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MEMORANDUM

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FROM: Lawson Anderson, E/A&H

SUBJECT: Project Update #12; NAS Memphis RFI; Millington, Tennessee; CTOs-094/106

DATE: June 6, 1995

ASSEMBLY B FIELD WORK: Test results for sediment samples collected from the drainage ditches associated with SWMUs 4, 6, 10, 31, and 38 are due from lab this week. Results of the DPT survey at SWMU 40 (Salvage Yard No. 1) indicate shallow soil and groundwater petroleum contamination in the vicinity of the former service station. Several petroleum constituents (i.e., naphthalene at 25 ppb, xylene at 10 ppb, and toluene at 4.6 ppb) detected at the top of the fluvial deposits. The toluene was detected in the 4-inch fluvial deposits well installed for water level measurements by the USGS. A data summary table and sample location map have been prepared for distribution at this week's BCT meeting.

ASSEMBLY C FIELD WORK: DPT surveys have been completed at SWMUs 15 (N-94 Tank Farm), 21 (N-10 UWT), 26 (N-102 Battery Acid Neutralization Unit), and 62 (M-21 Arresting Gear). The last Assembly C site, SWMU 27 (Northside Sewage Treatment Plant drying beds) is being sampled now and should be completed tomorrow or Thursday. Data summary tables and sample location maps have been prepared for distribution at the BCT meeting. Briefly, sampling results for the Assembly C SWMUs are as follows:

SWMU 15 — With the exception of one carbon tetrachloride hit of 43 ug/L in fluvial deposits groundwater, the contamination appears to be primarily petroleum-related. High concentrations of benzene have are widespread in both the shallow loess groundwater (13 to 3,200 ug/L) and in the upper fluvial deposits (14 to 780 ug/L). Loess groundwater was obtainable at only 5 of 20 sampling locations.

SWMU 21 — Carbon tetrachloride was detected in fluvial deposits groundwater at 3 of 6 sampling locations. Concentrations ranged from 15.2 ug/L to 163 ug/L. Dichlorofluoromethane was also detected at two of the locations at concentrations of 5.4 and 6.5 ug/L. Contamination was not detected in the shallow loess soil or groundwater.

SWMU 26 — Field work was conducted at this SWMU on Monday of this week. Samples were shipped to an offsite laboratory for metals analysis.

SWMU 27 — Field work (Geoprobe sampling) began at this SWMU today and should be completed tomorrow or Thursday. VOC analyses are being conducted at the onsite laboratory, while metals analyses of shallow samples are being shipped to an offsite laboratory for analysis.

SWMU 62 — With the exception of one hit of n-propylbenzene (5.3 ug/kg) in soil at a depth of 20', contamination was not detected at this site. Six locations were sampled at three depths.

ADDITIONAL FIELD WORK AT SWMU 7: The monitoring wells at this site were resampled the first week of May. Partial results (4 of 9 well clusters) have been received, with the remainder expected soon. Test results are essentially identical to the first round results. Ten additional locations were sampled with the DPT rig last week to fill data gaps identified after review of the first round groundwater monitoring data. Chlorinated solvents were detected at 6 of the 10 locations at concentrations typical of those already seen onsite. The only real surprise was the detection of tetrachloroethene (PCE) at 174 ug/L east of Building N-12 and south of the elevated water tank. A data summary table and map have been prepared for the BCT meeting.

RESAMPLING OF WELLS AT BACKGROUND LOCATION 5: The monitoring wells at BG5 (along Navy Road) were also resampled because tetrachloroethylene (PCE) was detected at 17 ug/L in the upper fluvial deposits and 22/24 (duplicates) ug/L in the lower fluvial deposits during the first round of sampling. Second round results were 19 ug/L in the upper fluvial deposits well and 27/28 (duplicates) ug/L in the lower fluvial deposits. The second round results were received last Thursday, the day the DPT rig was scheduled to demobilize. With SOUTHDIV's concurrence, E/A&H requested that the DPT subcontractor collect four groundwater samples from the top of the fluvial deposits at BG5. One sample was collected at the well cluster and the others were collected 50 feet east, west, and north of the cluster. PCE was detected only in the sample collected 50 feet east of the cluster (toward SWMU 5).

CBU EYEWASH DRAINAGE DRUM: This drum contained about three inches of clear liquid that appeared to be water. A sample of this water was tested at the onsite laboratory. Nothing was detected.

GRAY AREA INVESTIGATION REPORT: The revised *Gray Area Investigation Report* should be distributed next week upon completion of Assembly C field work.

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FOLLOW UP GRAY AREA WORK PLAN: The draft version was distributed May 31.

SWMU 45 INTERIM MEASURE: Fluvial deposits groundwater samples were collected from four locations around the pit using the DPT rig. The samples were analyzed for VOCs by the onsite laboratory. Nothing was detected in the samples. The previously excavated soil has been taken to the BFI North Shelby Landfill in Millington. During removal of the soil from the pit, the petroleum odor became very strong. One corner of the pit was excavated to a depth of 8 feet with no apparent decrease in contamination. A sample was collected from this depth from the backhoe bucket and taken to a local laboratory for rush analyses (GRO-TPH, DRO-TPH, VOCs, and SVOCs). Results were received today. GRO-TPH was 54 mg/kg, DRO-TPH was 41.7 mg/kg, and no VOCs or SVOCs were detected.

DATA VALIDATION: All Assembly A soil data has been validated. Validated groundwater test results for three of seven sample delivery groups are expected tomorrow. The remainder of the first round groundwater sampling results are due by the last week of June.

DISTRIBUTION OF NEW BASE MAPS: EPA (tape), USGS (tape), and NAS Memphis (CD) copies should be ready tomorrow (Wednesday). Preparation of deliverables has been a lengthy process because it takes 6 hours to copy one CD. The mapping vendor is scheduled to deliver the aerial photos next week. These will be used to produce additional sets of 24"x 30" contacts for distribution. Hard copies of the base map will also be provided; however, the first set of hard copies will not include street names or building numbers. Creation of a CAD file with this information is scheduled for completion by this Friday. Copies of the file will be distributed when it is complete. New hard copies of the map will also be distributed to those that are not receiving electronic versions of the map (e.g., TDEC). SOUTHDIV's copies of the deliverables will be hand-delivered to Charleston next week.

INVESTIGATION DERIVED WASTES: E/A&H has prepared a memorandum proposing that all Assembly A soil/drilling mud IDW be characterized as non-hazardous based on 40 CFR 261.3(a)(2)(iii) and the USEPA Contained-In Policy. A copy of this memo will be distributed at the BCT meeting.

PRELIMINARY RISK EVALUATION FOR AIRFIELD: A PRE has been prepared for the airfield parcel FOSL. A copy will be provided at the BCT meeting for review and discussion.

ROTASONIC DEMONSTRATION RESULTS: Test results for the monitoring wells installed at SWMU 5 using different installation techniques indicate no carry-down of petroleum contamination regardless of technique used. Copies of the results will be provided at the BCT meeting.

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COMPOSITE SAMPLES FROM BACKGROUND DRUMS: Analysis of composite samples from background IDW drums revealed the following results:

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| BG1 | Dieldrin | 9 ug/kg |
| BG2 | Dieldrin | None Detected |
| BG4 | Dieldrin | 30 ug/kg |
| BG5 | Dieldrin | 56 ug/kg |
| | SVOC | None Detected |

PROPOSED BACKGROUND DETERMINATION FOR INORGANICS: E/A&H has prepared a technical memo for distribution at the BCT meeting proposing background metals concentrations in soil. The memo includes an evaluation of Assembly A soil sample results as compared to RBCs and 2X the background concentrations. The proposed background determination for inorganics in groundwater will be completed by next week.

DIELDRIN RISK MANAGEMENT: E/A&H has prepared a technical memo discussing the dieldrin issue. The memo will be distributed at the BCT meeting.