

Final Report

**Don Oline Autofluff Site
2120 Marine View Drive
Tacoma, Washington**

Prepared For:

**Hylebos Marina
1940 Marine View Drive
Tacoma, Washington**

June 11, 1998

Prepared By:

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1.0 INTRODUCTION

This Final Report has been prepared to document the remediation of the Don Oline Autofluff Site located at 2120 Marine View Drive in Tacoma, Washington (site). The site location is presented on Figure 1. This remediation was performed pursuant to a Consent Decree between the Washington Department of Ecology (Ecology) and the potential responsible parties (PRPs) at the site. The PRPs at the site include Mr. Donald E. Oline, Mr. Ronald S. Oline, and Ms. Judy D. Johnson. The PRPs entered into the Consent Decree in fulfillment of their obligations as a PRP on the nearshore and upland remediation of the Hylebos Waterway being conducted by Ecology.

The Consent Decree became final on July 30, 1997. Site remediation progressed through the fall of 1997 and winter of 1997/1998. On March 2, 1998 The Ecology Project Manager, Mr. Russ McMillen, notified the PRPs that the completed remediation and site restoration met with Ecology approval and had been performed in accordance with the requirements of the Consent Decree.

1.1 Background

The site was purchased by Mr. Don Oline in 1972. Autoshrredder residue (ASR; a.k.a., autofluff) consists of shredded non-recyclable automobile components from the General Metals of Tacoma, Inc. (General Metals) facility on Marine View Drive. The ASR was reportedly placed as backfill material at the site behind two bulkheads along the Hylebos Waterway. The site was subsequently covered with gravel and has been used since that time for storage of miscellaneous machinery and equipment.

In November 1994 EMCON Northwest, Inc. (EMCON) performed an investigation of the site on behalf of General Metals. This investigation indicated the presence of an estimated 1,230 cubic yards of ASR in the upland portion of the site and about 90 cubic yards of ASR within the intertidal zone. ASR in the uplands portion of the site was estimated to be up to 6 feet deep and less than 1 foot thick in the intertidal zone.

During characterization sampling of Hylebos Waterway sediments by Ecology in 1996, two intertidal sediment samples near the site were observed to contain concentrations of several compounds above the sediment quality objectives (SQOs) for the Hylebos Waterway. These compounds included polychlorinated biphenyls (PCBs), several polycyclic aromatic hydrocarbons (PAHs), several phthalates, and several metals. Ecology established cleanup levels for seventeen individual contaminants of concern (COC) within the intertidal portion of the site and for four COCs in the upland portion of the site.

The results of the Ecology sediment sampling and the findings of the EMCON site investigation were used as the basis for the technical approach and scope of work presented in the Consent Decree and Compliance Monitoring Plan (CMP) prepared for the site remediation.

1.2 Report Organization

The remaining sections of this report are organized as follows:

- Section 2.0 presents the objectives of the remedial efforts at the site.
- Section 3.0 presents the technical approach used in fulfilling the objectives and the performance criteria stipulated in the consent decree for the site remediation.
- Section 4.0 presents the findings of the site remediation.
- Section 5.0 presents the conclusions supported by the findings of the site remediation.

The attached appendices (under separate cover) contain back-up documentation including hardcopy analytical data sheets and available bills-of-lading, and tipping receipts for material disposal.

2.0 OBJECTIVES

The general objective of the site remediation was to achieve the specified cleanup levels for the site COCs throughout both the upland and intertidal portions of the site.

The specific objectives of the site remediation were to:

- Remove all ASR from the upland and intertidal portions of the site.
- Attain the Ecology-specified cleanup levels for COCs in the intertidal portion of the property (See Section 3.1 below).
- Attain Model Toxics Control Act (MTCA; WAC 173-340) Method A Industrial soil cleanup levels for COCs in the upland portion of the site.
- Restore habitat in the intertidal portions of the site.
- Restore the site to a usable condition consistent with the current port-industrial zoning.

3.0 TECHNICAL APPROACH

The following sections describe the technical approach used to attain the project objectives. This technical approach was approved in the Work Plan, the CMP, and in subsequent discussions with Mr. McMillen.

3.1 Intertidal Sediments

The intertidal portion of the site is defined as the area between 0.0 feet mean low low water (MLLW) and 20 feet shoreward of the MLLW+12.0 feet shoreline. The bulkheads at the site generally defined the location of the MLLW+12.0 feet shoreline. Therefore, the intertidal portion of the site, in effect, extended from MLLW to 20 feet shoreward of the outboard edge of the bulkheads. The intertidal portion of the site is indicated on Figure 2.

The Consent Decree mandated that specific cleanup levels be attained for 17 individual COCs throughout the intertidal area of the site. The cleanup levels are based on the Hylebos Waterway Sediment Quality Objectives (SQOs) established in the Commencement Bay/Nearshore Tidelands Record of Decision and have been applied to the site under WAC 173-340-710. These intertidal COCs and the stipulated cleanup levels for the site are listed in Table 1.



EMCON Northwest, Inc.

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January 26, 1995
Project 0226-002.01

Mr. Norm Webb
General Metals of Tacoma, Inc.
4927 NW Front Avenue
Portland, Oregon 97210

Re: Oline/Mather Auctioneers Site Preliminary Investigation

Dear Mr. Webb:

This letter report summarizes the results of a preliminary investigation conducted to determine the extent of automobile shredder residue (ASR) for a portion of Mr. Don Oline's property on the Hylebos Waterway at 2120 Marine View Drive in Tacoma, Washington (Figure 1). The investigation was conducted between November 9 and November 23, 1994. It included test pit excavation, ASR and soil sampling, monitoring well installation, groundwater sampling, sediment test hole excavation, and sediment sampling. The procedures specified in EMCON's October 28, 1994, proposal were followed.

The property was reportedly purchased by Mr. Oline in 1972. At that time, the ground surface was covered with dredged sand, and small trees were on the property. The trees were removed from the site and, over a few years, six to twelve inches of gravel were placed on the surface. According to Mr. Oline, the property has not been used for any business purpose.

ASR AND SOIL

Test Pit Excavation

Thirty-four test pits were completed at the portion of the site near the Hylebos Waterway (Figure 2). Test pit logs are presented in Attachment A. The test pits were excavated by using a backhoe with a 12-inch-wide by 36-inch-long bucket. After digging a test pit containing ASR and before ASR or soil sampling, a hot water pressure washer was used to decontaminate the equipment. Each test pit was backfilled with material removed from the pit, a stake was placed at the center of each pit, and the horizontal and vertical location of each pit was surveyed (Attachment B).



Three ASR samples were collected from test pits TP-1, TP-2, and TP-22. The samples were collected with a clean shovel and placed in new plastic bags. The ASR samples were at least one cubic foot in volume. The samples were sent to BC Laboratories in Bakersfield, California, where each upland ASR sample was processed as follows:

- A magnet was run over each sample, removing the iron. The iron was weighed, and the results were corrected for the weight of material removed.
- The samples were sieved through a 9.5 mm sieve.
- Material greater than 9.5 mm in diameter was reduced in size in a hammermill.

The sample was mixed, and three replicates of each sample were analyzed for metals (cadmium and lead), by the Toxicity Characteristic Leaching Procedure (TCLP), and for polychlorinated biphenols (PCBs), by EPA Method 8080.

One composite ASR sample, labeled TP-CASR, was collected in the field by taking approximately equal volumes of ASR at TP-1, TP-2, and TP-22. The composite ASR sample was analyzed for arsenic, cadmium, copper, lead, mercury, nickel, and zinc, using EPA Methods 7060, 6010, 7421, and 7471.

Two discrete soil samples were collected from TP-1 and TP-22. The samples were collected six to twelve inches below the base of the overlying ASR. The samples were collected with a clean stainless steel spoon and placed in clean glass jars supplied by the laboratory. The soil samples were submitted to BC Laboratories and analyzed for cadmium, lead, and total PCBs by the methods listed above. A composite soil sample, labeled TP-1d, was collected in the field by placing approximately equal amounts of soil from TP-1 and TP-22 in the sample jars. The composite soil sample was analyzed for arsenic, copper, mercury, nickel, and zinc using the methods listed above. Chain-of-custody forms and laboratory data sheets are provided in Attachment C.

Extent and Volume of ASR

ASR was identified in the field by the presence of pieces of rubber hoses, multi-strand wiring, aluminum detailing, seat and insulation materials, and a variety of other automobile parts. ASR was identified in 24 of the 34 test pits. The thickness varied from trace levels to 6.5 feet at MW-3 (Figure 2). The ASR was covered with one-half to several feet of soil. At the base of the ASR was a brownish-gray to gray clayey silt. The thickness of the clayey silt was not determined. ASR was mixed with soil and other debris in the ASR-

impacted zone (ASR zone) between the overlying grade fill and the underlying clayey silt. In this zone, ASR varied from trace to 100 percent of the material, but typically made up 40 to 70 percent of the material. The other debris in this zone included construction demolition debris and landscaping material.

The lateral extent of the uplands ASR zone at the site was estimated to be 1,230 square yards (Figure 2). The average thickness of the ASR zone in the test pits was about three feet. Based on these estimates, the in-place volume of the uplands ASR zone was estimated to be about 33,225 cubic feet, or 1,230 cubic yards.

Laboratory Results

Table 1 summarizes the soil and ASR laboratory results. Model Toxics Control Act (MTCA) Method C Industrial Cleanup Levels (formula values; Ecology, 1994¹) are also shown.

Soil. None of the results from the two discrete soil samples and the one composite soil sample were greater than the MTCA Method C Industrial Cleanup Levels for metals or PCBs.

ASR. The composite ASR sample was less than the cleanup levels for arsenic, copper, mercury, nickel, or zinc. Results for cadmium and lead were greater than the cleanup levels. Results for one PCB replicate sample from the three ASR samples (the second replicate from TP-22) were greater than the 17 mg/kg cleanup level for PCBs. Results of the other two replicates were, however, below the cleanup level, and the average PCB concentration in the three replicates was also below the cleanup level.

None of the replicate results from the three ASR samples were greater than the dangerous waste toxicity characteristic (TC) regulatory levels for cadmium (1.0 mg/L) or lead (5.0 mg/L).

¹ Washington State Department of Ecology. August 31, 1994. Model Toxics Control Act Cleanup Levels and Risk Calculation (CLARC II) Update. Publication #94-145.

GROUNDWATER

Monitoring Well Installation, Development, and Sampling

Two monitoring wells were drilled and installed on the site (Figure 2). MW-1 was drilled to a depth of seven feet on the eastern portion of the site. The well was completed with nominal two-inch Schedule 40 PVC with three feet of 0.020-inch slot screen. MW-3 was drilled to a depth of 10.5 feet near the bulkhead. The well was completed with nominal two-inch Schedule 40 PVC with five feet of 0.020 inch slot screen. The annular space around both well screens was filled with 20-40 mesh Colorado silica sand. Bentonite chips were used to seal the annular space above the filter pack. Each well was completed with a locking, expandable plug and a flush-mount protective casing. Monitoring well logs are provided in Attachment A. Three attempts were made to drill a third monitoring well. The borings were located between TP-2 and TP-33. In each case, no water was found before encountering the gray clayey silt at the base of the ASR. Each boring was abandoned with bentonite chips, in accordance with chapter 173-160 WAC.

The two monitoring wells were developed on November 22, 1994, by overpumping with a peristaltic pump. During development, pH, temperature, specific conductance, and turbidity were measured. Before sampling, pH, temperature, and specific conductance readings were stable (at least two consecutive readings were within ten percent of each other), and the lowest turbidity reading was obtained. To ensure low turbidity readings, the wells were first pumped at a high pumping rate. The pumping rate was lowered before groundwater sampling. Approximately 16 gallons and 19 gallons of water were removed during development of MW-1 and MW-3, respectively.

The two monitoring wells were sampled on November 22, 1994. The samples were collected immediately after the wells were developed. Metals and total suspended solids (TSS) were sampled from the peristaltic pump tubing. The sample to be analyzed for dissolved metals was field filtered with a 0.45 micron filter. Containers for PCB analysis were filled from a disposable bailer. The samples were submitted to Sound Analytical Services, Inc., of Tacoma, for analysis of total and dissolved metals (arsenic, cadmium, copper, lead, mercury, nickel, and zinc) by EPA Methods 200.8 and 245.1, PCBs by EPA Method 8080, and TSS by EPA Method 160.2. Field sampling data forms, chain of custody forms, and laboratory data sheets are provided in Attachment C.

Groundwater Occurrence

Groundwater was encountered only sporadically at the site. Groundwater encountered was perched on the gray clayey silt. Due to the isolated occurrence of shallow groundwater, it might not be present at drier times of the year. Tidal variation in shallow groundwater was not determined.

Laboratory Results

Table 2 summarizes the groundwater laboratory results. The data were compared to the marine surface water quality criteria (chapter 173-201A WAC). Results for arsenic, cadmium, mercury, and temperature did not exceed the criteria. Total copper results exceeded the criterion in both water samples, but results for dissolved copper exceed the criterion in neither. Total lead and zinc results only exceeded the criteria in the MW-3 sample, and dissolved lead and zinc results exceeded the criteria in neither sample. Since the dissolved concentrations of these constituents were considerably lower than the total concentrations, it is likely that particulate matter in the samples contributed to the elevated total concentrations. Such particulate matter is not generally mobile in groundwater. Total and dissolved nickel, and PCBs exceeded the criteria in the MW-3 sample. The pH of the MW-1 sample was slightly outside the range of the criterion. Since groundwater flow is probably towards the Hylebos Waterway, the results from MW-1 likely represented upgradient groundwater quality. The results from MW-3, located in an area of relatively thick ASR accumulation, probably represented worst-case, downgradient, groundwater quality.

INTERTIDAL ASR AND SEDIMENTS

Sediment and Seep Survey

Visual observations of the extent of ASR in sediment and the collection of ASR samples from the intertidal area adjacent to the site were conducted on November 17, 1994. The site visit was conducted from 1700 hours to 2300 hours to permit making observations during a low tide.

Twenty-six test holes were excavated using a shovel and post-hole digger. Test holes were excavated to the top of native material, when present, or to below the bottom of observed ASR. The approximate locations of test holes are shown on Figure 2. As each test hole was excavated, a wooden stake labeled with the test hole number was inserted into the

sediment adjacent to the location. Visual observations of the presence of ASR and the approximate thickness were recorded in the field logbook. No seeps were observed along the exposed shoreline or bulkheads at the site.

Four samples of ASR and one field duplicate sample were collected. Sample SD-13 and the field duplicate sample (SD-14) were collected from a location between test holes 13 and 14. All other samples (SD-3, SD-19, and SD-24) were collected from the test hole locations shown on Figure 2. The intertidal ASR samples were submitted to BC Laboratories for processing and analysis for cadmium, lead, and total PCBs by the methods listed above. Three replicates of each sample were analyzed. The samples were also submitted to Analytical Resources, Inc., in Seattle, Washington, for the analysis of total organic carbon (TOC) by EPA Method 5310B. BC Laboratories composited samples SD-03, SD-13, SD-19, and SD-24 in the laboratory by using equal amounts of each sample. The composite sample was subsequently analyzed for arsenic, copper, mercury, nickel, and zinc by the methods listed above. Chain-of-custody forms and laboratory data sheets are provided in Attachment C.

Extent and Volume of Intertidal ASR

The actual thickness of the ASR zone was difficult to determine for most of the test hole locations. The ASR observed in test holes SD-03, SD-04, SD-06, and SD-10 appeared to be a lens of material from two to four inches thick, mixed with marine sediment. Native sediment was observed in the bottom of these test holes at depths ranging from six to twelve inches below the sediment surface. From six to twelve inches of depositional (loose) sediment were observed on top of native material at test holes SD-01, SD-02, SD-05, SD-07, SD-08, SD-09, and SD-11.

The ASR observed at test holes SD-13, SD-14, and SD-26 appeared to have sloughed off or washed out from the area behind the west bulkhead. Observations of ASR at test holes SD-19, SD-18, and SD-17 indicated a six- to eight-inch layer of ASR originally was present approximately one foot below the sediment surface, and material had sloughed off or washed out from the high area near test hole SD-19 towards test holes SD-17 and SD-18. The steep slope and poor accessibility to the south of test hole SD-18 prevented further observations in this area. The area to the west of test holes SD-17 and SD-18 was steeply sloped and still partially covered by water during the low tide. This prevented further observations.

At test hole SD-16, the test hole was excavated to 2.5 feet below the sediment surface before a lens of ASR approximately six inches thick was observed. An unknown

obstruction (see Figure 2) was encountered approximately eight to ten inches below the sediment surface in the area east of test hole SD-16 and south of test holes SD-22, SD-23, and SD-24. It was not possible to determine if ASR was present below this obstruction or if ASR was present below the concrete slab shown on Figure 2.

The volume of the intertidal ASR zone was estimated based on the following assumptions:

- The observed ASR zone was six inches thick.
- The boundaries of the ASR zone are as outlined on Figure 2.
- The lateral extent of the ASR zone was 533 square yards.

Based on the above assumptions, the volume of the ASR zone in the intertidal area was estimated to be approximately 2,400 cubic feet or about 90 cubic yards.

Laboratory Results

Table 3 summarizes the intertidal ASR laboratory results. The data were compared to the marine sediment quality standards (chapter 173-204 WAC). Results from at least one replicate from each sample exceeded the cadmium standard, and results from at least one replicate from three of the four samples exceeded the lead standard. Only one replicate exceeded the PCBs standard. Copper, mercury, and zinc concentrations in the composite sample exceeded the standards. The arsenic concentration in the composite sample was below the standard. No sediment quality standard exists for nickel.

SUMMARY AND CONCLUSIONS

A portion of the property located at 2120 Marine View Drive in Tacoma, Washington, was investigated to determine the extent of ASR. Thirty-four test pits were excavated, two monitoring wells were installed, and 26 intertidal test holes were dug. Four ASR samples, three soil samples, two groundwater samples, and five intertidal ASR samples were collected and analyzed for select metals and PCBs.

The lateral extent of the uplands ASR zone was estimated at 1,230 square yards and the in-place volume at 1,230 cubic yards. ASR results for cadmium, lead, and PCBs (in one replicate, only) were greater than Method C Industrial Cleanup Levels. The ASR results were below the TC regulatory levels for cadmium and lead. Soil sample results were less

Mr. Norm Webb
January 26, 1995
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than the cleanup levels for metals and PCBs, indicating that the soil beneath the ASR zone is probably not affected.

Shallow groundwater was encountered only sporadically at the site. Groundwater results did not exceed the marine surface water quality criteria for arsenic, cadmium, mercury, dissolved copper, dissolved lead, dissolved zinc, and temperature. Total copper exceeded the criterion in both the upgradient and downgradient wells. Nickel, total lead, and zinc, and PCBs exceeded the criteria in the downgradient well, indicating that the ASR has affected the shallow groundwater. Since shallow groundwater is only present sporadically at the site and may not be present seasonally, the impacts to groundwater are limited. Additional monitoring is needed to determine if the shallow, perched groundwater is present throughout the year.

The lateral extent of the intertidal ASR zone was estimated at 533 square yards and the in-place volume at 90 cubic yards. Results from at least one replicate sample exceeded the marine sediment quality standards for cadmium, lead, and PCBs. Copper, mercury, and zinc concentrations in the composite sample also exceeded the standards. ASR has sloughed into the intertidal area, and it is apparent that it has affected the quality of sediments in the intertidal area immediately adjacent to the site.

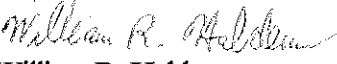
Soil and ASR results are comparable to those found at the General Metals of Tacoma site, where ASR-impacted soil contains elevated concentrations of heavy metals and PCBs that have remained relatively immobile. The upland ASR zone identified at the Oline/Mather Auctioneers site is substantially smaller than that identified at the General Metals of Tacoma site.


LIMITATIONS

Limitations to the services, opinions, and recommendations contained in this report are specified in an attachment and are incorporated herein by reference.

Sincerely,

EMCON


William R. Haldeman
Supervising Hydrogeologist


Linda Dawson
Director of Environmental Services

Mr. Norm Webb
January 26, 1995
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Attachments: Limitations

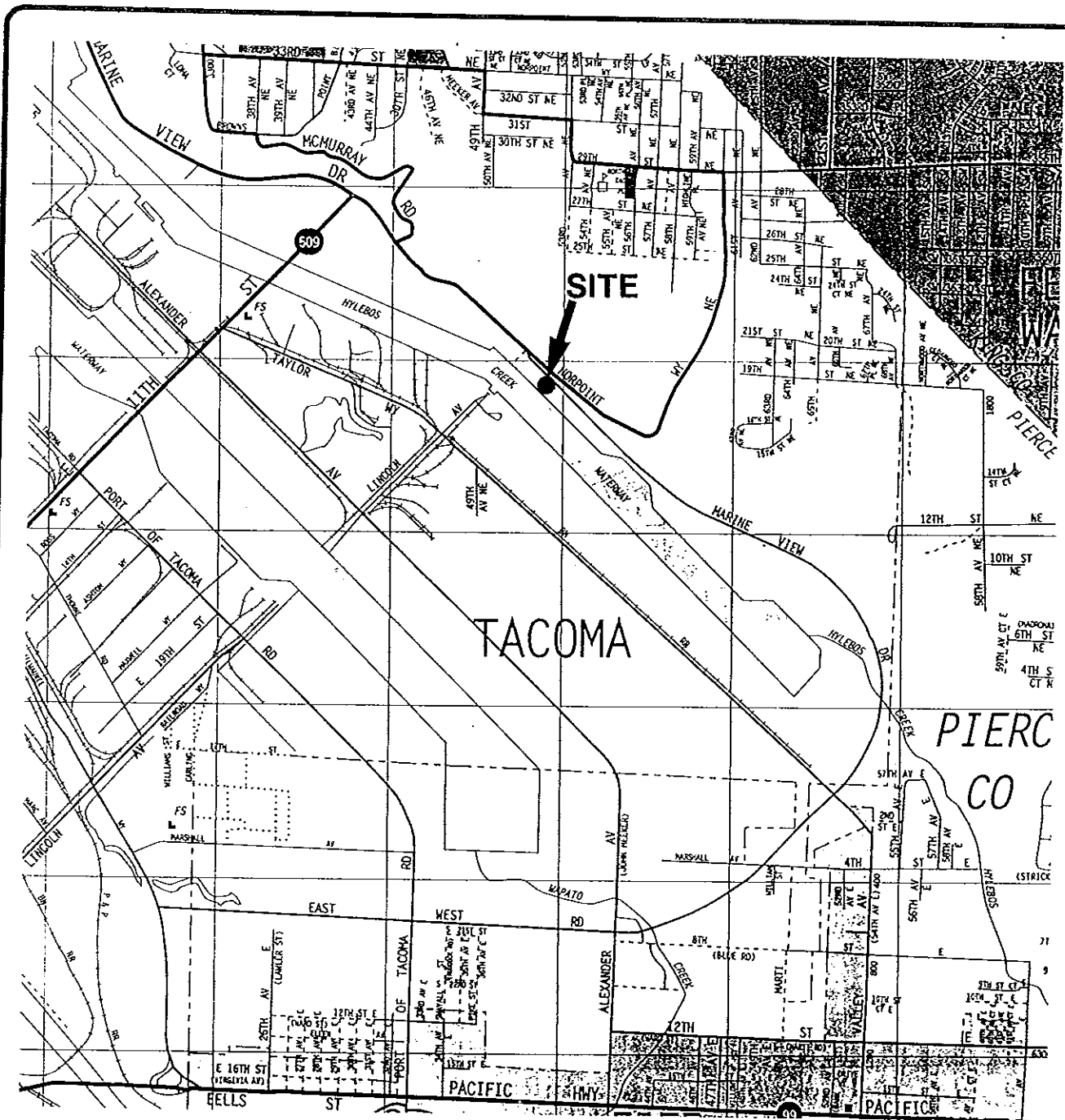
- Figure 1 - Site Vicinity Map
- Figure 2 - Sampling Locations and Extent of ASR
- Table 1 - Soil and ASR Laboratory Results
- Table 2 - Groundwater Field and Laboratory Results
- Table 3 - Intertidal ASR Laboratory Results
- Attachment A - Test Pit and Monitoring Well Logs
- Attachment B - Survey Map
- Attachment C - Laboratory Data Sheets

cc: Mr. Don Oline

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.



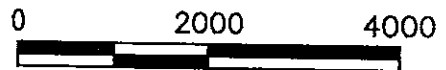
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WASHINGTON



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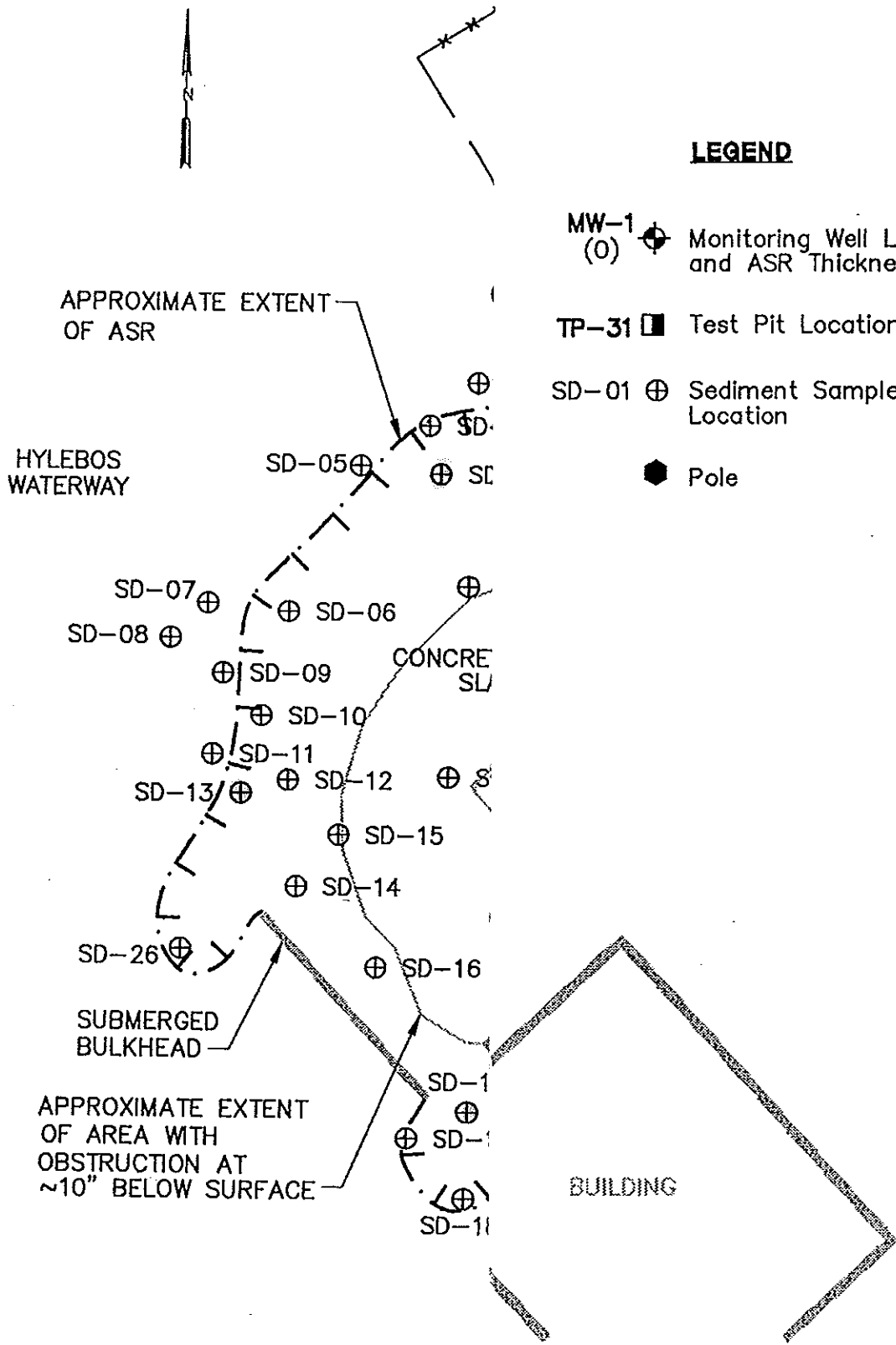


SCALE (Ft.)



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 PROJECT NO.
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Figure 1
 OLINE/MATHERS AUCTIONEERS SITE
 TACOMA, WASHINGTON
 SITE VICINITY MAP



LEGEND

MW-1 (0) ⊕ Monitoring Well Location and ASR Thickness (Feet)

TP-31 ■ Test Pit Location

SD-01 ⊕ Sediment Sample Location

● Pole

APPROXIMATE EXTENT OF ASR

HYLEBOS WATERWAY

CONCRETE SLU

SUBMERGED BULKHEAD

APPROXIMATE EXTENT OF AREA WITH OBSTRUCTION AT ~10" BELOW SURFACE

BUILDING



Figure 2
 OLIN/MATHER AUCTIONEERS SITE
 TACOMA, WASHINGTON
**SAMPLING LOCATIONS AND
 EXTENT OF ASR**

Table 1
Oline/Mather Auctioneers Preliminary Investigation
Soil and ASR Laboratory Results

| Sample Number | Results of Analyses (mg/kg) | | | | | | | | | | Results of Analyses (mg/L) | | |
|-------------------------------------|-----------------------------|-----------------|---------|--------------------|---------|--------|-----------|----------------|---------|---------|----------------------------|------|--|
| | Arsenic | Cadmium | Copper | Lead | Mercury | Nickel | Zinc | Total PCBs | TCLP | | Lead | | |
| | | | | | | | | | Cadmium | Cadmium | | | |
| ASR ^a | | | | | | | | | | | | | |
| TP-CASR #1 | 21 | 27 ^b | 1,030 | 1,460 | 2 | 153 | 6,080 | — ^c | — | — | — | — | |
| TP-CASR #2 | 22 | 29 | 1,720 | 1,650 | 1.2 | 630 | 7,790 | — | — | — | — | — | |
| TP-CASR #3 | 21 | 28 | 2,850 | 1,490 | 1.3 | 153 | 6,030 | — | — | — | — | — | |
| TP-22ASR #1 | — | — | — | — | — | — | — | 10.6 | <0.1 | <0.5 | <0.5 | <0.5 | |
| TP-22ASR #2 | — | — | — | — | — | — | — | 22 | <0.1 | <0.5 | <0.5 | <0.5 | |
| TP-22ASR #3 | — | — | — | — | — | — | — | 11.7 | <0.1 | <0.5 | <0.5 | <0.5 | |
| TP-1ASR #1 | — | — | — | — | — | — | — | 10.8 | 0.31 | 2.7 | 2.7 | 2.7 | |
| TP-1ASR #2 | — | — | — | — | — | — | — | 7.8 | 0.29 | 2.9 | 2.9 | 2.9 | |
| TP-1ASR #3 | — | — | — | — | — | — | — | 14.6 | 0.29 | 2.0 | 2.0 | 2.0 | |
| TP-2ASR #1 | — | — | — | — | — | — | — | 0.94 | <0.1 | 2.2 | 2.2 | 2.2 | |
| TP-2ASR #2 | — | — | — | — | — | — | — | 1.49 | <0.1 | <0.5 | <0.5 | <0.5 | |
| TP-2ASR #3 | — | — | — | — | — | — | — | 0.89 | <0.1 | <0.5 | <0.5 | <0.5 | |
| Soil | | | | | | | | | | | | | |
| TP-1s | — | <0.5 | — | 8.8 | — | — | — | <0.1 | — | — | — | — | |
| TP-1d ^d | — | <0.5 | — | 10.6 | — | — | — | <0.1 | — | — | — | — | |
| TP-22s | — | 1.5 | — | 20 | — | — | — | <0.1 | — | — | — | — | |
| Composite ^e | 26 | — | 103 | — | 0.58 | 25 | 239 | — | — | — | — | — | |
| Method C Cleanup Level ^f | 188 | 21.5 | 130,000 | 1,000 ^g | 1,050 | 70,000 | 1,050,000 | 17 | — | — | — | — | |

Note: ^a Three replicates of each ASR sample, labeled #1, #2, and #3, were analyzed.

^b Results above cleanup levels are shaded and shown in bold.

^c Not analyzed.

^d TP-1d is a field duplicate of TP-1s.

^e Composite sample from TP-1s and TP-22s.

^f WAC 173-340-745; Ecology, 1994.

^g MTCA Method A Industrial Cleanup Level since no Method C cleanup level (WAC 173-340-745) exists for lead.

Table 2
Oline/Mather Auctioneers Preliminary Investigation
Groundwater Field and Laboratory Results

| Analytical Parameter | Units | Sample | | | Marine Water Quality Criteria ^b |
|----------------------|----------------|------------------------|-------------------|------------|--|
| | | MW-1 | MW-2 ^a | MW-3 | |
| Arsenic, total | µg/L | < 1.0 | 17 | 13 | 36 |
| Arsenic, dissolved | µg/L | < 1.0 | 20 | 20 | 36 |
| Cadmium, total | µg/L | < 1.0 | 2.3 | 1.6 | 8 |
| Cadmium, dissolved | µg/L | < 1.0 | < 1.0 | < 1.0 | 8 |
| Copper, total | µg/L | 6.7^c | 34 | 17 | 2.5 |
| Copper, dissolved | µg/L | < 1.0 | < 1.0 | < 1.0 | 2.5 |
| Lead, total | µg/L | 2.3 | 100 | 55 | 5.8 |
| Lead, dissolved | µg/L | < 2.0 | < 2.0 | < 2.0 | 5.8 |
| Mercury, total | µg/L | < 0.7 | < 0.7 | < 0.7 | 0.025 |
| Mercury, dissolved | µg/L | < 0.7 | < 0.7 | < 0.7 | 0.025 |
| Nickel, total | µg/L | 2.6 | 54 | 41 | 7.9 |
| Nickel, dissolved | µg/L | 3.5 | 26 | 39 | 7.9 |
| Zinc, total | µg/L | 10 | 300 | 220 | 76.6 |
| Zinc, dissolved | µg/L | 5.5 | 44 | 41 | 76.6 |
| PCBs, total | µg/L | < 0.11 | 121 | 41 | 0.03 |
| TSS | mg/L | 33 | 65 | 58 | --- |
| pH | standard units | 6.44 | 6.74 | 6.74 | 6.5 to 8.5 |
| Specific Conductance | µmhos/cm | 1,190 | 1,610 | 1,690 | --- |
| Temperature | degrees C | 12 | 15 | 14 | 21 |
| Turbidity | Ntu | 7 | 22.8 | 24.7 | Bkd. + 10 |

Note: All samples were collected 11/22/94.

^a Sample MW-2 is a field duplicate of MW-3.

^b WAC 173-201A-030 and WAC 173-201A-040.

^c Results above the Marine Water Quality Criteria (chapter 173-201A WAC) are shaded and shown in bold.

Table 3
Oline/Mather Auctioneers Preliminary Investigation
Intertidal ASR Laboratory Results

mg/kg

| Sample Number | Results of Analyses (mg/kg) | | | | | | | | | | TOC (%) | Total PCBs (ppm carbon) |
|---|-----------------------------|---------|--------|------------------|---------|--------|-------|------------|-----|-------|---------|-------------------------|
| | Arsenic | Cadmium | Copper | Lead | Mercury | Nickel | Zinc | Total PCBs | | | | |
| SD-03 #1 ^a | — ^b | 3.3 | — | 678 ^c | — | — | — | 0.13 | 5.1 | 2.55 | | |
| SD-03 #2 | — | 4.6 | — | 445 | — | — | — | 0.15 | 5.1 | 2.94 | | |
| SD-03 #3 | — | 5.5 | — | 515 | — | — | — | 0.09 | 5.1 | 1.76 | | |
| SD-13 #1 | — | 8.9 | — | 1,530 | — | — | — | 0.58 | 6.4 | 9.06 | | |
| SD-13 #2 | — | 8.3 | — | 1,540 | — | — | — | 0.22 | 6.4 | 3.44 | | |
| SD-13 #3 | — | 7.8 | — | 1,900 | — | — | — | 0.18 | 6.4 | 2.81 | | |
| SD-14 ^d #1 | — | 8.9 | — | 1,950 | — | — | — | 0.23 | 5.8 | 3.97 | | |
| SD-14 ^d #2 | — | 10.3 | — | 2,090 | — | — | — | 6.390 | 5.8 | 108.6 | | |
| SD-14 ^d #3 | — | 8.6 | — | 1,690 | — | — | — | 0.23 | 5.8 | 3.97 | | |
| SD-19 #1 | — | 12 | — | 2,850 | — | — | — | 0.14 | 4.6 | 3.04 | | |
| SD-19 #2 | — | 31 | — | 3,010 | — | — | — | 0.33 | 4.6 | 7.17 | | |
| SD-19 #3 | — | 11 | — | 2,720 | — | — | — | 0.34 | 4.6 | 7.39 | | |
| SD-24 #1 | — | 7.7 | — | 358 | — | — | — | 0.06 | 3.6 | 1.67 | | |
| SD-24 #2 | — | 2.8 | — | 427 | — | — | — | 0.06 | 3.6 | 1.67 | | |
| SD-24 #3 | — | 2.3 | — | 267 | — | — | — | 0.11 | 3.6 | 3.06 | | |
| Composite ^e | 44 | — | 3,890 | — | 1.3 | 130 | 3,550 | — | — | — | | |
| Sediment Quality Standards ^f | 57 | 5.1 | 390 | 450 | 0.41/59 | — | 410 | — | — | 12 | | |

Note: ^a Three replicates of each intertidal ASR sample, labeled #1, #2, and #3, were analyzed.
^b Not analyzed.
^c Results above Sediment Quality Standards are shaded and shown in bold.
^d Sample SD-14 is a field duplicate sample of SD-13.
^e Composite sample from SD-13, SD-3, SD-19, and SD-24.
^f Chapter 173-204 WAC.

ATTACHMENT A
TEST PIT AND MONITORING WELL LOGS

OLINE/MATHER AUCTIONEERS SITE TEST PIT LOGS

Test Pit TP-1

| | |
|-----------|---|
| 0.0 - 1.4 | Silty sand with gravel (SW), yellow brown. |
| 1.4 - 3.4 | ASR, dark brown to black. |
| 3.4 - 4.5 | Clayey silty (CL/ML), brownish gray, trace of gravel, trace of fine sand, organic material. |

Test Pit TP-2

| | |
|-----------|--|
| 0.0 - 4.0 | ASR in matrix of concrete blocks and rubble. |
| 4.0 - 5.5 | Clayey silt (CL/ML), bluish gray with black streaks. |

Test Pit TP-3

| | |
|-----------|---|
| 0.0 - 3.5 | Silty sand with gravel and cobbles (GW), greenish gray. |
|-----------|---|

Test Pit TP-4

| | |
|-----------|--|
| 0.0 - 1.8 | Silty sand with gravel (SW), yellowish brown to greenish gray. |
| 1.8 - 4.6 | ASR, dark brown to black. |
| 4.6 - 5.2 | Clayey silt with organic material. |

Test Pit TP-5

| | |
|-----------|--|
| 0.0 - 2.2 | Silty sand with gravel (SW), yellowish brown to greenish gray, trace of ASR at the base. |
| 2.2 - 4.3 | Clayey silt with organic material (ML), brownish gray streaked black. |

Test Pit TP-6

- 0.0 - 2.2 Silty sand with gravel (GW), yellowish brown to greenish gray, trace of ASR at the base.
- 2.2 - 4.5 Clayey silt with organic material (ML), brownish gray streaked black.

Test Pit TP-7

- 0.0 - 2.0 Silty sand with gravel and cobbles (SW), yellowish brown to greenish gray, cobbles to 5 inches.
- 2.0 - 5.8 ASR, dark brown to black.
- 5.8 - 7.0 Clayey silt (CL/ML), greenish gray to black, wood debris and organic material.

Test Pit TP-8

- 0.0 - 1.4 Silty sand with gravel (SW), yellowish brown.
- 1.4 - 3.3 Sandy silt with cobbles (ML), greenish gray, trace of gravel, trace of cobbles.

Test Pit TP-9

- 0.0 - 2.0 Silt (ML), yellowish brown, non-plastic silt.
- 2.0 - 3.9 Sandy silt (ML), bluish gray with black streaks, organic material.

Test Pit TP-10

- 0.0 - 0.7 Silty sand with gravel and cobbles (SW), yellowish brown.
- 0.7 - 1.1 ASR.
- 1.1 - 4.2 Sandy silt with gravel and cobbles (ML), bluish gray with black streaks, organic and wood debris.

Test Pit TP-11

- 0.0 - 1.2 Silty sand with gravel (SW), yellowish brown to bluish gray.
- 1.2 - 2.9 ASR.
- 2.9 - 6.0 Sandy silt with cobbles (ML), bluish gray with black streaks, few gravel.

Test Pit TP-12

0.0 - 0.9 Silty sand with gravel (SW), yellowish brown.
0.9 - 4.0 ASR.
4.0 - 5.0 Sandy silt with gravel and cobbles (SW). Bluish gray with black streaks, organic material.

Test Pit TP-13

0.0 - 0.6 Silty sand (SW), medium to purplish gray, fine to coarse angular sand.
0.6 - 2.0 Silty sand with gravel (SW), yellowish brown.
2.0 - 4.3 Sandy silt with gravel and cobbles (ML), bluish gray.

Test Pit TP-14

0.0 - 0.9 Silty sand with gravel (SW), yellowish brown to bluish gray.
0.9 - 2.2 ASR.
2.2 - 4.5 Other fill, decaying vegetation, organic material.
4.5 - 5.0 Sandy silt (ML), tan to bluish gray with black streaks.

Test Pit TP-15

0.0 - 1.4 Sand with gravel (SW), yellowish brown.
1.4 - 2.0 ASR.
2.0 - 4.3 Fine sand (SP), yellowish brown to bluish gray, water at bottom of test pit.

Test Pit TP-16

0.0 - 0.8 Silty sand with gravel (SW), yellowish brown.
0.8 - 1.1 ASR.
1.1 - 3.3 Sand (SP), medium gray, fine sand, trace fines, trace gravel.

Test Pit TP-17

0.0 - 1.1 Silty sand (SW), yellowish brown changing to bluish gray at base.
1.1 - 3.5 Sand (SP), black to dark gray, top 0.9 ft. contains wood debris.

Test Pit TP-18

0.0 - 1.3 Silty sand with gravel and cobbles (SW), yellowish brown changing to bluish gray.
1.3 - 6.0 ASR.
6.0 - 8.0 Sandy silt (ML), tan with streaks of dark gray to black.

Test Pit TP-19

0.0 - 2.0 Silty sand with gravel (SW), yellowish brown changing to bluish gray.
2.0 - 5.8 ASR, dark brown to black, water seeping in at 4.7 feet.
5.8 - 6.5 Clayey silt (CL/ML), brownish gray with black streaks and wood debris.

Test Pit TP-20

0.0 - 1.9 Silty sand (SW), yellowish brown to bluish gray.
1.9 - 2.4 ASR.
2.4 - 4.4 Sandy silt (ML), brownish gray.

Test Pit TP-21

0.0 - 2.9 Silty sand with gravel (SW), yellowish brown to bluish gray.
2.9 - 3.5 ASR.
3.5 - 5.5 Clayey silt (CL/ML), brownish gray with black streaks, organic material.

Test Pit TP-22

0.0 - 1.2 Silty sand (SW), purplish gray streaked brown, fine to coarse angular sand.
1.2 - 2.0 Silty sand (SW), greenish gray.
2.0 - 8.0 ASR.
8.0 - 8.5 Sandy silt (ML), grayish brown, wood chips.

Test Pit TP-23

0.0 - 0.8 Silty sand (SW), gray, angular, coarse sand.
0.8 - 4.0 Silty sand with gravel (SW), greenish gray, construction debris, water seep at 3.1 ft.

Test Pit TP-24

| | |
|-----------|---|
| 0.0 - 1.6 | Silty sand with gravel and cobbles (SW), yellowish brown changing to bluish gray. |
| 1.6 - 2.7 | ASR. |
| 2.7 - 3.8 | Sand (SP), gray, fine sand. |
| 3.8 - 4.2 | Silt (ML), brown, organic material. |

Test Pit TP-25

| | |
|-----------|---|
| 0.0 - 1.7 | Silty sand with gravel and cobbles (SW), yellowish brown changing to bluish gray. |
| 1.7 - 7.4 | ASR. |
| 7.4 - 8.3 | Clayey silt (CL/ML), grayish brown. |

Test Pit TP-26

| | |
|-----------|--|
| 0.0 - 0.4 | Silty sand (SW), purplish gray, angular coarse sand. |
| 0.4 - 2.5 | Silty sand with gravel and cobbles (SW), yellowish brown. |
| 2.4 - 4.1 | ASR. |
| 4.1 - 5.4 | Clayey silt (CL/ML), tan with black streaks, organic material. |

Test Pit TP-27

| | |
|-----------|---|
| 0.0 - 2.2 | Silty sand with gravel and cobbles (SW), yellowish brown changing to greenish gray. |
| 2.2 - 4.7 | Clayey silt (CL/ML), brownish gray with black streaks, organic and other debris. |

Test Pit TP-28

| | |
|-----------|--|
| 0.0 - 2.1 | Sand (SP), yellowish brown, trace of gravel and cobbles. |
| 2.1 - 6.9 | ASR. |
| 6.9 - 7.6 | Clayey silt (CL/ML), brownish gray with black streaks. |

Test Pit TP-29

| | |
|-----------|--|
| 0.0 - 0.5 | Silty sand with gravel (SW), yellowish brown, trace yard scrap and debris at 0.5 ft. |
| 0.5 - 4.7 | Sand (SP), yellowish, brown to medium gray, water seep at 3.6 ft. |

Test Pit TP-30

0.0 - 0.6 Silty sand with gravel (SW), yellowish brown.
0.6 - 4.8 Sand (SP), medium gray, wood block at 3.7 ft., water seep at 3.3 ft.

Test Pit TP-31

0.0 - 3.2 Gravelly sand (SW), yellowish brown, trace of fines.
3.2 - 3.7 Sand (SP), medium gray, fine sand.
3.7 - 4.0 Saw shavings, yellowish brown.
4.0 - 5.8 Clayey silt (CL/ML), grayish brown.

Test Pit TP-32

0.0 - 1.1 Silty sand with gravel and cobbles (SW), yellowish brown to bluish gray.
1.1 - 5.6 ASR, water flowing in at 4.6 ft.
5.6 - 6.8 Clayey silt (CL/ML), brownish gray to greenish gray, organic material.

Test Pit TP-33

0.0 - 0.9 Silty sand with gravel and cobbles (SW), yellowish brown changing to bluish gray with depth.
0.9 - 6.3 ASR.
6.3 - 7.4 Clayey silt (CL/ML), brownish gray to greenish gray, organic material.

Test Pit TP-34

0.0 - 2.5 Silty sand with gravel and cobbles (SW), yellowish brown changing to greenish gray with depth.
2.5 - 8.3 ASR.
8.3 - 8.8 Sand (SP), black, fine sand.

NOTE:

- 1) ASR - Automobile Shredder Residue mixed with various amounts of soil, and other debris.
- 2) All distances are in feet.

LOG OF EXPLORATORY BORING

PROJECT NAME Oline Site/General Metals
LOCATION
DRILLED BY Tacoma Pump and Drilling
DRILL METHOD Hollow Stem Auger (6" ID)
LOGGED BY Greg Mack

BORING NO. MW- 1
PAGE 1 OF 1
GROUND ELEV.
TOTAL DEPTH 7.50'
DATE COMPLETED 11/15/94

| SAMPLE NUMBER | PID (in ppm) | BLOWS PER 6 INCHES | GROUND WATER LEVELS | DEPTH IN FEET | SAMPLES | LITHOLOGIC COLUMN | WELL DETAILS | LITHOLOGIC DESCRIPTION |
|---------------|--------------|--------------------|---------------------|---------------|---------|-------------------|--------------|--|
| TOP | | 25-50-45 | | | | | | 0 to 4.0 feet: SAND (SP), dark gray, fine sand, 5 percent of grains red color. |
| #2 | | 30-39-42 | | | | | | |
| #3 | | 15-18-12 | | | | | | @ 3.5 feet: looks wet. |
| #4 | | 5-6-10 | | 5 | | | | 4.0 to 7.0 feet: WOOD DEBRIS, yellowish brown, small wood chips or saw shavings. |
| #5a/5b | | 5-4-5 | | | | | | 7.0 to 7.5 feet: CLAYEY SILT (CL/ML), brownish gray with black streaks, rapid dilatency. |
| | | | | 10 | | | | Total depth drilled = 7.0 feet. Total depth sampled = 7.5 feet. |
| | | | | 15 | | | | WELL COMPLETION DETAILS: 0 to 4.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC blank riser pipe. 4.0 to 7.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.020-inch machined slots and a 2-inch-diameter threaded end cap. |
| | | | | 20 | | | | 0 to 1.0 feet: Flush-mount casing. 1.0 to 3.0 feet: Coarse Baroid Holeplug. 3.0 to 7.0 feet: 20 - 40 Colorado Silica Sand. |

REMARKS



LOG OF EXPLORATORY BORING

PROJECT NAME **Oline Site/General Metals**
 LOCATION
 DRILLED BY **Tacoma Pump and Drilling**
 DRILL METHOD **Hollow Stem Auger (6" ID)**
 LOGGED BY **Greg Mack**

BORING NO. **MW- 3**
 PAGE **1 OF 1**
 GROUND ELEV.
 TOTAL DEPTH **12.00'**
 DATE COMPLETED **11/15/94**

| SAMPLE NUMBER | PID (in ppm) | BLOWS PER 6 INCHES | GROUND WATER LEVELS | DEPTH IN FEET | SAMPLES | LITHOLOGIC COLUMN | WELL DETAILS | LITHOLOGIC DESCRIPTION |
|---------------|--------------|--------------------|---------------------|---------------|---------|-------------------|--------------|--|
| TOP | | 20-25-45 | | | | | | 0 to 0.5 foot: SILTY SAND (SP) , medium gray to purplish gray, medium to coarse angular sand, little to few fines. |
| #2 | | 45-20-35 | | | | | | 0.5 to 2.0 feet: SAND (SP) , yellowish brown, fine sand. |
| #3 | | 10-20-14 | | | | | | 2.0 to 2.5 feet: SILTY SAND with GRAVEL (SW) , yellowish brown, fine to coarse sand, gravel to 3-inches. |
| | | 9-14-27 | | 5 | | | | 2.5 to 9.0 feet: ASR , dark brown to black, automotive residue, with sand and other debris. @ 5.5 feet: 0.3-inch lense of clayey silt. @ 6.5 feet: wet. |
| #4 | | 14-35-50 | | | | | | |
| | | 20-28-10 | | | | | | |
| | | 14-10-10 | | 10 | | | | 9.0 to 12.0 feet: CLAYEY SILT (CL/ML) , grayish brown with black streaks, medium plasticity, low toughness, rapid dialating. No returns. |
| #5 | | | | | | | | |
| | | | | 15 | | | | |
| | | | | 20 | | | | |
| | | | | | | | | Total depth drilled = 10.5 feet. Total depth sampled = 12.0 feet. WELL COMPLETION DETAILS: 0 to 4.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC blank riser pipe. 4.0 to 9.0 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.020-inch machined slots and a 2-inch-diameter threaded end cap. 0 to 1.0 feet: Surface mount well box. 1.0 to 3.0 feet: Coarse Baroid Holeplug. 3.0 to 9.5 feet: 20 - 40 Colorado Silica Sand. |

REMARKS



ATTACHMENT B

SURVEY MAP

ATTACHMENT C
LABORATORY DATA SHEETS



LABORATORIES

MMI
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/20/94 Page 1
Date Received: 11/15/94
Laboratory No.: 94-12612-1

Sample Description: #0226-002.01 OLINE SITE: TP-1ASR (SOLID) 11-09-94 @ 1200 HRS
SAMPLED BY WILLIAM R. HALDEMAN

Iron

1.8 %

Note: Iron content determined by passing a magnet over the sample and weighing particles > 2mm in diameter prior to milling or splitting the sample for analysis.

Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

MMI
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313


Date Reported: 12/20/94 Page 1
Date Received: 11/15/94
Laboratory No.: 94-12612-2

Sample Description: #0226-002.01 OLINE SITE: TP-2ASR (SOLID) 11-09-94 @ 1400 HRS
SAMPLED BY WILLIAM R. HALDEMAN

Iron

6.7 %

Note: Iron content determined by passing a magnet over the sample and weighing particles > 2mm in diameter prior to milling or splitting the sample for analysis.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



LABORATORIES

MMI
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/20/94
Date Received: 11/15/94
Laboratory No.: 94-12612-1A

TCLP TOXICITY

Sample Description: #0226-002.01 OLINE SITE: TP-1ASR (SOLID) SAMPLE #1, 11-09-94 @ 1200
HRS SAMPLED BY WILLIAM R. HALDEMAN

| <u>Constituents</u> | <u>Sample Results</u> mg/liter | <u>Method</u> <u>Detection</u> <u>Limit</u> | <u>Analytical</u> <u>Method</u> |
|---------------------|-----------------------------------|---|------------------------------------|
| Cadmium | 0.31 | 0.1 | SW-6010 |
| Lead | 2.7 | 0.5 | SW-6010 |

Comment: All extract contaminants reported in mg/liter on a filtrate basis.
Sample analyzed in accordance with EPA's TCLP 18-hour extraction test.

REFERENCES:

SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material
removed during sample splitting.

B C LABORATORIES, INC.

Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

MMI
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/20/94
 Date Received: 11/15/94
 Laboratory No.: 94-12612-1B

TCLP TOXICITY

Sample Description: #0226-002.01 OLINE SITE: TP-1ASR (SOLID) SAMPLE #2, 11-09-94 @ 1200
 HRS SAMPLED BY WILLIAM R. HALDEMAN

| <u>Constituents</u> | <u>Sample Results</u> mg/liter | <u>Method</u> <u>Detection</u> <u>Limit</u> | <u>Analytical</u> <u>Method</u> |
|---------------------|-----------------------------------|---|------------------------------------|
| Cadmium | 0.29 | 0.1 | SW-6010 |
| Lead | 2.9 | 0.5 | SW-6010 |

Comment: All extract contaminants reported in mg/liter on a filtrate basis.
 Sample analyzed in accordance with EPA's TCLP 18-hour extraction test.

REFERENCES:

SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material
 removed during sample splitting.

B C LABORATORIES, INC.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

LABORATORIES

MMI
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/20/94
Date Received: 11/15/94
Laboratory No.: 94-12612-1C

TCLP TOXICITY

Sample Description: #0226-002.01 OLINE SITE: TP-1ASR (SOLID) SAMPLE #3, 11-09-94 @ 1200
HRS SAMPLED BY WILLIAM R. HALDEMAN

| <u>Constituents</u> | <u>Sample Results</u> <u>mg/liter</u> | <u>Method</u> <u>Detection</u> <u>Limit</u> | <u>Analytical</u> <u>Method</u> |
|---------------------|--|---|------------------------------------|
| Cadmium | 0.29 | 0.1 | SW-6010 |
| Lead | 2.0 | 0.5 | SW-6010 |


Comment: All extract contaminants reported in mg/liter on a filtrate basis.
Sample analyzed in accordance with EPA's TCLP 18-hour extraction test.

REFERENCES:

SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material
removed during sample splitting.

B C LABORATORIES, INC.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



LABORATORIES

MMI
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/20/94
Date Received: 11/15/94
Laboratory No.: 94-12612-2A

TCLP TOXICITY

Sample Description: #0226-002.01 OLINE SITE: TP-2ASR (SOLID) SAMPLE #1, 11-09-94 @ 1400
HRS SAMPLED BY WILLIAM R. HALDEMAN

| <u>Constituents</u> | <u>Sample Results</u> <u>mg/liter</u> | <u>Method</u> <u>Detection</u> <u>Limit</u> | <u>Analytical</u> <u>Method</u> |
|---------------------|--|---|------------------------------------|
| Cadmium | None Detected | 0.1 | SW-6010 |
| Lead | 2.2 | 0.5 | SW-6010 |

Comment: All extract contaminants reported in mg/liter on a filtrate basis.
Sample analyzed in accordance with EPA's TCLP 18-hour extraction test.

REFERENCES:

SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material
removed during sample splitting.

B C LABORATORIES, INC.

Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

LABORATORIES

MMI
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/20/94
 Date Received: 11/15/94
 Laboratory No.: 94-12612-2B

TCLP TOXICITY

Sample Description: #0226-002.01 OLINE SITE: TP-2ASR (SOLID) SAMPLE #2, 11-09-94 @ 1400
 HRS SAMPLED BY WILLIAM R. HALDEMAN

| <u>Constituents</u> | <u>Sample Results</u> <u>mg/liter</u> | <u>Method</u> <u>Detection</u> <u>Limit</u> | <u>Analytical</u> <u>Method</u> |
|---------------------|--|---|------------------------------------|
| Cadmium | None Detected | 0.1 | SW-6010 |
| Lead | None Detected | 0.5 | SW-6010 |

Comment: All extract contaminants reported in mg/liter on a filtrate basis.
 Sample analyzed in accordance with EPA's TCLP 18-hour extraction test.

REFERENCES:

SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material
 removed during sample splitting.

B C LABORATORIES, INC:


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



LABORATORIES

MMI
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/20/94
Date Received: 11/15/94
Laboratory No.: 94-12612-2C

TCLP TOXICITY

Sample Description: #0226-002.01 OLINE SITE: TP-2ASR (SOLID) SAMPLE #3, 11-09-94 @ 1400
HRS SAMPLED BY WILLIAM R. HALDEMAN

| <u>Constituents</u> | <u>Sample Results</u> mg/liter | <u>Method</u> <u>Detection</u> <u>Limit</u> | <u>Analytical</u> <u>Method</u> |
|---------------------|-----------------------------------|---|------------------------------------|
| Cadmium | None Detected | 0.1 | SW-6010 |
| Lead | None Detected | 0.5 | SW-6010 |

Comment: All extract contaminants reported in mg/liter on a filtrate basis.
Sample analyzed in accordance with EPA's TCLP 18-hour extraction test.

REFERENCES:

SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material
removed during sample splitting.

B C LABORATORIES, INC.

Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

MMI
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/22/94
 Lab #: 94-12612-1A

Sample Description: #0226-002.01 OLINE SITE: TP-1ASR (SOLID) SAMPLE #1, 11-09-94 @ 1200
 HRS SAMPLED BY WILLIAM R. HALDEMAN

Test Method: EPA Method 8080

Sample Matrix: Solid waste

Date Sample
 Collected:
 11/09/94

Date Sample
 Received @ Lab:
 11/15/94

Date Analysis
 Completed:
 12/15/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.6 |
| PCB-1221 | None Detected | mg/kg | 0.6 |
| PCB-1232 | None Detected | mg/kg | 0.6 |
| PCB-1242 | 4.0 | mg/kg | 0.6 |
| PCB-1248 | None Detected | mg/kg | 0.6 |
| PCB-1254 | 6.8 | mg/kg | 0.6 |
| PCB-1260 | None Detected | mg/kg | 0.6 |
| Total PCB's (Summation) | 10.8 | mg/kg | 0.6 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection limits were raised due to high concentration of target analytes requiring sample dilution.

Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

MMI
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/22/94
 Lab #: 94-12612-1B

Sample Description: #0226-002.01 OLINE SITE: TP-1ASR (SOLID) SAMPLE #2, 11-09-94 @ 1200 HRS SAMPLED BY WILLIAM R. HALDEMAN

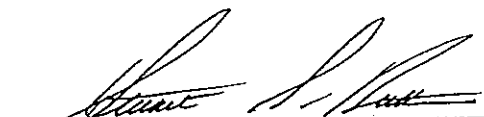
Test Method: EPA Method 8080

Sample Matrix: Solid waste

| | | |
|------------------------------------|---|--------------------------------------|
| Date Sample Collected: 11/09/94 | Date Sample Received @ Lab: 11/15/94 | Date Analysis Completed: 12/15/94 |
|------------------------------------|---|--------------------------------------|

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.6 |
| PCB-1221 | None Detected | mg/kg | 0.6 |
| PCB-1232 | None Detected | mg/kg | 0.6 |
| PCB-1242 | 3.0 | mg/kg | 0.6 |
| PCB-1248 | None Detected | mg/kg | 0.6 |
| PCB-1254 | 4.8 | mg/kg | 0.6 |
| PCB-1260 | None Detected | mg/kg | 0.6 |
| Total PCB's (Summation) | 7.8 | mg/kg | 0.6 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection limits were raised due to high concentration of target analytes requiring sample dilution.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

MMI
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/22/94
 Lab #: 94-12612-1C

Sample Description: #0226-002.01 OLINE SITE: TP-1ASR (SOLID) SAMPLE #3, 11-09-94 @ 1200
 HRS SAMPLED BY WILLIAM R. HALDEMAN

Test Method: EPA Method 8080

Sample Matrix: Solid waste


Date Sample
 Collected:
 11/09/94

Date Sample
 Received @ Lab:
 11/15/94

Date Analysis
 Completed:
 12/15/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.6 |
| PCB-1221 | None Detected | mg/kg | 0.6 |
| PCB-1232 | None Detected | mg/kg | 0.6 |
| PCB-1242 | 5.4 | mg/kg | 0.6 |
| PCB-1248 | None Detected | mg/kg | 0.6 |
| PCB-1254 | 9.2 | mg/kg | 0.6 |
| PCB-1260 | None Detected | mg/kg | 0.6 |
| Total PCB's (Summation) | 14.6 | mg/kg | 0.6 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection limits were raised due to high concentration of target analytes requiring sample dilution.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

MMI
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/22/94
 Lab #: 94-12612-2A

Sample Description: #0226-002.01 OLINE SITE: TP-2ASR (SOLID) SAMPLE #1, 11-09-94 @ 1400
 HRS SAMPLED BY WILLIAM R. HALDEMAN

Test Method: EPA Method 8080

Sample Matrix: Solid waste


Date Sample
 Collected:
 11/09/94

Date Sample
 Received @ Lab:
 11/15/94

Date Analysis
 Completed:
 12/15/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.2 |
| PCB-1221 | None Detected | mg/kg | 0.2 |
| PCB-1232 | None Detected | mg/kg | 0.2 |
| PCB-1242 | None Detected | mg/kg | 0.2 |
| PCB-1248 | None Detected | mg/kg | 0.2 |
| PCB-1254 | 0.94 | mg/kg | 0.2 |
| PCB-1260 | None Detected | mg/kg | 0.2 |
| Total PCB's (Summation) | 0.94 | mg/kg | 0.2 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection limits were raised due to high concentration of target analytes requiring sample dilution.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



LABORATORIES

PCB Analysis

MMI
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date of
Report: 12/22/94
Lab #: 94-12612-2B

Sample Description: #0226-002.01 OLINE SITE: TP-2ASR (SOLID) SAMPLE #2, 11-09-94 @ 1400
HRS SAMPLED BY WILLIAM R. HALDEMAN

Test Method: EPA Method 8080

Sample Matrix: Solid waste


Date Sample
Collected:
11/09/94

Date Sample
Received @ Lab:
11/15/94

Date Analysis
Completed:
12/15/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.2 |
| PCB-1221 | None Detected | mg/kg | 0.2 |
| PCB-1232 | None Detected | mg/kg | 0.2 |
| PCB-1242 | 0.29 | mg/kg | 0.2 |
| PCB-1248 | None Detected | mg/kg | 0.2 |
| PCB-1254 | 1.2 | mg/kg | 0.2 |
| PCB-1260 | None Detected | mg/kg | 0.2 |
| Total PCB's (Summation) | 1.49 | mg/kg | 0.2 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
Detection limits were raised due to high concentration of target analytes requiring sample dilution.


Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

MMI
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/22/94
 Lab #: 94-12612-2C

Sample Description: #0226-002.01 OLINE SITE: TP-2ASR (SOLID) SAMPLE #3, 11-09-94 @ 1400
 HRS SAMPLED BY WILLIAM R. HALDEMAN

Test Method: EPA Method 8080

Sample Matrix: Solid waste


Date Sample
 Collected:
 11/09/94

Date Sample
 Received @ Lab:
 11/15/94

Date Analysis
 Completed:
 12/15/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.2 |
| PCB-1221 | None Detected | mg/kg | 0.2 |
| PCB-1232 | None Detected | mg/kg | 0.2 |
| PCB-1242 | None Detected | mg/kg | 0.2 |
| PCB-1248 | None Detected | mg/kg | 0.2 |
| PCB-1254 | 0.89 | mg/kg | 0.2 |
| PCB-1260 | None Detected | mg/kg | 0.2 |
| Total PCB's (Summation) | 0.89 | mg/kg | 0.2 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection limits were raised due to high concentration of target analytes requiring sample dilution.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

MMI
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/20/94 Page 1
Date Received: 11/15/94
Laboratory No.: 94-12612-1A


Sample Description: #0226-002.01 OLINE SITE: TP-1ASR (SOLID) SAMPLE #1, 11-09-94 @ 1200
HRS SAMPLED BY WILLIAM R. HALDEMAN

CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | <u>Units</u> | <u>Method Detection Limit</u> | <u>Method</u> |
|---------------------|-----------------------|--------------|---------------------------------------|---------------|
| Moisture | 17. | % | 0.05 | BC |

REFERENCES:

BC = BC Laboratory In-House Method



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



LABORATORIES

MMI
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/20/94 Page 1
Date Received: 11/15/94
Laboratory No.: 94-12612-1B

Sample Description: #0226-002.01 OLINE SITE: TP-1ASR (SOLID) SAMPLE #2, 11-09-94 @ 1200
HRS SAMPLED BY WILLIAM R. HALDEMAN

CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | <u>Units</u> | <u>Method Detection Limit</u> | <u>Method</u> |
|---------------------|-----------------------|--------------|---------------------------------------|---------------|
| Moisture | 18. | % | 0.05 | BC |

REFERENCES:

BC = BC Laboratory In-House Method

Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



LABORATORIES

MMI
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

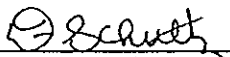
Date Reported: 12/20/94 Page 1
Date Received: 11/15/94
Laboratory No.: 94-12612-1C

Sample Description: #0226-002.01 OLINE SITE: TP-1ASR (SOLID) SAMPLE #3, 11-09-94 @ 1200
HRS SAMPLED BY WILLIAM R. HALDEMAN

CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | <u>Units</u> | <u>Method Detection Limit</u> | <u>Method</u> |
|---------------------|-----------------------|--------------|---------------------------------------|---------------|
| Moisture | 16. | % | 0.05 | BC |

REFERENCES:
BC = BC Laboratory In-House Method



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

MMI
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/20/94 Page 1
 Date Received: 11/15/94
 Laboratory No.: 94-12612-2A

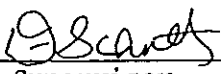
Sample Description: #0226-002.01 OLINE SITE: TP-2ASR (SOLID) SAMPLE #1, 11-09-94 @ 1400
 HRS SAMPLED BY WILLIAM R. HALDEMAN

CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | <u>Units</u> | <u>Method Detection Limit</u> | <u>Method</u> |
|---------------------|-----------------------|--------------|---------------------------------------|---------------|
| Moisture | 17. | % | 0.05 | BC |

REFERENCES:

BC = BC Laboratory In-House Method


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

MMI
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/20/94 Page 1
Date Received: 11/15/94
Laboratory No.: 94-12612-2B


Sample Description: #0226-002.01 OLINE SITE: TP-2ASR (SOLID) SAMPLE #2, 11-09-94 @ 1400
HRS SAMPLED BY WILLIAM R. HALDEMAN

CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | <u>Units</u> | <u>Method Detection Limit</u> | <u>Method</u> |
|---------------------|-----------------------|--------------|---------------------------------------|---------------|
| Moisture | 15. | % | 0.05 | BC |

REFERENCES:

BC = BC Laboratory In-House Method



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

MMI
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/20/94 Page 1
 Date Received: 11/15/94
 Laboratory No.: 94-12612-2C

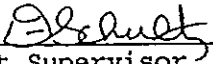
Sample Description: #0226-002.01 OLINE SITE: TP-2ASR (SOLID) SAMPLE #3, 11-09-94 @ 1400
 HRS SAMPLED BY WILLIAM R. HALDEMAN

CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | <u>Units</u> | <u>Method Detection Limit</u> | <u>Method</u> |
|---------------------|-----------------------|--------------|---------------------------------------|---------------|
| Moisture | 15. | % | 0.05 | BC |

REFERENCES:

BC = BC Laboratory In-House Method


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



Northwest, Inc.

94-12612

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

DATE 11/10/94 PAGE 1 OF 1

PROJECT NAME Online Site # 0226-002.0
 PROJECT Site Characterization, 2120 Marine View Dr, Tacoma
 COMPANY/ADDRESS EMCON NW
18912 N. Creek Parkway, Suite 100
Bothell, WA 98011 PHONE 206-485-5200
 SAMPLERS SIGNATURE William R. Haldeman

| SAMPLE I.D. | DATE | TIME | LAB I.D. | SAMPLE MATRIX |
|-------------|---------|-------|----------|---------------|
| TP-1ASR | 11/9/94 | 12:00 | | Solid |
| TP-2ASR | 11/9/94 | 14:00 | | Solid |

| PETROLEUM HCS | | ORGANIC | | ORGANIC METALS/INORGANICS | |
|-------------------|-----|--|-----------|--|--|
| TPH - HClD State: | | TPH - G State: | BTEX | pH, Cond Cl, SO ₄ , PO ₄ F, Br | |
| TPH - D State: | OIL | TPH - 418.1 State: | | NO ₂ NO ₃ (Circle) | |
| TPH - Other | | Halogenated or Aromatic Volatiles 601/8010 | 602/8020 | NH ₃ - N, COD, Total-P TKN, TOC | |
| | | Volatile Organics GC/MS 624-8240 | | TOX (Circle) | |
| | | Base/Neu/Acid Organics GC/MS 625/8270 | | | |
| | | Pesticides/PCBS 8080 PCB ONLY | | | |
| | | PAH 8100 GC | | | |
| | | 8310 HPCL | | | |
| | | TCLP Metals | Semi VOA | | |
| | | Metals Total List Below | Pest/Herb | | |
| | | Cyanide | DISS | | |
| | | | | | |

RELINQUISHED BY: William R. Haldeman
 Signature
 Printed Name
 Firm
 Date/Time 11/10/94 2:45 PM

RECEIVED BY: Breanna Chance
 Signature
 Printed Name
 Firm
 Date/Time 10:00

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/MMS, MSD, as required, may be changed as samples) --
 III. Data Validation Report (includes All Raw Data)
 IV. CIP Deferrable Report

INVOICE INFORMATION:
 P.O.# _____
 Bill To Mr. Norm Webb
MME
4927 NW Forest Ave
Bothell, OR
97210

SAMPLE RECEIPT:
 Shipping Via: UPS
 Shipping to: BC Laboratories
 Condition: _____
 Lab No: _____

RELINQUISHED BY: _____
 Signature
 Printed Name
 Firm
 Date/Time

RECEIVED BY: _____
 Signature
 Printed Name
 Firm
 Date/Time

SPECIAL INSTRUCTIONS/COMMENTS:
 1) 4 boxes total
 2) TCLP Cd by Methods 1311/6010, TCLP Pb by Methods 1311/7421
 3) Follow standard general methods of Tacoma ASRA (staff) for methods (attached or sent under separate cover) - run all sample through the hammermill - analyze in triplicate

| NUMBER OF CONTAINERS | TPH - HClD State: | TPH - G State: | TPH - D State: | TPH - 418.1 State: | TPH - Other | Halogenated or Aromatic Volatiles 601/8010 | 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 | Metals Total 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) | REMARKS | |
|----------------------|-------------------|----------------|----------------|--------------------|-------------|--|----------------------------------|---------------------------------------|-------------------------------|-------------|-----------|-------------|----------|-------------------------|---------|--|--|--|--------------|---------|-----------|
| 2 | | | | | | | | | | | | | | | | | | | | | See below |
| 2 | | | | | | | | | | | | | | | | | | | | | see below |

Call William
 Holdover -
 ask about Fe
 Remove - correct in
 11-16-94
 11-16-94
 11-16-94



B C LABORATORIES
QUALITY CONTROL REPORT
 (Instrumental & Blank Parameters)

LABORATORIES

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 NORM WEBB

Date of Report: 01/06/95
 Sample Matrix: SOLID

Samples Affected: 94-12612-1A, 94-12612-1B, 94-12612-1C, 94-12612-2A,
 94-12612-2B & 94-12612-2C

| Constituents | ICV % Found | | CCV % Found | | % Found Control Limits | | CCB Readings | | Method Blank Readings | |
|--------------|-------------|-------|-------------|--------|------------------------|--------|--------------|-------|-----------------------|-------|
| | Before | After | Before | After | Before | After | Before | After | Units | Units |
| Cadmium | 104. | 105. | < 0.01 | < 0.01 | 90 - 110 | < 0.01 | mg/L | < 0.1 | mg/L | < 0.1 |
| Lead | 106. | 108. | < 0.05 | < 0.05 | 90 - 110 | < 0.05 | mg/L | < 0.5 | mg/L | < 0.5 |

ICV = Initial Calibration Verification; CCV = Continuing Calibration Verification; CCB = Continuing Calibration Blank
 Quality Control Officer

[Signature]



LABORATORIES
GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 NORM WEBB

B C LABORATORIES
QUALITY CONTROL REPORT
 (Precision & Accuracy)

Date of Report: 01/06/95
 Sample Matrix: SOLID

Samples Affected: 94-12612-1A, 94-12612-1B, 94-12612-1C, 94-12612-2A,
 94-12612-2B & 94-12612-2C

| Constituents | QC Sample ID | Sample Result | Sample Duplicate | MS Result | MSD Result | MS Spike Level | MSD Spike Level | Units | Sample R.P.D. | Spike R.P.D. | Precision Control | | MSD % Rec | Accuracy Control Limits |
|--------------|-----------------|------------------|---------------------|--------------|---------------|----------------------|-----------------------|-------|------------------|-----------------|----------------------|-------|--------------|-------------------------------|
| | | | | | | | | | | | Limits | % Rec | | |
| Cadmium | TC-13625-4 | < 0.1 | < 0.1 | 0.9932 | 0.9969 | 1.000 | 1.000 | mg/L | <PQL | 0. | 20 | 100. | 101. | 80 - 120 |
| Lead | TC-13625-4 | < 0.5 | < 0.5 | 5.064 | 5.047 | 5.000 | 5.000 | mg/L | <PQL | 0. | 20 | 101. | 101. | 80 - 120 |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer



B C LABORATORIES
QUALITY CONTROL REPORT
 (Instrumental & Blank Parameters)
 METHOD 8080 - PCB'S

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 NORM WEBB

Date of Report: 01/06/95
 Sample Matrix: SOLIDWASTE

Samples Affected: 94-12612-1A, 94-12612-1B, 94-12612-1C, 94-12612-2A,
 94-12612-2B & 94-12612-3C

| Constituents | ICV | | CCV | | % Found Control Limits | CCB | | Units | CCB | | Units | Method Blank Readings | | Units |
|--------------|---------|---------|---------|---------|------------------------------|--------------------|-------------------|-------|-------------------|--------------------|-------|-----------------------------|--------|-------|
| | % Found | % Found | % Found | % Found | | Readings Before | Readings After | | Readings After | Readings Before | | Readings After | mg/L | |
| PCB-1260 | 103. | 91. | 90. | 90. | 85 - 115 | < 0.02 | < 0.02 | mg/L | < 0.02 | < 0.02 | mg/L | < 0.01 | < 0.01 | mg/kg |

ICV = Initial Calibration Verification; CCV = Continuing Calibration Verification; CCB = Continuing Calibration Blank
 Quality Control Officer

[Signature]



LABORATORIES

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
NORM WEBB

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
METHOD 8080 - PCB'S

Date of Report: 01/06/95
Sample Matrix: SOLIDWASTE

Samples Affected: 94-12612-1A, 94-12612-1B, 94-12612-1C, 94-12612-2A,
94-12612-2B & 94-12612-3C

| Constituents | QC Sample ID | Sample Result | MS Result | MSD Result | MS Spike Level | MSD Spike Level | Units | Spike R.P.D. | Precision Control Limits | MS % Rec | MSD % Rec | Accuracy Control Limits |
|---------------|-----------------|------------------|--------------|---------------|----------------------|-----------------------|-------|-----------------|--------------------------------|-------------|--------------|-------------------------------|
| | | | | | | | | | | | | |
| PCB | 13625-4 | < 0.01 | 0.57 | 0.55 | 0.80 | 0.80 | mg/kg | 4. | 20 | 71. | 68. | 64 - 117 |
| Surrogate DCB | 12612-1A | | | | | | | | | NR | | 60 - 140 |
| Surrogate DCB | 12612-1B | | | | | | | | | 106. | | |
| Surrogate DCB | 12612-1C | | | | | | | | | 129. | | |
| Surrogate DCB | 12612-2A | | | | | | | | | 103. | | |
| Surrogate DCB | 12612-2B | | | | | | | | | 109. | | |
| Surrogate DCB | 12612-2C | | | | | | | | | 103. | | |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

NR - Not Recovered due to dilution.

Quality Control Officer

LABORATORIES

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94 Page 1
 Date Received: 11/16/94
 Laboratory No.: 94-12672-1

Sample Description: #0226-002.01 DON OLINE SITE: TP-1S (SOIL) 11-09-94 @ 1230 HRS
 SAMPLED BY GREGORY

CHEMICAL ANALYSIS

| Constituents | Sample Results | | Units | Method | Method |
|---------------|----------------|---------------|-------|-----------|---------|
| | As Received | Dry Basis | | Detection | |
| | | | | Limit | |
| Moisture | 29. | | % | 0.05 | BC |
| Total Cadmium | None Detected | None Detected | mg/kg | 0.5 | SW-6010 |
| Total Lead | 6.2 | 8.8 | mg/kg | 0.5 | SW-7421 |

REFERENCES:

- BC = BC Laboratory In-House Method
- SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods", EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection limit based on "As Received" sample.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94 Page 1
 Date Received: 11/16/94
 Laboratory No.: 94-12672-2

Sample Description: #0226-002.01 DON OLINE SITE: TP-1d (SOIL) 11-09-94 @ 1235 HRS
 SAMPLED BY GREGORY

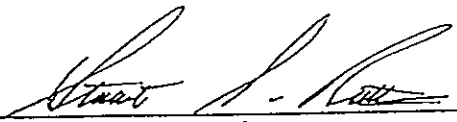
CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | | <u>Units</u> | <u>Method</u> | <u>Method</u> |
|---------------------|-----------------------|------------------|--------------|------------------|---------------|
| | <u>As Received</u> | <u>Dry Basis</u> | | <u>Detection</u> | |
| Moisture | 32. | | % | 0.05 | BC |
| Total Cadmium | None Detected | None Detected | mg/kg | 0.5 | SW-6010 |
| Total Lead | 7.2 | 10.6 | mg/kg | 0.5 | SW-7421 |

REFERENCES:

BC = BC Laboratory In-House Method
 SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material
 removed during sample splitting.
 Detection limit based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94 Page 1
 Date Received: 11/16/94
 Laboratory No.: 94-12672-3

Sample Description: #0226-002.01 DON OLINE SITE: TP-22S (SOIL) 11-10-94 @ 1600 HRS
 SAMPLED BY GREGORY


CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | | <u>Units</u> | <u>Method</u> | <u>Method</u> |
|---------------------|-----------------------|------------------|--------------|------------------|---------------|
| | <u>As Received</u> | <u>Dry Basis</u> | | <u>Detection</u> | |
| Moisture | 47. | | % | 0.05 | BC |
| Total Cadmium | 0.80 | 1.5 | mg/kg | 0.5 | SW-6010 |
| Total Lead | 10. | 20. | mg/kg | 0.5 | SW-7421 |

REFERENCES:

BC = BC Laboratory In-House Method
 SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material
 removed during sample splitting.
 Detection limit based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 1927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94 Page 1
 Date Received: 11/16/94
 Laboratory No.: 94-12672-4

Sample Description: #0226-002.01 DON OLINE SITE: COMPOSITE (SOIL) 11-10-94 @ 1615 HRS
 SAMPLED BY GREGORY

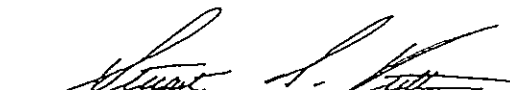
CHEMICAL ANALYSIS

| Constituents | Sample Results | | Units | Method | Method |
|---------------|----------------|-----------|-------|-----------------|---------|
| | As Received | Dry Basis | | Detection Limit | |
| Moisture | 43. | | % | 0.05 | BC |
| Total Arsenic | 15. | 26. | mg/kg | 1.0 | SW-7060 |
| Total Copper | 58. | 103. | mg/kg | 0.5 | SW-6010 |
| Total Mercury | 0.33 | 0.58 | mg/kg | 0.2 | SW-7471 |
| Total Nickel | 14. | 25. | mg/kg | 2.5 | SW-6010 |
| Total Zinc | 136. | 239. | mg/kg | 2.5 | SW-6010 |

REFERENCES:

- BC = BC Laboratory In-House Method
- SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods", EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection limit based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



LABORATORIES

PCB Analysis

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210

Date of
Report: 11/29/94
Lab #: 94-12672-1

Attn.: NORM WEBB 503-227-5313

Sample Description: #0226-002.01 DON OLINE SITE: TP-1S (SOIL) 11-09-94 @ 1230 HRS
SAMPLED BY GREGORY

Test Method: EPA Method 8080

Sample Matrix: Soil

Date Sample
Collected:
11/09/94

Date Sample
Received @ Lab:
11/16/94

Date Analysis
Completed:
11/28/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.1 |
| PCB-1221 | None Detected | mg/kg | 0.1 |
| PCB-1232 | None Detected | mg/kg | 0.1 |
| PCB-1242 | None Detected | mg/kg | 0.1 |
| PCB-1248 | None Detected | mg/kg | 0.1 |
| PCB-1254 | None Detected | mg/kg | 0.1 |
| PCB-1260 | None Detected | mg/kg | 0.1 |
| Total PCB's (Summation) | None Detected | mg/kg | 0.1 |

Note: MDL's were raised due to high matrix background requiring sample dilution.
Analytical results corrected for the amount of iron material removed during sample splitting.

Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 11/29/94
 Lab #: 94-12672-2

Sample Description: #0226-002.01 DON OLINE SITE: TP-1d (SOIL) 11-09-94 @ 1235 HRS
 SAMPLED BY GREGORY

Test Method: EPA Method 8080

Sample Matrix: Soil

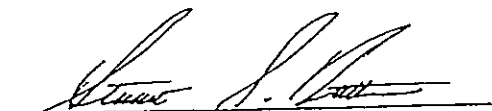
Date Sample
 Collected:
 11/09/94

Date Sample
 Received @ Lab:
 11/16/94

Date Analysis
 Completed:
 11/28/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.1 |
| PCB-1221 | None Detected | mg/kg | 0.1 |
| PCB-1232 | None Detected | mg/kg | 0.1 |
| PCB-1242 | None Detected | mg/kg | 0.1 |
| PCB-1248 | None Detected | mg/kg | 0.1 |
| PCB-1254 | None Detected | mg/kg | 0.1 |
| PCB-1260 | None Detected | mg/kg | 0.1 |
| Total PCB's (Summation) | None Detected | mg/kg | 0.1 |

Note: MDL's were raised due to high matrix background requiring sample dilution.
 Analytical results corrected for the amount of iron material removed during sample splitting.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



LABORATORIES

PCB Analysis

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date of
Report: 11/29/94
Lab #: 94-12672-3

Sample Description: #0226-002.01 DON OLINE SITE: TP-22S (SOIL) 11-10-94 @ 1600 HRS
SAMPLED BY GREGORY

Test Method: EPA Method 8080

Sample Matrix: Soil

Date Sample Collected: 11/10/94
Date Sample Received @ Lab: 11/16/94
Date Analysis Completed: 11/28/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.1 |
| PCB-1221 | None Detected | mg/kg | 0.1 |
| PCB-1232 | None Detected | mg/kg | 0.1 |
| PCB-1242 | None Detected | mg/kg | 0.1 |
| PCB-1248 | None Detected | mg/kg | 0.1 |
| PCB-1254 | None Detected | mg/kg | 0.1 |
| PCB-1260 | None Detected | mg/kg | 0.1 |
| Total PCB's (Summation) | None Detected | mg/kg | 0.1 |

Note: MDL's were raised due to high matrix background requiring sample dilution. Analytical results corrected for the amount of iron material removed during sample splitting.

Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



EMCON
Northwest, Inc.

94-126072

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

DATE 11/11/94 PAGE 1 OF 1

| | | | |
|--|--|--|--|
| PROJECT NAME <u>Demo Oil Site # 0226-002.cil</u> PROJECT Site Characteristics, 2100 Morris View Dr, Tacoma COMPANY/ADDRESS <u>Bill Haldeman, Elkson, WA 98541</u> <u>18912 North Creek Parkway</u> <u>Bellevue, WA 98011</u> PHONE <u>206-455-5200</u> SAMPLERS SIGNATURE <u>[Signature]</u> | | ANALYSIS REQUEST ORGANIC METALS/INORGANICS PH, Cond Cl, SO ₄ , PO ₄ , F, Br NH ₃ , N, COD, Total P, TKN, TOC TOX (Circle) Vbl As, Cu, Hg, Ni, Zn <u>PCB-5050</u> | |
| NUMBER OF CONTAINERS TPH-HCID State: _____ TPH-G State: _____ TPH-D State: _____ TPH-478.1 State: _____ TPH-Other State: _____ Halogenated or Aromatic Volatiles 601/8010 Volatile Organics 602/8020 Base/Neu/Acid Organics 624-8240 GC/MS 625/8270 Pesticides/CBS 8080 PCB ONLY PAH 8100 GC 8310 HPCl TCLP Metals Semi VOA Metals Total List Below Cyanide DISS <u>CD, PF, B</u> | | REMARKS see below see below see below see below | |
| SAMPLE ID. DATE TIME LAB I.D. SAMPLE MATRIX 1 TP-1S 11/6/94 12:30 Soil 2 TP-1d ↓ 12:35 3 TP-22S 11/10/94 16:00 4 Composite 11/10/94 16:15 | | REPORT REQUIREMENTS I. Routine Report <input checked="" type="checkbox"/> 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 | |
| RELINQUISHED BY: <u>[Signature]</u> Signature <u>William R. Haldeman</u> Printed Name EMCON Firm <u>11/11/94</u> 08:30 Date/Time | | RECEIVED BY: <u>[Signature]</u> Signature <u>William R. Haldeman</u> Printed Name EMCON Firm <u>11/11/94</u> 08:30 Date/Time | |
| RELINQUISHED BY: <u>[Signature]</u> Signature <u>William R. Haldeman</u> Printed Name EMCON Firm <u>11/11/94</u> 10:30 Date/Time | | RECEIVED BY: <u>[Signature]</u> Signature <u>William R. Haldeman</u> Printed Name EMCON Firm <u>11/11/94</u> 10:30 Date/Time | |
| TURNAROUND REQUIREMENTS 24 hr _____ 48 hr _____ 5 day _____ <input checked="" type="checkbox"/> Standard (10-15 working days) Provide Verbal Preliminary Results <input checked="" type="checkbox"/> Provide FAX preliminary Results Requested Report Date _____ | | INVOICE INFORMATION: P.O.# _____ Bill To <u>Mr. Norman Wzob</u> <u>MHT</u> <u>4927 NW Front Ave</u> <u>Portland, OR 97210</u> | |
| SHIPPING VIA: <u>UPS</u> Shipping to: <u>BC Laboratories</u> Condition: _____ Lab No: _____ | | SPECIAL INSTRUCTIONS/COMMENTS: 1) 1 cooler total 2) Total metals by Methods 7060 (As), 6010 (Cd, Cu, Ni, Zn), 7421 (Pb), and 7471 (Hg) 3) Do not run samples through hummermill. | |



B C LABORATORIES
 QUALITY CONTROL REPORT
 (Precision & Accuracy)
 .METHOD 8080 - PCB'S

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 NORM WEBB

Date of Report: 01/09/95
 Sample Matrix: SOIL

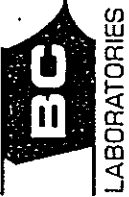
Samples Affected: 94-12672-1 - 94-12672-3

| Constituents | QC Sample ID | Sample Result | MS Result | MSD Result | MS Spike Level | MSD Spike Level | Units | Spike R.P.D. | Precision Control Limits | MS % Rec | MSD % Rec | Accuracy Control Limits |
|---------------|--------------|---------------|-----------|------------|----------------|-----------------|-------|--------------|--------------------------|----------|-----------|-------------------------|
| PCB | 12714-4 | < 0.01 | 0.57 | 0.64 | 0.80 | 0.80 | mg/kg | 12. | 20 | 71. | 80. | 64 - 117 |
| Surrogate DCB | 12672-1 | | | | | | | | | NR | | 60 - 140 |
| Surrogate DCB | 12672-2 | | | | | | | | | 137. | | |
| Surrogate DCB | 12672-3 | | | | | | | | | 124. | | |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference.

NR = Not Recovered due to dilution.

Quality Control Officer



B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
METHOD 8080 - PCB'S

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
NORM WEBB

Date of Report: 01/09/95
Sample Matrix: SOIL

Samples Affected: 94-12672-1 - 94-12672-3

| Constituents | ICV % Found | CCV % Found Before | CCV % Found After | % Found Control Limits | CCB Readings Before | Units | CCB Readings After | Units | Method Blank Readings | Units |
|--------------|----------------|--------------------------|-------------------------|------------------------------|---------------------------|-------|--------------------------|-------|-----------------------------|-------|
| PCB-1260 | 96. | 86. | 86. | 85 - 115 | < 0.02 | mg/L | < 0.02 | mg/L | < 0.01 | mg/kg |

ICV = Initial Calibration Verification; CCV = Continuing Calibration Verification; CCB = Continuing Calibration Blank
Quality Control Officer



LABORATORIES OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 NORM WEBB

B C LABORATORIES
QUALITY CONTROL REPORT
 (Precision & Accuracy)

Date of Report: 01/09/95
 Sample Matrix: SOIL

Samples Affected: 94-12672-1 - 94-12672-3

| Constituents | QC Sample ID | Sample Result | Sample Duplicate | MS Result | HSD Result | MS Spike Level | HSD Spike Level | Units | Sample R.P.D. | Spike R.P.D. | Precision Control Limits | MS % Rec | HSD % Rec | Accuracy Control Limits |
|--------------|--------------|---------------|------------------|-----------|------------|----------------|-----------------|-------|---------------|--------------|--------------------------|----------|-----------|-------------------------|
| Cadmium | HP-12657-4 | < 0.5 | < 0.5 | 9.515 | 9.303 | 10.00 | 9.901 | mg/kg | <PQL | 1. | 20 | 92. | 91. | 80 - 120 |
| Lead | 12657-4 | 10.25 | 9.46 | 107.65 | 106.39 | 100.00 | 99.01 | mg/kg | 8. | 1. | 20 | 97. | 97. | 80 - 120 |

MS = Matrix Spike; HSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer:



B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
NORM WEBB

Date of Report: 01/09/95
Sample Matrix: SOIL

Samples Affected: 94-12672-1 - 94-12672-3

| Constituents | ICV % Found | | CCV % Found | | % Found Control Limits | CCB Readings Before | | CCB Readings After | | Method Blank Readings | |
|--------------|-------------|-------|-------------|-------|------------------------|---------------------|-------|--------------------|-------|-----------------------|-------|
| | Before | After | Before | After | | mg/L | Units | mg/L | Units | mg/kg | Units |
| Cadmium | 105. | 101. | 103. | 103. | 90 - 110 | < 0.01 | mg/L | < 0.01 | mg/L | < 0.5 | mg/kg |
| Lead | 103. | 101. | 105. | 105. | 80 - 120 | < 0.001 | mg/L | < 0.001 | mg/L | < 0.5 | mg/kg |

ICV = Initial Calibration Verification; CCV = Continuing Calibration Verification; CCB = Continuing Calibration Blank

Quality Control Officer



LABORATORIES OF TACOMA
 GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 NORM WEBB

B C LABORATORIES
QUALITY CONTROL REPORT
 (Precision & Accuracy)

Date of Report: 01/09/95
 Sample Matrix: SOIL

Samples Affected: 94-12672 - 4

| Constituents | QC Sample ID | Sample Result | Sample Duplicate | MS Result | MSD Result | MS Spike Level | MSD Spike Level | Units | Sample Spike R.P.D. | R.P.D. | MS % Rec | MSD % Rec | Accuracy Control Limits | |
|--------------|--------------|---------------|------------------|-----------|------------|----------------|-----------------|-------|---------------------|--------|----------|-----------|-------------------------|----------|
| Arsenic | 13657-4 | 11.57 | 11.59 | 18.23 | 18.79 | 5.00 | 5.00 | mg/kg | 0. | 3. | 20 | 133. | 144. | 75 - 125 |
| Arsenic | LCSS | | | 29.64 | | 30.7 | | mg/kg | | | 97. | | | 83 - 117 |
| Copper | 12657-4 | 8.24 | 8.41 | 100.8 | 99.93 | 100.0 | 100.0 | mg/kg | 2. | 1. | 20 | 93. | 92. | 80 - 120 |
| Mercury | 12657-7 | 0.31 | 0.09 | 0.98 | 1.01 | 1.00 | 1.00 | mg/kg | 110. | 3. | 20 | 67. | 70. | 75 - 125 |
| Mercury | LCSH | | | 0.90 | | 1.00 | | mg/kg | | | 100. | | | 75 - 125 |
| Nickel | 12657-4 | 9.64 | 9.83 | 102.4 | 100.2 | 100.0 | 100.0 | mg/kg | 2. | 2. | 20 | 93. | 91. | 80 - 120 |
| Zinc | 12657-4 | 38.01 | 38.77 | 128.7 | 127.6 | 100.0 | 100.0 | mg/kg | 2. | 1. | 20 | 91. | 90. | 80 - 120 |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer



B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
NORM WEBB

Date of Report: 01/09/95
Sample Matrix: SOIL

Samples Affected: 94-12672 - 4

| Constituents | ICV % Found | | CCV % Found | | % Found Control Limits | CCB Readings | | CCB Readings | | Method Blank Readings | |
|--------------|-------------|-------|-------------|-------|------------------------|--------------|--------|--------------|--------|-----------------------|-------|
| | Before | After | Before | After | | Before | After | Before | After | Units | Units |
| Arsenic | 101. | 105. | 107. | 107. | 80 - 120 | < 1.0 | < 1.0 | < 1.0 | < 1.0 | µg/L | mg/kg |
| Copper | 97. | 97. | 93. | 93. | 90 - 110 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | mg/L | mg/kg |
| Mercury | 99. | 99. | 99. | 99. | 80 - 120 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | µg/L | mg/kg |
| Nickel | 102. | 100. | 100. | 100. | 90 - 110 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | mg/L | mg/kg |
| Zinc | 103. | 101. | 98. | 98. | 90 - 110 | < 0.05 | < 0.05 | < 0.05 | < 0.05 | mg/L | mg/kg |

ICV = Initial Calibration Verification; CCV = Continuing Calibration Verification; CCB = Continuing Calibration Blank

Quality Control Officer

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94 Page 1
 Date Received: 11/16/94
 Laboratory No.: 94-12677-2A

Sample Description: #0226-002.01 DON OLINE SITE: TP-CASR (SAMPLE #1) 11-10-94 @ 1630
 HRS SAMPLED BY GREGORY

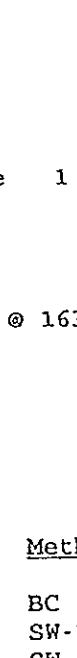
CHEMICAL ANALYSIS

| Constituents | Sample Results | | Units | Method | Method |
|---------------|----------------|-----------|-------|-----------------|---------|
| | As Received | Dry Basis | | Detection Limit | |
| Moisture | 19. | | % | 0.05 | BC |
| Total Arsenic | 17. | 21. | mg/kg | 2.5 | SW-7060 |
| Total Cadmium | 22. | 27. | mg/kg | 0.5 | SW-6010 |
| Total Copper | 827. | 1030. | mg/kg | 0.5 | SW-6010 |
| Total Lead | 1180. | 1460. | mg/kg | 100. | SW-7421 |
| Total Mercury | 1.6 | 2.0 | mg/kg | 0.2 | SW-7471 |
| Total Nickel | 124. | 153. | mg/kg | 2.5 | SW-6010 |
| Total Zinc | 4910. | 6080. | mg/kg | 2.5 | SW-6010 |

REFERENCES:

- BC = BC Laboratory In-House Method
- SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods", EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during sample splitting.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94 Page 1
 Date Received: 11/16/94
 Laboratory No.: 94-12677-2B

Sample Description: #0226-002.01 DON OLINE SITE: TP-CASR (SAMPLE #2) 11-10-94 @ 1630
 HRS SAMPLED BY GREGORY

CHEMICAL ANALYSIS

| Constituents | Sample Results | | Units | Method | Method |
|---------------|----------------|-----------|-------|-----------------|---------|
| | As Received | Dry Basis | | Detection Limit | |
| Moisture | 17. | | % | 0.05 | BC |
| Total Arsenic | 18. | 22. | mg/kg | 2.5 | SW-7060 |
| Total Cadmium | 24. | 29. | mg/kg | 0.5 | SW-6010 |
| Total Copper | 1420. | 1720. | mg/kg | 0.5 | SW-6010 |
| Total Lead | 1370. | 1650. | mg/kg | 100. | SW-7421 |
| Total Mercury | 1.0 | 1.2 | mg/kg | 0.2 | SW-7471 |
| Total Nickel | 521. | 630. | mg/kg | 2.5 | SW-6010 |
| Total Zinc | 6440. | 7790. | mg/kg | 2.5 | SW-6010 |

REFERENCES:

- BC = BC Laboratory In-House Method
- SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods", EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during sample splitting.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94 Page 1
 Date Received: 11/16/94
 Laboratory No.: 94-12677-2C

Sample Description: #0226-002.01 DON OLINE SITE: TP-CASR (SAMPLE #3) 11-10-94 @ 1630
 HRS SAMPLED BY GREGORY

CHEMICAL ANALYSIS

| Constituents | Sample Results | | Units | Method | Method |
|---------------|----------------|-----------|-------|-----------------|---------|
| | As Received | Dry Basis | | Detection Limit | |
| Moisture | 18. | | % | 0.05 | BC |
| Total Arsenic | 17. | 21. | mg/kg | 1.0 | SW-7060 |
| Total Cadmium | 23. | 28. | mg/kg | 0.5 | SW-6010 |
| Total Copper | 2340. | 2850. | mg/kg | 0.5 | SW-6010 |
| Total Lead | 1220. | 1490. | mg/kg | 100. | SW-7421 |
| Total Mercury | 1.0 | 1.3 | mg/kg | 0.2 | SW-7471 |
| Total Nickel | 126. | 153. | mg/kg | 2.5 | SW-6010 |
| Total Zinc | 4960. | 6030. | mg/kg | 2.5 | SW-6010 |

REFERENCES:

- BC = BC Laboratory In-House Method
- SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods", EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during sample splitting.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



LABORATORIES

PCB Analysis

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date of
Report: 12/07/94
Lab #: 94-12677-1A

Sample Description: #0226-002.01 DON OLINE SITE: TP-22ASR (SAMPLE #1) 11-10-94 @ 1630
HRS SAMPLED BY GREGORY

Test Method: EPA Method 8080

Sample Matrix: Solid waste


Date Sample
Collected:
11/16/94

Date Sample
Received @ Lab:
11/16/94

Date Analysis
Completed:
12/05/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.6 |
| PCB-1221 | None Detected | mg/kg | 0.6 |
| PCB-1232 | None Detected | mg/kg | 0.6 |
| PCB-1242 | 5.5 | mg/kg | 0.6 |
| PCB-1248 | None Detected | mg/kg | 0.6 |
| PCB-1254 | 5.1 | mg/kg | 0.6 |
| PCB-1260 | None Detected | mg/kg | 0.6 |
| Total PCB's (Summation) | 10.6 | mg/kg | 0.6 |

Note: Detection limits were raised due to high concentration of target analytes requiring sample dilution.
Analytical results corrected for the amount of iron material removed during sample splitting.


Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/07/94
 Lab #: 94-12677-1B

Sample Description: #0226-002.01 DON OLINE SITE: TP-22ASR (SAMPLE #2) 11-10-94 @ 1630
 HRS SAMPLED BY GREGORY

Test Method: EPA Method 8080

Sample Matrix: Solid waste

| | | |
|------------------------------------|---|--------------------------------------|
| Date Sample Collected: 11/16/94 | Date Sample Received @ Lab: 11/16/94 | Date Analysis Completed: 12/05/94 |
|------------------------------------|---|--------------------------------------|

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 1. |
| PCB-1221 | None Detected | mg/kg | 1. |
| PCB-1232 | None Detected | mg/kg | 1. |
| PCB-1242 | 11. | mg/kg | 1. |
| PCB-1248 | None Detected | mg/kg | 1. |
| PCB-1254 | 11. | mg/kg | 1. |
| PCB-1260 | None Detected | mg/kg | 1. |
| Total PCB's (Summation) | 22. | mg/kg | 1. |

Note: Detection limits were raised due to high concentration of target analytes requiring sample dilution.
 Analytical results corrected for the amount of iron material removed during sample splitting.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210

Date of
 Report: 12/07/94
 Lab #: 94-12677-1C

Attn.: NORM WEBB 503-227-5313

Sample Description: #0226-002.01 DON OLINE SITE: TP-22ASR (SAMPLE #3) 11-10-94 @ 1630
 HRS SAMPLED BY GREGORY

Test Method: EPA Method 8080

Sample Matrix: Solid waste

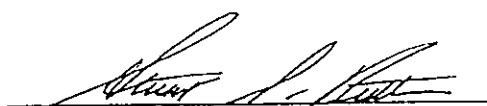
Date Sample
 Collected:
 11/16/94

Date Sample
 Received @ Lab:
 11/16/94

Date Analysis
 Completed:
 12/05/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 1. |
| PCB-1221 | None Detected | mg/kg | 1. |
| PCB-1232 | None Detected | mg/kg | 1. |
| PCB-1242 | 5.6 | mg/kg | 1. |
| PCB-1248 | None Detected | mg/kg | 1. |
| PCB-1254 | 6.1 | mg/kg | 1. |
| PCB-1260 | None Detected | mg/kg | 1. |
| Total PCB's (Summation) | 11.7 | mg/kg | 1. |

Note: Detection limits were raised due to high concentration of target analytes requiring sample dilution.
 Analytical results corrected for the amount of iron material removed during sample splitting.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94 Page 1
 Date Received: 11/16/94
 Laboratory No.: 94-12677-1A


Sample Description: #0226-002.01 DON OLINE SITE: TP-22ASR (SAMPLE #1) 11-10-94 @ 1630
 HRS SAMPLED BY GREGORY

CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | <u>Units</u> | <u>Method Detection Limit</u> | <u>Method</u> |
|---------------------|-----------------------|--------------|---------------------------------------|---------------|
| Moisture | 20. | % | 0.05 | BC |

REFERENCES:

BC = BC Laboratory In-House Method


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94 Page 1
 Date Received: 11/16/94
 Laboratory No.: 94-12677-1B


Sample Description: #0226-002.01 DON OLINE SITE: TP-22ASR (SAMPLE #2) 11-10-94 @ 1630
 HRS SAMPLED BY GREGORY

CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | <u>Units</u> | <u>Method Detection Limit</u> | <u>Method</u> |
|---------------------|-----------------------|--------------|---------------------------------------|---------------|
| Moisture | 18. | % | 0.05 | BC |

REFERENCES:

BC = BC Laboratory In-House Method


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94 Page 1
Date Received: 11/16/94
Laboratory No.: 94-12677-1C

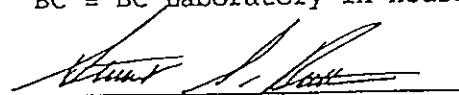
Sample Description: #0226-002.01 DON OLINE SITE: TP-22ASR (SAMPLE #3) 11-10-94 @ 1630
HRS SAMPLED BY GREGORY

CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | <u>Units</u> | <u>Method Detection Limit</u> | <u>Method</u> |
|---------------------|-----------------------|--------------|---------------------------------------|---------------|
| Moisture | 18. | % | 0.05 | BC |

REFERENCES:

BC = BC Laboratory In-House Method


Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94
 Date Received: 11/16/94
 Laboratory No.: 94-12677-1C

TCLP TOXICITY

Sample Description: #0226-002.01 DON OLINE SITE: TP-22ASR (SAMPLE #3) 11-10-94 @ 1630
 HRS SAMPLED BY GREGORY

| <u>Constituents</u> | <u>Sample Results</u> <u>mg/liter</u> | <u>Method</u> <u>Detection</u> <u>Limit</u> | <u>Analytical</u> <u>Method</u> |
|---------------------|--|---|------------------------------------|
| Cadmium | None Detected | 0.1 | SW-6010 |
| Lead | None Detected | 0.5 | SW-6010 |

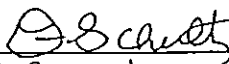
Comment: All extract contaminants reported in mg/liter on a filtrate basis.
 Sample analyzed in accordance with EPA's TCLP 18-hour extraction test.

REFERENCES:

SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material
 removed during sample splitting.

BC LABORATORIES, INC.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94
 Date Received: 11/16/94
 Laboratory No.: 94-12677-1B

TCLP TOXICITY

Sample Description: #0226-002.01 DON OLINE SITE: TP-22ASR (SAMPLE #2) 11-10-94 @ 1630
 HRS SAMPLED BY GREGORY

| <u>Constituents</u> | <u>Sample Results</u> <u>mg/liter</u> | <u>Method</u> <u>Detection</u> <u>Limit</u> | <u>Analytical</u> <u>Method</u> |
|---------------------|--|---|------------------------------------|
| Cadmium | None Detected | 0.1 | SW-6010 |
| Lead | None Detected | 0.5 | SW-6010 |

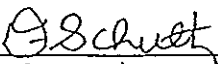
Comment: All extract contaminants reported in mg/liter on a filtrate basis.
 Sample analyzed in accordance with EPA's TCLP 18-hour extraction test.

REFERENCES:

SW. = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material
 removed during sample splitting.

B C LABORATORIES, INC.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



LABORATORIES

GENERAL METALS OF TACOMA
927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94
Date Received: 11/16/94
Laboratory No.: 94-12677-1A

TCLP TOXICITY

Sample Description: #0226-002.01 DON OLINE SITE: TP-22ASR (SAMPLE #1) 11-10-94 @ 1630
HRS SAMPLED BY GREGORY

| <u>Constituents</u> | <u>Sample Results</u> <u>mg/liter</u> | <u>Method</u> <u>Detection</u> <u>Limit</u> | <u>Analytical</u> <u>Method</u> |
|---------------------|--|---|------------------------------------|
| Cadmium | None Detected | 0.1 | SW-6010 |
| Lead | None Detected | 0.5 | SW-6010 |

Comment: All extract contaminants reported in mg/liter on a filtrate basis.
Sample analyzed in accordance with EPA's TCLP 18-hour extraction test.

REFERENCES:

SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material
removed during sample splitting.

B C LABORATORIES, INC.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/07/94 Page 1
Date Received: 11/16/94
Laboratory No.: 94-12677-1

Sample Description: #0226-002.01 DON OLINE SITE: TP-22ASR, 11-10-94 @ 1630 HRS SAMPLED
BY GREGORY

Iron

4.91 %

Note: Iron content determined by passing a magnet over the sample and weighing particles > 2mm in diameter prior to milling or splitting the sample for analysis.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

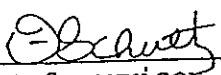
Date Reported: 12/07/94 Page 1
Date Received: 11/16/94
Laboratory No.: 94-12677-2

Sample Description: #0226-002.01 DON OLINE SITE: TP-CASR, 11-10-94 @ 1630 HRS SAMPLED
BY GREGORY

Iron

2.83 %

Note: Iron content determined by passing a magnet over the sample and weighing particles > 2mm in diameter prior to milling or splitting the sample for analysis.


Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



EMCON
Northwest, Inc.

94-12617

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

DATE 11/14/94 PAGE 1 OF 1

| | | | |
|--|--|--|--|
| PROJECT NAME <u>Dora Olive</u> # <u>0220-002-01</u> PROJECT <u>Site Characterization; 2120 Marine View Dr, Tacoma</u> COMPANY/ADDRESS <u>Bell Holdings</u> <u>EMCON 18912 North Creek Parkway</u> <u>Bathel, WA 98011</u> PHONE <u>206-485-5000</u> SAMPLERS SIGNATURE <u>[Signature]</u> | | ANALYSIS REQUEST PETROLEUM HCS TPH - HClO State: _____ TPH - G State: _____ TPH - D State: _____ OIL State: _____ TPH - 418.1 State: _____ TPH - Other State: _____ Halogenated or Aromatic Volatiles 601/6010 GC/MS 624-8240 Base/Neuroacid Organics GC/MS 625/8270 Pesticides/CBS 2080 PAH 8100 GC 8310 HPCl TCLP Semi VOA (Pb Cl) Metals Total KCl DISS Cyanide PH, Cond Cl, SO ₄ , PO ₄ , F, Br NH ₃ , N, COD, Total-P, TKN, TOC TOX (Circle) Total As (Method 8080) | |
| SAMPLE I.D. <u>TP-22MSR</u> DATE <u>11/10/94</u> TIME <u>16:30</u> LAB I.D. _____ SAMPLE MATRIX <u>MSR/Soil</u> <u>TP-CA5R</u> <u>↓</u> | | NUMBER OF CONTAINERS <u>2</u> | |
| RELINQUISHED BY: <u>[Signature]</u> Signature <u>William R. Holden</u> Printed Name EMCON Date/Time <u>11/14/94 08:30</u> | | RECEIVED BY: <u>[Signature]</u> Signature <u>William R. Holden</u> Printed Name EMCON Date/Time <u>11/14/94 08:30</u> | |
| TURNAROUND REQUIREMENTS 24 hr _____ 48 hr _____ 5 day _____ <input checked="" type="checkbox"/> Standard (10-15 working days) Provide Verbal Preliminary Results <input checked="" type="checkbox"/> Provide FAX preliminary Results Requested Report Date _____ | | REPORT REQUIREMENTS I. Routine Report _____ <input checked="" type="checkbox"/> II. Report (includes DUP, MMS, MSD, as required, may be changed as samples) - III. Data Validation Report (includes All Raw Data) IV. CLP Deliverable Report _____ | |
| INVOICE INFORMATION: P.O.# _____ Bill To <u>Mr. Norman Webb</u> <u>MMF</u> <u>4927 NW Front Ave</u> <u>Portland, OR 97210</u> | | SAMPLE RECEIPT: Shipping Via: <u>UPS</u> Shipping to: <u>EC Laboratories</u> Condition: _____ Lab No: _____ | |
| SPECIAL INSTRUCTIONS/COMMENTS: Samples sent to <u>Samples sent in a total of 4 bags via UPS. Each bag in separate box.</u> <u>1) TCLP (d by Methods 1311/6010, TCLP Pb by Methods 1311/7421)</u> <u>2) Total metals for sample TP-CA5R will include total As (7060), Cd, Cu, Ni, Zn (6010); total Pb (7420); and total Hg (7470).</u> | | | |



B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
METHOD 8080

Date of Report: 01/09/95
Sample Matrix: SOLIDWASTE

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
NORM WEBB

Samples Affected: 94-12677-1A, 94-12677-1B & 94-12677-1C

| Constituents | ICV % Found | CCV % Found Before | CCV % Found After | % Found Control Limits | CCB Readings Before | Units | CCB Readings After | Units | Method Blank Readings | Units |
|--------------|----------------|--------------------------|-------------------------|------------------------------|---------------------------|-------|--------------------------|-------|-----------------------------|-------|
| PCB-1260 | 102. | 103. | 102. | 85. - 115 | < 0.02 | mg/L | < 0.02 | mg/L | < 0.01 | mg/kg |

ICV = Initial Calibration Verification; CCV = Continuing Calibration Verification; CCB = Continuing Calibration Blank

Quality Control Officer



B C LABORATORIES
 QUALITY CONTROL REPORT
 (Precision & Accuracy)
 METHOD 8080

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE.
 PORTLAND, OR 97210
 NORM WEBB

Date of Report: 01/09/95
 Sample Matrix: SOLIDWASTE

Samples Affected: 94-12677-1A, 94-12677-1B & 94-12677-1C

| Constituents | QC Sample ID | Sample Result | MS Result | MSD Result | MS Spike Level | MSD Spike Level | Units | Spike R.P.D. | Precision Control Limits | MS % Rec | MSD % Rec | Accuracy Control Limits |
|---------------|--------------|---------------|-----------|------------|----------------|-----------------|-------|--------------|--------------------------|----------|-----------|-------------------------|
| PCB | 13138-1 | < 0.01 | 0.16 | 0.14 | 0.20 | 0.20 | mg/Kg | 12. | 20 | 81. | 71. | 64 - 117 |
| Surrogate DCB | 12677-1A | | | | | | | | | NR | | 60 - 140 |
| Surrogate DCB | 12677-1B | | | | | | | | | NR | | |
| Surrogate DCB | 12677-1C | | | | | | | | | NR | | |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

NR - Not Recovered due to dilution.

Quality Control Officer



B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

LABORATORIES
GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
NORM WEBB

Date of Report: 01/09/95
Sample Matrix: EXTRACT

Samples Affected: 94-12677-1A, 94-12677-1B & 94-12677-1C

| Constituents | QC Sample ID | Sample Result | Sample Duplicate | MS Result | MSD Result | MS Spike Level | MSD Spike Level | Units | Sample R.P.D. | Spike R.P.D. | Precision Control Limits | | MSD % Rec | | Accuracy Control Limits |
|--------------|--------------|---------------|------------------|-----------|------------|----------------|-----------------|-------|---------------|--------------|--------------------------|-----|-----------|----------|-------------------------|
| | | | | | | | | | | | 20 | 97. | 20 | 99. | |
| Cadmium | HP-TCLP-12 | < 0.1 | < 0.1 | 0.9770 | 0.9735 | 1.000 | 1.000 | mg/L | <PQL | 0. | 20 | 97. | 96. | 80 - 120 | |
| Lead | HP-TCLP-12 | < 0.5 | < 0.5 | 5.321 | 5.346 | 5.000 | 5.000 | mg/L | <PQL | 1. | 20 | 99. | 99. | 80 - 120 | |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

quality Control Officer



B C LABORATORIES
QUALITY CONTROL REPORT

(Instrumental & Blank Parameters)

LABORATORIES

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
NORM WEBB

Date of Report: 01/09/95
Sample Matrix: EXTRACT

Samples Affected: 94-12677-1A, 94-12677-1B & 94-12677-1C

| Constituents | ICV | | CCV | | % Found Control Limits | CCB | | Units | Method Blank Readings | Units |
|--------------|---------|---------|---------|---------|------------------------------|--------------------|-------------------|-------|-----------------------------|-------|
| | % Found | % Found | % Found | % Found | | Readings Before | Readings After | | | |
| Cadmium | 103. | 100. | 100. | 100. | 90 - 110 | < 0.01 | < 0.01 | mg/L | < 0.1 | mg/L |
| Lead | 104. | 101. | 102. | 102. | 90 - 110 | < 0.05 | < 0.05 | mg/L | < 0.5 | mg/L |

ICV = Initial Calibration Verification; CCV = Continuing Calibration Verification; CCB = Continuing Calibration Blank

Quality Control Officer



B C LABORATORIES
QUALITY CONTROL REPORT
(PRECISION & ACCURACY)

LABORATORIES
GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
NORM WEBB

Date of Report: 01/09/95
Sample Matrix: SOLIDWASTE

Samples Affected: 94-12677-2A, 94-12677-2B & 94-12677-2C

| Constituents | QC Sample ID | Sample Result | Sample Duplicate | MS Result | MSD Result | MS Spike Level | MSD Spike Level | Units | Sample R.P.D. | Spike R.P.D. | Precision Control Limits | MS % Rec | MSD % Rec | Accuracy Control Limits |
|--------------|--------------|---------------|------------------|-----------|------------|----------------|-----------------|-------|---------------|--------------|--------------------------|----------|-----------|-------------------------|
| Arsenic | 13164-14 | 14.04 | 13.65 | 18.46 | 18.16 | 4.95 | 4.95 | mg/kg | 3. | 2. | 20 | 89. | 83. | 75 - 125 |
| Cadmium | 13164-14 | < 0.5 | < 0.5 | 9.317 | 9.541 | 9.901 | 9.901 | mg/kg | <PbL | 2. | 20 | 92. | 94. | 80 - 120 |
| Copper | 13164-14 | 66.57 | 75.35 | 153.3 | 155.7 | 99.01 | 99.01 | mg/kg | 12. | 2. | 20 | 88. | 90. | 80 - 120 |
| Lead | 13164-14 | 18.91 | 18.19 | 110.20 | 113.56 | 99.01 | 99.01 | mg/kg | 4. | 3. | 20 | 92. | 96. | 75 - 125 |
| Mercury | 12967-1 | < 0.2 | < 0.2 | 0.95 | 1.03 | 1.00 | 1.00 | mg/kg | 0. | 8. | 20 | 95. | 103. | 75 - 125 |
| Nickel | 13164-14 | 55.97 | 54.55 | 143.1 | 147.7 | 99.01 | 99.01 | mg/kg | 3. | 3. | 20 | 88. | 93. | 80 - 120 |
| Zinc | 13164-14 | 106.9 | 100.5 | 189.8 | 195.5 | 99.01 | 99.01 | mg/kg | 6. | 3. | 20 | 84. | 89. | 80 - 120 |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer



B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE.
PORTLAND, OR 97210
NORM WEBB

Date of Report: 01/09/95
Sample Matrix: SOLIDWASTE

Samples Affected: 94-12677-2A, 94-12677-2B & 94-12677-2C

| Constituents | ICV % Found | CCV | | % Found Control Limits | CCB | | Units | CCB Readings After | Units | Method Blank Readings | Units |
|--------------|----------------|-------------------|------------------|------------------------------|--------------------|-------------------|-------|--------------------------|-------|-----------------------------|-------|
| | | % Found Before | % Found After | | Readings Before | Readings After | | | | | |
| Arsenic | 107. | 106. | 102. | 80 - 120 | < 0.001 | < 0.001 | mg/L | < 0.001 | mg/L | < 2.5 | mg/kg |
| Cadmium | 104. | 104. | 105. | 90 - 110 | < 0.01 | < 0.01 | mg/L | < 0.01 | mg/L | < 0.5 | mg/kg |
| Copper | 97. | 97. | 98. | 90 - 110 | < 0.01 | < 0.01 | mg/L | < 0.01 | mg/L | < 0.5 | mg/kg |
| Lead | 102. | 102. | 107. | 80 - 120 | < 0.001 | < 0.001 | mg/L | < 0.001 | mg/L | < 2.5 | mg/kg |
| Mercury | 110. | 102. | 105. | 80 - 120 | < 0.02 | < 0.02 | mg/L | < 0.02 | mg/L | < 0.2 | mg/kg |
| Nickel | 98. | 98. | 100. | 90 - 110 | < 0.05 | < 0.05 | mg/L | < 0.05 | mg/L | < 2.5 | mg/kg |
| Zinc | 104. | 104. | 105. | 90 - 110 | < 0.05 | < 0.05 | mg/L | < 0.05 | mg/L | < 2.5 | mg/kg |

ICV = Initial Calibration Verification; CCV = Continuing Calibration Verification; CCB = Continuing Calibration Blank

Quality Control Officer

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

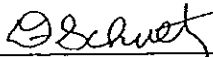
Date Reported: 12/19/94 Page 1
Date Received: 11/23/94
Laboratory No.: 94-13019-1

Sample Description: OLINE SITE #0226-002.01: SD-14, 11-17-94 @ 2100 HRS SAMPLED BY JOHN VIRGIN

SCALE ANALYSIS

Iron 1.33 %

Note: Iron content determined by passing a magnet over the sample and weighing particles > 2mm in diameter prior to milling or splitting the sample for analysis.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/21/94 Page 1
Date Received: 11/23/94
Laboratory No.: 94-13019-2

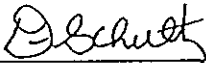
Sample Description: OLINE SITE #0226-002.01: SD-13, 11-17-94 @ 2130 HRS SAMPLED BY JOHN VIRGIN

SCALE ANALYSIS

Iron

1.43 %

Note: Iron content determined by passing a magnet over the sample and weighing particles > 2mm in diameter prior to milling or splitting the sample for analysis.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
Date Received: 11/23/94
Laboratory No.: 94-13019-3


Sample Description: OLINE SITE #0226-002.01: SD-3, 11-17-94 @ 2215 HRS SAMPLED BY JOHN VIRGIN

SCALE ANALYSIS

Iron

0. %

Note: Iron content determined by passing a magnet over the sample and weighing particles > 2mm in diameter prior to milling or splitting the sample for analysis.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
Date Received: 11/23/94
Laboratory No.: 94-13019-4


Sample Description: OLINE SITE #0226-002.01: SD-24, 11-17-94 @ 2240 HRS SAMPLED BY JOHN VIRGIN

SCALE ANALYSIS

Iron

0. %

Note: Iron content determined by passing a magnet over the sample and weighing particles > 2mm in diameter prior to milling or splitting the sample for analysis.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

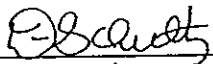
Date Reported: 12/19/94 Page 1
Date Received: 11/23/94
Laboratory No.: 94-13019-5

Sample Description: OLINE SITE #0226-002.01: SD-19, 11-17-94 @ 2300 HRS SAMPLED BY JOHN VIRGIN

SCALE ANALYSIS

Iron 0. %

Note: Iron content determined by passing a magnet over the sample and weighing particles > 2mm in diameter prior to milling or splitting the sample for analysis.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-1A

Sample Description: OLINE SITE #0226-002.01: SD-14 (SAMPLE #1) 11-17-94 @ 2100 HRS
 SAMPLED BY JOHN VIRGIN

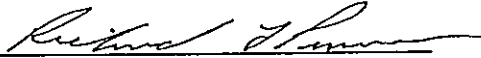
CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | | <u>Units</u> | <u>Method</u> | <u>Method</u> |
|---------------------|-----------------------|------------------|--------------|------------------------|---------------|
| | <u>As Received</u> | <u>Dry Basis</u> | | <u>Detection Limit</u> | |
| Moisture | 37. | | % | 0.05 | BC |
| Total Cadmium | 5.6 | 8.9 | mg/kg | 0.5 | SW-6010 |
| Total Lead | 1230. | 1950. | mg/kg | 100. | SW-7421 |

REFERENCES:

BC = BC Laboratory In-House Method
 SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during
 sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-1B

Sample Description: OLINE SITE #0226-002.01: SD-14 (SAMPLE #2) 11-17-94 @ 2100 HRS
 SAMPLED BY JOHN VIRGIN

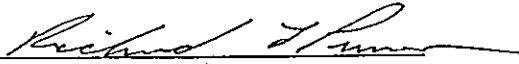
CHEMICAL ANALYSIS

| Constituents | Sample Results | | Units | Method | Method |
|---------------|----------------|-----------|-------|-----------------|---------|
| | As Received | Dry Basis | | Detection Limit | |
| Moisture | 37. | | % | 0.05 | BC |
| Total Cadmium | 6.5 | 10.3 | mg/kg | 0.5 | SW-6010 |
| Total Lead | 1310. | 2090. | mg/kg | 100. | SW-7421 |

REFERENCES:

BC = BC Laboratory In-House Method
 SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during
 sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-1C

Sample Description: OLINE SITE #0226-002.01: SD-14 (SAMPLE #3) 11-17-94 @ 2100 HRS
 SAMPLED BY JOHN VIRGIN

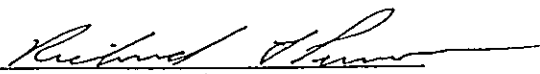
CHEMICAL ANALYSIS

| Constituents | Sample Results | | Units | Method | Method |
|---------------|----------------|-----------|-------|-----------------|---------|
| | As Received | Dry Basis | | Detection Limit | |
| Moisture | 41. | | % | 0.05 | BC |
| Total Cadmium | 5.1 | 8.6 | mg/kg | 0.5 | SW-6010 |
| Total Lead | 1010. | 1690. | mg/kg | 100. | SW-7421 |

REFERENCES:

BC = BC Laboratory In-House Method
 SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during
 sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-2A

Sample Description: OLINE SITE #0226-002.01: SD-13 (SAMPLE #1) 11-17-94 @ 2130 HRS
 SAMPLED BY JOHN VIRGIN


CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | | <u>Units</u> | <u>Method</u> | <u>Method</u> |
|---------------------|-----------------------|------------------|--------------|------------------------|---------------|
| | <u>As Received</u> | <u>Dry Basis</u> | | <u>Detection Limit</u> | |
| Moisture | 40. | | % | 0.05 | BC |
| Total Cadmium | 5.3 | 8.9 | mg/kg | 0.5 | SW-6010 |
| Total Lead | 916. | 1530. | mg/kg | 100. | SW-7421 |

REFERENCES:

- BC = BC Laboratory In-House Method
- SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods", EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



LABORATORIES

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
Date Received: 11/23/94
Laboratory No.: 94-13019-2B

Sample Description: OLINE SITE #0226-002.01: SD-13 (SAMPLE #2) 11-17-94 @ 2130 HRS
SAMPLED BY JOHN VIRGIN

CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | | <u>Units</u> | <u>Method</u> | <u>Method</u> |
|---------------------|-----------------------|------------------|--------------|------------------|---------------|
| | <u>As Received</u> | <u>Dry Basis</u> | | <u>Detection</u> | |
| Moisture | 40. | | % | 0.05 | BC |
| Total Cadmium | 5.0 | 8.3 | mg/kg | 0.5 | SW-6010 |
| Total Lead | 925. | 1540. | mg/kg | 100. | SW-7421 |

REFERENCES:

- BC = BC Laboratory In-House Method
- SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
Detection Limits based on "As Received" sample.


Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

LABORATORIES

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-2C

Sample Description: OLINE SITE #0226-002.01: SD-13 (SAMPLE #3) 11-17-94 @ 2130 HRS
 SAMPLED BY JOHN VIRGIN

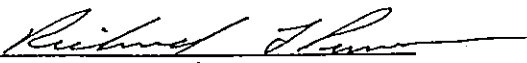
CHEMICAL ANALYSIS

| Constituents | Sample Results | | Units | Method | Method |
|---------------|----------------|-----------|-------|-----------------|---------|
| | As Received | Dry Basis | | Detection Limit | |
| Moisture | 39. | | % | 0.05 | BC |
| Total Cadmium | 13. | 7.8 | mg/kg | 0.5 | SW-6010 |
| Total Lead | 1150. | 1900. | mg/kg | 100. | SW-7421 |

REFERENCES:

BC = BC Laboratory In-House Method
 SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during
 sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDERMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-3A

Sample Description: OLINE SITE #0226-002.01: SD-3 (SAMPLE #1) 11-17-94 @ 2215 HRS
 SAMPLED BY JOHN VIRGIN

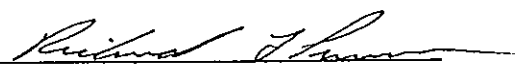
CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | | <u>Units</u> | <u>Method</u> | <u>Method</u> |
|---------------------|-----------------------|------------------|--------------|------------------------|---------------|
| | <u>As Received</u> | <u>Dry Basis</u> | | <u>Detection Limit</u> | |
| Moisture | 42. | | % | 0.05 | BC |
| Total Cadmium | 1.9 | 3.3 | mg/kg | 0.5 | SW-6010 |
| Total Lead | 396. | 678. | mg/kg | 100. | SW-7421 |

REFERENCES:

- BC = BC Laboratory In-House Method
 SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



LABORATORIES

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210
Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
Date Received: 11/23/94
Laboratory No.: 94-13019-3B

Sample Description: OLINE SITE #0226-002.01: SD-3 (SAMPLE #2) 11-17-94 @ 2215 HRS
SAMPLED BY JOHN VIRGIN

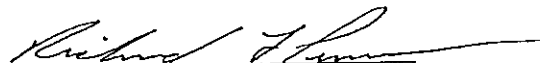
CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | | <u>Units</u> | <u>Method</u> | <u>Method</u> |
|---------------------|-----------------------|------------------|--------------|------------------|---------------|
| | <u>As Received</u> | <u>Dry Basis</u> | | <u>Detection</u> | |
| Moisture | 39. | | % | 0.05 | BC |
| Total Cadmium | 2.8 | 4.6 | mg/kg | 0.5 | SW-6010 |
| Total Lead | 272. | 445. | mg/kg | 100. | SW-7421 |

REFERENCES:

- BC = BC Laboratory In-House Method
- SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods", EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
Detection Limits based on "As Received" sample.


Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-3C

Sample Description: OLINE SITE #0226-002.01: SD-3 (SAMPLE #3) 11-17-94 @ 2215 HRS
 SAMPLED BY JOHN VIRGIN

CHEMICAL ANALYSIS


| Constituents | Sample Results | | Units | Method | Method |
|---------------|----------------|-----------|-------|-----------------|---------|
| | As Received | Dry Basis | | Detection Limit | |
| Moisture | 45. | | % | 0.05 | BC |
| Total Cadmium | 3.0 | 5.5 | mg/kg | 0.5 | SW-6010 |
| Total Lead | 284. | 515. | mg/kg | 100. | SW-7421 |

REFERENCES:

BC = BC Laboratory In-House Method

SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during
 sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-4A

Sample Description: OLINE SITE #0226-002.01: SD-24 (SAMPLE #1) 11-17-94 @ 2240 HRS
 SAMPLED BY JOHN VIRGIN

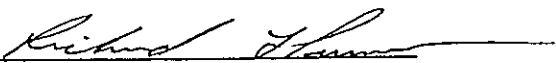
CHEMICAL ANALYSIS

| Constituents | Sample Results | | Units | Method | Method |
|---------------|----------------|-----------|-------|-----------------|---------|
| | As Received | Dry Basis | | Detection Limit | |
| Moisture | 27. | | % | 0.05 | BC |
| Total Cadmium | 5.6 | 7.7 | mg/kg | 0.5 | SW-6010 |
| Total Lead | 261. | 358. | mg/kg | 100. | SW-7421 |

REFERENCES:

- BC = BC Laboratory In-House Method
- SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods", EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-4B

Sample Description: OLINE SITE #0226-002.01: SD-24 (SAMPLE #2) 11-17-94 @ 2240 HRS
 SAMPLED BY JOHN VIRGIN

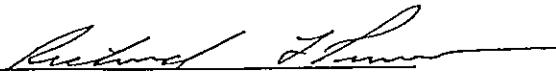
CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | | <u>Units</u> | <u>Method</u> | <u>Method</u> |
|---------------------|-----------------------|------------------|--------------|------------------------|---------------|
| | <u>As Received</u> | <u>Dry Basis</u> | | <u>Detection Limit</u> | |
| Moisture | 29. | | % | 0.05 | BC |
| Total Cadmium | 2.0 | 2.8 | mg/kg | 0.5 | SW-6010 |
| Total Lead | 306. | 427. | mg/kg | 100. | SW-7421 |

REFERENCES:

BC = BC Laboratory In-House Method
 SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during
 sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-4C

Sample Description: OLINE SITE #0226-002.01: SD-24 (SAMPLE #3) 11-17-94 @ 2240 HRS
 SAMPLED BY JOHN VIRGIN

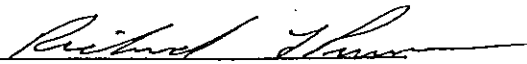
CHEMICAL ANALYSIS

| Constituents | Sample Results | | Units | Method | Method |
|---------------|----------------|-----------|-------|-----------------|---------|
| | As Received | Dry Basis | | Detection Limit | |
| Moisture | 27. | | % | 0.05 | BC |
| Total Cadmium | 1.7 | 2.3 | mg/kg | 0.5 | SW-6010 |
| Total Lead | 194. | 267. | mg/kg | 100. | SW-7421 |

REFERENCES:

BC = BC Laboratory In-House Method
 SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during
 sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-5A

Sample Description: OLINE SITE #0226-002.01: SD-19 (SAMPLE #1) 11-17-94 @ 2300 HRS
 SAMPLED BY JOHN VIRGIN


CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | | <u>Units</u> | <u>Method</u> | <u>Method</u> |
|---------------------|-----------------------|------------------|--------------|------------------|---------------|
| | <u>As Received</u> | <u>Dry Basis</u> | | <u>Detection</u> | |
| Moisture | 41. | | % | 0.05 | BC |
| Total Cadmium | 6.9 | 12. | mg/kg | 0.5 | SW-6010 |
| Total Lead | 1670. | 2850. | mg/kg | 100. | SW-7421 |

REFERENCES:

BC = BC Laboratory In-House Method
 SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during
 sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-5B

Sample Description: OLIVE SITE #0226-002.01: SD-19 (SAMPLE #2) 11-17-94 @ 2300 HRS
 SAMPLED BY JOHN VIRGIN

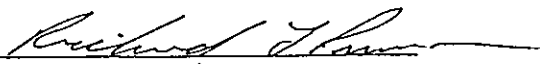
CHEMICAL ANALYSIS

| Constituents | Sample Results | | Units | Method | Method |
|---------------|----------------|-----------|-------|-----------------|---------|
| | As Received | Dry Basis | | Detection Limit | |
| Moisture | 47. | | % | 0.05 | BC |
| Total Cadmium | 17. | 31. | mg/kg | 0.5 | SW-6010 |
| Total Lead | 1600. | 3010. | mg/kg | 100. | SW-7421 |

REFERENCES:

BC = BC Laboratory In-House Method
 SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during
 sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-5C

Sample Description: OLINE SITE #0226-002.01: SD-19 (SAMPLE #3) 11-17-94 @ 2300 HRS
 SAMPLED BY JOHN VIRGIN

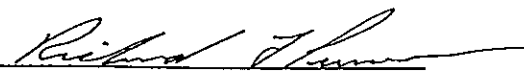
CHEMICAL ANALYSIS

| Constituents | Sample Results | | Units | Method | Method |
|---------------|----------------|-----------|-------|-----------------|---------|
| | As Received | Dry Basis | | Detection Limit | |
| Moisture | 46. | | % | 0.05 | BC |
| Total Cadmium | 6.0 | 11. | mg/kg | 0.5 | SW-6010 |
| Total Lead | 1470. | 2720. | mg/kg | 100. | SW-7421 |

REFERENCES:

BC = BC Laboratory In-House Method
 SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during
 sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date Reported: 12/19/94 Page 1
 Date Received: 11/23/94
 Laboratory No.: 94-13019-COMP

Sample Description: OLINE SITE #0226-002.01: COMPOSITE OF SD-13, SD-3, SD-24, SD-19

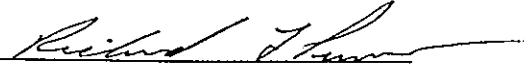
CHEMICAL ANALYSIS

| <u>Constituents</u> | <u>Sample Results</u> | | <u>Units</u> | <u>Method</u> | <u>Method</u> |
|---------------------|-----------------------|------------------|--------------|------------------|---------------|
| | <u>As Received</u> | <u>Dry Basis</u> | | <u>Detection</u> | |
| Moisture | 38.0 | | % | 0.05 | BC |
| Total Arsenic | 27. | 44. | mg/kg | 2.5 | SW-6010 |
| Total Copper | 2390. | 3890. | mg/kg | 0.5 | SW-6010 |
| Total Mercury | 0.80 | 1.3 | mg/kg | 0.2 | SW-7471 |
| Total Nickel | 80. | 130. | mg/kg | 2.5 | SW-6010 |
| Total Zinc | 2180. | 3550. | mg/kg | 2.5 | SW-6010 |

REFERENCES:

BC = BC Laboratory In-House Method
 SW = "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods",
 EPA-SW-846, September, 1986.

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits based on "As Received" sample.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of Report: 12/19/94
 Lab #: 94-13019-1A

Sample Description: OLINE SITE #0226-002.01: SD-14 (SAMPLE #1) 11-17-94 @ 2100 HRS
 SAMPLED BY JOHN VIRGIN

Test Method: EPA Method 8080

Sample Matrix: Solid waste

Date Sample Collected:
 11/17/94

Date Sample Received @ Lab:
 11/23/94

Date Analysis Completed:
 12/13/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.05 |
| PCB-1221 | None Detected | mg/kg | 0.05 |
| PCB-1232 | None Detected | mg/kg | 0.05 |
| PCB-1242 | None Detected | mg/kg | 0.05 |
| PCB-1248 | None Detected | mg/kg | 0.05 |
| PCB-1254 | 0.23 | mg/kg | 0.05 |
| PCB-1260 | None Detected | mg/kg | 0.05 |
| Total PCB's (Summation) | 0.23 | mg/kg | 0.05 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/19/94
 Lab #: 94-13019-1B

Sample Description: OLINE SITE #0226-002.01: SD-14 (SAMPLE #2) 11-17-94 @ 2100 HRS
 SAMPLED BY JOHN VIRGIN

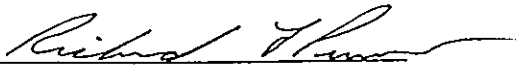
Test Method: EPA Method 8080

Sample Matrix: Solid waste

| Date Sample Collected: | Date Sample Received @ Lab: | Date Analysis Completed: |
|---------------------------|--------------------------------|-----------------------------|
| 11/17/94 | 11/23/94 | 12/15/94 |

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-----------------------------|----------------------------|---------------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.6 |
| PCB-1221 | None Detected | mg/kg | 0.6 |
| PCB-1232 | None Detected | mg/kg | 0.6 |
| PCB-1242 | None Detected | mg/kg | 0.6 |
| PCB-1248 | None Detected | mg/kg | 0.6 |
| PCB-1254 | 6.3 | mg/kg | 0.6 |
| PCB-1260 | None Detected | mg/kg | 0.6 |
| Total PCB's (Summation) | 6.3 | mg/kg | 0.6 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/19/94
 Lab #: 94-13019-1C

Sample Description: OLINE SITE #0226-002.01: SD-14 (SAMPLE #3) 11-17-94 @ 2100 HRS
 SAMPLED BY JOHN VIRGIN

Test Method: EPA Method 8080

Sample Matrix: Solid waste

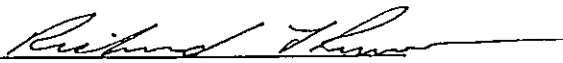
Date Sample
 Collected:
 11/17/94

Date Sample
 Received @ Lab:
 11/23/94

Date Analysis
 Completed:
 12/16/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.05 |
| PCB-1221 | None Detected | mg/kg | 0.05 |
| PCB-1232 | None Detected | mg/kg | 0.05 |
| PCB-1242 | None Detected | mg/kg | 0.05 |
| PCB-1248 | None Detected | mg/kg | 0.05 |
| PCB-1254 | 0.23 | mg/kg | 0.05 |
| PCB-1260 | None Detected | mg/kg | 0.05 |
| Total PCB's (Summation) | 0.23 | mg/kg | 0.05 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of Report: 12/19/94
 Lab #: 94-13019-2A

Sample Description: OLINE SITE #0226-002.01: SD-13 (SAMPLE #1) 11-17-94 @ 2130 HRS
 SAMPLED BY JOHN VIRGIN

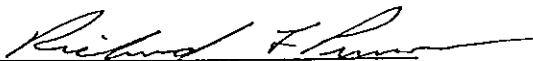
Test Method: EPA Method 8080

Sample Matrix: Solid waste

| | | |
|------------------------------------|---|--------------------------------------|
| Date Sample Collected: 11/17/94 | Date Sample Received @ Lab: 11/23/94 | Date Analysis Completed: 12/13/94 |
|------------------------------------|---|--------------------------------------|

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.05 |
| PCB-1221 | None Detected | mg/kg | 0.05 |
| PCB-1232 | None Detected | mg/kg | 0.05 |
| PCB-1242 | None Detected | mg/kg | 0.05 |
| PCB-1248 | None Detected | mg/kg | 0.05 |
| PCB-1254 | 0.58 | mg/kg | 0.05 |
| PCB-1260 | None Detected | mg/kg | 0.05 |
| Total PCB's (Summation) | 0.58 | mg/kg | 0.05 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of Report: 12/19/94
 Lab #: 94-13019-2B

Sample Description: OLINE SITE #0226-002.01: SD-13 (SAMPLE #2) 11-17-94 @ 2130 HRS
 SAMPLED BY JOHN VIRGIN

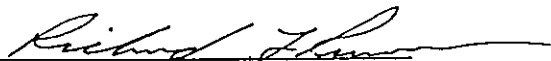
Test Method: EPA Method 8080

Sample Matrix: Solid waste

| | | |
|------------------------------------|---|--------------------------------------|
| Date Sample Collected: 11/17/94 | Date Sample Received @ Lab: 11/23/94 | Date Analysis Completed: 12/13/94 |
|------------------------------------|---|--------------------------------------|

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.05 |
| PCB-1221 | None Detected | mg/kg | 0.05 |
| PCB-1232 | None Detected | mg/kg | 0.05 |
| PCB-1242 | None Detected | mg/kg | 0.05 |
| PCB-1248 | None Detected | mg/kg | 0.05 |
| PCB-1254 | 0.22 | mg/kg | 0.05 |
| PCB-1260 | None Detected | mg/kg | 0.05 |
| Total PCB's (Summation) | 0.22 | mg/kg | 0.05 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/19/94
 Lab #: 94-13019-2C

Sample Description: OLINE SITE #0226-002.01: SD-13 (SAMPLE #3) 11-17-94 @ 2130 HRS
 SAMPLED BY JOHN VIRGIN

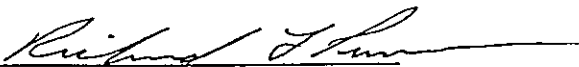
Test Method: EPA Method 8080

Sample Matrix: Solid waste

| | | |
|------------------------------------|---|--------------------------------------|
| Date Sample Collected: 11/17/94 | Date Sample Received @ Lab: 11/23/94 | Date Analysis Completed: 12/13/94 |
|------------------------------------|---|--------------------------------------|

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.05 |
| PCB-1221 | None Detected | mg/kg | 0.05 |
| PCB-1232 | None Detected | mg/kg | 0.05 |
| PCB-1242 | None Detected | mg/kg | 0.05 |
| PCB-1248 | None Detected | mg/kg | 0.05 |
| PCB-1254 | 0.18 | mg/kg | 0.05 |
| PCB-1260 | None Detected | mg/kg | 0.05 |
| Total PCB's (Summation) | 0.18 | mg/kg | 0.05 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/19/94
 Lab #: 94-13019-3A

Sample Description: OLINE SITE #0226-002.01: SD-3 (SAMPLE #1) 11-17-94 @ 2215 HRS
 SAMPLED BY JOHN VIRGIN

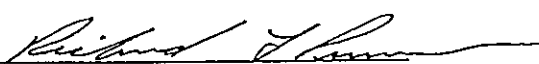
Test Method: EPA Method 8080

Sample Matrix: Solid waste

| Date Sample Collected: | Date Sample Received @ Lab: | Date Analysis Completed: |
|------------------------|-----------------------------|--------------------------|
| 11/17/94 | 11/23/94 | 12/13/94 |

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.05 |
| PCB-1221 | None Detected | mg/kg | 0.05 |
| PCB-1232 | None Detected | mg/kg | 0.05 |
| PCB-1242 | None Detected | mg/kg | 0.05 |
| PCB-1248 | None Detected | mg/kg | 0.05 |
| PCB-1254 | 0.13 | mg/kg | 0.01 |
| PCB-1260 | None Detected | mg/kg | 0.05 |
| Total PCB's (Summation) | 0.13 | mg/kg | 0.01 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/19/94
 Lab #: 94-13019-3B

Sample Description: OLINE SITE #0226-002.01: SD-3 (SAMPLE #2) 11-17-94 @ 2215 HRS
 SAMPLED BY JOHN VIRGIN

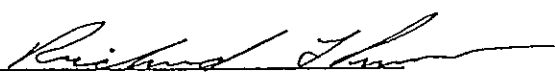
Test Method: EPA Method 8080

Sample Matrix: Solid waste

| Date Sample Collected: | Date Sample Received @ Lab: | Date Analysis Completed: |
|---------------------------|--------------------------------|-----------------------------|
| 11/17/94 | 11/23/94 | 12/15/94 |

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-----------------------------|----------------------------|---------------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.05 |
| PCB-1221 | None Detected | mg/kg | 0.05 |
| PCB-1232 | None Detected | mg/kg | 0.05 |
| PCB-1242 | None Detected | mg/kg | 0.05 |
| PCB-1248 | None Detected | mg/kg | 0.05 |
| PCB-1254 | 0.15 | mg/kg | 0.05 |
| PCB-1260 | None Detected | mg/kg | 0.05 |
| Total PCB's (Summation) | 0.15 | mg/kg | 0.05 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/19/94
 Lab #: 94-13019-3C

Sample Description: OLINE SITE #0226-002.01: SD-3 (SAMPLE #3) 11-17-94 @ 2215 HRS
 SAMPLED BY JOHN VIRGIN

Test Method: EPA Method 8080

Sample Matrix: Solid waste

| | | |
|------------------------------------|---|--------------------------------------|
| Date Sample Collected: 11/17/94 | Date Sample Received @ Lab: 11/23/94 | Date Analysis Completed: 12/15/94 |
|------------------------------------|---|--------------------------------------|

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.02 |
| PCB-1221 | None Detected | mg/kg | 0.02 |
| PCB-1232 | None Detected | mg/kg | 0.02 |
| PCB-1242 | None Detected | mg/kg | 0.02 |
| PCB-1248 | None Detected | mg/kg | 0.02 |
| PCB-1254 | 0.09 | mg/kg | 0.02 |
| PCB-1260 | None Detected | mg/kg | 0.02 |
| Total PCB's (Summation) | 0.09 | mg/kg | 0.02 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/19/94
 Lab #: 94-13019-4A

Sample Description: OLINE SITE #0226-002.01: SD-24 (SAMPLE #1) 11-17-94 @ 2240 HRS
 SAMPLED BY JOHN VIRGIN

Test Method: EPA Method 8080

Sample Matrix: Solid waste

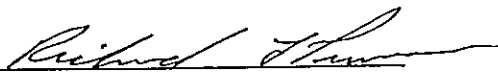
Date Sample
 Collected:
 11/17/94

Date Sample
 Received @ Lab:
 11/23/94

Date Analysis
 Completed:
 12/15/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.02 |
| PCB-1221 | None Detected | mg/kg | 0.02 |
| PCB-1232 | None Detected | mg/kg | 0.02 |
| PCB-1242 | None Detected | mg/kg | 0.02 |
| PCB-1248 | None Detected | mg/kg | 0.02 |
| PCB-1254 | 0.06 | mg/kg | 0.02 |
| PCB-1260 | None Detected | mg/kg | 0.02 |
| Total PCB's (Summation) | 0.06 | mg/kg | 0.02 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.



Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210

Attn.: NORM WEBB 503-227-5313

Date of
Report: 12/19/94
Lab #: 94-13019-4B

Sample Description: OLINE SITE #0226-002.01: SD-24 (SAMPLE #2) 11-17-94 @ 2240 HRS
SAMPLED BY JOHN VIRGIN

Test Method: EPA Method 8080

Sample Matrix: Solid waste

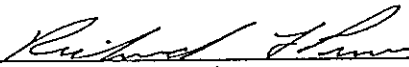
Date Sample
Collected:
11/17/94

Date Sample
Received @ Lab:
11/23/94

Date Analysis
Completed:
12/15/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.02 |
| PCB-1221 | None Detected | mg/kg | 0.02 |
| PCB-1232 | None Detected | mg/kg | 0.02 |
| PCB-1242 | None Detected | mg/kg | 0.02 |
| PCB-1248 | None Detected | mg/kg | 0.02 |
| PCB-1254 | 0.06 | mg/kg | 0.02 |
| PCB-1260 | None Detected | mg/kg | 0.02 |
| Total PCB's (Summation) | 0.06 | mg/kg | 0.02 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
Detection Limits were raised due to high concentration of target analytes requiring sample dilution.


Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/19/94
 Lab #: 94-13019-4C

Sample Description: OLINE SITE #0226-002.01: SD-24 (SAMPLE #3) 11-17-94 @ 2240 HRS
 SAMPLED BY JOHN VIRGIN

Test Method: EPA Method 8080

Sample Matrix: Solid waste

| | | |
|---------------------------------------|--|---|
| Date Sample Collected: 11/17/94 | Date Sample Received @ Lab: 11/23/94 | Date Analysis Completed: 12/15/94 |
|---------------------------------------|--|---|

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-----------------------------|----------------------------|---------------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.02 |
| PCB-1221 | None Detected | mg/kg | 0.02 |
| PCB-1232 | None Detected | mg/kg | 0.02 |
| PCB-1242 | None Detected | mg/kg | 0.02 |
| PCB-1248 | None Detected | mg/kg | 0.02 |
| PCB-1254 | 0.11 | mg/kg | 0.02 |
| PCB-1260 | None Detected | mg/kg | 0.02 |
| Total PCB's (Summation) | 0.11 | mg/kg | 0.02 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/19/94
 Lab #: 94-13019-5A

Sample Description: OLINE SITE #0226-002.01: SD-19 (SAMPLE #1) 11-17-94 @ 2300 HRS
 SAMPLED BY JOHN VIRGIN


Test Method: EPA Method 8080

Sample Matrix: Solid waste

| | | |
|------------------------------------|---|--------------------------------------|
| Date Sample Collected: 11/17/94 | Date Sample Received @ Lab: 11/23/94 | Date Analysis Completed: 12/15/94 |
|------------------------------------|---|--------------------------------------|

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.02 |
| PCB-1221 | None Detected | mg/kg | 0.02 |
| PCB-1232 | None Detected | mg/kg | 0.02 |
| PCB-1242 | None Detected | mg/kg | 0.02 |
| PCB-1248 | None Detected | mg/kg | 0.02 |
| PCB-1254 | 0.14 | mg/kg | 0.02 |
| PCB-1260 | None Detected | mg/kg | 0.02 |
| Total PCB's (Summation) | 0.14 | mg/kg | 0.02 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/19/94
 Lab #: 94-13019-5B

Sample Description: OLINE SITE #0226-002.01: SD-19 (SAMPLE #2) 11-17-94 @ 2300 HRS
 SAMPLED BY JOHN VIRGIN

Test Method: EPA Method 8080

Sample Matrix: Solid waste


Date Sample
 Collected:
 11/17/94

Date Sample
 Received @ Lab:
 11/23/94

Date Analysis
 Completed:
 12/15/94

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-------------------------|------------------------|-------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.02 |
| PCB-1221 | None Detected | mg/kg | 0.02 |
| PCB-1232 | None Detected | mg/kg | 0.02 |
| PCB-1242 | None Detected | mg/kg | 0.02 |
| PCB-1248 | None Detected | mg/kg | 0.02 |
| PCB-1254 | 0.33 | mg/kg | 0.02 |
| PCB-1260 | None Detected | mg/kg | 0.02 |
| Total PCB's (Summation) | 0.33 | mg/kg | 0.02 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN

PCB Analysis

GENERAL METALS OF TACOMA
 4927 NORTHWEST FRONT AVE
 PORTLAND, OR 97210
 Attn.: NORM WEBB 503-227-5313

Date of
 Report: 12/19/94
 Lab #: 94-13019-5C

Sample Description: OLINE SITE #0226-002.01: SD-19 (SAMPLE #3) 11-17-94 @ 2300 HRS
 SAMPLED BY JOHN VIRGIN

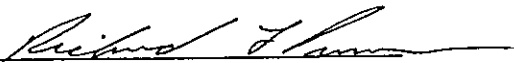
Test Method: EPA Method 8080

Sample Matrix: Solid waste

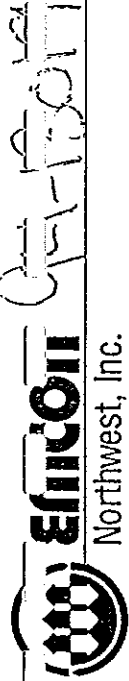
| | | |
|---------------------------------------|--|---|
| Date Sample Collected: 11/17/94 | Date Sample Received @ Lab: 11/23/94 | Date Analysis Completed: 12/16/94 |
|---------------------------------------|--|---|

| <u>Constituents</u> | <u>Analysis Results</u> | <u>Reporting Units</u> | <u>Method Detection Limit</u> |
|-------------------------|-----------------------------|----------------------------|---------------------------------------|
| PCB-1016 | None Detected | mg/kg | 0.05 |
| PCB-1221 | None Detected | mg/kg | 0.05 |
| PCB-1232 | None Detected | mg/kg | 0.05 |
| PCB-1242 | None Detected | mg/kg | 0.05 |
| PCB-1248 | None Detected | mg/kg | 0.05 |
| PCB-1254 | 0.34 | mg/kg | 0.05 |
| PCB-1260 | None Detected | mg/kg | 0.05 |
| Total PCB's (Summation) | 0.34 | mg/kg | 0.05 |

Note: Analytical results corrected for the amount of iron material removed during sample splitting.
 Detection Limits were raised due to high concentration of target analytes requiring sample dilution.


 Department Supervisor

cc: EMCON NORTHWEST, INC. - WILLIAM R. HALDEMAN



CHAIN OF CUSTODY / LABORATORY ANALYSIS REPORT FORM

DATE 11/18/94 PAGE 1 OF 1

PROJECT NAME Clunk Site # 0226-002.01
 PROJECT Site Characterization, 200 Marine View Dr, Rainier
 COMPANY/ADDRESS EPICON NW
18912 N. Creek Parkway Suite 100
Bothell, WA 98011 PHONE 206-488-5000
 SAMPLERS SIGNATURE [Signature]

| SAMPLE I.D. | DATE | TIME | LAB I.D. | SAMPLE MATRIX | NUMBER OF CONTAINERS | ANALYSIS REQUEST | | | | | | | | | | REMARKS | | | |
|-------------|-------|------|----------|---------------|----------------------|--------------------------|-----------------------|-----------------------|---------------------------|---------------------------|---|--|----------------------------------|--------------------------|--|---|---------------------------|--|---|
| | | | | | | PETROLEUM HCS | | | | | ORGANIC | | | | | | ORGANIC METALS/INORGANICS | | |
| | | | | | | TPH-HCID State: _____ | TPH-D State: _____ | TPH-G State: _____ | TPH-418.1 State: _____ | TPH-Other State: _____ | Halogenated or Aromatic Volatiles 601/8010 | GC/MS 624-8240 Base/Neu/acid Organics 602/8020 | GC/MS 625/8270 Pesticides/CBS | PAH 8100 GC 8310 HPCL | TCLP Metals Semt VOA VOA Pest/Herb | Metals Total List Below Cadmium Lead DISS | Cyanide | PH, Cond Cl, SO ₄ , PO ₄ , F, Br NH ₃ , N, COD, Total-P, TKN/TOC TOX (Circle) | |
| SD-14 | 11/17 | 2100 | | Sed/ASR | 2 | | | | | | | | | | | X | | | X |
| SD-13 | | 2130 | | | 2 | | | | | | | | | | | X | | | X |
| SD-3 | | 2215 | | | 2 | | | | | | | | | | | X | | | X |
| SD-24 | | 2240 | | | 2 | | | | | | | | | | | X | | | X |
| SD-19 | | 2300 | | | 2 | | | | | | | | | | | X | | | X |

RECEIVED BY: [Signature]
 Signature John Victor
 Printed Name John Victor
 Firm EPICON
 Date/Time 11/18/94 10:45

RECEIVED BY: [Signature]
 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 Mr. Kevin Webb
1714 E
4927 NW Front Ave
Bothell, OR 97006

SAMPLE RECEIPT:
 Shipping Via: UPS
 Shipping to: BC Laboratories
 Condition: _____
 Lab No: _____

SPECIAL INSTRUCTIONS/COMMENTS: All Analysis Confirmed on 11-30-94
1) 10 buckets total
2) Follow standard General Metals at Tacoma theft sampling procedures. An ill
sample through the hammermill - analyze samples in triplicate
3) Please composite equal portions from SD-13, SD-3, SD-24 and SD-19 (after hammermill
and mixing) and analyze for the following metals: As, Cu, Ni, and Zn (by GC/MS) and Hg (by
4) Methods = PCBs (ROSC), Cd (GC/MS), Pb (7221), and TOC (S310B)

Handwritten notes at the bottom of the page.



LABORATORIES

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
METHOD 8080 - PCB'S

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210
NORM WEBB

Date of Report: 01/09/95
Sample Matrix: SOLIDWASTE

Samples Affected: 94-13019-1A, 94-13019-1B, 94-13019-1C, 94-13019-2A,
94-13019-2B, 94-13019-2C, 94-13019-3A, 94-13019-3B,
94-13019-3C, 94-13019-4A, 94-13019-4B, 94-13019-4C,
94-13019-5A, 94-13019-5B & 94-13019-5C

| Constituents | QC Sample ID | Sample Result | MS Result | MSD Result | MS Spike Level | MSD Spike Level | Units | Spike R.P.D. | Precision Control Limits | MS % Rec | MSD % Rec | Accuracy Control Limits |
|---------------|--------------|---------------|-----------|------------|----------------|-----------------|-------|--------------|--------------------------|----------|-----------|-------------------------|
| | | | | | | | | | | | | |
| PCB | 13019-1A | < 0.01 | 0.17 | 0.16 | 0.20 | 0.20 | ms/kg | 7. | 20 | 86. | 80. | 64 - 117 |
| Surrogate DCB | 13019-1A | | | | | | | | | 89. | | 60 - 140 |
| Surrogate DCB | 13019-1B | | | | | | | | 140. | | | |
| Surrogate DCB | 13019-1C | | | | | | | | 62. | | | |
| Surrogate DCB | 13019-2A | | | | | | | | 80. | | | |
| Surrogate DCB | 13019-2B | | | | | | | | 78. | | | |
| Surrogate DCB | 13019-2C | | | | | | | | 82. | | | |
| Surrogate DCB | 13019-3A | | | | | | | | 85. | | | |
| Surrogate DCB | 13019-3B | | | | | | | | 93. | | | |
| Surrogate DCB | 13019-3C | | | | | | | | 92. | | | |
| Surrogate DCB | 13019-4A | | | | | | | | 93. | | | |
| Surrogate DCB | 13019-4B | | | | | | | | 90. | | | |
| Surrogate DCB | 13019-4C | | | | | | | | 90. | | | |
| Surrogate DCB | 13019-5A | | | | | | | | 94. | | | |
| Surrogate DCB | 13019-5B | | | | | | | | 102. | | | |
| Surrogate DCB | 13019-5C | | | | | | | | 96. | | | |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer



B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
METHOD 8080 - PCB'S

Date of Report: 01/09/95
Sample Matrix: SOLIDWASTE

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210
NORM WEBB

Samples Affected: 94-13019-1A, 94-13019-1B, 94-13019-1C, 94-13019-2A,
94-13019-2B, 94-13019-2C, 94-13019-3A, 94-13019-3B,
94-13019-3C, 94-13019-4A, 94-13019-4B, 94-13019-4C,
94-13019-5A, 94-13019-5B & 94-13019-5C

| Constituents | ICV % Found | CCV % Found Before | CCV % Found After | % Found Control Limits | CCB Readings Before | Units | CCB Readings After | Units | Method Blank Readings | Units |
|--------------|----------------|--------------------------|-------------------------|------------------------------|---------------------------|-------|--------------------------|-------|-----------------------------|-------|
| PCB-1260 | 102.. | 96. | 95. | 85 - 115 | < 0.02 | mg/L | < 0.02 | mg/L | < 0.01 | mg/kg |

ICV = Initial Calibration Verification; CCV = Continuing Calibration Verification; CCB = Continuing Calibration Blank
Quality Control Officer



LABORATORIES

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210
NORM WEBB

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
STANDARD TLIC CONSTITUENTS

Date of Report: 01/09/95
Sample Matrix: SOLIDWASTE

Samples Affected: 94-13019-1A, 94-13019-1B, 94-13019-1C, 94-13019-2A,
94-13019-2B, 94-13019-2C, 94-13019-3A, 94-13019-3B,
94-13019-3C, 94-13019-4A, 94-13019-4B, 94-13019-4C,
94-13019-5A, 94-13019-5B & 94-13019-5C

| Constituents | QC Sample ID | Sample Result | Sample Duplicate | MS Result | MSD Result | MS Spike Level | HSD Spike Level | Units | Sample Spike R.P.D. | Precision Control Limits | MS % Rec | HSD % Rec | Accuracy Control Limits |
|--------------|--------------|---------------|------------------|-----------|------------|----------------|-----------------|-------|---------------------|--------------------------|----------|-----------|-------------------------|
| Cadmium | 13521-1 | 0.5635 | 0.4188 | 8.788 | 9.082 | 9.901 | 10.00 | mg/kg | <PQL | 20 | 83. | 85. | 80 - 120 |
| Lead | 13521-1 | < 2.5 | < 2.5 | 114.11 | 113.65 | 99.01 | 100.00 | mg/kg | <PQL | 20 | 109. | 108. | 75 - 125 |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Quality Control Officer



LABORATORIES

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
STANDARD TTLC CONSTITUENTS

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210
NORM WEBB

Date of Report: 01/09/95
Sample Matrix: SOLIDWASTE

Samples Affected: 94-13019-1A, 94-13019-1B, 94-13019-1C, 94-13019-2A,
94-13019-2B, 94-13019-2C, 94-13019-3A, 94-13019-3B,
94-13019-3C, 94-13019-4A, 94-13019-4B, 94-13019-4C,
94-13019-5A, 94-13019-5B & 94-13019-5C

| Constituents | ICV % Found | CCV % Found Before | CCV % Found After | % Found Control Limits | CCB Readings Before | Units | CCB Readings After | Units | Method Blank Readings | Units |
|--------------|----------------|--------------------------|-------------------------|------------------------------|---------------------------|-------|--------------------------|-------|-----------------------------|-------|
| Cadmium | 102. | 101. | 102. | 90 - 110 | < 0.01 | mg/L | < 0.01 | mg/L | < 0.5 | mg/kg |
| Lead | 101. | 101. | 101. | 90 - 110 | < 0.05 | mg/L | < 0.05 | mg/L | < 2.5 | mg/kg |

ICV = Initial Calibration Verification; CCV = Continuing Calibration Verification; CCB = Continuing Calibration Blank
Quality Control Officer



LABORATORIES

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210
NORM WEBB

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)
STANDARD ITLC CONSTITUENTS

Date of Report: 01/09/95
Sample Matrix: SOLIDWASTE

Samples Affected: 94-13019 - COMP

| Constituents | QC Sample ID | Sample Result | Sample Duplicate | MS Result | MSD Result | MS Spike Level | MSD Spike Level | Units | Sample R.P.D. | Spike R.P.D. | Precision Control Limits | MS | | Accuracy Control Limits |
|--------------|--------------|---------------|------------------|-----------|------------|----------------|-----------------|-------|---------------|--------------|--------------------------|-------|-------|-------------------------|
| | | | | | | | | | | | | % Rec | % Rec | |
| Arsenic | 13251-1 | < 2.5 | < 2.5 | 3.99 | 5.21 | 4.95 | 5.00 | mg/kg | <PQL | 27. | 20 | 80. | 104. | 80 - 120 |
| Copper | 13521-1 | 7.172 | 7.515 | 95.57 | 97.33 | 99.01 | 100.0 | mg/kg | 5. | 1. | 20 | 89. | 90. | 80 - 120 |
| Mercury | 13332-8 | < 0.2 | < 0.2 | 1.10 | 1.09 | 1.00 | 1.00 | mg/kg | <PQL | 1. | 20 | 102. | 101. | 75 - 125 |
| Nickel | 13521-1 | 8.341 | 9.010 | 86.82 | 88.10 | 99.01 | 100.0 | mg/kg | 8. | 1. | 20 | 79. | 80. | 80 - 120 |
| Zinc | 13521-1 | 26.95 | 27.88 | 109.3 | 110.5 | 99.01 | 100.0 | mg/kg | 3. | 0. | 20 | 83. | 84. | 80 - 120 |

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

Spike RPD for AS is outside of QC limits

Quality Control Officer



LABORATORIES

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)
STANDARD IILC CONSTITUENTS

GENERAL METALS OF TACOMA
4927 NORTHWEST FRONT AVE
PORTLAND, OR 97210
NORM WEBB

Date of Report: 01/09/95
Sample Matrix: SOLIDWASTE

Samples Affected: 94-13019 - COMP

| Constituents | ICV % Found | CCV % Found Before | CCV % Found After | % Found Control Limits | CCB Readings Before | Units | CCB Readings After | Units | Method Blank Readings | Units |
|--------------|----------------|--------------------------|-------------------------|------------------------------|---------------------------|-------|--------------------------|-------|-----------------------------|-------|
| Arsenic | 93. | 93. | 96. | 90 - 110 | < 0.05 | mg/L | < 0.05 | mg/L | < 2.5 | mg/kg |
| Copper | 98. | 95. | 100. | 90 - 110 | < 0.01 | mg/L | < 0.01 | mg/L | < 0.5 | mg/kg |
| Mercury | 112. | 105. | 107. | 80 - 120 | < 0.0002 | mg/L | < 0.0002 | mg/L | < 0.2 | mg/kg |
| Nickel | 96. | 98. | 96. | 90 - 110 | < 0.05 | mg/L | < 0.05 | mg/L | < 2.5 | mg/kg |
| Zinc | 101. | 100. | 101. | 90 - 110 | < 0.05 | mg/L | < 0.05 | mg/L | < 2.5 | mg/kg |

ICV = Initial Calibration Verification; CCV = Continuing Calibration Verification; CCB = Continuing Calibration Blank

Quality Control Officer