

MEMORANDUM

CH2M HILL

TO: Joseph Joyce/SOUTHWESTDIV  
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COPIES: Peter Torrey/CH2M HILL

FROM: Kathy Brewer

DATE: July 20, 1993

SUBJECT: Additional Sampling for NC Long Beach RI/FS Work Plans

PROJECT: SCO70147.RF/SCO70148.RF

RESPOND  
BY: July 23, 1993

Based on the comments received and the discussions at the comment resolution meeting, Peter Torrey and I have developed a list of proposed additions or changes to the sampling program to address the comments. Please review the changes listed below and let us know whether or not to proceed with the revisions by Friday, July 23.

Most of the comments involved defining what the next step of the sampling program would be given the outcome of the first phase of sampling. Where appropriate, we have tried to add conditional samples to define the next step in the sampling program. Therefore, much of the additional sampling outlined below may not be done if the initial samples do not indicate the need for further investigation.

Sites 1 and 2

- If the surface soil samples collected at each of the ballfields indicate that remediation may be necessary, the Navy has the option of proceeding with the remediation or collecting additional samples to better define the mean and standard deviation of the contaminant concentrations. If the Navy elects to do additional sampling, up to seven more surface soil samples may be collected at each of the two areas (14 total) and analyzed for the contaminants of concern [these may include SVOCs, Pest/PCBs, metals, or asbestos depending on the results of the initial sampling].
- If the groundwater samples collected from Sites 1 and 2 show contamination that exceeds screening criteria, then well point samples may be used to better define the extent of the contamination for the purpose of the remedial alternatives evaluation. Up to 20 well points may be installed to define the lateral and vertical extent of the contamination. Analysis

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would be limited to the contaminants of concern or indicator parameters which may include VOCs, SVOCs, Pest/PCBs, or metals depending on the results of the initial sampling.

## Site 3

- Based on the same reasoning as bullet 1 for Sites 1 and 2, seven conditional surface soil samples will be added for Site 3. Analysis will be limited to contaminants of concern, which may include SVOCs, Pest/PCBs, or metals depending on the results of the initial analysis.
- To address DTSC's concern regarding basing the characterization of possible DNAPL contamination at the site on a single deep well point, two additional deep well points are proposed, bringing the total to three. The other two well points will be located near waste pit locations if these can be identified from aerial photos. Otherwise they will be located in a triangle pattern with the one already planned near well MW-6. Samples from the deep well points will be analyzed for VOCs.
- To address a comment from DTSC, TPH-diesel will be added to the list of analyses for subsurface soil samples and samples from groundwater monitoring wells at Site 3.
- The underwater survey planned for Site 4 will be extended to include Site 3 as part of the development of remedial action alternatives.
- To address DTSC and RWQCB concerns, a provision for up to 10 additional well points will be added to define the eastern and western boundaries of potential groundwater contamination at Site 3. The well points would only be installed if the data from the well points at the geographic boundaries of the site indicate that contamination has migrated past that point. Samples would be analyzed for VOCs.

## Site 4

- To respond to DTSC and RWQCB concerns, it is proposed that the area of Site 4 east of the jogging path and north of Alternate Site 1 be designated an area of concern. To characterize groundwater and subsurface soil in this area, five well point groundwater samples would be taken along with two subsurface soil samples at each well point location (one from vadose

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zone and one from the water table). Samples would be analyzed for VOCs, TPH-gas, TPH-diesel, and metals.

- If contamination above the screening criteria is found at any of the defined groundwater areas of concern and further information is needed on the extent of the contamination to evaluate remedial alternatives, it is proposed that up to 20 well points be installed. Analysis would be limited to the contaminants of concern or indicator parameters, which could include VOCs, TPH-gas, TPH-diesel, organotins, or metals. These analyses should be fast-turnaround so the plume can be defined.
- If significant groundwater plumes are found, then long-term monitoring may be necessary. It is recommended that the provision for up to three shallow wells be added. Analyses for groundwater samples would be limited to the contaminants of concern.

Site 5

- Three well point samples would initially be taken from the northern boundary of the site in addition to the monitoring well that has been proposed (these were included as conditional samples in the draft work plan). Groundwater samples would be analyzed for VOCs, TPH-gas, and TPH-diesel (fast-turnaround). Note that the monitoring well remains because it is part of the site-wide groundwater monitoring network.

Site 6A

- To address RWQCB concerns, it is recommended that the provision for up to 20 well points and 3 monitoring wells be added to define and monitor downgradient groundwater contamination. These well points and wells would only be installed if the wells at the site boundary indicate that groundwater contaminants above levels of concern have migrated beyond the boundary. The well point analyses should be limited to indicator parameters, which may include VOCs, SVOCs, Pest/PCBs, or metals depending on the results of the initial analyses. These should be fast-turnaround so the plume can be defined. The downgradient monitoring wells should be analyzed for all of the contaminants of concern as determined by the previous analyses.

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## Site 7

- Based on a comment by Bob Kanter in the meeting, the sampling locations east of Pier E have been deleted. This deletes two surface sediment samples and two deep sediment samples, bringing the total number of sediment samples to 77.

## Site 8

- To address the RWQCB concern regarding the potential for missing downgradient groundwater contamination by only looking at the soils along the fenceline, it is proposed that three shallow wellpoint samples be collected downgradient of the fenceline in addition to the soil and monitoring well sampling already proposed. VOCs would be analyzed.
- Already in the work plan is the provision for up to 20 additional well points (shallow and deep) and three monitoring wells to delineate the extent of groundwater contamination if necessary. Added will be a provision for one well into the Gaspur to confirm the presence or absence of contamination if the well point sampling shows that the oil wells in the area may have facilitated contaminant migration into the Gaspur. Samples from all of these would be analyzed for VOCs.

## Sites 9 and 10

- No specific comments were received and no revisions to the sampling program are proposed.

## Site 11

- In response to a comment from the RWQCB, a provision will be added for up to 10 well points to define the extent of contamination elevated levels of heavy metals are found in the monitoring wells. The samples would be analyzed for the contaminants of concern, which could include organotins or specific metals.

## Site 12

- To address DTSC's concern regarding general sandblast grit disposal in the Lot X, the analyte list for the 19 well points to be installed along the north

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and west boundaries of the site will be expanded to include lead (right now only organotin is specified for fast turn-around analysis at these well points). Lead was chosen as an indicator parameter for general sandblast grit contamination since it was found at elevated levels in the sandblast grit at Site 11.

- Also responding to DTSC's concern regarding general sandblast grit disposal in the area, it is proposed that existing wells MW-43 and MW-44 and the new well to be located at the northeastern boundary of the facility be sampled for metals to assess the potential for impacts to groundwater in the area.
- To address the concern for sandblast grit in surface soils, it is proposed that five surface soil samples be collected from Lot X. Based on the results, up to seven more surface soil samples may be collected to better define concentrations in the area (see explanation for Sites 1 and 2).

## Site 13

- To address the RWQCB comments, it is recommended that three shallow wellpoint samples be collected from the downgradient edge of the site to assess the potential impacts to groundwater (they did not feel that a single well was sufficient). Analysis would be for VOCs, SVOCs and metals. If contamination is found, then the work plan already contains the provision for up to 20 additional well points to define the extent of the contamination. If contamination is not found, and MW-45 is downgradient of the site, then it can serve as the long-term monitoring point. If MW-45 is shown not to be downgradient of the site, then a shallow monitoring well would need to be installed for long-term monitoring (this is already in the work plan).