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NOTES FROM BASE REALIGNMENT AND CLOSURE TEAM MEETING DATED 7 MAY 2001
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6/6/2001
CH2MHILL

May 2001 BCT Meeting Minutes - Revised Charleston, South Carolina

PREPARED FOR: Charleston Naval Complex BCT
PREPARED BY: Casey Hudson
DATE: June 6, 2001

The May 2001 BCT Meeting was held at the Charleston Naval Complex Library in Charleston, South Carolina. The meeting began at 1315 on May 7, 2001, and concluded at noon on May 9, 2001.

Monday May 7, 2001

AOC 700 IM Soil Excavation

Paul Favara presented a revised soil excavation boundary based on soil samples collected to characterize the nature and extent of arsenic in soil. The presentation included the proposed areas of surface and subsurface soil excavation. The target arsenic cleanup level for surface soil at this site is 14.2 mg/kg. In addition, 5 additional soil samples were collected in the center and in four corners of the proposed soil excavation. The four corner samples are being analyzed for pesticides. Soil and subsurface soil samples collected from the center of the proposed excavation detected one pesticide at a concentration greater than the method detection limit.

Since the scope and intent of the approved IM have not changed, SCDHEC indicated that the work should proceed as proposed. Susan Peterson inquired for the need to install an additional well following the soil excavation. Paul Favara indicated that, since groundwater samples from other wells at the site have not exhibited arsenic concentrations greater than the MCL, then an additional well is not required. There are several wells in the vicinity of this area, none of which have had arsenic concentrations greater than the MCL. CH2M-Jones indicated that the planned soil excavation would be scheduled concurrently with the excavations at SWMUs 42 and 44. CH2M-Jones will prepare an IM completion report following the soil excavation.

SWMU 166 – MIP Pilot Study Update

Casey Hudson and Paul Favara presented the results of the MIP Pilot Studies and interpreted areas of TCE DNAPL targeted for source area treatment. CH2M-Jones has concluded that the site conceptual model for the DNAPL area at SWMU 166 is somewhat different from that which was assumed, based on the previous work in the RFI report. CH2M-Jones had assumed that a single large DNAPL mass area was present. However, based on the results of the MIP and DPT work, it appears that several smaller but distinct DNAPL source areas are present. CH2M-Jones will likely modify the proposed DNAPL source area remediation approach based on this data. Rather than a six-phase heating method, an alternate technology that is better suited to these site conditions (such as in situ

oxidation) will likely be used. The results of the pilot study will be presented as an appendix to the IM Work Plan for source area treatment.

SWMU 39 – Update of Completed Field Work

Bill Elliot presented a figure depicting the interpreted areal extent of dissolved 1, 2-DCE, PCE, and TCE at the site with the three proposed HRC injection well locations. The western injection point is intended to cut off the dissolved plume prior to potential offsite migration from the SWMU boundary. Source area reduction is the intent for installing the northern injection point; monitoring the dissolved plume in the center of the contaminant area is the focus for installing the injection well in the middle of the site.

Two groundwater samples were collected from each of the ten Geoprobe locations installed at the CNC western boundary. Based on the results, the western injection grid has not changed in the intermediate zone (approximately 27 feet below land surface) due to the contaminant concentrations detected in Geoprobe 039GP044. VOCs were detected in the deeper portions of the aquifer at points 039GP039 and 039GP047, which are immediately east of groundwater wells 039GW022 and 039GW022D. This area will not be targeted for groundwater treatment under the IM.

Bill indicated that monitor wells are currently being installed upgradient and downgradient of the western HRC injection grid. Mansour Malik was concerned about potential impacts during the HRC injection from petroleum hydrocarbon constituents in the wells along the western property boundary, and the potential of chlorinated solvents in the wells in the northwest corner of the CNC or SWMU 39 boundary. Bill also indicated that he expects the range of groundwater treatment due to HRC injection to follow the same rate as the groundwater flow. HRC injection, proposed within the next 2 weeks at the site, will accelerate the dechlorination of all chlorinated solvents, including vinyl chloride. Bill indicated that within 6 months, CH2M-Jones would evaluate the effectiveness of the HRC injection pilot study through the collection of groundwater samples.

During the discussion Mansour Malik presented Bill Elliot a figure depicting diffusion sample locations with analytical results from a marshy area located approximately 1,000 feet downgradient (i.e., south) of SWMU 39. The diffusion sampling was conducted by the former Naval Detachment in the marshy area, which is located west of SWMU 42 and off the Charleston Navy Complex property. Mansour was concerned that the results of the sampling investigation could impact the HRC pilot study at SWMU 39. Mansour and Bill discussed the investigation results during the BCT meeting and Bill concluded that there was no potential impact to the HRC pilot study activities at SWMU 39.

SWMU 196 – Update of Subcontractor Bids for In Situ Chemical Oxidation

Paul Favara provided an update of the bids received from three in situ chemical oxidation contractors. The contractors were differentiated by their proposed delivery method, which included injection wells, pneumatic fracturing, and an alternative approach for pneumatic fracturing. Paul indicated that the contractor will be selected by the end of May, and the draft Phase II IM Work Plan to implement in situ chemical oxidation will be submitted to SCDHEC near the end of June.

Approximately 30 days of injection are likely to occur by the end of the summer, with a target 90 percent contaminant reduction. The contractor scope of work will provide for a

second injection in areas partially or not impacted by the chemical reaction from the first injection. The second injection would take place once the results of the first injection are evaluated, which will be approximately 60 days after the initial injection. CH2M-Jones will then prepare a CMS to address remaining dissolved contaminant plumes. Potential remedial approaches include in situ bioremediation or additional in situ chemical oxidation events.

SWMU 25/70 – Update of Hexavalent Chromium in Groundwater

Paul Favara presented an update of the field activities completed to investigate the source area of hexavalent chromium and cadmium in groundwater. Analytical data were presented from the Phase I IM Work Plan field activities that included the advancement of vertical profilers and groundwater samples collection. Localized hexavalent chromium at 1,000 mg/L at a depth of 23 - 30 ft bls in the area of 70GW01D was discussed. Paul indicated that the proposed Phase II IM Pilot Study in the area of the 70GW01D could include pneumatic fracturing followed by zero-valent iron addition or a possible biological reduction technology such as molasses injection.

Charleston Air Force Offsite Investigation Results

Tony provided a brief review of the results from the offsite groundwater investigation on the Charleston Air Force property. Based on the low-level detected chlorinated solvent concentrations of less than 100 µg/L, the Air Force has been charged with evaluating the local groundwater flow direction on its property and with characterizing the nature and extent of the dissolved contaminants through the collection of additional groundwater samples. It was concluded that the low-level concentrations of VOCs in groundwater in the northwestern corner of the Navy property would be addressed by the Navy rather than the Air Force.

Tuesday May 8, 2001

AOC 607 IM TCE Source Area Delineation Results

Casey Hudson presented the results from the initial PCE source area delineation activities completed on April 11 and 12, 2001. Based on the analytical results from the samples collected during the investigation, the interpreted areal extent of potential PCE DNAPL has extended southwards inside Building 1189, and south-southeast of Building 225. To further evaluate the extent of PCE DNAPL, a second source area investigation consisting of at least 9 MIP/DPT points is proposed in these areas and in an area immediately north of Building 1189. The well request and the IM Work Plan for Phase II PCE Source Area Delineation are scheduled for submittal to SCHDEC the week of May 14, 2001.

Mihir Mehta was concerned that the initial source area investigation would impact the schedule for delivering the IM Work Plan for six-phase heating (SPH). Concurrently with interpreting the results from the Phase II source area delineation activities, CH2M-Jones will prepare and submit its draft IM Work Plan template to SCDHEC for review. Independent of the final SPH layout and design, which will be submitted with the draft IM Work Plan, this template will present contingency plans, project management and organizational structure, operations and monitoring approach, and sampling and analysis plan.

AOC 518 IM Work Plan Comments

Paul Favara presented a brief overview of recent events that included the collection of soil samples as part of an IM work plan to evaluate lead in surface and subsurface soil. The soil sampling event characterized surface and subsurface soil at the perimeter of the former soil excavation area prior to any additional soil excavation activity. Additional samples were collected to verify if an additional area(s) has to be addressed. Eleven surface and subsurface samples were collected around the perimeter and center of the site to evaluate the extent of lead in surface 0 - 1 ft bls and subsurface soil 1 - 2 ft bls. The results were compared to the residential RBC value of 400 mg/kg. Only one subsurface soil sample had a detected lead concentration above 400 mg/kg.

SCDHEC has no comments on the IM Work Plan; however, there are comments on the CMS Work Plan previously submitted, which need to be addressed by CH2M-Jones. EnSafe developed a site-specific SSL for lead at 330 mg/kg in the RFI. However, CH2M-Jones recommends using the EPA-recommended 400 mg/kg SSL. Mansour Malik is concerned about the potential lead present in the groundwater. However, CH2M-Jones indicated that, since the subsurface soil is not impacted, the groundwater would not be impacted as a result of leaching. CH2M-Jones will revise the CMS Work Plan to address the lack of subsurface soil contamination. The IM completion report will provide the sampling results and recommend the site for NFA.

J-Flag Analytical Results

Paul Bergstrand indicated that SCDHEC considers J-flag values that exceed screening or other criteria such as MCLs as an actual concentration, even though the concentration is estimated by the laboratory. This is the case for both organic and inorganic compounds. CH2M-Jones does not place the same confidence with the J-flag values as it does with detected concentrations above the reportable limit (RL). In addition, organic and inorganic J-flag values are different due to laboratory methods. Tammy Carey, a CH2M HILL chemist, provided the definition and examples of J-flagged data via teleconference. One of these examples included J-flag values that can be above the method detection limit (MDL) but below the RL. Tammy responded to questions concerning the definition of the practical quantitation limit (PQL), which is contingent on the standard deviation associated with the establishment of the MDL. She also indicated that the PQL is seldom used in data validation reports or by laboratories.

SCDHEC expressed concern as to how CH2M-Jones will use the data to characterize the site for corrective action planning and for other data management decisions. Vijaya Mylavarapu emphasized that CH2M HILL has been treating J-flagged values above criteria as actual values and, as a rule, is not simply discounting or rejecting the values. CH2M-Jones indicated that J-flag inorganic data are common and occur in both the AOC/SWMU samples as well as the grid (background) data set. SCDHEC indicated that it would address the J-flag data on a site-specific basis. Paul Favara indicated that his experience at a number of other DOD facilities is that J-flagged data are almost never used as the sole basis for risk management decisions.

Mihir Mehta requested the Navy provide (as appropriate for the specific document) supporting information reviewed by CH2M-Jones when J-flag data are used to support risk management decisions, corrective action planning, or remedial investigation decisions or recommendations.

Inorganics and Turbidity

Paul Bergstrand indicated that turbidity is of some concern in some of RFI work plan addenda. SCDHEC requests that if turbidity is cited as a cause of randomly elevated inorganic concentrations, then CH2M-Jones should provide some backup data to support this, such as results of NTU measurements collected during sampling or other data such as suspended solids. Collection of filtered and unfiltered samples and use of low-flow sample collection techniques could also be considered. Dean Williamson indicated that there are generally no suspended solids data available since the samples were collected from DPT points and that NTU measurements may not be definitive due to the volume of water purged prior to sample collection. Todd Haverkost indicated that the BCT decided not to evaluate inorganic results from samples collected from DPT points due to the potential elevated turbidity results. Dean Williamson indicated that CH2M-Jones would not continue to include those data in the reports.

Turbidity measurements are collected during the sample collection activities from DPT points; however, the preferred method is sample collection from wells for inorganic analysis. SCDHEC will use the information on a site-specific basis for both characterization and in the establishment of recommended remedial objectives. CH2M-Jones should provide any weight of evidence to support occurrence of random inorganic analysis.

Discussions with Robert Ryan from the RDA

Building 68

Building 68 was previously used for battery storage. A decision will be made as to sample collection and remedial action to excavate soil between building demolition and construction. PCB and lead in soil was located on the side end under the structure. Robert expressed scheduling concerns for both sample collection and possible soil excavation during demolition activities. Onsite transformers were dry and did not contain any dielectric fluid. Underground pipelines run to former ASTs. These will be capped during demolition activities. The plan is to remove the pilings at an approximate depth of 5 ft bls. Future tenant plans to repair/manufacturing ships once the new structure is constructed. Plan is for long-term lease of the property.

Building 79

Building is planned for industrial use.

Building 664

Building 664 is a personal storage locker. The future tenant which is a not for profit agency plans to use the building for book exporting. The building has small office space but the space will be primarily used for storage. Mercury was detected in soil samples collected in a localized area of the site. Tony will provide FOSL to RDA within the next 2 weeks.

Upcoming Issues

Robert Ryan indicated that the City of North Charleston would be concentrating its efforts for future development of a waterfront park along the shoreline south of Pier Alpha, which will include a boat ramp.

Zone J Work Plan Addendum Breakout Session

The meeting minutes from the Zone J breakout session to discuss the Work Plan Addendum are attached as a separate file. The meeting minutes were prepared by EnSafe.

RAB Meeting Agenda Discussion

Lisa Belton, Supervisor of the Step Ahead Program, joined the BCT meeting and provided a brief overview of the status of the program and relocation of the Building 225 tenants. The Step Ahead Program clients located on the east side of Building 225 are scheduled to move Friday May 11, 2001. By next week, the resident room occupancy will decrease from 36 to approximately 12 rooms. The Step Ahead Program is establishing temporary residence for relocated clients. Casey Hudson presented the upcoming scope of work to further characterize the PCE source area; and Gary Foster provided the schedule for SPH implementation. Lisa Belton inquired as to when residents could possibly move back into Building 225, and based on the recent analytical results, if there is a risk to residents currently occupying Building 225. CH2M-Jones indicated that until the effectiveness of the SPH system could be evaluated, it is difficult to ascertain when the Step Ahead Program clients can move back into Building 225. CH2M-Jones also reiterated that there is no immediate danger to residents currently residing in Building 225. Lisa Belton requested a 30-day notice for relocating and moving the staff and residents prior to site mobilization. SCDHEC has promised a 15- to 30-day period to review the draft IM work plan template. In addition, SCDHEC plans to provide a 45-day public comment period once the draft template has been submitted.

SWMU 44 – Establishment of Media Cleanup Standard for Arsenic

Paul Favara presented the final step in the IM for soil excavation at SWMU 44, establishing a media cleanup standard (MCS) for arsenic. SCDHEC did not want to establish a 20 mg/kg value for the MCS (established by EPA), as it would set a precedent in South Carolina. The April 23, 2001 memorandum, prepared by CH2M-Jones, provided the approach and rationale for calculating the cleanup standard, which is based on achieving a background concentration and use of risk-based cleanup rationale. CH2M-Jones is requesting comments regarding the proposed MCS and the approach.

SCDHEC has internally distributed but not discussed the memorandum. CH2M-Jones reiterated that the technical approach is provided in the memorandum and that the establishment of the cleanup standard for subsurface soil is consistent with the approach provided for surface soil.

Dann Spariosu verbally approved the approach but indicated that EPA risk assessment personnel will review the document and approach. CH2M-Jones is requesting a schedule from SCDHEC as to when comments will be available. SCDHEC indicated that the item would be placed on the action item agenda for the Monday morning conference call scheduled for May 14, 2001.

RAB Meeting Agenda

Tony Hunt presented the RAB meeting agenda for discussion.

Background PAH and Arsenic in Soil at the Railroads and at the Naval Annex (Zone K)

Vijaya Mylavarapu presented the preliminary results from the soil samples that comprise the PAH and arsenic background data set. The draft memorandum addresses the technical approach for establishing the PAH and arsenic background concentration at the railroad boundary and at the Naval Annex. The 2X mean concentration for PAHs, arsenic, and copper from the samples collected at the railroad line areas are 3,397 µg/kg, 53 mg/kg, and 75 mg/kg, respectively. The 2X mean concentration for PAHs, arsenic, and copper from the samples collected from the Naval Annex are 87.6 µg/kg, 35.9 mg/kg, and 2.1 mg/kg, respectively. For sites with railroad lines transecting the SWMU or AOC boundary, the rationale is to implement strategies to use these background values when comparing to concentrations detected in soil samples collected near the rail line or within a stormwater runoff area potentially impacted from the rail line.

SWMU 47

Total BEQ equivalent concentrations in 2 surface soil samples were elevated, with the highest concentration of approximately 5,100 µg/kg, when compared to the remaining surface soil samples collected from the site. SCDHEC conducted a site visit to inspect the sample locations with the elevated PAH concentrations and the location of former railroad lines. The purpose of the inspection was to verify that these localized areas of elevated PAHs could be attributed to previously existing site conditions. SCDHEC is evaluating whether the PAH concentrations are related to site operations or if there is a discernable source based on sample distribution. SCDHEC will review the response to comments from the Rev. 1 document, which was submitted to SCDHEC on March 30, 2001.

Parking Lot Items

Paul Bergstrand requested the submittal schedule concerning SCHDEC's request for information on location and pipe material of underground conduit at Building 225. Request for information included the type of material used, pipe or conduit depth, and material used for piping located inside Building 225. The Navy is currently drafting its response.

AOC 709 - Zone H

Dean Williamson presented the technical approach for an IM work plan that includes additional sampling to characterize a PCB soil excavation area. Characterization of the area will include sample collection of surface soil samples from the 2 former locations to verify the presence of PCBs followed by a localized soil excavation. The IM work plan is scheduled for submittal to SCDHEC in May 2001.

Wednesday May 9, 2001

RAB Meeting Overview

Suzanne Zoda indicated that RAB committee attendance had decreased since its last meeting. The BCT discussed ways to improve the attendance for the next RAB meeting. Tony Hunt surmised that a contributing factor to low attendance could be the lack of

subcommittees and the need for individuals to feel they are part of the process. David Scaturo indicated that the public needs to feel that they are part of the decision-making process. Suzanne also indicated that the public is unaware of the RAB meetings and that there should be ways to inform the public of the upcoming meetings. One method would be to use the Charleston newspaper as a means for notifying the public. The next RAB meeting is scheduled for July 10, 2001. Suzanne asked Dan Spariosu and Paul Bergstrand to complete the community relations questionnaire prepared for the RAB.