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Gary K. Walker
Associate

June 17, 1999

Mr. Todd Ghiosay
State of New York
Department of Environmental Conservation
Bureau of Spill Response and Remediation
200 White Plains Road
Tarrytown, New York 10591-5805

RECEIVED
JUN 18 1999
NYS DEC - REGION 3
TARRYTOWN OFFICE

RE: Site Investigation Report
Universal Voltronics Facility
27 Radio Circle Drive
Mount Kisco, New York
NYSDEC # 9809708

Dear Mr. Ghiosay:

Please find enclosed the Site Investigation Report for the Universal Voltronics Facility located at the above referenced address (NYSDEC Spill Number 8909708). This report discusses the additional contamination found at the site as reported to Mr. Peter Doshna in Killam's telephone messages from April 1 through April 9, 1999. A copy of this report was originally sent to Mr. Doshna on May 4, 1999. We are transmitting this report to your attention as we understand that you have been assigned as the NYSDEC Project Manager for this case. Additional investigatory work was completed at the site during the week of May 10, 1999. Once a report summarizing the work performed in May 1999 is completed, we will forward a copy of the report for your review and comment.

Please feel free to contact me at (973) 912-2489 if you should have any questions or comments regarding the site and the information submitted.

Very truly yours,

KILLAM ASSOCIATES

Gary K. Walker

Gary K. Walker

cc: Mark Rollins, Thermo Electron Corporation

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E. Killam
Associates □ Consulting Engineers

SITE INVESTIGATION REPORT

for the

Universal Voltronics Facility
Mount Kisco, New York

May 4, 1999

RECEIVED
JUN 1 8 1999
NYS DEC - REGION 3
TARRYTOWN OFFICE

Prepared for:
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1. INTRODUCTION

Dames and Moore performed a Phase I Environmental Site Assessment and Limited Phase II Investigation during the period of April through August, 1998 at the Universal Voltronics facility located at 27 Radio Circle Drive in Mount Kisco, New York. Based upon the results of this assessment and investigation detailed in the Dames and Moore Report dated September 14, 1998, Thermo Electron requested that an additional site investigation be performed for the following potential areas of environmental concern:

- Stained concrete around the former aboveground storage tanks (ASTs);
- Total petroleum hydrocarbon (TPH), polychlorinated biphenyls (PCBs), and 1,1,1-trichloroethane (1,1,1-TCA) soil contamination detected at the site;
- Vacuum pump exhaust area; and,
- Pipes associated with the former ASTs.

Killam Associates was retained by Thermo Electron to perform the site investigation scope of work outlined in our proposal dated January 20, 1999. The sampling methodologies and results of the investigation are discussed in the following sections of this report.

2. DAMES AND MOORE SITE ASSESSMENT AND LIMITED PHASE II INVESTIGATION

2.1 Soil Investigation

Based upon the results of their Phase I site assessment, Dames and Moore performed a soil investigation in three areas of potential environmental concern at the site:

- Former 1,1,1-TCA process area;
- Stained exterior areas associated with onsite ASTs; and,
- Generator shed.

Dames and Moore performed soil sampling of these areas at the locations (SB-1 through SB-5) shown on the site plan (Figure 1). Of the soil sampling performed, only soil boring SB-1 contained contamination which required additional investigation. SB-1 is located on the exterior of the building adjacent to the AST fill ports. Dames and Moore obtained a soil sample from SB-1 at a depth of approximately two to three feet below grade. The sample was analyzed for Total Petroleum Hydrocarbons (TPH), polychlorinated biphenyls (PCBs), Target Compound List (TCL) volatile organic compounds (VOCs), and TCL base/neutral acid extractable organics (BNAs). TPH was detected in SB-1 at a concentration of 9,790 mg/kg. There is no New York State Department of Environmental Conservation (NYSDEC) Recommended Soil Cleanup Objective (RSCO) for TPH, however the TPH concentration detected is suggestive of a petroleum release. The results of the VOC analysis in SB-1 identified 1,1,1-TCA at a concentration of 3.88 mg/kg, which exceeds the RSCO of 0.8 mg/kg for this compound. The total PCB concentration detected in SB-1 was 1.54 mg/kg which is below the RSCO for subsurface soil of 10 mg/kg. However, the RSCO in surficial soils is 1 mg/kg. No BNA compounds were detected above the RSCO in SB-1.

2.2 PCB Wipe Sampling

Based upon concerns identified in their Phase I site assessment, Dames and Moore performed PCB wipe sampling of the stained concrete floors in the area of the former ASTs located within the building. Five wipe samples (PCB-1 through PCB-5) were obtained at the locations shown on Figure 1. PCBs were detected in the wipe samples at concentrations ranging from 1.48 to 8.86 $\mu g/100\ cm^2$. These concentrations are below the EPA standard of 10 $\mu g/100\ cm^2$ for decontaminating PCB spills. However, the NYSDEC and NYS Department of Health (NYSDOH) determine the need for PCB cleanup on a case-by-case basis and have used varying guidelines of 1 $\mu g/100\ cm^2$, 10 $\mu g/100\ cm^2$, and 100 $\mu g/100\ cm^2$.

2.3 Additional Site Concerns

In addition to the potential areas of environmental concern for which sampling was performed as described above, Dames and Moore identified the vacuum pump exhaust area and the pipes associated with the former ASTs as areas of potential environmental concern. The vacuum pump had been noted by the NYSDEC as discharging to the ground and Dames

and Moore noted staining of the concrete building in this area. Dames and Moore did not perform any sampling of this area.

As the presence of PCBs was confirmed in the PCB wipe samples of the concrete floor in the area of the former ASTs, Dames and Moore recommended sampling the oil in the piping associated with the former ASTs or obtaining wipe samples to determine their PCB content. Dames and Moore reported that these lines had been pressure tested and confirmed that the lines were within pressure test guidelines for intact piping. Dames and Moore did not perform any additional investigation of this piping.

3. KILLAM ASSOCIATES SITE INVESTIGATION

3.1 Soil Investigation

On February 22, 1999, Killam Associates and Summit Drilling Co. (Summit) of Bridgewater, New Jersey mobilized to the site to perform the site investigation. Summit, under the observation of a Killam geologist, installed six soil borings to a depth of eight feet utilizing direct push technology. Five of the soil borings (KB-1, KB-2, KB-3A, KB-3B, and KB-4) were installed in the outside loading dock area in an attempt to delineate the extent of the soil contamination identified at SB-1. The remaining soil boring (KB-5) was installed at the location of the former vacuum pump discharge to investigate whether any contamination existed at this location. The locations of the soil borings are shown on Figure 2.

Soil boring logs showing the geology encountered are located in Appendix A. Groundwater was encountered in the borings at a depth varying from 2 to 4.5 feet below grade. The soils encountered were generally a medium to fine sand.

Killam obtained a sample for analysis from each soil boring with the exception of KB-3A. A sample was obtained from KB-1, KB-3B and KB-4 at a depth of 1.5 to 2 feet below grade. A sample was obtained from KB-2 and KB-5 at a depth of 1 to 1.5 feet below grade. These sample depths correspond to the highest photoionization detector reading at each location. Each of the samples was submitted to Integrated Analytical Laboratories (IAL) of Randolph, New Jersey (NYSDOH Certification no. 11402) for VOC and PCB analysis. KB-5 was additionally analyzed for TPH.

The soil boring analytical data results are summarized on Table 1. The laboratory analytical data package is located in Appendix B. As shown on Table 1, toluene, in sample KB-3B, was the only targeted VOC compound detected in the soil samples. The toluene analytical result is well below the NYSDEC RSCO for this compound. No PCBS were detected in any of the soil samples. The TPH analytical result for KB-5 was 816 mg/kg. There is no NYSDEC RSCO for TPH. As no petroleum odors were noted at KB-5 and the analytical result is low, there are no remedial concerns at this location.

As noted above, the soil analytical results indicate that there are no exceedences of the RSCO in the surficial (0-2 feet below grade) interval at the locations sampled. KB-3B was sampled in approximately the same location as SB-1 (Please note that the location of SB-1 as shown on Figure 1 is only approximate based upon the information provided by Dames and Moore). SB-1 had shown 1,1,1-TCA and total PCBs at a concentration of 3.88 mg/kg and 1.54 mg/kg, respectively, at a depth of two to three feet below grade. The absence of contamination in the surficial soils indicates that the contamination noted in the 2-3 foot interval may not be the result of a surficial spill. As no PCBs were detected in the surficial soils at KB-3B, the presence of PCBs in the subsurface soils at SB-1 is not a concern as the concentration is below the RSCO for subsurface soils.

3.2 Groundwater Investigation

Based upon the soil analytical results in SB-1 and the shallow depth to water at the site, Killam obtained a groundwater point sample at the location of KB-1. There is a depression and a hole in the concrete at KB-1 which may have allowed contaminants to enter the soils and groundwater at this location. The sample was obtained by inserting a dedicated one inch PVC screen into the open borehole. A groundwater sample was obtained by inserting a disposable polyethylene bailer into the PVC screen to withdraw a sample. The water sample was submitted to IAL for VOC and PCB analysis. The analytical results are summarized in Table 2. The analytical data package is enclosed in Appendix B.

As shown in Table 2, several VOC compounds were detected above the NYSDEC groundwater standards, however, no PCBs were detected. The compounds which exceeded the groundwater standards were chloroethane (CE), 1,1-dichloroethane (1,1-DCA), 1,1,1-TCA, and toluene. CE and toluene only slightly exceeded the groundwater standards while 1,1-DCA and 1,1,1-TCA were detected at concentrations significantly greater than their respective groundwater standards.

3.3 Building Investigation

Based on the analytical results of the wipe sampling performed by Dames and Moore, the presence of PCBs was confirmed on the stained concrete in the area of the former ASTs. Although the analytical results for samples PCB-1 through PCB-5 did not exceed the USEPA PCB decontamination standard, the potential for portions of the concrete to exceed the standard remained.

During Killam's site visit, the staining from the former ASTs was noted to extend over a large portion of the floor and up the concrete block walls of the building. In addition, staining on the exterior of the concrete block walls and on the concrete foundation was noted at the location of the staining on the interior walls. Killam obtained ten additional wipe samples of the concrete floor (W-4 through W-13), three wipe samples of the interior of the concrete block walls (W-1 through W-3) and five chip samples of the interior of the concrete block walls (CH1 through CH4) in an attempt to assess the level and extent of potential PCB contamination. The sample locations are shown on Figure 2.

The wipe samples were obtained using the standard EPA sampling protocol from a 100 cm^2 area. The wipe samples were analyzed by IAL for PCBs. Samples W-1 through W-3 were obtained at a height of one foot off the floor. The PCB wipe sample analytical results are summarized in Table 3. PCBs were detected in all the samples, however only five samples (W-5, W-7, W-11, W-12, and W-13) exceeded the USEPA decontamination standard of 10 $\mu g/cm^2$. Based on the wipe sampling results, the extent of the PCB contaminated area above the standard has been delineated to the west, north and east.

The chip samples were obtained by chiseling a hole in the concrete block wall. The concrete chips were transferred into a laboratory bottle and shipped to IAL for PCB analysis. Chip samples CH1 and CH2 were obtained at a height of 2 inches off the floor. Chip samples

CH3 and CH5 were obtained at a height of 4 inches off the floor. Chip sample CH4 was obtained at a height of one foot off the floor. The chip sample analytical results are summarized in Table 4. PCBs were detected in two samples (CH2 and CH3). The PCB analytical results for both of these samples exceeded the USEPA standard for bulk PCB waste in a high occupancy area (1,000 μg/kg).

Four pipes remain at the facility which had been connected to the former ASTs. Pipes 1 and 2 are capped two inch diameter pipes extending several inches out of the concrete floor. Pipes 3 and 4 are 1 inch diameter pipes extending from the transfer pump, into the concrete floor and out of the concrete floor on the opposite site of the overhead door. These pipes extend several feet above the floor on both sides of the overhead door. Pipe 3 was open on both ends. Pipe 4 was capped on one end and open on the other. The pipe locations are shown on Figure 2.

As the wipe samples of the stained concrete floor contained PCBs, the residual oil remaining in the pipes was also suspected to contain PCBs. Killam attempted to collect an oil sample from each of the pipes. Only Pipe 2 contained enough oil to collect a sample. The analytical results for this sample are summarized in Table 5. No PCBs were detected in the oil.

As an insufficient amount of oil was present in the remaining pipes to collect a sample, Killam obtained a wipe sample from the end of each pipe. As Pipe 3 was open on both ends, two samples were obtained from this pipe (W-15 and W-17). One sample was obtained from Pipe 1 (W-14) and Pipe 4 (W-16). The samples were obtained by inserting a gauze pad soaked in a mixture of hexane and acetone (4:1 solution) 1½ inches into the pipe and wiping the inside surface of the pipe. The analytical results for the pipe wipe samples are summarized on Table 6. As the surface area wiped had not been calculated for these samples at the time they were submitted to the laboratory, the laboratory has reported the analytical results in μg/wipe. Killam has subsequently calculated the surface area wiped and converted the analytical results to the units μg/100 cm^2 as shown in Table 6. Only two wipe samples (W-15 and W-16) contained PCBs, however, the analytical results were below the USEPA PCB standard for non-porous surfaces in a high occupancy area.

4. CONCLUSIONS

4.1 Soil Investigation

No exceedences of the RSCO were detected in the surficial soils at the locations sampled by Killam. As KB-3B was sampled in approximately the same location as SB-1, and KB-3B showed no soil contamination above the RSCO, the PCB contamination previously noted in SB-1 is no longer a concern as it is below the RSCO for subsurface soils. However, TPH and 1,1,1-TCA remain a concern in SB-1. The absence of contamination in the surficial soils indicates that the contamination noted in the 2-3 foot interval is not likely the result of a surficial spill.

4.2 Groundwater Investigation

The groundwater point sample KB-1AQ indicated no PCB contamination. The VOC analytical results revealed that four compounds were detected above the NYSDEC groundwater standards. CE and toluene only slightly exceeded the groundwater standards while 1,1-DCA and 1,1,1-TCA were detected at concentrations significantly greater than their respective groundwater standards.

4.3 Building Investigation

Killam obtained ten additional wipe samples of the concrete floor (W-4 through W-13), and three wipe samples (W-1 through W-3) and five chip samples of the interior of the concrete block wall (CH1 through CH4) in an attempt to assess the level and extent of PCB contamination around the former ASTs.

PCBs were detected in all the wipe samples, however only five samples (W-5, W-7, W-11, W-12, and W-13) exceeded the USEPA decontamination standard. The PCB contaminated area above the standard has been delineated to the west, north and east.

PCBs were detected in two of the chip samples (CH2 and CH3). Both of these samples exceeded the USEPA standard for bulk PCB waste in a high occupancy area (1,000 μg/kg).

Killam obtained an oil sample from Pipe 2 and wipe samples from Pipes 1, 3 and 4 in order to determine whether the residuals in the pipes contained PCBs. PCBs were detected in two wipe samples (W-15 and W-16). The analytical results were below the USEPA PCB standard for non-porous surfaces in a high occupancy area.

Thermo Electron
Universal Voltronics Facility
Mount Kisco, NY

TABLE 1
SOIL ANALYTICAL DATA RESULTS

Client ID:	NYSDEC	KB-1	KB-2	KB-3B	KB-4	KB-5
Sample Depth:	RECOMMENDED	1.5-2.0	1.0-1.5	1.5-2.0	1.5-2.0	1.0-1.5
Lab ID:	SOIL CLEANUP	990-025	990-026	990-027	990-028	990-029
Date Sampled:	OBJECTIVES	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99
Volatiles (mg/kg)						
Chloromethane	NS	ND	ND	ND	ND	ND
Vinyl Chloride	**0.2**	ND	ND	ND	ND	ND
Bromomethane	NS	ND	ND	ND	ND	ND
Chloroethane	**1.9**	ND	ND	ND	ND	ND
Trichlorofluoromethane	NS	ND	ND	ND	ND	ND
1,1-Dichloroethene	**0.4**	ND	ND	ND	ND	ND
Methylene Chloride	**0.1**	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	**0.3**	ND	ND	ND	ND	ND
1,1-Dichloroethane	**0.2**	ND	ND	ND	ND	ND
Chloroform	**0.3**	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	**0.8**	ND	ND	ND	ND	ND
Carbon Tetrachloride	**0.6**	ND	ND	ND	ND	ND
1,2-Dichloroethane(EDC)	**0.1**	ND	ND	ND	ND	ND
Benzene	**0.06**	ND	ND	ND	ND	ND
Trichloroethene	**0.7**	ND	ND	ND	ND	ND
1,2-Dichloropropane	NS	ND	ND	ND	ND	ND
Bromodichloromethane	NS	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	NS	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	NS	ND	ND	ND	ND	ND
Toluene	**1.5**	ND	ND	0.00209 J	ND	ND
trans-1,3-Dichloropropene	NS	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	NS	ND	ND	ND	ND	ND
Tetrachloroethene	**1.4**	ND	ND	ND	ND	ND
Dibromochloromethane	NS	ND	ND	ND	ND	ND
Chlorobenzene	**1.7**	ND	ND	ND	ND	ND
Ethylbenzene	**5.5**	ND	ND	ND	ND	ND
Total Xylenes	**1.2**	ND	ND	ND	ND	ND
Bromoform	NS	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	**0.6**	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	**1.6**	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	**8.5**	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	**7.9**	ND	ND	ND	ND	ND
TOTAL VOs:	**10**	ND	ND	0.00209 J	ND	ND
TOTAL TICs:	**10**	0.03841	ND	0.14762	0.003881	ND
PCBs (mg/kg)						
Aroclor 1016	NS	ND	ND	ND	ND	ND
Aroclor 1221	NS	ND	ND	ND	ND	ND
Aroclor 1232	NS	ND	ND	ND	ND	ND
Aroclor 1242	NS	ND	ND	ND	ND	ND
Aroclor 1248	NS	ND	ND	ND	ND	ND
Aroclor 1254	NS	ND	ND	ND	ND	ND
Aroclor 1260	NS	ND	ND	ND	ND	ND
Total PCBs	**1**	ND	ND	ND	ND	ND
General Analytical						
Total Petroleum Hydrocarbons (mg/kg)	NS	–	–	–	–	816

– = Sample not analyzed for
ND = Analyzed for but Not Detected at the MDL
J = The concentration was detected at a value below the MDL
NS = There is no standard for this compound.
BOLDFACE numbers represent an exceedence of the NYSDEC Soil Cleanup Objectives.

Thermo Electron
Universal Voltronics Facility
Mount Kisco, NY

TABLE 2
GROUNDWATER ANALYTICAL DATA RESULTS

Client ID:	NYSDEC	KB-1AQ	
Lab ID:	GROUNDWATER	990-030	
Date Sampled:	STANDARDS	2/22/99	
Volatiles (ug/L)			
Chloromethane	NS	ND	
Vinyl Chloride	2	ND	
Bromomethane	NS	ND	
Chloroethane	50	**51.4**	*
Trichlorofluoromethane	NS	ND	
1,1-Dichloroethene	5	ND	
Methylene Chloride	5	ND	
trans-1,2-Dichloroethene	5	ND	
1,1-Dichloroethane	5	**294**	*
Chloroform	7	ND	
1,1,1-Trichloroethane	5	**2450**	*
Carbon Tetrachloride	5	ND	
1,2-Dichloroethane(EDC)	5	3.86	
Benzene	0.7	ND	
Trichloroethene	5	ND	
1,2-Dichloropropane	NS	ND	
Bromodichloromethane	NS	ND	
2-Chloroethylvinyl Ether	NS	ND	
cis-1,3-Dichloropropene	NS	ND	
Toluene	5	11.3	
trans-1,3-Dichloropropene	NS	ND	
1,1,2-Trichloroethane	NS	6.53	
Tetrachloroethene	5	1.9	
Dibromochloromethane	50	ND	
Chlorobenzene	5	ND	
Ethylbenzene	5	ND	
Total Xylenes	5	3.64	
Bromoform	NS	ND	
1,1,2,2-Tetrachloroethane	5	ND	
1,3-Dichlorobenzene	5	ND	
1,4-Dichlorobenzene	5	ND	
1,2-Dichlorobenzene	4.7	ND	
TOTAL VOs:	NS	2822.63	
TOTAL TICs:	NS	ND	
PCBs (ug/L)			
Aroclor 1016	NS	ND	
Aroclor 1221	NS	ND	
Aroclor 1232	NS	ND	
Aroclor 1242	NS	ND	
Aroclor 1248	NS	ND	
Aroclor 1254	NS	ND	
Aroclor 1260	NS	ND	
Total PCBs	0.1	ND	

ND = Analyzed for but Not Detected at the MDL
J = The concentration was detected at a value below the MDL
NS = There is no standard for this compound.
BOLDFACE numbers represent an exceedence of the NYSDEC Groundwater Standards
* = Result from diluted analysis.

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Universal Voltronics Facility
Mount Kisco, NY

TABLE 3
PCB WIPE SAMPLE
DATA RESULTS

Client ID:	USEPA PCB	W-1	W-2	W-3	W-4	W-5	W-6	W-7
Lab ID:	DECONTAMINATION	990-001	990-002	990-003	990-004	990-005	990-006	990-007
Date Sampled:	STANDARD	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99
PCBs ($ug/100cm^2$)*								
Aroclor 1016	NS	ND	ND	ND	ND	ND	ND	ND
Aroclor 1221	NS	ND	ND	ND	ND	ND	ND	ND
Aroclor 1232	NS	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	NS	ND	ND	ND	ND	ND	ND	ND
Aroclor 1248	NS	1.28	1.58	2.55	0.91	ND	ND	ND
Aroclor 1254	NS	ND	ND	ND	ND	26.7	0.695	30.7
Aroclor 1260	NS	ND	ND	ND	ND	ND	ND	ND
Total PCBs	10	1.28	1.58	2.55	0.91	26.7	0.695	30.7

ND = Analyzed for but Not Detected at the MDL
NS = There is no standard for this compound.
BOLDFACE numbers represent an exceedence of the USEPA PCB Decontamination Standard
* = FB (Field Blank) measured in ug/wipe

Thermo Electron
Universal Voltronics Facility
Mount Kisco, NY

TABLE 3
PCB WIPE SAMPLE
DATA RESULTS

Client ID:	USEPA PCB	W-8	W-9	W-10	W-11	W-12	W-13	FB
Lab ID:	DECONTAMINATION	990-008	990-009	990-010	990-011	990-012	990-013	990-018
Date Sampled:	STANDARD	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99
PCBs ($ug/100cm^2$)*								
Aroclor 1016	NS	ND	ND	ND	ND	ND	ND	ND
Aroclor 1221	NS	ND	ND	ND	ND	ND	ND	ND
Aroclor 1232	NS	ND	ND	ND	ND	ND	ND	ND
Aroclor 1242	NS	ND	ND	ND	20.9	ND	ND	ND
Aroclor 1248	NS	ND	ND	ND	ND	ND	ND	ND
Aroclor 1254	NS	2.51	0.49	5.83	ND	26.8	43.4	ND
Aroclor 1260	NS	ND	ND	ND	ND	ND	ND	ND
Total PCBs	10	2.51	0.49	5.83	**20.9**	**26.8**	**43.4**	ND

ND = Analyzed for but Not Detected at the MDL
NS = There is no standard for this compound.
BOLDFACE numbers represent an exceedence of the USEPA PCB Decontamination Standard
* = FB (Field Blank) measured in ug/wipe

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Mount Kisco, NY

TABLE 4
PCB CHIP SAMPLE
ANALYTICAL DATA RESULTS

Client ID:		CH-1	CH-2	CH-3	CH-4	CH-5
Lab ID:	USEPA PCB	990-020	990-021	990-022	990-023	990-024
Date Sampled:	STANDARD*	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99
PCBs (ug/kg)						
Aroclor 1016	NS	ND	ND	ND	ND	ND
Aroclor 1221	NS	ND	ND	ND	ND	ND
Aroclor 1232	NS	ND	ND	ND	ND	ND
Aroclor 1242	NS	ND	5830	2850	ND	ND
Aroclor 1248	NS	ND	ND	ND	ND	ND
Aroclor 1254	NS	ND	ND	1140	ND	ND
Aroclor 1260	NS	ND	ND	ND	ND	ND
Total PCBs	1000	ND	5830	3990	ND	ND

ND = Analyzed for but Not Detected at the MDL

NS = There is no standard for this compound.

BOLDFACE numbers represent an exceedence of the USEPA PCB Standard

* = USEPA PCB Standard for Bulk PCB Remediation Waste in a High Occupancy Area

Thermo Electron
Universal Voltronics Facility
Mount Kisco, NY

TABLE 5
PCB OIL SAMPLE
ANALYTICAL DATA RESULTS

Client ID:		O-2
Lab ID:	USEPA PCB	990-019
Date Sampled:	STANDARD*	2/22/99
PCBs (ug/L)		
Aroclor 1016	NS	ND
Aroclor 1221	NS	ND
Aroclor 1232	NS	ND
Aroclor 1242	NS	ND
Aroclor 1248	NS	ND
Aroclor 1254	NS	ND
Aroclor 1260	NS	ND
Total PCBs	25000	ND

ND = Analyzed for but Not Detected at the MDL

NS = There is no standard for this compound.

* = USEPA PCB Standard for Liquids

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Universal Voltronics Facility
Mount Kisco, NY

TABLE 6
PCB PIPE WIPE SAMPLE
ANALYTICAL DATA RESULTS

Client ID:		W-14	W-15	W-16	W-17	FB
Lab ID:	USEPA PCB	990-014	990-015	990-016	990-017	990-018
Date Sampled:	STANDARD*	2/22/99	2/22/99	2/22/99	2/22/99	2/22/99
PCBs (ug/wipe)						
Aroclor 1016	NS	ND	ND	ND	ND	ND
Aroclor 1221	NS	ND	ND	ND	ND	ND
Aroclor 1232	NS	ND	ND	ND	ND	ND
Aroclor 1242	NS	ND	ND	ND	ND	ND
Aroclor 1248	NS	ND	ND	ND	ND	ND
Aroclor 1254	NS	ND	0.505	0.655	ND	ND
Aroclor 1260	NS	ND	ND	ND	ND	ND
Total PCBs	NS	ND	0.505	0.655	ND	ND
Total PCBs (ug/100 cm^2)	10	ND	1.66	2.15	ND	- -

ND = Analyzed for but Not Detected at the MDL

NS = There is no standard for this compound.

* = USEPA PCB Standard for Porous Surfaces in a High Occupancy Area

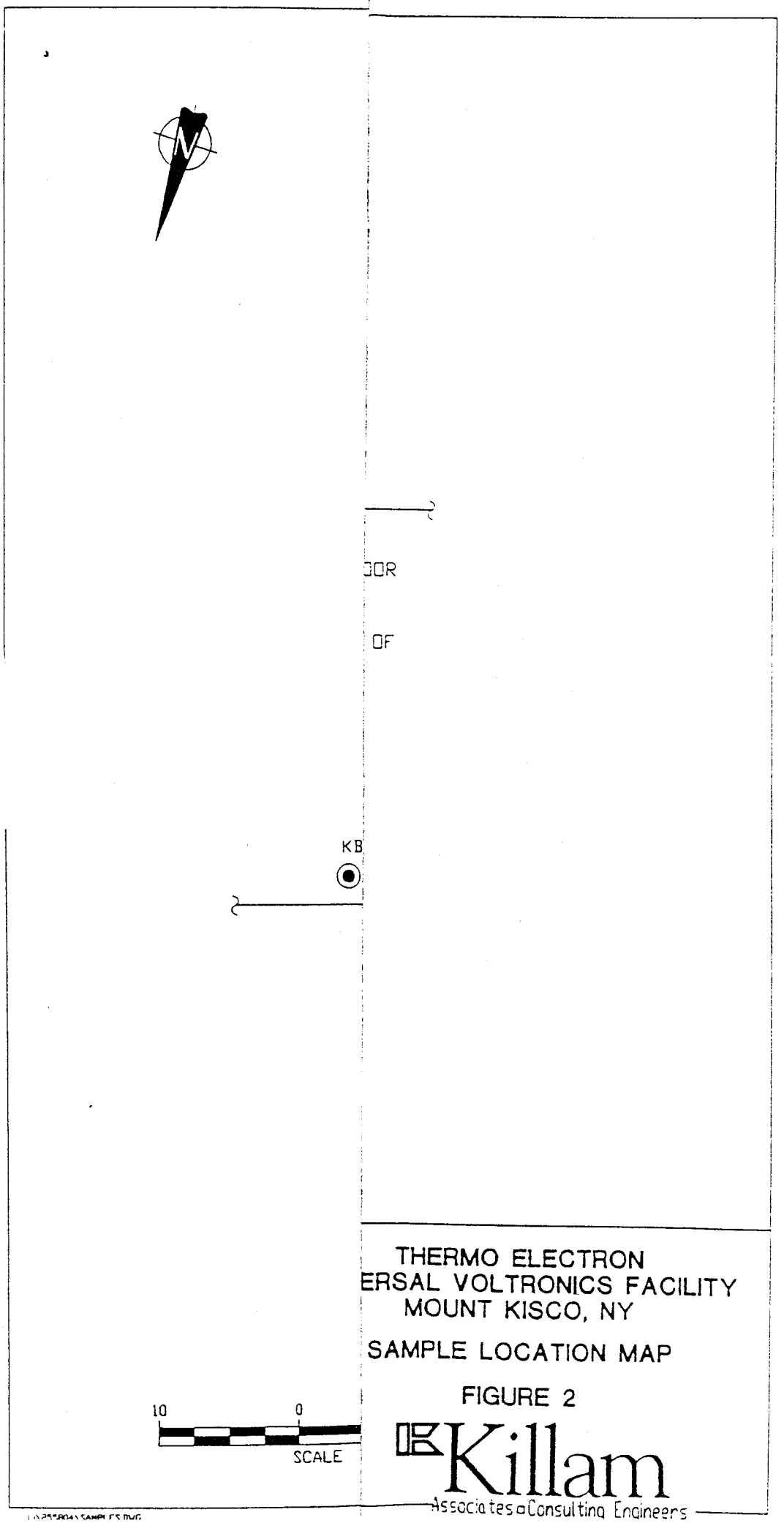
LEXINGTON AVENUE

THERMO ELECTRON
/ERSAL VOLTRONICS FACILITY
MOUNT KISCO, NY

SITE PLAN

FIGURE 1

Killam



THERMO ELECTRON
ERSAL VOLTRONICS FACILITY
MOUNT KISCO, NY

SAMPLE LOCATION MAP

FIGURE 2

Killam
Associates Consulting Engineers

Killam

DRILLING LOG

LOG: KB-1

DATE COMPLETED: February 22, 1999
DRILLER: Ralph Aquino, Summit Drilling
INSPECTOR: Robert Cunniff, Killam Associates
DRILLING METHOD: Geoprobe

PROJECT: UNIVERSAL VOLTRONICS
LOCATION: Mt. Kisco, NY
KILLAM PROJECT NUMBER: 255804

DEPTH FT.	SOIL CLASS.	SAMPLES	BLOW COUNTS	RECOVERY (ft)	FIELD SCREENING	VISUAL DESCRIPTION	COMMENTS
-0-						4" Asphalt	
-1-				2.5	ND	Brn m-f Sd	Sample obtained at 1.5-2.0' for PCB and VO+10 analysis. wet
-2-					2 ND	Brn m-f sdy Slt	
-3-							
-4-						Brn silty m-f Sd, t. grv. occ. c sd seam	
-5-				3.5			
-6-							
-7-							
-8-						Soil Boring Completed to 8 ft.	
-9-						1 inch 0.010 slot PVC screen inserted to 8 ft. for collection of a groundwater sample.	
-10-							
-11-							
-12-							
-13-							
-14-							
-15-							
-16-							
-17-							
-18-							
-19-							
-20-							
-21-							
-22-							
-23-							
-24-							
-25-							

[illegible] CALLSCR.MB1

Killam

DRILLING LOG

LOG: KB-2

DATE COMPLETED: February 22, 1999
DRILLER: Ralph Aquino, Summit Drilling
INSPECTOR: Robert Cunniff, Killam Associates
DRILLING METHOD: Geoprobe

PROJECT: UNIVERSAL VOLTRONICS
LOCATION: Mt. Kisco, NY
KILLAM PROJECT NUMBER: 255804

DEPTH (FT)	SOIL CLASS	SAMPLES	BLOW COUNTS	RECOVERY (ft)	FIELD SCREENING	VISUAL DESCRIPTION	COMMENTS
-0-							
						4" Asphalt	
-1-				3	ND	dk brn grvlly c Sd	Sample obtained at 1.0-1.5'
					0.5		for PCB and VO + 10 analysis.
-2-					ND		
						brn m-f Sd	
-3-							
-4-						Brn silty m-f Sd, t. grv, occ. c sd seam	wet
						Brn silty m-f Sd, t. grv, occ. c sd seam	
-5-				4			
-6-							
-7-							
-8-						Soil Boring Completed to 8 ft.	
-9-							
-10-							
-11-							
-12-							
-13-							
-14-							
-15-							
-16-							
-17-							
-18-							
-19-							
-20-							
-21-							
-22-							
-23-							
-24-							
-25-							

K:\ENG\255804\DRILLBOR.WB3

Killam

DRILLING LOG

LOG: KB-3A

DATE COMPLETED: February 22, 1999
DRILLER: Ralph Aquino, Summit Drilling
INSPECTOR: Robert Cunniff, Killam Associates
DRILLING METHOD: Geoprobe

PROJECT: UNIVERSAL VOLTRONICS
LOCATION: Mt. Kisco, NY
KILLAM PROJECT NUMBER: 255804

DEPTH (ft)	SOIL CLASS	SAMPLES	BLOW COUNTS	RECOVERY (ft)	FIELD SCREENING	VISUAL DESCRIPTION	COMMENTS
0							
						4" Asphalt	
1				3	ND	Brn m-f Sd	
					▽		
2					1		
					ND		
3					▽		
					2		
4					ND		
						Brn silty m-f Sd, t. grv	wet
5				NR			
6							
7							
					▽		
8							
						Soil Boring Completed to 8 ft.	
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

Killam

DRILLING LOG

LOG: KB-3B

DATE COMPLETED: February 22, 1999
DRILLER: Ralph Aquino, Summit Drilling
INSPECTOR: Robert Cunniff, Killam Associates
DRILLING METHOD: Geoprobe

PROJECT: UNIVERSAL VOLTRONICS
LOCATION: Mt. Kisco, NY
KILLAM PROJECT NUMBER: 255804

DEPTH ft	SOIL CLASS	SAMPLES	BLOW COUNTS	RECOVERY (in)	FIELD SCREENING	VISUAL DESCRIPTION	COMMENTS
0							
1				3.5	ND	4" Asphalt Brn m-f Sd	
2					2 ND		Sample obtained at 1.5-2.0' for PCB and VO+10 analysis.
3						Brn silty m-f Sd, t. grv, occ. c sd seam	
4							
5				4		Brn silty m-f Sd, t. grv, occ. c sd seam	wet
6							
7							
8						Soil Boring Completed to 8 ft.	
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

KILLAM DRILLLOG.PM3 4/03

Killam

DRILLING LOG

LOG: KB-4

DATE COMPLETED: February 22, 1999
DRILLER: Ralph Aquino, Summit Drilling
INSPECTOR: Robert Cunniff, Killam Associates
DRILLING METHOD: Geoprobe

PROJECT: UNIVERSAL VOLTRONICS
LOCATION: Mt. Kisco, NY
KILLAM PROJECT NUMBER: 255804

DEPTH (ft)	SOIL CLASS	SAMPLES	BLOW COUNTS	RECOVERY (ft)	FIELD SCREENING	VISUAL DESCRIPTION	COMMENTS
0							
				3	ND	4" Asphalt Brn m-f Sd	
						gry Slt, s. f Sd, occ brn mottling	Sample obtained at 1.5-2.0' for PCB and VO+10 analysis.
				4		Brn slty m-f Sd, t. grv, occ. c sd seam	wet
					▽		
						Soil Boring Completed to 8 ft.	

DRILLING LOG

LOG: KB-5

Killam

DATE COMPLETED: February 22, 1999
DRILLER: Ralph Aquino, Summit Drilling
INSPECTOR: Robert Cunniff, Killam Associates
DRILLING METHOD: Geoprobe

PROJECT: UNIVERSAL VOLTRONICS
LOCATION: Mt. Kisco, NY
KILLAM PROJECT NUMBER: 255804

DEPTH (FEET)	SOIL CLASS	SAMPLES	BLOW COUNTS	RECOVERY (ft)	FIELD SCREENING	VISUAL DESCRIPTION	COMMENTS
0							
				3.5	ND	4" Asphalt Brn m-f silty Sd	
						gry Slt. s. f Sd. occ brn mottling, t. plant roots a. decayed wood. Peat odor	Sample obtained at 1.0-1.5' for PCB, TPH and VO+10 analysis. moist @ 1.5'
				3.5		Brn silty m-f Sd, t. grv, occ. c sd seam	wet @ 4.5'
					▽		
						Soil Boring Completed to 8 ft.	