ALTA GEOSCIENCES, Inc.

11711 Northcreek Parkway S., Suite 101
Bothell, Washington 98011-8224

Phone (425) 485-1053
Fax (425) 486-7651

STID 1760

May 19, 1998

Ms. Susan Hugo
Alameda County
1131 Harbor Bay Parkway, 2nd floor
Alameda, CA 94502

Re: Completion Report for Site Soil Remediation
Westinghouse Emeryville Site
5899 Peladeau Street
Emeryville, California

Dear Ms. Hugo:

Enclosed is the Completion Report for Site Soil Remediation at the former Westinghouse site at 5899 Peladeau Street in Emeryville, California dated January, 1997. This is sent on behalf of CBS Corporation (formerly Westinghouse Electric Corporation).

If you have any questions, please call at your earliest convenience.

Sincerely,
***ALTA* Geosciences, Inc.**

Alex Tula, R.G.
Principal Consultant

enclosure: Completion Report for Site Soil Remediation

cc (w/o enclosure) : Gordon Taylor, CBS Corporation

alal0519

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Bothell, Washington 98011-8224

Phone (206) 485-1053
Fax (206) 486-7651

COMPLETION REPORT
Site Soil Remediation
Westinghouse Emeryville Site
5899 Peladeau Street
Emeryville, California

January 1997

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APPENDICIES

1.0 INTRODUCTION

1.1 Project Description, Location, and Purpose

This Completion Report has been developed by ALTA Geosciences, Inc. for Westinghouse Electric Corporation (WEC), for the purpose of describing the 1996 Soil Site Remediation at the Westinghouse Emeryville Site (Site). It presents a summary description of the work that was accomplished, the methods and approaches to conducting the work, confirmation sampling and testing results, and documentation of the offsite shipping and disposal of all wastes.

The project is located at 5899 Peladeau Street in the City of Emeryville, California, on the east side of the San Francisco Bay (Figure 1-1, Site Location Map). The entire WEC property is several acres in size, however, the portion involved in this Site Remediation is only 0.5 acres in the northeast corner (see Figure 1-2, Site Vicinity Map). The subject area is primarily covered with concrete, with some perimeter areas on the north side being unpaved. Two groundwater monitoring well clusters are located in the northwest corner and east end of the proposed excavation area, and were maintained during the construction. The site is fenced with a 6-foot high steel chainlink fence.

1.2 Goals and Objectives of the Remedial Action

The goal of this Site Soil Remediation was to excavate and properly dispose of soils in the northeast corner of the WEC site where PCB levels were known to exceed those acceptable for residential and industrial uses. This will mitigate potential threats to human health and the environment associated with these soils. The development of the remediation goals for the Site has been described in the Baseline Human Health Risk Assessment prepared for the Site by SOMA Environmental Engineering (SOMA, 1996). The risk-based PCB soil cleanup levels were evaluated in this study, with the following results for excess cancer risk of 1×10^{-5} :

Table 1-1
RISK-BASED PCB SOIL CLEANUP LEVELS
(SOMA, 1996)

SCENARIO	PCB CLEANUP LEVEL (mg/kg)
Residential	0.5
Industrial/Commercial	2.85
Utility Worker	59.3

In a letter dated 9 May 1996, the California Regional Water Quality Control Board (Board) accepted the cleanup levels to be used for the Site Soil Remediation as set forth in the SOMA document. Since the purchaser of the property is not planning for residential use, the Utility Worker Scenario was considered to be the most appropriate for setting the cleanup goal in the top two feet of soil. Below that, the Industrial/Commercial Scenario was considered appropriate. As a conservative measure, Westinghouse decided to use 50 mg/kg PCBs as the Industrial/Commercial cleanup level below two feet, instead of 59.3 mg/kg. Below 4 feet or the groundwater table, the risks to human health were not considered significant, since there is no exposure path. Groundwater monitoring at the Site is in progress to evaluate potential environmental impacts.

In summary, the cleanup was accomplished within the subject area by excavation and offsite disposal of soils having PCBs greater than 0.5 mg/kg within the top 2 feet, and PCBs greater than 50 mg/kg within the depths of 2 to 4 feet. Some individual confirmation samples may slightly exceed the cleanup goal, yet the Site as a whole will still be in conformance. This has been described in the Work Plan for Site Soil Remediation (ALTA, 1996). This Work Plan was submitted for Board approval in June 1996. On July 26, 1996, the Board issued a letter approving the Work Plan.

Because of the absence of a credible exposure pathway for soils deeper than 4 feet, the associated health risks are low, and the cleanup goals excluded excavation of these materials. To avoid the complications associated with heavy groundwater inflows to the excavation zone, the cleanup goals also excluded any requirement for excavation below the groundwater table. As a conservative measure, to remove local zones of visibly impacted soil or debris, the above exclusions were ignored in some locations, and the removal zone was extended below 4 feet or below the groundwater table.

1.3 Project Background

Westinghouse owns the property at 5899 Peladeau Street, in Emeryville, California. This property was formerly the site of an electrical apparatus service facility, which serviced and manufactured transformers and other electrical equipment in addition to fulfilling administrative and engineering functions for their service district. WEC ceased using the facility for work on electrical apparatus in 1982 and stopped using the facility for any work in 1992. Buildings on the site have been demolished and only concrete floor slabs and foundations, plus outside pavements remain from the original facility.

Some of the manufacturing and service functions at the facility involved handling, storing, and/or using fluids containing or impacted with Polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), hydrocarbon products such as gasoline and diesel, and mineral or hydraulic oils. Site investigations conducted on

the site identified the above compounds as present in the groundwater and in some soils on the site.

In 1984, WEC entered into a Consent Agreement and Final Order with the U.S. Environmental Protection Agency (EPA), Region 9 regarding the site. As part of this Order, in 1985 a slurry wall was constructed in the northwest portion of the property to limit the lateral migration of impacted groundwater beneath the site. PCB-impacted soil from areas surrounding the containment cell were consolidated into the cell, and a cap of geomembrane and asphalt was placed over the top.

1.4 Remediation Contractor and Support Services

The following organizations were involved in carrying out the Soils Remediation and associated work:

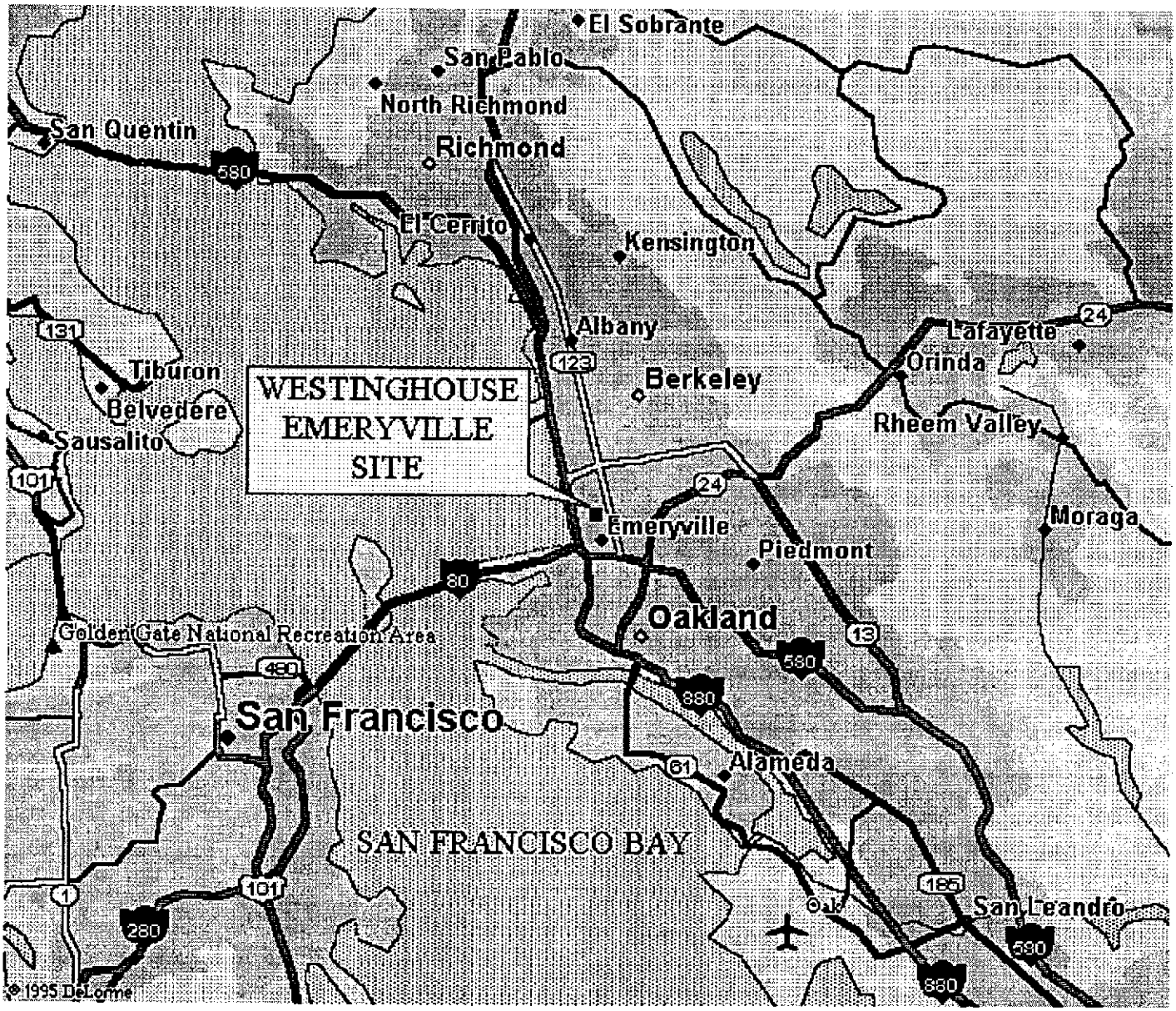
- Remediation Contractor -- Westinghouse Remediation Services (WRS), based in Murry, Utah
- Analytical Laboratory (PCBs) -- Analytical ChemTech International, Inc. (ACTI), Sacramento, CA.
- Analytical Laboratory (VOCs) -- MBT Environmental Laboratories (through ACTI)
- Non-TSCA materials Disposal -- ECDC Environmental Services, Inc., East Carbon, Utah
- TSCA materials disposal -- Laidlaw USPCI Grassy Mountain, Utah Facility
- Soils Geotechnical Testing -- Construction Materials Testing, Inc., Oakland, CA.
- Backfill Supplier -- Tide Water Sand and Gravel Co. -- Oakland, CA.

1.5 Health & Safety Issues

For the 1996 Site Soil Remediation, field work by engineering staff and those involved in construction was carried out in accordance with the requirements set forth in the Construction Health and Safety Plan (Non-Contractor) attached to the Site Soil Remediation Workplan (ALTA, June 1996). Personnel for the remediation contractor, Westinghouse Remediation Services (WRS), WRS subcontractors, and other site visitors followed the requirements of the WRS Health and Safety Plan for this project. The requirements of their plan were consistent with the ALTA document, however, because of the specific requirements involved in working around and operating heavy equipment, the WRS plan included additional safety requirements.

Safety reports were kept by the contractor (WRS) as part of their daily log. These records are available in the project records.

Daily safety meetings were held with the entire construction crew and oversight personnel. Forms documenting these meetings were filed in the contractor's records daily. During the period of excavation for the PCB-impacted soils the contractor maintained a full-time safety officer to monitor crew work activities and encourage compliance with the site-specific WRS health and safety program. Safety reports were filed in the contractor's records on a daily basis by the safety officer. The Westinghouse onsite representative also kept a record of any observed health and safety problems or any related issues that were brought to his attention. These records are filed in the project files as part of the onsite representative's daily log.

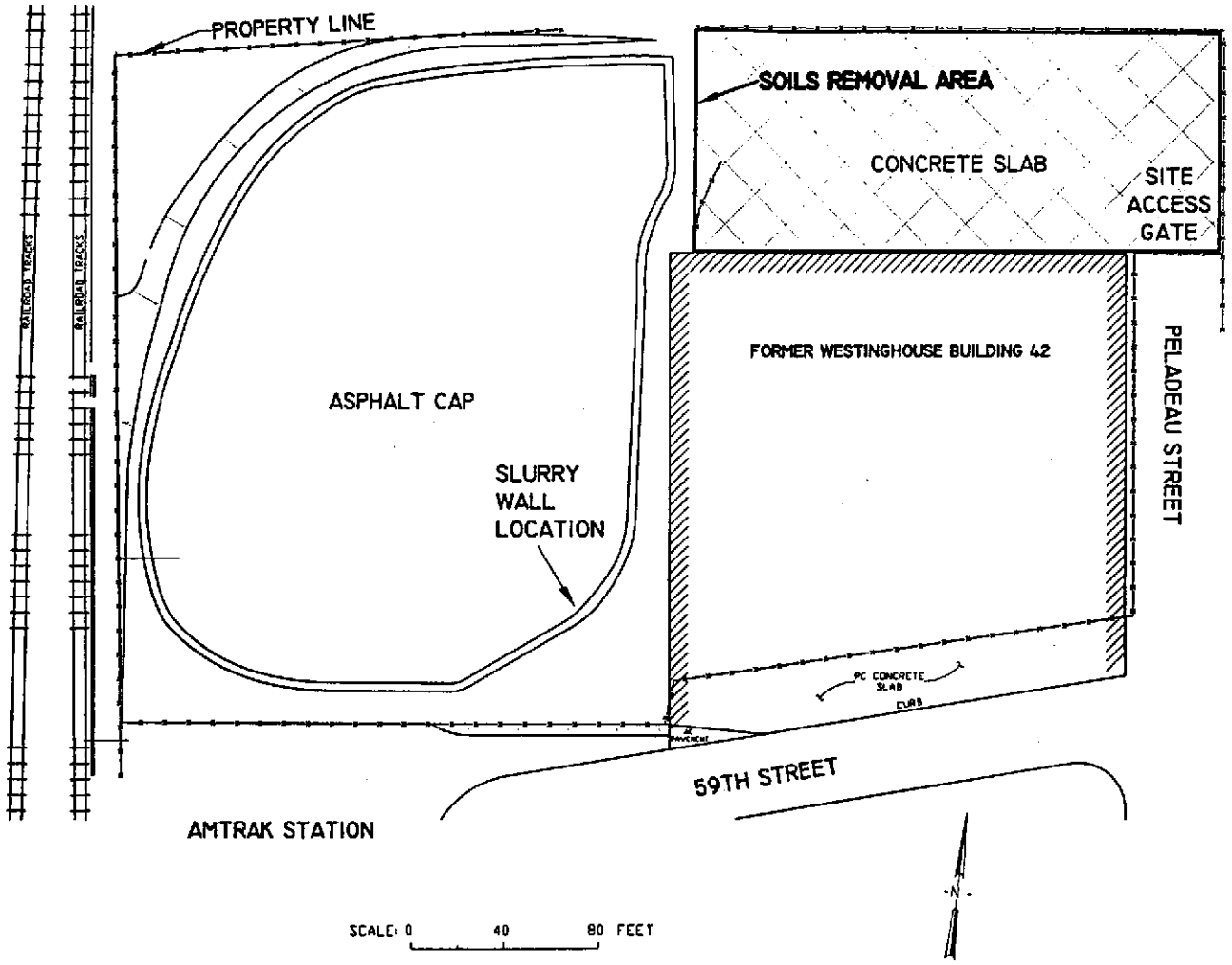


WESTINGHOUSE ELECTRIC CORPORATION
EMERYVILLE, CALIFORNIA SITE
REMOVAL ACTION COMPLETION REPORT

SITE LOCATION MAP

FIGURE 1-1 JANUARY 1997

ALTA Geosciences, Inc.



WESTINGHOUSE ELECTRIC CORPORATION
REMEDIAL ACTION CONSTRUCTION

SITE VICINITY MAP
EMERYVILLE SITE

FIGURE 1-2 JANUARY 1997

ALTA GEOSCIENCES, INC.

2.0
SOILS REMEDIATION OVERIVEW

2.1 Methodology

As stated in Section 1.2, the development of the remediation goals for the Site was described in the Baseline Human Health Risk (SOMA, 1996) and modified to be slightly more conservative by WEC. The goal was to excavate and dispose of offsite soils having PCBs greater than 0.5 mg/kg within the top 2 feet, and PCBs greater than 50 mg/kg within the depths of 2 to 4 feet. The remediation was not required to address soils deeper than 4 feet or below the level of groundwater saturation (generally about 4-5 feet). The overall methodology of the soils remediation was to test and remove the surface concrete slab covering the removal area, then iteratively test and remove soil until meeting the above goals.

After early excavations, it was found that PCBs were often associated with layers of imported soil that were buried under non-impacted, younger imported soil layers. In several areas, it was necessary to remove soil to a depth of 2 feet below the concrete slab before encountering more highly impacted layers, which were subsequently removed.

Debris (bricks, electrical insulators, scrap metal, etc.) were anticipated based on previous site investigations, and such materials were in fact encountered. In some cases the soil accompanying debris was found to be impacted with PCBs and in other cases it was not impacted. As a conservative measure, a field decision was made to remove most of the debris that was encountered, in addition to removing soil exceeding the risk-based criteria cited above.

2.2 Site Excavation and Confirmation Testing Grids

Two different grid square systems were used: 1) To identify concrete and soil removal areas and the origin of stockpiled material; and 2) to establish the location of confirmation samples. The first grid system was laid out on the surface concrete in approximate 36' x 36' squares (see Figure 2-1). This was the optimum concrete and soil excavation size for the equipment used by the contractor, since the excavator could sit at one side of a grid and just reach the other side. The excavation grid square designation was used for identification of the concrete sample locations. Each grid square was further subdivided into four (9-foot wide) strips to identify the origin of soil stockpile material for purposes of stockpile sampling and shipping.

For purposes of soil confirmation sampling, the excavation was divided into 10' x 10' squares on a grid with origin near the northwest corner of former Building 42. The Building 42 north side foundation was used as a base line for the grid system (see Figure 2-2). Sample locations were designated by the individual grid square number, or by the north and east coordinates (e.g., N25, E50).

2.3 Areas and Depths Excavated

The excavation depths ranged from a minimum of approximately 2 feet to a maximum of 6 feet below the top of soil (beneath the concrete slab). Figure 2-3 shows the final excavation depth for each grid square. As a generalization, the east end of the removal area was excavated to only about 2 feet, because PCB-impacted soil did not extend as deep in this end. Also, the debris that was encountered in this end consisted mainly of pieces of brick. The middle portion of the removal area was excavated to 2 to 5 feet, and contained brick, metallic, ceramic, and wood debris. Most of the west end was excavated to 3 or 4 feet deep. This portion also contained metallic and ceramic debris. The deepest excavations were in CS 6, 9, 11, and 12, where much of the area was excavated to at least 4 feet

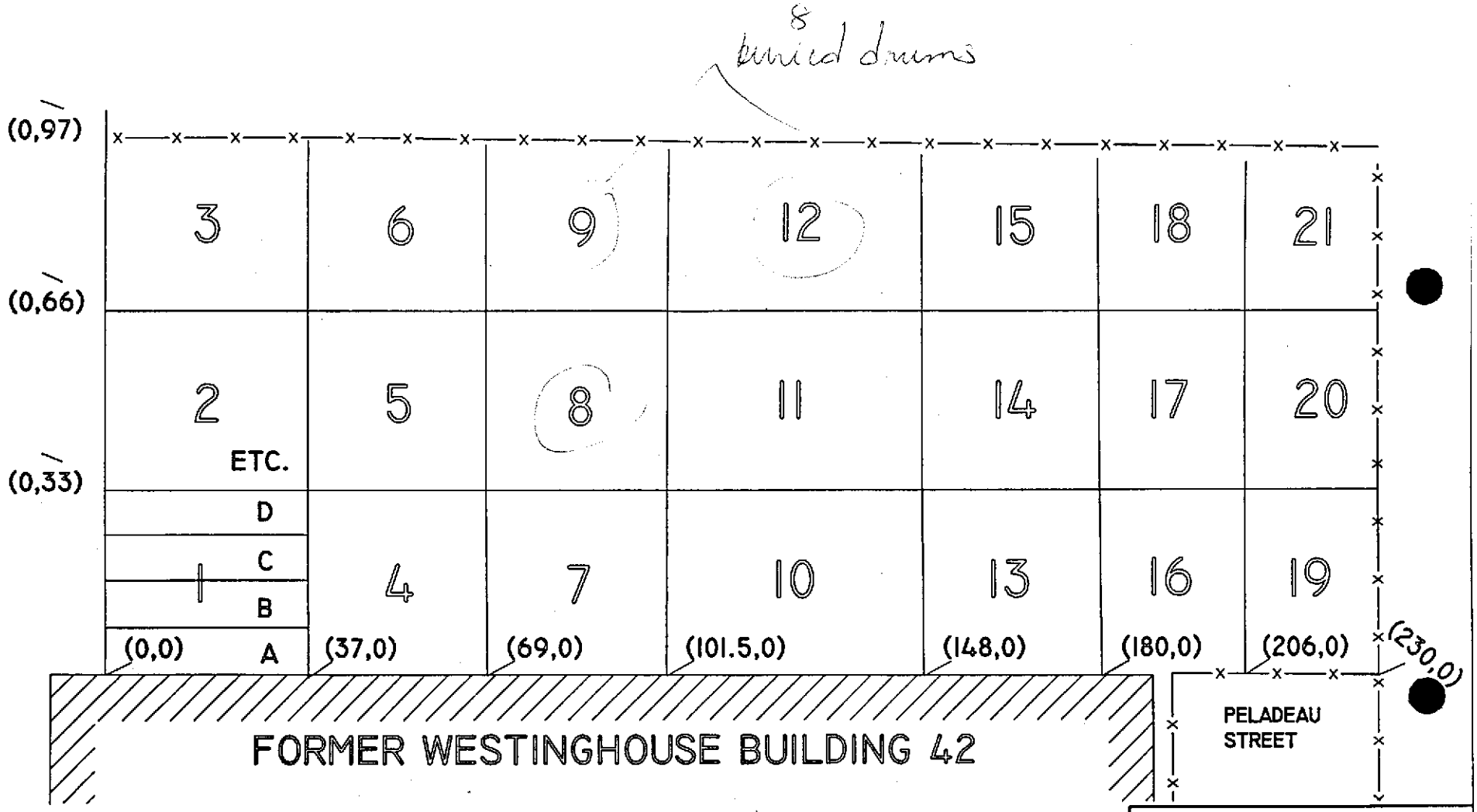
2.4 Description of Materials and Structures Encountered

The Portland cement concrete slab that covered the removal area varied in thickness from 4 inches to 8 inches. The majority of this slab was unreinforced, however, about 5 to10 percent of the concrete, especially in the CS10 and CS13 areas had light reinforcement in the form of either bars or wire fabric. A track excavator with a thumb attachment on the bucket was used to break apart the slab and load it into a truck.

Beneath the concrete slab, soil and debris materials were found to be variable by area and depth. Over much of the removal area, the uppermost soil layer was an imported silty sandy gravel, perhaps brought in to serve as a base for the concrete. In the west end, CS1, CS2, and part of CS4 contained a layer of imported aggregate base rock. In the middle and western end of the removal area the sandy gravely material extended to depths of 2 to 4 feet and was mixed with silt and clay. The appearance of this material suggested that a soft ground area (work or driving area) had been covered with sandy gravel to improve its serviceability, and that because of traffic, this material had subsequently worked its way down and mixed into the soft ground.

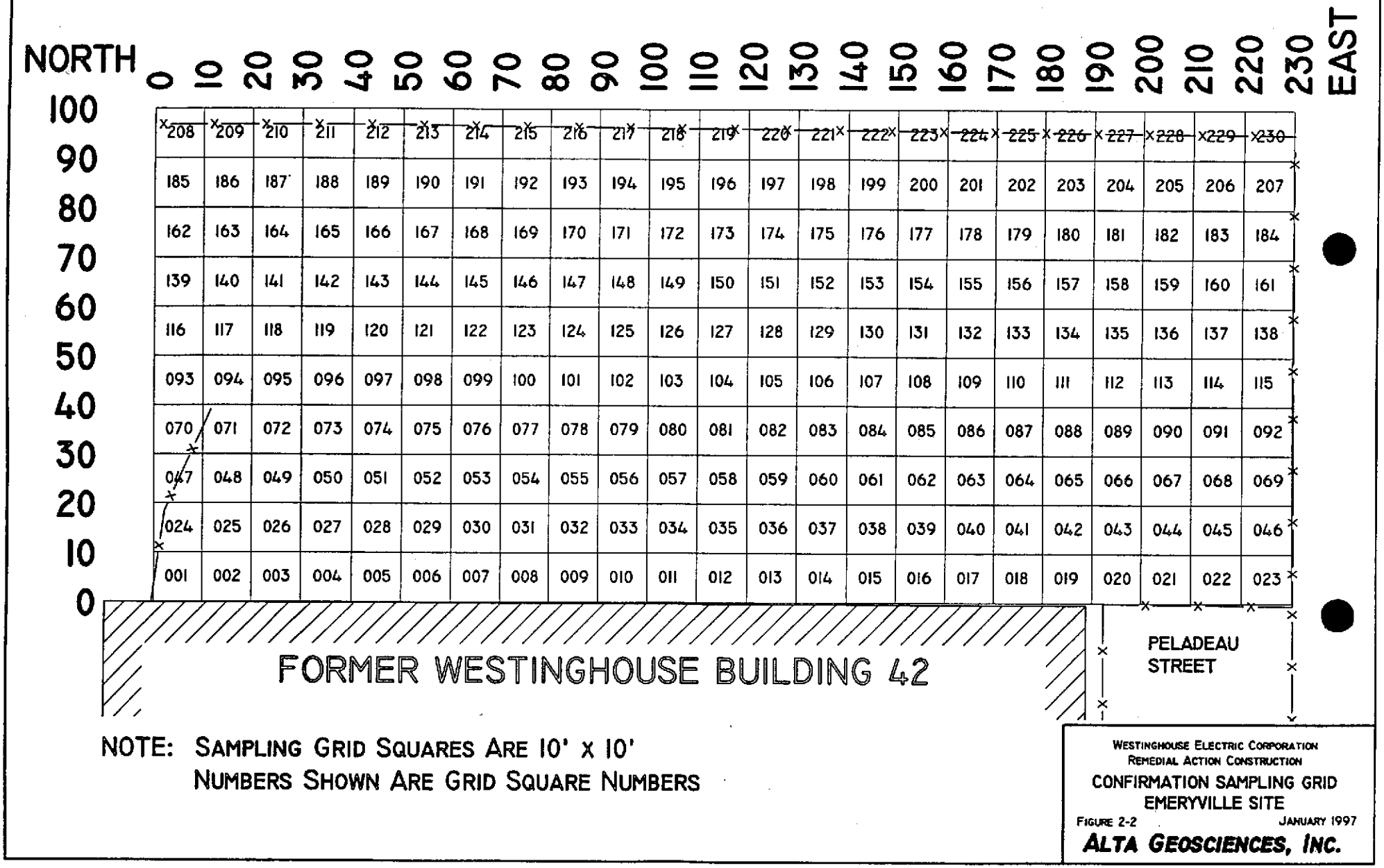
At depths of 2 to 4 feet, natural soil was encountered. This consisted of organic silty clay (Younger Bay Mud geologic formation). Bay Mud is a soil derived from marine sediments that are abundant in the area surrounding San Francisco Bay. This soil is very dark brown or black in color and while it has moderate strength when it is relatively dry, it looses strength and will not support much weight when saturated. Based on borings done during previous investigations, the Bay Mud thickness at the Site is at least 15 feet.

Debris material was encountered in distinct layers and intermixed with soil. Several portions of the removal area contained layers of broken clay and fire clay brick. Broken pieces of ceramic insulators were found throughout the middle and west end of the Site. The bricks and ceramic pieces were not themselves generally impacted by PCBs, however, the intermixed soil was impacted in some cases. Excavations also encountered assorted metallic debris. About 8 buried drums were encountered in the rear-center of the site in CS9 and CS12. Drums were composed of fragile, corroded/rusted steel and were buried lying on their sides. Two additional concrete-filled drums were encountered in the southwest corner of the removal area. These were broken and disposed of along with the surrounding soils. Drum contents are discussed below in Section 3.3.



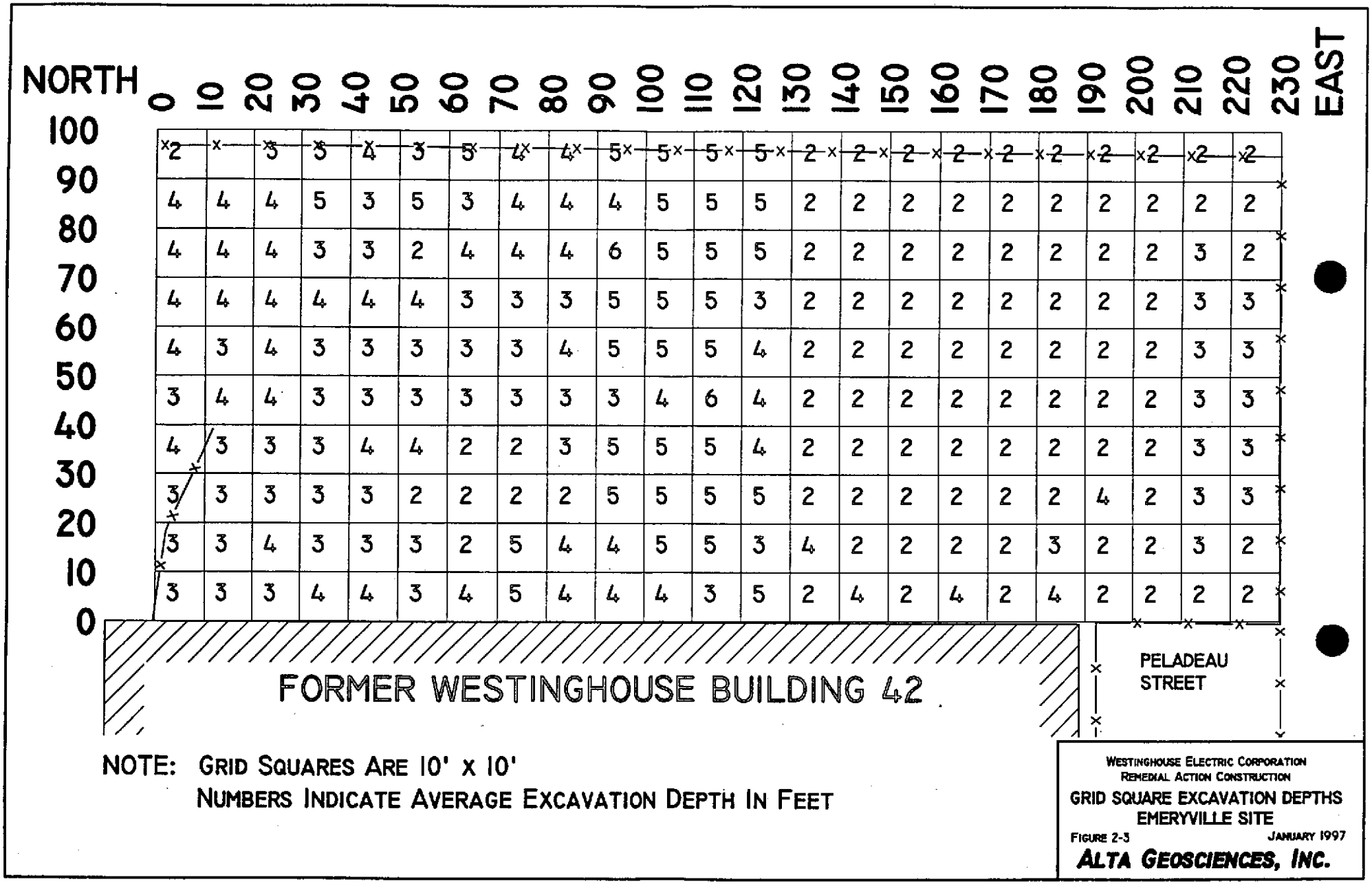
NOTE: FIGURE DEPICTS "CS" AREAS WHICH IDENTIFY CONCRETE REMOVAL AREAS AND SOIL STOCKPILE ORIGINATION ZONES

WESTINGHOUSE ELECTRIC CORPORATION
REMEDIAL ACTION CONSTRUCTION
REMOVAL - STOCKPILE ORIGINATION
EMERYVILLE SITE
FIGURE 2-1 JANUARY 1996
ALTA GEOSCIENCES, INC.



NOTE: SAMPLING GRID SQUARES ARE 10' X 10'
NUMBERS SHOWN ARE GRID SQUARE NUMBERS

WESTINGHOUSE ELECTRIC CORPORATION
REMEDIAL ACTION CONSTRUCTION
CONFIRMATION SAMPLING GRID
EMERYVILLE SITE
FIGURE 2-2 JANUARY 1997
ALTA GEOSCIENCES, INC.



NOTE: GRID SQUARES ARE 10' X 10'
NUMBERS INDICATE AVERAGE EXCAVATION DEPTH IN FEET

WESTINGHOUSE ELECTRIC CORPORATION
REMEDIAL ACTION CONSTRUCTION
GRID SQUARE EXCAVATION DEPTHS
EMERYVILLE SITE
FIGURE 2-3 JANUARY 1997
ALTA GEOSCIENCES, INC.

3.0
SOIL AND CONCRETE SAMPLING AND TESTING

3.1 Portland Cement Concrete

Based on preliminary site investigations, the Portland cement concrete slab was thought to have few PCB impacts. Insitu testing before excavation and follow-up stockpile testing determined that actually there were impacts exceeding the TSCA hazardous materials cutoff of 50 mg/kg PCBs. Table 3-1, Portland Cement Concrete Sampling Results, contains the PCB testing results from insitu and stockpile sampling. Eight of 21 concrete excavation areas contained concrete exceeding 50 mg/kg PCBs and this material was shipped to a TSCA landfill (approximately 400 tons). The remaining material was shipped to a non -TSCA solid waste landfill (approximately 250 tons).

3.2 Soil and Debris Stockpiles

Soil and debris was not segregated insitu and could not easily be segregated during the removal process. Therefore, they are discussed together. Approximately 47 of 83 soil and debris stockpiles (totalling about 3300 tons) exceeded 50 mg/kg PCBs and were shipped to a TSCA landfill (see Table 3-3). The remaining materials (about 850 tons) were below 50 mg/kg PCBs and disposed of at a non-TSCA solid waste landfill. Stockpiles samples tested as high as 2270 mg/kg PCBs.

3.3 Buried Drums

Eight buried drums were encountered in the north-central part of the removal area. They were partially filled with clear liquid or brown oily liquid, and in every case, the drums were so decomposed and fragile that they were broken by the excavator and their liquid spilled before they were identified as drums. An odor was noted in the vicinity of some of the broken drums. Because of the concern regarding proper disposal of the soil in the vicinity of these broken drums, tests for volatile organic compounds (VOC) were performed. These tests indicated that the VOCs present were mainly Chlorobenzene and Dichlorobenzene compounds in concentrations from a fraction of a part per million to about 8 parts per million (individual analyte, not in aggregate, which would be higher). In one sample Toluene, Ethylbenzene, and Xylene were identified in concentrations of less than one part per million, suggesting some of the material may have been a petroleum product, such as gasoline. In one sample, Tetrachloroethene was identified in a concentration of .34 parts per million. Stockpile testing for PCBs in soil removed from the zones surrounding broken drums were several hundred to a few thousand parts per million.

Based on conversations with personnel at the TSCA disposal site and submission of VOC analytical results to their office, all of the subject VOC-impacted soils were accepted at the same disposal site used for TSCA PCB materials.

3.4 Confirmation Sampling

Confirmation sampling was completed on 229 grid squares (10' x 10' size) and at 10 foot intervals around the west, north, and east perimeter (38 locations). Since there was an iteration of digging and sampling for many grids, the total number of samples collected and tested exceeds the number of grid squares and perimeter sampling stations. Table 3-2, Confirmation Sampling -- Excavation Bottom and Table 3-3, Confirmation Sampling -- Excavation Sidewalls, present summaries of the location, depth, date, and PCB testing results for the confirmation sampling. Appendix A presents the reports of laboratory testing from Analytical ChemTech International, Inc. (ACI). Note that for samples collected in the bottom of the excavation, the interval sampled is one foot below the excavation bottom. For sidewall samples, the interval sampled is at the depth indicated in the summary table.

Samples were collected by digging a shallow pit (bottom) or clear sidewall surface, scraping back to undisturbed material with a clean scoop, then using a second scoop to collect material from the sample interval. New, clean 4 oz. jars supplied from the laboratory were used to retain the sample. These were placed in ice chests and shipped the same day or the following day, under chain of custody procedures, to the testing laboratory. In most cases, 24-hour analyses were requested, so that results could be quickly available to manage the progress of the excavation.

Because of the debris encountered and the situation described above with impacted layers underlying younger imported material, soil removal to a depth of least 2 feet was considered necessary to assure cleanup goals were met. In the range 2-4 feet, the action level for PCBs was 50 mg/kg. Excavation below 4 feet or below the groundwater table was not required under the approved Work Plan. Figure 3-1 presents the excavation bottom confirmation sampling results and Figure 3-2 presents the excavation sidewall confirmation sampling results. In all cases, the bottom excavation met the required remediation goals.

Review of Figure 3-1 shows that there were 6 grid squares in the excavation bottom where remaining soils exceeded 50 mg/kg, however, these were all below 4 feet in depth and below the groundwater table. Furthermore, 3 of these 6, although exceeding 50 mg/kg PCBs did not exceed the 59.3 mg/kg PCBs risk-based action level established in the SOMA Risk Assessment. Two hundred twenty three grid square samples in the removal area were below 2 feet in depth and 50 mg/kg PCBs.

In the west sidewall sampling, 6 of 9 samples exceeded 50 mg/kg PCBs. This area is adjacent to the TSCA containment cell and its surrounding slurry wall. The excavation

for the present Site Remediation could not safely be carried any farther west, without possibly damaging the slurry wall. Therefore, the remediation goals could not be met on this boundary. Four layers of 6-mil polyethylene sheeting were installed on this sidewall between the remaining soil and new backfill.

Along the east sidewall, 3 of 9 samples exceeded 0.5 mg/kg PCBs. The maximum concentration was 8.2 mg/kg PCBs, and the mean of all samples was approximately 1.2 mg/kg PCBs. On this property boundary, there is a concrete wall and wrought iron fence. The excavation was taken as close as possible to this structure, without undermining the concrete wall.

Along the north sidewall, one sample out of 22 did not meet the remediation goals. The average PCB concentration in these samples was 13.1 mg/kg. This sidewall is adjacent to a concrete wall and fence similar to that on the east boundary. The areas to the east and north are zoned for commercial land use and primarily capped by pavement or covered by buildings.

3.5 Laboratory Analytical Procedures

PCB analyses were performed by Analytical ChemTech International, Inc. of Sacramento, California. This laboratory is certified by the State of California to perform these analyses. The procedures described in Method 8080 of EPA Laboratory Manual SW-846 were used for all sample analysis of PCBs, as stated below:

"The entire sample is mixed to insure homogeneity. Approximately two grams of sample sifted through a #10 nylon mesh is weighed and transferred to a 20 ml vial. Approximately two grams of sodium sulfate is mixed into the sample. Ten mls. of hexane is added to the mixture. The sample is disrupted with a 1/8" tapered microtip ultrasonic probe for two minutes at output control setting 5 and with the mode switched on pulse and percent duty cycle of 50%. A sulfuric acid and florisil cleanup is performed on each sample. Additional cleanup is performed as necessary. After settling, a portion of the preparation is transferred into an auto-injection vial for analysis by GC" (ACI, 1996).

3.6 Data Validation

General elements of quality control relating to laboratory data validation included the following:

- Chain-of-custody protocols and documentation for all samples
- Notation of sample condition upon arrival at the laboratory
- Confirmation of sample analysis date within applicable holding times
- Frequency of QA/QC analysis

- Laboratory blank contamination
- Laboratory accuracy (percent recovery)
- Laboratory Precision (relative percent difference versus control limits)

Quality Assurance aspects of the soils PCB confirmation testing were addressed by Analytical ChemTech International, Inc. (the testing laboratory) for samples sent to that firm. Based on the QA/QC Document For PCB Analysis (ACTI, 1996) the procedures described in Method 8080 of EPA Laboratory Manual SW-846 were used for all sample analysis (PCBs). The ACI program for internal quality control consisted of:

1. Weekly preparation of standards prepared from EPA-supplied material for all Aroclors of interest (generally: 1242, 1254, and 1260) at seven concentrations each in the range of 5 ppm - 500 ppm. On a daily basis, standard check samples are run at a frequency of 3 for every 20 samples.

2. Method blanks are injected at a frequency of one out of every 10 samples.

3. Duplicate spikes are run at a frequency of 1 in every 20 samples and on all samples that are within 10% of EPA classification limits. If spiked results are outside of established recoveries (85 - 115%) action would be taken as specified in their QA/QC document (ACTI, 1996).

Discussion -- Item 1. The QC Data Sheets that accompanied each data set indicate a midrange PCB concentration of approximately .120 ug/ml to 2.5 ug/ml was used for PCB Aroclors 1260, 1254, and 1242. For all the sample sets, the Aroclor 1260 actual and observed concentrations in the check samples had a percent difference of -8.0 to +10.0; the Aroclor 1254 actual and observed concentrations in the check samples had a percent difference of -7.0 to +8.0; the Aroclor 1242 actual and observed concentrations in the check samples had a percent difference of -9.0 to +8.0. These variations are considered within acceptable limits; no action is required.

Discussion -- Item 2. One method blank analysis was performed for each data set to determine the extent of laboratory contamination of samples. Method blank criteria require that no PCBs be detected in the blank. PCBs were not detected in any of the method blank samples. No action is required.

Discussion -- Item 3. Laboratory Control Spike and Spike Duplicates were reported on the QC Data Sheets. The percent recovery of these perimeters varied from 97% to 108%. Established limits are 85 to 115 percent, so all recoveries were acceptable.

Volatile organic compound (VOC) analyses (8010/8020) were subcontracted to MBT Environmental Laboratories. Procedures and QA/QC considerations are described in

their report on the VOCs (Appendix A). Since these analyses were done solely for classification purposes with respect to material disposal, no analysis of the QC data is presented.

Table 3-1 CONCRETE CONFIRMATION SAMPLING Westinghouse Emeryville Site -- August 1996			
STOCKPILE NUMBER	DATE	PCB (Mg/Kg) EPA 8081	SAMPLING LOCATION
CS-1	1-Aug-96	<0.5	In-Place
CS-1	2-Aug-96	<0.5	Stockpile
CS-2	1-Aug-96	14	In-Place
CS-2	2-Aug-96	4.4	Stockpile
CS-3	1-Aug-96	164	Stockpile
CS-4	1-Aug-96	<0.5	In-Place
CS-4	2-Aug-96	<0.5	Stockpile
CS-4	15-Aug-96	<0.5	Stockpile
CS-5	1-Aug-96	17	In-Place
CS-5	2-Aug-96	2.3	Stockpile
CS-5	15-Aug-96	18	Stockpile
CS-6	1-Aug-96	4.6	In-Place
CS-6	2-Aug-96	26	Stockpile
CS-7	1-Aug-96	1.4	Stockpile
CS-7	15-Aug-96	320	Stockpile
CS-8	1-Aug-96	7.9	Stockpile
CS-9	1-Aug-96	6.1	In-Place
CS-9	2-Aug-96	22	Stockpile
CS-10	1-Aug-96	3.3	Stockpile
CS-10	15-Aug-96	31	Stockpile
CS-11	1-Aug-96	1.2	Stockpile
CS-11	20-Aug-96	11	Stockpile
CS-12	1-Aug-96	332	In-Place
CS-13	1-Aug-96	57	Stockpile
CS-13	20-Aug-96	90	Stockpile
CS-14	1-Aug-96	142	Stockpile
CS-14	20-Aug-96	13	Stockpile
CS-15	1-Aug-96	66	In-Place
CS-16	1-Aug-96	58	Stockpile
CS-16	20-Aug-96	8	Stockpile
CS-17	1-Aug-96	8.4	Stockpile
CS-18	1-Aug-96	113	In-Place
CS-19	1-Aug-96	1.2	Stockpile
CS-20	1-Aug-96	2.9	Stockpile
CS-21	1-Aug-96	4.6	In-Place
CS-21	2-Aug-96	889	Stockpile

Table 3-2
CONFIRMATION SAMPLING -- EXCAVATION BOTTOM
Westinghouse Emeryville Site -- August and September 1996

GRID SQUARE NUMBER	NORTH COORDINATE	EAST COORDINATE	SAMPLE FOR 1 FT BELOW	DATE	PCB (Mg/Kg) EPA 8081	RESOLUTION
1	9	5	3	7-Aug-96	19	
2	5	18	3	7-Aug-96	18	
3	9	24	3	7-Aug-96	25	
4	5	38	3	21-Aug-96	108	Excavated To 4 Feet
4	3	37	4	26-Aug-96	2.2	
5	8	48	3	21-Aug-96	146	Excavated To 4 Feet
5	4	45	4	26-Aug-96	13	
6	8	54	3	21-Aug-96	46	
7	8	67	2	2-Sep-96	62	Excavated To 4 Feet
7	8	67	4	4-Sep-96	1.3	
8	6	72	4	2-Sep-96	60	Excavated To 5 Feet
8	6	72	5	4-Sep-96	0.8	
9	8	85	4	2-Sep-96	3.1	
10	5	99	4	2-Sep-96	2.3	
11	6	105	4	2-Sep-96	14	
12	6	115	3	29-Aug-96	3.7	
13	8	125	5	29-Aug-96	<0.5	
14	2	135	2	26-Aug-96	3.9	
15	3	143	4	26-Aug-96	10	
16	8	157	2	26-Aug-96	2.6	
17	4	165	2	26-Aug-96	121	Excavated To 3 Feet
17	6	165	3.5	29-Aug-96	<0.5	Excavated For Debris
17	6	166	4	2-Sep-96	<0.5	
18	4	179	2	26-Aug-96	3	
18	9	178	2	26-Aug-96	12	
19	3	189	3	29-Aug-96	62	Excavated To 4 Feet
19	6	189	4	2-Sep-96	<0.5	
20	7	198	2	21-Aug-96	<0.5	
21	5	205	2	21-Aug-96	<0.5	
22	4	216	2	12-Aug-96	<0.5	
23	5	222	2	12-Aug-96	<0.5	
24	11	9	3	7-Aug-96	12	
25	15	15	3	7-Aug-96	11	
26	13	21	3	7-Aug-96	108	Excavated To 4 Feet
26	15	25	4	29-Aug-96	15	
27	11	33	3	21-Aug-96	12	
28	18	45	3	21-Aug-96	38	
29	13	55	3	21-Aug-96	1.6	
30	19	65	2	2-Sep-96	4.8	
31	15	75	3	2-Sep-96	21	
31	16	79	4	2-Sep-96	44	Excavated To 5 Feet

Table 3-2

CONFIRMATION SAMPLING -- EXCAVATION BOTTOM

Westinghouse Emeryville Site -- August and September 1996

GRID SQUARE NUMBER	NORTH COORDINATE	EAST COORDINATE	SAMPLE FOR 1 FT BELOW	DATE	PCB (Mg/Kg) EPA 8081	RESOLUTION
31	16	79	5	4-Sep-96	0.7	
32	15	85	4	2-Sep-96	21	
33	15	95	4	2-Sep-96	20	
34	17	106	4.5	2-Sep-96	3.0	
35	17	116	5	29-Aug-96	10	
36	18	125	3	29-Aug-96	<0.5	
37	15	136	4	26-Aug-96	<0.5	
38	12	147	2	26-Aug-96	8.8	
39	17	152	2	26-Aug-96	1.1	
40	11	168	2	26-Aug-96	0.7	
41	15	175	2	26-Aug-96	<0.5	
42	17	186	2	26-Aug-96	74	Excavated To 3 Feet
42	15	189	3	29-Aug-96	7.9	
43	14	195	2	21-Aug-96	<0.5	
44	16	207	2	21-Aug-96	<0.5	
45	11	219	3	12-Aug-96	<0.5	
46	14	224	2	12-Aug-96	<0.5	
47	22	4	3	7-Aug-96	21	
48	22	16	3	7-Aug-96	15	
49	25	26	3	7-Aug-96	5.6	
50	23	39	3	21-Aug-96	<0.5	
51	29	44	3	21-Aug-96	17	
52	23	55	3	21-Aug-96	0.5	
53	27	61	2	2-Sep-96	2.4	
54	24	74	2	28-Aug-96	<0.5	
55	28	84	2	28-Aug-96	23	
56	25	95	5	2-Sep-96	52	Sample Below 5 Ft.
57	28	104	5	2-Sep-96	1.0	
58	25	115	5	29-Aug-96	<0.5	
59	26	125	5	29-Aug-96	4.2	
60	24	138	2	26-Aug-96	1.9	
61	21	147	2	26-Aug-96	0.6	
62	22	158	2	26-Aug-96	<0.5	
63	22	163	2	26-Aug-96	<0.5	
64	23	174	2	26-Aug-96	5.4	
65	24	186	2	26-Aug-96	1.6	
66	24	195	4	21-Aug-96	6.1	
66	24	195	4	21-Aug-96	8.1	
67	27	203	2	21-Aug-96	25	
68	25	213	3	12-Aug-96	<0.5	
69	21	222	3	12-Aug-96	<0.5	

Table 3-2

CONFIRMATION SAMPLING -- EXCAVATION BOTTOM

Westinghouse Emeryville Site -- August and September 1996

GRID SQUARE NUMBER	NORTH COORDINATE	EAST COORDINATE	SAMPLE FOR 1 FT BELOW	DATE	PCB (Mg/Kg) EPA 8081	RESOLUTION
70	32	6	3	7-Aug-96	489	Excavated to 4 feet
70	37	8	4	15-Aug-96	11	
71	32	17	3	7-Aug-96	10	
72	38	25	3	7-Aug-96	87	Excavated to 4 feet
72	36	27	4	8-Aug-96	<0.5	
73	32	36	3	21-Aug-96	36	
74	31	47	3	21-Aug-96	74	Excavated to 4 feet
74	34	44	4	28-Aug-96	0.8	
75	35	59	3	21-Aug-96	1127	Excavated to 4 feet
75	36	55	4	26-Aug-96	32	
76	38	68	2	28-Aug-96	0.9	
77	33	76	2	28-Aug-96	1.5	
78	39	86	3	28-Aug-96	31	
79	36	96	3	28-Aug-96	151	Excavated to 5 feet
79	35	95	5	4-Sep-96	<0.5	
80	38	104	5	28-Aug-96	<0.5	
81	36	112	5	29-Aug-96	<0.5	
82	39	123	4	29-Aug-96	1	
83	33	137	2	26-Aug-96	0.6	
84	36	145	2	26-Aug-96	<0.5	
85	34	156	2	26-Aug-96	0.6	
86	32	161	2	26-Aug-96	<0.5	
87	34	175	2	26-Aug-96	1.6	
88	38	188	2	29-Aug-96	0.5	
89	34	198	2	21-Aug-96	<0.5	
90	32	204	2	21-Aug-96	0.6	
91	35	218	3	12-Aug-96	<0.5	
92	32	225	3	12-Aug-96	1	
93	49	9	3	7-Aug-96	4.7	
94	41	15	3	7-Aug-96	96	Excavated to 4 feet
94	44	17	4	8-Aug-96	<0.5	
95	47	23	3	7-Aug-96	207	Excavated to 4 feet
95	48	28	4	8-Aug-96	<0.5	
96	44	38	3	21-Aug-96	45	
97	45	45	3	21-Aug-96	1.3	
98	48	53	3	21-Aug-96	1.3	
99	47	64	3	28-Aug-96	20	
100	47	76	3	28-Aug-96	<0.5	
101	41	88	3	28-Aug-96	15	
101	49	84	3	28-Aug-96	16	
102	45	98	3	28-Aug-96	2.5	

Table 3-2

CONFIRMATION SAMPLING -- EXCAVATION BOTTOM

Westinghouse Emeryville Site -- August and September 1996

GRID SQUARE NUMBER	NORTH COORDINATE	EAST COORDINATE	SAMPLE FOR 1 FT BELOW	DATE	PCB (Mg/Kg) EPA 8081	RESOLUTION
103	48	105	4	28-Aug-96	0.9	
104	44	115	6	29-Aug-96	<0.5	
105	45	122	4	29-Aug-96	<0.5	
106	47	132	2	26-Aug-96	1	
107	44	145	2	26-Aug-96	<0.5	
108	43	156	2	21-Aug-96	<0.5	
109	44	164	2	21-Aug-96	0.5	
110	48	174	2	29-Aug-96	2.8	
111	48	182	2	21-Aug-96	1.8	
112	48	198	2	21-Aug-96	<0.5	
113	43	208	2	21-Aug-96	<0.5	
114	43	212	3	12-Aug-96	0.6	
115	48	226	3	12-Aug-96	<0.5	
116	57	3	3	7-Aug-96	355	Excavated to 4 feet
116	57	8	4	15-Aug-96	<0.5	
117	57	14	3	7-Aug-96	3.6	
118	54	24	3	7-Aug-96	100	Excavated to 4 feet
118	58	23	4	8-Aug-96	<0.5	
119	56	37	3	21-Aug-96	<0.5	
120	56	43	3	21-Aug-96	2.4	
121	57	57	3	21-Aug-96	<0.5	
122	57	63	3	28-Aug-96	3	
123	55	73	3	28-Aug-96	<0.5	
124	55	85	4	29-Aug-96	0.7	
125	53	92	3	28-Aug-96	164	Excavated to 5 feet
125	53	95	5	2-Sep-96	269	1.5 Ft. Below GW
126	55	105	5	2-Sep-96	8.9	
127	55	115	5	2-Sep-96	18	
128	55	125	4	29-Aug-96	<0.5	
129	57	134	2	26-Aug-96	0.9	
130	56	144	2	26-Aug-96	1.9	
131	57	154	2	29-Aug-96	<0.5	
132	54	164	2	21-Aug-96	1.1	
133	56	176	2	21-Aug-96	0.7	
134	57	186	2	21-Aug-96	<0.5	
135	55	195	2	21-Aug-96	<0.5	
136	54	202	2	21-Aug-96	<0.5	
137	51	217	3	12-Aug-96	<0.5	
138	52	225	3	12-Aug-96	<0.5	
139	62	4	4	7-Aug-96	9.2	
140	69	18	4	7-Aug-96	0.5	

Table 3-2

CONFIRMATION SAMPLING -- EXCAVATION BOTTOM

Westinghouse Emeryville Site -- August and September 1996

GRID SQUARE NUMBER	NORTH COORDINATE	EAST COORDINATE	SAMPLE FOR 1 FT BELOW	DATE	PCB (Mg/Kg) EPA 8081	RESOLUTION
141	64	21	4	7-Aug-96	2.7	
142	64	35	4	21-Aug-96	<0.5	
143	63	43	4	21-Aug-96	<0.5	
144	68	52	4	21-Aug-96	13	
145	64	66	3	28-Aug-96	1.2	
146	65	75	3	28-Aug-96	4.1	
147	66	86	3	28-Aug-96	<0.5	
148	68	97	5	2-Sep-96	361	1.5 FT Below GW
149	63	105	5	2-Sep-96	57	1.5 FT Below GW
150	65	115	5	2-Sep-96	33	
151	68	123	3	29-Aug-96	184	Excavated To 5 Feet
151	68	128	5	2-Sep-96	<0.5	
152	64	135	2	26-Aug-96	<0.5	
153	66	144	2	26-Aug-96	1.1	
154	65	157	2	29-Aug-96	<0.5	
155	66	168	2	29-Aug-96	1.2	
156	65	174	2	21-Aug-96	<0.5	
157	68	185	2	21-Aug-96	<0.5	
158	64	195	2	21-Aug-96	0.8	
159	67	209	2	21-Aug-96	41	Excavate To 3 Feet
160	67	216	3	12-Aug-96	<0.5	
161	61	221	3	12-Aug-96	<0.5	
162	77	4	4	7-Aug-96	40	
163	73	12	4	7-Aug-96	<0.5	
164	78	22	4	7-Aug-96	3.8	
165	72	34	3	21-Aug-96	1.3	
166	77	42	3	21-Aug-96	<0.5	
167	71	51	2	14-Aug-96	<0.5	
167	72	53	2	21-Aug-96	12	
168	78	65	4	26-Aug-96	2.4	
169	79	75	4	26-Aug-96	1.0	
170	76	85	3	28-Aug-96	<0.5	
170	78	85	4	26-Aug-96	7.3	
171	78	96	4	26-Aug-96	2280	Excavated To 6 Feet
171	78	93	6	29-Aug-96	94	2 Ft. Below GW
172	75	105	5	2-Sep-96	3.6	
173	75	115	5	2-Sep-96	<0.5	
174	75	128	5	2-Sep-96	<0.5	
175	78	134	2	26-Aug-96	0.7	
176	77	147	2	26-Aug-96	0.8	
177	74	156	2	21-Aug-96	<0.5	

Table 3-2

CONFIRMATION SAMPLING -- EXCAVATION BOTTOM

Westinghouse Emeryville Site -- August and September 1996

GRID SQUARE NUMBER	NORTH COORDINATE	EAST COORDINATE	SAMPLE FOR 1 FT BELOW	DATE	PCB (Mg/Kg) EPA 8081	RESOLUTION
178	74	164	2	14-Aug-96	<0.5	
178	74	168	2	21-Aug-96	<0.5	
179	73	171	2	14-Aug-96	<0.5	
180	75	185	2	14-Aug-96	1.9	
181	73	191	2	14-Aug-96	<0.5	
182	78	201	2	14-Aug-96	0.6	
183	78	212	2	12-Aug-96	408	Excavated To 3 Feet
183	76	215	3	14-Aug-96	<0.5	
184	72	224	2	12-Aug-96	<0.5	
185	82	6	4	7-Aug-96	3.0	
186	81	16	4	7-Aug-96	3.8	
187	85	22	4	7-Aug-96	22	
188	81	35	4	8-Aug-96	189	Excavated To 5 Feet
188	95	35	5	2-Sep-96	3	
189	85	44	3	8-Aug-96	44	
190	81	51	3	8-Aug-96	137	Excavated To 4 Feet
190	85	53	4	15-Aug-96	58	Excavated To 5 Feet
190	88	52	5	26-Aug-96	9.5	
191	82	63	3	8-Aug-96	44	
192	85	71	4	26-Aug-96	14	
193	84	85	4	26-Aug-96	10	
194	84	93	4	26-Aug-96	45	
195	85	105	5	2-Sep-96	0.7	
196	85	115	5	2-Sep-96	19	
197	88	125	5	2-Sep-96	1.3	
198	86	136	2	14-Aug-96	<0.5	
199	86	145	2	14-Aug-96	<0.5	
200	88	153	2	14-Aug-96	<0.5	
201	85	166	2	14-Aug-96	<0.5	
202	82	173	2	14-Aug-96	0.9	
203	86	181	2	14-Aug-96	<0.5	
204	88	194	2	14-Aug-96	<0.5	
205	85	202	2	14-Aug-96	<0.5	
206	85	217	2	12-Aug-96	<0.5	
207	82	223	2	12-Aug-96	<0.5	
208	91	2	1.5	7-Aug-96	<0.5	
209	Grid Square Not Excavated -- New Backfill Around Monitoring Wells					
210	95	23	3	7-Aug-96	5.1	
211	96	35	2	7-Aug-96	1.0	
211	91	37	3	8-Aug-96	15	
211	95	35	5	2-Sep-96	3.0	

Table 3-2

CONFIRMATION SAMPLING -- EXCAVATION BOTTOM

Westinghouse Emeryville Site -- August and September 1996

GRID SQUARE NUMBER	NORTH COORDINATE	EAST COORDINATE	SAMPLE FOR 1 FT BELOW	DATE	PCB (Mg/Kg) EPA 8081	RESOLUTION
212	92	45	3	8-Aug-96	4.1	
212	90	46	4	26-Aug-96	17	
213	92	52	3	8-Aug-96	18	
214	94	65	3	8-Aug-96	88	Excavated To 5 Feet
214	92	68	5	26-Aug-96	57	1.5 Ft. Below GW
215	93	76	4	26-Aug-96	0.6	
216	92	84	4	26-Aug-96	<0.5	
217	92	95	4	26-Aug-96	53	Excavated To 5 Feet
217	92	97	5	2-Sep-96	3.7	
218	93	104	5	2-Sep-96	<0.5	
219	92	118	5	2-Sep-96	0.7	
220	92	123	5	2-Sep-96	<0.5	
221	91	135	2	14-Aug-96	<0.5	
222	92	142	2	14-Aug-96	<0.5	
223	91	154	2	14-Aug-96	<0.5	
224	92	168	2	14-Aug-96	0.6	
225	92	176	2	14-Aug-96	<0.5	
226	91	187	2	14-Aug-96	<0.5	
227	91	195	2	14-Aug-96	<0.5	
228	92	208	2	14-Aug-96	16	
229	91	216	2	12-Aug-96	<0.5	
230	92	222	2	12-Aug-96	4.4	

Table 3-3
CONFIRMATION SAMPLING -- EXCAVATION SIDEWALLS
Westinghouse Emeryville Site -- August - September 1996

NORTH COORDINATE	EAST COORDINATE	DEPTH (Feet)	DATE	PCB (Mg/Kg) EPA 8081	RESOLUTION
(WEST SIDE)					
8	1	2	14-Aug-96	90	Left In Place
16	1	2	8-Aug-96	1.9	
29	1	2	8-Aug-96	1570	Left In Place
34	1	2	8-Aug-96	894	Left In Place
42	1	2	8-Aug-96	229	Left In Place
51	1	2	8-Aug-96	101	Left In Place
63	1	2	8-Aug-96	308	Left In Place
76	1	2	8-Aug-96	45	Left In Place
82	1	2	8-Aug-96	<0.5	
(EAST SIDE)					
10	228	1	15-Aug-96	37	Re-excavated
10	228	1	7-Sep-96	0.6	
20	228	1	15-Aug-96	<0.5	
30	228	1	15-Aug-96	8.2	
40	228	1	15-Aug-96	<0.5	
50	228	1	15-Aug-96	<0.5	
60	228	1	15-Aug-96	<0.5	
70	228	1	15-Aug-96	2.2	
80	228	1	15-Aug-96	<0.5	
90	228	1	15-Aug-96	<0.5	
(NORTH SIDE)					
93	10	2	15-Aug-96	18	
93	20	2	15-Aug-96	4.9	
93	30	2	15-Aug-96	7.0	
93	40	2	15-Aug-96	2.9	
93	50	2	15-Aug-96	37	Re-excavated
93	50	2	2-Sep-96	1..5	
93	60	2	15-Aug-96	<0.5	
93	70	2	15-Aug-96	13	
93	80	2	15-Aug-96	10	
93	90	2	2-Sep-96	<0.5	
93	100	2	2-Sep-96	7.9	
93	110	2	2-Sep-96	325	Re-excavated
93	110	2	4-Sep-96	<0.5	
93	120	2	15-Aug-96	4.8	
93	130	2	15-Aug-96	81	Re-excavated
93	130	2	2-Sep-96	93	Left In Place
93	140	2	15-Aug-96	50	Re-excavated

Table 3-3
CONFIRMATION SAMPLING -- EXCAVATION SIDEWALLS
Westinghouse Emeryville Site -- August - September 1996

NORTH COORDINATE	EAST COORDINATE	DEPTH (Feet)	DATE	PCB (Mg/Kg) EPA 8081	RESOLUTION
93	140	2	2-Sep-96	45	Left In Place
93	150	2	15-Aug-96	5.7	
93	160	2	15-Aug-96	<0.5	
93	170	2	15-Aug-96	2.1	
93	180	2	15-Aug-96	<0.5	
93	190	2	15-Aug-96	10	
93	200	2	15-Aug-96	38	Re-excavated
93	200	2	29-Aug-96	14	
93	210	2	7-Sep-96	43	Left In Place
93	220	2	15-Aug-96	50	Re-excavated
93	220	2	29-Aug-96	6.8	

Table 3-4
STOCKPILE SAMPLING RESULTS
Westinghouse Emeryville Site -- August and September 1996

STOCKPILE NUMBER	DATE SAMPLED	PCB (Mg/Kg) EPA 8081	COMMENTS
STP-1A	5-Aug-96	64	
STP-1B	5-Aug-96	115	
STP-1C	5-Aug-96	171	
STP-1D	5-Aug-96	244	
STP-2A	7-Aug-96	233	
STP-2B	7-Aug-96	410	
STP-2C	7-Aug-96	676	
STP-2D	7-Aug-96	427	
STP-3A	7-Aug-96	329	
STP-3B	7-Aug-96	270	
STP-3C	7-Aug-96	52	
STP-3D	7-Aug-96	118	
STP-4A	16-Aug-96	85	
STP-4B	16-Aug-96	68	
STP-4C	16-Aug-96	51	
STP-4D	16-Aug-96	187	
STP-5A	16-Aug-96	19	
STP-5B	16-Aug-96	111	
STP-5C	20-Aug-96	311	
STP-5D	20-Aug-96	409	
STP-6A	7-Aug-96	203	
STP-6B	7-Aug-96	228	
STP-6C	7-Aug-96	333	
STP-6D	7-Aug-96	147	
STP-7A-3.5	2-Sep-96	370	
STP-7A-2	2-Sep-96	303	
STP-7B2	28-Aug-96	312	
STP-7B-4	2-Sep-96	73	
STP-7C	26-Aug-96	12	
STP-7C3	28-Aug-96	72	
STP-7C4	28-Aug-96	74	
STP-7C2	28-Aug-96	87	
STP-7D2	28-Aug-96	33	
STP-7D5	28-Aug-96	7.9	
STP-7E-3	26-Aug-96	18	
STP-7E-5	26-Aug-96	11	
STP-7E5	28-Aug-96	37	
STP-7F-3	26-Aug-96	12	
STP-7F	4-Sep-96	5.9	
STP-8A4	28-Aug-96	830	

Table 3-4
STOCKPILE SAMPLING RESULTS
Westinghouse Emeryville Site -- August and September 1996

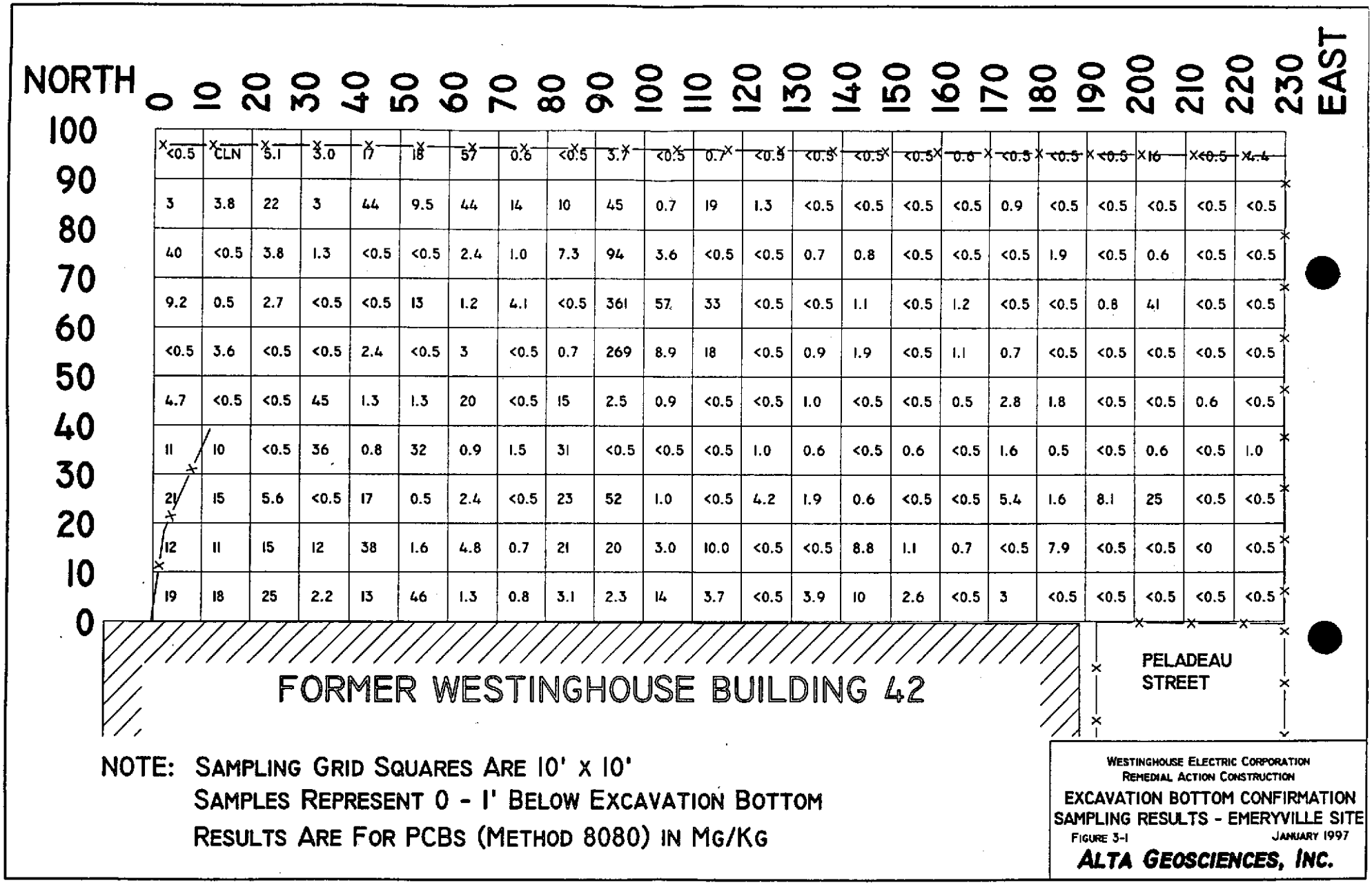
STOCKPILE NUMBER	DATE SAMPLED	PCB (Mg/Kg) EPA 8081	COMMENTS
STP-8B2	28-Aug-96	496	
STP-8ABC2	28-Aug-96	505	
STP-8B4	28-Aug-96	199	
STP-8C2	28-Aug-96	271	
STP-8D4	26-Aug-96	34	
STP-8D2	28-Aug-96	301	
STP-9A	8-Aug-96	575	
STP-9A, 12A	23-Aug-96	699	
STP-9D, 12D	23-Aug-96	682	
STP-9AB	26-Aug-96	250	
STP9-CD	26-Aug-96	1550	
STP-9B	8-Aug-96	1430	
STP-9C	8-Aug-96	932	
STP-10A	23-Aug-96	24	
STP-10B	23-Aug-96	6.5	
STP-10C	23-Aug-96	26	
STP-CS-C10	23-Aug-96	47	
STP-10D	23-Aug-96	27	
STP-11A	22-Aug-96	364	
STP-11A, 11B	23-Aug-96	246	
STP-11AB-5	26-Aug-96	58	
STP-11B	22-Aug-96	59	
STP-11C	22-Aug-96	221	
STP-11D	22-Aug-96	61	
STP-12A	14-Aug-96	2270	
STP-12ABC4	28-Aug-96	853	
STP-12B	14-Aug-96	1340	
STP-12C	14-Aug-96	274	
STP-12D	14-Aug-96	269	
STP-12D	14-Aug-96	269	
STP-12ABC-5	26-Aug-96	49	
STP-12-5	26-Aug-96	12	
STP-13A	23-Aug-96	33	
STP-13B	23-Aug-96	25	
STP-13C	23-Aug-96	147	
STP-13D	23-Aug-96	82	
STP-14A	20-Aug-96	13	
STP-14B	20-Aug-96	10	
STP-14C	20-Aug-96	145	
STP-14D	20-Aug-96	28	
STP-15A	14-Aug-96	39	

Table 3-4
STOCKPILE SAMPLING RESULTS
Westinghouse Emeryville Site -- August and September 1996

STOCKPILE NUMBER	DATE SAMPLED	PCB (Mg/Kg) EPA 8081	COMMENTS
STP-15B	14-Aug-96	56	
STP-15C	14-Aug-96	86	
STP-15D	14-Aug-96	100	
STP-16B	20-Aug-96	92	
STP-16C	20-Aug-96	163	
STP-16D	20-Aug-96	161	
STP-17A	20-Aug-96	5.0	
STP-17B	20-Aug-96	2.2	
STP-17C	20-Aug-96	4.5	
STP-17C/3	20-Aug-96	4	
STP-17D	20-Aug-96	8	
STP-18A	14-Aug-96	14	
STP-18B	12-Aug-96	7.6	
STP-18C	12-Aug-96	7.2	
STP-18D	12-Aug-96	95	
STP-19A	12-Aug-96	62	
STP-19B	12-Aug-96	55	
STP-19C	14-Aug-96	18	
STP-19D	8-Aug-96	4.3	
STP-20A	12-Aug-96	Sample Broken In Transit	
STP-20B	12-Aug-96	21	
STP-20C	12-Aug-96	4.7	
STP-20D	12-Aug-96	12	
STP-21A	12-Aug-96	14	
STP-21B	12-Aug-96	24	
STP-21C	12-Aug-96	393	
STP-21D	12-Aug-96	116	
STP-AGB	7-Aug-96	57	
AGB-CS-3	2-Aug-96	1440	Aggregate Base
AGB-CS-12	2-Aug-96	659	Aggregate Base
AGB-CS-18	2-Aug-96	134	Aggregate Base

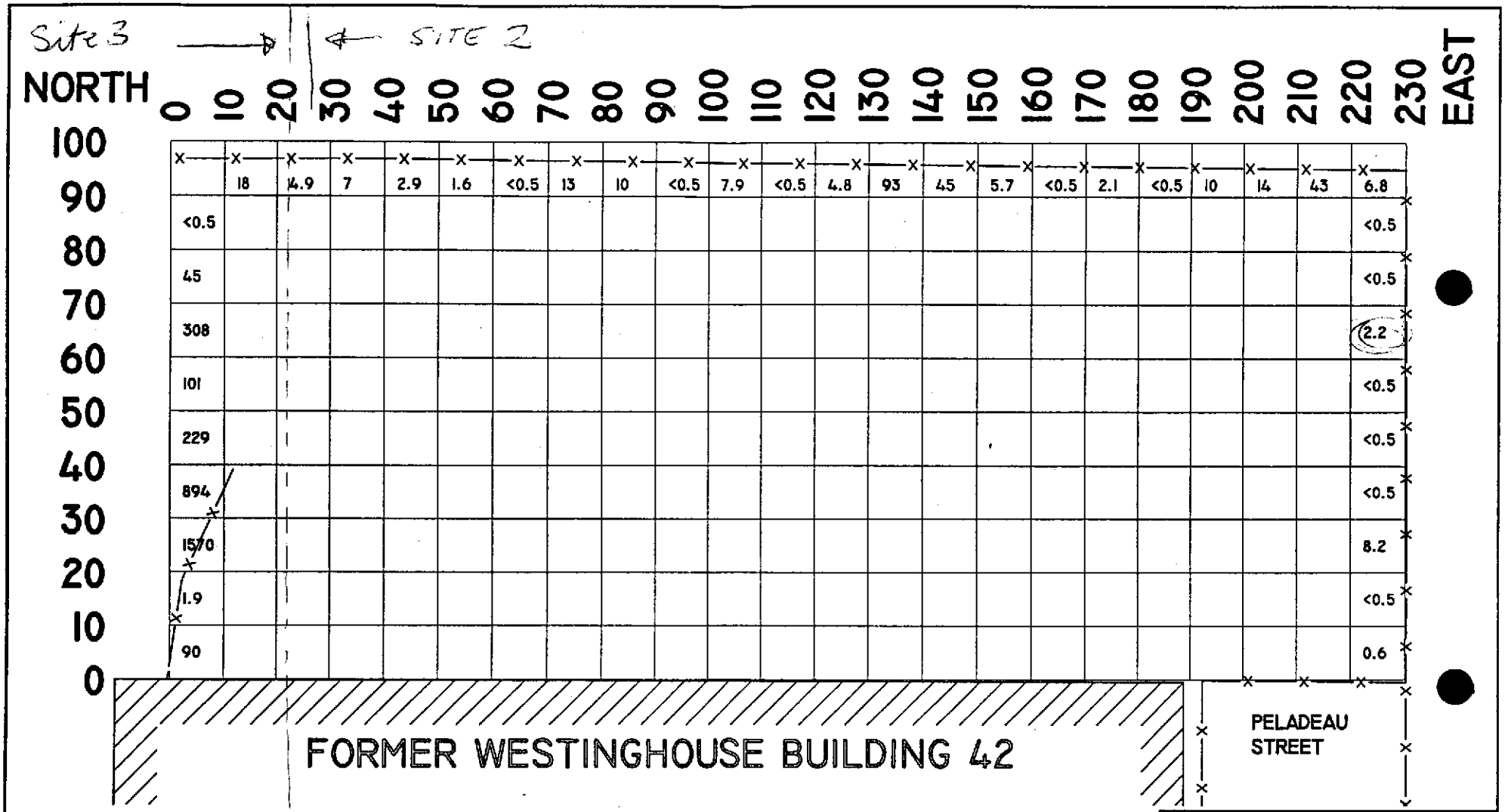
Table 3-5
VOC TESTPIT SAMPLING SUMMARY
Westinhouse Emeryville Site -- August 1996

DATE SAMPLED	5-Aug-96	5-Aug-96	8-Aug-96	15-Aug-96
GRID SQUARE	CS-12	CS-1	CS-9	CS-9D TO 12A
COORDINATES				
DEPTH (Feet)	3	3	3	3
8010 COMPOUNDS	Mg/Kg	Mg/Kg	Mg/Kg	
Tetrachloroethene			0.340	
Chlorobenzene	0.230		2.800	0.027
1, 3 - Dichlorobenzene	7.600	0.170	4.500	
1, 4 - Dichlorobenzene	6.000	0.890	5.000	2.6
1, 2 - Dichlorobenzene			0.620	
8020 COMPOUNDS	Mg/Kg	Mg/Kg	Mg/Kg	
Toluene			0.190	
Chlorobenzene	0.240		3.800	
Ethyl benzene			0.580	
1, 3 - and 1, 4 - Xylene	0.120		3.000	
1, 2 - Xylene	0.130		0.740	
1, 3 - Dichlorobenzene	7.600	0.200	7.700	
1, 4 - Dichlorobenzene	5.800	0.800	8.200	
1, 2 - Dichlorobenzene	0.790		2.800	



NOTE: SAMPLING GRID SQUARES ARE 10' X 10'
SAMPLES REPRESENT 0 - 1' BELOW EXCAVATION BOTTOM
RESULTS ARE FOR PCBS (METHOD 8080) IN MG/KG

WESTINGHOUSE ELECTRIC CORPORATION
REMEDIAL ACTION CONSTRUCTION
EXCAVATION BOTTOM CONFIRMATION
SAMPLING RESULTS - EMERYVILLE SITE
FIGURE 3-1 JANUARY 1997
ALTA GEOSCIENCES, INC.



NOTE: SAMPLING GRID SQUARES ARE 10' X 10'
SAMPLES REPRESENT SIDEWALL COMPOSITE
RESULTS ARE FOR PCBS (METHOD 8080) IN MG/KG

WESTINGHOUSE ELECTRIC CORPORATION
REMEDIAL ACTION CONSTRUCTION

SIDEWALL CONFIRMATION SAMPLING
EMERYVILLE SITE

FIGURE 3-2 JANUARY 1997

ALTA GEOSCIENCES, INC.

4.0
SHIPPING AND DISPOSAL

All soil, debris, and concrete materials removed from the excavation area were transported and disposed of offsite. After excavation, stockpiled materials were sampled and tested using a four-point composite. Testing results showing PCBs greater than 40 kg/mg resulted in the material being placed in a water-tight shipping box and transported by truck and rail to a landfill permitted to receive TSCA waste. Testing results showing PCBs less than 40 mg/kg resulted in the material being shipped by truck and rail to a non -TSCA solid waste landfill. Although 50 mg/kg PCBs is technically the point of division for TSCA and non-TSCA wastes of this type, as a conservative measure, Westinghouse used 40 mg/kg PCBs as the dividing line to decrease the possibility of TSCA waste being improperly disposed at a non-TSCA landfill.

4.1 ECDC Shipments

Non-TSCA waste was shipped to the Laidlaw Environmental Services/ECDC landfill at East Carbon, Utah. Approximately 1100 tons was shipped and received at the landfill. Table 4-1 presents a summary of the tonnage shipped from the site.

4.2 Grassy Mountain Shipments

The Laidlaw Landfill at Grassy Mountain, Utah is permitted to receive TSCA waste. All TSCA waste from the Emeryville Site went to Grassy Mountain. The shipments from the Emeryville Site were in 184 steel shipping containers totaling approximately 3700 tons. Each load was shipped by truck and rail under a California Uniform Hazardous Waste Manifest (see Appendix B). A summary of the manifest information is presented in Table 4-2. Appendix C presents the disposal certificates for these materials. The disposal certificate for Manifest Number 171 had not been recieved from Laidlaw at the time this completion report was prepared.

Table 4-1
ECDC LANDFILL SHIPPING SUMMARY
Westinghouse Emeryville Site -- 1996 Removal Action

SHIPPING TRUCK	WEIGHT SHIPPED (Kilograms)	COMMENT	DATE SHIPPED	MATERIAL	EXCAVATIO SOURCE
Rodgers #6	14470		6-Aug-96	Concrete	C-2
Rodgers #8	23623		6-Aug-96	Concrete	C-2
Rodgers #6	19042		6-Aug-96	Concrete	C-1
Rodgers #8	21047		6-Aug-96	Concrete	C-1
Rodgers #6	19522		6-Aug-96	Asphalt Concrete	
Rodgers #8	16284		6-Aug-96	Asphalt Concrete, Trash	
Rodgers #6	17926		6-Aug-96	Concrete	C-9
Rodgers #8	21101		6-Aug-96	Concrete	C-9
Rodgers #6	17074		6-Aug-96	Concrete	C-6
Rodgers #8	20938		6-Aug-96	Concrete	C-19
Rodgers #6	18425		6-Aug-96	Concrete	C-19/C-20
Rodgers #8	10088		6-Aug-96	Concrete	C-20
Rodgers	20503		16-Aug-96	Soil	20D, 20B
Rodgers	18434		16-Aug-96	Soil	20B, 21B
Rodgers	18870		16-Aug-96	Soil	20C, 21A
Rodgers	18666		16-Aug-96	Soil	18C, 18B
Rodgers	19314		16-Aug-96	Soil	18B, 18A
Rodgers	21120		16-Aug-96	Soil	19C, 18A
Rodgers	17627		16-Aug-96	Soil	
Rodgers	24948		19-Aug-96	Soil	1C, 11C
Rodgers	20475		19-Aug-96	Soil	4C
Rodgers	19332		19-Aug-96	Soil	5C
Rodgers	15195		19-Aug-96	Soil	5C
Rodgers #8	16102		23-Aug-96	Soil	5A
Rodgers #44	13798		23-Aug-96	Soil	5A
Rodgers #8	13218		23-Aug-96	Soil	5A, 14B
Rodgers #44	11775		23-Aug-96	Soil	5A, 16D
Rodgers #8	16729		23-Aug-96	Soil	14B
	Estimate				
Rodgers #44	20000	Scale Down	23-Aug-96	Soil	C11
Rodgers #8	20000	Scale Down	23-Aug-96	Soil	C11, 17C
Rodgers #44	20000	Scale Down	23-Aug-96	Soil	14D
Rodgers #8	20000	Scale Down	23-Aug-96	Soil	17A.17B
Rodgers #44	20000	Scale Down	23-Aug-96	Soil	17C, 17B
Rodgers #8	20000	Scale Down	23-Aug-96	Soil	17C
	Estimate				
Rodgers #6	23124		30-Aug-96	Soil	10C
Rodgers #997	25406		30-Aug-96	Soil	10A, 10B
Rodgers #6	19831		30-Aug-96	Soil	10A

ECDC LANDFILL SHIPPING SUMMARY

Westinghouse Emeryville Site -- 1996 Removal Action

SHIPPING TRUCK	WEIGHT SHIPPED (Kilograms)	COMMENT	DATE SHIPPED	MATERIAL	EXCAVATIO SOURCE
Rodgers #997	26136		30-Aug-96	Concrete	C7
Rodgers #6	16652		30-Aug-96	Concrete	C7
Rodgers #997	24703		30-Aug-96	Soil	7E
Rodgers #6	17014		30-Aug-96	Soil	7E
Rodgers #997	21070		30-Aug-96	Soil	7E
Rodgers #6	19201		30-Aug-96	Soil	7F
Rodgers #997	25996		30-Aug-96	Soil	13B
Rodgers #6	20140		30-Aug-96	Soil	13A, 7F
Rodgers #997	26209		30-Aug-96	Soil	8D
Rodgers #6	16402		30-Aug-96	Soil	8D,13A,7D
Rodgers #997	29574		30-Aug-96	Soil	7D
Rodgers #6	17405		30-Aug-96	Soil	10A
Rodgers #997	23542		30-Aug-96	Soil	7D
ESTIMATED TOTAL	**978050 Kilograms**				
	1078 Tons				

Table 4-2
LAIDLAW GRASSY MOUNTAIN LANDFILL SHIPPING MANIFEST SUMMARY
Westinghouse Emeryville Site -- 1996 Soils Removal Action

MANIFEST NUMBER	WEIGHT SHIPPED (Kilograms)	WEIGHT SHIPPED (Tons)	WEIGHT RECEIVED (Tons)	DATE SHIPPED	DATE RECEIVED	MATERIAL	EXCAVATION SOURCE	SHIPPING CONTAINER
00001	22589	24.90	23.66	9-Aug-96	21-Aug-96	Concrete	C-12	I25217RT
00002	17745	19.56	19.89	9-Aug-96	21-Aug-96	Soil	1D	I25861RT
00003	20122	22.18	23.20	9-Aug-96	21-Aug-96	Soil	1D	I25789RT
00004	21383	23.57	22.97	9-Aug-96	21-Aug-96	Concrete	C12, C15	I25178RT
00005	17436	19.22	18.47	9-Aug-96	22-Aug-96	Soil	AGB-1C	I12082RT
00006	17645	19.45	19.15	9-Aug-96	22-Aug-96	Soil	2A	I25483RT
00007	21972	24.22	22.38	9-Aug-96	28-Aug-96	Concrete	C12	I25407RT
00008	19196	21.16	22.03	9-Aug-96	28-Aug-96	Soil	1E	I526026RT
00009	19568	21.57	22.16	9-Aug-96	29-Aug-96	Soil	1B, 1C	I525601RT
00010	21945	24.19	23.22	9-Aug-96	29-Aug-96	Concrete	C15	I2920RT
00011	20240	22.31	20.60	12-Aug-96	28-Aug-96	Concrete	C21	I2961RT
00012	18643	20.55	20.08	12-Aug-96	28-Aug-96	Concrete	C18	I2805RT
00013	19858	21.89	20.12	12-Aug-96	28-Aug-96	Concrete	C15, C18	I25293RT
00014	19405	21.39	20.72	12-Aug-96	27-Aug-96	Soil	1B	I26536RT
00015	22263	24.54	22.47	12-Aug-96	27-Aug-96	Soil	1B	I25105RT
00016	20530	22.63	22.87	12-Aug-96	28-Aug-96	Soil	1B, 1A	I25866RT
00017	22308	24.59	23.96	12-Aug-96	27-Aug-96	Soil	1A	I525301RT
00018	19269	21.24	19.12	12-Aug-96	28-Aug-96	Soil	2B	I25577RT
00019	17264	19.03	18.86	12-Aug-96	29-Aug-96	Soil	2B	I2960RT
00020	19468	21.46	19.29	12-Aug-96	5-Sep-96	Soil	2B	I25131RT
00021	17681	19.49	17.35	12-Aug-96	27-Aug-96	Soil	2B	I25011RT
00022	15622	17.22	17.56	13-Aug-96	27-Aug-96	Soil	2D	I2077RT
00023	14886	16.41	20.82	13-Aug-96	29-Aug-96	Soil	2D, 3A	I25405RT
00024	19005	20.95	21.59	13-Aug-96	27-Aug-96	Soil	2D	I25458RT
00025	18552	20.45	21.07	13-Aug-96	27-Aug-96	Soil	2D,3A	I25632ML

Table 4-2
LAIDLAW GRASSY MOUNTAIN LANDFILL SHIPPING MANIFEST SUMMARY
Westinghouse Emeryville Site -- 1996 Soils Removal Action

MANIFEST NUMBER	WEIGHT SHIPPED (Kilograms)	WEIGHT SHIPPED (Tons)	WEIGHT RECEIVED (Tons)	DATE SHIPPED	DATE RECEIVED	MATERIAL	EXCAVATION SOURCE	SHIPPING CONTAINER
00026	10705	11.80	11.67	13-Aug-96	27-Aug-96	Soil	3A	I25668ML
00027	18398	20.28	19.26	13-Aug-96	30-Aug-96	Soil	3A	I2922RT
00028	15136	16.68	16.92	13-Aug-96	27-Aug-96	Soil	3A	I25080RT
00029	12510	13.79	13.43	13-Aug-96	28-Aug-96	Soil	2D, 3A	030387
00030	13335	14.70	15.51	13-Aug-96	3-Sep-96	Soil	3A	037001
00031	13835	15.25	17.95	13-Aug-96	27-Aug-96	Soil	3B	I28221RT
00032	19205	21.17	21.81	13-Aug-96	28-Aug-96	Soil	3D, 3C	I25298RT
00033	17998	19.84	20.09	13-Aug-96	27-Aug-96	Soil	3B, 3C	NURW200157
00034	20030	22.08	21.00	13-Aug-96	3-Sep-96	Soil	3C, 3B	NVRU200166
00035	23625	26.04	14.07	13-Aug-96	27-Aug-96	Soil	3B, 6D	030242
00036	11331	12.49	13.99	13-Aug-96	27-Aug-96	Soil	6D	30033
00037	20022	22.07	20.76	13-Aug-96	28-Aug-96	Soil	6A	I25685ML
00038	16284	17.95	18.60	14-Aug-96	28-Aug-96	Soil	6D	I25627ML
00039	20548	22.65	22.33	14-Aug-96	30-Aug-96	Soil	6C	I2646ML
00040	19359	21.34	19.63	14-Aug-96	30-Aug-96	Soil	6C	I25619ML
00041	12002	13.23	15.96	14-Aug-96	28-Aug-96	Soil	6B	030037
00042	12483	13.76	14.42	14-Aug-96	29-Aug-96	Soil	6B	30551
00043	13417	14.79	14.41	14-Aug-96	30-Aug-96	Soil	6B, 6A	037083
00044	10986	12.11	12.63	14-Aug-96	28-Aug-96	Soil	6A, 20A	030347
00045	12220	13.47	14.10	14-Aug-96	29-Aug-96	Soil	21D, 20A	037182
00046	15377	16.95	16.09	14-Aug-96	29-Aug-96	Soil	20A, 21C, 21D	410952
00047	20030	22.08	22.06	19-Aug-96	12-Sep-96	Soil	15C, 15D	I2979ML
00048	16901	18.63	17.98	19-Aug-96	12-Sep-96	Soil	15C, 15B	I25297RT
00049	21192	23.36	21.39	19-Aug-96	5-Sep-96	Soil	12C	I264ML
00050	13598	14.99	12.83	19-Aug-96	6-Sep-96	Concrete	C8	I2901ML

Table 4-2
LAIDLAW GRASSY MOUNTAIN LANDFILL SHIPPING MANIFEST SUMMARY
Westinghouse Emeryville Site -- 1996 Soils Removal Action

MANIFEST NUMBER	WEIGHT SHIPPED (Kilograms)	WEIGHT SHIPPED (Tons)	WEIGHT RECEIVED (Tons)	DATE SHIPPED	DATE RECEIVED	MATERIAL	EXCAVATION SOURCE	SHIPPING CONTAINER
00051	18616	20.52	17.86	19-Aug-96	12-Sep-96	Concrete	C8	I25610ML
00052	15159	16.71	18.77	20-Aug-96	12-Sep-96	Concrete	C8	I2837RT
00053	23115	25.48	20.09	20-Aug-96	20-Sep-96	Soil	12B	I2594RT
00054SS	20484	22.58	21.75	20-Aug-96	12-Sep-96	Soil	12B	I2883RT
00055	19151	21.11	17.45	20-Aug-96	12-Sep-96	Soil	12B	
00056	17255	19.02	20.46	20-Aug-96	13-Sep-96	Soil	12B	I25631ML
00057	18960	20.90	21.99	20-Aug-96	11-Sep-96	Soil	4A	I2643ML
00058	20139	22.20	20.21	20-Aug-96	13-Sep-96	Soil	4A	I25042RT
00059	19532	21.53	21.89	20-Aug-96	11-Sep-96	Soil	4A	I2976ML
00060	18987	20.93	18.45	20-Aug-96	12-Sep-96	Soil	4A	I25676ML
00061	19849	21.88	21.06	20-Aug-96	11-Sep-96	Soil	5B	I25311RT
00062	16511	18.20	19.05	20-Aug-96	23-Sep	Soil	5B	I25634ML
00063	15504	17.09	19.50	20-Aug-96	11-Sep-96	Soil	4A, 5A	I25661ML
00064	19205	21.17	19.17	20-Aug-96	10-Sep-96	Soil	12D, 12C	IS25279RT
00065	21482	23.68	21.72	20-Aug-96	11-Sep-96	Soil	12D	I2900ML
00066	16511	18.20	16.87	21-Aug-96	11-Sep-96	Soil	4D	I2846RT
00067	17282	19.05	16.33	21-Aug-96	11-Sep-96	Soil	4D	I27998RT
00068	19268	21.24	17.49	21-Aug-96	20-Sep-96	Soil	4A, 4B	I2966ML
00069	18216	20.08	18.81	21-Aug-96	12-Sep-96	Soil	4D	IS25946RT
00070	17282	19.05	15.21	21-Aug-96	11-Sep-96	Soil	C4	I25636M:
00071	18362	20.24	16.30	21-Aug-96	11-Sep-96	Soil	4B	I2561ML
00072	18888	20.82	17.14	21-Aug-96	10-Sep-96	Soil	4D	I2925RT
00073	18198	20.06	14.50	21-Aug-96	11-Sep-96	Soil		I2098RT
00074	16021	17.66	14.77	21-Aug-96	11-Sep-96	Soil		I25412RT
00075	17482	19.27	17.18	21-Aug-96	11-Sep-96	Soil	9D	I26074RT

Table 4-2
LAIDLAW GRASSY MOUNTAIN LANDFILL SHIPPING MANIFEST SUMMARY
Westinghouse Emeryville Site -- 1996 Soils Removal Action

MANIFEST NUMBER	WEIGHT SHIPPED (Kilograms)	WEIGHT SHIPPED (Tons)	WEIGHT RECEIVED (Tons)	DATE SHIPPED	DATE RECEIVED	MATERIAL	EXCAVATION SOURCE	SHIPPING CONTAINER
00076	14170	15.62	15.21	21-Aug-96	12-Sep-96	Soil	19A, 19B	I25365RT
00077	14370	15.84	15.34	22-Aug-96	12-Sep-96	Soil	19B	I2858RT
00078	16293	17.96	16.96	22-Aug-96	12-Sep-96	Soil	19D	I2796RT
00079	17373	19.15	15.83	22-Aug-96	12-Sep-96	Soil	9C	I2825RT
00080	18017	19.86	17.16	22-Aug-96	12-Sep-96	Concrete	13C	I25625ML
00081	17971	19.81	17.88	22-Aug-96	12-Sep-96	Soil	19D	I2076RT
00082	20357	22.44	19.01	22-Aug-96	12-Sep-96	Concrete	13C	I25124RT
00083	17146	18.90	17.71	22-Aug-96	12-Sep-96	Soil	9A	I29115RT
00084	18117	19.97	18.48	22-Aug-96	2-Oct-96	Concrete	13C	I28009RT
00085	21637	23.85	14.50	22-Aug-96	12-Sep-96	Soil	9C	I25779RT
00086	18362	20.24	16.02	22-Aug-96	12-Sep-96	Soil	9C	I25647ML
00087	17881	19.71	20.36	22-Aug-96	17-Sep-96	Soil	14C	I2993RT
00088	20448	22.54	15.55	22-Aug-96	17-Sep-96	Soil	9C	I2994RT
00089	17527	19.32	15.59	22-Aug-96	12-Sep-96	Soil	4C	I25692ML
00090	15241	16.80	15.89	22-Aug-96	12-Sep-96	Soil	9B, 9C	IS26003RT
00091	15341	16.91	14.63	22-Aug-96	17-Sep-96	Soil	9B	I25263RT
00092	22271	24.55	20.82	22-Aug-96	12-Sep-96	Soil	14C, 5D	IS25922RT
00093	17409	19.19	17.12	22-Aug-96	12-Sep-96	Soil	5B, 16B	I25624ML
00094	17854	19.68	17.28	22-Aug-96	16-Sep-96	Soil	14C	I2084RT
00095	19487	21.48	18.57	23-Aug-96	13-Sep-96	Soil	16C	I25628ML
00096	20485	22.58	18.51	23-Aug-96	12-Sep-96	Soil	16C, 16D	I25303RT
00097	15395	16.97	16.30	23-Aug-96	12-Sep-96	Concrete	13C	I25662ML
00098	20485	22.58	18.97	23-Aug-96	12-Sep-96	Soil	5D	I25663ML
00099	16919	18.65	18.29	23-Aug-96	12-Sep-96	Soil	5A, 16B	I25687ML
00100	14288	15.75	19.56	23-Aug-96	13-Sep-96	Soil	16D	I25006RT

Table 4-2
LAIDLAW GRASSY MOUNTAIN LANDFILL SHIPPING MANIFEST SUMMARY
Westinghouse Emeryville Site -- 1996 Soils Removal Action

MANIFEST NUMBER	WEIGHT SHIPPED (Kilograms)	WEIGHT SHIPPED (Tons)	WEIGHT RECEIVED (Tons)	DATE SHIPPED	DATE RECEIVED	MATERIAL	EXCAVATION SOURCE	SHIPPING CONTAINER
00101	15939	17.57	17.38	23-Aug-96	13-Sep-96	Soil	16D, 5D	I25415ML
00102	11167	12.31	19.74	23-Aug-96	12-Sep-96	Soil	5C	I2969ML
00103	15204	16.76	17.94	26-Aug-96	13-Sep-96	Soil	5C	I25705ML
00104	11585	12.77	15.73	26-Aug-96	11-Sep-96	Concrete	16C	I1526416RT
00105	12904	14.22	17.60	26-Aug-96	10-Sep-96	Concrete	14C	I152803RT
00106	18461	20.35	15.31	26-Aug-96	10-Sep-96	Concrete	14C	I25043RT
00107	13077	14.41	19.71	26-Aug-96	10-Sep-96	Soil		I25773RT
00108	11948	13.17	17.28	26-Aug-96	10-Sep-96	Concrete	14C, 16C	I25543RT
00109	11467	12.64	16.62	26-Aug-96	10-Sep-96	Soil	5 C	IS26417RT
00110	14388	15.86	20.68	26-Aug-96	10-Sep-96	Soil	11B	I25498RT
00111	13712	15.11	18.04	26-Aug-96	10-Sep-96	Soil	5C, 11B	I25515RT
00112	14302	15.76	20.76	26-Aug-96	10-Sep-96	Soil	11C	I25517RT
00113	15349	16.92	20.30	26-Aug-96	10-Sep-96	Soil	11C	I2775RT
00114	15014	16.55	21.59	26-Aug-96	10-Sep-96	Soil	11D	I25030RT
00115	12500	13.78	18.99	26-Aug-96	6-Sep-96	Soil	11C	I2751RT
00116	12773	14.08	18.67	26-Aug-96	10-Sep-96	Soil	11D	I25029RT
00117	10841	11.95	15.99	26-Aug-96	6-Sep-96	Soil	9D	I250086RT
00118	20947	23.09	16.60	27-Aug-96	13-Sep-96	Soil	10	I25799RT
00119	21346	23.53	14.47	27-Aug-96	13-Sep-96	Soil	13D	I2818RT
00120	21364	23.55	16.72	27-Aug-96	13-Sep-96	Soil	13D	IS25813RT
00121	18942	20.88	12.41	28-Aug-96	13-Sep-96	Soil	10C	IS25603RT
00122	20911	23.05	17.52	28-Aug-96	13-Sep-96	Soil	9D, 13D	I25474RT
00123	19881	21.91	18.88	28-Aug-96	13-Sep-96	Soil	13C, 13D	IS2760RT
00124	22566	24.87	19.85	28-Aug-96	13-Sep-96	Soil	13C	I2999RT
00125	16593	18.29	13.81	28-Aug-96	13-Sep-96	Soil	9D, 12A	NVRU200168

Table 4-2
LAIDLAW GRASSY MOUNTAIN LANDFILL SHIPPING MANIFEST SUMMARY
Westinghouse Emeryville Site -- 1996 Soils Removal Action

MANIFEST NUMBER	WEIGHT SHIPPED (Kilograms)	WEIGHT SHIPPED (Tons)	WEIGHT RECEIVED (Tons)	DATE SHIPPED	DATE RECEIVED	MATERIAL	EXCAVATION SOURCE	SHIPPING CONTAINER
00126	16030	17.67	15.22	28-Aug-96	13-Sep-96	Soil	9D, 12A	IS26024RT
00127	23437	25.83	19.63	28-Aug-96	13-Sep-96	Soil	9D, 12A	I25871RT
00128	20797	22.92	20.91	28-Aug-96	13-Sep-96	Soil	11A	IS26059RT
00129	21074	23.23	18.59	28-Aug-96	12-Sep-96	Soil	11A	NVRU200214
00130	24394	26.89	19.65	28-Aug-96	12-Sep-96	Soil	11A	NVRU200155
00131	21410	23.60	16.95	29-Aug-96	12-Sep-96	Soil	13C	IS25599RT
00132	17409	19.19	16.38	29-Aug-96	13-Sep-96	Soil	11A, 11B	ECCU4084
00133SS	25851	28.50	24.24	29-Aug-96	11-Sep-96	Soil	11AB	I2904ML
00134SS	20085	22.14	18.62	29-Aug-96	11-Sep-96	Soil	12ABC	I25621ML
00135SS	21374	23.56	17.69	29-Aug-96	11-Sep-96	Soil	12ABC	I2092RT
00136	20593	22.70	18.83	29-Aug-96	11-Sep-96	Soil	12ABC	I29668ML
00137	20557	22.66	16.79	29-Aug-96	11-Sep-96	Soil	11AB	I25294RT
00138	18434	20.32	16.56	29-Aug-96	11-Sep-96	Soil	11AB	I25167RT
00139	20666	22.78	17.33	30-Aug-96	11-Sep-96	Soil	8A, 8B	USPC030080
00140	14433	15.91	11.80	30-Aug-96	11-Sep-96	Soil	11AB	USPC030641
00141	19106	21.06	11.88	30-Aug-96	11-Sep-96	Soil	11AB, 12ABC	USPC037148
00142	19582	21.59	17.16	30-Aug-96	18-Sep-96	Soil	8ABC	USPC030148
00143	19106	21.06	16.70	30-Aug-96	11-Sep-96	Soil	8ABC	USPC030359
00144	23533	25.94	18.59	30-Aug-96	13-Sep-96	Soil	11AB	I2970ML
00145	14874	16.40	12.63	30-Aug-96	13-Sep-96	Soil	11AB	USPC035155
00146	13735	15.14	11.65	30-Aug-96	13-Sep-96	Soil	8ABC	USPC030664
00147	16593	18.29	13.70	30-Aug-96	11-Sep-96	Soil	9CD	USPC030122
00148	13844	15.26	11.79	30-Aug-96	18-Sep-96	Soil	9AB	USPC030029
00149SS	20947	23.09	18.01	30-Aug-96	18-Sep-96	Soil	9CD	I25108RT
00150	21419	23.61	18.53	30-Aug-96	17-Sep-96	Soil	7C	USPC030181

Table 4-2
LAIDLAW GRASSY MOUNTAIN LANDFILL SHIPPING MANIFEST SUMMARY
Westinghouse Emeryville Site -- 1996 Soils Removal Action

MANIFEST NUMBER	WEIGHT SHIPPED (Kilograms)	WEIGHT SHIPPED (Tons)	WEIGHT RECEIVED (Tons)	DATE SHIPPED	DATE RECEIVED	MATERIAL	EXCAVATION SOURCE	SHIPPING CONTAINER
00151	17445	19.23	15.88	30-Aug-96	17-Sep-96	Soil	7C	USPC030314
00152	20158	22.22	13.71	30-Aug-96	18-Sep-96	Soil	7C	USPC030122
00153	17609	19.41	15.00	31-Aug-96	17-Sep-96	Soil	8ABC	USPC030246
00154	16157	17.81	14.74	31-Aug-96	16-Sep-96	Soil	8ABC	USPC037168
00155	18276	20.15	14.94	31-Aug-96	17-Sep-96	Soil	7C, 8ABC	USPC030104
00156	21496	23.69	19.38	31-Aug-96	17-Sep-96	Soil	8ABC	I25002RT
00157SS	20203	22.27	17.20	3-Sep-96	17-Sep-96	Soil	RX-1	IS25605RT
00158	16107	17.75	13.21	3-Sep-96	18-Sep-96	Concrete	CS-11 (structures	I2806RT
00159	22380	24.67	16.85	3-Sep-96	17-Sep-96	Concrete	CS-11 (structures	I2786RT
00160	16094	17.74	14.12	3-Sep-96	17-Sep-96	Soil	7D	USPC035084
00161	17781	19.60	15.89	3-Sep-96	17-Sep-96	Soil	7D	USPC030101
00162	24708	27.24	22.10	3-Sep-96	23-Sep-96	Soil	7D	IS26431RT
00163	21120	23.28	18.64	3-Sep-96	18-Sep-96	Soil	7B	IS2557LRT
00164	20480	22.57	18.28	3-Sep-96	18-Sep-96	Soil	7C	IS25590RT
00165	23682	26.10	20.77	3-Sep-96	18-Sep-96	Concrete	CS-11 (structures	I2097RT
00166	22253	24.53	19.15	3-Sep-96	17-Sep-96	Soil	8D	I25771RT
00167	23455	25.85	18.80	3-Sep-96	16-Sep-96	Soil	8D, 7C	I25224RT
00168	24708	27.24	14.35	3-Sep-96	17-Sep-96	Soil	8D	030530
00169	24708	27.24	16.31	3-Sep-96	17-Sep-96	Soil	8D	I2621ML
00170	23682	26.10	16.73	3-Sep-96	7-Oct-96	Soil	8D	II2991RT
00171	20866	23.00	18.38	5-Sep-96		Soil	7C	I2991RT
00172	17400	19.18	15.00	5-Sep-96	2-Oct-96	Soil	8B	USPC035211
00173	13281	14.64	12.34	5-Sep-96	18-Sep-96	Soil	8B	USPC030271
00174	17083	18.83	14.65	5-Sep-96	20-Sep-96	Soil	8B, 8C	USPC035002
00175	20334	22.41	20.72	5-Sep-96	23-Sep-96	Soil	7A, 7F	I2952RT

Table 4-2
LAIDLAW GRASSY MOUNTAIN LANDFILL SHIPPING MANIFEST SUMMARY
Westinghouse Emeryville Site -- 1996 Soils Removal Action

MANIFEST NUMBER	WEIGHT SHIPPED (Kilograms)	WEIGHT SHIPPED (Tons)	WEIGHT RECEIVED (Tons)	DATE SHIPPED	DATE RECEIVED	MATERIAL	EXCAVATION SOURCE	SHIPPING CONTAINER
00176	13281	14.64	11.84	5-Sep-96	18-Sep-96	Soil	7A, 7B	030335
00177	20593	22.70	22.17	5-Sep-96	18-Sep-96	Soil	7A, 7F	I25854RT
00178	20988	23.13	21.23	6-Sep-96	23-Sep-96	Soil	7F,8B	IS26056RT
00179	19523	21.52	15.44	6-Sep-96	23-Sep-96	Soil	7A	USPC030256
00180	20593	22.70	21.65	6-Sep-96	23-Sep-96	Soil	7F, 8B	I25064RT
00181	21460	23.66	20.17	13-Sep-96	23-Sep-96	Soil		
00182	20017	22.06	23.86	13-Sep-96	25-Sep-96	Soil		
00183	21301	23.48	23.90	13-Sep-96	23-Sep-96	Soil		
00184	20974	23.12	24.24	13-Sep-96	2-Oct-96	Soil		
TOTAL	3354085	3697.18	3312.12					
	KILOGRAMS	TONS	TONS					

5.0 AIR MONITORING

5.1 Overview of Monitoring Program

During day-to-day excavation and removal activities a Mini-Ram was used to monitor airborne dust near the site of excavation work. The Mini-Ram is a portable air/dust monitor that takes real-time readings of the level of dust in the surrounding atmosphere.

Air monitoring using the Mini-Ram was supplemented by collecting 24-hour air samples at monitoring stations established around the perimeter of the soil excavation and storage areas. Samples were analyzed for PCBs in a Certified Laboratory and the results, along with meteorological and collection station flow parameters were reported in the Air Monitoring Report (Appendix D) produced by the RA Contractor.

5.2 Monitoring and Testing Results

Monitoring data for the Mini-Ram was recorded in the daily health and safety records by the RA Contractor (these are available in the project records). Monitoring results were typically 0.1 to 0.01 times the allowable airborne dust, as set forth in the Site Health and Safety Plan. These results represent periodic monitoring at times when the dust was observed to be visible. Throughout most of the soil and concrete handling activities, visual dust was avoided by extensive watering. Thus, the monitoring represents the worst case condition. Based on the Mini-Ram records, airborne dust was not a problem during the Soil Remediation work.

Monitoring was also conducted at five high volume air sampling stations to evaluate the PCB content present in Site emissions. These stations were located just outside the middle of each side of the Removal Area (two on the north side), as shown on the figure included with the Air Monitoring Report in Appendix D, "Site Layout and Air Monitoring Stations". Testing results are summarized in Table 5-1 below. The laboratory testing summary sheets from Air Toxics LTD, are presented in Appendix D.

Table 5-1
PCB CONCENTRATIONS IN AIR SAMPLES
(mg/M^3)

STA HV-01	STA HV-02	STA HV-03	STA HV-04	STA HV-05
ECHV-01	ECHV-02	ECHV-03	ECHV-04	ECHV-05
0.00002 8/7 - 8/8	0.0019 8/7 - 8/8	0.0025 8/7 - 8/8	0.00034 8/7 - 8/8	0.0029 8/7 - 8/8
ECHV-06	ECHV-07	ECHV-08	ECHV-09	ECHV-10
0.000027 8/15 - 8/16	0.00042 8/15 - 8/16	0.0019 8/15 - 8/16	0.00032 8/15 - 8/16	0.00022 8/15 - 8/16
ECHV-11	ECHV-12	ECHV-13	ECHV-14	ECHV-15
0.000052 8/22 - 8/23	0.00020 8/22 - 8/23	0.00027 8/22 - 8/23	Not Analyzed 8/22 - 8/23	Not Analyzed 8/22 - 8/23
ECHV-16	ECHV-17	ECHV-18	ECHV-19	ECHV-20
0.000087 8/28 - 8/29	0.00046 8/28 - 8/29	0.00027 8/28 - 8/29	Not Analyzed 8/28 - 8/29	Not Analyzed 8/28 - 8/29

5.3 CRITERIA FOR AIR MONITORING

This section presents the criteria for air quality monitoring. For on-site worker health and safety, the applicable criteria are the Permissible Exposure Limits (PELs) given in 29 CFR 1910, or the Threshold Limit Values For Airborne Contaminants (TLVs) given in 29 CFR 1926. The contaminates of concern for this project were PCBs and dust. The criteria for these contaminants are shown in Table 5-2.

Table 5-2
ON-SITE AIR QUALITY CRITERIA

Analytes	Worker Protection	Perimeter Maximum
PCBs	0.5 mg/m^3	0.05 mg/m^3
Total particulates	10 mg/m^3	1.0 mg/m^3

The airborne PCB concentration is the product of the dust concentration times the PCB concentration in the dust particles, since PCBs have essentially zero volatility under the conditions in the field. Therefore, there is a direct linear relationship between the airborne dust concentration, the PCB concentration in the dust particles, and the airborne PCB concentration.

The most-contaminated soil excavated had PCB concentrations as high as 1650 mg/kg (average of 4 highest stockpile samples). If the airborne dust concentration was equal to the Permissible Exposure Limit (PEL) for on-site workers of 10 mg/m^3 and the dust particles contain 1650 mg/kg PCBs, then the corresponding airborne PCB concentration would be 0.0165 mg/m^3.

The dust action levels for perimeters are 10 percent of the action levels for on-site workers. So, if the perimeter airborne dust concentration was equal to the worker PEL of 10 mg/m^3 then the PCB concentration would be 0.00165 mg/m^3.

These values for PCBs are based on conservative projections from airborne dust concentrations (10 to 100 times higher than those observed). Also, they used the highest observed soil PCB concentrations from stockpiles. On this basis, both of these projected values for PCBs were well below the allowable PCB values. Therefore, based on this estimation, for site workers and anyone at the site perimeter, the allowable PCB values were not exceeded.

Turning to the data in Table 5-1 from perimeter high volume air samples, it may be seen that the highest measured PCB concentration was 0.0025 mg/m^3 (24-hour sample). This is approximately 20 times lower than the perimeter action level of 0.05 mg/m^3. Therefore, on this basis also, the allowable PCB values were not exceeded.

The Bay Area Air Quality Management District (BAAQMD) is responsible for the local air quality. They do not have specific criteria for dust or PCB concentrations that are applicable for this project . This project had a duration less than 3 months; therefore, no permit from the BAAQMD was required.

6.0
SOIL BACKFILL

6.1 Materials And Procedures

Four different materials were used for backfill in the soil removal area. The first material, a clean medium sand, was used in the lower part of the east end. This material was found to be difficult to work with and lead to evaluation of alternatives from the same supplier. The second material used was a brown/olive gravelly sand. This material was available in limited quantities, and could only be used for about half of the total fill. The third material used was a 3-inch crushed rock. This material was placed in the lowest portions of the excavation in zones that were under water. The final material used was a red-brown sandy gravel, designated as an aggregate base by the supplier. This material was used for the top one-third to one-half of the fill. It produced a gravel surface suitable for dry weather use by light vehicles. It was not intended for heavy truck traffic or use under wet conditions.

Available particle size analyses and moisture-density (compaction) curves for these materials are presented in Appendix E. A sufficient number of tests were performed to verify the material gradation and compaction characteristics, and allow field verification of proper compaction. In water-filled, soft, or muddy portions of the excavation, a woven geotextile fabric was placed before starting the backfill. This material served as a separator between the soft, wet ground and the fill materials, and it reduced the amount of soil liquifaction, penetration of fill, and consequent loss of fill into the mud.

6.2 Soil Compaction Testing

A total of eighteen nuclear gauge moisture-density tests were performed during three separate testing episodes. Relative compaction (ASTM D1557) ranged from a low of 91 percent on materials that had received incomplete compaction to 100 percent in well-compacted portions of the aggregate base material. The compaction requirement in the workplan was to exceed 90 percent relation compaction in all tests. Based on the field testing results, this was achieved. Field compaction testing results are presented at the end of Appendix E.

During the material placement, loose lifts of 1-foot or less were spread with a dozer and compacted using a vibratory steel drum roller. The backfill soil was placed up to a level of approximately 18-inches below the floor grade in the former Westinghouse Building 42. From this level, it tapered toward the north-northwest. Runoff from the fill surface will drain out the northwest corner, just as it did prior to commencing the removal action.

7.0 RECORD KEEPING

7.1 Daily Logs

Daily logs were kept by the remediation contractors and owner's representatives. These logs recorded number of personal and hours onsite, weather conditions, work locations and activities, subcontractors onsite, equipment in use, sampling undertaken for the day, and any quality control issues. Owner's representatives also kept logs of similar types of items, plus information relating to Site meetings, visitors, and observations of the contractor's work. Both types of logs are available in the project files.

7.2 Health and Safety Reports

Provisions regarding health and safety were set forth in Site Safety Plans for the soils and groundwater remediation work. The contractor (WRS) kept a daily log of safety meetings, levels of personnel protection required, results of organic vapor (PID) and dust monitoring, and any relevant safety or emergency issues. The health and safety issues were consistently handled in a very professional manner by the contractor's personnel. No safety-related emergencies or injury accidents were encountered, and no personnel exposures beyond those allowable are known to have occurred.

7.3 Final Material Inventory

A summary of the materials shipped offsite during the Soils Remediation work is presented in Tables 4-1, and 4-2. All surface concrete and all excavated soil was disposed of offsite in appropriate landfills, as discussed in Section 4.0.

7.4 Visitors Logs

A daily log of all Site workers and visitors was kept as part of the WRS daily log and is in the project files.

7.5 Sample Chain-Of-Custody

All samples that left the site were attached to a chain-of-custody form, identifying all personnel handling the sample. Copies of these are filed following their respective lab data sheets in the appendices.

7.6 Waste Manifests And Disposal Certificates

Waste manifests have been discussed in Section 6.0. Manifests for shipment of all TSCA wastes are presented in Appendix B, and Disposal Certificates are presented in Appendix C.

8.0 CONCLUSIONS

In August and September 1996, Westinghouse Electric Corporation completed a Site Soils Remediation project at their Emeryville, California site. The goal of this work was to excavate and properly dispose of soils in the northeast corner of the Site where PCBs were known to exceed Residential and Industrial Cleanup Levels. The cleanup goal was established by the Baseline Human Health Risk Assessment (SOMA, 1996) and approved by the California Regional Water Quality Control Board. The required action was excavation and offsite disposal of soils having PCBs greater than 0.5 mg/kg within the top 2 feet, and PCBs greater than 59 mg/kg within the depths 2 to 4 feet. Excavation below 4 feet or below the water table was not required.

Approximately 3,700 tons of soil, concrete, and debris with PCBs greater than 40 mg/kg was shipped in steel containers and disposed of at the USPCI Laidlaw Landfill at Grassy Mountain, Utah. Approximately 1,100 tons of soil, concrete, and debris with PCBs less than 40 mg/kg was shipped in bulk railroad cars to the ECDC Landfill in East Carbon, Utah. The excavation was backfilled with imported sand, sandy gravel, and aggregate base rock, and sloped to drain toward the northwest, as had the pre-excavation surface.

Based on analytical results from samples collected in the confirmation sampling grid system, the clean-up goals were met throughout the excavation bottom. In some portions of the Site, sidewall sampling indicated remaining soil exceeds the established residential clean-up criteria. On the west sidewall, continuing excavation would have extended into the TSCA containment cell. To the north and east, continued excavation would have undermined the concrete curbing and wrought iron fencing. The properties to the north and east are in commercial land use and are capped with asphalt pavement or buildings.

9.0 REFERENCES

ALTA Geosciences, Inc. (ALTA), 1996. Work Plan, Site Remediation Westinghouse Emeryville Site, 5899 Peladeau Street, Emeryville, California, June 1996.

Analytical ChemTech International, Inc. (ACI), 1996. QA/QC Document For PCB Analysis.

EMCON, 1993a. Westinghouse Emeryville Data Summary Report, Emeryville, California, October 1993.

EMCON, 1993b. Soil Characterization, Building 42, Westinghouse Emeryville Facility, October 27, 1993.

EMCON, 1995a. Additional Site Assessment, Westinghouse Electric Corporation, 5840 Landregan Street, Emeryville, California, March 1995.

EMCON, 1995b. PCB Concentrations in Groundwater, Westinghouse Site, Emeryville, California. Letter with attachments to Mr. Gordon Taylor, Westinghouse Electric Corporation, March 30, 1995.

EMCON, 1995c. Results of Supplemental Risk Assessment Data, Westinghouse Corporation, 5840 Landregan Street, Emeryville, California, August 1995.

SOMA Environmental Engineering, Inc., 1996. Baseline Human Health Risk Assessment For The Former Westinghouse Electric Corporation Facility, 5899 Peladeau Street, Emeryville, California, March 15, 1996.

Woodward-Clyde Consultants, 1985. Exterior Remedial Action Plan Specifications and Procedures, July 9, 1985.

AIR TOXICS LTD.

EPA METHOD TO-4

Polychlorinated Biphenyls in Ambient Air

GC/ECD

Field Sample I.D.	Lab Sample I.D.	File Name	Sample Date	Analyzed For	Dilution Factor	Det. Limit (uG)	Amount (uG)	Amount (mG/m3)
ECHV001	9608123-01A	8081305	8/8/96	Total PCB	1.0	1.0	7.9	0.00002
ECHV002	9608123-02A	8081314	8/8/96	Total PCB	10	10	790	0.0019
ECHV003	9608123-03A	8081406	8/8/96	Total PCB	50	50	1000	0.0025
ECHV004	9608123-04A	8081310	8/8/96	Total PCB	1.0	1.0	140	0.00034
ECHV005	9608123-05A	8081311	8/8/96	Total PCB	1.0	1.0	120	0.00029
# 5 Blank	9608123-06A	8081312	8/8/96	Total PCB	1.0	1.0	Not Detected	Not Detected
# 6 Spike	9608123-07A	8081313	8/8/96	Total PCB	1.0	1.0	Not Detected	Not Detected
Method Blank	9608123-08A	8081303	NA	Total PCB	1.0	1.0	Not Detected	Not Detected

Analysis Date: 8/13/96
Container Type: PUF Cartridge

COMMENTS: NA = Not Applicable

AIR TOXICS LTD.

EPA METHOD TO-4

Polychlorinated Biphenyls in Ambient Air

GC/ECD

Field Sample I.D.	Lab Sample I.D.	File Name	Sample Date	Analyzed For	Dilution Factor	Det. Limit (uG)	Amount (uG)	Amount (mG/m3)
ECHV-006	9608225-01A	8082705	8/15/96	Total PCB	1.0	1.0	9.0	0.000027
ECHV-007	9608225-02A	8082706	8/15/96	Total PCB	1.0	1.0	130	0.00042
ECHV-008	9608225-03A	8082707	8/15/96	Total PCB	1.0	1.0	67	0.00019
ECHV-008 Duplicate	9608225-03AA	8082713	8/15/96	Total PCB	1.0	1.0	71	0.00020
ECHV-009	9608225-04A	8082708	8/15/96	Total PCB	1.0	1.0	120	0.00032
ECHV-010	9608225-05A	8082709	8/15/96	Total PCB	1.0	1.0	75	0.00022
BLANK	9608225-06A	8082711	8/15/96	Total PCB	1.0	1.0	Not Detected	Not Detected
Method Blank	9608225-09A	8082703	NA	Total PCB	1.0	1.0	Not Detected	Not Detected
Spiked Samples							**% Recovery**	
SPIKE	9608225-07A	8082712	8/15/96	Total PCB	1.0	1.0	108	
Method Spike	9608225-08A	8082704	NA	Total PCB	1.0	1.0	95	

Extraction Date: 8/23/96
Analysis Date: 8/27/96
Container Type: PUF Cartridge

COMMENTS: NA = Not Applicable

AIR TOXICS LTD.

EPA METHOD TO-4

Polychlorinated Biphenyls in Ambient Air

GC/ECD

Field Sample I.D.	Lab Sample I.D.	File Name	Sample Date	Analyzed For	Dilution Factor	Det. Limit (uG)	Amount (uG)	Amount (mG/m3)
ECHV011 / GLASS #7 / FILTER #1	9608294-01A	8082906	8/23/96	Total PCB	1.0	1.0	17	0.000052
ECHV012	9608294-02A	8082907	8/23/96	Total PCB	1.0	1.0	70	0.00020
ECHV013	9608294-03A	8082908	8/23/96	Total PCB	1.0	1.0	94	0.00027
ECHV014*	9608294-04A	NA	8/23/96	Total PCB	1.0	1.0	Not Analyzed	Not Analyzed
ECHV015*	9608294-05A	NA	8/23/96	Total PCB	1.0	1.0	Not Analyzed	Not Analyzed
FIELD BLANK	9608294-06A	8082909	8/23/96	Total PCB	1.0	1.0	Not Detected	Not Detected
Method Blank	9608294-08A	8082904	NA	Total PCB	1.0	1.0	Not Detected	Not Detected
Spiked Samples							**% Recovery**	
SPIKE	9608294-07A	8082910	NA	Total PCB	1.0	1.0	90	

Extraction Date: 8/27/96

Analysis Date: 8/29/96

Container Type: PUF Cartridge

COMMENTS: *Sample on hold per client's request.
NA = Not Applicable

AIR TOXICS LTD.

EPA METHOD TO-4

Polychlorinated Biphenyls in Ambient Air

GC/ECD

Field Sample I.D.	Lab Sample I.D.	File Name	Sample Date	Analyzed For	Total Volume (m3)	Dilution Factor	Det. Limit (uG)	Amount (uG)	Amount (mG/m3)
ECHV016	9609022-01A	8091205	8/29/96	Total PCB's	310.6	1.0	1.0	27	0.000087
ECHV017	9609022-02A	8091206	8/29/96	Total PCB's	350.45	1.0	1.0	160	0.00046
ECHV018	9609022-03A	8091207	8/29/96	Total PCB's	332.33	1.0	1.0	91	0.00027
ECHV018 Duplicate	9609022-03AA	8091804	8/29/96	Total PCB's	332.33	1.0	1.0	94	0.00028
ECHV019*	9609022-04A	NA	8/29/96	Total PCB's	350.92	1.0	1.0	Not Analyzed	Not Analyzed
ECHV020	9609022-05A	8091803	8/29/96	Total PCB's	329.2	2.0	2.0	180	0.00055
BLANK	9609022-06A	8091209	NA	Total PCB's	NA	1.0	1.0	Not Detected	Not Detected
Method Blank	9609022-09A	8091203	NA	Total PCB's	NA	1.0	1.0	Not Detected	Not Detected
Spiked Samples								**% Recovery**	
SPIKE	9609022-07A	8091210	NA	Total PCB's	NA	1.0	1.0	90	
Method Spike	9609022-08A	8091204	NA	Total PCB's	NA	1.0	1.0	101	

Extraction Date: 9/5/96
Analysis Date: 9/12/96 & 9/18/96
Container Type: PUF Cartridge

COMMENTS: *Sample on hold per client's request.
NA = Not Applicable