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Privileged and Confidential

July 26, 1996
Project 40358-017.001

Ms. Reta Jensen
Monroe Auto Salvage
426 Fremont Street
Monroe, Washington 98272

Re: Monroe Auto Salvage Site Investigation

Dear Ms. Jensen:

This letter report summarizes the results of the site investigation conducted at the Monroe Auto Salvage site located at 426 Fremont Street in Monroe, Washington (Figure 1). The purpose of the site investigation was to collect data to assess the extent of potential contamination indicated by previously reported results and to further delineate the extent of polychlorinated biphenyl (PCB) contamination in soil. Sampling for the site investigation was conducted between April 2 and May 23, 1996 following procedures in the Sampling and Analysis Plan (SAP) prepared by EMCON and dated February 29, 1996.

The site investigation included focused PCB soil sampling, area soil sampling for petroleum hydrocarbons, PCBs, and metals, and a groundwater evaluation. A site walk was also performed during a storm event to identify drainage pathways and storm water discharge points. Each of these activities is described below.

I. SURFACE DRAINAGE PATHWAYS ASSESSMENT

A general site reconnaissance was conducted on April 12, 1996 during a storm event to delineate surface drainage pathways and potential off-site migration points. A survey map with topographic and boundary information were not available at the time of the site reconnaissance. All drainage features identified during the site reconnaissance were therefore based on visual observations of general storm water flow path directions.

A majority of the site perimeter is surrounded by metal containers and scrap metal, which form an impermeable barrier to surface migration (see Figure 2). The barrier items are placed directly on the ground surface or buried to depths of approximately 2 feet and serve to block surface water runoff from exiting most of the site. It appears that most runoff generated on site is infiltrated in a series of naturally occurring low areas which collect and pond storm water during storm events. Three surface discharge pathways were observed along the southwestern edge of the property, adjacent to the Woods Creek ravine. The

observed location of the discharges and the approximate area of the site contributing runoff to each discharge point is provided in Figure 2.

II. SAMPLE COLLECTION

A. Focused PCB Sampling

In accordance with the SAP, four soil samples were collected from depths of 0 to 12 inches below ground surface (bgs) for PCB analysis to delineate the extent of PCB-contaminated soil in the area of former sample M-3 (Figure 3). The M-3 sample was collected in the power pole area by the Snohomish Health District in 1994. The four new samples were labeled MAS-01 through MAS-04. Sample locations were immediately adjacent to stained soils. A composite sample was collected from depths of 0 to 6 inches within the stained area (sample MAS-SAS) and analyzed for PCBs for waste characterization and disposal purposes.

One sediment sample was collected from the banks of the drainage area trending from the southwest area of the site to Woods Creek (sample MAS-05), and one sediment sample was collected from the bank of Woods Creek south of the site (sample MAS-06). Both of these sampling locations were next to the markers locating sediment samples collected by the Snohomish Health District. One sediment sample was also collected immediately downgradient from abandoned containers that were located in the southwest-trending drainage area (sample MAS-07). The abandoned containers consisted of two heavily rusted and partially buried 55-gallon drums. Both of the drums were observed to be empty, with several holes and rusted areas. A sample was collected downgradient of the containers to assess the potential for impacts from container residues, if any. Approximate sediment sample locations are presented on Figure 3. The sediment samples were collected from depths of 0 to 6 inches and analyzed for PCBs. The sample collected downgradient from the containers was also analyzed for metals and total petroleum hydrocarbons (TPH) as gasoline (TPH-G), as diesel (TPH-D), and as oil (TPH-O).

B. Area Petroleum Hydrocarbon, PCB, and Metals Sampling

A sample grid comprising 19 sections was established and 11 samples were collected from points within different grid sections per the SAP. The sample locations are shown on Figure 4. Samples were collected from depths of 0 to 6 inches bgs and labeled with the letters "MAS", followed by the grid number and the designation "Grid". A background sample (sample name MAS-BS, rather than MAS-19 as indicated in the SAP) and a focused grab sample from the car crusher area (sample MAS-CCS) were also collected as a component of the area sampling. The grid samples, background sample, and car crusher

area sample were analyzed for PCBs, TPH-G, TPH-D, and TPH-O, and cadmium, chromium, and lead. Five of the grid samples with lead concentrations greater than 100 mg/kg were selected for toxicity characteristic leaching procedure (TCLP) analysis for lead. The car crusher area sample was also analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX).

C. Groundwater Evaluation

The groundwater evaluation was conducted to assess whether soil contaminants have impacted groundwater beneath the site, and if so, whether contaminants may potentially migrate off site. Four monitoring wells were installed at the locations shown on Figure 5 (MW-1 through MW-4). Monitoring wells were located in directions anticipated to be hydraulically upgradient (MW-4) and downgradient (MW-1, MW-2, and MW-3) of potentially contaminated areas. Soil borings were drilled and sampled to depths of 21.5 feet to 29 feet bgs. Soil samples were collected at 5-foot intervals beginning at 5 feet bgs and included final samples from the bottom of the borings. Observations of soil characteristics and organic vapor measurements were recorded for each sample and are included on the boring logs provided in Attachment A. No elevated concentrations of organic vapors were detected for any of the soil samples.

Groundwater was observed at depths of 17 feet bgs at MW-1 and 20.5 to 22 feet bgs at MW-2, MW-3, and MW-4. Soil samples collected from the 5-foot interval and from just above the water table were submitted for chemical analysis; i.e., samples collected from 5 to 6.5 feet and 15 to 16.5 feet bgs at MW-1 and 5 to 6.5 feet and 20 to 21.5 feet bgs at MW-2, MW-3, and MW-4. Soil samples collected from the monitoring well boreholes were analyzed for TPH-G, TPH-D and TPH-O, and cadmium, chromium, and lead.

Monitoring well completion details are included on the boring logs (Attachment A). The proposed groundwater sampling included collection of samples from two monitoring wells (HC-4 and HC-5) that were previously installed at MAS. Groundwater samples were collected from wells MW-2, MW-3, MW-4, and HC-5 on May 23, 1996. Monitoring well MW-1 was installed in a perched groundwater zone and was not sampled as the well went dry during development. HC-4 could not be located and therefore a groundwater sample was not collected from this well. Groundwater samples were submitted for laboratory analysis of TPH-G, TPH-D, TPH-O, total and dissolved cadmium, chromium, and lead, PCBs, and total suspended solids (TSS).

III. LABORATORY RESULTS

All soil, sediment, and groundwater samples were analyzed using the methods specified in the SAP. Laboratory data were validated following procedures specified in the SAP. Validation results and laboratory reports are provided in Attachment B.

A. Focused PCB Sampling

Results of the focused PCB sampling are presented in Table 1 and show total PCB concentrations of 1 mg/kg for samples MAS-01 and MAS-02, non-detect for sample MAS-03, and 2 mg/kg for sample MAS-04. The composite sample from the stained area (sample MAS-SAS) showed a total PCB concentration of 260 mg/kg. Sediment samples MAS-05, MAS-06, and MAS-07 showed no detections for PCBs.

B. Area Petroleum Hydrocarbon, PCB, and Metals Sampling.

PCBs. Results of the area sampling for PCBs are provided in Table 1. With the exception of samples MAS-05-Grid and MAS-07-Grid, all of the area grid samples, the car crusher area sample, and the background sample, showed no PCB detections. Sample MAS-05-Grid showed a total PCB concentration of 5 mg/kg, and sample MAS-07-Grid showed a total PCB concentration of 1 mg/kg.

Petroleum Hydrocarbons. Results of soil sample analyses for TPH (TPH-G, TPH-D, and TPH-O) and metals are presented in Table 2. The concentrations of TPH-G in area grid samples ranged from non-detect to 385 mg/kg at location MAS-13-Grid. TPH-D concentrations in the grid area samples ranged from non-detect to 7,600 mg/kg at location MAS-14-Grid and TPH-O ranged from non-detect to 22,000 mg/kg at location MAS-14-Grid. The car crusher area sample showed a concentration of 5,500 mg/kg TPH-D and 24,000 mg/kg TPH-O. TPH-D was detected at 37 mg/kg and TPH-O at 190 mg/kg in the background sample. BTEX constituents were not detected in the car crusher area sample. TPH-D and TPH-O were detected in the sediment sample collected immediately downgradient of the abandoned containers (MAS-07), though concentrations were comparable to those detected in the background sample (MAS-BS).

Metals. Cadmium was not detected in the background sample. Cadmium concentrations in the area grid samples ranged from non-detect to 12 mg/kg at MAS-15-Grid. The car crusher area sample showed a cadmium concentration of 17 mg/kg. Chromium was detected in all of the area grid samples, with concentrations ranging from 16 mg/kg to 52 mg/kg at grid locations 15 and 19. The background sample and car crusher area sample contained chromium at 29 mg/kg and 44 mg/kg, respectively. The lead concentration in

the background sample was 41 mg/kg. Lead concentrations ranged from non-detect to 964 mg/kg in the area grid samples, with the highest concentration at grid location 15. Lead was detected at 554 mg/kg in the car crusher area sample. At the sample location immediately downgradient of the abandoned containers, chromium and lead concentrations were not significantly greater than background. Cadmium was not detected at this location.

Five of the area grid samples with lead concentrations greater than 100 mg/kg were also analyzed for lead by TCLP analysis. Concentrations ranged from 0.27 mg/L to 2.95 mg/L. Results are provided on Table 2.

C. Groundwater Evaluation.

Borehole Soil Samples. TPH-G was not detected in soil samples collected from boreholes except for the sample collected from 5 to 6.5 feet bgs at MW-2. This sample showed a TPH-G concentration of 23 mg/kg. The sample collected from 5 to 6.5 feet at borehole MW-1 contained TPH-D at 68 mg/kg and TPH-O at 290 mg/kg,. The sample collected from 5 to 6.5 feet at borehole MW-2 showed a TPH-D concentration of 2,060 mg/kg and a TPH-O concentration of 4,120 mg/kg. All other borehole samples were non-detect for TPH-D and TPH-O.

Cadmium was not detected in any of the borehole soil samples except the sample collected from 5 to 6.5 ft bgs at MW-2, with a reported concentration of 1 mg/kg. Chromium was detected in all of the soil borehole samples, with concentrations ranging from 25 mg/kg to 120 mg/kg at MW-2. Lead was not detected in any borehole soil sample except the samples collected from 5 to 6.5 feet bgs at boreholes MW-1 and MW-2, which showed lead concentration of 37 mg/kg and 64 mg/kg, respectively.

Groundwater Samples. Results of the groundwater sample analyses are provided in Tables 1 and 3. All sample analyses were conducted on unfiltered groundwater samples except for dissolved metals. PCBs, TPH-G, and TPH-O were not detected in any groundwater sample. TPH-D was only detected in the groundwater sample from well MW-2 and its duplicate, at concentrations of 0.46 and 0.47 mg/L. Total and dissolved cadmium were not detected in any groundwater samples. Total chromium was reported at concentrations of 21 µg/L, 35 µg/L, and 13 µg/L in groundwater samples from wells MW-3, MW-4, and HC-5, respectively. Total lead was reported at concentrations of 3 µg/L and 7 µg/L in groundwater samples from wells MW-3 and MW-4, respectively. Dissolved lead and dissolved chromium were not detected in these samples, indicating that these metals are likely found in particulate form and are associated with the soil. Total suspended solids (TSS) ranged from non-detect to 170 mg/L at MW-4. Higher metals

concentrations were consistent with higher TSS concentrations, further indicating that metals detected in the groundwater samples were associated with soil particulate.

Groundwater Flow Direction.

Groundwater levels were measured in monitoring wells HC-5, MW-2, MW-3, and MW-4 prior to groundwater sampling on May 23, 1996. Depths to groundwater varied from approximately 20 to 25 feet below ground surface. Groundwater elevations varied from 52.46 feet in HC-5 to 57.66 feet in MW-4 (Figure 6). Based on the surface topography, previous groundwater level measurements, and the May 23 groundwater level measurements, groundwater is estimated to flow to the southwest. The hydraulic gradient is estimated to be approximately 0.002 feet/foot in the northeastern part of the site and approximately 0.025 feet/foot in the southwestern part of the site.

IV. COMPARISON TO MODEL TOXICS CONTROL ACT (MTCA) CLEANUP LEVELS

According to the city of Monroe zoning code dated January 25, 1995, the site is zoned general industrial (GI). Permitted uses in this zoning include manufacturing, lumber mills, product fabrication, service stations and bulk plants, trucking yards, and other heavy industrial and retail uses. Conditional uses include auto parts salvage yards. Per WAC 173-340-706, MTCA Method C cleanup levels are appropriate for industrial sites. As such, Method C cleanup levels are provided in the tables for comparative purposes. Method A cleanup levels for TPH and lead are provided, as they are currently the only published MTCA cleanup levels for these parameters.

The focused area samples that were collected adjacent to stained soils at the power pole showed concentrations of PCBs that were all less than or equal to 2 mg/kg, confirming the delineation of PCB-contaminated soil around former sampling location M-3. Two grid samples showed detectable concentrations of PCBs, one sample at 5 mg/kg and one sample at 1 mg/kg. Both detections are below the Method C cleanup level of 17 mg/kg. PCBs were not detected in any groundwater samples, nor were they detected in the sediment samples collected near Woods Creek.

The concentrations of TPH-G in soil were all less than the Method A cleanup level of 100 mg/kg, except for one area grid sample (MAS-13-Grid). TPH-D and TPH-O concentrations in soil samples ranged from non-detect up to 24,000 mg/kg. Samples from 7 of the 11 grid sampling locations and from the car crusher area contained TPH-D and TPH-O at concentrations greater than Method A cleanup levels.

The highest concentrations of cadmium, chromium, and lead reported in the soil samples were 17 mg/kg, 120 mg/kg, and 964 mg/kg, respectively. All detections were below the respective Method C and A soil cleanup levels.

Results of the sediment sample collected immediately downgradient of the abandoned containers indicated that TPH or metals-related residues, if any, were not significant.

TPH was not detected in the groundwater samples except for TPH-D at MW-2. The average detected concentration (0.465 mg/L) was below the Method A cleanup level of 1 mg/L. Cadmium was not detected in any sample. Total chromium was reported in 3 of 4 wells, with a maximum concentration of 35 µg/L. This value is below the Method C groundwater cleanup level. Total lead was detected in 2 of 4 wells, at reported concentrations of 3 and 7 µg/L. The higher value is above the Method C groundwater cleanup level. As previously noted, however, metal detections in groundwater appear to be associated with soil particulate. All dissolved metals results were below detection limits.

V. ESTIMATED PCB SOIL VOLUMES AND DISPOSAL OPTIONS

The volume of PCB-contaminated soil at the power pole area (former sampling location M-3) is estimated at 12 banked (in place) cubic yards. Assuming a weight of 1.75 tons per cubic yard, this equates to approximately 21 tons of soil. The estimate is based on visual observations of stained soil within the boundaries delineated by the focused PCB samples, the sample results, and an assumed excavation depth of 1.5 feet.

Potential options for disposal of the excavated soil include incineration or landfill disposal. Landfill disposal is a less expensive, acceptable disposal option and potentially can include transportation to a solid waste or chemical waste landfill in the northwest. The composite sample result of 260 mg/kg precludes disposal in a solid waste landfill such as the Roosevelt Regional Landfill in eastern Washington. The disposal limit for PCB-contaminated soil at that facility is generally 50 mg/kg. A chemical waste landfill alternative is the Arlington, Oregon landfill operated by Chemical Waste Management of the Northwest.

VI. CONCLUSIONS

Excepting the power pole area and the area at grid location 5, PCBs do not appear to be a contaminant of concern for the site. The two PCB detections outside of the power pole area are well below Method C industrial cleanup levels for soil and PCBs were not detected in any groundwater sample. Elevated cadmium, chromium and lead concentrations were detected in several surface soil samples and at sporadic locations with

depth. None of the detections exceed Method C (cadmium and chromium) or Method A (lead) industrial cleanup levels for soil. Limited metals detections in groundwater appear to be related to soil particulate and except for one total lead detection, do not exceed associated industrial cleanup levels. Elevated TPH concentrations were detected in several locations throughout the site and identify diesel and oil as contaminants of concern for the site. Groundwater results indicate limited transport of these petroleum-related contaminants to groundwater.

Additional groundwater monitoring is recommended to confirm the groundwater conditions. The Department of Ecology typically requires data from four quarterly sampling events to substantiate that groundwater is not adversely impacted by soil contaminants.

Please feel free to call if you have any questions or would like to discuss these findings.

Sincerely,

EMCON

John Virgin
Environmental Scientist

Linda Dawson
Director of Environmental Services

Attachments: Limitations
Figure 1 - Site Location Map
Figure 2 - Surface Drainage
Figure 3 - Focused PCB Sampling Locations
Figure 4 - Area Grid Sampling Locations
Figure 5 - Soil Boring and Monitoring Well Locations
Table 1 - Laboratory Results for PCB Analyses
Table 2 - Soil Sample Petroleum Hydrocarbon and Metals Results
Table 3 - Groundwater Sample Laboratory Results
Attachment A - Soil Boring Logs
Attachment B - Data Validation Results and Laboratory Reports

cc w/att: Jim Crane; Copeland, Landye, Bennett and Wolf, LLP
John Sainsbury; USEPA Region 10
Gary Hanada; Snohomish Health District
Gail Colburn; Department of Ecology NWRO

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

TABLES

Table 1
Monroe Auto Salvage Site Investigation
Laboratory Results for PCB Analyses

Sample Number	Results of Analyses							Total PCBs
	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	
Soil Samples (mg/kg)								
MAS-01	< 1	< 1	< 1	< 1	< 1	1	< 1	1
MAS-02	< 1	< 1	< 1	< 1	< 1	1	< 1	1
MAS-03	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-04	< 1	< 1	< 1	< 1	< 1	2	< 1	2
MAS-SAS	< 1	< 1	< 1	< 1	< 1	260	< 1	260
MAS-05	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-06	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-07	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-01-Grid	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-04-Grid	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-05-Grid	< 1	< 1	< 1	< 1	< 1	5	< 1	5
MAS-07-Grid	< 1	< 1	< 1	< 1	< 1	1	< 1	1
MAS-08-Grid	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-09-Grid	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-13-Grid	< 1 J	< 1 J	< 1 J	< 1 J	< 1 J	< 1 J	< 1 J	< 1
MAS-14-Grid	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-15-Grid	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-17-Grid	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-19-Grid	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-20-Grid	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-21-Grid	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MAS-CCS	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
MAS-BS	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Method C Cleanup Level[a]								17
Water Samples (µg/L)								
MW-2	< 0.2 J	< 0.2 J	< 0.2 J	< 0.2 J	< 0.2 J	< 0.2 J	< 0.2 J	< 0.2
MW-3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MW-4	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
MW-5	< 0.2 J	< 0.2 J	< 0.2 J	< 0.2 J	< 0.2 J	< 0.2 J	< 0.2 J	< 0.2
HC-5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Method C Cleanup Level[a]								0.114

Notes: < indicates compound was not detected at method reporting limit shown, J indicates an estimated value.

[a] Method C formula values are from Ecology, 1996. Model Toxics Control Act Cleanup Levels and Risk Calculations (CLARC II) Update. February.

Table 2
Monroe Auto Salvage Site Investigation
Soil Sample Petroleum Hydrocarbon and Metals Results

Sample Number	Results of Analyses (mg/kg)						Results of Analyses (mg/L)
	TPH-G	TPH-D	TPH-0	Total Cadmium	Total Chromium	Total Lead	TCLP Lead
MAS-01-Grid	< 5	39	129	< 1	33	31	---
MAS-04-Grid	< 5 J	1,670 J	9,100 J	< 1	16	24	---
MAS-05-Grid	< 5	790 J	4,400 J	< 1	28	49	---
MAS-07-Grid	9 J	2,500	7,000	6	37	567	0.27
MAS-08-Grid[a]	< 5	36	130	< 1	30	44	---
MAS-09-Grid	< 5	55	190	< 1	19	21	---
MAS-13-Grid	385 J	654 J	2,240 J	4	35	232	0.27
MAS-14-Grid	29	7,600	22,000	6	46	566	0.84
MAS-15-Grid	< 5 J	2,800	12,000	12	52	964	1.01
MAS-17-Grid[b]	< 5 J	27	< 100	< 1	48	< 20	---
MAS-19-Grid	< 5	4,700	14,000	10	52	867	2.95
MAS-20-Grid[a]	< 5 J	42	160	< 1	32	51	---
MAS-21-Grid[b]	< 5	< 25	< 100	< 1	45	< 20	---
MAS-07	< 5	53	171	< 1	46	< 20	---
MAS-CCS	< 5	5,500	24,000	17 J	44 J	554	---
MW-1-5	< 5	68	290	< 1	38	37	---
MW-1-15	< 5	< 25	< 100	< 1	42	< 20	---
MW-2-5	23	2,060	4,120	1	37	64	---
MW-2-20	< 5	< 25	< 100	< 1	120	< 20	---
MW-3-5	< 5	< 25	< 100	< 1	42	< 20	---
MW-3-20	< 5	< 25	< 100	< 1	25	< 20	---
MW-4-5	< 5	< 25	< 100	< 1	49	< 20	---
MW-4-20	< 5	< 25	< 100	< 1	40	< 20	---
MAS-BS	< 5 J	37	190	< 1	29	41	---
Method C Cleanup Level[c]	100	200	200	3,500	17,500[d]	1,000	---
Puget Sound Background[e]	---	---	---	0.77	48.2	16.8	---

Notes: < indicates compound was not detected at method reporting limit shown, J indicates an estimated value.
-- indicates not analyzed or no associated cleanup level.

[a,b] Field duplicate samples.

[c] Method C formula values from Ecology, 1996. Model Toxics Control Act Cleanup Levels and Risk Calculations (CLARC II) Update. February. Values for TPH and lead are Method A cleanup levels from WAC 173-340-745.

[d] Value is for hexavalent chromium.

[e] Puget Sound Area 90th percentile values from Ecology, 1994. Natural Background Soil Metals Concentrations in Washington State

Table 3
Monroe Auto Salvage Site Investigation
Groundwater Sample Laboratory Results

Analytical Parameter	Units	Sample Number					Method C Cleanup Levels[b]
		MW-2[a]	MW-3	MW-4	HC-5	MW-5[a]	
TPH-G	mg/L	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1
TPH-D	mg/L	0.460[c]	< 0.250	< 0.250	< 0.250	0.470[c]	1
TPH-O	mg/L	< 0.750	< 0.750	< 0.750	< 0.750	< 0.750	1
Cadmium, total	µg/L	< 4	< 4	< 4	< 4	< 4	17.5
Cadmium, dissolved	µg/L	< 4	< 4	< 4	< 4	< 4	--
Chromium, total	µg/L	< 5	21	35	13	< 5	175[d]
Chromium, dissolved	µg/L	< 5	< 5	< 5	< 5	< 5	--
Lead, total	µg/L	< 2	3	7	< 2	< 2	5
Lead, dissolved	µg/L	< 2	< 2	< 2	< 2	< 2	--
TSS	mg/L	< 5	109	170	74	5	--

Notes: < indicates compound was not detected at method reporting limit shown.
-- indicates not analyzed or no associated cleanup level.

[a] Sample MW-5 is a field duplicate collected at well MW-2.

[b] Method C formula values from Ecology, 1996. Model Toxics Control Act Cleanup Levels and Risk Calculations (CLARC II) Update. February. Values for TPH and lead are Method A cleanup levels from WAC 173-340-740.

[c] Laboratory indicated sample quantified as diesel but chromatogram did not match typical diesel fingerprint.

[d] Value is for hexavalent chromium.

FIGURES

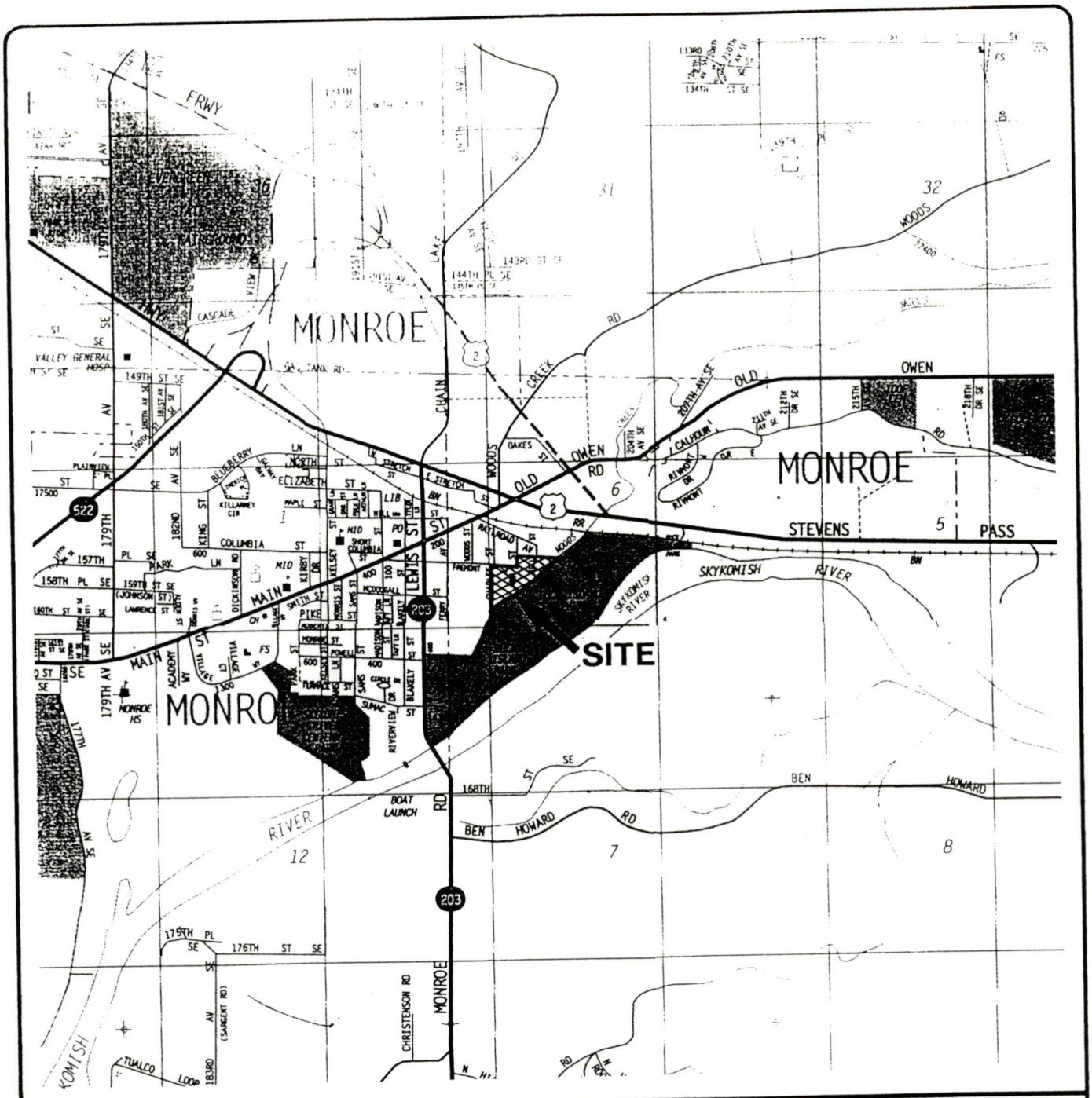

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Figure 1
MONROE AUTO SALVAGE SITE INVESTIGATION
MONROE, WASHINGTON

SITE LOCATION MAP

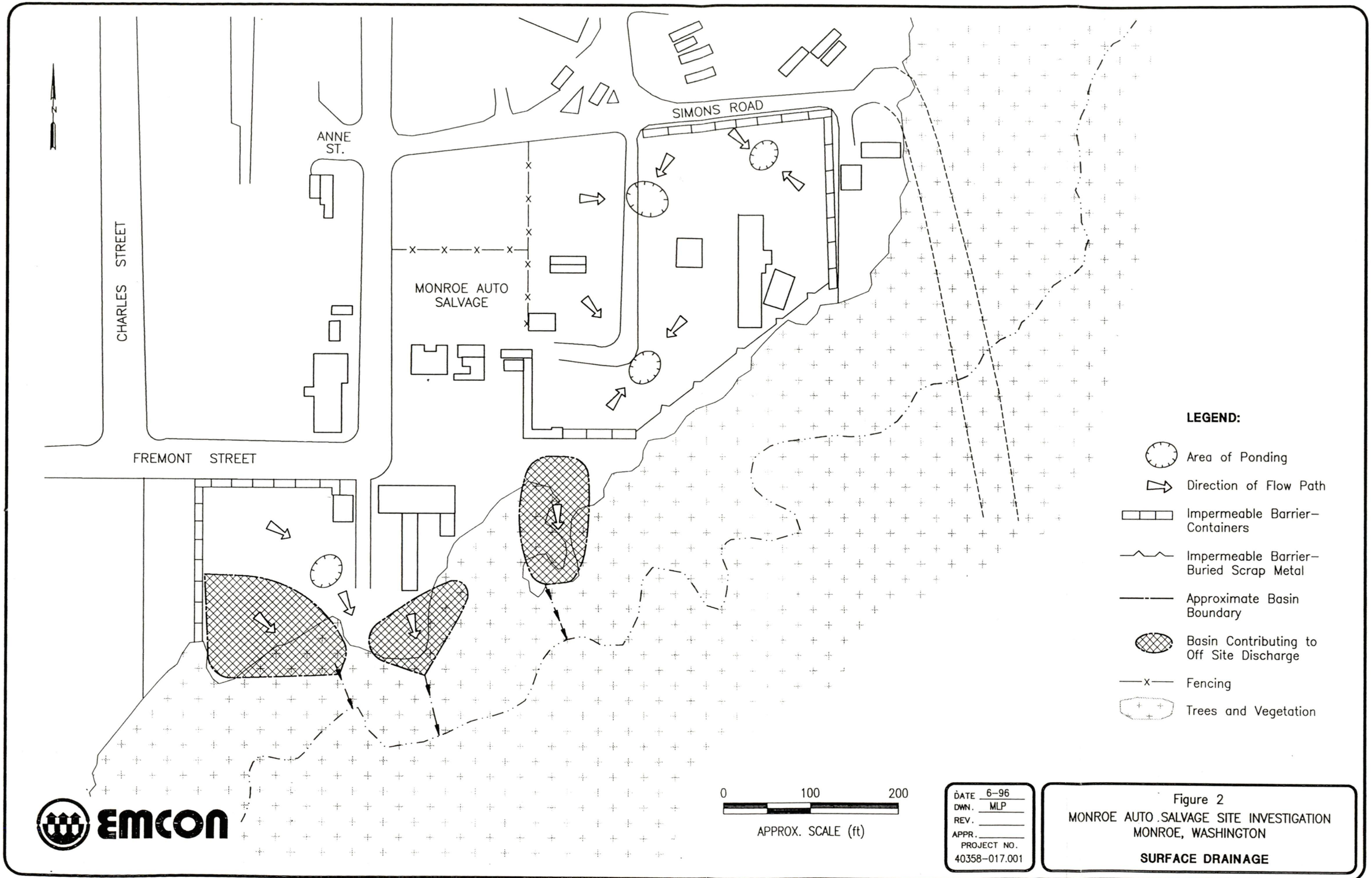

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Figure 2
MONROE AUTO SALVAGE SITE INVESTIGATION
MONROE, WASHINGTON

SURFACE DRAINAGE

1= 200 07-10-96 G:\DWG\0358\017\001\B0001N05

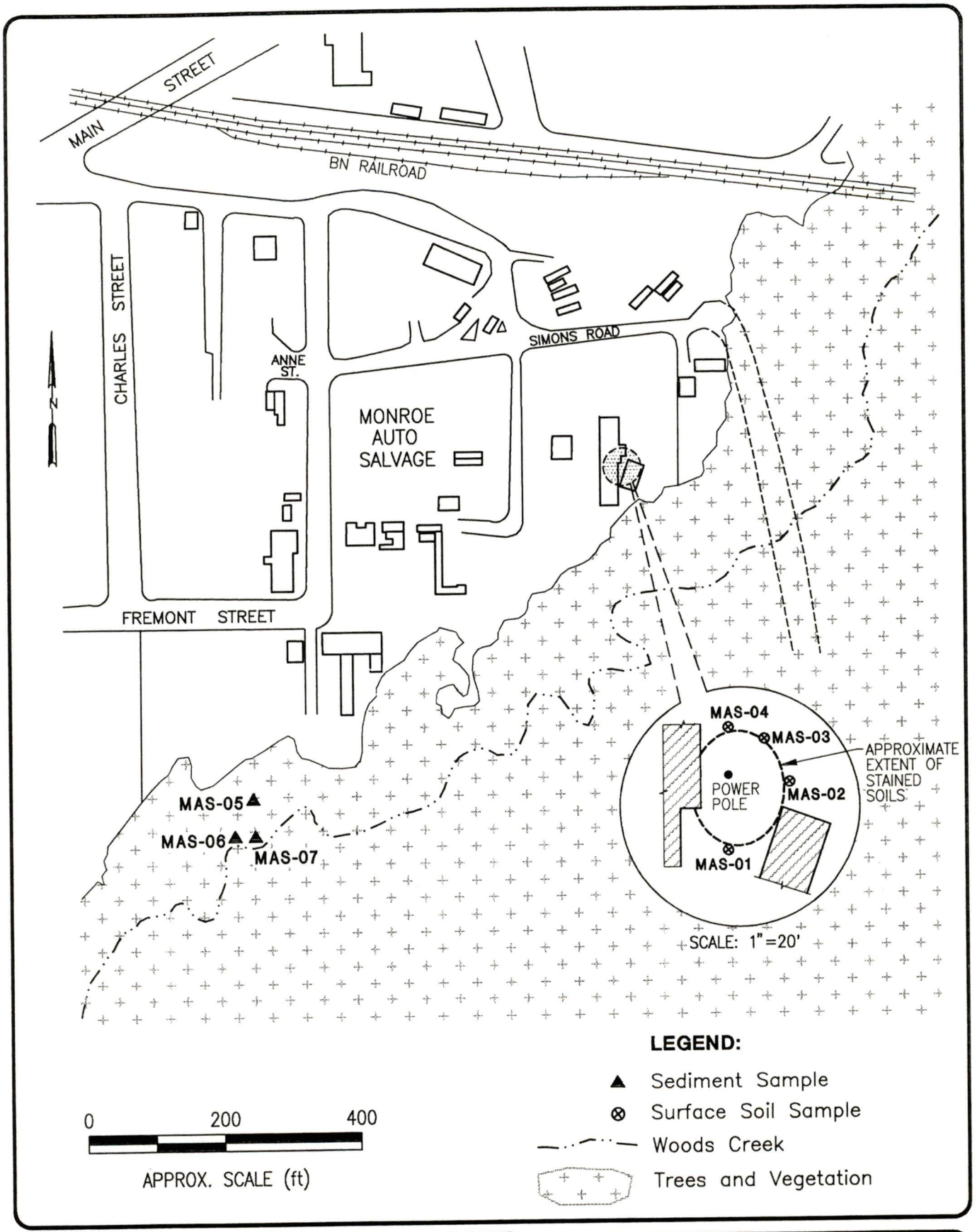

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Figure 3
MONROE AUTO SALVAGE SITE INVESTIGATION
MONROE, WASHINGTON
FOCUSED PCB SAMPLING SAMPLE LOCATIONS

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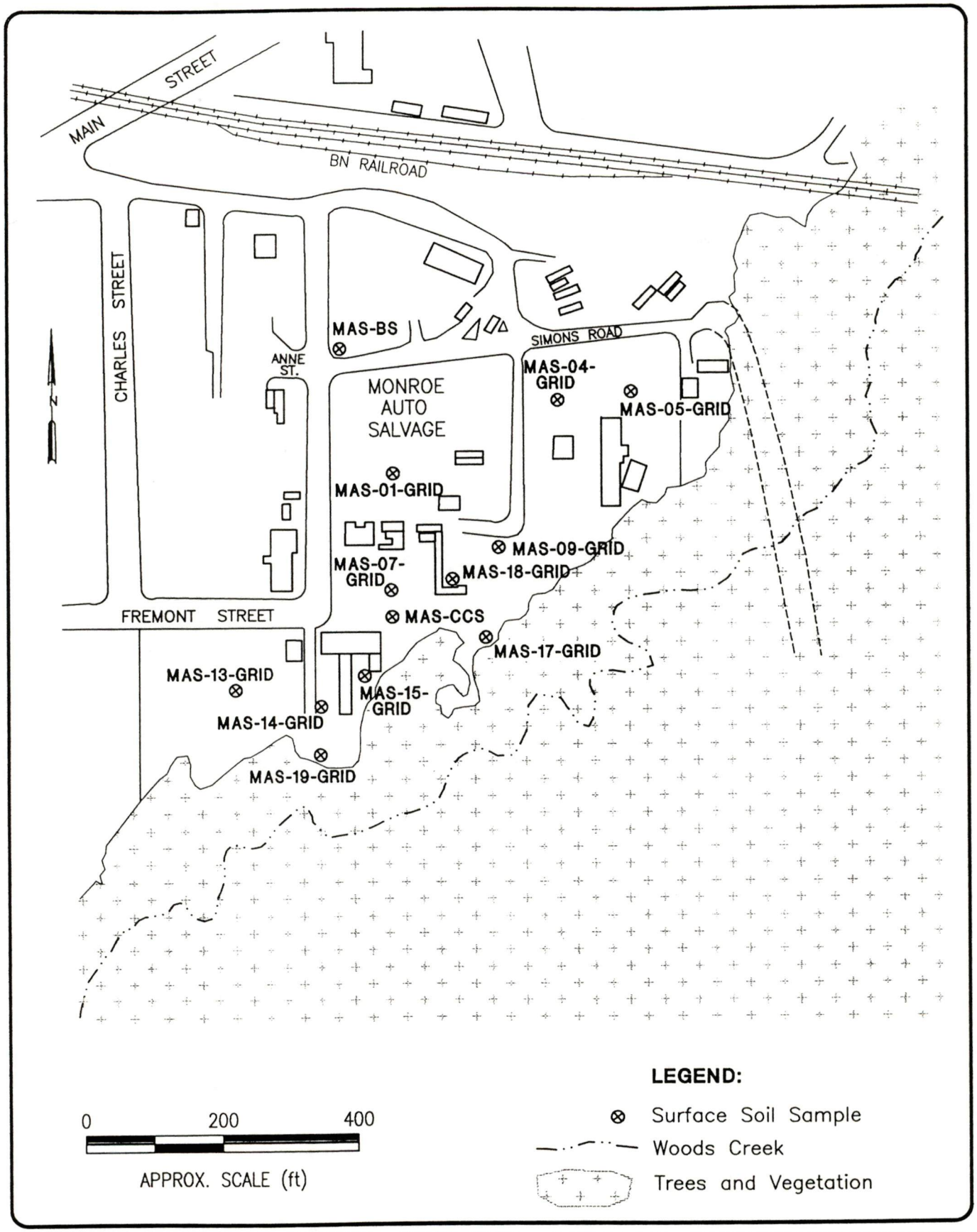

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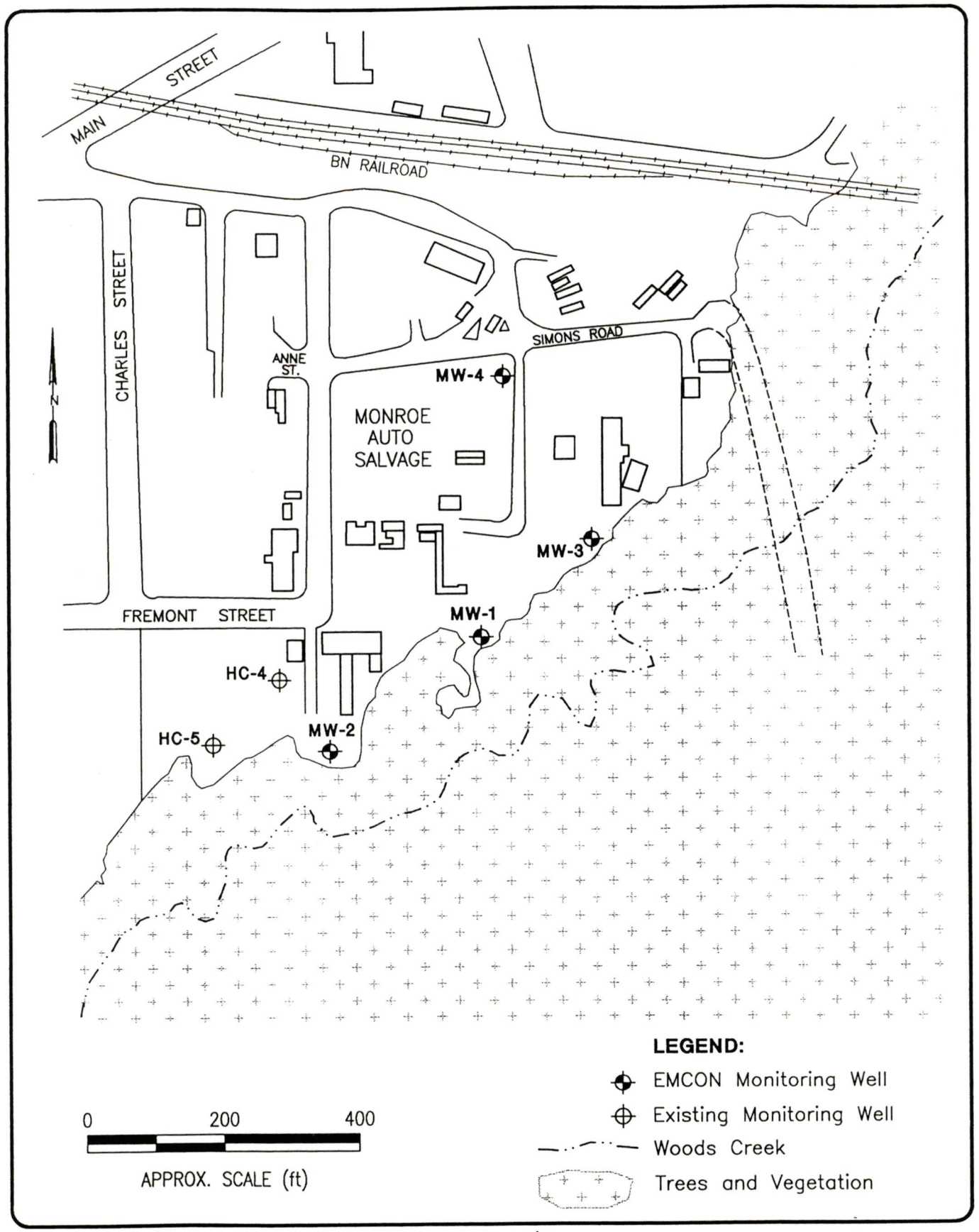
Figure 4

MONROE AUTO SALVAGE SITE INVESTIGATION
MONROE, WASHINGTON

AREA GRID SAMPLING LOCATIONS

1= 200 07-09-96 G:\DWG\0358\017\001\B0001N03



EMCON

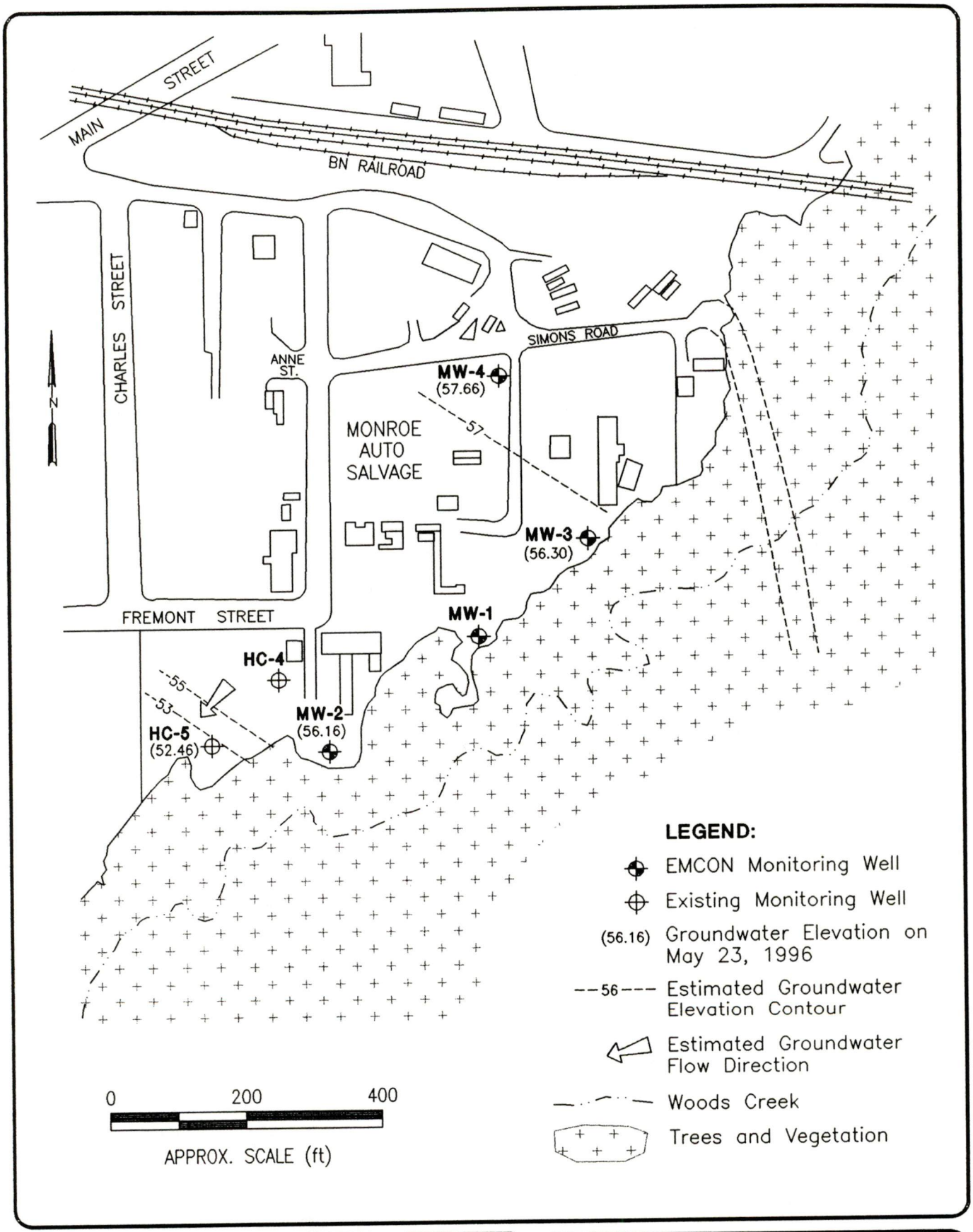
DATE 6-96
DWN. MLP
REV.
APPR.
PROJECT NO.
40358-017.001

Figure 5

MONROE AUTO SALVAGE SITE INVESTIGATION
MONROE, WASHINGTON

SOIL BORING AND MONITORING WELL LOCATIONS

1= 200 07-09-96 G:\DWG\0358\017\001\BO001N04



EMCON

DATE	7-96
DWN.	MLP
REV.	
APPR.	
PROJECT NO.	40358-017.001

Figure 6

MONROE AUTO SALVAGE SITE INVESTIGATION
MONROE, WASHINGTON

GROUNDWATER ELEVATIONS MAY 23, 1996

1= 200 7-25-96 G:\DWG\0358\017\001\BO001N06

APPENDIX A

SOIL BORING LOGS

EMCON

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: Monroe Auto Salvage
PROJECT #: 40358-017.001(2)
GEOLOGIST/ENGINEER: Nick Garson
DRILLING CONTRACTOR: CASCADE
DRILLING METHOD: CME 75 Hollow Stem Auger Drill Rig
HOLE DIA.: 4.25" I.D/7" O.D.

BORING NO.: MW-1
DATE BEGAN: 5/1/96
DATE COMPLETED: 5/1/96
TOTAL DEPTH: 21.5 Feet
SHEET: 1 OF 2

FIELD LOCATION OF BORING: Next to ORANGE SHACK @ SE Site Boundary
GROUND ELEVATION:
DATUM:

OTHER: PID

WATER LEVEL DATA				
DEPTH	~17'			
TIME	0815			
DATE	5/1/96			
BORING DEPTH	21.5'			

WELL OR PIEZOMETER DETAILS	SAMPLING METHOD	SAMPLE NUMBER	BLOWS/FT	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION
					1	SM	0.0 to 5.5 feet: Silty SAND with GRAVEL (SM-GW) dark brown, fine to coarse SAND, ~15-20% low to medium plasticity fines, ~10-15% fine to coarse gravel, scattered rootlets and glass fragments, dense, damp (FILL)
2.7	SB	MW-1 -5	30 50/3	X	5		5.5 to 17 feet: SAND (SW), light brown, fine to medium, ~5% coarse SAND to fine GRAVEL, trace fines, very dense, damp to wet (NATIVE)
0.0	SB	MW-1 -10	55	X	10	SW	
0.0	SB	MW-1 -15	62	X	15		
					17	▽	17 to 19 feet: SAND (SP), brown, fine, ~5% low plasticity fines, trace medium to coarse SAND, very dense, wet (NATIVE)

REMARKS: 1) SB = Soil samples collected using either a 2.5" x 24" Dames and Moore Sampler or a 2.5" x 36" stainless steel split Barrel sampler 2) Blow counts do not represent SPT Results 3) White triangle = field estimate of water level during time of drilling 4) Soil samples screened with PID 5) Reference elevation = ground surface

*NOTE: Specify data recorded in undesignated column (e.g. conductance, pH, tip reading, pocket torvane, etc.)

EMCON

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: Monroe Auto Salvage
PROJECT #: 40358-017.001(2)
GEOLOGIST/ENGINEER: Nick Garson
DRILLING CONTRACTOR: Cascade
DRILLING METHOD: CME 75 Hollow Stem Auger Drill Rig
HOLE DIA.: 4.25" I.D./9" O.D.

BORING NO.: MW-1
DATE BEGAN: 5/1/96
DATE COMPLETED: 5/1/96
TOTAL DEPTH: 21.5 feet
SHEET: 2 OF 2

FIELD LOCATION OF BORING:

GROUND ELEVATION: _____
DATUM: _____

WATER LEVEL DATA				
DEPTH				
TIME				
DATE				
BORING DEPTH				

OTHER* (PID)	WELL OR PIEZOMETER DETAILS	SAMPLING DATA: SAMPLING METHOD	SAMPLE NUMBER	BLOWS/FT	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION
0.0		SB	MW-1-19	15 17 12	X	21 22		19 to 21 feet: Silt (ML), brown to gray, laminated, low to medium plasticity, stiff, wet (Native)

Total Depth Drilled: 20 feet bgs
Total Depth Sampled: 21.5 feet bgs

Well Completion Details

0 - 9 feet bgs: 2-inch diameter, flush-threaded Schedule 40 PVC blank riser pipe.

9 - 19 feet bgs: 2-inch diameter, flush-threaded Schedule 40 PVC well screen with 0.020 inch machined slots.

0 - 1.5 feet bgs: Flush mount well monument with concrete

1.5 to 6.5 feet bgs: Pure Gold medium bentonite chips hydrated with potable water.

6.5 - 19 feet bgs: RMC Lonestar #6/12 SAND

REMARKS:

*NOTE: Specify data recorded in undesignated column (e.g. conductance, pH, tip reading, pocket torvane, etc.)

EMCON

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: Monroe Auto Salvage
PROJECT #: 40358-017.001(2)
GEOLOGIST/ENGINEER: Nick Garson
DRILLING CONTRACTOR: Cascade
DRILLING METHOD: CME 75 Hollow Stem Auger Drill Rig
HOLE DIA.: 4.25" I.D./9" O.D.

BORING NO.: MW-2
DATE BEGAN: 5/1/96
DATE COMPLETED: 5/1/96
TOTAL DEPTH: 29 feet
SHEET: 1 OF 2

OTHER: PID

WELL OR PIEZOMETER DETAILS	SAMPLING METHOD	SAMPLE NUMBER	BLOWS/FT	DEPTH SAMPLED	PID*	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)
	SB	MW-2-5	20 27 12	X	2.7	5	SM-GW
	SB	MW-2-10	8 7 7	X	2.7	10	SM
	SB	MW-2-15	5 7 8	X	2.7	15	SW

WATER LEVEL DATA

DEPTH	~21.5'			
TIME	1025			
DATE	5/1/92			
BORING DEPTH	29 feet			

FIELD LOCATION OF BORING: South of office

GROUND ELEVATION: _____

DATUM: _____

LITHOLOGIC DESCRIPTION

0.0 to 10 feet: Silty SAND with GRAVEL (SM-GW) dark brown, fine to coarse SAND, ~15-20% low to medium plasticity fines, ~10-15% fine to coarse GRAVEL, loose to medium dense, damp (FILL)

@ 10 feet - Auger Refusal. Moved boring ~3-4 to south.

10 to 15 feet: Silty SAND (SM), dark brown to black, fine, ~10-15% low plasticity fines, trace to ~5% medium to coarse SAND, scattered wood chips and peat, loose, damp (NATIVE)

15 to 21 feet: SAND (SW), brown, fine to medium, ~5-10% coarse SAND, trace fines, loose, damp to wet (NATIVE)

REMARKS:

*NOTE: Specify data recorded in undesignated column (e.g. conductance, pH, tip reading, pocket torvane, etc.)

EMCON

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: MONROE AUTO SALVAGE
PROJECT #: 40358-017.001(2)
GEOLOGIST/ENGINEER: NICK GARSON
DRILLING CONTRACTOR: CASCADE
DRILLING METHOD: CME 75 H.S.A. DRILL Rig
HOLE DIA.: 4.25" I.D. / 9" O.D.

BORING NO.: MW-2
DATE BEGAN: 5/1/96
DATE COMPLETED: 5/1/96
TOTAL DEPTH: 29 feet
SHEET: 2 OF 2

OTHER: PID

WELL OR PIEZOMETER DETAILS	SAMPLING METHOD	SAMPLE NUMBER	BLOWS/FT	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)
2.7	SB	MW-2 -20	15 34 50/5	X	21	SW ML
—	SB	MW-2 -21.5	24 17 23	X	22 23 24	
—	SB	MW-2 -25	50/5	X	25 26 27	SW
—	SB	MW-2 -27.5	31 50	X	28 29 30	ML

WATER LEVEL DATA

DEPTH				
TIME				
DATE				
BORING DEPTH				

FIELD LOCATION OF BORING:

GROUND ELEVATION: _____
DATUM: _____

LITHOLOGIC DESCRIPTION

21 to 27.5 feet: Silt (ML), rust brown, non to low plasticity, trace fine SAND, hard, moist to wet (NATIVE)

21.5 to 27.5 feet: SAND (SW), brown, fine to medium, ~5-10% coarse SAND, trace fines, medium to very dense, wet (NATIVE)

@ ~25 feet: fines increase to ~5-15%

27.5 to 28.5 feet: Silt (ML), gray, low plasticity, hard, wet (NATIVE)

Total Depth Drilled: 27.5 feet bgs
Total Depth Sampled: 29 feet bgs

Well Completion Details

0-17 feet bgs: 2-inch diameter, flush-threaded Schedule 40 PVC blank riser pipe.

17-27 feet bgs: 2-inch diameter, flush-threaded Schedule 40 PVC well screen with 0.020-inch machined slots

0-1.5 feet: Flush well monument with concrete
1.5-15.5 feet: Pure ^Gold medium bentonite chips hydrated with potable water
15.5-27 Feet: RMC Lonestar #6/12 SAND

REMARKS:

*NOTE: Specify data recorded in undesignated column (e.g. conductance, pH, tip reading, pocket torvane, etc.)

EMCON

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: Monroe Auto Salvage
PROJECT #: 40358-017.001
GEOLOGIST/ENGINEER: Nick Garson
DRILLING CONTRACTOR: Cascade
DRILLING METHOD: CME 75 Hollow Stem Auger Drill Rig
HOLE DIA.: 4.25" I.D./9" O.D.

BORING NO.: MW-3
DATE BEGAN: 5/1/96
DATE COMPLETED: 5/1/96
TOTAL DEPTH: 28 feet
SHEET: 1 OF 2

FIELD LOCATION OF BORING: South of Focused PCB Sampling Area
GROUND ELEVATION:
DATUM:

WATER LEVEL DATA

DEPTH	~22'			
TIME	1250			
DATE	5/1/96			
BORING DEPTH	28'			

OTHER: PID

WELL OR PIEZOMETER DETAILS	SAMPLING METHOD	SAMPLE NUMBER	BLOWS/FT	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION
					0		0.0 to 10 feet: Silty GRAVELLY SAND (SW), light to dark brown, fine to coarse, ~10-15% fine to coarse gravel, ~5-10% low plasticity fines, dense, damp (FILL)
2.7	SB	MW-3-5	50/4	X	5	SW	
2.7	SB	MW-3-10	31 50	X	10		10 to 15 feet: SAND (SP), brown, fine, trace to ~5% medium to coarse SAND, trace fines, medium to dense, damp (NATIVE)
					12	SP	
2.7	SB	MW-3-15	54	X	15		15 to 20 Feet: GRAVELLY SAND (SW), rust brown, fine to coarse, ~15-20% fine to coarse GRAVEL, trace fines, very dense, damp to moist (NATIVE)
					17	SW	

REMARKS:

*NOTE: Specify data recorded in undesignated column (e.g. conductance, pH, tip reading, pocket torvane, etc.)

EMCON

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: MONROE Auto SALVAGE
PROJECT #: 40355-017.001(1)
GEOLOGIST/ENGINEER: NICK GARSON
DRILLING CONTRACTOR: CASCADE
DRILLING METHOD: CME 75 HSA DRILLING
HOLE DIA.: 4.25" I.D./8" O.D.

BORING NO.: MW-3
DATE BEGAN: 5/1/96
DATE COMPLETED: 5/1/96
TOTAL DEPTH: 28 feet
SHEET: 2 OF 2

OTHER*: PID

WELL OR PIEZOMETER DETAILS	SAMPLING METHOD	SAMPLE NUMBER	BLOWS/FT	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)
2.7	SB	MW -3-20	50	X	21	
					22	▽
2.7	SB	MW-3 -22.5	15 50	X	23	SP
					24	
2.7	SB	MW-3 -25	53	X	25	
					26	SW
1	SB	MW-3 -26.5	8 12 20	X	27	
					28	

WATER LEVEL DATA

DEPTH				
TIME				
DATE				
BORING DEPTH				

FIELD LOCATION OF BORING:

GROUND ELEVATION: _____
DATUM: _____

LITHOLOGIC DESCRIPTION

20 to 25 feet: SAND (SP), RUST to dark brown, fine, ~5% medium to coarse SAND, trace to ~5% fine to coarse GRAVEL, medium to dense, moist to wet (NATIVE)

@ ~22 feet: Scattered silt lenses up to 2" thick

25 to 27 feet: GRAVELly SAND (SW), brown, fine to coarse, ~10-15% fine to coarse GRAVEL, ~5% low plasticity fines, very dense, wet (NATIVE)

27 to 28 feet: Silt (ML), brown to gray, low plasticity, trace to ~5% fine SAND, stiff to very stiff, wet (NATIVE)

Total Depth Drilled: 27.5 feet bgs
Total Depth Sampled: 28.0 feet bgs

Well Completion Details

0 - 17.5 feet: 2-inch diameter, flush-threaded Schedule 40 PVC blank Riser pipe.

17.5 - 27.5 feet: 2-inch diameter, flush-threaded Schedule 40 PVC well screen with 0.020-inch machined slots

0 - 1.5 feet: Flush mount well monument with concrete

1.5 - 16 feet: Pure Gold medium bentonite chips hydrated with potable water

16 - 27.5 feet: RMC Lonestar #6/12 SAND

REMARKS:

*NOTE: Specify data recorded in undesignated column (e.g. conductance, pH, tip reading, pocket torvane, etc.)

EMCON

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: Monroe Auto Salvage
PROJECT #: 40358-017.001(2)
GEOLOGIST/ENGINEER: Nick Garson
DRILLING CONTRACTOR: Cascade
DRILLING METHOD: CME 75 Hollow Stem Auger
Drill Rig
HOLE DIA.: 4.25" ID/8" OD

BORING NO.: MW-4
DATE BEGAN: 5/1/96
DATE COMPLETED: 5/1/96
TOTAL DEPTH: 28 feet
SHEET: 1 OF 2

WATER LEVEL DATA				
DEPTH	~22'			
TIME	1430			
DATE	5/1/96			
BORING DEPTH	28'			

FIELD LOCATION OF BORING:

GROUND ELEVATION: _____
DATUM: _____

OTHER*	WELL OR PIEZOMETER DETAILS	SAMPLING METHOD	SAMPLE NUMBER	BLOWS/FT	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION
PID								0.0 to 11 feet: SAND (SP), light to dark brown, fine, ~5% medium to coarse SAND, ~5% fines, trace fine to coarse gravel, loose to dense, damp (Fill / Native)
2.7		SB	MW-4-5	5 23 50/2	X	5	SP	@ ~5-6 feet: scattered organic material
2.7		SB	MW-4-10	10 50	X	10		11 to 25 feet: Gravelly SAND (SW), rust brown, fine to coarse, ~15-30% fine to coarse gravel, trace fines, medium to dense, damp to wet (Native)
2.7		SB	MW-4-15	24 50	X	15	SW	@ ~15 feet: fines increase to ~5%

REMARKS:

*NOTE: Specify data recorded in undesignated column (e.g. conductance, pH, tip reading, pocket torvane, etc.)

EMCON

LOG OF EXPLORATORY BORING

CLIENT/PROJECT NAME: Monroe Auto Salvage
PROJECT #: 40358-017.001 (2)
GEOLOGIST/ENGINEER: Nick Grason
DRILLING CONTRACTOR: CASCADE
DRILLING METHOD: CME 75 H.S.A. OD.
HOLE DIA.: 9.25" ID/13" OD

BORING NO.: MW-4
DATE BEGAN: 5/1/96
DATE COMPLETED: 5/1/96
TOTAL DEPTH: 28 feet
SHEET: 2 OF 2

WATER LEVEL DATA

DEPTH				
TIME				
DATE				
BORING DEPTH				

FIELD LOCATION OF BORING:

GROUND ELEVATION:
DATUM:

OTHER: PID	WELL OR PIEZOMETER DETAILS	SAMPLING METHOD	SAMPLE NUMBER	BLOWS/FT	DEPTH SAMPLED	DEPTH IN FEET	SOIL GROUP SYMBOL (USCS)	LITHOLOGIC DESCRIPTION
2.7		SB	MW-4 -20	50	X	21		
						22	▽	@ ~ 23 feet: Scattered silt lenses ~1-2" thick
		SB	MW-4 -22.5	10 10 20	X	23	SW	
						24		
		SB	MW-4 -25	50	X	25		25 to 26.5 feet: Silty GRAVELLY SAND (SW) brown, fine to coarse, ~5-15% fines, ~15-20% fine to coarse gravel, very dense, wet (NATIVE)
		SB	MW-4 -26.5	50	X	26		
						27	ML	26.5 to 28 feet: SILT (ML) gray, non to low plasticity, trace to fine sand, hard, wet (NATIVE)
						28		

TOTAL Depth DRILLED: 27 feet
TOTAL Depth Sampled: 27 feet

WELL Completion DETAILS

0 - 17 feet: 2-inch diameter flush-threaded Schedule 40 PVC blank Riser pipe.

17 - 27 feet: 2-inch diameter, flush-threaded Schedule 40 PVC well screen with 0.020-inch machined slots

0 - 1.5 feet: Flushmount well monument w/ concrete

1.5 - 15 feet: Pure Gold Medium Bentonite Chips hydrated with potable water

15 - 27 feet: RMC LONESTAR #6/12 SAND

REMARKS:

*NOTE: Specify data recorded in undesignated column (e.g. conductance, pH, tip reading, pocket torvane, etc.)

APPENDIX B

DATA VALIDATION RESULTS AND LABORATORY REPORTS

DATA VALIDATION

Data were reviewed for compliance with method quality control (QC) criteria following procedures specified in *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (USEPA, 1994) and *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (USEPA, 1994). Items that were reviewed included sample holding times, method blank results, surrogate recovery for organics analyses, field and laboratory duplicate results, matrix spike and matrix spike/matrix spike duplicate (MS/MSD) results, reporting limits, and completeness. Only items that did not meet QC guidelines are discussed below.

The TPH-G analysis of samples MAS-07-Grid, MAS-20-Grid, MAS-17-Grid, MAS-15-Grid, MAS-04-Grid, MAS-13-Grid, and MAS-BS were originally conducted within the 14-day holding time limit, but the surrogate recoveries did not meet QC criteria. These seven samples were re-analyzed from 4 to 5 days after the holding time limit, with surrogate recoveries that were within QC criteria. Based on USEPA guidelines (USEPA, 1994), an estimated (J) data qualifier was assigned to the TPH-G results for these samples due to holding time exceedance.

The surrogate recoveries for TPH-D analysis of samples MAS-13-Grid, MAS-04-Grid, and MAS-05-Grid, and for the PCB analysis of samples MAS-13-Grid, and the field duplicate groundwater samples from well MW-2 did not meet QC criteria. Based on USEPA guidelines (USEPA, 1994b), an estimated (J) data qualifier was assigned to the TPH-D and PCB results for sample with surrogate recoveries that did not meet QC criteria.

The laboratory duplicate analysis and matrix spike analysis for cadmium and chromium in sample MAS-CCS showed results that did not meet QC criteria. Based on USEPA guidelines (USEPA, 1994), estimated (J) data qualifiers were assigned to the cadmium and chromium results for this sample.

The data are judged to be ACCEPTABLE for their intended use. The usefulness of results are modified by assignment of the following data qualifiers to individual compound and sample results:

- < - The material was analyzed for, but was not detected at a concentration greater than the associated value. The associated numerical value is the method reporting limit.
- J - The associated numerical value is an estimated quantity.
- < J - The material was analyzed for, but was not detected. The associated numerical value is the estimated method reporting limit.

Columbia Analytical Services, Inc.

April 23, 1996

Service Request No.: B9600248

John Virgin
EMCON Northwest
18912 N Creek Parkway
Suite 210
Bothell, WA 98011

Re: **Monroe Auto Salvage/Project #40358-017.001**

Dear John:

Attached are the results of the sample(s) submitted to our laboratory on April 2, 1996. Preliminary results were transmitted via facsimile on April 23, 1996. For your reference, these analyses have been assigned our service request number B9600248.

All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and CAS is not responsible for use of less than the complete report. Results only apply to samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Colin B. Elliott
Laboratory Manager

CBE/bdr

18912 North Creek Parkway, Suite 118 • Bothell, WA 98011 • 206/486-6983 • Fax 206/486-7695

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	B9600248
Project:	Monroe Auto Salvage	**Date Collected:**	4/2/96
Sample Matrix:	Soil	**Date Received:**	4/2/96
		Date Extracted:	4/2/96
		Date Analyzed:	4/2/96

BTEX and Total Petroleum Hydrocarbons as Gasoline
EPA Methods 5030A/8020 and Washington DOE Method WTPH-G
Units: mg/Kg (ppm)
Dry Weight Basis

Analyte:	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH as Gasoline
Method Reporting Limit:	0.05	0.1	0.1	0.1	5
Sample Name / **Lab Code**					
MAS-CCS B9600248-06	ND	ND	ND	ND	ND
Method Blank B9600248-SB	ND	ND	ND	ND	ND

Approved By: Lin · Elliott Date: 4/23/96

5A/102194
00248VOA.DC1 - SOIL 4/11/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	B9600248
Project:	Monroe Auto Salvage	**Date Collected:**	4/2/96
Sample Matrix:	Soil	**Date Received:**	4/2/96
		Date Extracted:	4/2/96
		Date Analyzed:	4/3/96

Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D
Units: mg/Kg (ppm)
Dry Weight Basis

Analyte:		**Diesel**	**Oil***
Method Reporting Limit:		25	100
Sample Name	**Lab Code**		
MAS-CCS	B9600248-06(a)	5500(b)	24000
Method Blank	B9600248-SB	ND	ND

* Quantified using 30-weight motor oil as a standard.
(a) Result is from the analysis of a diluted sample, performed on 4/3/96. Dilution factor:10
(b) This result is primarily due to the beginning of oil, which elutes in the diesel region.

Approved By: Carla Elliott Date: 9/23/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600248
Date Collected: 4/2/96
Date Received: 4/2/96
Date Extracted: 4/8/96
Date Analyzed: 4/20/96

Polychlorinated Biphenyls (PCBs)
EPA Method 3540/8080
Units: mg/Kg (ppm)
Dry Weight Basis

Analyte:	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
Method Reporting Limit:	1	1	1	1	1	1	1
Sample Name	**Lab Code**						
MAS-01	B9600248-01	ND	ND	ND	ND	ND	1	ND
MAS-02	B9600248-02	ND	ND	ND	ND	ND	1	ND
MAS-03	B9600248-03	ND	ND	ND	ND	ND	ND	ND
MAS-04	B9600248-04	ND	ND	ND	ND	ND	2	ND
MAS-SAS	B9600248-05 (a)	ND	ND	ND	ND	ND	260	ND
MAS-CCS	B9600248-06 (a)	< 5 (b)	< 5 (b)	< 5 (b)	< 5 (b)	< 5 (b)	< 5 (b)	< 5 (b)
MAS-05	B9600248-07	ND	ND	ND	ND	ND	ND	ND
MAS-06	B9600248-08	ND	ND	ND	ND	ND	ND	ND
Method Blank	B9600248-SB	ND	ND	ND	ND	ND	ND	ND

ND None Detected
a Result is from the analysis of a diluted sample, performed on 4/20/96. Dilution factor: 10.
b The MRL is elevated because of matrix interferences.

Approved By: C. Elliott Date: 4/23/96

SA 122194
0024SPHC.CE1 - PCB 4/23/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage/#40358-017.001
Sample Matrix: Soil

Service Request: K9601925
Date Collected: 4/2/96
Date Received: 4/5/96
Date Extracted: 4/10/96

Total Metals
Units: mg/Kg (ppm)
Dry Weight Basis

Analyte:	Cadmium	Chromium	Lead
EPA Method:	6010A	6010A	6010A
Method Reporting Limit:	1	2	20
Date Analyzed:	4/10/96	4/10/96	4/10/96
Sample Name	**Lab Code**		
MAS-CCS	K9601925-001	17	44	554
Method Blank	K9601925-MB	ND	ND	ND

Approved By: _____ Date: 4/23/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600248
Date Collected: 4/2/96
Date Received: 4/2/96
Date Extracted: 4/2/96
Date Analyzed: 4/2/96

Surrogate Recovery Summary
BTEX and Total Petroleum Hydrocarbons as Gasoline
EPA Methods 5030A/8020 and Washington DOE Method WTPH-G

Sample Name	Lab Code	Percent Recovery 4-BFB (PID - BTEX)	Percent Recovery 4-BFB (FID - GAS)
MAS-CCS	B9600248-06	76	79
Method Blank	B9600248-SB	90	93
CAS Acceptance Limits:		69-112	69-111

Approved By: C. Elliott Date: 4/23/96

SUR2/111594
00248VOA.DC1 - SUR 4/11/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600248
Date Collected: 4/2/96
Date Received: 4/2/96
Date Extracted: 4/2/96
Date Analyzed: 4/3/96

Surrogate Recovery Summary
Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D

Sample Name	Lab Code	Percent Recovery p-Terphenyl
MAS-CCS	B9600248-06	110
Method Blank	B9600248-SB	88

CAS Acceptance Limits: 74-117

Approved By: C. Elliott Date: 4/23/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600248
Date Collected: 4/2/96
Date Received: 4/2/96
Date Extracted: 4/8/96
Date Analyzed: 4/20/96

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)
EPA Method 3540/8080

Sample Name	Lab Code	Percent Recovery Tetrachlorometaxylene
MAS-01	B9600248-01	78
MAS-02	B9600248-02	78
MAS-03	B9600248-03	80
MAS-04	B9600248-04	81
MAS-SAS	B9600248-05 (a)	110
MAS-CCS	B9600248-06 (a)	110
MAS-05	B9600248-07	85
MAS-06	B9600248-08	78
Method Blank	B9600248-SB	83

CAS Acceptance Limits: 67-138

a Result is from the analysis of a diluted sample, performed on 4/20/96. Dilution factor: 10.

Approved By: Ch. Elliott Date: 4/23/96

Columbia Analytical Services, Inc.

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068

DATE 4/2/96 PAGE 1 OF 1

PROJECT NAME Monroe Auto Salvage # 40358-017.001

PROJECT MANAGER John Virgin

COMPANY/ADDRESS EMCON

18912 North Creek Pkwy Suite 100

Bothell, WA 98011 PHONE (206) 485-5000

SAMPLERS SIGNATURE [signature]

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	Pesticides/PCBs 608/8080	Total Petroleum Hydrocarbons EPA/418.1 ☐ OR/418.1 ☐ WA/418.1 ☐	TPH/Gas/BTEX 5030/8015/8020 Gas ☐ BTEX ☐	TPH/8015 Modified Diesel ☐ Hydrocarbon Scan ☐	TPH/HCID ☐ OR/HCID ☐ WA/HCID ☐	TCLP Metals ☐ VOA ☐ Semi Pest/ VOA ☐ Herb ☐ List Below (total or dissolved)	Cyanide	pH, Cond, Cl, SO_4, PO_4, F, Br NO_2, NO_3, (circle)	NH_3-N, COD, Total-P, TKN, TOC (circle)	Total Organic Halides (TOX) 9020 ☐ (AOX) 1650 ☐	TPH-D Extended	Cd, Cr, Pb	REMARKS
MAS-01	4/3/96	0945	B96-248-1	Soil	1				X												
MAS-02		0950	-2		1				X												
MAS-03		0955	-3		1				X												
MAS-04		1000	-4		1				X												
MAS-SA,S		1005	-5		2				X												
MAS-CCS		1035	-6		3				X	X									X	X	
MAS-05		1130	-7		1				X												
MAS-06	↓	1145	-8	↓	1				X												

RELINQUISHED BY:

Signature [signature]

Printed Name NICK GARSON

Firm EMCON

Date/Time 4/2/96 1235

RECEIVED BY:

Signature [signature]

Printed Name [signature]

Firm 4-2-96 12:35

Date/Time

TURNAROUND REQUIREMENTS

___ 24 hr ___ 48 hr. ___ 5 day

✓ Standard (10-15 working days)

✓ Provide Verbal Preliminary Results

✓ Provide FAX preliminary Results

Requested Report Date _____

REPORT REQUIREMENTS

___ I. Routine Report

___ II. Report (includes DUP.MS. MSD, as required, may be charged as samples)

___ III. Data Validation Report (includes All Raw Data)

___ IV. CLP Deliverable Report

INVOICE INFORMATION:

P.O.# _____

Bill To _____

SAMPLE RECEIPT:

Shipping VIA: _____

Shipping #: _____

Condition: _____

Lab No: B960024B

RELINQUISHED BY:

Signature

Printed Name

Firm

Date/Time

RECEIVED BY:

Signature

Printed Name

Firm

Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

6

Columbia Analytical Services, Inc.

July 22, 1996

Service Request No.: B9600248

John Virgin
EMCON Northwest
18912 N Creek Parkway
Suite 210
Bothell, WA 98011

Re: **Monroe Auto Salvage/Project #40358-017.001**

Dear John:

Attached are the QC results for samples submitted to our laboratory on April 2, and reported to you on April 23, 1996. For your reference, this is regarding our service request number B9600248.

All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and CAS is not responsible for use of less than the complete report. Results only apply to samples analyzed.

Please call if we can be of further assistance.

Respectfully submitted,

Columbia Analytical Services, Inc.

C. B. Elliott

Colin B. Elliott
Laboratory Manager

CBE/bdr

18912 North Creek Parkway, Suite 118 • Bothell, WA 98011 • 206/486-6983 • Fax 206/486-7695

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
LCS Matrix: Soil

Service Request: B9600248
Date Collected: 4/2/96
Date Received: 4/2/96
Date Extracted: 4/8/96
Date Analyzed: 4/20/96

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)
EPA Method 3540/8080
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: MAS-06
Lab Code: B9600248-08

Analyte	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Criteria	Relative Percent Difference
Aroclor 1260	0.60	0.61	ND	0.63	0.64	105	105	62-154	0

Approved By: A. Elliott Date: 7/22/96

DLCS/121594

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
LCS Matrix: Soil

Service Request: B9600248
Date Collected: NA
Date Received: NA
Date Extracted: 4/8/96
Date Analyzed: 4/20/96

Laboratory Control Sample
Polychlorinated Biphenyls (PCBs)
EPA Method 3540/8080
Units: mg/Kg (ppm)

	True Value	Result	Percent Recovery	CAS Acceptance
Analyte	LCS	LCS	LCS	Limits
Aroclor 1260	0.50	0.49	98	62-154

Approved By: _____ Date: 7/22/96

DLCS7121594
002458PHC.CEI - DLCS 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600248
Date Collected: NA
Date Received: NA
Date Extracted: 4/2/96
Date Analyzed: 4/3/96

Duplicate Summary
Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: Batch QC
Lab Code: B9600243-1

Analyte	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	CAS RPD Acceptance Limit
Diesel	25	2790	2270	2530	21	40
Oil	100	ND	ND	ND		40

Approved By: Lon. Elliott Date: 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600248
Date Collected: NA
Date Received: NA
Date Extracted: 4/2/96
Date Analyzed: 4/3/96

Matrix Spike Summary
Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: Batch QC
Lab Code: B9600244-1MS

Analyte	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Diesel	25	332	ND	363	109	63-125

Approved By: Lee Elliott Date: 7/22/96

MS1SMRL/120194
0024SPHC.DJ1 - TPHsMS 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600248
Date Collected: NA
Date Received: NA
Date Extracted: 4/2/96
Date Analyzed: 4/2/96

Duplicate Summary
BTEX and Total Petroleum Hydrocarbons as Gasoline
EPA Methods 5030A/8020 and Washington DOE Method WTPH-G
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: Batch QC
Lab Code: B9600237-1

Analyte	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	CAS RPD Acceptance Limit
Benzene	0.05	ND	ND	-	-	40
Toluene	0.1	ND	ND	-	-	40
Ethylbenzene	0.1	3.7	3.7	3.7	< 1	40
Xylenes, Total	0.1	11.5	10.0	10.8	14	40
Gasoline	5	1130	1090	1110	4	40

Approved By: Lee. Elliott Date: 7/22/96

DUP1SRPD/102194
00248VOA.DC1 - DUP 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600248
Date Collected: NA
Date Received: NA
Date Extracted: 4/2/96
Date Analyzed: 4/2/96

Matrix Spike Summary
BTEX and Total Petroleum Hydrocarbons as Gasoline
EPA Methods 5030A/8020 and Washington DOE Method WTPH-G
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: Batch QC
Lab Code: B9600249-1

Analyte	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Benzene	0.05	0.80	ND	0.56	70	58-111
Toluene	0.1	0.8	ND	0.7	90	58-116
Ethylbenzene	0.1	0.8	0.1	1.0	110	57-120
Gasoline	5	NS	-	-	-	NA

Approved By: Cic. Elliott Date: 7/22/96

MS1S/102194
00248VOA.DC1 - MS 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage/40358-017.001
Sample Matrix: Soil

Service Request: K9601925
Date Collected: 4/2/96
Date Received: 4/5/96
Date Extracted: 4/10/96
Date Analyzed: 4/10/96

Duplicate Summary
Total Metals
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: MAS-CCS
Lab Code: K9601925-001

Analyte	EPA Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference
Cadmium	6010A	1	17	9	13	62 (A)
Chromium	6010A	2	44	65	54	39 (A)
Lead	6010A	20	554	638	600	14

A Outside acceptance limits due to inhomogeneous nature of the sample.

Approved By: _____ Date: 7/22/96

DUP1SEPA/102194

01925ICP.EA1 - DUP 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage/40358-017.001
Sample Matrix: Soil

Service Request: K9601925
Date Collected: 4/2/96
Date Received: 4/5/96
Date Extracted: 4/10/96
Date Analyzed: 4/10/96

Matrix Spike Summary
Total Metals
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: MAS-CCS
Lab Code: K9601925-001

Analyte	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Cadmium	1	12	17	20	25 (A)	75-125
Chromium	2	49	44	110	135 (A)	75-125
Lead	20	120	554	3480	NA	75-125

A Outside acceptance limits due to inhomogeneous nature of the sample.
NA Not Applicable; see case narrative.

Approved By: A. Elliott Date: 7/22/96

Analytical Services Inc. 1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068 DATE 4/2/96 PAGE 1 OF 1

PROJECT NAME Monroe Auto Salvage # 40358-017.001
PROJECT MANAGER John Virgin
COMPANY/ADDRESS EMCON
18912 North Creek Pkwy Suite 100
Bothell, WA 98011 PHONE (206) 485-5000
SAMPLERS SIGNATURE [signature]

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	Base/Neu/Acid Organics GC/MS 625/8270	Volatile Organics GC/MS 624/8240	Halogenated or Aromatic Volatiles 601/8010 ☐ 602/8020 ☐	Pesticides/PCBs 608/8080	Total Petroleum Hydrocarbons EPA/418.1 ☐ OR/418.1 ☐ WA/418.1 ☐	TPH/Gas/BTEX 5030/8015/8020 Gas ☑ BTEX ☑	TPH/8015 Modified Diesel ☐ Hydrocarbon Scan ☐	TPH/HCID ☐ OR/HCID ☐ WA/HCID ☐	TCLP Metals ☐ VOA ☐ Semi VOA ☐ Pest/Herb ☐	Metals (total or dissolved) List Below	Cyanide	pH, Cond, Cl, SO_4, PO_4, F, Br NO_2, NO_3, (circle)	NH_3-N, COD, Total-P, TKN, TOC (circle)	Total Organic Halides (TOX) 9020 ☐ (AOX) 1650A ☐	TPH-D Extended	Cd, Cr, Pb	REMARKS
MAS-01	4/2/96	0945	B96-248-1	Soil	1				X													
MAS-02		0950	-2		1				X													
MAS-03		0955	-3		1				X													
MAS-04		1000	-4		1				X													
MAS-SA,S		1005	-5		2				X													
MAS-CCS		1035	-6		3				X	X										X	X	
MAS-05		1130	-7		1				X													
MAS-06		1145	-8		1				X													

RELINQUISHED BY:
Signature [signature]
Printed Name NICK GARSON
Firm EMCON
Date/Time 4/2/96 1235

RECEIVED BY:
Signature [signature]
Printed Name [signature]
Firm [signature]
Date/Time 4-2-96 12:35

TURNAROUND REQUIREMENTS
___ 24 hr ___ 48 hr. ___ 5 day
✓ Standard (10-15 working days)
✓ Provide Verbal Preliminary Results
✓ Provide FAX preliminary Results
Requested Report Date ___

REPORT REQUIREMENTS
___ I. Routine Report
___ II. Report (includes DUP.MS. MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ IV. CLP Deliverable Report

INVOICE INFORMATION:
P.O.# ___
Bill To ___

SAMPLE RECEIPT:
Shipping VIA: ___
Shipping #: ___
Condition: ___
Lab No: B960024B

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

DISTRIBUTION: WHITE • return to originator; YELLOW • lab; PINK • retained by originator

400-05

Columbia Analytical Services inc.

May 7, 1996

Service Request No.: B9600292

John Virgin
EMCON Northwest
18912 N Creek Parkway
Suite 210
Bothell, WA 98011

Re: **Monroe Auto Salvage/Project #40358-017.001**

Dear John:

Attached are the results of the sample(s) submitted to our laboratory on April 12, 1996. Preliminary results were transmitted via facsimile on April 26, 29 and 30, 1996. For your reference, these analyses have been assigned our service request number B9600292.

All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and CAS is not responsible for use of less than the complete report. Results only apply to samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

C. Elliott

Colin B. Elliott
Laboratory Manager

CBE/bdr

18912 North Creek Parkway, Suite 118 • Bothell, WA 98011 • 206/486-6983 • Fax 206/486-7695

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage/#40358-017.001
Sample Matrix: Soil

Service Request: K9602145
Date Collected: 4/12/96
Date Received: 4/16/96
Date Extracted: NA
Date Analyzed: 4/16/96

Solids, Total
EPA Method 160.3 Modified
Units: Percent (%)

Sample Name	Lab Code	Result
MAS-07-GRID	K9602145-001	76.7
MAS-08-GRID	K9602145-002	84.3
MAS-20-GRID	K9602145-003	87.6
MAS-09-GRID	K9602145-004	92.5
MAS-17-GRID	K9602145-005	85.4
MAS-21-GRID	K9602145-006	86.9
MAS-15-GRID	K9602145-007	83.2
MAS-13-GRID	K9602145-008	85.0
MAS-14-GRID	K9602145-009	91.3
MAS-19-GRID	K9602145-010	83.8
MAS-01-GRID	K9602145-011	82.7
MAS-04-GRID	K9602145-012	49.8
MAS-05-GRID	K9602145-013	81.8
MAS-BS	K9602145-014	91.5
MAS-07	K9602145-015	72.5

Approved By: Richard A Adams Date: 5/8/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	B9600292
Project:	Monroe Auto Salvage	**Date Collected:**	4/12/96
Sample Matrix:	Soil	**Date Received:**	4/12/96
		Date Extracted:	4/25/96
		Date Analyzed:	4/25,26/96

Total Petroleum Hydrocarbons as Gasoline
Washington DOE Method WTPH-G
Units: mg/Kg (ppm)
Dry Weight Basis

Analyte:	**TPH as Gasoline**
Method Reporting Limit:	5

Sample Name	**Lab Code**	
MAS-07-Grid	B9600292-01 (a)	9
MAS-08-Grid	B9600292-02	ND
MAS-20-Grid	B9600292-03 (a)	ND
MAS-09-Grid	B9600292-04	ND
MAS-17-Grid	B9600292-05 (a)	ND
MAS-21-Grid	B9600292-06	ND
MAS-15-Grid	B9600292-07 (a)	ND
MAS-13-Grid	B9600292-08	385 (b,c)
MAS-14-Grid	B9600292-09	29 (c)
MAS-19-Grid	B9600292-10	ND
MAS-01-Grid	B9600292-11	ND
MAS-04-Grid	B9600292-12 (b)	ND
MAS-05-Grid	B9600292-13	ND
MAS-BS	B9600292-14 (b)	ND
MAS-07	B9600292-15	ND
Method Blank	B9600292-SB	ND

a Result is from an analysis performed on 4/30/96, which is four days past the holding time. The original analysis was performed within the holding time, but had low surrogate recovery.

b Result is from an analysis performed on 5/1/96, which is five days past the holding time. The original analysis was performed within the holding time, but had low surrogate recovery.

c Highly weathered gasoline.

Approved By: _____ Date: 5/16/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600292
Date Collected: 4/12/96
Date Received: 4/12/96
Date Extracted: 4/19/96
Date Analyzed: 4/20,21/1996

Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D
Units: mg/Kg (ppm)
Dry Weight Basis

Analyte:		Diesel	Oil*
Method Reporting Limit:		25	100
Sample Name	**Lab Code**		
MAS-07-Grid	B9600292-01(a)	2500(b)	7000
MAS-08-Grid	B9600292-02	36(b)	130
MAS-20-Grid	B9600292-03	42(b)	160
MAS-09-Grid	B9600292-04	55(b)	190
MAS-17-Grid	B9600292-05	27(b)	ND
MAS-21-Grid	B9600292-06	ND	ND
MAS-15-Grid	B9600292-07(a)	2800(b)	12000
MAS-13-Grid	B9600292-08	654(b)	2240
MAS-14-Grid	B9600292-09(a)	7600(b)	22000
MAS-19-Grid	B9600292-10(a)	4700(b)	14000
MAS-01-Grid	B9600292-11(c)	39(b)	129
MAS-04-Grid	B9600292-12	1670(b)	9100
MAS-05-Grid	B9600292-13(a)	790(b)	4400
MAS-BS	B9600292-14(c)	37(b)	190
MAS-07	B9600292-15(c)	53(b)	171
Method Blank	B9600292-SB	ND	ND

* Quantified using 30-weight motor oil as a standard.
(a) Result is from the analysis of a diluted sample, performed on 4/20,21/96. Dilution factor:10
(b) This result is primarily due to the beginning of oil, which elutes in the diesel region.
(c) Result is from an analysis performed on 4/24/96.

Approved By: _____ Date: 5/16/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600292
Date Collected: 4/12/96
Date Received: 4/12/96
Date Extracted: 4/19/96
Date Analyzed: 4/24,25/95

Polychlorinated Biphenyls (PCBs)
EPA Method 3540/8080
Units: mg/Kg (ppm)
Dry Weight Basis

Analyte:	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
Method Reporting Limit:	1	1	1	1	1	1	1
Sample Name	**Lab Code**						
MAS-07-Grid	B9600292-01	ND	ND	ND	ND	ND	1	ND
MAS-08-Grid	B9600292-02	ND	ND	ND	ND	ND	ND	ND
MAS-20-Grid	B9600292-03	ND	ND	ND	ND	ND	ND	ND
MAS-09-Grid	B9600292-04	ND	ND	ND	ND	ND	ND	ND
MAS-17-Grid	B9600292-05	ND	ND	ND	ND	ND	ND	ND
MAS-21-Grid	B9600292-06	ND	ND	ND	ND	ND	ND	ND
MAS-15-Grid	B9600292-07	ND	ND	ND	ND	ND	ND	ND
MAS-13-Grid	B9600292-08 (a)	ND	ND	ND	ND	ND	ND	ND
MAS-14-Grid	B9600292-09	ND	ND	ND	ND	ND	ND	ND
MAS-19-Grid	B9600292-10	ND	ND	ND	ND	ND	ND	ND
MAS-01-Grid	B9600292-11	ND	ND	ND	ND	ND	ND	ND
MAS-04-Grid	B9600292-12	ND	ND	ND	ND	ND	ND	ND
MAS-05-Grid	B9600292-13	ND	ND	ND	ND	ND	5	ND
MAS-BS	B9600292-14	ND	ND	ND	ND	ND	ND	ND
MAS-07	B9600292-15	ND	ND	ND	ND	ND	ND	ND
Method Blank	B9600292-SB	ND	ND	ND	ND	ND	ND	ND

ND None Detected

a Result is from a sample extracted on 4/26/96 and analyzed on 4/30/96.

Approved By: _____ Date: 5/16/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage/#40358-017.001
Sample Matrix: Soil

Service Request: K9602145
Date Collected: 4/12/96
Date Received: 4/16/96
Date Extracted: 4/20/96

Total Metals
Units: mg/Kg (ppm)
Dry Weight Basis

	Analyte:	**Cadmium**	**Chromium**	**Lead**
	EPA Method:	6010A	6010A	6010A
	Method Reporting Limit:	1	2	20
	Date Analyzed:	4/25/96	4/25/96	4/25/96
Sample Name	**Lab Code**			
MAS-07-GRID	K9602145-001	6	37	567
MAS-08-GRID	K9602145-002	ND	30	44
MAS-20-GRID	K9602145-003	ND	32	51
MAS-09-GRID	K9602145-004	ND	19	21
MAS-17-GRID	K9602145-005	ND	48	ND
MAS-21-GRID	K9602145-006	ND	45	ND
MAS-15-GRID	K9602145-007	12	52	964
MAS-13-GRID	K9602145-008	4	35	232
MAS-14-GRID	K9602145-009	6	46	566
MAS-19-GRID	K9602145-010	10	52	867
MAS-01-GRID	K9602145-011	ND	33	31
MAS-04-GRID	K9602145-012	ND	16	24
MAS-05-GRID	K9602145-013	ND	28	49
MAS-BS	K9602145-014	ND	29	41
MAS-07	K9602145-015	ND	46	ND
Method Blank	K9602145-MB	ND	ND	ND

Approved By: Richard a Craven Date: 5/8/96

3AEPA/102694

K9602145.XLS - Sample rev 5-8-96 5/8/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage/#40358-017.001
Sample Matrix: Soil

Service Request: K9602505
Date Collected: 4/12/96
Date Received: 4/16/96
Date TCLP Performed: 5/1/96
Date Extracted: 5/2/96

Toxicity Characteristic Leaching Procedure (TCLP)
EPA Method 1311
Metals
Units: mg/L (ppm) in TCLP Extract

			Sample Name:	MAS-07-GRID	MAS-15-GRID	MAS-13-GRID
			Lab Code:	K9602145-001	K9602145-007	K9602145-008
			Date Analyzed:	5/8/96	5/8/96	5/8/96
Analyte	**EPA Method**	**MRL**	**Regulatory Limit***			
Lead	3010A/6010A	0.05	5	0.27	1.01	0.27

* From 40 CFR Part 261, et al., and *Federal Register*, March 29, 1990 and June 29, 1990.

Approved By: _____ Date: 5-14-96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage/#40358-017.001
Sample Matrix: Soil

Service Request: K9602505
Date Collected: 4/12/96
Date Received: 4/16/96
Date TCLP Performed: 5/1/96
Date Extracted: 5/2/96

Toxicity Characteristic Leaching Procedure (TCLP)
EPA Method 1311
Metals
Units: mg/L (ppm) in TCLP Extract

			Sample Name:	**MAS-14-GRID**	**MAS-19-GRID**	**Method Blank**
			Lab Code:	K9602145-009	K9602145-010	K9602505-MB
			Date Analyzed:	5/8/96	5/8/96	5/8/96
Analyte	**EPA Method**	**MRL**	**Regulatory Limit***			
Lead	3010A/6010A	0.05	5	0.84	2.95	ND

* From 40 CFR Part 261, et al., and *Federal Register*, March 29, 1990 and June 29, 1990.

Approved By: JC Date: 5-14-96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600292
Date Collected: 4/12/96
Date Received: 4/12/96
Date Extracted: 4/25/96
Date Analyzed: 4/25,26/96

Surrogate Recovery Summary
Total Petroleum Hydrocarbons as Gasoline
Washington DOE Method WTPH-G

Sample Name	Lab Code	Percent Recovery 4-BFB (FID - GAS)
MAS-07-Grid	B9600292-01 (a)	82
MAS-08-Grid	B9600292-02	72
MAS-20-Grid	B9600292-03 (a)	70
MAS-09-Grid	B9600292-04	84
MAS-17-Grid	B9600292-05 (a)	77
MAS-21-Grid	B9600292-06	69
MAS-15-Grid	B9600292-07 (a)	83
MAS-13-Grid	B9600292-08	80 (b)
MAS-14-Grid	B9600292-09	82
MAS-19-Grid	B9600292-10	69
MAS-01-Grid	B9600292-11	80
MAS-04-Grid	B9600292-12 (b)	74
MAS-05-Grid	B9600292-13	75
MAS-BS	B9600292-14 (b)	92
MAS-07	B9600292-15	74
Method Blank	B9600292-SB	69

CAS Acceptance Limits: 69-112 69-111

a Result is from an analysis performed on 4/30/96.
b Result is from an analysis performed on 5/1/96.

Approved By: C. Elliott Date: 5/16/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600292
Date Collected: 4/12/96
Date Received: 4/12/96
Date Extracted: 4/19/96
Date Analyzed: 4/20,21/1996

Surrogate Recovery Summary
Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D

Sample Name	Lab Code	Percent Recovery p-Terphenyl
MAS-07-Grid	B9600292-01	96
MAS-08-Grid	B9600292-02	108
MAS-20-Grid	B9600292-03	116
MAS-09-Grid	B9600292-04	112
MAS-17-Grid	B9600292-05	104
MAS-21-Grid	B9600292-06	101
MAS-15-Grid	B9600292-07	100
MAS-13-Grid	B9600292-08	131(a)
MAS-14-Grid	B9600292-09	82
MAS-19-Grid	B9600292-10	78
MAS-01-Grid	B9600292-11	103
MAS-04-Grid	B9600292-12	134(a)
MAS-05-Grid	B9600292-13	129(a)
MAS-BS	B9600292-14	108
MAS-07	B9600292-15	108
Method Blank	B9600292-SB	101

CAS Acceptance Limits: 74-117

(a) Outside of acceptance limits because of matrix interferences. The chromatogram showed nontarget components that interfered with the analysis.

Approved By: C. Elliott Date: 5/16/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600292
Date Collected: 4/12/96
Date Received: 4/12/96
Date Extracted: 4/19/96
Date Analyzed: 4/24,25/95

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)
EPA Method 3540/8080

Sample Name	Lab Code	Percent Recovery Decachlorobiphenyl
MAS-07-Grid	B9600292-01	108
MAS-08-Grid	B9600292-02	97
MAS-20-Grid	B9600292-03	92
MAS-09-Grid	B9600292-04	71
MAS-17-Grid	B9600292-05	93
MAS-21-Grid	B9600292-06	99
MAS-15-Grid	B9600292-07	90
MAS-13-Grid	B9600292-08 (a)	82
MAS-14-Grid	B9600292-09	101
MAS-19-Grid	B9600292-10	84
MAS-01-Grid	B9600292-11	88
MAS-04-Grid	B9600292-12	72
MAS-05-Grid	B9600292-13	83
MAS-BS	B9600292-14	85
MAS-07	B9600292-15	88
Method Blank	B9600292-SB	106

CAS Acceptance Limits: 67-138

a Result is from a sample extracted on 4/26/96 and analyzed on 4/30/96.

Approved By: _____ Date: 5/16/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	EMCON	**Service Request:**	K9602505
Project:	Monroe Auto Salvage/#40358-017.001	**Date Collected:**	4/12/96
Sample Matrix:	Soil	**Date Received:**	4/16/96
		Date TCLP Performed:	5/1/96
		Date Extracted:	5/2/96
		Date Analyzed:	5/8/96

Matrix Spike Summary
Toxicity Characteristic Leaching Procedure (TCLP)
EPA Method 1311
Metals
Units: mg/L (ppm) in TCLP Extract

Sample Name: MAS-07-GRID
Lab Code: K9602145-001

Analyte	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery*
Lead	5	0.27	4.79	90

* Percent recovery information is provided in order to assess the performance of the method on this matrix.

Approved By: _____ Date: 5-14-96

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

Columbia Analytical Services, Inc. 18912 North Creek Pkwy, Suite 118 • Bothell, WA 98011 • (206) 486-6983 • FAX (206) 486-7695

DATE 4/12/96 PAGE 1 OF 2

PROJECT NAME Monroe Auto # 40358-017.001

PROJECT ATTN: John Virgin SALVAGE

COMPANY/ADDRESS EMCON

18912 North Creek PKWY Suite 100

Bothell, WA PHONE 485-5000

SAMPLERS SIGNATURE [signature]

ANALYSIS REQUEST

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	PETROLEUM HCS: TPH - HCID State:	TPH - G State: WA BTEX	TPH - D State: WA EXT OIL	TPH - 418.1 State: WA	TPH - Other	ORGANIC: Halogenated or Aromatic Volatiles 601/8010 602/8020	Volatile Organics GC/MS 624-8240	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides/PCBS 8080 (PCB ONLY)	PAH 8310 HPCL	TCLP Metals Semi VOA VOA	Metals Total List Below Pest/Herb DISS	Cyanide	ORGANIC METALS/INORGANICS: pH, Cond Cl, SO_4, PO_4 F, Br NO_2 NO_3 (Circle)	NH_3 - N, COD, Total-P TKN, TOC, TOX (Circle)	Chromium Cadmium Lead		REMARKS
MAS-07-Grid	4/12/96	0920	292-1	Soil	2		X	X						X							X		
MAS-08-Grid		0930	2		2		X	X						X							X		
MAS-20-Grid		1500	3		2		X	X						X							X		
MAS-09-Grid		0940	4		2		X	X						X							X		
MAS-17-Grid		0950	5		2		X	X						X							X		
MAS-21-Grid		1600	6		2		X	X						X							X		
MAS-15-Grid		0955	7		2		X	X						X							X		
MAS-13-Grid		1000	8		2		X	X						X							X		
MAS-14-Grid		1005	9		2		X	X						X							X		
MAS-19-Grid		1010	10		2		X	X						X							X		

RELINQUISHED BY:

Signature [signature]

Printed Name NICK GARSON

Firm EMCON

Date/Time 4/12/96 1500

RECEIVED BY:

Signature [signature]

Printed Name DJ MOSIER

Firm CAS

Date/Time 041296 1500

TURNAROUND REQUIREMENTS

___ 24 hr ___ 48 hr. ___ 5 day

~~Standard~~ (10-15 working days)

~~Provide Verbal Preliminary Results~~

~~Provide FAX preliminary Results~~

Requested Report Date _____

REPORT REQUIREMENTS

I. Routine Report

___ II. Report (includes DUP.MAS. MSD, as required, may be charged as samples)

___ III. Data Validation Report (includes All Raw Data)

___ IV. CLP Deliverable Report

INVOICE INFORMATION:

P.O.# _____

Bill To _____

SAMPLE RECEIPT:

Shipping VIA: _____

Shipping to: _____

Condition: _____

Lab No: BG600292

RELINQUISHED BY:

Signature

Printed Name

Firm

Date/Time

RECEIVED BY:

Signature

Printed Name

Firm

Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

13

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

mb Analytical Services inc. 18912 North Creek Pkwy, Suite 118 • Bothell, WA 98011 • (206) 486-6983 • FAX (206) 486-7695

DATE 4/12/96 PAGE 2 OF 2

PROJECT NAME Monroe Auto Salvage #40358-017.001
PROJECT ATTN: John Virgin
COMPANY/ADDRESS EMCON
18912 N. Creek Pkwy Suite 100
Bothell, WA PHONE 485-5000
SAMPLERS SIGNATURE [signature]

ANALYSIS REQUEST

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	PETROLEUM HCS: TPH - HCID State:	TPH - G State:	BTEX	TPH - Diesel Oil	TPH - 418.1 State:	TPH - Other	ORGANIC: Halogenated or Aromatic Volatiles 601/8010 602/8020	Volatile Organics GC/MS 624-8240	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides/PCBs 8080 PCB ONLY	PAH 8310	8100 GC	HPCL	TCLP Metals	Semi VOA	VOA	Pest/Herb	Metals Total	DISS	List Below	Cyanide	ORGANIC METALS/INORGANICS: pH, Cond Cl, SO_4, PO_4 F, Br NO_2 NO_3 (Circle)	NH_3-N, COD, Total-P TKN, TOC (Circle)	Cadmium Chromium Lead			REMARKS
MAS-01-Grid	4/12/96	1020	292-11	Soil	2		X	X						X														X			
MAS-04-Grid	"	1030	12	"	2		X	X						X														X			
MAS-05-Grid	"	1040	13	"	2		X	X						X														X			
MAS-B5'	"	1055	14	"	2		X	X						X														X			
MAS-07	"	1110	15	"	2		X	X						X														X			

RELINQUISHED BY:
Signature [signature]
Printed Name Nick Carson
Firm EMCON
Date/Time 4/12/96 1500

RECEIVED BY:
Signature DJ Mosier
Printed Name DJ Mosier
Firm CAS
Date/Time 041296 1500

TURNAROUND REQUIREMENTS
___ 24 hr ___ 48 hr. ___ 5 day
X Standard (10-15 working days)
___ Provide Verbal Preliminary Results
___ Provide FAX preliminary Results
Requested Report Date ___

REPORT REQUIREMENTS
X I. Routine Report
___ II. Report (includes DUP.MAS. MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ IV. CLP Deliverable Report

INVOICE INFORMATION:
P.O.# ___
Bill To ___

SAMPLE RECEIPT:
Shipping VIA: ___
Shipping to: ___
Condition: ___
Lab No: B9600292

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

Columbia Analytical Services, Inc.

July 22, 1996

Service Request No.: B9600292

John Virgin
EMCON Northwest
18912 N Creek Parkway
Suite 210
Bothell, WA 98011

Re: **Monroe Auto Salvage/Project #40358-017.001**

Dear John:

Attached are the QC results for samples submitted to our laboratory on April 12, and reported on May 7, 1996. Preliminary results were transmitted via facsimile on April 26, 29 and 30, 1996. For your reference, this is regarding our service request number B9600292.

All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and CAS is not responsible for use of less than the complete report. Results only apply to samples analyzed.

Please call if we can be of further assistance.

Respectfully submitted,

Columbia Analytical Services, Inc.

C. Elliott

Colin B. Elliott
Laboratory Manager

CBE/bdr

18912 North Creek Parkway, Suite 118 • Bothell, WA 98011 • 206/486-6983 • Fax 206/486-7695

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	EMCON	**Service Request:**	B9600292
Project:	Monroe Auto Salvage	**Date Collected:**	4/12/96
LCS Matrix:	Soil	**Date Received:**	4/12/96
		Date Extracted:	4/19/96
		Date Analyzed:	4/24,25/95

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)
EPA Method 3540/8080
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: MAS-20-Grid
Lab Code: B9600292-03

	Spike Level		Sample	Spike Result		Percent Recovery		CAS Acceptance	Relative Percent
Analyte	**MS**	**DMS**	**Result**	**MS**	**DMS**	**MS**	**DMS**	Criteria	Difference
Aroclor 1260	0.58	0.57	ND	0.6	0.46	103	81	62-154	25

Approved By: Lin - Elliott Date: 7/22/96

DLCS/121594

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	EMCON	**Service Request:**	B9600292
Project:	Monroe Auto Salvage	**Date Collected:**	4/12/96
Sample Matrix:	Soil	**Date Received:**	4/12/96
		Date Extracted:	4/25/96
		Date Analyzed:	4/25,26/96

Duplicate Summary
Total Petroleum Hydrocarbons as Gasoline
Washington DOE Method WTPH-G
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: MAS-BS
Lab Code: B9600292-14

Analyte	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	CAS RPD Acceptance Limit
Gasoline	5	ND	ND	-	-	40

Approved By: A. Elliott Date: 7/22/96

DUP1SRPD/102194
00292VOA.DC1 - DUP 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600292
Date Collected: 4/12/96
Date Received: 4/12/96
Date Extracted: 4/25/96
Date Analyzed: 4/25,26/96

Matrix Spike Summary
BTEX and Total Petroleum Hydrocarbons as Gasoline
EPA Methods 5030A/8020 and Washington DOE Method WTPH-G
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: MAS-01-Grid
Lab Code: B9600292-11

Analyte	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Benzene	0.05	1.00	ND	0.76	76	58-111
Toluene	0.1	1.00	ND	0.8	84	58-116
Ethylbenzene	0.1	1.00	ND	0.9	85	57-120
Gasoline	5	NS	-	-	-	NA

Approved By: Lori Elliott Date: 7/22/96

MS1S/102194
00292VOA.DC1 - MS 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600292
Date Collected: 4/12/96
Date Received: 4/12/96
Date Extracted: 4/19/96
Date Analyzed: 4/20,21/1996

Duplicate Summary
Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: MAS-13-Grid
Lab Code: B9600292-08

Analyte	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	CAS RPD Acceptance Limit
Diesel	25	654	656	655	0.31	40
Oil	100	2240	2130	2185	5	40

Approved By: C. Elliott Date: 7/22/96

DUP1SRPD/102194
00292PHC.DJ1 - TPHsDUP 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600292
Date Collected: 4/12/96
Date Received: 4/12/96
Date Extracted: 4/19/96
Date Analyzed: 4/20,21/1996

Matrix Spike Summary
Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: MAS-01-Grid
Lab Code: B9600292-11

Analyte	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Diesel	25	337	39	322	84	63-125

Approved By: C. Elliott Date: 7/22/96

MS1SMRL/120194
00292PHC.DJ1 - TPHsMS 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage/40358-017.001
Sample Matrix: Soil

Service Request: K9602145
Date Collected: 4/12/96
Date Received: 4/16/96
Date Extracted: 4/20/96
Date Analyzed: 4/25/96

Duplicate Summary
Total Metals
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: MAS-07
Lab Code: K9602145-015

Analyte	EPA Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference
Cadmium	6010A	1	ND	ND	ND	-
Chromium	6010A	20	46	45	46	2
Lead	6010A	20	ND	ND	ND	-

Approved By: A. Elliott Date: 7/22/96

DUP1SEPA/102194

02145ICP.EA1 - DUP 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage/40358-017.001
Sample Matrix: Soil

Service Request: K9602145
Date Collected: 4/12/96
Date Received: 4/16/96
Date Extracted: 4/20/96
Date Analyzed: 4/25/96

Matrix Spike Summary
Total Metals
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: MAS-07
Lab Code: K9602145-015

Analyte	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Cadmium	1	14	ND	14	100	75-125
Chromium	2	55	46	97	93	75-125
Lead	20	140	ND	143	102	75-125

Approved By: R. Elliott Date: 7/22/96

MS1S/102194
02145ICP.EA1 - Spike 7/22/96

Services Inc. 18912 North Creek Pkwy, Suite 118 • Bothell, WA 98011 • (206) 486-6983 • FAX (206) 486-7695

DATE 4/12/96 PAGE 1 OF

PROJECT NAME Monroe Auto # 40358-017.001

PROJECT ATTN: John Virgin SALVAGE

COMPANY/ADDRESS EMCON

18912 North Creek Pkwy Suite 100

Bothell, WA PHONE 485-5000

SAMPLERS SIGNATURE [signature]

ANALYSIS REQUEST

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	PETROLEUM HCS: TPH - HCID State:	TPH - G State: WA BTEX	TPH - D EXT State: WA OIL	TPH - 418.1 State:	TPH - Other	Halogenated or Aromatic Volatiles 601/8010 602/8020	Volatile Organics GC/MS 624-8240	Base/Neu/Acid Organics GC/MS 625/8270	ORGANIC: Pesticides/PCBS 8080 (PCB ONLY)	PAH 8310 HPCL	PAH 8100 GC	TCLP Metals Semi VOA VOA	Metals Total List Below DISS	Pest/Herb	Cyanide	ORGANIC METALS/INORGA: pH, Cond Cl, SO_4, PO_4 F, Br NO_2 NO_3 (Circle)	NH_3 - N, COD, Total-P TKN, TOC, TOX (Circle)	Cadmium Chromium Lead	REMARK
MAS-07-Grid	4/12/96	0920	292-1	Soil	2		X	X					X									X		
MAS-08-Grid		0930	2		2		X	X					X									X		
MAS-20-Grid		1500	3		2		X	X					X									X		
MAS-09-Grid		0940	4		2		X	X					X									X		
MAS-17-Grid		0950	5		2		X	X					X									X		
MAS-21-Grid		1600	6		2		X	X					X									X		
MAS-15-Grid		0955	7		2		X	X					X									X		
MAS-13-Grid		1000	8		2		X	X					X									X		
MAS-14-Grid		1005	9		2		X	X					X									X		
MAS-19-Grid	↓	1010	10	↓	2		X	X					X									X		

RELINQUISHED BY:

Signature [signature]

Printed Name NICK GARSON

Firm EMCON

Date/Time 4/12/96 1500

RECEIVED BY:

Signature [signature]

Printed Name DJ MOSIER

Firm CAS

Date/Time 041296 1500

TURNAROUND REQUIREMENTS

___ 24 hr ___ 48 hr. ___ 5 day

✓ Standard (10-15 working days)

✓ Provide Verbal Preliminary Results

___ Provide FAX preliminary Results

Requested Report Date ___

REPORT REQUIREMENTS

✓ I. Routine Report

___ II. Report (includes DUP.MAS. MSD, as required, may be charged as samples)

___ III. Data Validation Report (includes All Raw Data)

___ IV. CLP Deliverable Report

INVOICE INFORMATION:

P.O.# ___

Bill To ___

SAMPLE RECEIPT:

Shipping VIA: ___

Shipping to: ___

Condition: ___

Lab No: 960002 92

RELINQUISHED BY:

Signature ___

Printed Name ___

Firm ___

Date/Time ___

RECEIVED BY:

Signature ___

Printed Name ___

Firm ___

Date/Time ___

SPECIAL INSTRUCTIONS/COMMENTS:

9 + 3 Co.

Columbia Analytical Services, Inc.

18912 North Creek Pkwy, Suite 118 • Bothell, WA 98011 • (206) 486-6983 • FAX (206) 486-7695

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST

DATE 4/12/96 PAGE 2 OF

PROJECT NAME Norac Auto Salvage #40358-017.001

PROJECT ATTN: John Virgin

COMPANY/ADDRESS EMCON

18912 N. Creek Pkwy Suite 100

Bothell, WA PHONE 485-5000

SAMPLERS SIGNATURE

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	TPH - HCID State:	TPH - G State: WA BTEX	TPH - Dsl State: WA Oil	TPH - 418.1 State: WA	TPH - Other	Halogenated or Aromatic Volatiles 601/8010 602/8020	Volatile Organics GC/MS 624-8240	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides/PCBs 8080 PCB ONLY	PAH 8310 8100 GC HPCL	TCLP Metals Semi VOA VOA Pest/Herb	Metals Total DISS List Below	Cyanide	pH, Cond Cl, SO_4, PO_4 F, Br NO_2 NO_3 (Circle)	NH_3-N, COD, Total-P TKN, TOC, TOX (Circle)	Cadmium Chromium Lead	REMAR
MAS-01-6ft	4/12/96	1020	292-11	Soil	2		X	X						X							Y	
MAS-04-6ft		1030	12		2		X	X						X							X	
MAS-05-6ft		1040	13		2		X	X						X							X	
MAS-B5'		1055	14		2		X	X						X							X	
MAS-07		1110	15		2		X	X						X							X	

RELINQUISHED BY:

Signature

Printed Name NICK GARSON

Firm EMCON

Date/Time 4/12/96 1500

RECEIVED BY:

Signature DJ Mosier

Printed Name DJ MOSIER

Firm CAS

Date/Time 041296 1500

TURNAROUND REQUIREMENTS

___ 24 hr ___ 48 hr. ___ 5 day

~~Standard~~ (10-15 working days)

~~Provide Verbal Preliminary Results~~

___ Provide FAX preliminary Results

Requested Report Date ___

REPORT REQUIREMENTS

✓ I. Routine Report

___ II. Report (includes DUP.MAS. MSD, as required, may be charged as samples)

___ III. Data Validation Report (includes All Raw Data)

___ IV. CLP Deliverable Report

INVOICE INFORMATION:

P.O.# ___

Bill To ___

SAMPLE RECEIPT:

Shipping VIA: ___

Shipping to: ___

Condition: ___

Lab No: B960029

RELINQUISHED BY:

Signature

Printed Name

Firm

Date/Time

RECEIVED BY:

Signature

Printed Name

Firm

Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

10 to CAS

Columbia Analytical Services, Inc.

May 16, 1996 Service Request No.: B9600355

John Virgin
EMCON Northwest
18912 N Creek Parkway
Suite 210
Bothell, WA 98011

Re: **Monroe Auto Salvage/Project #40358-017.001**

Dear John:

Attached are the results of the sample(s) submitted to our laboratory on May 2, 1996. For your reference, these analyses have been assigned our service request number B9600355.

All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and CAS is not responsible for use of less than the complete report. Results only apply to samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

C. Elliott

Colin B. Elliott
Laboratory Manager

CBE/bdr

18912 North Creek Parkway, Suite 118 • Bothell, WA 98011 • 206/486-6983 • Fax 206/486-7695

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	B9600355
Project:	Monroe Auto Salvage	**Date Collected:**	5/1/96
Sample Matrix:	Soil	**Date Received:**	5/2/96
		Date Extracted:	5/7/96
		Date Analyzed:	5/7/96

Total Petroleum Hydrocarbons as Gasoline
Washington DOE Method WTPH-G
Units: mg/Kg (ppm)
Dry Weight Basis

Analyte:	TPH as Gasoline
Method Reporting Limit:	5

Sample Name	Lab Code	
MW-1-5	B9600355-01	ND
MW-1-15	B9600355-02	ND
MW-2-5	B9600355-03	23*
MW-2-20	B9600355-04	ND
MW-3-5	B9600355-05	ND
MW-3-20	B9600355-06	ND
MW-4-5	B9600355-07	ND
MW-4-20	B9600355-08	ND
Method Blank	B9600355-SB	ND

* Quantified as gas. The sample contained components that eluted in the gas range, but the chromatogram did not match the typical gas fingerprint.

Approved By: C. Elliott Date: 5/16/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	B9600355
Project:	Monroe Auto Salvage	**Date Collected:**	5/1/96
Sample Matrix:	Soil	**Date Received:**	5/2/96
		Date Extracted:	5/6/96
		Date Analyzed:	5/8/96

Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D
Units: mg/Kg (ppm)
Dry Weight Basis

Analyte:		**Diesel**	**Oil***
Method Reporting Limit:		25	100
Sample Name	**Lab Code**		
MW-1-5	B9600355-01	68	290
MW-1-15	B9600355-02	ND	ND
MW-2-5	B9600355-03	2060(a)	4120
MW-2-20	B9600355-04	ND	ND
MW-3-5	B9600355-05	ND	ND
MW-3-20	B9600355-06	ND	ND
MW-4-5	B9600355-07	ND	ND
MW-4-20	B9600355-08	ND	ND
Method Blank	B9600355-SB	ND	ND

* Quantified using 30-weight motor oil as a standard.

(a) This result is primarily due to the beginning of oil, which elutes in the diesel region.

Approved By: C. Elliott Date: 5/16/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage/#40358-017.001
Sample Matrix: Soil

Service Request: K9602594
Date Collected: 5/1/96
Date Received: 5/3/96
Date Extracted: 5/7/96

Total Metals
Units: mg/Kg (ppm)
Dry Weight Basis

	Analyte:	**Cadmium**	**Chromium**	**Lead**
	EPA Method:	6010A	6010A	6010A
	Method Reporting Limit:	1	2	20
	Date Analyzed:	5/8/96	5/8/96	5/8/96
Sample Name	**Lab Code**			
MW-1-5	K9602594-001	ND	38	37
MW-1-15	K9602594-002	ND	42	ND
MW-2-5	K9602594-003	1	37	64
MW-2-20	K9602594-004	ND	120	ND
MW-3-5	K9602594-005	ND	42	ND
MW-3-20	K9602594-006	ND	25	ND
MW-4-5	K9602594-007	ND	49	ND
MW-4-20	K9602594-008	ND	40	ND
Method Blank	K9602594-MB	ND	ND	ND

Approved By: JC Date: 5-14-96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600355
Date Collected: 5/1/96
Date Received: 5/2/96
Date Extracted: 5/7/96
Date Analyzed: 5/7/96

Surrogate Recovery Summary
Total Petroleum Hydrocarbons as Gasoline
Washington DOE Method WTPH-G

Sample Name	Lab Code	Percent Recovery 4-BFB (FID - GAS)
MW-1-5	B9600355-01	83
MW-1-15	B9600355-02	83
MW-2-5	B9600355-03	85
MW-2-20	B9600355-04	83
MW-3-5	B9600355-05	90
MW-3-20	B9600355-06	80
MW-4-5	B9600355-07	89
MW-4-20	B9600355-08	86
Method Blank	B9600355-SB	90

CAS Acceptance Limits: 69-111

Approved By: M. Elliott Date: 5/16/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600355
Date Collected: 5/1/96
Date Received: 5/2/96
Date Extracted: 5/6/96
Date Analyzed: 5/8/96

Surrogate Recovery Summary
Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D

Sample Name	Lab Code	Percent Recovery p-Terphenyl
MW-1-5	B9600355-01	115
MW-1-15	B9600355-02	114
MW-2-5	B9600355-03	109
MW-2-20	B9600355-04	103
MW-3-5	B9600355-05	114
MW-3-20	B9600355-06	98
MW-4-5	B9600355-07	107
MW-4-20	B9600355-08	110
Method Blank	B9600355-SB	100

CAS Acceptance Limits: 74-117

Approved By: M. Elliott Date: 5/16/96

EMCON

CHAIN OF CUSTODY / LABORATORY ANALYSIS REPORT

DATE 5/2/96 PAGE 1 OF 1

PROJECT NAME MONROE Auto #40358-017.001
PROJECT SALVAGE
COMPANY/ADDRESS ATTN: John Virgin/Nick GARSON
EMCON - Bothell PHONE (206) 485-5000
SAMPLERS SIGNATURE N. Murphy Garson

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	ANALYSIS REQUEST: PETROLEUM HCS — TPH - HCID State:	TPH - G ✓ BTEX State: WA	TPH - D State: OIL	TPH - 418.1 State:	TPH - Other	Halogenated or Aromatic Volatiles 601/8010 ___ 602/8020 ___	Volatile Organics GC/MS 624-8240	ORGANIC — Base/Neu/Acid Organics GC/MS 625/8270	Pesticides/PCBS 8080 PCB ONLY	PAH 8310 HPCL ___ 8100 GC ___	TCLP Metals ___ Semi VOA ___ VOA ___ Pest/Herb	Metals Total ___ DISS ___ List Below	Cyanide	ORGANIC METALS/INORGANICS — pH, Cond Cl, SO_4, PO_4 F, Br NO_2 NO_3 (Circle)	NH_3 - N, COD, Total-P TKN, TOC, TOX (Circle)	WTPH-D Extended	Cd, Cr, Lead	REMARKS
MW-1-5	5/1/96	0800	355-1	Soil	1		X															X	11	
MW-1-15	"	0815	2	"	1		X															X	X	
MW-2-5	"	0945	3	"	1		X															X	4	
MW-2-20	"	1025	4	"	1		X															X	7	
MW-3-5	"	1250	5	"	1		X															X	X	
MW-3-20	"		6	"	1		X															X	X	
MW-4-5	"	1415	7	"	1		X															X	X	
MW-4-20	"	1430	8	"	1		X															X	X	

RELINQUISHED BY:
Signature: N. Murphy Garson
Printed Name: NICK GARSON
Firm: EMCON
Date/Time: 5/2/96 1415

RECEIVED BY:
Signature: B. Regan
Printed Name: B. Regan
Firm: CAS Bothell
Date/Time: 05/02/96 1415

TURNAROUND REQUIREMENTS
___ 24 hr ___ 48 hr. ___ 5 day
✓ Standard (10-15 working days)
___ Provide Verbal Preliminary Results
✓ Provide FAX preliminary Results
Requested Report Date ___

REPORT REQUIREMENTS
✓ I. Routine Report
___ II. Report (includes DUP.MAS. MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ IV. CLP Deliverable Report

INVOICE INFORMATION:
P.O.# ___
Bill To ___

SAMPLE RECEIPT:
Shipping VIA: ___
Shipping to: ___
Condition: ___
Lab No: B9600355

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

Columbia Analytical Services inc.

July 22, 1996

Service Request No.: B9600355

John Virgin
EMCON Northwest
18912 N Creek Parkway
Suite 210
Bothell, WA 98011

Re: **Monroe Auto Salvage/Project #40358-017.001**

Dear John:

Attached are the QC results for samples submitted to our laboratory on May 2, and reported to you May 16, 1996. For your reference, this is regarding our service request number B9600355.

All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and CAS is not responsible for use of less than the complete report. Results only apply to samples analyzed.

Please call if we can be of further assistance.

Respectfully submitted,

Columbia Analytical Services, Inc.

Colin Elliott

Colin B. Elliott
Laboratory Manager

CBE/bdr

18912 North Creek Parkway, Suite 118 • Bothell, WA 98011 • 206/486-6983 • Fax 206/486-7695

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600355
Date Collected: NA
Date Received: NA
Date Extracted: 5/7/96
Date Analyzed: 5/7/96

Duplicate Summary
Total Petroleum Hydrocarbons as Gasoline
Washington DOE Method WTPH-G
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: Batch QC
Lab Code: B9600369-2

Analyte	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	CAS RPD Acceptance Limit
Benzene	0.05	ND	ND	-	-	40
Toluene	0.1	ND	ND	-	-	40
Ethylbenzene	0.1	ND	ND	-	-	40
Xylenes, Total	0.1	ND	ND	-	-	40
Gasoline	5	ND	ND	-	-	40

Approved By: Lon. Ellwood Date: 7/22/96

DUP1SRPD/102194
00355VOA.DC1 - DUP 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600355
Date Collected: 5/1/96
Date Received: 5/2/96
Date Extracted: 5/7/96
Date Analyzed: 5/7/96

Matrix Spike Summary
Total Petroleum Hydrocarbons as Gasoline
Washington DOE Method WTPH-G
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: MW-1-5
Lab Code: B9600355-01

Analyte	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Gasoline	5	40	ND	41	102	70-130

Approved By: _____ Date: 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600369
Date Collected: NA
Date Received: NA
Date Extracted: 5/6/96
Date Analyzed: 5/7,8/1996

Duplicate Summary
Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: Batch QC
Lab Code: B9600367-04

Analyte	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	CAS RPD Acceptance Limit
Diesel	25	ND	ND	-	-	40
Oil	100	ND	ND	-	-	40

Approved By: Ann Elliott Date: 7/22/96

DUP1SRPD/102194
0035SPHC.DJ1 - TPHsDUP 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Soil

Service Request: B9600369
Date Collected: NA
Date Received: NA
Date Extracted: 5/6/96
Date Analyzed: 5/7/96

Matrix Spike Summary
Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: Batch QC
Lab Code: B9600367-03

Analyte	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Diesel	25	311	ND	348	112	63-125

Approved By: Chris Elliott Date: 7/22/96

MS1SMRL/120194
00355PHC.DJI - TPHsMS 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage/40358-017.001
Sample Matrix: Soil

Service Request: K9602594
Date Collected: 5/1/96
Date Received: 5/3/96
Date Extracted: 5/7/96
Date Analyzed: 5/8/96

Duplicate Summary
Total Metals
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: MW-4-5
Lab Code: K9602594-007

Analyte	EPA Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference
Cadmium	6010A	1	ND	ND	ND	-
Chromium	6010A	2	49	41	45	18
Lead	6010A	20	ND	ND	ND	-

Approved By: A. Elliott Date: 7/22/96

DUP1SEPA/102194

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage/40358-017.001
Sample Matrix: Soil

Service Request: K9602594
Date Collected: 5/1/96
Date Received: 5/3/96
Date Extracted: 5/7/96
Date Analyzed: 5/8/96

Matrix Spike Summary
Total Metals
Units: mg/Kg (ppm)
Dry Weight Basis

Sample Name: MW-4-5
Lab Code: K9602594-007

Analyte	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Cadmium	1	12	ND	12	100	75-125
Chromium	2	48	49	95	96	75-125
Lead	20	112	ND	116	104	75-125

Approved By: *[signature]* Date: 7/22/96

MS1S/102194
02594ICP.EA1 - Spike 7/22/96

DATE 5/2/96 PAGE 1 OF 1

PROJECT NAME Monroe Auto #40358-017.001
PROJECT Salvage
COMPANY/ADDRESS ATTN: John Virgin/Nick Garson
EMCON - Bothell
PHONE (206) 485-5000
SAMPLERS SIGNATURE N. Garson

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	TPH - HCID State:	TPH - G / BTEX State: WA	TPH - D State:	TPH - 418.1 State:	TPH - Other	Halogenated or Aromatic Volatiles 601/8010 / 602/8020	Volatile Organics GC/MS 624-8240	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides/PCBS 8080 PCB ONLY	PAH 8100 GC 8310 HPCL	TCLP Metals / Semi VOA / VOA	Metals Total / DISS List Below	Pest/Herb	Cyanide	pH, Cond Cl, SO_4, PO_4 F, Br NO_2 NO_3 (Circle)	NH_3 - N, COD, Total-P TKN, TOC, TOX (Circle)	WTPH-D Extended	Cd, CR, LEAD	REMAR
MW-1-5	5/1/96	0800	355-1	Soil	1		X														X	11		
MW-1-15	"	0815	2	"	1		X														X	X		
MW-2-5	"	0945	3	"	1		X														X	"		
MW-2-20	"	1025	4	"	1		X														X	"		
MW-3-5	"	1250	5	"	1		X														X	X		
MW-3-20	"		6	"	1		X														X	"		
MW-4-5	"	1415	7	"	1		X														X	X		
MW-4-20	"	1430	8	"	1		X														X	X		

RELINQUISHED BY:
Signature: N. Garson
Printed Name: Nick Garson
Firm: EMCON
Date/Time: 5/2/96 1415

RECEIVED BY:
Signature: B. Regan
Printed Name: B. Regan
Firm: CAS Bothell
Date/Time: 05/02/96 1415

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
___ 24 hr ___ 48 hr. ___ 5 day
✓ Standard (10-15 working days)
✓ Provide Verbal Preliminary Results
✓ Provide FAX preliminary Results
Requested Report Date ___

REPORT REQUIREMENTS
✓ I. Routine Report
___ II. Report (includes DUP.MAS. MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ IV. CLP Deliverable Report

INVOICE INFORMATION:
P.O.# ___
Bill To ___

SAMPLE RECEIPT:
Shipping VIA: ___
Shipping to: ___
Condition: ___
Lab No: B9600355

SPECIAL INSTRUCTIONS/COMMENTS:

3 of 8 COC

ORIGINAL IS IN PROJECT FILING

Columbia Analytical Services inc.

RECEIVED
JUN 18 1996

June 6, 1996

Service Request No.: B9600424

John Virgin
EMCON Northwest
18912 N Creek Parkway
Suite 210
Bothell, WA 98011

Re: **Monroe Auto Salvage/Project #40358-017.001(2)**

Dear John:

Attached are the results of the sample(s) submitted to our laboratory on May 23, 1996. For your reference, these analyses have been assigned our service request number B9600424.

All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and CAS is not responsible for use of less than the complete report. Results only apply to samples analyzed.

Please call if you have any questions.

Respectfully submitted,

Columbia Analytical Services, Inc.

Colin B. Elliott
Laboratory Manager

CBE/bdr

18912 North Creek Parkway, Suite 118 • Bothell, WA 98011 • 206/486-6983 • Fax 206/486-7695

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	B9600424
Project:	Monroe Auto Salvage	**Date Collected:**	5/23/96
Sample Matrix:	Water	**Date Received:**	5/23/96
		Date Extracted:	NA
		Date Analyzed:	5/29/96

Total Petroleum Hydrocarbons as Gasoline
EPA Methods 5030A and Washington DOE Method WTPH-G
Units: µg/L (ppb)

	Analyte:	**TPH as Gasoline**
	Method Reporting Limit:	50
Sample Name	**Lab Code**	
MW-2-0596	B9600424-01	ND
MW-3-0596	B9600424-02	ND
MW-4-0596	B9600424-03	ND
HC-5-0596	B9600424-04	ND
MW-5-0596	B9600424-05	ND
Method Blank	B9600424-WB	ND

Approved By: Lee Elliott Date: 6/7/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	B9600424
Project:	Monroe Auto Salvage	**Date Collected:**	5/23/96
Sample Matrix:	Water	**Date Received:**	5/23/96
		Date Extracted:	5/28/96
		Date Analyzed:	5/29/96

Total Petroleum Hydrocarbon as Diesel and Oil
Washington DOE Method WTPH-D
Units: µg/L (ppb)

Analyte:	**Diesel**	**Oil***
Method Reporting Limit:	250	750

Sample Name	**Lab Code**		
MW-2-0596	B9600424-01	460(a)	ND
MW-3-0596	B9600424-02	ND	ND
MW-4-0596	B9600424-03	ND	ND
HC-5-0596	B9600424-04	ND	ND
MW-5-0596	B9600424-05	470(a)	ND
Method Blank	B9600424-WB	ND	ND

* Quantified using 30 weight motor oil as a standard.

(a) Quantified as diesel. The sample contained components that eluted in the diesel range, but the chromatogram did not match the typical diesel fingerprint.

Approved By: Chris Elliott Date: 6/7/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage/#40358-017.001(2)
Sample Matrix: Water

Service Request: K9603073
Date Collected: 5/23/96
Date Received: 5/24/96
Date Extracted: NA
Date Analyzed: 5/30/96

Solids, Total Suspended (TSS)
EPA Method 160.2
Units: mg/L (ppm)

Sample Name	Lab Code	MRL	Result
MW-2-0596	K9603073-001	5	ND
MW-3-0596	K9603073-002	5	109
MW-4-0596	K9603073-003	5	170
HC-5-0596	K9603073-004	5	74
MW-5-0596	K9603073-005	5	5
Method Blank	K9603073-MB	5	ND

Approved By: _____ Date: 6/5/96

1AMRL/102594
03073WET.LJ1 - TSS 6/5/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage/40358-017.001(2)
Sample Matrix: Water

Service Request: K9603073
Date Collected: 5/23/96
Date Received: 5/24/96
Date Extracted: 5/29/96

Dissolved Metals
Units: µg/L (ppb)

		Sample Name:	MW-2-0596	MW-3-0596	MW-4-0596
		Lab Code:	K9603073-001	K9603073-002	K9603073-003
		Date Analyzed:	6/4/96	6/4/96	6/4/96
Analyte	**EPA Method**	**MRL**			
Cadmium	6010A	4	ND	ND	ND
Chromium	6010A	5	ND	ND	ND
Lead	7421	2	ND	ND	ND

Approved By: JC Date: 6/6/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage/40358-017.001(2)
Sample Matrix: Water

Service Request: K9603073
Date Collected: 5/23/96
Date Received: 5/24/96
Date Extracted: 5/29/96

Dissolved Metals
Units: µg/L (ppb)

			Sample Name:	HC-5-0596	MW-5-0596	Method Blank
			Lab Code:	K9603073-004	K9603073-005	K9603073-MB
			Date Analyzed:	6/4/96	6/4/96	6/4/96
Analyte	**EPA Method**	**MRL**				
Cadmium	6010A	4		ND	ND	ND
Chromium	6010A	5		ND	ND	ND
Lead	7421	2		ND	ND	ND

Approved By: _____ Date: 6/6/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage/40358-017.001(2)
Sample Matrix: Water

Service Request: K9603073
Date Collected: 5/23/96
Date Received: 5/24/96
Date Extracted: 5/29/96

Total Metals
Units: µg/L (ppb)

		Sample Name:	MW-2-0596	MW-3-0596	MW-4-0596
		Lab Code:	K9603073-001	K9603073-002	K9603073-003
		Date Analyzed:	6/4/96	6/4/96	6/4/96
Analyte	**EPA Method**	**MRL**			
Cadmium	6010A	4	ND	ND	ND
Chromium	6010A	5	ND	21	35
Lead	7421	2	ND	3	7

Approved By: _____ Date: 6/6/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	EMCON	**Service Request:**	K9603073
Project:	Monroe Auto Salvage/40358-017.001(2)	**Date Collected:**	5/23/96
Sample Matrix:	Water	**Date Received:**	5/24/96
		Date Extracted:	5/29/96

Total Metals
Units: µg/L (ppb)

			Sample Name:	HC-5-0596	MW-5-0596	Method Blank
			Lab Code:	K9603073-004	K9603073-005	K9603073-MB
			Date Analyzed:	6/4/96	6/4/96	6/4/96
Analyte	**EPA Method**	**MRL**				
Cadmium	6010A	4		ND	ND	ND
Chromium	6010A	5		13	ND	ND
Lead	7421	2		ND	ND	ND

Approved By: _____ Date: 6/6/96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage/ #40358-017.001(2)
Sample Matrix: Water

Service Request: K9603073
Date Collected: 5/23/96
Date Received: 5/24/96
Date Extracted: 5/30/96

Polychlorinated Biphenyls (PCBs)
EPA Methods 3510B/8080A
Units: µg/L (ppb)

	Sample Name:	MW-2-0596	MW-3-0596	MW-4-0596
	Lab Code:	K9603073-001	K9603073-002	K9603073-003
	Date Analyzed:	6/6/96	6/6/96	6/6/96
Analyte	**MRL**			
Aroclor 1016	0.2	ND	ND	ND
Aroclor 1221	0.2	ND	ND	ND
Aroclor 1232	0.2	ND	ND	ND
Aroclor 1242	0.2	ND	ND	ND
Aroclor 1248	0.2	ND	ND	ND
Aroclor 1254	0.2	ND	ND	ND
Aroclor 1260	0.2	ND	ND	ND

Approved By: _____ Date: 6-12-96

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: EMCON
Project: Monroe Auto Salvage/ #40358-017.001(2)
Sample Matrix: Water

Service Request: K9603073
Date Collected: 5/23/96
Date Received: 5/24/96
Date Extracted: 5/30/96

Polychlorinated Biphenyls (PCBs)
EPA Methods 3510B/8080A
Units: µg/L (ppb)

	Sample Name:	HC-5-0596	MW-5-0596	Method Blank
	Lab Code:	K9603073-004	K9603073-005	K960530-MB
	Date Analyzed:	6/7/96	6/7/96	6/6/96
Analyte	**MRL**			
Aroclor 1016	0.2	ND	ND	ND
Aroclor 1221	0.2	ND	ND	ND
Aroclor 1232	0.2	ND	ND	ND
Aroclor 1242	0.2	ND	ND	ND
Aroclor 1248	0.2	ND	ND	ND
Aroclor 1254	0.2	ND	ND	ND
Aroclor 1260	0.2	ND	ND	ND

Approved By: _____ Date: 6·12·96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Water

Service Request: B9600424
Date Collected: 5/23/96
Date Received: 5/23/96
Date Extracted: 5/28/96
Date Analyzed: 5/29/96

Surrogate Recovery Summary
Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D

Sample Name	Lab Code	Percent Recovery p-Terphenyl
MW-2-0596	B9600424-01	118
MW-3-0596	B9600424-02	124
MW-4-0596	B9600424-03	125
HC-5-0596	B9600424-04	125
MW-5-0596	B9600424-05	130
Method Blank	B9600424-WB	117

CAS Acceptance Limits: 59-131

Approved By: L. Elliott Date: 6/7/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Water

Service Request: B9600424
Date Collected: 5/23/96
Date Received: 5/23/96
Date Extracted: NA
Date Analyzed: 5/29/96

Surrogate Recovery Summary
Total Petroleum Hydrocarbons as Gasoline
EPA Methods 5030A and Washington DOE Method WTPH-G

Sample Name	Lab Code	Percent Recovery 4-BFB (PID - BTEX)	Percent Recovery 4-BFB (FID - GAS)
MW-2-0596	B9600424-01	NA	98
MW-3-0596	B9600424-02	NA	96
MW-4-0596	B9600424-03	NA	100
HC-5-0596	B9600424-04	NA	97
MW-5-0596	B9600424-05	NA	93
Method Blank	B9600424-WB	NA	100
CAS Acceptance Limits:		86-117	86-117

Approved By: Carla Elliott Date: 6/7/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage/ #40358-017.001(2)
Sample Matrix: Water

Service Request: K9603073
Date Collected: 5/23/96
Date Received: 5/24/96
Date Extracted: 5/30/96
Date Analyzed: 6/6,7/96

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)
EPA Methods 3510B/8080A

Sample Name	Lab Code	Percent Recovery Decachlorobiphenyl
MW-2-0596	K9603073-001	42(A)
MW-3-0596	K9603073-002	72
MW-4-0596	K9603073-003	91
HC-5-0596	K9603073-004	66
MW-5-0596	K9603073-005	37(A)
Method Blank	K960530-MB	101

CAS Acceptance Limits: 50-131

A Outside acceptance limits. There was insufficient sample to reanalyze.

Approved By: Richard A Brown Date: 6/13/96

lyt Services inc. 18912 North Creek Pkwy, Suite 118 • Bothell, WA 98011 • (206) 486-6983 • FAX (206) 486-7695

DATE 5/23/96 PAGE 1 OF 1

PROJECT NAME Monroe Auto #40358-017-001(2)

PROJECT Salvage

COMPANY/ADDRESS Emcon / John [illegible]

18912 North Creek Pkwy Suite 100

Bothell, WA PHONE (206) 485-5000

SAMPLERS SIGNATURE [signature]

ANALYSIS REQUEST — PETROLEUM HCS / ORGANIC / ORGANIC METALS/INORGANICS

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	TPH - HCID State:	TPH - G ✓ BTEX State: WA	TPH - D Ext ✓ OIL State: WA	TPH - 418.1 State:	TPH - Other	Halogenated or Aromatic Volatiles 601/8010 602/8020	Volatile Organics GC/MS 624-8240	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides/PCBS 8080 PCB ONLY ✓	PAH 8310 / 8100 GC HPCL	TCLP Metals / Semi VOA / VOA / Pest/Herb	Metals Total / DISS ✓ List Below Cd, Cr, Pb, (CrAl)	Cyanide	pH, Cond Cl, SO4, PO4 F, Br NO2 NO3 (Circle)	NH3 - N, COD, Total-P TKN, TOC, TOX (Circle)	TSS		REMARKS
MW-2-0596	5/23/96	1230		Water	7		X	X						X			X				X		
MW-3-0596	↓	1100		↓	7		X	X						X			X				X		
MW-4-0596		1000			7		X	X						X			X				X		
HC-5-0596	↓	1430		↓	7		X	X						X			X				X		
MW-5-0596	↓	0800		↓	7		X	X						X			X				X		

RELINQUISHED BY:
Signature: [signature]
Printed Name: Nick Garson
Firm: Emcon
Date/Time: 5/23/96 1600

RECEIVED BY:
Signature: [signature]
Printed Name: Colin Elliott
Firm: CAS
Date/Time: 5/23/96 16:00

TURNAROUND REQUIREMENTS
___ 24 hr ✓ 48 hr. ___ 5 day
✓ Standard (10-15 working days)
✓ Provide Verbal Preliminary Results
___ Provide FAX preliminary Results
Requested Report Date ________

REPORT REQUIREMENTS
___ I. Routine Report
___ II. Report (includes DUP.MAS. MSD, as required, may be charged as samples)
___ III. Data Validation Report (includes All Raw Data)
___ IV. CLP Deliverable Report

INVOICE INFORMATION:
P.O.# ________
Bill To ________

SAMPLE RECEIPT:
Shipping VIA: ________
Shipping to: ________
Condition: ________
Lab No: ________

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:
Dissolved metals were field filtered

14

Columbia Analytical Services, Inc.

July 22, 1996

Service Request No.: B9600424

John Virgin
EMCON Northwest
18912 N Creek Parkway
Suite 210
Bothell, WA 98011

Re: **Monroe Auto Salvage/Project #40358-017.001(2)**

Dear John:

Attached are the QC results for samples submitted to our laboratory on May 23, and reported to you on June 6, 1996. For your reference, this is regarding our service request number B9600424.

All analyses were performed consistent with our laboratory's quality assurance program. All results are intended to be considered in their entirety, and CAS is not responsible for use of less than the complete report. Results only apply to samples analyzed.

Please call if we can be of further assistance.

Respectfully submitted,

Columbia Analytical Services, Inc.

C. B. Elliott

Colin B. Elliott
Laboratory Manager

CBE/bdr

18912 North Creek Parkway, Suite 118 • Bothell, WA 98011 • 206/486-6983 • Fax 206/486-7695

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage/ #40358-017.001(2)
LCS Matrix: Water

Service Request: K9603073
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 6/6/96

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)
EPA Methods 3510B/8080A
Units: µg/L (ppb)

Analyte	True Value		Result		Percent Recovery		CAS Acceptance Limits	Relative Percent Difference
	LCS	DLCS	LCS	DLCS	LCS	DLCS		
Aroclor 1254	1.0	1.0	1.0	1.1	100	110	24-142	10

Approved By: _____ Date: 7/22/96

DLCS/102194
BOOK1.XLS - wPCBdlcs 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
LCS Matrix: Water

Service Request: B9600424
Date Collected: NA
Date Received: NA
Date Extracted: 5/28/96
Date Analyzed: 5/29/96

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary
Total Petroleum Hydrocarbons as Diesel and Oil
Washington DOE Method WTPH-D
Units: ug/L (ppb)

	True Value		Result		Percent Recovery			
Analyte	LCS	DLCS	LCS	DLCS	LCS	DLCS	CAS Acceptance Limits	**Relative Percent Difference**
Diesel	3020	3020	3160	3180	105	105	82-121	1

Approved By: Ch. Elliott Date: 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
Sample Matrix: Water

Service Request: B9600424
Date Collected: 5/23/96
Date Received: 5/23/96
Date Extracted: NA
Date Analyzed: 5/29/96

Duplicate Summary
Total Petroleum Hydrocarbons as Gasoline
Washington DOE Method WTPH-G
Units: µg/L (ppb)

Sample Name: MW-5-0596
Lab Code: B9600424-05

Analyte	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	CAS RPD Acceptance Limit
Gasoline	50	ND	ND	-	-	30

Approved By: A. Elliott Date: 7/22/96

DUP1SRPD/102194
00-024PHC.DJ1 - DUP 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage
LCS Matrix: Water

Service Request: B9600424
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 5/29/96

Laboratory Control Sample Summary
Total Petroleum Hydrocarbons as Gasoline
Washington DOE Method WTPH-G
Units: µg/L (ppb)

Analyte	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Gasoline	5600	6400	114	70-140

Approved By: Ali Elliott Date: 7/22/96

LCS/102194

00-G4PHC.DJI - LCS 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage/40358-017.001(2)
Sample Matrix: Water

Service Request: K9603073
Date Collected: 5/23/96
Date Received: 5/24/96
Date Extracted: 5/29/96
Date Analyzed: 6/4/96

Duplicate Summary
Total Metals
Units: µg/L (ppb)

Sample Name: Batch QC
Lab Code: K9603071-001

Analyte	EPA Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference
Cadmium	6010A	4	ND	ND	ND	-
Chromium	6010A	5	ND	ND	ND	-
Lead	7421	2	3	2	2	50

Approved By: A. Elliott Date: 7/22/96

DUP1SEPA/102194

BOOK1.XLS - DUP 7/22/96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: EMCON
Project: Monroe Auto Salvage/40358-017.001(2)
Sample Matrix: Water

Service Request: K9603073
Date Collected: 5/23/96
Date Received: 5/24/96
Date Extracted: 5/29/96
Date Analyzed: 6/4/96

Matrix Spike Summary
Total Metals
Units: µg/L (ppb)

Sample Name: Batch QC
Lab Code: K9603071-001

Analyte	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits
Cadmium	4	50	ND	56	112	75-125
Chromium	5	200	ND	206	103	75-125
Lead	2	20	3	23	100	75-125

Approved By: A. Elliott Date: 7/22/96

MS1S/102194
BOOK1.XLS - Spike 7/22/96

Columbia Analytic Services inc.

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

18912 North Creek Pkwy, Suite 118 • Bothell, WA 98011 • (206) 486-6983 • FAX (206) 486-7695

DATE 5/23/96 PAGE 1 OF 1

PROJECT NAME Monroe Auto #40358-017.001(2)

PROJECT Salvage

COMPANY/ADDRESS EMCON / John Vir[illegible]

18912 North Creek Pkwy Suite 100

Bothell, WA PHONE (206) 485-5000

SAMPLERS SIGNATURE [signature]

ANALYSIS REQUEST: PETROLEUM HCS / ORGANIC / ORGANIC METALS/INORGANICS

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	NUMBER OF CONTAINERS	TPH - HCID State:	TPH - G ✓ BTEX ✓ State: WA	TPH - D Ext. Oil ✓ State: WA	TPH - 418.1 State:	TPH - Other	Halogenated or Aromatic Volatiles 601/8010 602/8020	Volatile Organics GC/MS 624-8240	Base/Neu/Acid Organics GC/MS 625/8270	Pesticides/PCBs 8080 PCB ONLY	PAH 8310	8100 GC HPCL	TCLP Metals Semi VOA VOA	Pest/Herb	Metals Total ✓ DISS ✓ List Below Cd, Cr, Pb	Cyanide	pH, Cond Cl, SO4, PO4 F, Br NO2 NO3 (Circle)	NH3 - N, COD, Total-P TKN, TOC, TOX (Circle)	TSS		REMARKS
MW-2-0596	5/23/96	1230		Water	7		X	X						X					X				X		
MW-3-0596	↓	1100		↓	7		X	X						X					X				X		
MW-4-0596	↓	1000		↓	7		X	X						X					X				X		
HC-5-0596	↓	1430		↓	7		X	X						X					X				X		
MW-5-0596	↓	0800		↓	7		X	X						X					X				X		

RELINQUISHED BY:

Signature [signature]

Printed Name Nick Garson

Firm EMCON

Date/Time 5/23/96 1600

RECEIVED BY:

Signature [signature]

Printed Name Colin Elliott

Firm CAS

Date/Time 5/23/96 16:00

TURNAROUND REQUIREMENTS

- ___ 24 hr ___ 48 hr. ___ 5 day
- ✓ Standard (10-15 working days)
- ✓ Provide Verbal Preliminary Results
- ___ Provide FAX preliminary Results

Requested Report Date ______

REPORT REQUIREMENTS

- ___ I. Routine Report
- ___ II. Report (includes DUP.MAS. MSD, as required, may be charged as samples)
- ___ III. Data Validation Report (includes All Raw Data)
- ___ IV. CLP Deliverable Report

INVOICE INFORMATION:

P.O.# ______

Bill To ______

SAMPLE RECEIPT:

Shipping VIA: ______

Shipping to: ______

Condition: ______

Lab No: B96-424

RELINQUISHED BY:

Signature

Printed Name

Firm

Date/Time

RECEIVED BY:

Signature

Printed Name

Firm

Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:

Dissolved metals were field filtered