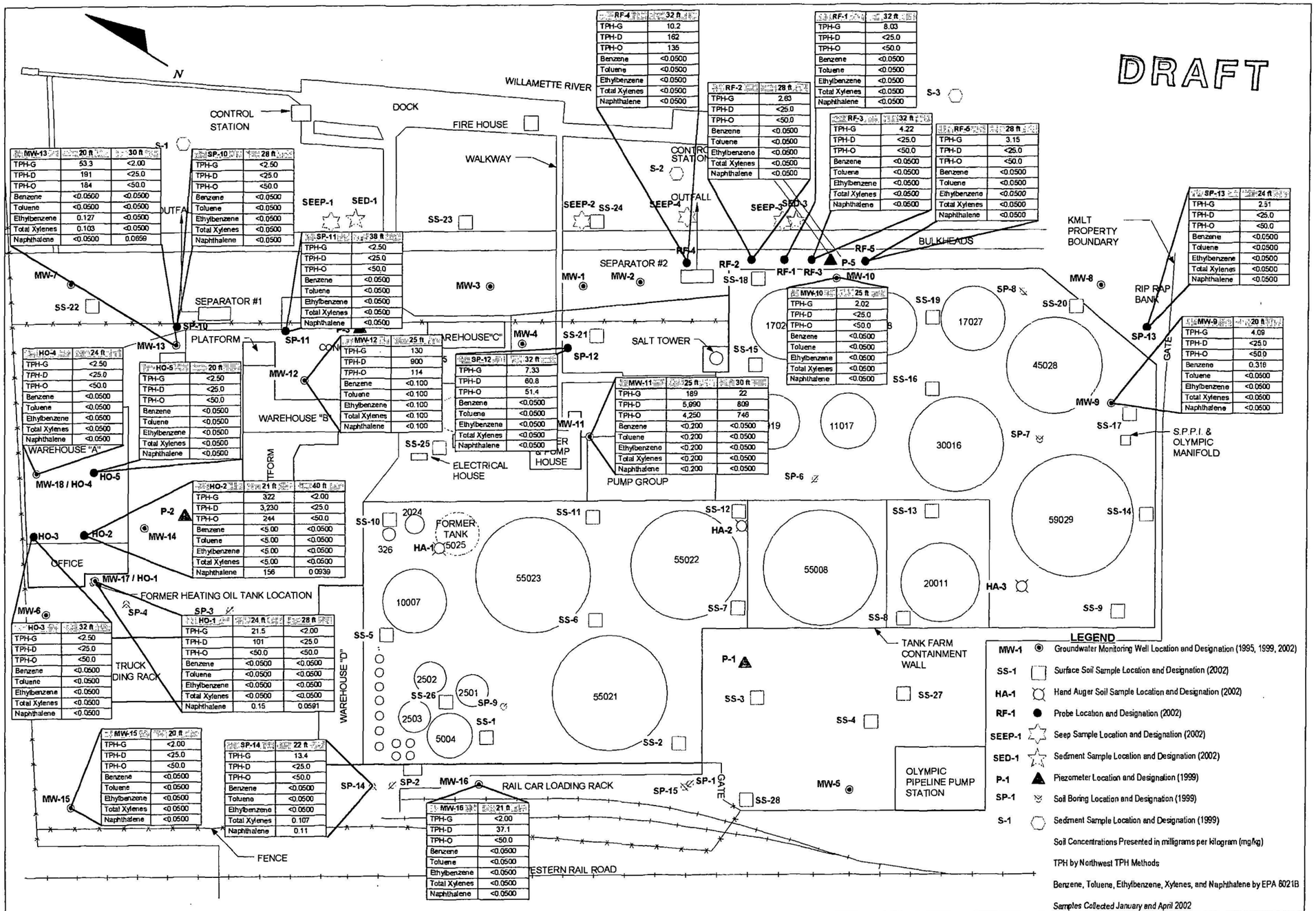
PORSF
11.3.18.1 V11



MW-13	20 ft	30 ft
TPH-G	53.3	<2.00
TPH-D	191	<25.0
TPH-O	184	<50.0
Benzene	<0.0500	<0.0500
Toluene	<0.0500	<0.0500
Ethylbenzene	0.127	<0.0500
Total Xylenes	0.103	<0.0500
Naphthalene	<0.0500	0.0659

SP-10	28 ft
TPH-G	<2.50
TPH-D	<25.0
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

SP-11	38 ft
TPH-G	<2.50
TPH-D	<25.0
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

HO-4	24 ft
TPH-G	<2.50
TPH-D	<25.0
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

HO-5	20 ft
TPH-G	<2.50
TPH-D	<25.0
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

MW-12	25 ft
TPH-G	130
TPH-D	900
TPH-O	114
Benzene	<0.100
Toluene	<0.100
Ethylbenzene	<0.100
Total Xylenes	<0.100
Naphthalene	<0.100

SP-12	32 ft
TPH-G	7.33
TPH-D	60.8
TPH-O	51.4
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

MW-11	25 ft	30 ft
TPH-G	189	22
TPH-D	5,990	809
TPH-O	4,250	746
Benzene	<0.200	<0.0500
Toluene	<0.200	<0.0500
Ethylbenzene	<0.200	<0.0500
Total Xylenes	<0.200	<0.0500
Naphthalene	<0.200	<0.0500

HO-2	21 ft	40 ft
TPH-G	322	<2.00
TPH-D	3,230	<25.0
TPH-O	244	<50.0
Benzene	<5.00	<0.0500
Toluene	<5.00	<0.0500
Ethylbenzene	<5.00	<0.0500
Total Xylenes	<5.00	<0.0500
Naphthalene	156	0.0939

HO-3	32 ft
TPH-G	<2.50
TPH-D	<25.0
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

HO-1	24 ft	28 ft
TPH-G	21.5	<2.00
TPH-D	101	<25.0
TPH-O	<50.0	<50.0
Benzene	<0.0500	<0.0500
Toluene	<0.0500	<0.0500
Ethylbenzene	<0.0500	<0.0500
Total Xylenes	<0.0500	<0.0500
Naphthalene	0.15	0.0591

MW-15	20 ft
TPH-G	<2.00
TPH-D	<25.0
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

SP-14	22 ft
TPH-G	13.4
TPH-D	<25.0
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	0.107
Naphthalene	0.11

MW-16	21 ft
TPH-G	<2.00
TPH-D	37.1
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

RF-4	32 ft
TPH-G	10.2
TPH-D	162
TPH-O	135
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

RF-2	28 ft
TPH-G	2.63
TPH-D	<25.0
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

RF-1	32 ft
TPH-G	8.03
TPH-D	<25.0
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

RF-3	32 ft
TPH-G	4.22
TPH-D	<25.0
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

RF-5	28 ft
TPH-G	3.15
TPH-D	<25.0
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

MW-10	25 ft
TPH-G	2.02
TPH-D	<25.0
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

SP-13	24 ft
TPH-G	2.31
TPH-D	<25.0
TPH-O	<50.0
Benzene	<0.0500
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

MW-9	20 ft
TPH-G	4.09
TPH-D	<25.0
TPH-O	<50.0
Benzene	0.318
Toluene	<0.0500
Ethylbenzene	<0.0500
Total Xylenes	<0.0500
Naphthalene	<0.0500

LEGEND

MW-1	Groundwater Monitoring Well Location and Designation (1995, 1999, 2002)
SS-1	Surface Soil Sample Location and Designation (2002)
HA-1	Hand Auger Soil Sample Location and Designation (2002)
RF-1	Probe Location and Designation (2002)
SEEP-1	Seep Sample Location and Designation (2002)
SED-1	Sediment Sample Location and Designation (2002)
P-1	Piezometer Location and Designation (1999)
SP-1	Soil Boring Location and Designation (1999)
S-1	Sediment Sample Location and Designation (1999)

Soil Concentrations Presented in milligrams per kilogram (mg/kg)

TPH by Northwest TPH Methods

Benzene, Toluene, Ethylbenzene, Xylenes, and Naphthalene by EPA 8021B

Samples Collected January and April 2002

KHM ENVIRONMENTAL MANAGEMENT INC.

DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY

SATURATED SOIL ANALYTICAL RESULTS - TPH, BTEX, AND NAPHTHALENE

Kinder Morgan Liquid Terminals LLC
Linnton Terminal
11400 NW St. Helens Road
Portland, Oregon

DATE 8/28/02 | PROJECT B30-01F | DRAWING 12

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