EMCON Associates
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Attachment Rec'd from Sum Arigala 10/26/94

October 10, 1994
Project 0F88-001.17

Mr. Sumadhu Arigala
California Regional Water Quality Control Board
2101 Webster Street, Suite 500
Oakland, California 94621

Re: Workplan for evaluating the extent of VOCs in groundwater, Emeryville facility

Dear Mr. Arigala:

EMCON Associates (EMCON) is pleased to submit this workplan for evaluating the extent of volatile organic compounds (VOCs) in groundwater at Westinghouse Electric Corporation's (Westinghouse) facility in Emeryville, California. The proposed work is in response to concerns expressed by the Regional Water Quality Control Board (RWQCB) in a meeting on August 23, 1994.

BACKGROUND

VOCs have been detected in shallow groundwater at the Westinghouse Emeryville site. Figure 1 shows the locations of the groundwater monitoring wells at the site and VOC detections from the most recent sampling event.

In May 1983, Westinghouse had six monitoring wells (W17 through W20, W22, and W24) sampled and analyzed for VOCs by U.S. Environmental Protection Agency (EPA) method 624. These wells were subsequently destroyed during the installation of the cap. Wells D-1, D-5, D-6, S-1, S-5, S-6, and S-7 were sampled semiannually for two years (in 1991 and 1992) and the samples analyzed for VOCs by EPA methods 8010 and 8020 according to the *Workplan for Ground-Water Monitoring of Volatile Organic Compounds*, (EMCON, July 1991). The July 1991 Workplan and subsequent analytical results were submitted to the RWQCB.

SCOPE OF WORK

At our meeting on August 23, 1994, the RWQCB expressed concerns regarding the on-site extent and source of the VOCs. EMCON proposes the following tasks in response to the RWQCB's concerns.

Task 1. Sample Existing Wells

Semiannual sampling is conducted at the site as required by an Order issued from the Environmental Protection Agency. During the next semiannual sampling event, scheduled for November 1994, EMCON will sample all existing wells at the site. Samples will be submitted to a state-certified laboratory and analyzed for VOCs by EPA method 8240. Groundwater levels will also be measured in the wells for use in preparing groundwater elevation contour maps.

Task 2. Review Information on Adjacent Sites

EMCON will review available RWQCB files to obtain information on sites adjacent to and in the vicinity of the Westinghouse site for information on groundwater flow directions and VOC concentrations in groundwater. Any information obtained will be combined with the information generated in Task 1 and will be plotted on figures.

Task 3. Collect Additional Groundwater Samples (Optional)

Based on the results of Tasks 1 and 2, EMCON will determine the need for further groundwater sampling. At this time, EMCON anticipates collecting two to three samples on site along the northern fence, east of well S-5, and two to three samples off site and upgradient. At this time, EMCON anticipates that these samples will be collected using in situ methods, such as HydroPunch® or a push-in piezometer. Samples will be analyzed for VOCs by EPA method 8240.

Task 4. Conduct Soil-Gas Sampling (Optional)

If the results from Tasks 2 and 3 indicate a source of VOCs is likely to be on site, EMCON will conduct a soil-gas survey and collect soil-gas samples to determine the approximate location of the VOC source. At this time, EMCON anticipates collecting samples at about 15 to 20 locations, which will be determined after the results of Tasks 2 and 3 are reviewed. Samples will be collected from the unsaturated soils (at approximately 3 feet) and will be analyzed by a mobile laboratory for VOCs of concern, including trichloroethene (TCE), dichloroethene (DCE), and vinyl chloride (VC). EMCON also proposes to collect one soil-plug sample from each of the sampling locations for discrete soil analyses. The soil samples will be analyzed for VOCs by EPA method 8240.

Task 5. Prepare Report

EMCON will prepare a report detailing the work performed at the site. The report will include methods and procedures, certified analytical reports (CARs), and figures depicting groundwater flow data and groundwater chemistry. If tasks 3 and 4 are conducted, figures will be prepared showing the groundwater, soil-gas, and soil concentrations at the various locations.

SCHEDULE

Figure 2 presents the proposed schedule for implementing this workplan. The schedule anticipates that the RWQCB will review and approve the workplan by October 28, 1994, and that Westinghouse will authorize EMCON to proceed by November 4, 1994. EMCON will keep Westinghouse and the RWQCB informed about project progress and will provide notification of any potential delays. EMCON anticipates that the project as described will be completed within about 6 months after receiving authorization to proceed, assuming that the optional tasks are completed as described. If the optional tasks (Tasks 3 and 4) are determined to be unnecessary based on preliminary data collected, the report will be completed sooner.

Please call if you have questions concerning this workplan.

Sincerely,

EMCON Associates

Mark Smolley

Mark Smolley
Project Manager

Attachments: Figure 1 - Site Plan with Groundwater Chemistry
Figure 2 - Schedule

cc: Gordon Taylor - Westinghouse
Alex Tula - Alta Geosciences

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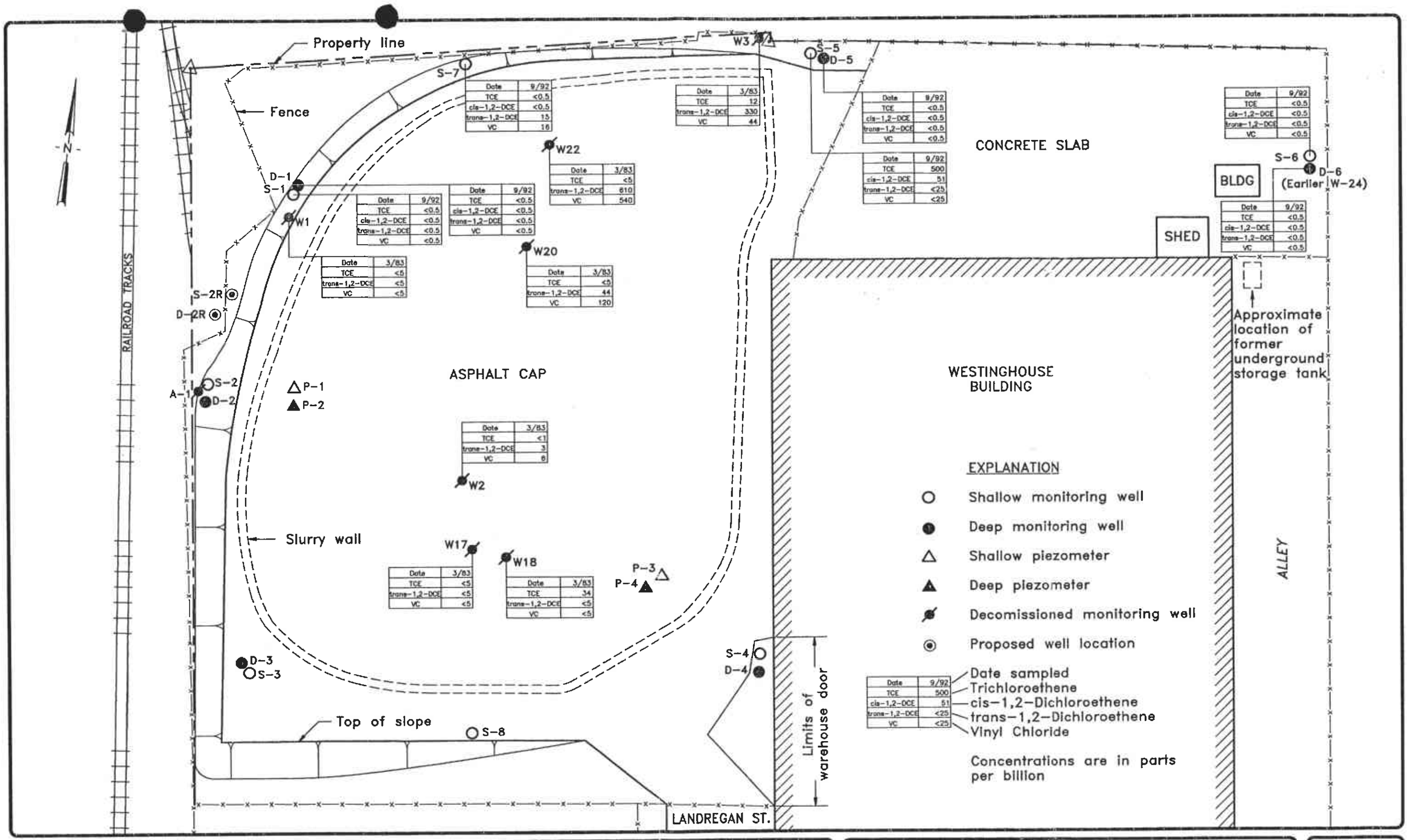

Date	9/92
TCE	<0.5
cis-1,2-DCE	<0.5
trans-1,2-DCE	15
VC	16

Date	3/83
TCE	12
trans-1,2-DCE	330
VC	44

Date	9/92
TCE	<0.5
cis-1,2-DCE	<0.5
trans-1,2-DCE	<0.5
VC	<0.5

Date	9/92
TCE	500
cis-1,2-DCE	51
trans-1,2-DCE	<25
VC	<25

Date	9/92
TCE	<0.5
cis-1,2-DCE	<0.5
trans-1,2-DCE	<0.5
VC	<0.5

Date	9/92
TCE	<0.5
cis-1,2-DCE	<0.5
trans-1,2-DCE	<0.5
VC	<0.5

Date	9/92
TCE	<0.5
cis-1,2-DCE	<0.5
trans-1,2-DCE	<0.5
VC	<0.5

Date	3/83
TCE	<5
trans-1,2-DCE	<5
VC	<5

Date	3/83
TCE	<5
trans-1,2-DCE	610
VC	540

Date	3/83
TCE	<5
trans-1,2-DCE	44
VC	120

Date	3/83
TCE	<1
trans-1,2-DCE	3
VC	8

Date	3/83
TCE	<5
trans-1,2-DCE	<5
VC	<5

Date	3/83
TCE	34
trans-1,2-DCE	<5
VC	<5

Date	9/92
TCE	500
cis-1,2-DCE	51
trans-1,2-DCE	<25
VC	<25

EMCON Associates

SCALE: 0 40 80 FEET

WESTINGHOUSE ELECTRIC CORPORATION
GROUND-WATER MONITORING PROGRAM
EMERYVILLE, CALIFORNIA

SITE PLAN WITH GROUNDWATER CHEMISTRY

FIGURE NO. 1

PROJECT NO. F88-01.17

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Figure 2
Project Schedule

Task	Start	Finish
RWQCB Reviews Workplan	10/11/94	10/28/94
Westinghouse Authorization	10/31/94	11/4/94
Task 1 - Wells		
Sample Existing Wells	11/7/94	11/11/94
Analyze samples	11/14/04	11/30/94
Task 2 - Review Information on adjacent sites		
Obtain Information	11/7/94	11/30/94
Evaluate Information	12/1/94	12/16/94
Task 3 - Collect Additional Groundwater Samples (Optional)		
Prefield Coordination	12/19/94	12/23/94
Collect Samples	12/27/94	1/6/95
Analyze Samples	1/9/95	1/20/95
Evaluate Information	1/23/95	2/3/95
Task 4 - Conduct Soil Gas Survey (Optional)		
Prefield Coordination	2/6/95	2/10/95
Collect Samples	2/13/95	2/17/95
Analyze Samples	2/20/95	3/3/95
Task 5 - Prepare Report		
Prepare Draft Report (EMCON)	3/6/95	3/24/95
Westinghouse Review	3/27/95	4/7/95
Finalize Report (EMCON)	4/10/95	4/14/95
Deliver to RWQCB	4/17/95