesser, MK
Scott Newman, MK

Ghattas Murr, TDEC (UST Div)
John Stedham, EnSafe
Ben Brantley, EnSafe
Bob Hlavacek, MK

Scott Newman from (MK), spoke to the BCT about upcoming tank removals (non-regulated), that are 18 feet below ground. They will excavate below the water table and manage the water in frac tanks. They estimate their field work will take 2 1/2 to 3 months to complete. They will submit their work plan by 6 Dec 96. Comments were asked to be sent back to SOUTHDIV. They would resubmit to the BCT by 20 Jan 97, with their comments expected by 20 Feb 97. They would seek approval from the BCT by 20 March 97 and start work by 30 Apr 97. The BCT will receive an info copy instead of an approval copy of their work plan. The BCT regulators said they will turn their copies over to their UST personnel. Ghattas Murr will comment on the environmental portion as it relates to the sampling requirements of the State. Rick Davis and Bob Hlavacek conducted a briefing from a handout. He reassured the group there would be no excessive modifications/contingencies. After the briefing on the USTs, the meeting was concluded.

16. Lawson Anderson provided BCT members with an Assembly E Groundwater Summary and a technical memorandum on reference concentrations for the base. The BCT decided that they would discuss the Assembly E results on 10 Sep in Dallas.

17. EnSafe needs to acquire the south boundary map and name of property owner, for possible off-site sampling. EnSafe will coordinate with base, if needed. They will also conduct additional groundwater monitoring when the CTO is revised or while they are doing current round of sampling. EnSafe will arrange to have Geoprobe sampling placed on other side of Big Creek before the next Assembly E report is produced. The report could proceed without SWMU #2 information.

The BCT concluded the meeting for 27 Aug and reconvened at EnSafe's office at 0800 on 28 Aug 96.

18. The BCT asked Rob Williamson to find out if the building to west of S-75 was a brine building, what it was used for, what the process was, and what was in the open rectangular area in the grass between the two ditches west of S-75, near the open ditch. Also, he was to investigate where the origination of the PVC pipe was that drained into the open drainage ditch near the containment area west of S-75.

19. Rob Williamson, on behalf of the Engineering Division, asked the BCT if S-183 and S-184 could be demolished and the foundation removed. After brief discussion, the BCT agreed to permit demolition of those buildings.

20. Dr. Rouhani presented the results of his analysis of the existing investigation data on the contaminated groundwater on the Northside. The following is a summary of his presentation:

- a. We are dealing with isolated hot spots that are hard to track.
- b. If we put a pump in the middle of the hits south of N-126, we would probably not get any trace of TCE.
- c. The hot spots have a size of about 100-150 feet (the longest axis).
- d. Something is attenuating these plumes.
- e. The lower fluvial aquifer data were more consistent.
- f. The 1100 ppb is probably a lab error.
- g. Soluble TCE may be 1% or 11,000 ppb; we are way below that.
- h. If you remove the 1100 ppb reading from the data, then there are a "sea of norms," associated.
- i. If the receptors are protected, then additional sampling would just be a matter of curiosity.
- j. The plume is moving, but the degradation is eating up the boundaries, so the hot spots appear to remain in place.
- k. The lower fluvial is going to the west; the Cockfield water is moving to the north.
- l. We are probably dealing with aerobic conditions, instead of anaerobic conditions. There is no vinyl chloride; we are dealing with daughter products based upon oxydization and hydroloysis factors. Around the edges of the plume, anaerobic conditions exist; around the sources, there are aerobic conditions. Anaerobic conditions means that they will be preserved. He expected to see anaerobic conditions.
- m. There is not correlation between the upper and lower fluvial aquifers, possibly as a result of direct introduction by the dry well. The aquifer is unimpacted because of the multitude of isolated hot spots. Pump and treat is not viable; continue to monitor hot spots, and possibly use some form of enhanced bio-degradation, i.e., introduce oxygen.

21. Dr. Rouhani made the following assessment about the Turkey Shoot area:

- a. The dimensions of this area are 100' X 100'.
- b. There need to be some additional sampling in the area, somewhat off-center to the right. Filter out the soil samples to remove lead pellets from the samples.
- c. The impacted area is probably not much larger than sixty feet where the pellets dropped. We need to take a confirmatory sample in the woods at a greater range.
- d. Dr. Rouhani will have his written report out by 6 Sep.

22. Following Dr. Rouhani's presentation, the BCT reconvened to discuss other open issues. Larry Hughes, EnSafe, had been looking at the three-dimensional view of the plume. He should have something by approximately 10 Sep. After considerable discussion, the BCT will take Dr. Rouhani's work and Frank Capelle's input, and make a decision about whether to proceed with the RFI report without the results on the wells.

NSA MEMPHIS BCT MEETING MINUTES
SEPTEMBER 1996

Minutes from BCT Meeting in Dallas at Hyatt Regency Hotel, 9/10/96, started at 1000, ended at 1730.

Attendees: David Porter, Mark Taylor, Jack Carmichael, Lawson Anderson, Robert Smith, Rob Williamson, Jim Morrison, Brian Donaldson.

(Notes follow order of items on BCT meeting agenda)

Follow-up Assignments

Lawson Anderson (1000-1045):

Larry Hughes is working on 3D map--he originally thought plumes were shaped like "pencils"; now rethinking shapes as more like "fans"; map should help in justifying additional wells to NW of SWMU 7/apron area; Larry H. has also been looking at geology, different solvent compounds detected in wells, how to break up plumes, and trying to fingerprint plumes based on daughter products.

Jack C. has given list of wells USGS uses for water-level measurements to Lawson; Jim Morrison is preparing a checklist with items to consider when deciding which wells will be selected for abandonment.

SWMU 60 and 8 reports are out to SOUTHDIV and USGS presently.

N. Fuel Farm Tech Memo--will go out from E/A&H ~9/16 to BCT; David P. said Charleston Shipyard Detachment may be used to clean tanks 336 and 337.

Environmental Update--Keith Johns is working on; David P. has seen draft; Keith will FedEx draft to BCT here in Dallas for review and comments to be returned to David P. by Friday, 9/13.

Rob W./E/A&H are taking lots of pictures of SWMU 66, and tank, gas pit, and dry well removals; Omega is also taking pictures of their work.

PCB Samples at SWMU 57--Robert S. resampled where DynCorp took initial sample at outfall; results are 270 ppb at outfall; 1,900 ppb in ditch about mid-way between outfall and concrete pad.

Lawson is working on proposal & map for GW monitoring strategy (coincides with well abandonment).

Extent of fuel contamination at NW corner of SWMU 60 is described in SWMU 60 report; basically, removal will consist of dig and screen using backhoe and field IR until clean dirt is

encountered; will be cleaned to less than or equal to 100 ppm (TDEC cleanup level); Shipyard Detachment may cleanup this site???

TCLP Results at SWMU 8--all non detects; NSAM, PW-ED will arrange for removal to BFI landfill as non-hazardous waste; DynCorp will load and ship to BFI; work will take place no sooner than 45 days from now--probably a Nov/Dec timeframe.

Fish Tissue Sampling--most is done; at Golf Course Lake, only bluegills and one catfish have been caught--no bass; at Navy Lake, bass, crappie, and bluegill have been caught; at Tonya Lake, bass have been caught but need a catfish; at the Stable Lake, BIG catfish have been caught (straightened hooks!); this lake will be sweep seined, fish caught for study are being gutted, tagged, and frozen; will wait to ship to lab when all fish are caught (should be completed by 9/13).

Southside Aircraft Parking Areas--no notes on this.

Land on South Side of Big Creek Adjacent to SWMU 2--Jack C. explained that part of land is TDOT, part is owned by Mr. Henry Jones; Jack will arrange for himself and Tim Diehl of USGS in Nashville (working on wetlands mitigation study SE of SWMU 2) to come to Memphis and meet with Rob W./Robert S. and recon area for access locations for Geoprobe survey at selected locations south of Big Creek; recon will probably take place in mid-October.

E/A&H is proceeding ahead with Assembly E report.

CMS work plan being started.

RFI/CMS responsibilities--no notes on this.

Lawson's list of deliverables status: (not on agenda).

-SWMU 10 report--Robert S.'s next priority.

-Dr. Rouhani--Lawson received draft of his report; no additional work at SWMU 7 is recommended; one more sample at Turkey Shoot was suggested for closure.

-SWMU 5 report--E/A&H waiting on EPA and TDEC comments.

-SWMU 1 report--being revised week of 9/9.

-Assembly B report--being revised week of 9/9; will be distributed 9/17.

-Assembly C report--E/A&H waiting on TDEC comments.

-CAMP--Lawson will finish and distribute week of 9/16.

-SWMUs 15 and 21--E/A&H has completed drafts; Lawson will work on finishing and distributing soon.

-Assembly F--E/A&H needs to schedule work; work will consist primarily of Geoprobe; may be able to do additional work at SWMU 2 at same time???.; estimated start date is a few weeks from now.

-Assembly G & H--E/A&H will resume on these work plans now since others are out of the way.

-GW Monitoring Report--a draft is available now; Joe Matthews at E/A&H is working on.

-SWMU 2--E/A&H has resampled selected wells showing high VOCs/metals; these samples were on FedEx plane that burned in Boston; E/A&H is negotiating with FedEx for cost reimbursement; may be costs associated with resampling; sampling strategy was designed to determine difference between VOC hits during DPT work and first round of well sampling; this will include analyses both locally at ETC and at standard lab (NET), as well as comparing results from low-flow and 3 casing volumes purging before sampling.
-SOUTHDIV/E/A&H CTO being modded for extra \$ for Geoprobe, additional wells, long-term GW monitoring.

Brian Donaldson (1045-1050):

-Tech Memo for N. Fuel Farm--hasn't received yet.
-SWMU 9 Tech Memo--Brian D. still looking for EPA risk assessor; may combine with SWMU 60 when he gets it for RA to look over both at the same time.

Rob Williamson (1050-1110):

-DynCorp capping of tank pit at SWMU 9--should be done in about one week; service order from PW-ED has been issued.
-Assembly E IDW--waiting on characterization results from E/A&H before disposal.
-Rob W. has provided Jim M. with a list of potential sites for radiation survey--Jim M. had questions about the large number of sites on the list; Rob explained that the list was generated from the radiation survey questionnaire; may break up BRAC and DERA sites and do only BRAC sites now to expedite work???. Jim M. said that work for either just BRAC or both BRAC/DERA sites may take place late October???.
-SWMU 66--PW-ED has given go ahead to DynCorp for cleanup of debris.
-Rob W. has "before" pictures of SWMU 66; Robert S. and Rob will coordinate w/ Omega for pictures they are taking at their sites.
-SWMU 8--PW-ED will initiate deliver order to get dirt mounds excavated now that sample results are available showing dirt is non-hazardous.
-PVC pipe at SWMU 57--Rob W. talked with person at S-75; he was "not too definitive" according to Rob; Rob invited the BCT to go out a take a look at this pipe; meanwhile, he will investigate the pipe further; may have been source of PCBs at S-75 because there appears to be a drain in S-75 that leads to the PVC pipe???

David Porter (1110-1130):

-David P. is still working on plan for parcels delineation for property transfer; Navy wants to excess N-7 hangar; Captain Mallory wants Horse Stables as long as possible; area where elevated water tower is also will be transferred, as will land with Northside production wells, but utilities will be retained (including water tower and wells).
-Steve Beverly, SOUTHDIV attorney, has investigated Tennessee law and has found nothing to prevent innovative transfer; Steve found several incidences where land has been transferred and subsurface resources kept; Steve is of opinion that we should wait on new EPA guidance on transfers of contaminated Federal property which should be issued about 10/1; David said he

thought new rules will be included as part of DoD appropriations bill, and that they will be part of CERCLA amendments; David also said that there is a question of whether these new laws will cause Navy to lose liability???. Jim M. said TDEC attorneys are talking about possibility of Navy being issued Natural Resources Damages (NRD) penalties and fines in the millions of dollars; BCT discussed that this would only be the case if Navy did nothing to remediate site???. to be determined soon???

Mark Taylor (1130-1131):

-Mark T. and Lawson are working on developing a proposal for ground-water sampling; still need input from Jim M. on checklist for well abandonment.

Jim Morrison (1131-1135):

- Rad survey will probably happen late October.
- Jim has completed review of SWMU 5 report.
- Jim has completed review of Assembly C report.
- Tech memo on N. Fuel Farm hasn't been released in draft form yet
- Jim is developing a checklist of criteria for abandoning wells--will be a list of questions for considering future uses of wells; he will have available by end of September.

Jack Carmichael (1135-1155)

- List of observation wells needed for model, water-level measurements, other purposes by the USGS provided to Lawson at August BCT meeting.
- Property issues for expected work south of SWMU 2 and Big Creek discussed earlier this am.
- Didn't discuss RFI/CMS items except to revisit possibility of additional seismic work in area NW of SWMU 7/apron area--Jack talked with Rick Miller of Kansas Geological Survey; he said that costs shown in second proposal sent to USGS (two options, 1st about \$30K and 2nd, about \$60K) are entirely negotiable; he said he could conduct reduced seismic effort NW of SWMU 7 area to better define faults in this area; cost reduction would be associated with fewer shots and wider geophone spacing, as well as reduced footages of seismic line(s); he said they could possibly do something that would contribute to the project for ~\$10K, especially since if fault was identified in field under any plan, they could stop at that point, thereby reducing costs; he was still of the impression, based on feasibility study, that valuable information on stratigraphy and faulting could be obtained in the area NW of SWMU; he also still felt that it would be difficult and cost prohibitive to try seismic lines through the concrete in the area of interest, but might be able to lay out lines along grass areas nearby that would add some information about stratigraphy in the SWMU 7/apron area; he said basically that the BCT needs to formulate a problem (e.g., how could seismic be utilized to assist in defining the stratigraphy in area where contamination has been identified, or in a downgradient location and then extrapolated back to the area of concern?) and he would then try to consider a solution; he also said that if two deep Rotasonic stratigraphic test holes that have been talked about by the BCT were drilled, he would welcome the opportunity to come and run downhole seismic surveys in them for only the price of fuel to and from NSA Memphis, if logistics could be arranged (timing, agreement with drillers,

etc.); he also said that, normally, the sequence of seismic work and test-hole drilling would be to run the seismic lines first, then use the data generated from the seismic survey(s) to assist in positioning the test holes; BCT needs to discuss and come to decision on this issue.

Lunch break (1155-1340)

Resumed meeting, same place, same attendees

Additional Items not on Agenda (1340-1500):

-Pipeline at Gas Pits--while removing SW-most gas pit along apron, workers uncovered a new pipeline that was previously unknown; estimated to be ~825 feet long and extending ~100 feet under apron; appears to be the supply line that made loop from N-94 along apron and supplied fuel to pits; it is a 6-inch line that is buried 3-4 feet deep; uncovered end at SW pit was full of sludge; unknown before because line was not shown on any drawings; PW-ED is considering two corrective scenarios--flush and cap, or remove completely; may be difficult to excavate section under apron; Jim M. asked what proper procedure for closure under RCRA was; Brian D. suspected flushing, however, this would depend on integrity of line apparently, there is also a 2-inch line with the 6-inch line that reportedly was used for supplying lube oil to the pits; the work plan being operated under calls for flushing 3 volumes through known 10-inch line from N-94 and capping; InSitu-Form and video survey suggested by some BCT member???: Mark T. will call Jim Heide this pm for more info on line; Lawson said this first pit (SW pit) had been removed and filled with gravel--samples collected for confirmation on this pit also were on ill-fated FedEx plane, so there are no analytical results for this pit; David P. suggested digging up part of pipe under grass may be option, but would represent a change order to the contract; suggestion made by BCT member (who?) that maybe section under grass could be excavated and part under apron could be flushed and capped; Rob W. estimated that about 3/4 of line is under grass; BCT acknowledged that sludge should be sampled, but Omega is on-site now and decision needs to be made fast; Robert S. said that as of Friday, 9/6, there were still 4 of 7 pits remaining; suggestion made that waste oil forming sludge could have come from one of the pits excavated a few years ago which apparently contain waste oil and sludge excavated, or Lawson said it could have come directly from N-94; Robert/Mark tried calling PW-ED to talk to Randy W. or Jim H.; neither were there so left message for Jim to return call; BCT agreed at this point that more info is needed before decision can be made on this issue; Robert S. called and talked to Tim Moore (E/A&H) at E/A&H trailer--Tim said line probably is partially full with water and sludge; he hadn't seen much of the work at the pits, but did see end of line on northern row of pits where it comes into west-most pit which is full of water; Tim assumed that pipe has some water in it based on this; Tim said that there have been PID responses in all pits excavated so far; BCT moved to table issue until more info is obtained.

-On issue of missing confirmation sample from excavation of 1st pit, decision was made to evaluate analytical results from all pits and look at TCLP results from roll-offs of excavated dirt to determine if Geoprobe sampling should be conducted at this pit (and others?) at a later time; BCT agreed to this plan.

-Jim M. brought up issue of over-excavating more than the 2 feet around each UST/gas pit removal as called for in present contract; apparently, difficult to have this contingency with

Omega/fixed-price contracts; David P. said he thinks they may have negotiated for costs associated with extra excavation should it be needed, but not as part of the current contract with Omega.

NewFields Conclusions for SWMU 7/Apron Area (1500-1550):

-Dr. Rouhani's conclusions for SWMU 7/apron area and Turkey Shoot have been presented to Lawson in a draft report (BCT has not seen); Lawson said basically, Dr. R. recommended no further work at SWMU 7/apron area other than that needed as part of a point of compliance monitoring system; the BCT then went through a lengthy discussion of these recommendations and decided to wait to see what might be learned from the EPA Bioattenuation meeting, plus what Frank Chapelle said in meeting scheduled with him for Thursday pm here in Dallas; BCT generally agreed that POC monitoring program should be followed, including monitoring of ground water from Memphis aquifer production well(s) periodically to fulfill TDEC concerns; BCT motioned to table this discussion for now; as for Turkey Shoot, Dr. R. suggested one additional sample to be collected in the area where the high lead sample was collected to confirm that this was not a pervasive problem.

Rob W. on issue of Southside Battery Shop next to Equipment Maintenance Facility (1550-1625):

-Rob said that drain found in Building S-197 leads outside, but doesn't connect to sanitary sewer based on observations made by Jim Heide; Rob said site was WWII vintage; now is a Gray Area; Lawson said that SWMU 38 sediment samples in ditches leading from S-197 had elevated Cu and Ni???. will look at this site closer under DERA Southside Gray Area investigation; Robert S. asked if additional work at this site would slow down transfer or change "caretaker" status for this building; Rob W. said he didn't think so; Rob said he would investigate the history of this building further.

-Other issue Rob brought up was the PCBs in sediment near SWMU 57; Robert S. clarified that 1,900 ppb concentration was for E/A&H sample at offbase ditch outfall and 270 ppb concentration was for resample in onbase part of ditch (these concentrations had been reversed in earlier discussion this am); Lawson said that RBC for PCBs in soil/sediment is 83 ppb and SSL is 21 ppb; Rob said Tonya Barker wanted to know about posting these areas with signs; the problem really exists with the results of DynCorp's sample results from the outfall (offbase) which was 114 ppm; Lawson suggested additional study of area under Assembly F; Brian D. will talk to PCB person at EPA to clarify clean-up levels--there is question among members of BCT as to what cleanup levels are for PCBs in soil/sediment, thus, what posting requirements are; Jack C. asked when DynCorp sample was collected--Robert S. replied July 26--Jack then suggested that it may be worthwhile to see if ETC (lab doing DynCorp analysis) still has sample for rerun, or still has chromatogram on computer--Robert will check on this; BCT agreed to see what Brian/Robert can find out, then act judiciously; Jim M. expressed concern that 1,900 ppb conc. in soil is 22 times RBC and what action would be taken based on this?; Lawson said that RBC's may not be appropriate since they are for chronic, 30 year exposure, and this isn't really a concern; he suggested maybe calculating a site-specific SSL would be more appropriate.

Continuing Agenda Items (1625-1655):

Assembly E Results Discussion:

- Lawson handed out Assembly E GW results at August BCT meeting.
- Lawson handed out surface-soil results for SWMUs 2, 9, and 59 for BCT to scan and discuss.

SWMU 2--at SWMU 2, PCBs, pesticides, and lead at a couple sites exceeding RBC/background reference concentrations; PAHs at NW corner of site may be from skeet shooting at range; Jim M. thought there is an exposure potential from area down sight from shooting range; said presumptive remedy for landfills is capping; Brian D. asked whether an RA wouldn't remove some of the compounds?--Lawson said an RA should be done for this site, but it would be difficult to knock off the PAHs if an RA is done; BCT will have to decide what to do with SWMU 2 because of exposure potential; need to look at PAHs in northwest corner to see if these could be result of skeet; Lawson will investigate.

SWMU 9--at SWMU 9, one PCB hit, one TPH-DRO hit, and one BaP hit; fish samples collected from lagoons had DDE and PCBs; Lawson feels plugging these numbers into a RA won't really identify the problem; Jim M. said fishing has already been banned; also commented that SWMUs 2 and 9 would be "long-term problem for Navy".

SWMU 59--at SWMU 59, pesticides are a problem in surface soil at a couple locations around building; Jack C. asked about correlation of new data with those collected as part of earlier RFI for soil; Mark T. said he wasn't sure and would have to compare; new data show that top 2 feet of soil is where problem is, except that deeper soil zone from 10-12 feet at one location had PAH hit; building will be removed--may plan for soil removal at time building is demolished; hot spots in grass area outside building, soil zones are clean beneath asphalt, so soil removal would be restricted to grass area.

DERA Execution (1655-1710):

-Mark T. handed out schedule and matrix of costs for FY97 and beyond; estimates cover all projected DERA activities except for Gray Areas on Southside; no specific line items for further work at Assembly E sites (SWMU 2, etc.); Brian D. asked where extra work at some DERA sites was covered in this plan and, if not line-itemed, how easy would it be to secure additional funding?; Mark said funding for additional work at Southside sites should not be a problem, and that numbers will likely change in 6 months; Mark asked whether he should add a budget item for a fence around SWMU 2; BCT thought this would be a good idea to restrict access to this site while investigations and possible remediation is conducted.

Jim M. Comments on SWMU 5 and Assembly C Reports (1710-1715):

- SWMU 5--he will finish reviewing report tonight.
- Assembly C--Jim said Brian D. had done a thorough job in his review of report and that he didn't really have anything to add.

-On a related note, Jim requested that a summary be prepared for each SWMU describing why NFAs are being sought; Lawson said he could add to CAMP revision which will be distributed next week (9/16).

Discussion of AFFTA Closures (1715-1725):

-Davis P. said time was nearing for process closure of the Carrier Deck and AFFT facilities; plan is to remove ASTs at the AFFT facility; question for BCT is whether anything should be done with concrete slabs at SWMU 5 and Carrier Deck?; David said that City of Millington has said that they might want to bring the aircraft crash section of the State fire school into these facilities, probably to the Carrier Deck facility; suggestion was made that BCT should find out more about what the State school's plan was before acting on cleaning of either or both facilities.

GW Monitoring Requirements for Next Year (1725-1726):

-BCT agreed to table this discussion until after Mark T. and Lawson have had a chance to draft memo with recommendations and distribute to BCT next week (9/16).

Other Items:

Environmental Update--Keith Johns, E/A&H, is faxing a draft of this document to the hotel in Dallas tonight; David P. asked that BCT review and respond back to him with comments by end of meeting in Dallas (9/13).

Other Issues Tabled:

-Dr. Rouhani's recommendation for no additional wells at SWMU 7/apron area--will resume discussions after EPA symposium and meeting with Frank Chapelle.

-8A contract for pipe and gas pits work--may discuss further this week in Dallas after more information on this matter is obtained from PW-ED.

Final Note. David P. brought up matter of next BCT meeting scheduled for October 21-23 will coincide with next RAB meeting (Tuesday night, 10/22); Lawson has list of possible agenda items for RAB meeting from August BCT meeting; they include:

GW update--3d model, Dr. Rouhani results, flow model

Assembly E update

Environmental Update

SWMU 66 before and after photos and status

VCA site before and after photos

Fish tissue study

Bioremediation

Meeting adjourned at 1730