REMEDIAL INVESTIGATION
FINAL REPORT
WAGSTAFF BATTERY MANUFACTURING CO.
PORTLAND, OREGON

December 10, 1997
Project No. 18572

David Sacd
360
737-1943

PHILIP ENVIRONMENTAL

Philip Environmental Services Corporation, a subsidiary of Philip Services Corp

P.O. Box 3552, Seattle, WA 98124
955 Powell Avenue S.W., Renton, WA 98055
(206) 227-0311

1.0 INTRODUCTION

Philip Services Corporation (Philip) was contracted by Bruce and Chad Hindman, owners of the Wagstaff Battery Manufacturing Company (Wagstaff) property, to perform site investigation and remediation activities at their facility in Portland, Oregon. The purpose of these activities was to gather information concerning the potential presence of petroleum compounds beneath an interior sump, assess the extent of lead beneath the facility's foundation, to characterize lead concentrations in a grass lot located along the eastern boundary of the property, and to excavate and dispose of approximately 130 tons of lead-impacted soil which had been previously stabilized and buried on-site. The Hindmans have entered the Oregon Department of Environmental Quality's (DEQ) Voluntary Cleanup Program in an effort to mitigate site environmental concerns and solicit a No Further Action (NFA) determination from the DEQ. A property sale is on hold pending issuance of the NFA determination by DEQ.

2.0 SITE LOCATION AND DESCRIPTION

The Wagstaff property is located at 2124 North Williams Avenue, Portland, Oregon (Figures 1). The industrial property is approximately 0.5 acres in size, bounded on the west by North Williams, the east by residential structures, the north by a residential structure and North Thompson Street, and to the south by residential and commercial properties. The site is comprised of two connecting buildings with an unpaved lot on the east side of the property (Figure 2). The site elevation is approximately 140 feet above mean sea level. The legal description of the property is Albina, Lot 4, Block #24, City of Portland, County of Multnomah, State of Oregon.

3.0 SITE GEOLOGY AND HYDROLOGY

The Wagstaff property is located approximately one-half mile northeast of the Willamette River. The site topography is flat with a gentle slope to the south-southwest. The site is situated on the floor of the Portland basin in the northern portion of the Lower Willamette drainage basin. The underlying site geology is made up of coarse sand and silt and Pleistocene flood deposits.

The area's drinking water supply is provided by the Willamette, Tualatin, Columbia and Bull Run watersheds. This is augmented by groundwater extraction from basalt. There are no groundwater wells at the site. The depth to groundwater beneath the site is not known. A Phase I site assessment report identified one active groundwater well within a 1-mile radius. It was drilled to 83 feet below ground surface (bgs) and had a static water level of 55 feet bgs. Shallow groundwater flow beneath the site is estimated to be west-southwest towards the Willamette River. Regionally groundwater flow is towards the north and west following the Columbia River flow.

4.0 SITE HISTORY

The Wagstaff facility has operated an industrial battery manufacturing, servicing, and recycling facility at the site for approximately 35 years. The facility consists of two connecting buildings (Buildings I and II, Figure 2) constructed in 1926 and 1936, respectively. A warehouse addition was added to Building I in 1972. Prior to occupancy by Wagstaff, the site was occupied by an upholstery company and later by a lounge chair manufacturer. Industrial batteries were manufactured on-site from 1962-1991. In 1991 Wagstaff notified the DEQ that they were no longer manufacturing batteries. A June 19, 1997 Oregon Department of Environmental Quality Memorandum noted that Wagstaff produced 800 batteries in 1973 and was producing 500 batteries per year by 1986 using 70 tons of lead and 100 tons of lead ingot. Currently the facility services batteries and acts as a collection point for batteries designated for scrap recycling. A more detailed history of the site is available in a 1992 site assessment report prepared by the Technical Action Group, Inc. ("Phase 1 Environmental Site Assessment, Wagstaff Battery", May 24, 1992, TAG Inc.).

During the period that batteries were manufactured at the site, wastewater from the manufacturing process was pumped to a collection sump in Building I (Figure 2) where lead oxide was allowed to settle out. The water was then pumped into a 3-foot diameter dry-well, formerly located outside the east wall of Building I. The former dry-well extended 18 feet bgs and was set in drain rock.

The eastern portion of the site is a grass lot. The area measures approximately 180 feet in length (north to south) by 42 feet in width (east to west). A concrete foundation for a residential structure is present in the northeast corner of the lot. Weeds and grass cover much of the soil surface. A discharge fan along the east wall of Building I and the roof ventilation fan vent towards this area.

5.0 PREVIOUS INVESTIGATIONS

In 1986 the DEQ identified the ventilation fans as a potential pathway for lead migration from the building's interior. The DEQ obtained soil samples from two areas of the grass lot that forms the eastern boundary of the Wagstaff property. Analytical testing of the samples indicated that lead concentrations in the surface soil from these two locations exceeded the current residential cleanup standard of 200 mg/kg total lead. As a result, the DEQ stated concern that these elevated lead concentrations were potentially attributable to fugitive dust from the battery manufacturing process.

The soil surrounding the dry-well was tested in 1993 by Wagstaff Battery. The analytical results indicated that the soil contained lead concentrations in excess of TCLP action levels (5 mg/l). As a result, the dry-well was removed and approximately 100 tons of impacted soil was excavated from this area in 1993. The excavated soil was stockpiled on a concrete pad in the northeast corner of the property and covered with a plastic liner. A layer of gray soil (possibly lead oxide) was visible at the time of the excavation and

appeared to extend beneath the building's foundation. The layer measured approximately 1.5 feet in width, 2 feet in length, and extended from a vertical depth of between 2 and 3 feet bgs to approximately 8 feet bgs. Confirmation samples taken from the excavation side walls and bottom after the excavation was completed indicated that the west wall of the excavation was the only area in which soluble lead concentrations still exceeded 5 mg/l. The soil in this area could not be removed due to its proximity to the building's foundation.

In April 1995, the stockpiled soil was treated by chemical fixation and stabilization (CFS), utilizing cement kiln dust (CKD). This process proved ineffective in reducing the soluble lead levels to below 5 mg/l limit in the TCLP extract. In December 1995, the CFS process was repeated using Portland cement as the reagent. This process proved effective. In 1996, after receiving approval from the DEQ's Solid Waste Program, stabilized soil was backfilled into the former dry-well excavation. The excavation was then capped with a 6-mil plastic cover and 6 inches of clean fill.

In January 1997, samples were taken within the Wagstaff facility from the two sumps that drained to the dry-well. Solid and liquid residue were removed from the sumps and placed in a 55-gallon drum and staged on-site. The concrete bottom of Sump #1 was removed and samples were taken from the underlying soil. Laboratory analytical testing indicated that lead and petroleum hydrocarbons were present at concentrations of 350 mg/kg and 15,000 mg/kg, respectively. Excavation of soil was performed to a depth 5 feet bgs. A hand-auger boring was then advanced to 6 feet bgs and a sample collected. Analytical results indicated that lead and petroleum hydrocarbon concentrations were 19 mg/kg and 9,000 mg/kg, respectively.

Lead was also identified in the soil beneath Sump #2. Affected soil was removed and the underlying soil re-sampled. At a depth of 4 feet bgs, a lead concentration of 15 mg/kg was detected. No further soil removal was performed in either sump.

In April 1997, Wagstaff entered the DEQ Voluntary Cleanup Program. The goals were to develop and institute a program to excavate impacted soil that could be removed without endangering the building foundation or structure and to delineate contaminant levels that would remain on-site due to their inaccessibility. The objective of this program was to bring about site closure with the DEQ and allow sale of the property to proceed without excessive deed restrictions.

6.0 SITE INVESTIGATION ACTIVITIES

6.1 Determine Vertical Extent of TPH Concentration Beneath Sump 1

On October 14, 1997, Philip personnel collected three soil samples from depths of 9, 12, and 15 feet bgs directly beneath Sump 1. Due to limited vertical access in the vicinity of Sump 1, a hand-held, hydraulically driven geo-probe unit was used to drive a 1-inch

split-spoon into the soil. The samples were collected by placing the soil from the split-spoon directly into an 8-ounce glass jar using a pre-cleaned stainless steel spoon. After collection, the samples were placed in an iced cooler until delivery to the laboratory. The samples were submitted to North Creek Analytical Laboratory and analyzed for TPH using Method 418.1, Polynuclear Aromatic Hydrocarbons (PAHs) using the Selective Ion Methodology (SIM), and pH.

6.2 Assess the Extent of Lead Contamination, West Wall of Building I

On October 15, 1997, samples were collected to quantify the extent of lead-impacted soil beneath the foundation of the building near the area of the former dry-well. Samples were collected from depths of 2, 5, 8, and 10 feet bgs from three locations around the perimeter of the identified contaminant hotspot and analyzed for total lead. Soil boring locations are indicated as B-02, B-03, B-04 on Figure 2. Soil borings were installed by first coring through the concrete floor of the facility building. A limited access drill rig was used to advance hollow stem augers through the cored holes. The gray soil layer identified the 1993 excavation activities in the area surrounding the former dry-well was not observed in any sample from the soil.

Samples were obtained from the appropriate sampling depths using a decontaminated split-spoon soil sampler. The samples were collected by placing the soil directly from a 2-inch split-spoon into an 8-ounce glass jar using a pre-cleaned stainless steel spoon. The samples were transported to Philip's Laboratory in Renton, Washington, and analyzed for total lead concentrations using EPA Method 6010.

6.3 Characterization of Grass Lot on East Side of Wagstaff Property

Three soil samples were collected on October 14 1997 to assess total lead concentrations in the grass lot located on the eastern portion of the Wagstaff property (Figure 2). One sample (B-05) was collected from the area adjacent to the discharge fan; another sample (B-06) was collected along the eastern fence line near the area sampled in 1986; the third sample (B-07) was collected approximately 5 ft east of the former dry-well. Each of the three samples were collected from undisturbed surface soils at depths of approximately 1 to 2 inches bgs. No evidence of previous excavation or other land reworking activities were observed in the sampling locations.

All samples were collected using pre-cleaned stainless steel sampling spoons and placed in laboratory-supplied 8-ounce glass sample containers. The containers were labeled with the sample location, date, time and sample ID number and placed in a cooler packed with ice, then transported under chain-of-custody to the laboratory for analysis. The samples were analyzed for total lead concentrations using EPA method 6010 at the Philip Renton Laboratory.

Philip Environmental
Renton, WA 425-204-7049

6.4 Removal of Stabilized Soil Surrounding Former Dry-well

The DEQ determined that a site risk assessment study of the potential impacts from the stabilized soil buried in the area surrounding the former dry-well would be required before an NFA determination would be issued, if the stabilized material was to remain on-site. As a result, Wagstaff decided to remove the treated soil from the site.

The treated soil was overlain by a layer of clean overburden to a depth of approximately four feet bgs. Over a period of several days in October 1997, Philip removed the overburden and stockpiled it on site. The previously treated soil was located in an area measuring approximately 18 feet by 20 feet and extending from approximately four feet bgs to approximately 20 feet bgs.

In addition to the previously treated soil, a gray colored soil layer, corresponding to the gray layer identified during the 1993 excavation activities, was encountered in the southwest corner of the excavation pit (Figure 3). The gray layer was observed extending from a depth of approximately 8 feet bgs to approximately 18 feet bgs. The gray layer appears to emanate from the location of the former dry well near the center of the excavation towards the southwest corner of the excavation and the facility building. Along the west wall of the excavation, the width of the gray layer varied from approximately 2 feet at 8 feet bgs to approximately 12 feet at 18 feet bgs.

The vertical extent of the gray layer in the west wall could not be determined due to the proximity of the excavation pit to the foundation of the building and the potential for impacting the structural integrity of the building. However, confirmation samples collected from the bottom of the excavation, approximately 24 ft bgs contained total lead concentrations of 33 mg/kg (Table 2), indicating that the vertical extent of lead-impacted soil did not extend below this depth.

The gray layer was also present, although to a lesser extent, at approximately 14 ft bgs along the south wall, near the southwestern corner of the excavation. The lateral extent of the gray layer along the south wall could not be fully delineated due to the presence of an asphalt driveway, however confirmation samples collected from 16 ft bgs along the south wall indicated total lead concentrations of approximately 13 mg/kg indicating that lead-impacted soils remaining in this area did not extent below 16 ft bgs.

Following excavation of the previously stabilized material, six confirmation samples were collected from the sidewalls and bottom of the excavation and analyzed for total lead concentrations at North Creek Analytical. The area of impacted soil was over-excavated to ensure complete removal of the previously treated soil with the final excavation measuring approximately 26 feet by 28 feet with a depth of 20 feet. The liner and approximately 350 tons of impacted or previously treated soil were excavated and transported off-site for disposal at the Waste Management Facility in Columbia Ridge. Receipts for disposal of the treated soils and other associated wastes are provided in Appendix A.

7.0 ANALYTICAL RESULTS

7.1 TPH Concentrations Beneath Sump 1

The vertical distribution of petroleum concentrations evident from the analytical data collected below Sump #1 indicates that there is decreasing concentration with depth. The data indicates that petroleum concentrations are present at 13,100 mg/kg at 9 feet bgs, 334 mg/kg at 12 feet bgs and below detectable limits at 15 feet bgs. Only one PAH, phenanthrene, was detected (22 µg/kg). It was detected from the sample collected at 12 feet bgs, B-01-12. No other PAH compound was detected from any other sample. Soil pH ranged from 3.56 to 5.39. Analytical results from the borings and soil samples are presented as Table 1. Analytical data is provided in Appendix B.

The volume of residual impacted soil remaining beneath Sump #1 (v) can be estimated by calculating the volume of a theoretical cylinder beneath Sump 1 based on the results of the field investigation and analytical results from boring (B-01) using the following equation.

$$v = \pi r^2 h$$

where r, the lateral extent of impacted soil surrounding Sump #1 is assumed to fall within a 3 ft radius of the sump. TPH-impacted soil beneath the sump was observed extending to approximately 15 ft bgs. The upper 5 ft of this soil was excavated from beneath the sump during 1993. Therefore h, the vertical extent of residual impacted soil remaining beneath Sump #1 is assumed to be 10 ft. Solving this equation for v yields an estimated 283 ft^3 (10.5 yd^3) of residual impacted soil remaining beneath the facility building in the vicinity of Sump #1.

7.2 Lead Concentration, West Wall of Building I

Total lead concentration from the borings collected inside Building I, adjacent to the former dry-well location ranged from 5.51 mg/kg in sample B-03-10 to 8.37 mg/kg in sample B-04-5, (Table 1). None of the samples exceeded the clean-up level of 200 mg/kg. There is no indication that elevated lead concentrations extend any significant distance beneath the facility in the vicinity of the former dry-well.

7.3 Lead Concentrations in the Grassy Lot on East Side of Property

Analytical data from the surface soils collected from the grassy lot adjacent to the facility indicate lead concentrations at 139 mg/kg in sample B-05-S, 22.2 mg/kg in sample B-06-S and 27.5 mg/kg in sample B-07-S, (Figure 2). No analytical results exceeded the clean-up level of 200 mg/kg, (Table 1).

7.4 Excavation Activities in the Area Surrounding the Former Dry-Well

The analytical results of total lead analyses in confirmation samples collected following excavation of soil from the area surrounding the former dry-well the soil excavation activities are provided in Table 2. Laboratory reporting sheets are provided in Appendix B. The results of the confirmation analyses from samples B-01 and B-07 indicated the presence of elevated concentrations of total lead along the west wall of the excavations (Figure 3). Total lead concentrations of 383 mg/kg were detected in the 10 ft bgs sample from B-03. Total lead concentrations of 3,750 mg/kg were detected in the 19 ft bgs sample from B-01. Following receipt of the analytical results from B-01, soil was excavated to a depth of 24 ft bgs and resampled (B-08) to evaluate whether all soil above the 200 mg/kg cleanup criteria had been removed. As shown in Table 2, total lead concentrations in B-08 (24 ft bgs) were approximately 33 mg/kg. Because total lead concentrations were below 40 mg/kg in each of the confirmation samples collected from the bottom of the excavation, none of the samples were analyzed for soluble lead (TCLP) concentrations.

As stated above, due to the proximity of the excavation pit to the foundation of the building and the potential for impacting the structural integrity of the building, some residual lead-impacted soil remains onsite in the area adjacent to the building. However, the gray soil layer observed during excavation activities was not observed in any samples collected from the borings B-02 through B-04, installed inside the facility building adjacent to the area of excavation In addition, the total lead concentration observed in borings B-02 through B-04 were all below 10 mg/kg. These results indicate that residual lead-impacted soil does not extend beneath the facility building.

The volume of residual impacted soil can be estimated based on the observations made during the field activities and the analytical results from the confirmation samples. Based on the results of the field investigation the average lateral extent of the gray layer in the west wall is assumed to be 10 ft. The vertical extent of residual impacted soil is assumed to be 20 ft. The extent of residual lead-impacted soil is estimated to be less than 3 ft from the sidewall of the excavation. Multiplication of these estimated dimensions yields an approximate volume of 600 ft^3 (22 yd^3) of lead-impacted residual impacted soil adjacent to the building.

8.0 CONCLUSIONS AND RECOMMENDATIONS

The results of this investigation indicate the presence of petroleum compounds at concentrations of 13,100 mg/kg at 9 feet bgs directly beneath Sump # 1. However, the concentrations are below analytical detection limits at 15 feet bgs. Groundwater in the vicinity of the site is approximately 55 feet bgs, more than 40 feet below the impacted soil. The sump is no longer in use. The impacted soil is beneath Building I and the ground surface surrounding Building I is covered by asphalt pavement. As a result, the area of impacted soil is not subject to infiltration by rainfall. Therefore, it is unlikely that the petroleum compounds beneath Sump #1 will reach groundwater or migrate off-site. Excavation of the impacted soil beneath the sump is not recommended.

Analytical data from soil samples collected along the eastern wall of the facility building indicate that the total lead concentrations were below the cleanup criteria of 200 mg/kg. The highest concentration of total lead was observed in the sample from 5 feet bgs in boring B-04 (8.37 mg/kg).

Analytical data from the samples collected from the grassy lot indicate that total lead concentrations were below the cleanup action level.

Soil treated during previous site activities was excavated from the area surrounding the former dry-well located adjacent to the east wall of the facility building. Elevated lead concentrations were observed in the confirmation samples collected from the west wall of the excavation pit, extending toward the facility building. This soil cannot be removed without jeopardizing the structural integrity of the building. All other soil samples collected from the excavation pit indicate levels below the cleanup criteria. The analytical results of confirmation sampling indicates that the vertical extent of lead-impacted soil remaining in the area adjacent to the west wall of the facility building is less than 24 ft bgs. Groundwater in the vicinity is estimated to occur at 55 ft bgs, approximately 30 ft below the vertical extent of impacted soil. As a result, it is considered unlikely that the residual impacted soil remaining on site would act as a source of groundwater degradation. Excavation of this soil is not recommended.

Based on the results of the recent investigation and associated remediation activities, Philip proposes that the DEQ grant a No Further Action determination for this site.

Table 1

Analytical Data from Soil Borings and Surface Samples

Sample Number	Depth (bgs)	Analytical Results			
		Total Lead (mg/kg)	PAHs (µg/kg)	TPH 418.1 (mg/kg)	pH
B-01-9	9	-	ND	13,100	3.53
B-01-12	12	-	Phenanthrene 22	334	3.39
B-01-15	15	-	ND	ND	3.56
B-02-2	2	7.23	-	-	-
B-02-5	5	7.14	-	-	-
B-02-8	8	7.09	-	-	-
B-02-10	10	6.73	-	-	-
B-902-2	2	7.74	-	-	-
B-03-2	2	7.67	-	-	-
B-03-5	5	8.15	-	-	-
B-03-8	8	6.37	-	-	-
B-03-10	10	5.51	-	-	-
B-04-2	2	6.36	-	-	-
B-04-5	5	8.37	-	-	-
B-04-8	8	6.14	-	-	-
B-04-10	10	6.74	-	-	-
B-05-S	Surface	1.39	-	-	-
B-06-S	Surface	22.2	-	-	-
B-07-S	Surface	27.5	-	-	-

ND = not detected

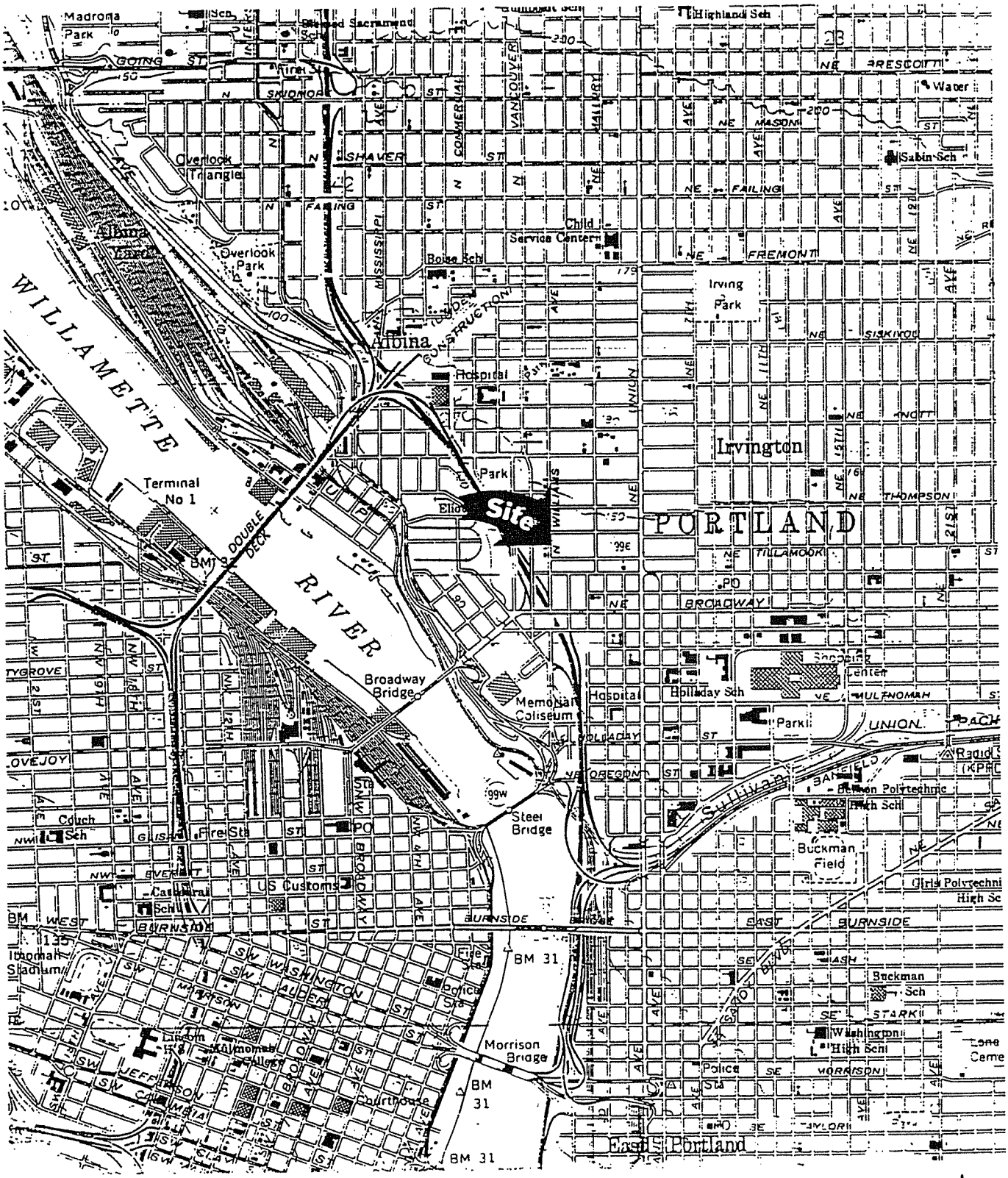
- indicates not analyzed for

Table 2

Analytical Data of Confirmation Samples of Excavation Pit

Sample Number	Location	Depth	Total Lead (mg/kg)
1	West center	19	3,750
2	South center wall	12	67.1
3	West wall	10	383
4	East center bottom	18	ND
5	East wall	8	17.2
6	North wall	10	ND
7	South wall	16	13.3
Bottom	West center bottom	24	33.6
Stockpile			99.6

ND = not detected



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TITLE

SITE LOCATION MAP

WAGSTAFF BATTERY MFG CO.

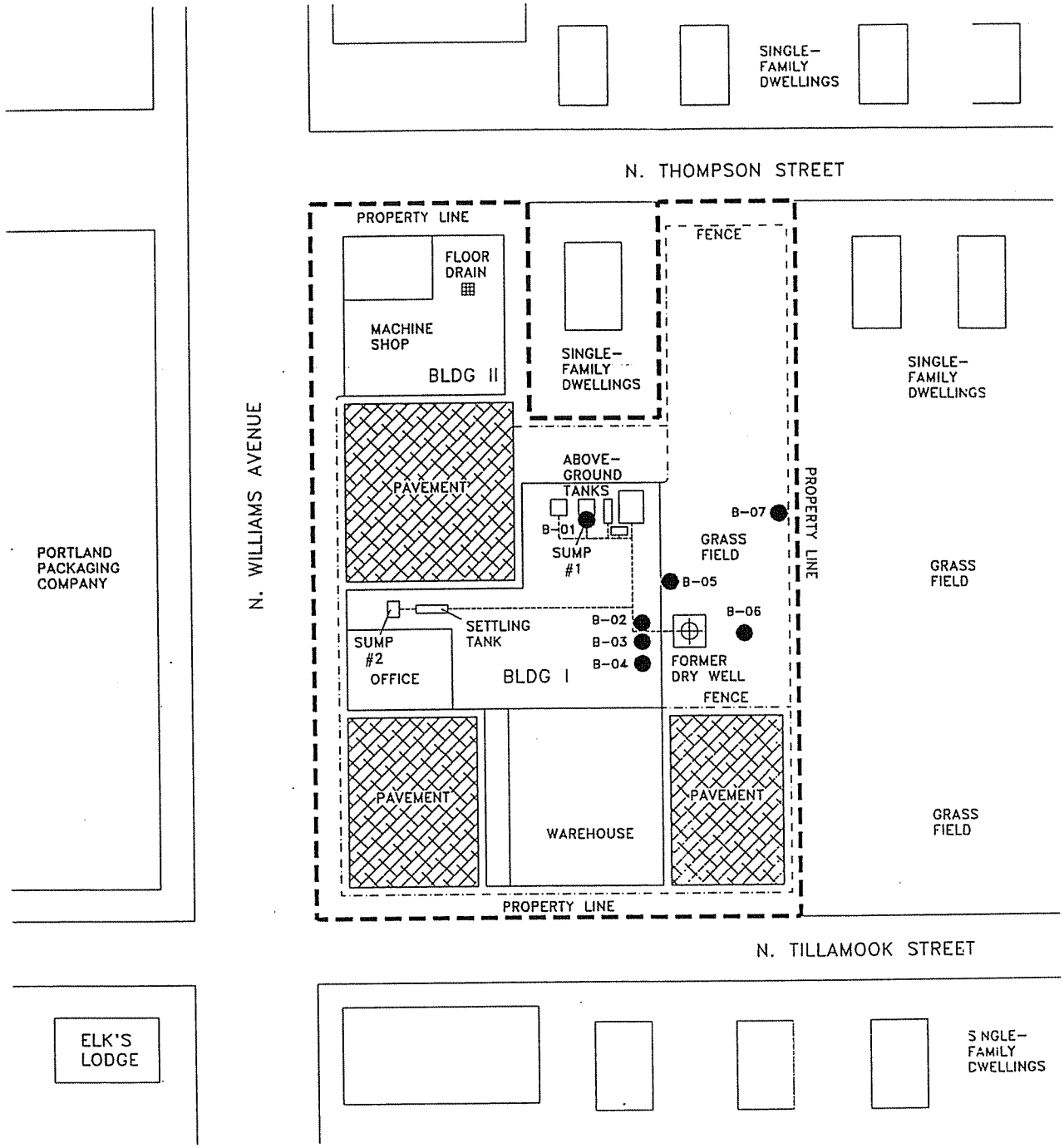
PORTLAND, OREGON

DWN: DRAWING NO: WGCL

CHKD: APPD:

PROJECT NO:

PAGE: 1



LEGEND

B-01 ●	PROPOSED SAMPLE LOCATION	-------	PIPING
⊕	FORMER DRY WELL	— —	PROPERTY LINE
▦	FLOOR DRAIN	- - -	FENCE
▨	PAVED AREAS		

N

Not to Scale

PHILIP ENVIRONMENTAL

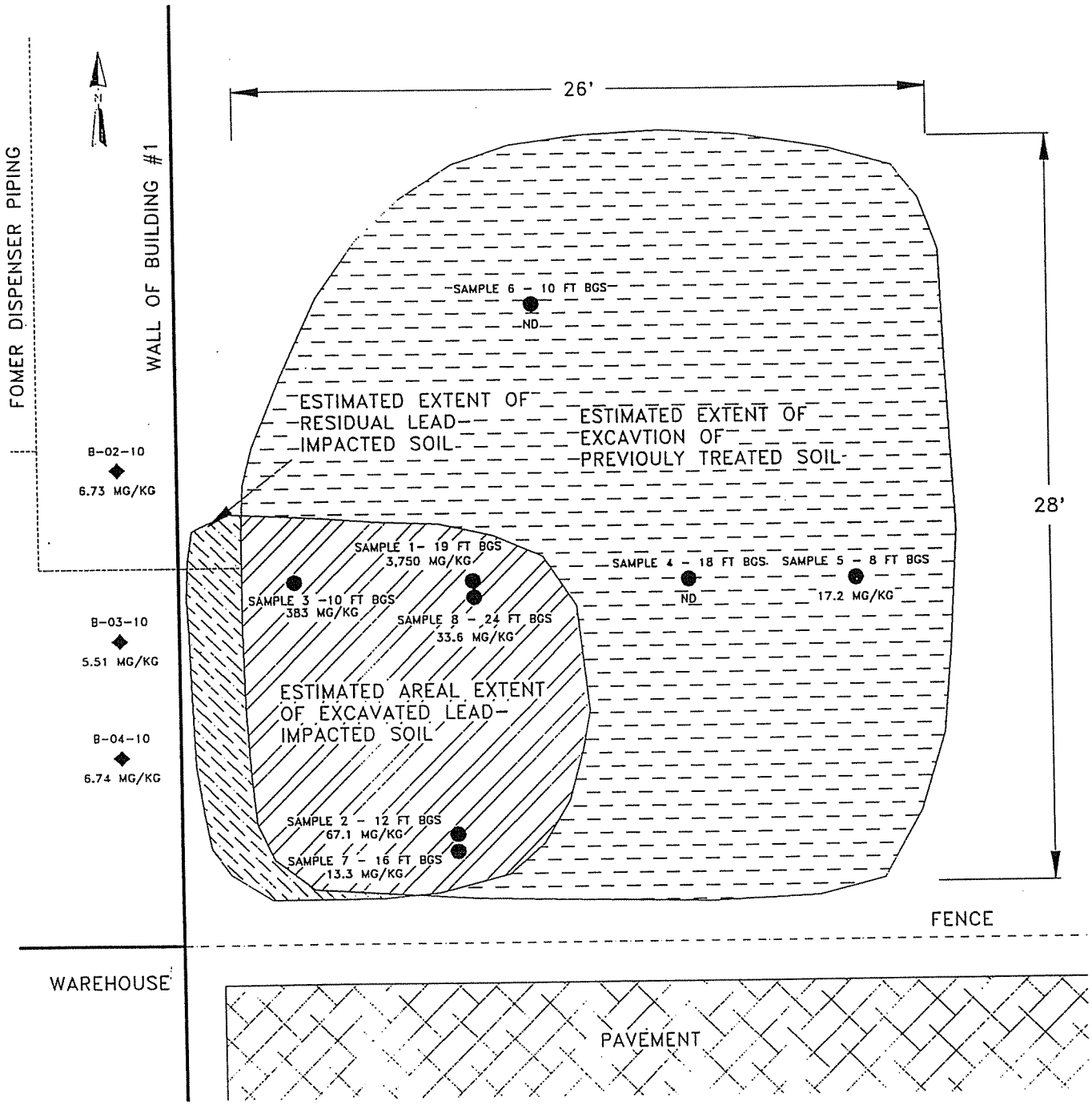
TITLE:

SITE PLAN

WAGSTAFF BATTERY MFG CO.

PORTLAND, OREGON

DWN: DRP	DRAWING NO: WG01	PROJECT NO.: 8572
CHKD:	APPD:	
DATE: 12.03.97	REV: 1	FIGURE NO.: 2



LEGEND

SAMPLE 2 - 12 FT BGS
67.1 MG/KG
CONFIRMATION SAMPLE - SAMPLE DEPTH TOTAL LEAD (MG/KG)

B-04-10
6.74 MG/KG
SOIL BORING - SAMPLE DEPTH TOTAL LEAD (MG/KG)

ESTIMATED AREAL EXTENT OF EXCAVATED LEAD-IMPACTED SOIL

ESTIMATED EXTENT OF RESIDUAL LEAD-IMPACTED SOIL

ESTIMATED EXTENT OF EXCAVATION OF PREVIOULY TREATD SOIL

PHILIP ENVIRONMENTAL

TITLE:
AREA OF EXCAVATION
WAGSTAFF BATTERY MFG CO.
PORTLAND, OREGON

DRN: DRP | DRAWING NO: WG03
CHK: | APPD:
DATE: | REV:

PROJECT NO.: 18572

FIGURE NO.: 3

APPENDIX A

WASTE DISPOSAL RECEIPTS

RECYCLE AMERICA - TROUTDALE
Customer Activity Report
10/24/1997 thru 10/31/1997

Date: 12/10/1997
Page: 1

Customer 1108894 OREGON WASTE SYSTEMS, INC

Category SOI SOIL

DATE	TRUCK	TICKET	GROSS	TARE	NET
10/24/1997	505	3104	42520	24860	17660
10/24/1997	505	3105	49680	24860	24820
10/24/1997	501	3110	46560	24480	22080
10/24/1997	501	3111	49740	24480	25260
10/24/1997	501	3120	54080	24480	29600
10/24/1997	502	3128	53760	24780	28980
10/24/1997	502	3129	53540	24780	28760
10/24/1997	89	3132	64680	30960	33720
10/24/1997	89	3133	65280	30960	34320
10/24/1997	89	3134	67600	30960	36640
10/24/1997	502	3135	54300	24780	29520
10/24/1997	89	3136	67260	30960	36300
10/24/1997	502	3137	58800	24780	34020
10/24/1997	188	3138	46940	23540	23400
10/24/1997	188	3139	46880	23540	23340
10/24/1997	89	3145	58320	30780	27540
10/24/1997	89	3170	66340	30960	35380
10/24/1997	89	4459	49860	30960	18900
10/27/1997	400	3151	53540	26000	27540
10/27/1997	89	3156	62760	31000	31760
10/27/1997	89	3161	64640	31000	33640
10/27/1997	89	3162	62420	31000	31420
10/27/1997	400	3164	52160	26000	26160
10/27/1997	400	3169	54760	26000	28760
10/27/1997	89	3174	65400	31000	34400
Category Totals					
25	Total:		1411820	687900	723920

		GROSS	TARE	NET
Type A Material:				
Type B Material:				
Type C Material:	25	1411820	687900	723920
Type D Material:				
Type E Material:				
Type F Material:				
TOTAL ORE :	25	1411820	687900	723920

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 11:17
TIME OUT: 11:17

TICKET: 3104
DATE: 10/24/1997

TRUCK: 505 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS:	42520	KB Weigh-in	TONS:	8.83
TARE LBS:	24860	KB Weigh-out	RATE:	
			SUB TOTAL:	
NET LBS:	17660	8.83 TON	TAX:	
			TOTAL AMOUNT:	

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 11:18
TIME OUT: 11:18

TICKET: 3105
DATE: 10/24/1997

TRUCK: 505 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 49680 KB Weigh-in
TARE LBS: 24860 KB Weigh-out
NET LBS: 24820 12.41 TON

TONS: 12.41
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 12:00 TICKET: 3110
TIME OUT: 12:01 DATE: 10/24/1997

TRUCK: 501 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 46560 KB Weigh-in TONS: 11.04
TARE LBS: 24480 KB Weigh-out RATE:
SUB TOTAL:
NET LBS: 22080 11.04 TON TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 12:02
TIME OUT: 12:02

TICKET: 3111
DATE: 10/24/1997

TRUCK: 501 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 49740 KB Weigh-in
TARE LBS: 24480 KB Weigh-out

NET LBS: 25260 12.63 TON

TONS: 12.63
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 12:52
TIME OUT: 12:52

TICKET: 3120
DATE: 10/24/1997

TRUCK: 501 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS:	54080	KB Weigh-in	TONS:	14.80
TARE LBS:	24480	KB Weigh-out	RATE:	
			SUB TOTAL:	
NET LBS:	29600	14.80 TON	TAX:	
			TOTAL AMOUNT:	

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 14:22
TIME OUT: 14:23

TICKET: 3128
DATE: 10/24/1997

TRUCK: 502 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 53760 KB Weigh-in
TARE LBS: 24780 KB Weigh-out
NET LBS: 28980 14.49 TON

TONS: 14.49
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 14:23
TIME OUT: 14:23

TICKET: 3129
DATE: 10/24/1997

TRUCK: 502 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 53540 KB Weigh-in
TARE LBS: 24780 KB Weigh-out

NET LBS: 28760 14.38 TON

TONS: 14.38
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 14:55
TIME OUT: 14:57

TICKET: 3132
DATE: 10/24/1997

TRUCK: 89 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 64680 KB Weigh-in
TARE LBS: 30960 KB Weigh-out
NET LBS: 33720 16.86 TON

TONS: 16.86
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 15:02
TIME OUT: 15:02

TICKET: 3133
DATE: 10/24/1997

TRUCK: 89 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 65280 KB Weigh-in
TARE LBS: 30960 KB Weigh-out

NET LBS: 34320 17.16 TON

TONS: 17.16
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 15:03
TIME OUT: 15:03

TICKET: 3134
DATE: 10/24/1997

TRUCK: 89 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 67600 KB Weigh-in
TARE LBS: 30960 KB Weigh-out
NET LBS: 36640 18.32 TON

TONS: 18.32
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 15:18
TIME OUT: 15:18

TICKET: 3135
DATE: 10/24/1997

TRUCK: 502 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 54300 KB Weigh-in
TARE LBS: 24780 KB Weigh-out
NET LBS: 29520 14.76 TON

TONS: 14.76
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 15:21
TIME OUT: 15:21

TICKET: 3136
DATE: 10/24/1997

TRUCK: 89 TRAILER: PROFILE: 489528 MANIFEST:

CARRIER:	NO	A-NOBLE GENERAL CONTRACTORS
CUSTOMER:	ORE	OREGON WASTE SYSTEMS, INC
ROUTE:	NA	NON ROUTED TRUCK
CATEGORY:	SOI	SOIL
ORIGIN:	PLND	PORTLAND
DESTINATION:		
BOL:	SEAL:	COMMENT:

GROSS LBS:	67260	KB Weigh-in	TONS:	18.15
TARE LBS:	30960	KB Weigh-out	RATE:	
NET LBS:	36300	18.15 TON	SUB TOTAL:	
			TAX:	
			TOTAL AMOUNT:	

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 15:39
TIME OUT: 15:39

TICKET: 3137
DATE: 10/24/1997

TRUCK: 502 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 58800 KB Weigh-in
TARE LBS: 24780 KB Weigh-out

NET LBS: 34020 17.01 TON

TONS: 17.01
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 15:42
TIME OUT: 15:42

TICKET: 3138
DATE: 10/24/1997

TRUCK: 188 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS:	46940	KB Weigh-in	TONS:	11.70
TARE LBS:	23540	KB Weigh-out	RATE:	
			SUB TOTAL:	
NET LBS:	23400	11.70 TON	TAX:	
			TOTAL AMOUNT:	

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 15:43
TIME OUT: 15:43

TICKET: 3139
DATE: 10/24/1997

TRUCK: 188 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS:	46880	KB Weigh-in	TONS:	11.67
TARE LBS:	23540	KB Weigh-out	RATE:	
NET LBS:	23340	11.67 TON	SUB TOTAL:	
			TAX:	
			TOTAL AMOUNT:	

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 16:30
TIME OUT: 16:30

TICKET: 3145
DATE: 10/24/1997

TRUCK: 89 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 58320 KB Weigh-in
TARE LBS: 30780 KB Weigh-out
NET LBS: 27540 13.77 TON

TONS: 13.77
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 11:39
TIME OUT: 11:39

TICKET: 3170
DATE: 10/24/1997

TRUCK: 89 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 66340 KB Weigh-in
TARE LBS: 30960 KB Weigh-out
NET LBS: 35380 17.69 TON

TONS: 17.69
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 09:19
TIME OUT: 09:19

TICKET: 3151
DATE: 10/27/1997

TRUCK: 400 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 53540 KB Weigh-in
TARE LBS: 26000 KB Weigh-out
NET LBS: 27540 13.77 TON

TONS: 13.77
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 15:33
TIME OUT: 15:28

TICKET: 4459
DATE: 10/24/1997

TRUCK: 89 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 49860 KB Weigh-in
TARE LBS: 30960 KB Weigh-out
NET LBS: 18900 9.45 TON

TONS: 9.45
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 09:40 TICKET: 3156
TIME OUT: 09:41 DATE: 10/27/1997

TRUCK: 89 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: 75318 SEAL: COMMENT:

GROSS LBS: 62760 KB Weigh-in TONS: 15.88
TARE LBS: 31000 KB Weigh-out RATE:
SUB TOTAL:
NET LBS: 31760 15.88 TON TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 11:02
TIME OUT: 11:02

TICKET: 3161
DATE: 10/27/1997

TRUCK: 89 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 64640 KB Weigh-in
TARE LBS: 31000 KB Weigh-out
NET LBS: 33640 16.82 TON

TONS: 16.82
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 11:05 TICKET: 3162
TIME OUT: 11:05 DATE: 10/27/1997

TRUCK: 89 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 62420 KB Weigh-in TONS: 15.71
TARE LBS: 31000 KB Weigh-out RATE:
SUB TOTAL:
NET LBS: 31420 15.71 TON TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 11:14
TIME OUT: 11:15

TICKET: 3164
DATE: 10/27/1997

TRUCK: 400 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 52160 KB Weigh-in
TARE LBS: 26000 KB Weigh-out
NET LBS: 26160 13.08 TON

TONS: 13.08
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 11:34
TIME OUT: 11:34

TICKET: 3169
DATE: 10/27/1997

TRUCK: 400 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 54760 KB Weigh-in
TARE LBS: 26000 KB Weigh-out
NET LBS: 28760 14.38 TON

TONS: 14.38
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

WASTE MANAGEMENT/RECYCLE AMERICA
869 NW EASTWIND DRIVE
TROUTDALE, OR 97060
(503)667-5264

TIME IN: 12:24
TIME OUT: 12:24

TICKET: 3174
DATE: 10/27/1997

TRUCK: 89 TRAILER: PROFILE: 489528 MANIFEST:
CARRIER: NO A-NOBLE GENERAL CONTRACTORS
CUSTOMER: ORE OREGON WASTE SYSTEMS, INC
ROUTE: NA NON ROUTED TRUCK
CATEGORY: SOI SOIL
ORIGIN: PLND PORTLAND
DESTINATION:
BOL: SEAL: COMMENT:

GROSS LBS: 65400 KB Weigh-in
TARE LBS: 31000 KB Weigh-out
NET LBS: 34400 17.20 TON

TONS: 17.20
RATE:
SUB TOTAL:
TAX:
TOTAL AMOUNT:

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

OREGON WASTE SYSTEMS, INC.
COLUMBIA RIDGE LANDFILL & RECYCLING CENTER
18177 CEDAR SPRING LANE
ARLINGTON, OREGON 97812
PHONE: 541/454–2030

CUSTOMER INFORMATION:
Philip Services
7117 NE 47th Avenue
Vancouver, Wa. 98668
Attn: David Jacobs

INVOICE #: 1204–Wagstaff
DATE: 12/04/97
PROFILE # 489528
LOCATION: Portland Ore.
WASTE TYPE: Treated Soil Cont. with Lead

SUMMARY OF CHARGES

TONS RECEIVED IN OCTOBER	335.46	
TONS RECEIVED IN NOVEMBER	26.74	
TOTAL TONS RECEIVED	362.2	
DISPOSAL/TRANS/TAXES/FEES	$55.50/TON	$20,102.10
TOTAL AMOUNT DUE		$20,102.10

SEND REMITTANCE TO:

OREGON WASTE SYSTEMS, INC.
P.O. BOX 55037
PORTLAND, OR 97238–5037

INVOICE #: 1204–Wagstaff
AMOUNT DUE: $20,102.10

WE THANK YOU FOR YOUR BUSINESS AND PROMPT PAYMENT!

Oregon Waste Systems
A Waste Management Company
18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

№ 268263

DATE:/TIME: TIME 07:39 AM 05 NOV 97

LOAD DATE:

CUSTOMER NAME: wmo/wagstaff

PROFILE NUMBER: 489528

TRUCK NUMBER: TRUCK NO 765-951

TRAILER/CONTAINER NUMBER: W 420-639

SEAL NUMBER:

CUSTOMER INVOICE NO.: 1234

GROSS WEIGHT:	GROSS	93160 LB
TARE WEIGHT-TRACTOR:		
TARE WGT.-TRAILER/CONTAINER:	W TARE	41680 LB
NET WEIGHT:	NET	53420 LB
		==========

GATEHOUSE:

DRIVER: 04 TODD

TRAIN ID: Mirage ~~03~~ ORIGIN: OP 507

WASTE TYPE: Grid containing lead

DISPOSAL: ~~CM DC~~ Beneficial reuse

REMARKS: See form B. before Tipping

F/E

Oregon Waste Systems
A Waste Management Company

18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

№ 287654

№ [redacted]

45 Departure Time: _____

489528
Soil
32 (tons)

DATE:/TIME: Oct 27 97 5:09 PM
LOAD DATE: _____
CUSTOMER NAME: WMO / Wagstaff
PROFILE NUMBER: 489528
TRUCK NUMBER: 400
TRAILER/CONTAINER NUMBER: 201T
SEAL NUMBER: _____
CUSTOMER INVOICE NO.: B of L

GROSS WEIGHT: 92580
TARE WEIGHT-TRACTOR: _____
TARE WGT:-TRAILER/CONTAINER: 37560
NET WEIGHT: 55020

GATEHOUSE: JV
DRIVER: See ticket # 004263
TRAIN ID: _____ ORIGIN: _____
WASTE TYPE: Soil cont w/lead
DISPOSAL: ~~GM DC~~ Beneficial Use
REMARKS: material is being used in Asbestos grid area as road Bed and fill material

structions:

sponce Telphone #: (800) 424-9300

ors Representative)

10/27/97
Date

me & Address:

dfill & Recycling Facility
Lane
12

54-2030

(Upon pick-up)
accessories are in good condition
door ratchets are secured tightly
is empty and clean

ps and tarp bows have been removed

debris on the outside of the container/truck, replace the roof bows, and secure the tarp prior to leaving the job site.

Bill Thomason
Driver Name (Please Print)

Signature

10-27-97
Date

Remarks:

White Landfill / Green Rail Facility / Yellow Shipper / Pink Transporter / Goldenrod [illegible]

Oregon Waste Systems
A Waste Management Company

18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

№ 267653

№ 54150

Departure Time: _____

489528
Soil

_____ (tons)

DATE:/TIME: Oct 2797 1:36pm
LOAD DATE: _____
CUSTOMER NAME: Lomo/ Wagstaff
PROFILE NUMBER: 489528
TRUCK NUMBER: 500
TRAILER/CONTAINER NUMBER: T500
SEAL NUMBER: _____
CUSTOMER INVOICE NO.: 54150

GROSS WEIGHT: 102600
TARE WEIGHT-TRACTOR:
TARE WGT.-TRAILER/CONTAINER: 37620
NET WEIGHT: 64980

GATEHOUSE: JV
DRIVER: See ticket # 004262
TRAIN ID: _____ ORIGIN: _____
WASTE TYPE: soil cont w/lead
DISPOSAL: ~~GM DC~~ Beneficial use
REMARKS: material is being used in asbestos grid and as road bed and fill material

structions:

sponce Telephone #: (800) 424-9300

ors Representative)

Date

me & Address:

dfill & Recycling Facility
Lane
12

54-2030

(Upon pick-up)
accessories are in good condition
door ratchets are secured tightly
is empty and clean

s and tarp bows have been removed

...ing the entire container/truck free of obstructions prior to loading. After loading, the transporter is to clean and remove all debris on the outside of the container/truck, replace the roof bows, and secure the tarp prior to leaving the job site.

Mike Klose
Driver Name (Please Print)

Mike Klose
Signature

10-2797
Date

Remarks:

White Landfill / Green Rail Facility / Yellow Shipper / Pink Transporter / Goldenrod Generator

Oregon Waste Systems
A Waste Management Company
18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

№ 237652

№ 54147

Departure Time:

489528
Cont Soil

(tons)

DATE:/TIME: Oct 27 97 1:33pm
LOAD DATE:
CUSTOMER NAME: WMO / Wagstaff
PROFILE NUMBER: 489528
TRUCK NUMBER: 504
TRAILER/CONTAINER NUMBER: 504T
SEAL NUMBER:
CUSTOMER INVOICE NO.: 54147

GROSS WEIGHT: 102860
TARE WEIGHT-TRACTOR:
TARE WGT.-TRAILER/CONTAINER: 37960
NET WEIGHT: 64900

GATEHOUSE: JV
DRIVER: See ticket 004261
TRAIN ID: ORIGIN:
WASTE TYPE: Soil cont w/ lead
DISPOSAL: ~~GM DE~~ Beneficial Use
REMARKS: material is being used in asbestos grid area as road bed and fill material.

nstructions:

esponce Telephone #: (800) 424-9300

actors Representative)

10/27/
Date

Name & Address:

Landfill & Recycling Facility
ngs Lane
97812

3) 454-2030

tion (Upon pick-up)
and accessories are in good condition
and door ratchets are secured tightly
ainer is empty and clean

t tarps and tarp bows have been removed
g, the transporter is to clean and remove all
leaving the entire container/truck free of obstructions prior to leaving.
debris on the outside of the container/truck, replace the roof bows, and secure the tarp prior to leaving the job site.

Gerald Martin
Driver Name (Please Print)

Gerald Martin
Signature

10-27-97
Date

Remarks:

White Landfill / Green Rail Facility / Yellow Shipper / Pink Transporter / Goldenrod Generator

Oregon Waste Systems
A Waste Management Company
18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

№ 237651

№ 54148

Departure Time:

DATE:/TIME: Oct 27 97 11:48am
LOAD DATE:
CUSTOMER NAME: Lumo/ Wagstaff
PROFILE NUMBER: 489528
TRUCK NUMBER: 506
TRAILER/CONTAINER NUMBER: 506T
SEAL NUMBER:
CUSTOMER INVOICE NO.: 54148

GROSS WEIGHT: 100480
TARE WEIGHT-TRACTOR:
TARE WGT.-TRAILER/CONTAINER: 37760
NET WEIGHT: 62720

GATEHOUSE: JV
DRIVER: see ticket # 0042600
TRAIN ID: ORIGIN:
WASTE TYPE: soil cont w/lead
DISPOSAL: ~~CM DC~~ Beneficial use
REMARKS: material is being used as road bed and fill material in asbestos grid area

489528
Soil
31.44 (tons)

tructions:

ponce Telphone #: (800) 424-9300

rs Representative)

10/27/97
Date

e & Address:

fill & Recycling Facility
Lane
2
4-2030

Upon pick-up)
ccessories are in good condition
oor ratchets are secured tightly
s empty and clean

leaving the entire container/truck free of obstructions prior to loading. After loading, the transporter is to clean and remove all debris on the outside of the container/truck, replace the roof bows, and secure the tarp prior to leaving the job site.

Dennis R Watson — Driver Name (Please Print)
Dennis R Walton — Signature
10-27-97 — Date

Remarks:

White Landfill / Green Rail Facility / Yellow Shipper / Pink Transporter / Goldenrod Generator

Oregon Waste Systems
A Waste Management Company
18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

№ 267650

№ 54145

Departure Time:

489528
Soil
33.19 (tons)

DATE:/TIME: Oct 27 97 11:42am
LOAD DATE:
CUSTOMER NAME: WMO/Wagstaff
PROFILE NUMBER: 489528
TRUCK NUMBER: 502
TRAILER/CONTAINER NUMBER: 502-T
SEAL NUMBER:
CUSTOMER INVOICE NO.: 54145

GROSS WEIGHT: 103720
TARE WEIGHT-TRACTOR:
TARE WGT.-TRAILER/CONTAINER: 37520
NET WEIGHT: 66200

GATEHOUSE: JV
DRIVER: See ticket # ~~210~~ 004259
TRAIN ID: ORIGIN:
WASTE TYPE: Soil cont. w/ lead
DISPOSAL: ~~CM DG~~ Beneficial Use
REMARKS: material is being used in asbestos grid area as roadbed and fill material.

structions:

sponce Telphone #: (800) 424-9300

tors Representative)

10-27-97
Date

ame & Address:

ndfill & Recycling Facility
s Lane
812

454-2030

n (Upon pick-up)
l accessories are in good condition
d door ratchets are secured tightly
er is empty and clean

rps and tarp bows have been removed
he transporter is to clean and remove all debris on the outside of the container/truck, replace the roof bows, and secure the tarp prior to leaving the job site.

TIMOTHY E RITCHIE
Driver Name (Please Print)

Timothy E. Ritchie
Signature

10-27-97
Date

Remarks:

White Landfill / Green Rail Facility / Yellow Shipper / Pink Transporter / Goldenrod Generator

Oregon Waste Systems
A Waste Management Company
18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

№ 237649

№ 54146

DATE:/TIME: Oct 27 97 11:39 am
LOAD DATE:
CUSTOMER NAME: WMO/ Wagstaff
PROFILE NUMBER: 489528
TRUCK NUMBER: 505
TRAILER/CONTAINER NUMBER: 505T
SEAL NUMBER:
CUSTOMER INVOICE NO.: 54146

GROSS WEIGHT: 164520
TARE WEIGHT-TRACTOR:
TARE WGT.-TRAILER/CONTAINER: 37620
NET WEIGHT: 66900

GATEHOUSE: JV
DRIVER: See ticket # 004258
TRAIN ID: _____ ORIGIN: _____
WASTE TYPE: Soil cont w/ Lead
DISPOSAL: ~~CM~~ ~~DE~~ Beneficial use
REMARKS:
material is being used in asbestos grid area as road bed and fill material

Departure Time: _____
489528
Soil
33.51 (tons)

nstructions:

esponce Telphone #: (800) 424-9300

ctor's Representative)
Date 10/27/97

Name & Address:

andfill & Recycling Facility
ngs Lane
97812

) 454-2030

ion (Upon pick-up)
and accessories are in good condition
and door ratchets are secured tightly
iner is empty and clean

t tarps and tarp bows have been removed
g, the transporter is to clean and remove all debris on the outside of the container/truck, replace the roof bows, and secure the tarp prior to leaving the job site.

Linda Andrews — Driver Name (Please Print)
Linda Andrews — Signature
10-27-97 — Date

Remarks:

White Landfill / Green Rail Facility / Yellow Shipper / Pink Transporter / Goldenrod Generator

Oregon Waste Systems
A Waste Management Company
18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

№ 54153

№ 267648

Departure Time: 1

DATE:/TIME: 10/24/97 3:30pm
LOAD DATE:
CUSTOMER NAME: WMO/Wagstaff
PROFILE NUMBER: 489528
TRUCK NUMBER: 510
TRAILER/CONTAINER NUMBER: T510
SEAL NUMBER:
CUSTOMER INVOICE NO.: 54153

GROSS WEIGHT: 103060
TARE WEIGHT-TRACTOR: 38680
TARE WGT.-TRAILER/CONTAINER:
NET WEIGHT: 64380

GATEHOUSE: JV
DRIVER: See Ticket 004257
TRAIN ID: ORIGIN:
WASTE TYPE: Soil cont. lead
DISPOSAL: ~~GM DC~~ Beneficial use
REMARKS: material is being used in Asbestos grid area as road bed and fill material

489528
Soil
32 (tons)

structions:

sponce Telphone #: (800) 424-9300

tors Representative)

10/24/97
Date

me & Address:

ndfill & Recycling Facility
s Lane
812

454-2030

(Upon pick-up)
d accessories are in good condition
d door ratchets are secured tightly
er is empty and clean

rps and tarp bows have been removed

leaving the entire container/truck free of obstructions prior to loading. After loading, the transporter is to clean and remove all debris on the outside of the container/truck, replace the roof bows and secure the tarp prior to leaving the job site.

Bob Olson — Bob Olson — 10/24/97

Driver Name (Please Print) Signature Date

Remarks:

White Landfill / Green Rail Facility / Yellow Shipper / Pink Transporter / Goldenrod Generator

Oregon Waste Systems
A Waste Management Company

18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

№ 267647

№ 54144

Departure Time: _____

489528
Soil
32 (tons)

DATE:/TIME: 0c124 2:45pm
LOAD DATE:
CUSTOMER NAME: WMC/ Wagstaff
PROFILE NUMBER: 489528
TRUCK NUMBER: 505
TRAILER/CONTAINER NUMBER: 505T
SEAL NUMBER:
CUSTOMER INVOICE NO.: 54144

GROSS WEIGHT: 103660
TARE WEIGHT-TRACTOR:
TARE WGT.-TRAILER/CONTAINER: 37760
NET WEIGHT: 65840

GATEHOUSE: JV
DRIVER: SEE TICKET 004256
TRAIN ID: _____ ORIGIN: _____
WASTE TYPE: Soil cont. Lead
DISPOSAL: ~~CM DC~~ Beneficial use
REMARKS: material is being used in Asbristos grid area as fill and road bed material

structions:

sponce Telphone #: (800) 424-9300

tors Representative)

Date

ame & Address:

ndfill & Recycling Facility
gs Lane
7812

454-2030

on (Upon pick-up)
nd accessories are in good condition
nd door ratchets are secured tightly
ner is empty and clean

tarps and tarp bows have been removed
leaving the entire container/truck free of obstructions prior to [illegible], the transporter is to clean and remove all debris on the outside of the container/truck, replace the roof bows, and secure the tarp prior to leaving the job site.

Linda Andrews
Driver Name (Please Print)

Linda Andrews
Signature

Date

Remarks:

White Landfill / Green Rail Facility / Yellow Shipper / Pink Transporter / Goldenrod Generator

Oregon Waste Systems
A Waste Management Company
18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

№ 267646

№ 75298

DATE:/TIME: Time 8:11am 28 oct 97
LOAD DATE:
CUSTOMER NAME: Lumol wagstaff
PROFILE NUMBER: 489528
TRUCK NUMBER: 89
TRAILER/CONTAINER NUMBER:
SEAL NUMBER:
CUSTOMER INVOICE NO.: 75298

GROSS WEIGHT: 101600
TARE WEIGHT-TRACTOR:
TARE WGT.-TRAILER/CONTAINER: 46320
NET WEIGHT: 55280

GATEHOUSE: JV
DRIVER: See ticket 004205
TRAIN ID: ORIGIN:
WASTE TYPE: Soil cont lead
DISPOSAL: ~~CM~~ ~~DC~~ Beneficial use
REMARKS: Being used in Asbestos grid area as fill material and road bed material

489528
DIRT
28 (tons)

Instructions:

ctors Representative)
Date

Name & Address: WMIC
andfill & Recycling Facility
gs Lane
7812
) 454-2030

OWNBOXES
on (Upon pick-up)
nd tarp accessories are in good condition
and door ratchets are secured tightly
iner is empty and clean

It is the transporters responsibility to install plastic liner (if required) and insure that tarps and tarp bows have been removed leaving the entire container/truck free of obstructions prior to loading. After loading, the transporter is to clean and remove all debris on the outside of the container/truck, replace the roof bows, and secure the tarp prior to leaving the job site.

Tony Veach — Driver Name (Please Print)
Signature
10-28-97 — Date

Remarks:

Oregon Waste Systems
A Waste Management Company
18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

№ 287645

№ [redacted]

Departure Time: 489528

Soil

32 (tons

uctions:

once Telphone #: (800) 424-9300

s Representative)

10/27
Date

e & Address:

fill & Recycling Facility
Lane
12

54-2030

DATE:/TIME: Time 8:39am 28Oct97
LOAD DATE:
CUSTOMER NAME: comc/ wagstaff
PROFILE NUMBER: 489528
TRUCK NUMBER: 505
TRAILER/CONTAINER NUMBER: 505T
SEAL NUMBER:
CUSTOMER INVOICE NO.: 75298

GROSS WEIGHT: 102640
TARE WEIGHT-TRACTOR:
TARE WGT.-TRAILER/CONTAINER: 37760
NET WEIGHT: 64880

GATEHOUSE: VV
DRIVER: See ticket # 004266
TRAIN ID: _____ ORIGIN: _____
WASTE TYPE: soil cont/ lead
DISPOSAL: GM--DC Beneficial use
REMARKS: material is being used in Asbestos and area as fill material and road bed material

(Upon pick-up)
accessories are in good condition
door ratchets are secured tightly
r is empty and clean

ps and tarp bows have been removed
e transporter is to clean and remove all
debris on the outside of the container/truck, replace the roof bows, and secure the tarp prior to leaving the job site.

Linda Andrews
Driver Name (Please Print)

Signature

10-27-9
Date

Remarks:

White Landfill / Green Rail Facility / Yellow Shipper / Pink Transporter / G...

Oregon Waste Systems
A Waste Management Company
18177 Cedar Springs Lane
Arlington, Oregon 97812
(541) 454-2030

№ 267450

№ 54141

DATE:/TIME: TIME 10:24 AM 31 OCT 97
LOAD DATE:
CUSTOMER NAME:
PROFILE NUMBER:
TRUCK NUMBER: TRUCK NO 42845
TRAILER/CONTAINER NUMBER:
SEAL NUMBER:
CUSTOMER INVOICE NO.: 54141

GROSS WEIGHT: GROSS 81400 LB
TARE WEIGHT-TRACTOR:
TARE WGT.-TRAILER/CONTAINER: W TARE 41580 LB
NET WEIGHT: NET 39820 LB

GATEHOUSE: CL
DRIVER: Brian
TRAIN ID: N Sept 29 ORIGIN: OP 507
WASTE TYPE: Soil Containing Lead
DISPOSAL: ~~CM~~ ~~DC~~
REMARKS: F/E
Disposal: Beneficial Use
Road Bed or Fill Material
See John Before Tipping

Departure Time:
#: 489528
tion: Soil
ume: 25 (tons)
ng Instructions:

ll Responce Telphone #: (800) 424-9300

ntractors Representative)

Date

ity Name & Address:

ge Landfill & Recycling Facility
prings Lane
97812

503) 454-2030

EGT4102653

ection (Upon pick-up)
irp and accessories are in good condition
oor and door ratchets are secured tightly
ontainer is empty and clean

It is the transporters responsibility to install plastic liner (if required) and insure that tarps and tarp bows have been removed leaving the entire container/truck free of obstructions prior to loading. After loading, the transporter is to clean and remove all debris on the outside of the container/truck, replace the roof bows, and secure the tarp prior to leaving the job site.

Darrell Kidwell — Driver Name (Please Print)
DK — Signature
10-24-97 — Date

Remarks:

APPENDIX B

ANALYTICAL DATA

PHILIP SERVICES CORP.

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVID BROTEN
955 Powell Ave SW
Renton WA 98055

Report Date: 10/30/97	Generator: WAGSTAFF BATTERY	Work Order No.:
Sample Collected: 10/15/97	Project Name: WAGSTAFF BATTERY	P.O. No.:
Received Date: 10/16/97	Project No: 18572	Job Number: 97100176

Client ID: B-02-2

Profile #:
Lab ID: AA29392

Analyte	Method	Result	Units
METALS			
Total Metals			
Lead	EPA 6010	7.23	mg/Kg

PHILIP SERVICES CORP.

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVID BROTEN
955 Powell Ave SW
Renton WA 98055

Report Date: 10/30/97	Generator: WAGSTAFF BATTERY	Work Order No.:
Sample Collected: 10/15/97	Project Name: WAGSTAFF BATTERY	P.O. No.:
Received Date: 10/16/97	Project No: 18572	Job Number: 97100176

Client ID: B-02-5

Profile #:
Lab ID: AA29393

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	7.14	mg/Kg

PHILIP SERVICES CORP.

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVE BROTEN
955 Powell Ave SW
Renton WA 98055

Report Date: 10/30/97	Generator: WAGSTAFF BATTERY	Work Order No.:
Sample Collected: 10/29/97	Project Name: WAGSTAFF BATTERY	P.O. No.:
Received Date: 10/29/97	Project No: 18572	Job Number: 97100176

Client ID: B-02-8

Profile #:
Lab ID: AA29991

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	7.09	mg/Kg

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL • (425) 481-9200 • FAX 485-2992
SPOKANE • (509) 924-9200 • FAX 924-9290
PORTLAND • (503) 643-9200 • FAX 644-2202

Philip Environmental-Vancouver	Project:	Wagstaff	Sampled:	10/29/97
7117 N.E. 47th Ave, Suite B	Project Number:	none	Received:	10/29/97
Vancouver, WA 98661	Project Manager:	David Jacobs	Reported:	11/7/97 14:47

Dry Weight Determination
North Creek Analytical - Portland

Sample Name	Lab ID	Matrix	Result	Units
#7 Southwall	P710529-01	Soil	84.8	%
Bottom 24'	P710529-02	Soil	81.9	%
Stockpile composite	P710529-03	Soil	79.8	%

North Creek Analytical, Inc.

Howard Holmes, Project Manager

18939 120th Avenue N.E. Suite 101 Bothell, WA 98011-9508
East 11115 Montgomery, Suite B Spokane, WA 99206-4776

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL • (425) 481-9200 • FAX 485-2992
SPOKANE • (509) 924-9200 • FAX 924-9290
PORTLAND • (503) 643-9200 • FAX 644-2202

ıilip Environmental-Vancouver	Project:	Wagstaff	Sampled: 10/29/97
117 N.E. 47th Ave, Suite B	Project Number:	none	Received: 10/29/97
'ancouver, WA 98661	Project Manager:	David Jacobs	Reported: 11/7/97 14:47

Total Metals per EPA 6000/7000 Series Methods/Quality Control
North Creek Analytical - Portland

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
ıtch: 1070710	**Date Prepared: 10/29/97**					**Extraction Method: EPA 3050**				
lank	**1070710-BLK1**									
ead	10/30/97			ND	mg/kg dry	10.0				
CS	**1070710-BS1**									
ead	10/30/97	100		104	mg/kg dry	80.0-120	104			
ıplicate	**1070710-DUP1**		**P710499-01**							
ead	10/30/97		28.2	21.7	mg/kg dry			40.0	26.1	
atrix Spike	**1070710-MS1**		**P710499-01**							
ead	10/30/97	112	28.2	135	mg/kg dry	75.0-125	95.4			

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL • (425) 481-9200 • FAX 485-2992
SPOKANE • (509) 924-9200 • FAX 924-9290
PORTLAND • (503) 643-9200 • FAX 644-2202

ilip Environmental-Vancouver	Project:	Wagstaff	Sampled: 10/29/97
17 N.E. 47th Ave, Suite B	Project Number:	none	Received: 10/29/97
ancouver, WA 98661	Project Manager:	David Jacobs	Reported: 11/7/97 14:47

TCLP Metals per EPA 1311/6000/7000 Series Methods/Quality Control
North Creek Analytical - Portland

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
tch: 1170150	Date Prepared: 11/4/97					Extraction Method: EPA 200/3005				
lank	1170150-BLK1									
ead	11/7/97			ND	mg/l	0.200				
S	1170150-BS1									
ead	11/7/97	5.00		4.91	mg/l	75.0-125	98.2			
trix Spike	1170150-MS1		P710595-01							
ead	11/7/97	5.00	ND	4.85	mg/l	50.0-150	97.0			

rth Creek Analytical, Inc.

Refer to end of report for text of notes and definitions.

ward Holmes, Project Manager

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

BOTHELL • (425) 481-9200 • FAX 485-2992
SPOKANE • (509) 924-9200 • FAX 924-9290
PORTLAND • (503) 643-9200 • FAX 644-2202

ilip Environmental-Vancouver	Project: Wagstaff	Sampled: 10/29/97
117 N.E. 47th Ave, Suite B	Project Number: none	Received: 10/29/97
ancouver, WA 98661	Project Manager: David Jacobs	Reported: 11/7/97 14:47

Notes and Definitions

	Note
ET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
R	Not Reported
dry	Sample results reported on a dry weight basis
cov.	Recovery
PD	Relative Percent Difference

PHILIP SERVICES CORP.

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVE BROTEN
955 Powell Ave SW
Renton WA 98055

Report Date: 10/30/97	Generator: WAGSTAFF BATTERY	Work Order No.:
Sample Collected: 10/29/97	Project Name: WAGSTAFF BATTERY	P.O. No.:
Received Date: 10/29/97	Project No: 18572	Job Number: 97100176

Client ID: B-02-10

Profile #:
Lab ID: AA29992

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	6.73	mg/Kg

PHILIP SERVICES CORP.

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVID BROTEN
955 Powell Ave SW
Renton WA 98055

Report Date: 10/30/97	Generator: WAGSTAFF BATTERY	Work Order No.:
Sample Collected: 10/15/97	Project Name: WAGSTAFF BATTERY	P.O. No.:
Received Date: 10/16/97	Project No: 18572	Job Number: 97100176

Client ID: B-902-2

Profile #:
Lab ID: AA29398

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	7.74	mg/Kg

PHILIP SERVICES CORP.

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVID BROTEN
955 Powell Ave SW
Renton WA 98055

Report Date: 10/30/97	Generator: WAGSTAFF BATTERY	Work Order No.:
Sample Collected: 10/15/97	Project Name: WAGSTAFF BATTERY	P.O. No.:
Received Date: 10/16/97	Project No: 18572	Job Number: 97100176

Client ID: B-03-2

Profile #:
Lab ID: AA29394

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	7.67	mg/Kg

PHILIP SERVICES

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVID BROTEN
955 Powell Ave SW
Renton WA 98055

Report Date: 10/30/97	Generator: WAGSTAFF BATTERY	Work Order No.:
Sample Collected: 10/15/97	Project Name: WAGSTAFF BATTERY	P.O. No.:
Received Date: 10/16/97	Project No: 18572	Job Number: 97100176

Client ID: B-03-5

Profile #:
Lab ID: AA29395

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	8.15	mg/Kg

PHILIP SERVICES CORP.

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVE BROTEN
955 Powell Ave SW
Renton WA 98055

Report Date: 10/30/97	Generator: WAGSTAFF BATTERY	Work Order No.:
Sample Collected: 10/29/97	Project Name: WAGSTAFF BATTERY	P.O. No.:
Received Date: 10/29/97	Project No: 18572	Job Number: 97100176

Client ID: B-03-8

Profile #:
Lab ID: AA29993

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	6.37	mg/Kg

PHILIP SERVICES

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVE BROTEN
955 Powell Ave SW
Renton WA 98055

Report Date: 10/30/97	Generator: WAGSTAFF BATTERY	Work Order No.:
Sample Collected: 10/29/97	Project Name: WAGSTAFF BATTERY	P.O. No.:
Received Date: 10/29/97	Project No: 18572	Job Number: 97100176

Client ID: B-03-10

Profile #:
Lab ID: AA29994

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	5.51	mg/Kg

PHILIP SERVICES CORP.

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVID BROTEN
955 Powell Ave SW
Renton WA 98055

Report Date: 10/30/97	Generator: WAGSTAFF BATTERY	Work Order No.:
Sample Collected: 10/15/97	Project Name: WAGSTAFF BATTERY	P.O. No.:
Received Date: 10/16/97	Project No: 18572	Job Number: 97100176

Client ID: B-04-2

Profile #:
Lab ID: AA29396

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	6.36	mg/Kg

PHILIP SERVICES
CORP.

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVID BROTEN
955 Powell Ave SW
Renton WA 98055

Report Date: 10/30/97	Generator: WAGSTAFF BATTERY	Work Order No.:
Sample Collected: 10/15/97	Project Name: WAGSTAFF BATTERY	P.O. No.:
Received Date: 10/16/97	Project No: 18572	Job Number: 97100176

Client ID: B-04-5

Profile #:
Lab ID: AA29397

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	8.37	mg/Kg

PHILIP SERVICES CORP.

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVE BROTEN
955 Powell Ave SW
Renton WA 98055

Report Date: 10/30/97	Generator: WAGSTAFF BATTERY	Work Order No.:
Sample Collected: 10/29/97	Project Name: WAGSTAFF BATTERY	P.O. No.:
Received Date: 10/29/97	Project No: 18572	Job Number: 97100176

Client ID: B-04-8

Profile #:
Lab ID: AA29995

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	6.14	mg/Kg

PHILIP SERVICES CORP.

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVE BROTEN
955 Powell Ave SW
Renton WA 98055

Report Date: 10/30/97	Generator: WAGSTAFF BATTERY	Work Order No.:
Sample Collected: 10/29/97	Project Name: WAGSTAFF BATTERY	P.O. No.:
Received Date: 10/29/97	Project No: 18572	Job Number: 97100176

Client ID: B-04-10

Profile #:
Lab ID: AA29996

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	6.74	mg/Kg

Data Reviewed By: Sm

Data Reported By:

Chain-of Custody Record

PHILIP

955 Powell Avenue, Southwest
Renton, WA 98055
(P.O. Box 3552, Seattle 98124)
(206) 227-0311 Phone
(206) 227-6191 FAX

COC Serial No. F 3220

Project Name [illegible] Battery
Project Number 1[illegible]12 Phase . Task
Samplers [illegible]
Laboratory Name Philip Svcs
Location

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: Total Lead (6010)	TCLP Lead											Comments
[illegible]			Soil		X												
[illegible]					X												
[illegible]					X												
[illegible]-02	10/15/97	0940	Soil	1	X												[illegible]
[illegible]-05		0950		1	X												[illegible]
[illegible]-03 0		1000		1	X	[illegible]											[illegible]
[illegible]-02-10 D		1010		1	X	[illegible] B											[illegible]
[illegible]-03-[illegible]		1030		1	X												[illegible]
[illegible]-05		1040		1	X												[illegible]
[illegible]-03-8 6		1050		1	X												[illegible]
[illegible]-02-10 6		1100		1	X												[illegible]

Relinquished by:

Signature	Date	Time
[illegible]	10/16/97	1000

Received By:

Signature	Date	Time
[illegible]	10-16-97	[illegible]

Samples Iced: ☐ Yes ☐ No

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☐ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Carrier: Airbill No.

Shipping and Lab Notes: Samples B-02-10, B-02-6, [illegible]-5, B-03-[illegible] may be [illegible] and [illegible] results of other samples. TCLP analysis pending other samples results.

H77160716

Chain-of Custody Record

PHILIP

955 Powell Avenue, Southwest
Renton, WA 98055
(P.O. Box 3552, Seattle 98124)
(206) 227-0311 Phone
(206) 227-6191 FAX

COC Serial No. F 3222

Project Name WW JUEF Battery
Project Number 13 972 Phase . Task
Samplers Parker
Laboratory Name
Location

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Type of Analysis and Bottle: Total Lead (6010)	TCLP										Comments
[illegible]-2	10/15/97	1120	Soil		X											[illegible]
[illegible] 5		1130			X											[illegible]
B-101-8		1140			X	B151	10/16/97									[illegible]
[illegible]-10		1150			X											[illegible]
B-102-2	10/15/97	0945	Soil		X											Hold

Relinquished by:

Signature	Date	Time
[illegible] Parker	10/16/97	1000

Received By:

Signature	Date	Time
[illegible] Nichols	10-16-97	10:22

Samples Iced: ☐ Yes ☐ No

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☐ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☐ Other (Specify) .....
- ☐ Other (Specify) _____

Carrier: Airbill No.

Shipping and Lab Notes: Samples B-101-8, B-101-10 may be analyzed pending results of other samples. TCLP analysis may be run on other sample results

10/17/97

78 4/95

PHILIP
ENVIRONMENTAL
BY-PRODUCT RECOVERY GROUP
WESTERN REGION

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVID BROTEN
955 POWELL AVE SW
RENTON, WA 98055

Report Date: 10/16/97	Generator: PASC	Work Order No.:
Sample Collected: 10/14/97	Project Name: WAG STAFF BATTERY	P.O. No.:
Received Date: 10/15/97	Project No: 18572	Job Number: 97100150

Client ID: B-05-S

Profile #:
Lab ID: AA29267

Analyte	Method	Result	Units
METALS			
Total Metals			
Lead	EPA 6010	139	mg/Kg

PHILIP
ENVIRONMENTAL
BY-PRODUCT RECOVERY GROUP
WESTERN REGION

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Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

To: DAVID BROTEN
955 POWELL AVE SW
RENTON, WA 98055

Analytical Report

Report Date: 10/16/97	Generator: PASC	Work Order No.:
Sample Collected: 10/14/97	Project Name: WAG STAFF BATTERY	P.O. No.:
Received Date: 10/15/97	Project No: 18572	Job Number: 97100150

Client ID: B-06-S

Profile #:
Lab ID: AA29268

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	22.2	mg/Kg

PHILIP
ENVIRONMENTAL
BY-PRODUCT RECOVERY GROUP
WESTERN REGION

Philip Environmental Laboratory
955 Powell Avenue S.W.
Renton, WA 98055-2908
TEL 206.227.6110
FAX 206.227.6196

Analytical Report

To: DAVID BROTEN
955 POWELL AVE SW
RENTON, WA 98055

Report Date: 10/16/97	Generator: PASC	Work Order No.:
Sample Collected: 10/14/97	Project Name: WAG STAFF BATTERY	P.O. No.:
Received Date: 10/15/97	Project No: 18572	Job Number: 97100150

Client ID: B-07-S

Profile #:
Lab ID: AA29269

Analyte	Method	Result	Units
Total Metals			
Lead	EPA 6010	27.5	mg/Kg

Data Reviewed By: SM

Data Reported By:

Chain-of Custody Record

PHILIP
955 Powell Avenue, Southwest
Renton, WA 98055
(P.O. Box 3552, Seattle 98124)
(206) 227-0311 Phone
(206) 227-6191 FAX

COC Serial No. F 3213

Project Name WAGSTAFF BATTERY
Project Number 18572 Phase . Task .
Samplers BROTEN
Laboratory Name PACE
Location

Sample Number (and depth)	Date	Time	Matrix	Total Number of Bottles	Total Lead (6010)	Comments
B-05-S	10/14/97	1510	Soil	1	X	M27147
B-06-S	↓	15:00	↓	1	X	29266
B-07-S	↓	15:05	↓	1	X	29269

Relinquished by:

Signature	Date	Time
Wayne Broten	10/14/97	
[illegible]	10/15/97	[illegible]

Received By:

Signature	Date	Time
[illegible]	10/14/97	4:45 PM
Hannah Thomas	10/15/97	8:00

Samples Iced: [ ] Yes [ ] No

Preservatives (ONLY for Water Samples)

- [ ] Cyanide ..... Sodium hyroxide (NaOH)
- [ ] Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- [ ] Metals ..... Nitric acid (HNO_3)
- [ ] TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- [ ] Other (Specify) _____
- [ ] Other (Specify) _____

Carrier: Airbill No.

Shipping and Lab Notes: 24 HOUR RUSH!!

#97100150

E-178 4/95

NORTH CREEK ANALYTICAL
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SPOKANE • (509) 924-9200 • FAX 924-9290
PORTLAND • (503) 643-9200 • FAX 644-2202

hilip Environmental - Vancouver	Project:	WAGSTAFF	Sampled: 10/14/97
117 NE 47th Ave.	Project Number:	18572	Received: 10/15/97
Vancouver, WA 98661	Project Manager:	David Jacobs	Reported: 10/28/97 16:49

ANALYTICAL REPORT FOR SAMPLES:

ample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
3-01-9	P710301-01	Soil	10/14/97
-01-12	P710301-02	Soil	10/14/97
-01-15	P710301-03	Soil	10/14/97

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Philip Environmental - Vancouver	Project:	WAGSTAFF	Sampled: 10/14/97
7117 NE 47th Ave.	Project Number:	18572	Received: 10/15/97
Vancouver, WA 98661	Project Manager:	David Jacobs	Reported: 10/23/97 16:49

Total Recoverable Petroleum Hydrocarbons per EPA Method 418.1
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
B-01-9			P710301-01				Soil	
Petroleum Oil Hydrocarbons	1070453	10/20/97	10/20/97	EPA 418.1	1000	13100	mg/kg dry	1
B-01-12			P710301-02				Soil	
Petroleum Oil Hydrocarbons	1070453	10/20/97	10/20/97	EPA 418.1	20.0	334	mg/kg dry	
B-01-15			P710301-03				Soil	
Petroleum Oil Hydrocarbons	1070453	10/20/97	10/20/97	EPA 418.1	20.0	ND	mg/kg dry	

*Refer to end of report for text of notes and definitions.

North Creek Analytical, Inc.

Howard Holmes, Project Manager

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PORTLAND • (503) 643-9200 • FAX 644-2202

Philip Environmental - Vancouver	Project:	WAGSTAFF	Sampled: 10/14/97
117 NE 47th Ave.	Project Number:	18572	Received: 10/15/97
Vancouver, WA 98661	Project Manager:	David Jacobs	Reported: 10/28/97 16:49

Polynuclear Aromatic Compounds per EPA 8270M-SIM
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
1-01-9			P710301-01				Soil	
Acenaphthene	1070349	10/16/97	10/22/97		168	ND	ug/kg dry	1
Acenaphthylene	"	"	"		168	ND	"	1
Anthracene	"	"	"		168	ND	"	1
Benzo (a) anthracene	"	"	10/24/97		67.0	ND	"	1
Benzo (a) pyrene	"	"	"		67.0	ND	"	1
Benzo (b) fluoranthene	"	"	"		67.0	ND	"	1
Benzo (ghi) perylene	"	"	"		67.0	ND	"	1
Benzo (k) fluoranthene	"	"	"		67.0	ND	"	1
Chrysene	"	"	"		67.0	ND	"	1
Dibenzo (a,h) anthracene	"	"	"		67.0	ND	"	1
Fluoranthene	"	"	10/22/97		168	ND	"	1
Fluorene	"	"	"		168	ND	"	1
Indeno (1,2,3-cd) pyrene	"	"	10/24/97		67.0	ND	"	1
Naphthalene	"	"	10/22/97		168	ND	"	1
Phenanthrene	"	"	"		168	ND	"	1
Pyrene	"	"	10/24/97		67.0	ND	"	1
Surrogate: 2-Fluorobiphenyl	"	"	*10/22/97*	*30.0-115*		*NR*	%	*2*
Surrogate: Nitrobenzene-d5	"	"	"	*23.0-120*		*NR*	"	*2*
Surrogate: p-Terphenyl-d14	"	"	*10/24/97*	*18.0-137*		*100*	"	
1-01-12			P710301-02				Soil	
Acenaphthene	1070349	10/16/97	10/22/97		67.0	ND	ug/kg dry	1
Acenaphthylene	"	"	"		67.0	ND	"	1
Anthracene	"	"	10/21/97		6.70	ND	"	
Benzo (a) anthracene	"	"	"		6.70	ND	"	
Benzo (a) pyrene	"	"	"		6.70	ND	"	
Benzo (b) fluoranthene	"	"	"		6.70	ND	"	
Benzo (ghi) perylene	"	"	"		6.70	ND	"	
Benzo (k) fluoranthene	"	"	"		6.70	ND	"	
Chrysene	"	"	"		6.70	ND	"	
Dibenzo (a,h) anthracene	"	"	"		6.70	ND	"	
Fluoranthene	"	"	"		6.70	ND	"	
Fluorene	"	"	10/22/97		67.0	ND	"	1
Indeno (1,2,3-cd) pyrene	"	"	10/21/97		6.70	ND	"	
Naphthalene	"	"	10/22/97		67.0	ND	"	1
Phenanthrene	"	"	10/21/97		6.70	22.0	"	
Pyrene	"	"	"		6.70	ND	"	
Surrogate: 2-Fluorobiphenyl	"	"	*10/22/97*	*30.0-115*		*74.0*	%	

North Creek Analytical, Inc.

**Refer to end of report for text of notes and definitions.*

Howard Holmes, Project Manager

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PORTLAND • (503) 643-9200 • FAX 644-2202

ilip Environmental - Vancouver	Project:	WAGSTAFF	Sampled: 10/14/97
17 NE 47th Ave.	Project Number:	18572	Received: 10/15/97
ancouver, WA 98661	Project Manager:	David Jacobs	Reported: 10/28/97 16:49

Polynuclear Aromatic Compounds per EPA 8270M-SIM
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
01-12 (continued)			**P710301-02**				Soil	
rrogate: Nitrobenzene-d5	*1070349*	*10/16/97*	*10/22/97*	*23.0-120*		*NR*	%	*3*
rrogate: p-Terphenyl-d14	"	"	*10/21/97*	*18.0-137*		*87.0*	"	
01-15			**P710301-03**				Soil	
enaphthene	1070349	10/16/97	10/21/97		6.70	ND	ug/kg dry	
enaphthylene	"	"	"		6.70	ND	"	
thracene	"	"	"		6.70	ND	"	
nzo (a) anthracene	"	"	"		6.70	ND	"	
nzo (a) pyrene	"	"	"		6.70	ND	"	
nzo (b) fluoranthene	"	"	"		6.70	ND	"	
nzo (ghi) perylene	"	"	"		6.70	ND	"	
nzo (k) fluoranthene	"	"	"		6.70	ND	"	
rysene	"	"	"		6.70	ND	"	
benzo (a,h) anthracene	"	"	"		6.70	ND	"	
uoranthene	"	"	"		6.70	ND	"	
orene	"	"	"		6.70	ND	"	
leno (1,2,3-cd) pyrene	"	"	"		6.70	ND	"	
phthalene	"	"	"		6.70	ND	"	
enanthrene	"	"	"		6.70	ND	"	
rene	"	"	"		6.70	ND	"	
rogate: 2-Fluorobiphenyl	"	"	"	*30.0-115*		*76.6*	%	
rrogate: Nitrobenzene-d5	"	"	"	*23.0-120*		*97.1*	"	
rogate: p-Terphenyl-d14	"	"	"	*18.0-137*		*106*	"	

*Refer to end of report for text of notes and definitions.

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PORTLAND • (503) 643-9200 • FAX 644-2202

ıilip Environmental - Vancouver	Project:	WAGSTAFF	Sampled: 10/14/97
117 NE 47th Ave.	Project Number:	18572	Received: 10/15/97
ancouver, WA 98661	Project Manager:	David Jacobs	Reported: 10/28/97 16:49

Conventional Chemistry Parameters per APHA/EPA Methods
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
-01-9			P710301-01				Soil	
H	1070444	10/18/97	10/18/97	EPA 9045B		3.53	pH units	
-01-12			P710301-02				Soil	
H	1070444	10/18/97	10/18/97	EPA 9045B		3.39	pH units	
-01-15			P710301-03				Soil	
H	1070444	10/18/97	10/18/97	EPA 9045B		3.56	pH units	

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Philip Environmental - Vancouver	Project:	WAGSTAFF	Sampled: 10/14/97
7117 NE 47th Ave.	Project Number:	18572	Received: 10/15/97
Vancouver, WA 98661	Project Manager:	David Jacobs	Reported: 10/28/97 16:49

Dry Weight Determination
North Creek Analytical - Portland

Sample Name	Lab ID	Matrix	Result	Units
B-01-9	P710301-01	Soil	75.8	%
B-01-12	P710301-02	Soil	79.3	%
B-01-15	P710301-03	Soil	79.8	%

North Creek Analytical, Inc.

Howard Holmes, Project Manager

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hilip Environmental - Vancouver	Project:	WAGSTAFF	Sampled: 10/14/97
17 NE 47th Ave.	Project Number:	18572	Received: 10/15/97
ancouver, WA 98661	Project Manager:	David Jacobs	Reported: 10/28/97 16:49

Total Recoverable Petroleum Hydrocarbons per EPA Method 418.1/Quality Control
North Creek Analytical - Portland

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
atch: 1070453	Date Prepared: 10/20/97				Extraction Method: TPH Freon Extraction					
lank	1070453-BLK1									
troleum Oil Hydrocarbons	10/20/97			ND	mg/kg dry	20.0				
CS	1070453-BS1									
troleum Oil Hydrocarbons	10/20/97	200		204	mg/kg dry	50.0-150	102			
plicate	1070453-DUP1		P710301-01							
troleum Oil Hydrocarbons	10/20/97		13100	13100	mg/kg dry			50.0	0	

Refer to end of report for text of notes and definitions.

rth Creek Analytical, Inc.

ward Holmes, Project Manager

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PORTLAND • (503) 643-9200 • FAX 644-2202

Philip Environmental - Vancouver	Project:	WAGSTAFF	Sampled: 10/14/97
7117 NE 47th Ave.	Project Number:	18572	Received: 10/15/97
Vancouver, WA 98661	Project Manager:	David Jacobs	Reported: 10/28/97 16:49

Polynuclear Aromatic Compounds per EPA 8270M-SIM/Quality Control
North Creek Analytical - Portland

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 1070349	**Date Prepared: 10/15/97**					**Extraction Method: EPA 3550**				
Blank	**1070349-BLK1**									
Acenaphthene	10/21/97			ND	ug/kg dry	6.70				
Acenaphthylene	"			ND	"	6.70				
Anthracene	"			ND	"	6.70				
Benzo (a) anthracene	"			ND	"	6.70				
Benzo (a) pyrene	"			ND	"	6.70				
Benzo (b) fluoranthene	"			ND	"	6.70				
Benzo (ghi) perylene	"			ND	"	6.70				
Benzo (k) fluoranthene	"			ND	"	6.70				
Chrysene	"			ND	"	6.70				
Dibenzo (a,h) anthracene	"			ND	"	6.70				
Fluoranthene	"			ND	"	6.70				
Fluorene	"			ND	"	6.70				
Indeno (1,2,3-cd) pyrene	"			ND	"	6.70				
Naphthalene	"			ND	"	6.70				
Phenanthrene	"			ND	"	6.70				
Pyrene	"			ND	"	6.70				
Surrogate: 2-Fluorobiphenyl	"	*83.3*		*67.5*	"	*30.0-115*	*81.0*			
Surrogate: Nitrobenzene-d5	"	*83.3*		*78.9*	"	*23.0-120*	*94.7*			
Surrogate: p-Terphenyl-d14	"	*83.3*		*89.2*	"	*18.0-137*	*107*			
LCS	**1070349-BS1**									
Acenaphthylene	10/21/97	167		135	ug/kg dry	50.0-150	80.8			
Benzo (k) fluoranthene	"	167		145	"	50.0-150	86.8			
Pyrene	"	167		159	"	50.0-150	95.2			
Surrogate: 2-Fluorobiphenyl	"	*83.3*		*65.2*	"	*30.0-115*	*78.3*			
Surrogate: Nitrobenzene-d5	"	*83.3*		*77.5*	"	*23.0-120*	*93.0*			
Surrogate: p-Terphenyl-d14	"	*83.3*		*83.2*	"	*18.0-137*	*99.9*			
Matrix Spike	**1070349-MS1**		**P710243-02**							
Acenaphthylene	10/22/97	211	ND	176	ug/kg dry	50.0-150	83.4			
Benzo (k) fluoranthene	"	211	ND	180	"	50.0-150	85.3			
Pyrene	"	211	142	278	"	50.0-150	64.5			
Surrogate: 2-Fluorobiphenyl	"	*105*		*76.0*	"	*30.0-115*	*72.4*			
Surrogate: Nitrobenzene-d5	"	*105*		*93.0*	"	*23.0-120*	*88.6*			
Surrogate: p-Terphenyl-d14	"	*105*		*104*	"	*18.0-137*	*99.0*			

North Creek Analytical, Inc.

*Refer to end of report for text of notes and definitions.

Edward Holmes, Project Manager

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PORTLAND • (503) 643-9200 • FAX 644-2202

Philip Environmental - Vancouver	Project: WAGSTAFF	Sampled: 10/14/97
7117 NE 47th Ave.	Project Number: 18572	Received: 10/15/97
Vancouver, WA 98661	Project Manager: David Jacobs	Reported: 10/28/97 16:49

Polynuclear Aromatic Compounds per EPA 8270M-SIM/Quality Control
North Creek Analytical - Portland

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike Dup	1070349-MSD1		P710243-02							
Acenaphthylene	10/22/97	211	ND	193	ug/kg dry	50.0-150	91.5	60.0	9.26	
Benzo (k) fluoranthene	"	211	ND	195	"	50.0-150	92.4	60.0	7.99	
Pyrene	"	211	142	341	"	50.0-150	94.3	60.0	37.5	
Surrogate: 2-Fluorobiphenyl	"	*105*		*82.4*	"	*30.0-115*	*78.5*			
Surrogate: Nitrobenzene-d5	"	*105*		*98.4*	"	*23.0-120*	*93.7*			
Surrogate: p-Terphenyl-d14	"	*105*		*113*	"	*18.0-137*	*108*			

Refer to end of report for text of notes and definitions.

NORTH CREEK ANALYTICAL
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ilip Environmental - Vancouver	Project:	WAGSTAFF	Sampled: 10/14/97
17 NE 47th Ave.	Project Number:	18572	Received: 10/15/97
ancouver, WA 98661	Project Manager:	David Jacobs	Reported: 10/28/97 16:49

Conventional Chemistry Parameters per APHA/EPA Methods/Quality Control
North Creek Analytical - Portland

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
tch: 1070444	Date Prepared: 10/18/97				Extraction Method: Wet Chem					
uplicate	1070444-DUP1		P710301-01							
-1	10/18/97		3.53	3.53	pH units				0	

Refer to end of report for text of notes and definitions.

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ip Environmental - Vancouver	Project: WAGSTAFF	Sampled: 10/14/97
17 NE 47th Ave.	Project Number: 18572	Received: 10/15/97
ncouver, WA 98661	Project Manager: David Jacobs	Reported: 10/28/97 16:49

Notes and Definitions

Note

Reporting limits raised due to dilution necessary for analysis.

The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interferences.

The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.

: Analyte DETECTED

Analyte NOT DETECTED at or above the reporting limit

Not Reported

Sample results reported on a dry weight basis

:ov. Recovery

) Relative Percent Difference

19.6°

P710301

Chain-of Custody Record

PHILIP ENVIRONMENTAL

955 Powell Avenue, Southwest
Renton, WA 98055
(P.O. Box 3552, Seattle 98124)
(206) 227-0311 Phone
(206) 227-6191 FAX

COC Serial No. F 3221

Project Name WAGSTAFF
Project Number 18572 Phase . Task
Samplers BROKEN
Laboratory Name North Creek Analytical
Location Portland Or.

Sample Number (and depth)	Time ~~Date~~	Date ~~Time~~	Matrix	Total Number of Bottles	Type of Analysis and Bottle: TPH 418.1 (EPA)	PAH's (SIM)	PH	Comments
B-01-9	1655	10/14/97	Soil		X	X	X	
B-01-12	1730	↓	↓		X	X	X	
B-01-15	1750	↓	↓		X	X	X	

Relinquished by:

Signature	Date	Time
David Broken	10/15/97	1330

Received By:

Signature	Date	Time
Sara McClurg	10/15/97	1330

Samples Iced: ☐ Yes ☐ No

Preservatives (ONLY for Water Samples)

- ☐ Cyanide ..... Sodium hyroxide (NaOH)
- ☐ Volatile Organic Analysis ..... Hydrochloric acid (HCl)
- ☐ Metals ..... Nitric acid (HNO_3)
- ☐ TPH (418.1) ..... Sulfuric acid (H_2SO_4)
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

Carrier: Airbill No.

Shipping and Lab Notes:

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hilip Environmental-Vancouver	Project: Wagstaff	Sampled:	10/27/97
117 N.E. 47th Ave	Project Number:	Received:	10/27/97
'ancouver, WA 98661	Project Manager: David Jacobs	Reported:	11/12/97 09:17

ANALYTICAL REPORT FOR SAMPLES:

- - REVISED 11/12/97

ample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
1 West Center Bottom 19'	P710461-01	Soil	10/27/97
2 South, Center 12' Wall	P710461-02	Soil	10/27/97
3 West Wall 10'	P710461-03	Soil	10/27/97
4 East, Center, Bottom 18'	P710461-04	Soil	10/27/97
5 East Wall 8'	P710461-05	Soil	10/27/97
5 North Wall 10'	P710461-06	Soil	10/27/97

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ilip Environmental-Vancouver	Project: Wagstaff	Sampled:	10/27/97
17 N.E. 47th Ave	Project Number:	Received:	10/27/97
ncouver, WA 98661	Project Manager: David Jacobs	Reported:	11/12/97 09:17

Total Metals per EPA 6000/7000 Series Methods

REVISED 11/12/97

North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
West Center Bottom 19'			**P710461-01**				**Soil**	
ad	1070652	10/28/97	10/28/97	EPA 6010A	100	3750	mg/kg dry	
South. Center 12' Wall			**P710461-02**				**Soil**	
ad	1070652	10/28/97	10/27/97	EPA 6010A	10.0	67.1	mg/kg dry	
West Wall 10'			**P710461-03**				**Soil**	
ad	1070652	10/28/97	10/27/97	EPA 6010A	10.0	383	mg/kg dry	
East. Center. Bottom 18'			**P710461-04**				**Soil**	
id	1070652	10/28/97	10/27/97	EPA 6010A	10.0	ND	mg/kg dry	
ad	1070652	10/28/97	10/27/97	EPA 6010A	10.0	17.2	mg/kg dry	
North Wall 10'			**P710461-06**				**Soil**	
id	1070652	10/28/97	10/27/97	EPA 6010A	10.0	ND	mg/kg dry	

Refer to end of report for text of notes and definitions.

th Creek Analytical, Inc.

ward Holmes, Project Manager

18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508
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9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132

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hilip Environmental-Vancouver	Project:	Wagstaff	Sampled: 10/27/97
117 N.E. 47th Ave	Project Number:		Received: 10/27/97
'ancouver, WA 98661	Project Manager:	David Jacobs	Reported: 11/12/97 09:17

TCLP Metals per EPA 1311/6000/7000 Series Methods
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
1 West Center Bottom 19'			**P710461-01**				**Soil**	
.ead	1170092	10/29/97	11/5/97	EPA 6010A	2.00	74.7	mg/l	
3 West Wall 10'			**P710461-03**				**Soil**	
ead	1170092	10/29/97	11/5/97	EPA 6010A	0.200	ND	mg/l	

Refer to end of report for text of notes and definitions.

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ıilip Environmental-Vancouver	Project:	Wagstaff	Sampled: 10/27/97
117 N.E. 47th Ave	Project Number:		Received: 10/27/97
ıncouver, WA 98661	Project Manager:	David Jacobs	Reported: 11/12/97 09:17

Dry Weight Determination

REVISED 11/12/97
North Creek Analytical - Portland

mple Name	Lab ID	Matrix	Result	Units
West Center Bottom 19'	P710461-01	Soil	79.1	%
South, Center 12' Wall	P710461-02	Soil	81.2	%
West Wall 10'	P710461-03	Soil	77.7	%
East, Center, Bottom 18'	P710461-04	Soil	87.3	%
East Wall 8'	P710461-05	Soil	78.9	%
North Wall 10'	P710461-06	Soil	82.8	%

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Philip Environmental-Vancouver	Project: Wagstaff	Sampled:	10/27/97
7117 N.E. 47th Ave	Project Number:	Received:	10/27/97
Vancouver, WA 98661	Project Manager: David Jacobs	Reported:	11/12/97 09:17

Total Metals per EPA 6000/7000 Series Methods/Quality Control

REVISED 11/12/97

North Creek Analytical - Portland

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 1070652	**Date Prepared: 10/28/97**				**Extraction Method: Metals**					
Blank	**1070652-BLK1**									
Lead	10/27/97			ND	mg/kg dry	10.0				
LCS	**1070652-BS1**									
Lead	10/27/97	100		98.0	mg/kg dry	80.0-120	98.0			
Duplicate	**1070652-DUP1**		**P710461-01**							
Lead	10/28/97		3750	2400	mg/kg dry			40.0	43.9	1,2
Matrix Spike	**1070652-MS1**		**P710461-01**							

*Refer to end of report for text of notes and definitions.

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ilip Environmental-Vancouver	Project: Wagstaff	Sampled:	10/27/97
117 N.E. 47th Ave	Project Number:	Received:	10/27/97
ancouver, WA 98661	Project Manager: David Jacobs	Reported:	11/12/97 09:17

TCLP Metals per EPA 1311/6000/7000 Series Methods/Quality Control
North Creek Analytical - Portland

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
tch: 1170092	Date Prepared: 10/29/97					Extraction Method: EPA 1311/3010				
ank	1170092-BLK1									
ad	11/5/97			ND	mg/l	0.200				
S	1170092-BS1									
ad	11/5/97	5.00		4.84	mg/l	75.0-125	96.8			
trix Spike	1170092-MS1		P710461-01							
ad	11/5/97	5.00	74.7	78.5	mg/l	50.0-150	76.0			

th Creek Analytical, Inc.

Refer to end of report for text of notes and definitions.

vard Holmes, Project Manager

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ilip Environmental-Vancouver	Project: Wagstaff	Sampled: 10/27/97
117 N.E. 47th Ave	Project Number:	Received: 10/27/97
ncouver, WA 98661	Project Manager: David Jacobs	Reported: 11/12/97 09:17

Notes and Definitions

REVISED 11/12/97

Note	
	The RPD is above the control limit due to a non-homogeneous sample matrix.
	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte already present in the sample.
:T	Analyte DETECTED
:D	Analyte NOT DETECTED at or above the reporting limit
ι	Not Reported
rv	Sample results reported on a dry weight basis
..'D	Relative Percent Difference

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CHAIN OF CUSTODY REPORT

Work Order # P710461

REPORT TO:
ATTENTION: David Jacobs
ADDRESS: 7117 N.E. 47th Ave
Vancouver WA 98661
PHONE 360-737-1943 FAX: 360 737-2349
PROJECT NAME: Wagstaff
PROJECT NUMBER:
SAMPLED BY: Philip L Johnson

INVOICE TO:
ATTENTION: Philip Environmental
ADDRESS: P.O. Box 3552
Seattle WA 98124
P.O. NUMBER: Wagstaff NCA QUOTE #:

TURNAROUND REQUEST in Business Days *
Organic & Inorganic Analyses: 10 (Standard) | 7 | 5 | 4 | 3 | 2 | 1 | Same Day (X)
Fuels & Hydrocarbon Analyses: 5 (Standard) | 3-4 | 2 | 1 | Same Day
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NCA SAMPLE ID (Laboratory Use Only)	Analysis Request: Total Pb	MATRIX (W, S, A, O)	# OF CONTAINERS	COMMENTS
#1 West, Center Bottom 19'	10/27 11:10		✓	Soil	1	Call ASAP -- 24hr Turnaround
#2 South, Center 12' Wall	10/27 11:38		✓			24hr
#3 West Wall 10'	10/27 11:40		✓			24hr
#4 East, Center, Bottom 18'	10/27 11:45		✓			24hr
#5 East Wall 8'	10/27 11:50		✓			24hr
#6 North Wall 10'	10/27 11:52		✓			24hr

RELINQUISHED BY (Signature): Philip L Johnson DATE: 10-27-97
PRINT NAME: Philip L Johnson FIRM: Philip Envi. TIME: 12:08pm
RELINQUISHED BY (Signature): DATE: 10 27-97
PRINT NAME: Cathy Spangler FIRM: NCA TIME: 1230

RECEIVED BY (Signature): DATE: 10-27-97
PRINT NAME: Cathy Spangler FIRM: NCA TIME: 1200
RECEIVED BY (Signature): Kari Cline DATE: 10/27/97
PRINT NAME: KARI CLINE FIRM: NCA TIME: 12:30

ADDITIONAL REMARKS: Sample 1 - if Hot, run TCLP.

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iilip Environmental-Vancouver	Project:	Wagstaff	Sampled: 10/29/97
117 N.E. 47th Ave, Suite B	Project Number:	none	Received: 10/29/97
'ancouver, WA 98661	Project Manager:	David Jacobs	Reported: 11/7/97 14:47

ANALYTICAL REPORT FOR SAMPLES:

umple Description	Laboratory Sample Number	Sample Matrix	Date Sampled
7 Southwall	P710529-01	Soil	10/29/97
;ottom 24'	P710529-02	Soil	10/29/97
ockpile composite	P710529-03	Soil	10/29/97

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ilip Environmental-Vancouver	Project:	Wagstaff	Sampled: 10/29/97
17 N.E. 47th Ave, Suite B	Project Number:	none	Received: 10/29/97
ancouver, WA 98661	Project Manager:	David Jacobs	Reported: 11/7/97 14:47

Total Metals per EPA 6000/7000 Series Methods
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
Southwall			P710529-01				Soil	
ead	1070710	10/29/97	10/30/97	EPA 6010A	10.0	13.3	mg/kg dry	
ttom 24'			P710529-02				Soil	
ad	1070710	10/29/97	10/30/97	EPA 6010A	10.0	33.6	mg/kg dry	
ockpile composite			P710529-03				Soil	
ad	1070710	10/29/97	10/30/97	EPA 6010A	10.0	99.6	mg/kg dry	

Refer to end of report for text of notes and definitions.

rth Creek Analytical, Inc.

ward Holmes, Project Manager

13939 120th Avenue N.E. Suite 101 Bothell, WA 98011-9508
East 11115 Montgomery, Suite B Spokane, WA 99206-4776

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Philip Environmental-Vancouver	Project:	Wagstaff	Sampled: 10/29/97
7117 N.E. 47th Ave, Suite B	Project Number:	none	Received: 10/29/97
Vancouver, WA 98661	Project Manager:	David Jacobs	Reported: 11/7/97 14:47

TCLP Metals per EPA 1311/6000/7000 Series Methods
North Creek Analytical - Portland

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
Stockpile composite			P710529-03				Soil	
Lead	1170150	11/4/97	11/7/97	EPA 6010A	0.200	ND	mg/l	