EPA Region 10 Laboratory **Analyses Required**

PRIORITY POLLUTANTS - ORGANICS

Project Name: SEATTLE IRON + METALS Project Code: TEC-263 B Account Code: AFEB3A

Matrix Codes *(circle one only)*

10 Water-Total
11 Water-Dissolved
40 Sediment/Soil
45 Semi-Solid/Sludge
46 Sediment for EP Toxicity
70 Tissue
80 Oil/Solvent
00 Other

	Sample Numbers																		Analy/Comp Init/Date
	862906 80	862906 83																	
GC/MS Organic Scans																			
68 Base/Neutrals/Acids B/N/A																			
62 Base/Neutrals Only B/N																			
51 Volatile Organics VOA																			
65 Acids Only Acid																			
Specific (GC/MS) Organics *List Below*																			
GC Organic Scans																			
71 Pesticide/PCB's Pest/PCB																			
74 PCB's Only PCB	X	X																	
54 Purgeable Halocarbons Purg																			
53 Trihalomethanes Trihal																			
73 Herbicides Herb																			
70 Chlorinated Hydrocarbons																			
70 Organophosphate Pesticides																			
Specific (GC) Organics *List Below*																			
Specific Organics ai Other Miscellaneous																			
67 PolyAromHydro (HPLC) PAH																			
40 Oil Identification Oil-Id																			
40 Phenolics (AAP) Phenol																			
40 Oil & Grease Oil & Greas																			
40 Flashpoint Flashpt																			

Save samples after analysis? **NONE, SOME** or **ALL.** *(If SOME, circle sample numbers.)*

Special detection limits and comments:

Project Officer Signature *Date*

7-16-86

EPA X-91 **Project Officer Copy**

Sample volumes and containers required for certain analyses are shown below. This information is intended as a guide only. It is recommended that the Laboratory be contacted when determining the proper sample containers.

Size and Type of Container	Parameter and Matrix
1 gallon and ½ gallon glass	Base/Neutral/Acid/Pesticides - Water
8 ounce glass	Base/Neutral/Acid/Pesticides - Sediment
2 40 ml glass vials	Volatile Organics - Water
8 ounce glass	Volatile Organics - Sediment
16 or 40 ml glass vial	PCB–Oil
1/2 gallon glass	PCB - Water
8 ounce glass	PCB - Sediment
1/2 gallon glass	Herbicides - Water
8 ounce glass	Herbicides - Sediment
8 ounce glass	Oil & Grease - Sediment
1/2 gallon glass	Oil & Grease - Water

GC/MS Analyses

Organics - Base/Neutral Extractables
Workgroup(s) 62 or 68

Acenaphthene
Benzidine
Benzene, 1,2,4-trichloro-
Benzene, hexachloro-
Ethane, hexachloro-
Ether, bis(2-chloroethyl)
Napthalene, 2-chloro-
Benzene, 1,2-dichloro-
Benzene, 1,3-dichloro-
Benzene, 1,4-dichloro-
Benzidine, 3,3'-dichloro
Toluene, 2,4-dinitro-
Toluene, 2,6-dinitro-
Hydrazine, 1,2-diphenyl-
Fluoranthene
Ether,4-chlrphnyl phenyl
Ether,4-bromphnyl phenyl
Ether,bis(2-chlrisoprpl)
Methane,bis(2-chlrethox)
Butadiene, hexachloro-
Cyclopentadiene,hexachlr
Isophorone
Naphthalene
Benzene, nitro-
Nitrosamine, dimethyl-
Nitrosamine, diphenyl-
Nitrosamine, di-n-propyl
Phthlate,bis(2-ethlhexl)
Phthalate,n-butyl benzyl
Phthalate, di-n-butyl-
Phthalate, di-n-octyl
Phthalate, diethyl-
Phthalate, dimethyl
Anthracene, benzo(a)-
Pyrene, benzo(a)-
Fluoranthene benzo(b)
Fluoranthene, benzo(k)-
Chrysene
Acenaphthylene
Anthracene
Perylene, benzo(g,h,i)-
Fluorene
Phenanthrene
Anthracene, dibenzo(a,h)
Pyrene,indeno(1,2,3-c,d)
Pyrene
TCDD

Organics - Volatile
Workgroup 51

Acrolein
Acrylonitrile
Benzene
Carbon Tetrachloride
Chlorobenzene
1,2-Dichloroethane
1,1,1-Trichloroethane
1,1-Dichloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
Chloroethane
2-Chloroethylvinyl ether
Chloroform
1,1-Dichloroethylene
1,2-trans-Dichloroethylene
1,2-Dichloropropane
cis-1,3-dichloropropylene
trans-1,3-dichloropropylene
Ethylbenzene
Methane, dichloro
Methane, chloro
Methane, bromo-
Methane, tribromo-
Methane, dichlorobromo-
Chlorodibromomethane
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl chloride
Acetone
2-Butanone
Carbon disulfide
2-Hexanone
4-Methyl 2-pentanone
Styrene
Vinyl acetate
o-Xylene
Total Xylenes

Organics - Acid Extractables
Workgroup(s) 65 or 68

Phenol, 2,4,6-trichloro-
M-cresol, p-chloro-
Phenol, 2-chloro-
Phenol, 2,4-dichloro-
Phenol, 2,4-dimethyl-
Phenol, 2-nitro-
Phenol, 4-nitro-
Phenol, 2,4-dinitro-
O-cresol, 4,6-dinitro-
Phenol, pentachloro-
Phenol
Benzoic acid
Phenol,2-methyl-
Phenol,4-methyl-
Phenol,245-trichloro-

GC Analyses

Trihalomethanes
Workgroup 53

Chloroform
Dichlorobromomethane
Chlorodibromomethane
Bromoform

Purgeable Halocarbons
Workgroup 54

Chloroform
Dichlorobromomethane
Chlorodibromomethane
Bromoform
Carbon tetrachloride
Chlorobenzene
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
1,2-(trans)-Dichloroethene
1,2-Dichloropropane
Methylene chloride
Tetrachloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene

Organophosphorous Pesticides
Workgroup 70

Mevinphos
Phorate
Dimethoate
Diazinon
Methyl parathion
Ethyl parathion
Malathion
Ethion
Carbophenothion
Azinphos (methyl or ethyl)
Dichlorvos
Dioxathion
Ronnel
Fenthion
Phosphamidon
Folex
DEF
Phencapton
Monocrotophos
EPN
Imidan
Coumaphos
Disulfoton

Pesticide/PCB Analysis
Workgroup 71

Aldrin
Chlordane
Dieldrin
DDT, 4,4'-
DDE, 4,4'-
DDD, 4,4'-
Endosulfan, alpha-
Endosulfan, beta-
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
BHC, alpha-
BHC, beta-
BHC, gamma-
BHC, delta-
Toxaphene
PCB - 1016
PCB - 1221
PCB - 1232
PCB - 1242
PCB - 1248
PCB - 1254
PCB - 1260

Polycyclic Aromatic Hydrocarbons
Workgroup 67

Acenaphthene
Acenaphthylene
Anthracene
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Chrysene
Dibenzo(a,h)anthracene
Fluoranthene
Fluorene
Indeno(1,2,3-cd)pyrene
Naphthalene
Phenanthrene
Pyrene

Chlorinated Hydrocarbons

95501 1,2-Dichlorobenzene
87616 1,2,3-Trichlorobenzene
95943 1,2,4,5-Tetrachlorobenzene
608935 Pentachlorobenzene
118741 Hexachlorobenzene

PCB Analysis only
Workgroup 74

PCB - 1016
PCB - 1221
PCB - 1232
PCB - 1242
PCB - 1248
PCB - 1254
PCB - 1260

Organics - Herbicides
Workgroup 73

2,4-D
2,4-DB
2,4,5-T
2,4,5-TB
Silvex (2,4,5-TP)
MCPA
MCPP
MCPB
Pentachlorophenol
Tetrachlorophenol
Dicamba
Bromoxynil
Ioxynil
Dinoseb
Picloram

Note: *To obtain a complete Priority Pollutant scan, request* **WG 68, 51, 71, and 40** *on this sheet and appropriate metals on the metals analysis request form.*

EPA Region 10 Laboratory **Analyses Required**

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00 Other

Sample Numbers

			862906 75	862906 76	862906 77	862906 78	862906 79	862906 81	862906 82	862906 83										Analy/Comp Init/Date
GC/MS Organic Scans																				
68	Base/Neutrals/Acids	B/N/A																		
62	Base/Neutrals Only	B/N																		
51	Volatile Organics	VOA																		
65	Acids Only	Acid																		
Specific (GC/MS) Organics *List Below*																				
GC Organic Scans																				
71	Pesticide/PCB's	Pest/PCB																		
74	PCB's Only	PCB	X	X	X	X	X	X	X	X										
54	Purgeable Halocarbons	Purg																		
53	Trihalomethanes	Trihal																		
73	Herbicides	Herb																		
70	Chlorinated Hydrocarbons																			
70	Organophosphate Pesticides																			
Specific (GC) Organics *List Below*																				
Specific Organics ar Other Miscellaneous																				
67	PolyAromHydro (HPLC)	PAH																		
40	Oil Identification	Oil-Id																		
40	Phenolics (AAP)	Phenol																		
40	Oil & Grease	Oil & Greas																		
40	Flashpoint	Flashpt																		

Save samples after analysis? **NONE, SOME** or **ALL.** *(If SOME, circle sample numbers.)*

Special detection limits and comments:

Project Officer Signature *Date*

7-16-86

EPA X-91 **Project Officer Copy**

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8 ounce glass	PCB - Sediment
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8 ounce glass	Herbicides - Sediment
8 ounce glass	Oil & Grease - Sediment
1/2 gallon glass	Oil & Grease - Water

GC/MS Analyses

Organics - Base/Neutral Extractables
Workgroup(s) 62 or 68

Acenaphthene
Benzidine
Benzene, 1,2,4-trichloro-
Benzene, hexachloro-
Ethane, hexachloro-
Ether, bis(2-chloroethyl)
Napthalene, 2-chloro-
Benzene, 1,2-dichloro-
Benzene, 1,3-dichloro-
Benzene, 1,4-dichloro-
Benzidine, 3,3'-dichloro
Toluene, 2,4-dinitro-
Toluene, 2,6-dinitro-
Hydrazine, 1,2-diphenyl-
Fluoranthene
Ether,4-chlrphnyl phenyl
Ether,4-bromphnyl phenyl
Ether,bis(2-chlrisoprpl)
Methane,bis(2-chlrethox)
Butadiene, hexachloro-
Cyclopentadiene,hexachlr
Isophorone
Naphthalene
Benzene, nitro-
Nitrosamine, dimethyl-
Nitrosamine, diphenyl-
Nitrosamine, di-n-propyl
Phthlate,bis(2-ethlhexl)
Phthalate,n-butyl benzyl
Phthalate, di-n-butyl-
Phthalate, di-n-octyl
Phthalate, diethyl-
Phthalate, dimethyl
Anthracene, benzo(a)-
Pyrene, benzo(a)-
Fluoranthene benzo(b)
Fluoranthene, benzo(k)-
Chrysene
Acenaphthylene
Anthracene
Perylene, benzo(g,h,i)-
Fluorene
Phenanthrene
Anthracene, dibenzo(a,h)
Pyrene,indeno(1,2,3-c,d)
Pyrene
TCDD

Organics - Volatile
Workgroup 51

Acrolein
Acrylonitrile
Benzene
Carbon Tetrachloride
Chlorobenzene
1,2-Dichloroethane
1,1,1-Trichloroethane
1,1-Dichloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
Chloroethane
2-Chloroethylvinyl ether
Chloroform
1,1-Dichloroethylene
1,2-trans-Dichloroethylene
1,2-Dichloropropane
cis-1,3-dichloropropylene
trans-1,3-dichloropropylene
Ethylbenzene
Methane, dichloro
Methane, chloro
Methane, bromo-
Methane, tribromo-
Methane, dichlorobromo-
Chlorodibromomethane
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl chloride
Acetone
2-Butanone
Carbon disulfide
2-Hexanone
4-Methyl 2-pentanone
Styrene
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o-Xylene
Total Xylenes

Organics - Acid Extractables
Workgroup(s) 65 or 68

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M-cresol, p-chloro-
Phenol, 2-chloro-
Phenol, 2,4-dichloro-
Phenol, 2,4-dimethyl-
Phenol, 2-nitro-
Phenol, 4-nitro-
Phenol, 2,4-dinitro-
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Phenol, pentachloro-
Phenol
Benzoic acid
Phenol,2-methyl-
Phenol,4-methyl-
Phenol,245-trichloro-

GC Analyses

Trihalomethanes
Workgroup 53

Chloroform
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Bromoform

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Workgroup 54

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Bromoform
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1,2-Dichloroethane
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1,2-(trans)-Dichloroethene
1,2-Dichloropropane
Methylene chloride
Tetrachloroethene
1,1,1-Trichloroethane
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Organophosphorous Pesticides
Workgroup 70

Mevinphos
Phorate
Dimethoate
Diazinon
Methyl parathion
Ethyl parathion
Malathion
Ethion
Carbophenothion
Azinphos (methyl or ethyl)
Dichlorvos
Dioxathion
Ronnel
Fenthion
Phosphamidon
Folex
DEF
Phencapton
Monocrotophos
EPN
Imidan
Coumaphos
Disulfoton

Pesticide/PCB Analysis
Workgroup 71

Aldrin
Chlordane
Dieldrin
DDT, 4,4'-
DDE, 4,4'-
DDD, 4,4'-
Endosulfan, alpha-
Endosulfan, beta-
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
BHC, alpha-
BHC, beta-
BHC, gamma-
BHC, delta-
Toxaphene
PCB - 1016
PCB - 1221
PCB - 1232
PCB - 1242
PCB - 1248
PCB - 1254
PCB - 1260

Polycyclic Aromatic Hydrocarbons
Workgroup 67

Acenaphthene
Acenaphthylene
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Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
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Dibenzo(a,h)anthracene
Fluoranthene
Fluorene
Indeno(1,2,3-cd)pyrene
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Phenanthrene
Pyrene

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PCB Analysis only
Workgroup 74

PCB - 1016
PCB - 1221
PCB - 1232
PCB - 1242
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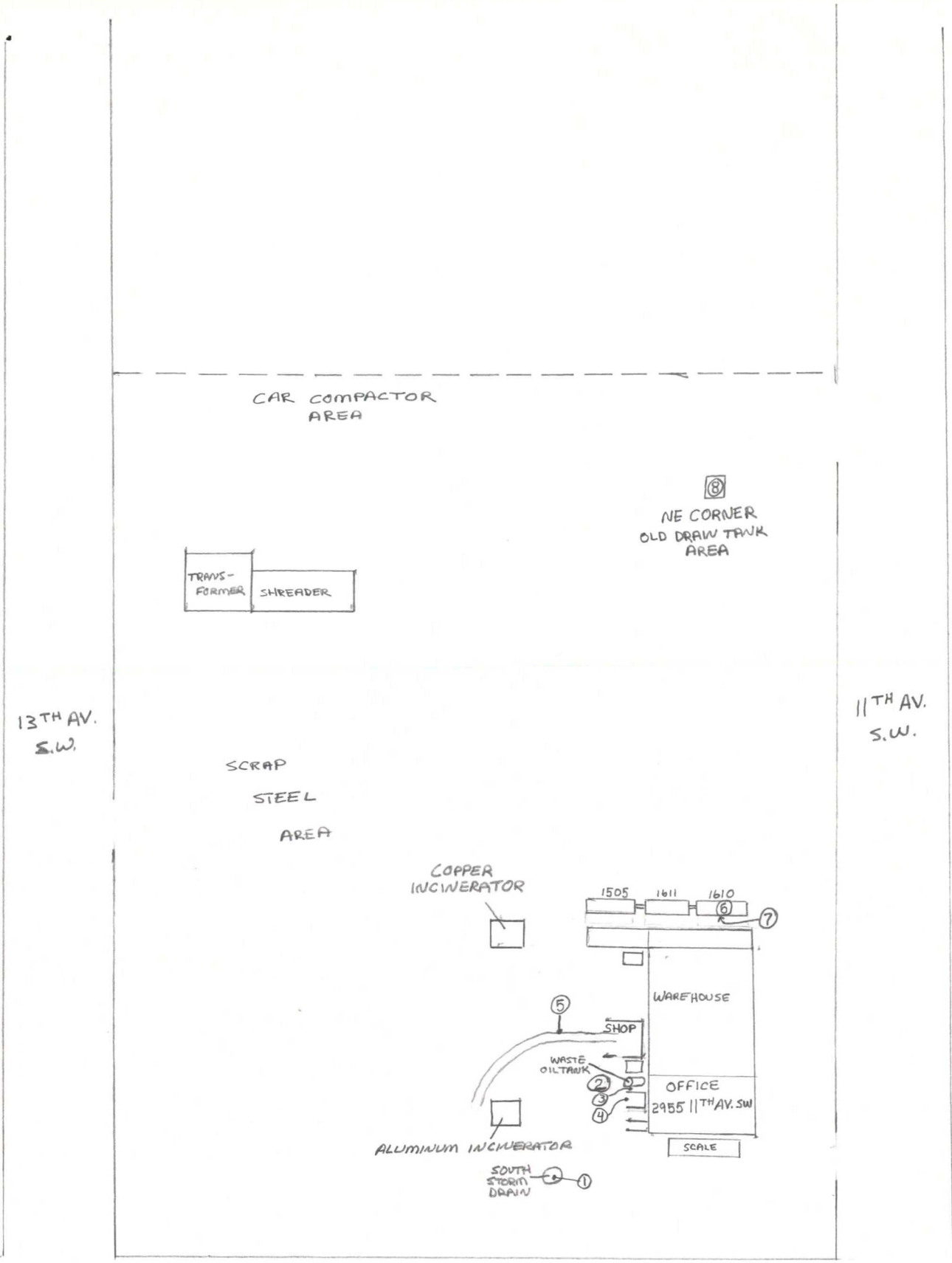
Organics - Herbicides
Workgroup 73

2,4-D
2,4-DB
2,4,5-T
2,4,5-TB
Silvex (2,4,5-TP)
MCPA
MCPP
MCPB
Pentachlorophenol
Tetrachlorophenol
Dicamba
Bromoxynil
Ioxynil
Dinoseb
Picloram

Note: *To obtain a complete Priority Pollutant scan, request* **WG 68, 51, 71, and 40** *on this sheet and appropriate metals on the metals analysis request form.*


N
CAR COMPACTOR AREA
8
NE CORNER OLD DRAW TANK AREA
TRANS-FORMER
SHREADER
13TH AV. S.W.
11TH AV. S.W.
SCRAP STEEL AREA
COPPER INCINERATOR
1505
1611
1610
6
7
WAREHOUSE
5
SHOP
WASTE OILTANK
2
3
4
OFFICE
2955 11TH AV. SW
ALUMINUM INCINERATOR
SCALE
SOUTH STORM DRAIN
1

HANFORD

FIELD SAMPLE DATA AND CHAIN OF CUSTODY SHEET

EPA
EPA Region 10
1200 Sixth Avenue
Seattle WA 98101

Project Code: TEC-263B Account: AFER3A
Name/Location: SEATTLE IRON + METALS CORP.
Project Officer: ANDREW HESS

☐ Enforcement/Custody
☒ Possible Toxic/Hazardous
☐ Data Confidential
☐ Data for Storet

Notes:

Samplers: ANDREW HESS, DAVID ROBOCKER
Recorder: [signature]
(Signatures Required)

SOURCE CODE	MATRIX: Water	Sediment	Tissue	Oil	EMPTY-VAS	#CONTAINERS & PRESERV.: Unpress	H_2SO_4	HNO_3	LAB NUMBER Yr Wk Seq	STATION NUMBER	DATE Yr Mo Dy Time	COMPOSITE ONLY ENDING DATE Mo Dy Time	Type	Freq	STATION DESCRIPTION
42		X				1			86290675		860716 1350				SOUTH STORM DRAIN
48		X				1			86290676		860716 1402				WASTE OIL TANK AREA-GENERAL
48		X				1			86290677		860716 1407				ADJACENT TO WASTE OIL TANK
48		X				1			86290678		860716 1412				SOIL UNDER EMPTY DRUM STORAGE
48		X				1			86290679		860716 1422				SOIL NEXT TO RAILROAD TRACT
81				X		1			86290680		860716 1434				OIL ON BOTTOM OF TRAIN ENGINE #1610
48		X				1			86290681		860716 1447				SOIL UNDER TRAIN ENGINE #1610
48		X				1			86290682		860716 1500				NORTHEAST CORNER DRAIN DITCH
						2			86290683		860716				TRANSPORT BLANK

LAB NUMBER Yr Wk Seq	DEPTH	Units	Type	COL MTD CD	QA CODE	TEMP DEG C	pH	CNDCTVTY umho/cm	MISCELLANEOUS
86290683					FTRS				

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	REC'V'D BY MOBILE LAB FOR FIELD ANAL.: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) [signature]	DATE/TIME 7-16-86 1720	RECEIVED FOR LAB BY: (Signature) DATE/TIME

METHOD OF SHIPMENT

Laboratory Copy *White* — Project Officer Copy *Yellow* — Field or Office Copy *Pink*

☆ GPO 593-456 / 20000

★ Source Codes and Descriptions ★

Code	Description
00	Unspecified Source
01	Unknown Liquid Media (Drum/Tank)
02	Unknown Liquid Media (Spill Area)
03	Unknown Liquid Media (Waste Pond)
10	Water (General)
12	Ambient Stream/River
13	Lake/Reservoir
14	Estuary/Ocean
15	Spring/Seepage
16	Rain
17	Surface Runoff/Pond (General)
18	Irrigation Canal/Return Flow
20	Well (General)
21	Well (Industrial/Agricultural)
22	Well (Drinking Water Supply)
23	Well (Test/Observation)
24	Drinking Water Intake
25	Drinking Water (At Tap)
30	Effluent Wastewater (General)
31	Municipal Effluent
32	Municipal Inplant Waters
33	Sewage Runoff/Leachate
34	Industrial Effluent
35	Industrial Inplant Waters
36	Industrial Surface Runoff/Pond
37	Industrial Waste Pond
38	Landfill Runoff/Pond/Leachate
40	Sediment (General)
42	Bottom Sediment or Deposit
44	Sludge (General)
45	Sludge (Waste Pond)
46	Sludge (Drum/Tank)
48	Soil (General)
49	Soil (Spill/Contaminated Area)
50	Bore Hole Material

Code	Description
60	Air (General)
61	Ambient Air
62	Source or Effluent Air
63	Industrial or Workroom Air
64	Hi-Vol Filter
70	Tissue (General)
71	Fish Tissue
72	Shellfish Tissue
73	Bird Tissue
74	Mammal Tissue
75	Macroinvertebrate
76	Algae
77	Periphyton
78	Plant/Vegetation
80	Oil/Solvent (General)
81	Oil (Transformer/Capacitor)
82	Oil/Solvent (Drum/Tank)
83	Oil/Solvent (Spill Area)
84	Oil/Solvent (Waste Pond)
90	Commercial Product Formulation
95	Well Drill Water
96	Well Drill Mud
97	Well Sealing Material
98	Gravel Pack Material

★ Collection Method Codes ★

Code	Description
00	Unknown
10	Hand Grab
11	Plastic Bucket
12	Stainless Steel Bucket
13	Brass Kemmerer
14	PVC Kemmerer
15	D.O. Dunker
16	DH 48/DH 49 Integrating Sampler
17	Van Dorn Bottle
18	Glass Dip Tube
19	Other
20	Automatic Sampler (General)
21	ISCO Auto Sampler
22	Manning Auto Sampler
25	Well Point Sampler (Pump)
26	Stainless Steel Bailer (Hand)
30	Dredge (Unspecified)
31	Dredge (Peterson)
32	Dredge (Van Dorn)
33	Dredge (Van Veen)
34	Core
35	Freeze Core
40	Macroinvertebrate (Unspecified)
41	Picked by Hand
42	Kick Net
43	Surber
44	Modified Hess Type Sampler
45	Rock Basket
46	Hester Dendy Sampler
50	Fish (Unspecified)
51	Fish (Shocking)
52	Fish (Netting)
53	Fish (Hook & Line)
54	Fish (Poison)
60	Periphyton (Unspecified)
61	Rock Scraping
62	Glass Slides

★ Composite Codes ★

Type	Description
T	Time Composite
S	Space Composite
F	Flow Proportioned Composite
B	Both Space & Time Composite

Freq	Description
C	Continuous
G	Grabs (# Unknown)
##	# of Grabs

★ Depth Codes ★

Unit	Description
F	Feet
M	Meters

Type	Description
-	Regular (Blank)
V	Vertically Integrated
B	Sample at Bottom

★ Quality Assurance Codes ★

Code	Description
FBLK	Field Blank Sample (Dist H20)
FXFR	Field Transfer Blank Sample
FTRS	Field Transport Blank Sample
FRXS	Field Reagent Sample
FRNS	Field Rinse Water Sample
FSPK	Field Spiked Sample
FDP1	Field Duplicate Sample #1
FDP2	Field Duplicate Sample #2
FSPL	Field Split Sample