APPENDIX B

Remedial Design Technical Memorandum for Field Sampling Results (July 2006) Data, Figures, and Tables

TABLES

TABLE 1

Well Specifications
Cooper Drum Company Site, South Gate, California

Well Number	Date Installed	Total Depth (1)	Screen Interval (1)	TOC Elevation (2)	Ground Surface Elevation (2)	Diameter	Type (3)	Aquifer Zone
On-site Wells								
MW-1	8/9/90	84	52-84	102.83	103.72	4-inch	M	Gaspur
MW-2	8/8/90	82	50–82	104.59	104.7	4-inch	M	Gaspur
MW-3	8/10/90	73.5	52–73.5	103.98	104.2	4-inch	M	Gaspur
MW-4	9/9/91	82	50–82	102.91	103.3	4-inch	M	Gaspur
MW-5	5/28/92	75	30–75	103.42	104.17	4-inch	M	Perched/Gaspur
MW-21	10/22/03	75	55–75	103.63	104.06	4-inch	M	Gaspur
EW-1	3/29/99	90.5	48.5–88.5	103.24	103.65	6-inch	E	Gaspur
EW-2	12/6/00	87	38.5–78.5	103.65	104.08	6-inch	E	Gaspur
SVE-1	12/4/00	44	8–43	104.5	104.96	4-inch	E	Perched
SVE-2	2/27/04	52	8B48	NA	NA	4-inch	E	Perched
Off-site Wells								
MW-8	4/15/93	75	41–74.5	103.21	103.6	4-inch	M	Gaspur
MW-10	4/15/93	75	45–74.5	103.83	104	4-inch	M	Gaspur
MW-12	6/27/96	62	42–62	104.25	104.6	4-inch	M	Gaspur
MW-14	6/28/96	60	30–60	102.22	102.5	4-inch	M	Perched/Gaspur
M W-15	11/30/00	87	70–85	102.77	102.98	4-inch	M	Gaspur
MW-16	11/28/00	135	118–128	102.75	102.96	2-inch	M	Exposition
MW-17	11/30/00	80	69–79	103.36	103.65	4-inch	M	Gaspur
MW-18	11/29/00	135	118–128	103.42	103.64	2-inch	M	Exposition
MW-19	12/5/00	80	67–77	104.05	104.35	4-inch	M	Gaspur
MW-20	2/28/03	75	55–70	102.84	103.29	4-inch	M	Gaspur
MW-22	12/4/03	75	63–73	103.39	103.74	4-inch	M	Gaspur

TABLE 1 (continued)

Well Number	Date Installed	Total Depth (1)	Screen Interval (1)	TOC Elevation (2)	Ground Surface Elevation (2)	Diameter	Type (3)	Aquifer Zone
MW-23	12/5/03	81	69–79	104.15	104.38	4-inch	M	Gaspur
MW-24	12/1/03	87	70–85	101.99	102.34	4-inch	M	Gaspur
MW-25	12/3/03	92	75–90	101.79	102.12	4-inch	M	Gaspur
MW-26	12/10/03	134	122–132	101.94	102.20	2-inch	M	Exposition
MW-27	12/3/03	92	75–90	101.62	102.02	4-inch	M	Gaspur
MW-28	12/11/03	115	104–114	101.53	101.86	2-inch	M	Gaspur
MW-29	12/2/03	92	75–90	101.13	101.43	4-inch	M	Gaspur
MW-30	12/9/03	115	104–114	101.08	101.39	2-inch	M	Gaspur
MW-31	12/2/03	92	75–90	101.31	101.57	4-inch	M	Gaspur
MW-32	12/8/03	134	122–132	101.28	101.62	2-inch	M	Exposition

(1) feet below ground surface
(2) feet above mean sea level
(3) M-monitor; E-extraction
NA not available
TOC top of casing

TABLE 2

Contaminants of Concern and Cleanup Levels
Cooper Drum Company Site, South Gate, California

Medium	Contaminant of Concern	Cleanup Level	Basis for Clean up Level
Soil (VOCs)	1,1-Dichloroethane (1,1-DCA)	Leachate <MCL[a]	VLEACH modeling
	1,1-Dichloroethene (1,1-DCE)	Leachate <MCL	VLEACH modeling
	1,2-Dichloroethane (1,2-DCA)	Leachate <MCL	VLEACH modeling
	1,2-Dichloropropane (1,2-DCP)	Leachate <MCL	VLEACH modeling
	1,2,3-Trichloropropane (1,2,3-TCP)	Leachate <PQL	VLEACH modeling
	Benzene	Leachate <MCL	VLEACH modeling
	cis-1,2-Dichloroethene (cis-1,2-DCE)	Leachate <MCL	VLEACH modeling
	trans-1,2-Dichloroethene (trans-1,2-DCE)	Leachate <MCL	VLEACH modeling
	Tetrachloroethene (PCE)	Leachate <MCL	VLEACH modeling
	Trichloroethene (TCE)	Leachate <MCL	VLEACH modeling
	Vinyl chloride	Leachate <MCL	VLEACH modeling
Soil (nonVOCs)	Aroclor-1254	870 µg/kg	Human health hazard
	Aroclor-1260	870 µg/kg	Human health hazard
	B (a)P-TE [b] - Benzo(a)anthracene - Benzo(a)pyrene - Benzo(b)fluoranthene - Benzo(k)fluoranthene - Chrysene - Dibenz(a,h)anthracene - Indeno(1,2,3-cd)pyrene	900 µg/kg	Background
	Lead	400 mg/kg	Human health hazard
Groundwater (VOCs)	1,1-Dichloroethane (1,1-DCA)	5 µg/L	MCL
	1,1-Dichloroethene (1,1-DCE)	6 µg/L	MCL
	1,2-Dichloroethane (1,2-DCA)	0.5 µg/L	MCL
	1,2-Dichloropropane (1,2-DCP)	5 µg/L	MCL
	1,2,3-Trichloropropane (1,2,3-TCP)	1 µg/L	PQL [c]
	Benzene	1 µg/L	MCL
	cis-1,2-Dichloroethene (cis-1,2-DCE)	6 µg/L	MCL
	trans-1,2-Dichloroethene (trans-1,2-DCE)	10 µg/L	MCL
	Tetrachloroethene (PCE)	5 µg/L	MCL
	Trichloroethene (TCE)	5 µg/L	MCL
	Vinyl chloride	0.5 µg/L	MCL
Groundwater (non VOCs)	1,4-Dioxane	6.1 µg/L	PRG[d]

TABLE 2 (Continued)

µg/L	micrograms per liter
µg/kg	micrograms per kilogram
MCL	California primary maximum contaminant level
PQL	Practical quantification limit
AL	Action Level

[a] MCLs from Title 22 California Code of Regulation Section 64431 and 64444 unless otherwise specified.

[b] Based on upper tolerance limit (UTL) background Benzo(a)pyrene-toxicity equivalent (B(a)P-TE) concentration for southern California PAH data set.

[c] No MCL established for 1,2,3-trichloropropane. The PQL was identified as a remedial goal.

[d] No MCL established for 1,4-dioxane. The concentration for ingestion of drinking water only and does not account for potential dermal and inhalation exposure. EPA has established a screening criterial for preliminary remediation goals (PRG).

TABLE 3

Soil Gas Analytical Results – Former Hard Wash Area
May 2003 and January 2004
Cooper Drum Company Site, South Gate, California

Location	Depth (bgs)	Sample Date	Pre-Vacuum Reading (in/Hg)	Post-Vacuum Reading (in/Hg)	1,1,1-TCA	PCE	TCE	1,1-DCE	cis-1,2-DCE	Vinyl Chloride	1,1-DCA	1,2-DCA	Benzene	1,2-DCPA
SG-18	10.0	5/7/03	-30	-6	<0.5	113	46	2 J	2 J	3.2 J	12 J	<0.2	1 J	2 J
	20.0		-30	-5	<0.5	62	26	1 J	1 J	<0.5	3 J	< 0.2	1 J	1 J
	30.0		-30	-15	<0.8	76	30	<0.7	1 J	<0.7	4 J	<0.3	3 J	<1.0
SG-19	10.0	5/8/03	-30	-7	55 J	1,100 D	389 D	<9	<12	<9	1,154 D	<4	<11	<14
	10.0		-30	-7	56 J	1,320 D	463 D	<9	<12	<9	1,473 D	<4	<11	<13
	20.0		-30	-7	<10	205 D	80	<9	<12	<9	120	<4	<11	<14
	30.0		-30	-7	2 J	91	33	<0.4	<0.6	<0.5	71	<0.2	3 J	<0.7
SG-20	10.0	5/13/03	-29	-7	31 J	4,840	777	<21	30 J	<23	187	<11	<28	<32
	20.0		-29	-7	<11	2,640 J	1,295 J	45 J	98 J	38 J	466	<5	15 J	43 J
	27.0		-29	-5	<93	22,002	18,504	1,027	1,35 J3	1319	6,873	<42	200 J	1,009
SG-39	10.0	1/15/04	-29	-7	<4.9	3.3J	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	1.8J	<4.9
	20.0		-30	-7	<4.6	17	3.2J	<4.6	<4.6	<4.6	<4.6	<4.6	2.7J	<4.6
	30.0		-30	-7	<4.6	39	86	7.5	16	2.2J	3.1J	<4.6	2.8J	<4.6
SG-40	10.0	1/15/04	-30	-7	<4.6	12	<4.6	<4.6	<4.6	<4.6	<4.6	<4.6	2.2J	<4.6
	20.0		-30	-7	<4.4	3.2J	<4.4	<4.4	<4.4	<4.4	<4.4	<4.4	2J	<4.4
	30.0		-30	-7	<4.6	57	14	1J	<4.6	<4.6	<4.6	<4.6	2.4J	<4.6
SG-41	10.0	1/15/04	-30	-7	<4.5	32	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5	2.3J	<4.5
	20.0		-29	-7	<4.7	15	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	2.3J	<4.7
	30.0		-30	-7	<4.8	44	8.7	<4.8	<4.8	<4.8	<4.8	<4.8	2.4J	<4.8

TABLE 3 (Continued)

Index: Analytical results in parts per billion by volume
Diluted sample concentrations used in table

bgs	=	feet below ground surface
D	=	detection associated with sample dilution (TO-14)
in/Hg	=	inches of mercury
J	=	estimated value
DCA	=	dichloroethane
DCE	=	dichloroethene
DCPA	=	dichloropropane
PCE	=	tetrachloroethene
TCA	=	trichloroethane
TCE	=	trichloroethene

TABLE 4

Soil Gas Analytical Results – Drum Processing Area
May 2003 through March 2004
Cooper Drum Company Site, South Gate, California

Location	Depth (bgs)	Sample Date	Pre-Vacuum Reading (in/Hg)	Post-Vacuum Reading (in/Hg)	1,1,1-TCA	PCE	TCE	1,1-DCE	cis-1,2-DCE	Vinyl Chloride	1,1-DCA	1,2-DCA	Benzene	1,2-DCPA
SG-21	10.0	5/9/03	-30	-5	<10	587	241	<8	<11	<9	1,080	<4	<11	<13
	20.0		-30	-5	<47	2,347	2,776	276 J	155 J	1,086	10,800	<21	370	<64
	30.0		-30	-5	<0.5	29	15	<0.4	<0.6	0.8 J	23	<0.2	2 J	<0.6
SG-22	10.0	5/9/03	-30	-5	47 J	1,056	105	<9	<12	<9	442	<4	<11	<13
	10.0		-30	-5	44 J	1,056	98	<8	<11	<9	466	<4	<11	<13
	20.0		-30	-5	<47	2,200	2,220	165 J	105 J	299 J	12,028	<21	74 J	<62
	30.0		-30	-5	<46	352	833	80 J	<55	144 J	5,646	<21	59 J	<62
SG-23	13.0	5/12/03	-30	-5	5,285 J	86,539 J	14,433 J	<276	<376	<295	27,001	<137 UJ	<339 UJ	<408 J
	20.0		-30	-5	<255 UJ	17,601 J	22,205 J	2,105	451 J	2,134	44,183	<110 UJ	648 J	<344 J
	30.0		-30	-5	<255 UJ	6,454 J	15,913 J	2,406	526 J	2,367	41,728	<110 UJ	648 J	<344 J
SG-24*	12.5	5/12/03	-30	-5	<5	953	278	8 J	<6	7.7 J	204	<2	19 J	<7
	25.0		-30	-5	<5	220	146	12 J	9 J	54	589	<2	133 J	<7
SG-25*	12.5	5/8/03	-30	-5	<237	12,468	15,173	551 J	526 J	931 J	54,001	<108	1,511 J	<322
SG-26	10.0	5/12/03	-30	-5	<5	939	407	12 J	10 J	18.6 J	1,350	<2	<46 J	<7
	10.0		-30	-5	<5	909	426	12 J	11 J	17.5 J	1,448	<2	<43 J	<7
	20.0		-30	-5	<26	748	1,036 J	73 J	63 J	306	3,191	<11	555	<34
SG-27	10.0	5/8/03	-30	-5	<5	1,349	133	<5	<6	<5	61	<2	20 J	<7
	23.0		-30	-5	<10	587	389	22 J	17 J	62 J	810	<4	287	<14

TABLE 4 (Continued)

Location	Depth (bgs)	Sample Date	Pre-Vacuum Reading (in/Hg)	Post-Vacuum Reading (in/Hg)	1,1,1-TCA	PCE	TCE	1,1-DCE	cis-1,2-DCE	Vinyl Chloride	1,1-DCA	1,2-DCA	Benzene	1,2-DCPA
SG-28	10.0	5/8/03	-30	-6	<142	11,587	9,622	526 J	426 J	854 J	39,273	<64	1,388	<191
	20.0		-30	-7	<51	3,960	2,776	902	170 J	2,483	7,609	<23	1,511	<69
	30.0		-30	-6	<49	1,467	1,813	501	115 J	1,319	4,909	<22	864	<67
SG-29	10.0	5/8/03	-30	-6	<255	42,536	22,205	401 J	376 J	543 J	49,092	<115	987 J	<344
	20.0		-30	-5	<47	2,200	2,035	276 J	70 J	466	5,155	<21	370	<64
	30.0		-30	-15	<82	3,520	6,661	1,779	276 J	2,638	14,482	<37	1,234	<112
SG-30	10.0	1/14/04	-30	-7	1.3J	17	6.2	<4.5	<4.5	<4.5	9.6	<4.5	1.9J	<4.5
	20.0		-29.5	-7	6.3	87	78	5.3	3.7J	6.7	150	<4.5	6.1	<4.5
	30.0		-29.5	-7	12J	170	230	40	16J	53	510	<4.5	18J	<4.5
	30.0		-30	-7	<4.4	100	160	32	13J	43	340	<4.4	13J	<4.4
SG-31	10.0	1/14/04	-30	-7	1.7J	11	<4.6	<4.6	<4.6	<4.6	<4.6	<4.6	1.7J	<4.6
	20.0		-30	-7	1J	5.1	2.4J	<4.8	<4.8	<4.8	5.8	<4.8	2.7J	<4.8
	30.0		-30	-7	1J	4.1J	24	17	2.9J	14	24	<4.6	4.4J	<4.6
SG-32	10.0	1/14/04	-30	-7	4.4J	39	3.8J	<4.5	<4.5	<4.5	3.2J	<4.5	2.7J	<4.5
	20.0		-30	-7	1.2J	9.1	4.7	<4.4	<4.4	<4.4	9.6	<4.4	6.5	<4.4
	30.0		-30	-7	<4.5	1.8J	3.7J	2.7J	<4.5	2.1J	5.5	<4.5	3.5J	<4.5
SG-33	10.0	1/14/04	-30	-7	0.75J	13	<4.6	<4.6	<4.6	<4.6	<4.6	<4.6	2.2J	<4.6
	20.0		-30	-7	<4.7	1.7J	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	2.5J	<4.7
	30.0		-30	-7	<4.7	1J	6.3	2.2J	0.82J	0.84J	0.84J	<4.7	2.6J	<4.7
SG-34	10.0	1/14/04	-29.5	-6	1.5J	14	6.4	<4.2	<4.2	<4.2	2.7J	<4.2	4.1J	<4.2
	20.0		-29	-7	<4.3	1.7J	2.2J	<4.3	<4.3	<4.3	1.6J	<4.3	2.9J	<4.3
	20.0		-29	-7	<4.3	9	19	2.6J	5.2	4.4	27	<4.3	7	<4.3
	30.0		-29.5	-7	<4.3	27	260	160	34	200	280	<4.3	42	<4.3
SG-35	10.0	1/14/04	-30	-10	4.2J	36	3.2J	0.66J	<5.0	<5.0	0.95J	<5.0	5	<5.0
	20.0		-30	-7	<4.4	1.3J	1.6J	<4.4	<4.4	<4.4	0.66J	<4.4	3.2J	<4.4
	30.0		-30	-7	<4.5	1.6J	36	15	11	10	12	<4.5	4.3J	<4.5

TABLE 4 (Continued)

Location	Depth (bgs)	Sample Date	Pre-Vacuum Reading (in/Hg)	Post-Vacuum Reading (in/Hg)	1,1,1-TCA	PCE	TCE	1,1-DCE	cis-1,2-DCE	Vinyl Chloride	1,1-DCA	1,2-DCA	Benzene	1,2-DCPA
SG-36	10.0	1/15/04	-30	-7	<4.3	<4.3	<4.3	<4.3	<4.3	<4.3	<4.3	<4.3	5.7	<4.3
	20.0		-30	-7	<5.0	0.88J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	10	<5.0
	30.0		-29	-10	<4.4	<4.4	4.2J	3.7J	<4.4	1.8J	2.6J	<4.4	6.8	<4.4
SG-37	10.0	1/14/04	-30	-7	15	260E	35	<4.6	<4.6	<4.6	58	<4.6	1.4J	<4.6
	20.0		-30	-7	0.92J	24	29	1.9J	2.9J	2.1J	64	<4.6	3.6J	<4.6
	30.0		-30	-7	0.74J	13	12	0.89J	1.1J	0.87J	32	0.61J	3.2J	<4.5
SG-38	10.0	1/15/04	-30	-7	1.9J	51	5.1	<4.4	<4.4	<4.4	22	<4.4	3.6J	<4.4
	10.0		-29	-7	1J	31	3J	<4.4	<4.4	<4.4	12	<4.4	2.8J	<4.4
	20.0		-30	-7	<4.4	29	12	0.68J	<4.4	<4.4	79	<4.4	4.3J	<4.4
	30.0		-30	-7	<4.4	1.2J	<4.4	<4.4	<4.4	<4.4	4.7	<4.4	4.6	<4.4
SG-42	10.0	2/26/04	-30	-7	<21	17J	<21	<21	<21	<21	40	<21	<21	<21
	20.0		-30	-7	<23	35	30	<23	<23	<23	400	<23	15J	<23
	30.0		-30	-7	<9.8	140	61	<9.8	7.8J	26	100	<9.8	30	30
SVE-2	10 min.#	3/3/04	-30	-7	1,400	230,000	90,000	580J	7,800	600J	160,000	<1,000	630	<1,000
	30 min.#		-30	-7	3,600	180,000	79,000	1,200	17,000	1,100	130,000	<1,000	1,200	<1,000
	100 min.#		-30	-7	2,700	150,000	52,000	<2,100	9,500	<2,100	93,000	<2,100	<2,100	<2,100
	230 min.#		-30	-7	3,200	170,000	50,000	<1,200	10,000	<1,200	77,000	<1,200	<1,200	<1,200

Index: Analytical results in parts per billion by volume
Diluted sample concentrations used in table

*	=	angle boring
#	=	minutes after start of SVE test
bgs	=	feet below ground surface
DCA	=	dichloroethane
DCE	=	dichloroethene
DCPA	=	dichloropropane
E	=	estimated value
in/Hg	=	inches of mercury
J	=	estimated value
PCE	=	tetrachloroethene
SVE	=	soil vapor extraction
TCA	=	trichloroethane
TCE	=	trichloroethene

TABLE 5

Maximum Leachate Concentrations from VLEACH Modeling Cooper Drum Company Site, South Gate, California

	TCE	PCE	VC	1,2-DCE	1,1-DCA
MCL =	(5)	(5)	(0.5)	(6)	(5)
Location	**Former Hard Wash Area**				
SG-18	0.11	0.34	0	0	0.04
SG-19	0.26	0.41	0	0	0.93
SG-20	**159.64**	**105.43**	**3.00**	**23.00**	**95.45**
Location	**Drum Processing Area**				
SG-21	0.16	0.18	0	0	0.33
SG-22	**8.13**	2.13	0.33	0	**76.07**
SG-23	**148.28**	**33.89**	**5.54**	**9.60**	**613.23**
SG-24	0.62	0.52	0.07	0.08	4.08
SG-25	**76.03**	**43.75**	**0.70**	4.67	**187.46**
SG-26	4.46	1.79	0.02	0.53	**22.14**
SG-27	1.68	1.41	0.07	0.15	**5.63**
SG-28	**15.63**	**7.02**	**3.00**	1.97	**68.19**
SG-29	**57.47**	**16.87**	**5.98**	4.71	**201.12**
SG-30	2.14	0.90	0.12	0.28	**7.51**
SG-34	2.26	0.13	0.46	0.57	3.91
SG-37	0.12	0.07	0	0.0001	0.49
SG-42	0.84	0.60	0.05	1.17	1.35

Analytical results in micrograms per liter or parts per billion.
Bold type indicates a concentration above the MCL.
Diluted concentrations used in table.

MCL = maximum contaminant level
DCA = dichloroethane
DCE = dichloroethene
PCE = tetrachloroethene
TCE = trichloroethene
VC = vinyl chloride

TABLE 6

SVE-2 Test Data
Cooper Drum Company Site, South Gate, California

Well Name	SVE-2	VP-3 10 ft bgs	VP-3 20 ft bgs	VP-3 30 ft bgs	VP-4 10 ft bgs	VP-4 20 ft bgs	VP-4 30 ft bgs	
Distance from SVE (feet)	–	50	50	50	50	50	50	
Screen Interval (feet bgs)	8–48	9.5–10	19.5–20	29.5–30	9.5–10	19.5–20	29.5–30	
Flow rate (cfm)	Vacuum (in H_2O)	Vacuum (in H_2O)	Vacuum (in H_2O)	Vacuum (in H_2O)	Vacuum (in H_2O)	Vacuum (in H_2O)	Vacuum (in H_2O)	Elapsed Time
24.5	40	0.3–0.6	0.65–0.7	0.7–1.15	0.17–0.2	0.45–0.85	0.67–1.1	40 min.
45.8	80	0.6–1.3	0.7–1.5	1.15–2.9	0.2–0.5	0.85–1.62	1.1–2.7	105 min.
72.5	132	1.3–2.2	1.5–4.1	2.9–4.9	0.5–0.63*	1.62–4.13*	2.7–4.79	235 min.

Note- Vacuums at all vapor probes gradually increased through the test, with the exception of the VP-4-10 ft which stabilized after 120 minutes.

Vapor samples collected from SVE-1 at 10, 30, 100, and 230 minutes (shutdown).

bgs below ground surface
cfm cubic feet per minute
ft feet
in H_2O inches of water
SVE Soil Vapor Extraction
VP vapor point
* changed gauge

TABLE 7

Soil Analytical Results – Former Hard Wash Area
SVOCs/Lead
May 2003
Cooper Drum Company Site, South Gate, California

Location	Depth (bgs)	Sample No.	benzo-(a)pyrene	benzo-(b)fluoranthene	dibenzo-(a,h)anthracene	benzo-(a)anthracene	benzo-(k)fluoranthene	chrysene	indeno(1,2,3-cd)-pyrene	Lead (mg/kg)	Other SVOCs Detected (µg/kg)	Calculated PAH Cleanup Level (µg/kg)
SB-18	1.0	Y0WA3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4.0	Y0WA4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5.0	Y0WA5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10.0	Y0WA6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-19	1.0	Y0WA7	<340	<340	<340	<340	<340	<340	<340	NA	None	598
	5.0	Y0WA8	<400	<400	<400	<400	<400	<400	<400	NA	None	704
	10.0	Y0WA9	<400	<400	<400	<400	<400	<400	<400	NA	None	704
SB-20	1.0	Y0WB0	<14,000	<14,000	<14,000	<14,000	<14,000	<14,000	<14,000	NA	None	24,640
	5.0	Y0WB1	<410	<410	<410	<410	<410	<410	<410	NA	None	722
	10.0	Y0WB2	<380	<380	<380	<380	<380	<380	<380	NA	None	669

TABLE 7 (Continued)

Location	Depth (bgs)	Sample No.	benzo-(a)pyrene	benzo-(b)fluoranthene	dibenzo-(a,h)anthracene	benzo-(a)anthracene	benzo-(k)fluoranthene	chrysene	indeno(1,2,3-cd)-pyrene	Lead (mg/kg)	Other SVOCs Detected (µg/kg)	Calculated PAH Cleanup Level (µg/kg)
SB-21	1.5	Y0WB3/ MY0WB3	<380	<380	<380	<380	<380	<380	<380	2.5	None	669
	5.0	Y0WB4/ MY0WB4	<390	<390	<390	<390	<390	<390	<390	5.8	None	686
	10.0	Y0WB5/ MY0WB5	<380	<380	<380	<380	<380	<380	<380	2.8	benzaldehyde (58J), 2-methylphenol (150J), acetophenone (72J), 4-methylphenol (51J), 2,4-dimethylphenol (57J), naphthalene (78J), 2-methylnaphthalene (110J), 1,1'-biphenyl (250J), pyrene (42J)	669
	10.5	Y0WB6/ MY0WB6	<360	<360	<360	<360	<360	<360	<360	3.3	None	634

TABLE 7 (Continued)

Location	Depth (bgs)	Sample No.	benzo-(a)pyrene	benzo-(b)fluoranthene	dibenzo-(a,h)anthracene	benzo-(a)anthracene	benzo-(k)fluoranthene	chrysene	indeno(1,2,3-cd)-pyrene	Lead (mg/kg)	Other SVOCs Detected (µg/kg)	Calculated PAH Cleanup Level (µg/kg)
SB-22	1.0	Y0WB7/ MY0WB7	NA	NA	NA	NA	NA	NA	NA	3.5	NA	NA
	5.0	Y0WB8/ MY0WB8	NA	NA	NA	NA	NA	NA	NA	2.7	NA	NA
	10.0	Y0WB9/ MY0WB9	NA	NA	NA	NA	NA	NA	NA	3.1	NA	NA
SB-23	1.0	Y0WC0/ MY0WC0	NA	NA	NA	NA	NA	NA	NA	2.4	NA	NA
	5.0	Y0WC1/ MY0WC1	NA	NA	NA	NA	NA	NA	NA	2.9	NA	NA
	10.0	Y0WC2/ MY0WC2	NA	NA	NA	NA	NA	NA	NA	6.1	NA	NA
SB-32	10.0	Y0WA1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15.0	Y0WA2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Index: Analytical results in micrograms per kilogram (µg/kg) or parts per billion except for lead (milligrams per kilogram [mg/kg] or parts per million).

bgs = feet below ground surface
NA = not analyzed
PAH = polycyclic aromatic hydrocarbon
SVOC = semivolatile organic compound

* PAH cleanup level for soil is based on the upper tolerance limit background benzo(a)pyrene-toxicity equivalent of 900 µg/kg.

note: elevated detection limits
Calculated using elevated detection limits.

TABLE 8

Soil Analytical Results – Former Hard Wash Area
SVOCs/1,4-Dioxane
March 2006
Cooper Drum Company Site, South Gate, California

Location	Depth (bgs)	Sample No.	benzo-(a)pyrene	benzo-(b)fluoranthene	dibenzo-(a,h)anthracene	benzo-(a)anthracene	benzo-(k)fluoranthene	chrysene	indeno(1,2,3-cd)-pyrene	1,4-Dioxane	Other SVOCs detected (µg/kg)
SB-34	10.0	SB-34 10'	<36	<36	<36	<36	<36	<36	<36	390	6 compounds, 2 unknowns
	20.0	SB-34 20'	<43	<43	<43	<43	<43	<43	<43	1200	13 compounds
	30.0	SB-34 30'	<42	<42	<42	<42	<42	<42	<42	960	2 compounds, 1 unknown
SB-35	10.0	SB-35 10'	<210	<210	<210	<210	<210	<210	<210	<210	17 compounds, 6 unknown alkanes
	20.0	SB-35 20'	<38	<38	<38	<38	<38	<38	<38	810	12 compounds, 6 unknowns
	30.0	SB-35 30'	<42	<42	<42	<42	<42	<42	<42	2200	11compounds, 4 unkowns
SB-36	10.0	SB-36 10'	<36	<36	<36	<36	<36	<36	<36	140	15 compounds, 2 unknowns
	20.0	SB-36 20'	<40	<40	<40	<40	<40	<40	<40	720	9 compounds, 7 unknowns
	30.0	SB-36 30'	<41	<41	<41	<41	<41	<41	<41	1400	11 compounds, 5 unknowns

Index: Analytical results in micrograms per kilogram (µg/kg) or parts per billion.

SVOC = semivolatile organic compound

bgs = feet below ground surface

Preliminary Remediation Goals (PRGs) for 1,4, Dioxane 44,000 µg/kg (residential)

All other SVOCs detected were less than PRGs (residential). Results for these SVOCs are available at the Records Center at EPA Region 9 in San Francisco

TABLE 9

Soil Analytical Results – Former Hard Wash Area
PCBs/Pesticides
May 2003
Cooper Drum Company Site, South Gate, California

Location	Depth (bgs)	Sample No.	Aroclor-1254	Aroclor-1260	Other PCBs/Pesticides detected (µg/kg)
SB-18	1.0	Y0WA3	<350	<350	4,4'-DDT (80)
	4.0	Y0WA4	<38	<38	None
	5.0	Y0WA5	<40	<40	None
	10.0	Y0WA6	<40	<40	None
SB-19	1.0	Y0WA7	<33	<33	None
	5.0	Y0WA8	<41	<41	None
	10.0	Y0WA9	<40	<40	None
SB-20	1.0	Y0WB0	2500D	890D	aldrin (73D), gamma-Chlordane (51NJ D)
	5.0	Y0WB1	<41	<41	None
	10.0	Y0WB2	<38	<38	None
SB-21	1.5	Y0WB3	<38	<38	None
	5.0	Y0WB4	<39	<39	None
	10.0	Y0WB5	31J	31J	None
	10.5	Y0WB6	<36	<36	None
SB-22	1.0	Y0WB7	<38	<38	None
	5.0	Y0WB8	<40	<40	None
	10.0	Y0WB9	<36	<36	None
SB-23	1.0	Y0WC0	46	<37	None
	5.0	Y0WC1	<38	<38	None
	10.0	Y0WC2	<42	<42	None
SB-32	10.0	Y0WA1	82	<40	None
	15.0	Y0WA2	<36	<36	None

Index: Analytical results in micrograms per kilogram (µg/kg) or parts per billion.
bgs = feet below ground surface
D = detection associated with sample dilution (ILM5)
J = value less than contract-required quantitation limit (CRQL), but greater than or equal to MDL (ILM5)
NJ = nalyte is considered presumptively identified at an estimated concentration

TABLE 10

Soil Analytical Results – Drum Processing Area
SVOCs/Lead
May 2003
Cooper Drum Company Site, South Gate, California

Location	Depth (bgs)	Sample No.	benzo (a) pyrene	benzo (b) fluoranthene	dibenzo (a,h) anthracene	benzo (a) anthracene	benzo (k) fluoranthene	chrysene	indeno (1,2,3-cd)-pyrene	Lead (mg/kg)	Other SVOCs Detected (µg/kg)	Calculated PAH Cleanup Level (µg/kg)
SB-24	0.5	Y0WC3	450	530	120J	250J	440	390	340J	NA	Benzaldehyde (62J), acetophenone (150J), phenanthrene (86J), fluoranthene (260J), pyrene (310J), benzo(g,h,i)perylene (250J)	652
	5.0	Y0WC4	<370	<370	<370	<370	<370	<370	<370	NA	None	651
	10.0	Y0WC5	<350	<350	<350	<350	<350	<350	<350	NA	None	616
SB-25	0.5	Y0WC6	<330	<330	<330	<330	<330	<330	<330	NA	None	581
	1.0	Y0WC7	560	440	200J	420	570	670	420	NA	Phenanthrene (250J), anthracene (47J), fluoranthene (510), pyrene (530), benzo(g,h,i)perylene (310J)	822
	5.0	Y0WC8	880	660J	310J	560J	780	920	470J	NA	Phenanthrene (180J), fluoranthene (420J), pyrene (460J)	1,255
	10.0	Y0WC9	<380	<380	<380	<380	<380	<380	<380	NA	None	669

TABLE 10 (Continued)

Location	Depth (bgs)	Sample No.	benzo (a) pyrene	benzo (b) fluoranthene	dibenzo (a,h) anthracene	benzo (a) anthracene	benzo (k) fluoranthene	chrysene	indeno (1,2,3-cd)-pyrene	Lead (mg/kg)	Other SVOCs Detected (µg/kg)	Calculated PAH Cleanup Level (µg/kg)
SB-26	0.5	Y0WD0	1,300	1,000	280J	920	1,200	1400	700	NA	Benzaldehyde (56J), acetophenone (140J), naphthalene (45J), acenaphthene (51J), fluorene (36J), phenanthrene (510), anthracene (150J), carbazole (46J), fluoranthene (1100), pyrene (1600), benzo(g,h,i)perylene (570)	1,794
	5.0	Y0WD1	<370	<370	<370	<370	<370	60J	<370	NA	Acetophenone (76J), phenanthrene (92J), fluoranthene (120J), pyrene (130J)	648
	10.0	Y0WD2	<380	<380	<380	<380	<380	<380	<380	NA	Benzaldehyde (67J), acetophenone (270J)	669
SB-27	0.5	MY0WD3	NA	NA	NA	NA	NA	NA	NA	19.6	NA	NA
	5.0	MY0WD4	NA	NA	NA	NA	NA	NA	NA	2,090	NA	NA
	10.0	MY0WD5	NA	NA	NA	NA	NA	NA	NA	536	NA	NA
	15.0	MY0WD6	NA	NA	NA	NA	NA	NA	NA	168	NA	NA
	15.5	MY0WD7	NA	NA	NA	NA	NA	NA	NA	368	NA	NA

TABLE 10 (Continued)

Location	Depth (bgs)	Sample No.	benzo (a) pyrene	benzo (b) fluoranthene	dibenzo (a,h) anthracene	benzo (a) anthracene	benzo (k) fluoranthene	chrysene	indeno (1,2,3-cd)-pyrene	Lead (mg/kg)	Other SVOCs Detected (µg/kg)	Calculated PAH Cleanup Level (µg/kg)
SB-28	0.5	Y0WD8/ MY0WD8	<360	<360	<360	<360	<360	<360	<360	3.2	None	634
	5.0	Y0WD9/ MY0WD9	<380	<380	<380	<380	<380	<380	<380	2.3	None	669
	12.0	Y0WE0/ MY0WE0	<1100	<1100	<1100	<1100	<1100	<1100	<1100	105	Phenol (1300), 2-methylphenol (660J), acetophenone (440J), 4-methylphenol (760J)	1,936[1]
	15.0	Y0WE1/ MY0WE1	<380	<380	<380	<380	<380	<380	<380	15.4	Phenol (830), 2-methylphenol (320J), acetophenone (84J), 4-methylphenol (520), isophorone (78J), 2,4-dimethylphenol (47J), phenanthrene (50J), fluoranthene (52J), pyrene (50J)	669
SB-29	0.5	Y0WE2/ MY0WE2	<350	<350	<350	<350	<350	<350	<350	2.2	None	616
	5.0	Y0WE3/ MY0WE3	<380	<380	<380	<380	<380	<380	<380	2.2	None	669
	10.0	Y0WE4/ MY0WE4	<390	<390	<390	<390	<390	<390	<390	20.1	Benzaldehyde (100J), phenol (1400), 2-methylphenol (540), acetophenone (50J), 4-methylphenol (520)	686
	17.0	Y0WE5/ MY0WE5	<1000	<1000	<1000	<1000	<1000	<1000	<1000	215	phenol (610J), 2-methylphenol (290J), 4-methylphenol (260J)	1,760[1]

TABLE 10 (Continued)

Location	Depth (bgs)	Sample No.	benzo (a) pyrene	benzo (b) fluoranthene	dibenzo (a,h) anthracene	benzo (a) anthracene	benzo (k) fluoranthene	chrysene	indeno (1,2,3-cd)-pyrene	Lead (mg/kg)	Other SVOCs Detected (µg/kg)	Calculated PAH Cleanup Level (µg/kg)
SB-30	1.0	Y0WE6/ MY0WE6	760	650J	280J	540J	720	820	390J	233	Phenol (170J), acetophenone (110J), 4-methylphenol (760), naphthalene (130J), 2-methylnaphthalene (310J), phenanthrene (370J), anthracene (89J), fluoranthene (720), pyrene (910)	1,096
	4.0	Y0WE7/ MY0WE7	630J	530J	<3500	550J	600J	850J	<3500	38.9	Phenanthrene (570J), fluoranthene (830J), pyrene (950J)	2,382
SB-30	8.0	Y0WE8/ MY0WE8	510	380	140J	370J	580	630	360J	34.4	Benzaldehyde (250J), phenol (1100), 2-methylphenol (480), acetophenone (370J), 4-methylphenol (620), isophorone (45J), 2,4-dimethylphenol (53J), naphthalene (49J), 2-methylnaphthalene (55J), phenanthrene (200J), anthracene (41J), fluoranthene (480), pyrene (680), benzo(g,h,i)perylene (360J)	734
	10.0	Y0WE9/ MY0WE9	<340	<340	<340	<340	<340	<340	<340	8.1	Benzaldehyde (51J), phenol (450), 2-methylphenol (240J), 4-methylphenol (210J)	598

TABLE 10 (Continued)

Location	Depth (bgs)	Sample No.	benzo (a) pyrene	benzo (b) fluoranthene	dibenzo (a,h) anthracene	benzo (a) anthracene	benzo (k) fluoranthene	chrysene	indeno (1,2,3-cd)-pyrene	Lead (mg/kg)	Other SVOCs Detected (µg/kg)	Calculated PAH Cleanup Level (µg/kg)
SB-30	15.0	Y0WF0/ MY0WF0	<390	<390	<390	<390	<390	<390	<390	6.7	Benzaldehyde (71J), phenol (1500), 2-methylphenol (850), acetophenone (56J), 4-methylphenol (720), isophorone (40J), 2,4-dimethylphenol (76J), pentachorophenol (290J)	686
SB-31	0.5	Y0WF1/ MY0WF1	1100	1200	300J	700	1200	1200	810	319	Phenanthrene (220J), anthracene (42J), fluoranthene (770), pyrene (980), benzo(g,h,i)perylene (680)	1,608
	5.0	Y0WF2/ MY0WF2	2200J	1400J	<3800	2900J	2300J	2300J	670J	4.3	Phenol (5600), 4-methylphenol (400J), naphthalene (450J), 2-methylnaphthalene (560J), acenaphthene (1700J), dibenzofuran (1000J), fluorene (1800J), phenanthrene (9800), anthracene (2600J), fluoranthene (7800), pyrene (9400), benzo(g,h,i)perylene (530J)	2,950
	10.0	Y0WF3/ MY0WF3	<860	<860	<860	<860	<860	<860	<860	4.3	Phenol (1800), 2-methylphenol (1000), 4-methylphenol (980), isophorone (120J), 2,4-dimethylphenol (210J), phenanthrene (150J)	1,514[1]

TABLE 10 (Continued)

Location	Depth (bgs)	Sample No.	benzo (a) pyrene	benzo (b) fluoranthene	dibenzo (a,h) anthracene	benzo (a) anthracene	benzo (k) fluoranthene	chrysene	indeno (1,2,3-cd)-pyrene	Lead (mg/kg)	Other SVOCs Detected (µg/kg)	Calculated PAH Cleanup Level (µg/kg)
SB-31	15.0	Y0WF4/ MY0WF4	460	280J	52J	460	440	620	210J	15.3	phenol (680), 2-methylphenol (220J), acetophenone (39J), 4-methylphenol (290J), 2,4-dimethylphenol (70J), acenaphthene (100J), dibenzofuran (76J), fluorene (150J), phenanthrene (900), anthracene (290J), carbazole (57J), fluoranthene (880), pyrene (1000), benzo(g,h,i)perylene (150J)	623

Index: Analytical results in micrograms per kilogram (ug/kg) or parts per billion except for lead (milligrams per kilogram [mg/kg] or parts per million).

bgs = feet below ground surface
J = value less than CRQL, but greater than or equal to MDL (ILM5)
NA = not analyzed
PAH = polycyclic aromatic hydrocarbon
SVOC = semivolatile organic compound
* PAH cleanup level for soil is based on the upper tolerance limit background benzo(a)pyrene-toxicity equivalent of 900 ug/kg.
[1]Calculated using elevated detection limits.

TABLE 11

Soil Analytical Results – Drum Processing Area
VOCs
May 2003
Cooper Drum Company Site, South Gate, California

Location	Depth (bgs)	Sample No.	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA	Benzene	1,2-DCPA	Other VOCs detected
SB-24	0.5	Y0WC3	7J	<26	<26	<26	<26	<26	<26	<26	<26	<26	Cyclohexane (3)
	5.0	Y0WC4	<14	<14	<14	<14	<14	<14	<14	<14	<14	<14	None
	10.0	Y0WC5	2J	<10	<10	<10	<10	<10	<10	<10	<10	<10	None
SB-25	0.5	Y0WC6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1.0*	Y0WC7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5.0	Y0WC8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10.0	Y0WC9	<11	<11	<11	<11	<11	<11	<11	<11	<11	<11	None
SB-26	0.5	Y0WD0	6J	<13	<13	<13	<13	<13	<13	<13	<13	<13	None
	5.0	Y0WD1	1J	<13	<13	<13	<13	<13	<13	<13	<13	<13	None
	10.0	Y0WD2	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	None
SB-28	0.5	Y0WD8	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	None
	5.0	Y0WD9	<10	<10	<10	<10	<10	<10	1J	<10	<10	<10	None
	12.0	Y0WE0	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	<2,000	None
	15.0	Y0WE1	130J	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	Toluene (130)
SB-29	0.5	Y0WE2	4J	<12	<12	<12	<12	<12	<12	<12	<12	<12	Acetone (16B)
	5.0	Y0WE3	<13	<13	<13	<13	<13	<13	<13	<13	<13	<13	Methylene chloride (25B)
	10.0	Y0WE4	160J	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	Ethylbenzene (58)
	17.0	Y0WE5	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	None

TABLE 11 (Continued)

Location	Depth (bgs)	Sample No.	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA	Benzene	1,2-DCPA	Other VOCs detected
SB-30	1.0	Y0WE6	<14	<14	7J	<14	<14	<14	2J	<14	<14	<14	Carbon disulfide (2J), 2-butanone (12J), 1,2-dichlorobenzene (2J)
	4.0	Y0WE7	150	51	24	<13	2J	<13	34	<13	<13	<13	Methylcyclohexane (2J), toluene (4J), xylenes (3J), 1,2-dichlorobenzene (3J)
	8.0	Y0WE8	470J	<2,200	<2,200	<2,200	<2,200	<2,200	<2,200	<2,200	<2,200	<2,200	Acetone (3800)
	10.0	Y0WE9	530J	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	Acetone (3700), toluene (140J), xylenes (230J)
	15.0	Y0WF0	200J	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	Acetone (2500), toluene (110J), xylenes (120J)
SB-31	0.5	Y0WF1	2J	14	23	<14	<14	<14	18	<14	<14	<14	Chloromethane (4J), acetone (160), 2-butanone (29), cyclohexane (4J), methylcyclohexane (3J), toluene (6J), ethylbenzene (2J), xylenes (10J)
	5.0	Y0WF2	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	<1,300	Acetone (1100J), xylenes (380J)
	10.0	Y0WF3	<1,400	<1,400	<1,400	<1,400	<1,400	<1,400	<1,400	<1,400	<1,400	<1,400	Acetone (1200J)
	15.0	Y0WF4	480J	690J	<2,000	<2,000	<2,000	<2,000	480J	<2,000	<2,000	<2,000	Acetone (1800J), methylcyclohexane (390J), toluene (1600J), ethylbenzene (380J), xylenes (1700J)

TABLE 11 (Continued)

Index: Analytical results in micrograms per kilogram (ug/kg) or parts per billion.

B	=	analyte found in associated method blank as well as in sample
bgs	=	feet below ground surface
DCA	=	dichloroethane
DCE	=	dichloroethene
DCPA	=	dichloropropane
J	=	estimated value
NA	=	not analyzed (soil too tight for En Core samplers to penetrate)
PCE	=	tetrachloroethene
TCE	=	trichloroethene
VC	=	vinyl chloride
VOC	=	volatile organic compound

TABLE 12

Groundwater Surface Elevation 1998 - 2005
Cooper Drum Company Site, South Gate, California

Well Number	Date Measured	Depth to Groundwater (1)	TOC Elevation (2)	Groundwater Surface Elevation (2)	Aquifer Zone
On-site Wells					
MW-1	11/4/98	40.20	102.83	62.63	Gaspur
	4/7/99	40.52		62.31	
	8/5/99	40.64		62.19	
	10/10/00	42.81		60.02	
	12/14/00	42.97		59.86	
	2/8/01	42.47		60.36	
	5/1/03	44.74		58.09	
	12/18/03	45.58		57.25	
	4/16/04	NM			
	8/27/04	NM			
	12/22/04	46.65		56.18	
	4/20/05	46.04		56.79	
	6/6/06	44.12		58.71	
MW-2	11/4/98	43.82	104.59	60.77	Gaspur
	4/7/99	44.35		60.24	
	8/5/99	44.52		60.07	
	10/10/00	46.95		57.64	
	12/14/00	46.95		57.64	
	2/8/01	46.43		58.16	
	5/1/03	49.05		55.54	
	12/18/03	49.60		54.99	
	4/16/04	50.02		54.57	
	8/27/04	50.64		53.95	
	12/22/04	51.14		53.45	
	4/20/05	50.54		54.05	
	6/6/06	48.79		55.80	
MW-3	11/4/98	41.30	103.98	62.68	Gaspur
	4/7/99	41.58		62.40	
	8/5/99	NM		NM	
	10/10/00	43.82		60.16	
	12/14/00	44.00		59.98	
	2/8/01	43.45		60.53	
	5/1/03	45.97		55.11	
	12/18/03	46.66		57.32	
	4/16/04	46.91		57.07	
	8/27/04	47.41		56.57	

TABLE 12 (Continued)

Well Number	Date Measured	Depth to Groundwater (1)	TOC Elevation (2)	Groundwater Surface Elevation (2)	Aquifer Zone
On-site Wells					
MW-3 (cont'd)	12/22/04	48.36		55.62	
	4/20/05	47.39		56.59	
	6/6/06	45.93		58.05	
MW-4	11/4/98	42.06	102.91	60.85	Gaspur
	4/7/99	42.60		60.31	
	8/5/99	42.88		60.03	
	10/10/00	45.40		57.51	
	12/14/00	45.32		57.59	
	2/8/01	44.70		58.21	
	5/1/03	47.38		55.53	
	12/18/03	48.17		54.74	
	4/16/04	48.45		54.46	
	8/27/04	48.97		53.94	
	12/22/04	49.44		53.47	
	4/20/05	48.88		54.03	
	6/6/06	NM			
MW-5	11/4/98	36.88	103.42	66.54	Perched/Gaspur
	4/6/99	35.52		67.90	
	8/5/99	34.41		69.01	
	10/10/00	34.55		68.87	
	12/14/00	34.75		68.67	
	2/8/01	34.63		68.79	
	5/1/03	35.67		67.75	
	12/18/03	36.01		67.41	
	4/16/04	36.31		67.11	
	8/27/04	36.52		66.90	
	12/22/04	36.80		66.62	
	4/20/05	36.70		66.72	
	6/6/06	35.44		67.98	
MW-21	12/18/03	48.85	103.63	54.78	Gaspur
	4/16/04	49.19		54.44	
	8/27/04	49.75		53.88	
	12/22/04	50.32		53.31	
	4/20/05	49.67		53.96	
	6/6/06	47.64		55.99	

TABLE 12 (Continued)

Well Number	Date Measured	Depth to Groundwater (1)	TOC Elevation (2)	Groundwater Surface Elevation (2)	Aquifer Zone
On-site Wells					
EW-1	4/7/99	42.84	103.24	60.40	Gaspur
	8/5/99	43.15		60.09	
	10/10/00	45.60		57.64	
	12/14/00	45.65		57.59	
	2/8/01	45.09		58.15	
	5/1/03	47.76		55.48	
	12/18/03	48.45		54.79	
	4/16/04	48.78		54.46	
	8/27/04	49.36		53.88	
	12/22/04	49.91		53.33	
	4/20/05	49.32		53.92	
	6/6/06	47.42		55.82	
EW-2	12/14/00	45.88	103.65	57.77	Gaspur
	2/8/01	45.45		58.20	
	5/1/03	47.98		55.67	
	12/18/03	48.71		54.94	
	4/16/04	49.08		54.57	
	8/27/04	49.65		54.00	
	12/22/04	50.20		53.45	
	4/20/05	49.57		54.08	
	6/6/06	47.54		56.11	
SVE-1	12/14/00	35.27	104.50	69.23	Perched
	2/8/01	35.17		69.33	
	5/1/03	NM			
	12/18/03	36.48		68.02	
	12/22/04	37.10		67.40	
	4/20/05	36.87		67.63	
	6/6/06	36.01		68.49	
Off-site Wells					
MW-8	11/15/98	42.02	103.21	61.19	Gaspur
	10/10/00	45.23		57.98	
	12/14/00	45.30		57.91	
	2/8/01	44.67		58.54	
	5/1/03	47.52		55.69	
	12/18/03	48.25		54.96	
	4/16/04	48.62		54.59	
	8/27/04	45.59		57.62	
	12/22/04	49.80		53.41	
	4/20/05	49.18		54.03	
	6/6/06	47.15		56.06	

TABLE 12 (Continued)

Well Number	Date Measured	Depth to Groundwater (1)	TOC Elevation (2)	Groundwater Surface Elevation (2)	Aquifer Zone
Off-site Wells					
MW-10	11/5/98	42.98	103.83	60.85	Gaspur
	4/7/99	43.60		60.23	
	10/10/00	46.32		57.51	
	12/14/00	46.37		57.46	
	2/8/01	45.80		58.03	
	5/1/03	48.43		55.40	
	12/18/03	49.23		54.60	
	4/16/04	49.51		54.32	
	8/27/04	50.11		53.72	
	12/22/04	50.66		53.17	
	4/20/05	50.08		53.75	
	6/6/06	48.19		55.64	
MW-12	11/5/98	43.10	104.25	61.15	Gaspur
	10/10/00	46.30		57.95	
	12/14/00	NM			
	2/8/01	NM			
	5/1/03	48.58		55.67	
	12/18/03	NM			
	4/16/04	49.67		54.58	
	8/27/04	50.25		54.00	
	12/22/04	50.81		53.44	
	4/20/05	50.22		54.03	
	6/6/06	48.35		55.90	
MW-14	11/5/98	33.90	102.22	68.32	Perched/Gaspur
	10/11/00	34.70		67.52	
	12/14/00	NM			
	2/8/01	NM			
	5/1/03	NM			
	4/16/04	40.78		61.44	
	8/27/04	43.17		59.05	
	12/18/03	42.17		60.05	
	12/22/04	43.49		58.73	
	4/20/05	34.74		67.48	
	6/6/06	34.48		67.74	

TABLE 12 (Continued)

Well Number	Date Measured	Depth to Groundwater (1)	TOC Elevation (2)	Groundwater Surface Elevation (2)	Aquifer Zone
Off-site Wells					
MW-15	12/14/00	45.60	102.77	57.17	Gaspur
	2/8/01	45.03		57.74	
	5/1/03	47.66		55.11	
	12/18/03	48.41		54.36	
	4/16/04	48.69		54.08	
	8/27/04	49.24		53.53	
	12/22/04	49.79		52.98	
	4/20/05	49.11		53.66	
	6/6/06	47.34		55.43	
MW-16	12/14/00	48.49	102.75	54.26	Exposition
	2/8/01	47.90		54.85	
	5/1/03	50.95		51.80	
	12/18/03	51.76		50.99	
	4/16/04	52.13		50.62	
	8/27/04	52.80		49.95	
	12/22/04	53.33		49.42	
	4/20/05	52.84		49.91	
	6/6/06	50.81		51.94	
MW-17	12/14/00	45.74	103.36	57.62	Gaspur
	2/8/01	45.19		58.17	
	5/1/03	47.89		55.47	
	12/18/03	48.61		54.75	
	4/16/04	48.85		54.51	
	8/27/04	49.46		53.90	
	12/22/04	50.02		53.34	
	4/20/05	49.40		53.96	
	6/6/06	47.61		55.75	
MW-18	12/14/00	50.36	103.42	53.06	Exposition
	2/8/01	49.79		53.63	
	5/1/03	52.97		50.45	
	12/18/03	53.83		49.59	
	4/16/04	54.24		49.18	
	8/27/04	55.00		48.42	
	12/22/04	55.56		47.86	
	4/20/05	55.23		48.19	
	6/6/06	NM			

TABLE 12 (Continued)

Well Number	Date Measured	Depth to Groundwater (1)	TOC Elevation (2)	Groundwater Surface Elevation (2)	Aquifer Zone
Off-site Wells					
MW-19	12/14/00	45.91	104.05	58.14	Gaspur
	2/8/01	45.39		58.66	
	5/1/03	48.10		55.95	
	12/18/03	48.86		55.19	
	4/16/04	49.10		54.95	
	8/27/04	49.70		54.35	
	12/22/04	50.25		53.80	
	4/20/05	49.73		54.32	
	6/6/06	48.03		56.02	
MW-20	5/1/03	47.47	102.84	55.37	Gaspur
	12/18/03	48.20		54.64	
	4/16/04	48.51		54.33	
	8/27/04	49.09		53.75	
	12/22/04	49.64		53.20	
	4/20/05	48.96		53.88	
	6/6/06	46.95		55.89	
MW-22	12/18/03	48.85	103.39	54.54	Gaspur
	4/16/04	49.17		54.22	
	8/27/04	49.73		53.66	
	12/22/04	50.20		53.19	
	4/20/05	49.63		53.76	
	6/6/06	47.85		55.54	
MW-23	12/18/03	49.04	104.15	55.11	Gaspur
	4/16/04	49.34		54.81	
	8/27/04	49.89		54.26	
	12/22/04	50.41		53.74	
	4/20/05	49.88		54.27	
	6/6/06	48.17		55.98	
MW-24	12/18/03	47.88	101.99	54.11	Gaspur
	4/16/04	48.21		53.78	
	8/27/04	48.76		53.23	
	12/22/04	49.23		52.76	
	4/20/05	48.60		53.39	
	6/6/06	46.82		55.17	

TABLE 12 (Continued)

Well Number	Date Measured	Depth to Groundwater (1)	TOC Elevation (2)	Groundwater Surface Elevation (2)	Aquifer Zone
Off-site Wells					
MW-25	12/18/03	47.80	101.79	53.99	Gaspur
	4/16/04	48.12		53.67	
	8/27/04	48.67		53.12	
	12/22/04	49.24		52.55	
	4/20/05	48.50		53.29	
	6/6/06	46.74		55.05	
MW-26	12/18/03	52.24	101.94	49.70	Exposition
	4/16/04	52.76		49.18	
	8/27/04	53.47		48.47	
	12/22/04	54.00		47.94	
	4/20/05	53.54		48.40	
	6/6/06	51.35		50.59	
MW-27	12/18/03	47.86	101.62	53.76	Gaspur
	4/16/04	48.16		53.46	
	8/27/04	48.66		52.96	
	12/22/04	49.16		52.46	
	4/20/05	48.57		53.05	
	6/6/06	46.77		54.85	
MW-28	12/18/03	48.25	101.53	53.28	Gaspur
	4/16/04	48.59		52.94	
	8/27/04	49.09		52.44	
	12/22/04	49.57		51.96	
	4/20/05	48.94		52.59	
	6/6/06	46.90		54.63	
MW-29	12/18/03	47.42	101.13	53.71	Gaspur
	4/16/04	47.71		53.42	
	8/27/04	48.22		52.91	
	12/22/04	48.74		52.39	
	4/20/05	48.12		53.01	
	6/6/06	46.33		54.80	
MW-30	12/18/03	47.94	101.08	53.14	Gaspur
	4/16/04	47.33		53.75	
	8/27/04	48.84		52.24	
	12/22/04	49.35		51.73	
	4/20/05	48.70		52.38	
	6/6/06	46.90		54.18	

TABLE 12 (Continued)

Well Number	Date Measured	Depth to Groundwater (1)	TOC Elevation (2)	Groundwater Surface Elevation (2)	Aquifer Zone
Off-site Wells					
MW-31	12/18/03	47.43	101.31	53.88	Gaspur
	4/16/04	47.73		53.58	
	8/27/04	48.27		53.04	
	12/22/04	48.66		52.65	
	4/20/05	48.20		53.11	
	6/6/06	46.48		54.83	
MW-32	12/18/03	51.74	101.28	49.54	Exposition
	4/16/04	52.26		49.02	
	8/27/04	52.97		48.31	
	12/22/04	53.50		47.78	
	4/20/05	53.07		48.21	
	6/6/06	50.87		50.41	

Notes:

(1) feet below top of well casing (TOC)
(2) feet above mean sea level (msl)
NM = not measured

TABLE 13

Comparison of Water Level Elevations in the Gaspur and Exposition Aquifers Cooper Drum Company Site, South Gate, California

Date	Well	Aquifer	Well Screen (1)	Groundwater Surface Elevation (2)	Difference (3)
12/14/00	MW15	Gaspur	70 – 85	57.17	2.91
	MW16	Exposition	118 – 128	54.26	
	MW17	Gaspur	69 – 79	57.62	4.56
	MW18	Exposition	118 – 128	53.06	
2/8/01	MW15	Gaspur	70 – 85	57.74	2.89
	MW16	Exposition	118 – 128	54.85	
	MW17	Gaspur	69 – 79	58.17	4.54
	MW18	Exposition	118 – 128	53.63	
5/1/03	MW15	Gaspur	70 – 85	55.11	3.31
	MW16	Exposition	118 – 128	51.80	
	MW17	Gaspur	69 – 79	55.47	5.02
	MW18	Exposition	118 – 128	50.45	
12/18/03	MW15	Gaspur	70 – 85	54.36	3.37
	MW16	Exposition	118 – 128	50.99	
	MW17	Gaspur	69 – 79	54.75	5.16
	MW18	Exposition	118 – 128	49.59	
	MW-25	Gaspur	75 – 90	53.99	4.29
	MW-26	Exposition	122 – 132	49.70	
	MW-27	Gaspur	75 – 90	53.76	0.48
	MW-28	Lower Gaspur	104 – 114	53.28	
	MW-29	Gaspur	75 – 90	53.71	0.57
	MW-30	Lower Gaspur	104 – 114	53.14	
	MW-31	Gaspur	75 – 90	53.88	4.34
	MW-32	Exposition	122 – 132	49.54	
4/16/04	MW15	Gaspur	70 – 85	54.08	3.46
	MW16	Exposition	118 – 128	50.62	
	MW17	Gaspur	69 – 79	54.51	5.33
	MW18	Exposition	118 – 128	49.18	
	MW-25	Gaspur	75 – 90	53.67	4.49
	MW-26	Exposition	122 – 132	49.18	
	MW-27	Gaspur	75 – 90	53.46	0.52
	MW-28	Lower Gaspur	104 – 114	52.94	
	MW-29	Gaspur	75 – 90	53.42	-0.33
	MW-30	Lower Gaspur	104 – 114	53.75	
	MW-31	Gaspur	75 – 90	53.58	4.56
	MW-32	Exposition	122 – 132	49.02	

TABLE 13 (Continued)

Date	Well	Aquifer	Well Screen (1)	Groundwater Surface Elevation (2)	Difference (3)
8/27/04	MW15	Gaspur	70 – 85	53.53	3.58
	MW16	Exposition	118 – 128	49.95	
	MW17	Gaspur	69 – 79	53.90	5.48
	MW18	Exposition	118 – 128	48.42	
	MW-25	Gaspur	75 – 90	53.12	4.65
	MW-26	Exposition	122 – 132	48.47	
	MW-27	Gaspur	75 – 90	52.96	0.52
	MW-28	Lower Gaspur	104 – 114	52.44	
	MW-29	Gaspur	75 – 90	52.91	0.67
	MW-30	Lower Gaspur	104 – 114	52.24	
	MW-31	Gaspur	75 – 90	53.04	4.73
	MW-32	Exposition	122 – 132	48.31	
12/22/04	MW15	Gaspur	70 – 85	52.98	3.56
	MW16	Exposition	118 – 128	49.42	
	MW17	Gaspur	69 – 79	53.34	5.48
	MW18	Exposition	118 – 128	47.86	
	MW-25	Gaspur	75 – 90	52.55	4.61
	MW-26	Exposition	122 – 132	47.94	
	MW-27	Gaspur	75 – 90	52.46	0.50
	MW-28	Lower Gaspur	104 – 114	51.96	
	MW-29	Gaspur	75 – 90	52.39	0.66
	MW-30	Lower Gaspur	104 – 114	51.73	
	MW-31	Gaspur	75 – 90	52.65	4.87
	MW-32	Exposition	122 – 132	47.78	
4/20/05	MW15	Gaspur	70 – 85	53.66	3.75
	MW16	Exposition	118 – 128	49.91	
	MW17	Gaspur	69 – 79	53.96	5.77
	MW18	Exposition	118 – 128	48.19	
	MW-25	Gaspur	75 – 90	53.29	4.89
	MW-26	Exposition	122 – 132	48.40	
	MW-27	Gaspur	75 – 90	53.05	0.46
	MW-28	Lower Gaspur	104 – 114	52.59	
	MW-29	Gaspur	75 – 90	53.01	0.63
	MW-30	Lower Gaspur	104 – 114	52.38	
	MW-31	Gaspur	75 – 90	53.11	4.90
	MW-32	Exposition	122 – 132	48.21	

TABLE 13 (Continued)

Date	Well	Aquifer	Well Screen (1)	Groundwater Surface Elevation (2)	Difference (3)
6/6/06	MW15	Gaspur	70 – 85	55.43	3.49
	MW16	Exposition	118 – 128	51.94	
	MW-25	Gaspur	75 – 90	55.5	4.46
	MW-26	Exposition	122 – 132	50.59	
	MW-27	Gaspur	75 – 90	54.85	0.22
	MW-28	Lower Gaspur	104 – 114	54.63	
	MW-29	Gaspur	75 – 90	54.80	0.62
	MW-30	Lower Gaspur	104 – 114	54.18	
	MW-31	Gaspur	75 – 90	54.83	4.42
	MW-32	Exposition	122 – 132	50.41	

(1) feet below ground surface
(2) feet above mean sea level
(3) positive value indicates downward vertical gradient between aquifer zones

TABLE 14

CPT/HydroPunch VOC Results
May 2003
Cooper Drum Company Site, South Gate, California

Location	Depth (bgs)	Sample No.	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA	Benzene	1,2-DCPA	Other VOCs Detected
CPT-25	72	Y0W29	<0.5	<0.5	2J	1.0	<0.5	<0.5	2.0	0.7	<0.5	<0.5	None
	99	Y0W30	<0.5	<0.5	0.4J	<0.5	<0.5	<0.5	<0.5	1.0	<0.5	<0.5	None
	114	Y0W31	<0.5	<0.5	0.3J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
CPT-26	72	Y0W34	<0.5	84D	17	0.6	1.0	<0.5	<0.5	<0.5	<0.5	<0.5	Cyclohexane (1.0), methylcyclohexane (0.7)
	72D	Y0W35	<0.5	99D	17D	0.6	1.0	<0.5	<0.5	<0.5	<0.5	<0.5	Cyclohexane (1.0), methylcyclohexane (0.7)
	88	Y0W37	<0.5	110D	11D	1.0	1.0	<0.5	0.7	13D	<0.5	<0.5	Cyclohexane (2.0)
	102	Y0W38	<0.5	240D	12	1.0	4.0	<0.5	<0.5	3.0	<0.5	<0.5	Cyclohexane (0.8), benzene (0.5)
	125	Y0W39	<0.5	0.3J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
CPT-27	62	Y0W41	<0.5	6.5	4.8	2.4	0.32J	<0.5	1.3	9.6	<0.5	<0.5	None
	78	Y0W42	<0.5	2.4	0.59	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	103	Y0W43	<0.5	4.1	0.52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	126	Y0W44	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
CPT-28	59	Y0W46	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	59D	Y0W47	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Acetone (50J), 4-methyl-2-pentanone (3J), xylenes (0.4J)
	72	Y0W49	<0.5	43D	42D	<0.5	3D	<0.5	3D	<0.5	<0.5	<0.5	Acetone (100J), 4-methyl-2-pentanone (6), xylenes (0.5)
	96	Y0W50	<0.5	3.0	4.0	<0.5	<0.5	<0.5	<0.5	6.0	<0.5	<0.5	None
	128	Y0W51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None

TABLE 14 (Continued)

Location	Depth (bgs)	Sample No.	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA	Benzene	1,2-DCPA	Other VOCs Detected
CPT-29	60	Y0W53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Carbon disulfide (0.36J)
	74	Y0W54	0.58	52D	61D	1.1	3.1D	0.65	1.6	1.9	<0.5	0.57	Benzene (0.44J)
	91	Y0W55	<0.5	29D	29D	1.4D	1.2D	0.6DJ	2.6D	2.9D	<0.5	<0.5	None
	109	Y0W56	<0.5	<0.5	7.4	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	None
	128	Y0W57	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.6	<0.5	<0.5	None
CPT-30	64	Y0W58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	64D	Y0W59	<0.5	0.4J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	80	Y0W61	<0.5	130D	30D	1.7	1.4	0.34J	1.1	<0.5	<0.5	<0.5	Cyclohexane (0.33J)
	98	Y0W62	<0.5	23D	7.4D	0.45J	0.63DJ	<0.5	<0.5	<0.5	<0.5	<0.5	None
	128	Y0W63	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.9	<0.5	<0.5	None
CPT-31	69	Y0W65	<0.5	16	7.0	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	Benzene (3.0)
	90	Y0W66	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	6.0	<0.5	<0.5	None
	108	Y0W67	<0.5	<0.5	2J	<0.5	<0.5	<0.5	<0.5	3.0	<0.5	<0.5	None
CPT-32	73	Y0W70	<0.5	0.3J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	73D	Y0W71	<0.5	0.3J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	90	Y0W73	<0.5	2.0	0.3J	<0.5	<0.5	<0.5	<0.5	5.0	<0.5	<0.5	None
	111	Y0W74	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Acetone (7J)
	128	Y0W75	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
CPT-33	72	Y0W77	<0.5	5.0	2.0	<0.5	<0.5	<0.5	<0.5	4.0	<0.5	<0.5	None
	88	Y0W78	<0.5	1.0	0.7	<0.5	<0.5	<0.5	<0.5	6.0	<0.5	<0.5	None
	102	Y0W79	<0.5	4.0	16J	<0.5	0.4J	<0.5	<0.5	5.0	<0.5	<0.5	None
	126	Y0W80	<0.5	<0.5	<0.5J	<0.5	<0.5J	<0.5	<0.5	<0.5	<0.5	<0.5	Benzene (0.7), toluene (0.7), ethylbenzene (0.3J), xylenes (0.5J)

TABLE 14 (Continued)

Location	Depth (bgs)	Sample No.	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA	Benzene	1,2-DCPA	Other VOCs Detected
CPT-34	72	Y0W82	<0.5	28D	16	<0.5	0.9	<0.5	<0.5	2.0	<0.5	<0.5	None
	72D	Y0W83	<0.5	33D	17	<0.5	0.9	<0.5	<0.5	2.0	<0.5	<0.5	None
	90	Y0W85	<0.5	15	14	<0.5	0.7	<0.5	0.8	<0.5	<0.5	<0.5	None
	108	Y0W86	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	128	Y0W87	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
CPT-35	58	Y0W89	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	72	Y0W90	<0.5	20	4.0	<0.5	0.4J	<0.5	<0.5	1.0	<0.5	<0.5	Cyclohexane (4J)
	90	Y0W91	<2.0	35D	4D	<2.0	0.8	<2.0	<2.0	<2.0	<2.0	<2.0	Carbon disulfide (0.4J)
	110	Y0W92	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	128	Y0W93	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
CPT-36	58	Y0W94	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	58D	Y0W95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	72	Y0W97	<0.5	5.0	2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	89	Y0W98	<0.5	140D	5.0	<0.5	0.7	<0.5	2.0	<0.5	<0.5	<0.5	Cyclohexane (0.9)
	108	Y0W99	<0.5	<0.5	2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Cyclohexane (0.9)
	128	Y0WA0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.0	<0.5	<0.5	None
CPT-37	72	Y0XL0	<0.5	4.4	3.4	<0.5	<0.5	<0.5	<0.5	3.2	<0.5	<0.5	Acetone (6J)
	90	Y0XL1	<0.5	1.4	3.5	<0.5	<0.5	<0.5	<0.5	3.5	<0.5	<0.5	None
	112	Y0XL2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	128	Y0XL3	<0.5	<0.5	0.3J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
													Acetone (30J), carbon disulfide (1.0), 2-hexanone (2J)
CPT-38	72	Y0XL4	<0.5	14	4J	<0.5	0.7	<0.5	<0.5	2.0	<0.5	<0.5	None
	90	Y0XL5	<0.5	10	8J	<0.5	0.8J	<0.5	<0.5	2.0	<0.5	<0.5	None
	113	Y0XL6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	129	Y0XL7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Acetone (18J)

TABLE 14 (Continued)

Index: Analytical results in micrograms per liter (ug/L) or parts per billion (ppb).
Diluted sample concentrations used in table.

bgs	=	feet below ground surface
J	=	estimated value
B	=	analyte found in associated method blank as well as in sample
D	=	detection associated with sample dilution
CPT	=	cone penetrometer testing
DCA	=	dichloroethane
DCE	=	dichloroethene
DCPA	=	dichloropropane
PCE	=	tetrachloroethene
TCE	=	trichloroethene
VC	=	vinyl chloride
VOC	=	volatile organic

TABLE 15

Recent Groundwater Analytical Results
VOCs
Cooper Drum Company Site, South Gate, California

Location	Sample Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA	Benzene	1,2-DCPA	Other VOCs detected
MW-1	8/29/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.2J	<0.5	<0.5	<0.5	Chloroform (0.8)
	1/15/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5	<0.5	Toluene (0.25J), xylenes (0.18J)
	11/04/04	<0.5	0.27J	<0.5	<0.5	<0.5	<0.5	<0.5	2.8	<0.5	<0.5	None
MW-2	4/30/03	<25* (<25*)	230 (220)	790 (790)	29 (27)	45 (46)	<25* (<25*)	64 (65)	<25* (<25*)	<25* (<25*)	<25* (<25*)	Bromoform (56J, 41J)
	12/4/03	<1.0	240	810	13	52	17	75	14	5.1	5.6	Toluene (1.6), chlorobenzene (5.6)
	2/26/04	<0.5	220D	770D	12	48D	15	73D	19	5.8	6.3	Toluene (1.6), chlorobenzene (6.2), Methylcyclohexane (0.63)
	4/28/04	<0.5	290D	990D	10J	50D	10	86D	19	6.0	6.6	Toluene (0.92), chlorobenzene (4.0), cyclohexane (0.20J)
	7/19/04	<2.5	220D	730D	15	46	11	64	<2.5	6.1	5.8	Toluene (1.7J), chlorobenzene (5.4)
	11/02/04	<0.5	270D	790D	19	46JD	23	75D	23	8.2	7.7	Methylcyclohexane (0.66J)Toluene (0.93), chlorobenzene (4.1)
MW-3	4/29/03	<0.5	4	2	<0.5	0.3J	<0.5	<0.5	<0.5	<0.5	<0.5	None
	1/15/04	<0.5	4.2	2.8	<0.5	0.29J	<0.5	<0.5	<0.5	<0.5	<0.5	Toluene (0.24J), xylenes (0.27J)
	7/22/04	<0.5	3.3	2.3	<0.5	0.27J	<0.5	<0.5	<0.5	<0.5	<0.5	None
MW-4	4/29/03	<1.0	12	38	7	2	2	8	3	<1.0	<1.0	None
	1/15/04	<0.5	6.8	23	2.6	0.93	0.86	3.7	1.3	0.23J	<0.5	Toluene (0.19J)
	11/01/04	<0.5	15	30D	6.8	3.0	5.0	8.4	<0.5	0.42J	<0.5	None
MW-5	4/29/03	10	88	200J	6J	3J	3J	78	9J	<10*	<10*	Chlorobenzene (9J)
	12/3/03	13	110	270	7	4.4	3.5	110	8.1	1.5	8.3	Acetone (2.2J), 1,1,2-trichloroethane (0.7J), chlorobenzene (7.2), 1,2,3-trichloropropane (8.0)
	2/25/04	13	91D	210D	5.9	4.1	1.9	90D	8.2	1.3	7.6	1,1,2 trichloroethane (0.93), chlorobenzene (4.6)
	4/27/04	9.8	88D	220D	<0.5	3.3J	<0.5	86D	7.1	<0.5	7.0	Toluene (0.12J), chlorobenzene (4.3), 1,1,2- TCA (0.87), cis-1,3-DCP (0.14J)
	7/21/04	12	220D	170D	6.0	4.1	1.6	82D	5.8	1.2	6.7	1,1,2-Trichloroethane (0.72), chlorobenzene (3.6)
	11/01/04	16	100D	220D	8.0	6.0	4.1	92D	8.2	1.8	9.3	1,1,2-Trichloroethane (0.77), chlorobenzene (5.2)
MW-8	1/21/04	<0.5	33D	86D	0.51	3.2	<0.5	<0.5	<0.5	<0.5	<0.5	Toluene (0.17J)

TABLE 15 (Continued)

Location	Sample Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA	Benzene	1,2-DCPA	Other VOCs detected
MW-10	5/1/03	<0.5 (<0.5)	26D (25)	9 (8)	0.8 (0.9J)	0.4J (0.3J)	0.2J (<0.5)	0.4J (0.4J)	0.2J (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	None
	1/21/04	<0.5 (<0.5)	20D (20D)	12 (14)	0.98 (1.1)	0.60 (0.63)	<0.5 (<0.5)	0.55 (0.57)	<0.5 (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	Toluene (0.17J, 0.17J)
	11/02/04	<0.5 (<0.5)	23D (25D)	20 (19)	1.3 (1.2)	1.0 (0.96)	0.79 (0.81)	0.58 (0.61)	<0.5 (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	None
MW-12	5/13/03	0.34J	25D	30D	3.6	1.4	<0.5	5.2	<0.5	<0.5	<0.5	None
	1/21/04	<0.5	37D	43D	8.8	2.7	0.75	11	<0.5	0.29J	<0.5	Toluene (0.34J), xylenes (0.45J)
MW-15	5/0103	<10*	250	98	9J	3J	<10*	10J	11	<10*	<10*	Methylene chloride (19J), bromoform (29J)
	1/20/04	0.30J	360D	160D	6.7	6.5	1.2	14	14	0.85	4.1	4-methyl-2-pentanone (0.27J), chlorobenzene (0.56), xylenes (0.24J)
	7/22/04	<0.5	87D	70D	3.9	3.5	1.1	7.3	3.9	0.43J	1.3	None
MW-16	4/28/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.2J	<0.5	<0.5	None
	1/12/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	11/03/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
MW-17	4/28/03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.2J	<0.5	<0.5	None
	1/20/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	11/02/04	<0.5	0.58	0.52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Toluene (0.53), xylenes (0.53)
MW-18	4/28/03	<0.5	0.2J	0.8J	<0.5	<0.5	<0.5	<0.5	0.2J	<0.5	<0.5	None
	1/12/04	<0.5	0.24J	0.72	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
MW-19	5/1/03	<50*	1,000	<50*	<50*	<50*	<50*	<50*	39J	<50*	<50*	None
	1/20/04	<0.5	450D	11	2.8J	1.5	0.19J	3	34D	<0.5	<0.5	Bromoform (93J)
	7/20/04	<0.5	99D	4.5	1.6J	0.65	0.25J	0.77	33D	<0.5	<0.5	Chloromethane (0.59BJ), cyclohexane (1.8)
MW-20	4/30/03	<13*	520	140	<13*	<13*	<13*	41	<13*	<13*	<13*	Cyclohexane (2.7) carbon disulfide (0.19J)
	12/4/03	5.2	570	150	16	7.8	3.6	44	7.6	1.1	4.2	None
	2/26/04	4.1	490D	140D	14	7.3	28	39D	7.8	0.97	4.1	Chlorobenzene (5.4), 1,2,3-trichloropropane (3.8)
	4/27/04	5.1	670D	180D	15	8.9	<0.5	48D	8.0	<0.5	4.9	1,1,2-Trichloroethane (0.94), chlorobenzene (4.5)
	7/20/04	4.0	470D	140D	16	7.6	3.0	45	7.3	1.1J	4.3	Toluene (0.18J), 1,1,2-Trichloroethane (0.67), chlorobenzene (5.5)
	11/1/04	5.1	770D	200D	24	11	8.3	58D	12	1.2	5.9	chlorobenzene (3.7)
												Methylcyclohexane (0.46J), chlorobenzene (4.8)

TABLE 15 (Continued)

Location	Sample Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA	Benzene	1,2-DCPA	Other VOCs detected
MW-21	12/3/03	2.3 (2.3)	550 (870)	210 (370)	25 (25)	14 (14)	5 (5.2)	40 (61)	17 (17)	2.7 (2.6)	9.7 (9.5)	Chlorobenzene (3.8J, 3.8), 1,2,3-trichloropropane (7.9, 7.8)
	2/25/04	2.2	680D	330D	27D	16J	4.9	51D	17	2.6	9.3	Chlorobenzene (3.8), methyl acetate (4.7), toluene (0.22J)
	4/27/04	3.0	980D	490D	50D	20	5.0	80D	20	<0.5	11	Chlorobenzene (4.9), toluene (0.28J)
	7/21/04	2.8	640D	340D	29	15	5.8	69	17	2.6	8.3	Chlorobenzene (4.2)
	11/01/04	2.1	720D	430D	24	11	28E	59D	21	3.0	8.2	Methylcyclohexane (0.52)Toluene (0.25J), chlorobenzene (3.9)
MW-22	1/13/04	<0.5	7.2	2.9	<0.5	0.21J	<0.5	<0.5	<0.5	1.8	<0.5	None
	11/03/04	<0.5	9.6	9.7	<0.5	0.53	0.56	0.38J	<0.5	3.7	<0.5	None
MW-23	1/20/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	11/02/04	<0.5	<0.5	0.69	<0.5	<0.5	<0.5	0.21J	<0.5	<0.5	<0.5	None
MW-24	1/13/04	<0.5	3.1	1.6	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5	Chloromethane (0.28J)
	11/04/04	<0.5	3.1	2.3	<0.5	<0.5	<0.5	<0.5	2.3	<0.5	<0.5	None
MW-25	1/14/04	0.33J (0.37J)	50D (50D)	40D (37D)	1.7 (2.3J)	2.9 (3.9)	0.75 (0.98)	4.7J (6.2)	3.3 (5.5J)	0.35J (0.47J)	<0.5 (1.1)	Chlorobenzene (0.48J, 0.55)
	7/22/04	<0.5	62D	64D	1.2	3.3	0.7	2.2	3.0	0.36J	0.83	Chlorobenzene (0.22J)
MW-26	1/14/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
	11/04/04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
MW-27	1/13/04	<0.5	4.9	2.4	<0.5	0.17J	<0.5	<0.5	1.8	<0.5	<0.5	None
	7/21/04	<0.5	3.4	2.3	<0.5	0.20J	<0.5	<0.5	1.7	<0.5	<0.5	None
MW-28	1/14/04	<0.5	11	10	<0.5	0.48J	<0.5	<0.5	1.8J	<0.5	<0.5	None
	11/03/04	<0.5	18	21	<0.5	1.1	0.73	<0.5	2.4	<0.5	<0.5	None
MW-29	1/13/04	<0.5	16	4.7	<0.5	0.63	<0.5	<0.5	1.5	<0.5	<0.5	None
	11/03/04	<0.5	21	5.7	0.38J	0.96	0.38J	<0.5	<0.5	<0.5	<0.5	None
MW-30	1/14/04	<0.5	110D	5.1	0.43J	0.84	<0.5	<0.5	2.7	<0.5	<0.5	None
	7/21/04	<0.5	110D	6.1	0.77	1.4	0.20J	0.42J	3.7	<0.5	<0.5	Cyclohexane (0.69)
MW-31	1/19/04	<0.5	79D	22D	1.4	2	<0.5	<0.5	8	0.42J	<0.5	Cyclohexane (2.9), methylcyclohexane (1.8)
	7/21/04	<0.5	63D	17	1.3	1.6	0.26J	0.36J	5.5	0.31J	<0.5	Cyclohexane (2.0), methylcyclohexane (0.65)

TABLE 15 (Continued)

Location	Sample Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA	Benzene	1,2-DCPA	Other VOCs detected
MW-32	1/19/04	<0.5 (<0.5)	1.3 (<0.5)	0.17J (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	2-butanone (0.47J), toluene (0.21J) None
	11/04/04	<0.5	0.46J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	None
EW-1	4/30/04	<13*	380	170J	19	7J	3J	46	3J	<13*	<13*	Bromoform (24J)
	12/4/04	1.0	480	230	41	9.8	4.1	70	3.7	1.1	1.9	Chlorobenzene (2.6), 1,2,3-trichloropropane (0.8J)
	2/26/04	1.0	450D	210D	39D	9.0J	3.4	65D	5.2	1.3	2.5	Chlorobenzene (2.9)
	4/28/04	1.7	790D	290D	33E	10	<0.5R	83D	5.5	1.9	<0.5	Chlorobenzene (4.2)
	7/20/04	1.9J	600D	230D	39	9.3	3.7	68	5.8	1.7J	3.2	Chlorobenzene (3.7)
	11/01/04	2.9	830D	250E	53E	13	9.7	75E	7.8	2.1	4.2	Chlorobenzene (5.9)
EW-2	4/30/03	<50*	86	1,300J	46J	39J	12J	260	46J	20J	<50*	Bromoform (87J)
	12/3/03	<1.0	16	1,200	72	55	13	320	36	15	11	Chlorobenzene (9.0), 1,2,3-trichloropropane (5.4)
	2/25/04	<0.5 (<0.5)	140D (140D)	1,000D (1,000D)	56D (55D)	43D (44D)	12 (12)	230D (220D)	<40 (43D)	14 (14D)	1.3 (1.3)	Chlorobenzene (9.7, 10.0), methyl acetate (3.6,4.4), toluene (2.6,2.7), 4methyl-2pentonone (3.2J, 3.1J)
	4/28/04	<0.5 (<0.5)	270D (280D)	1,200D (1,200D)	33D (54E)	63E (59E)	84E (78E)	280D (280D)	48E (52E)	20 (19)	15 (15)	Chlorobenzene (10, 10), toluene (3.6,3.6), cyclohexane (0.67, 0.52) See lab sheet for more VOCs
	7/20/04	<2.0 (<2.0)	130D (140D)	390D (400D)	27 (25)	51 (49)	460D (480D)	250D (260D)	39 (36)	14 (14)	11 (11)	Toluene (2.8,2.9), chlorobenzene (6.5, 6.1), xylenes (1.0J)
	11/2/04	<0.5 (<0.5)	130D (130D)	210D (230D)	34E (41JD)	72JD (75JD)	1100D (1200D)	240D (270D)	41E (41E)	20 (20)	15 (16)	Toluene (3.5,3.6), chlorobenzene (7.5, 7.3), xylenes (1.2, 1.2)
SVE-1	12/3/03	2.5	70	1,100	69	18	140	230	8.2	16	15	Chlorobenzene (32), ethylbenzene (76) xylenes (162), toluene (310), see Lab sheet for additional VOCs
	7/22/04	1.7J	47	370D	7.0	26	33	81	5.4	6.8	8.5	Chlorobenzene (29), ethylbenzene (12) xylenes (33), toluene (51), see Lab sheet for additional VOCs
SVE-2	4/29/04	50D	29D	5.9	<0.5	0.55	1.1	76D	<0.5	0.93	<0.5	Acetone (51), 1,1,1-TCA (0.76), See Lab sheet for additional VOCs

TABLE 15 (Continued)

Index: Analytical results in micrograms per liter or parts per billion.

*	=	Detection limit exceeds respective maximum contaminant level for drinking water as established in Title 22 of the California Code of Regulations.

Duplicate Sample results shown in parenthesis.

D	=	detection associated with sample dilution
E	=	concentration exceeds upper instrument calibration range
R	=	The data are unusable. Resampling and reanalysis is necessry for verification.
DCA	=	dichloroethane
DCE	=	dichloroethene
DCPA	=	dichloropropane
J	=	estimated value
PCE	=	tetrachloroethene
TCA	=	trichloroethane
TCE	=	trichloroethene
VC	=	vinyl chloride
VOC	=	volatile organic compound

TABLE 16

Historical Groundwater Analytical Results
VOCs
Cooper Drum Company Site, South Gate, California

Location	MW-1							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Sep-91	-	ND	ND	ND	-	-	-	-
Jun-92	-	2	ND	ND	-	-	-	-
Oct-96	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	2
Nov-98	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	0.4J
Oct-00	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
May-03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.2J	<0.5
Jan-04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.3
Nov-04	<0.5	0.27J	<0.5	<0.5	<0.5	<0.5	<0.5	2.8

Location	MW-2							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Sep-91	-	207	ND	ND	-	-	-	-
Jun-92	-	510	346	7	-	-	-	-
Oct-96	<1.0	480	660	19	23	8	100	45
Oct-98	<10	640	1100	46	46	14	220	97
Nov-98	<1.0	780	1200	32	34	12	190	82
Mar-99	<1.0	800	800	10	19	5	52	20
Oct-00	0.5	290	730	15	47	9	72	30
May-03	<25	230	790	29	46	<25	65	<25
Dec-03	<1.0	240	810	13	52	17	75	14
Feb-04	<0.5	220	770	12	48	15	73	19
Apr-04	<0.5	290	990	10	50	10	86	19
July-04	<2.5	220D	730D	15	46	11	64	<2.5
Nov-04	<0.5	270D	790D	19	46JD	23	75D	23

TABLE 16 (Continued)

Location	MW-3							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Sep-91	-	17	ND	ND	-	-	-	-
Jun-92	-	18	6	0.6	-	-	-	-
Oct-96	<1.0	7	2	<1.0	0.6J	<0.5	<1.0	<1.0
Nov-98	<1.0	9	2	<1.0	<1.0	<0.5	<1.0	<0.5
Oct-00	<0.5	5	2	<0.5	0.3J	<0.5	<0.5	<0.5
May-03	<0.5	4	2	<0.5	0.3J	<0.5	<0.5	<0.5
Jan-04	<0.5	4.2	2.8	<0.5	0.29J	<0.5	<0.5	<0.5
July-04	<0.5	3.3	2.3	<0.5	0.27J	<0.5	<0.5	<0.5

Location	MW-4							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Sep-91	-	29	ND	ND	-	-	-	-
Jun-92	-	27	18	ND	-	-	-	-
Oct-96	<1.0	6	10	2	0.9J	1	0.3J	0.9
Nov-98	<1.0	8	14	2	0.9J	0.9	1	0.5
Oct-00	<0.5	6	15	2	1	1	4	1
May-03	<1.0	12	38	7	2	2	8	3
Jan-04	<0.5	6.8	23	2.6	0.93	0.86	3.7	1.3
Nov-04	<0.5	15	30D	6.8	3.0	5.0	8.4	<0.5

TABLE 16 (Continued)

Location	MW-5							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Jun-92	-	684	90	11	-	-	-	-
Oct-96	23	570	440	43	10	7	280	29
Oct-98	57	590	580	54	16	14	340	38
Nov-98	44	570	670	45	14	11	330	39
Mar-99	42	300	300	20	10	9	200	28
Oct-00	21	60	100	9	3	3	47	12
May-03	10	88	200J	6J	3J	3J	78	9J
Dec-03	13	110	270	7	4.4	3.5	110	8.1
Feb-04	13	91	210	5.9	4.1	1.9	90	8.2
Apr-04	9.8	88	220	<0.5	3.3	<0.5	86	1.1
July-04	12	220D	170D	6.0	4.1	1.6	82D	5.8
Nov-04	16	100D	220D	8.0	6.0	4.1	92D	8.2

Location	MW-8							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Nov-98	<10	150	140	10	5J	<10	<10	<10
Oct-00	<0.5	58	81	<0.5	4	<0.5	<0.5	<0.5
Jan-04	<0.5	33D	86D	0.51	3.2	<0.5	<0.5	<0.5

Location	MW-10							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Nov-98	<1.0	<1.0	4	<1.0	<1.0	<1.0	<1.0	<1.0
Oct-00	<0.5	2	4	0.4J	<0.5	<0.5	<0.5	<0.5
May-03	<0.5	26D	9	0.8	0.4J	0.2J	0.4J	0.2J
Jan-04	<0.5	20	14	1.1	0.63	<0.5	0.57	<0.5
Nov-04	<0.5	23D	20	1.3	1.0	0.79	0.58	<0.5

TABLE 16 (Continued)

Location	MW-12							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Nov-98	<2.0	38	22	2	1J	<2.0	<2.0	<2.0
Oct-00	<3.0	31	21	<3.0	<3.0	<3.0	<3.0	<3.0
May-03	0.34J	25D	30D	3.6	1.4	<0.5	5.2	<0.5
Jan-04	<0.5	37D	43D	8.8	2.7	0.75	11	<0.5

Location	MW-14							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Nov-98	<1.0	2	0.6J	<1.0	<1.0	<1.0	<1.0	<1.0
Oct-00	<0.5	6	51	<0.5	1	<0.5	2	<0.5
Oct-02	<0.5	58	330	<0.5	17	2	11	<0.5

Location	MW-15							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Dec-00	1	590	150	10	7	2.2	22	4.1
Feb-01	2	700	170	10	6	2	20	3.7
May-03	<10	250	98	9J	3J	<10	10J	11
Jan-04	0.30J	360D	160D	6.7	6.5	1.2	14	14
July-04	<0.5	87D	70D	3.9	3.5	1.1	7.3	3.9

Location	MW-16							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Dec-00	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<0.5
Feb-01	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<0.5
May-03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.2J
Jan-04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nov-04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 16 (Continued)

Location	MW-17							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Dec-00	<1.0	3	<0.5	<1.0	<1.0	<0.5	<1.0	0.3J
Feb-01	<1.0	<1.0	<0.5	<1.0	<1.0	<0.5	<1.0	<0.5
May-03	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.2J
Jan-04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nov-04	<0.5	0.58	0.52	<0.5	<0.5	<0.5	<0.5	<0.5

Location	MW-18							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Dec-00	<1.0	<1.0	0.6	<1.0	<1.0	<0.5	<1.0	0.4J
Feb-01	<1.0	<1.0	<0.5	<1.0	<1.0	<0.5	<1.0	0.3J
May-03	<0.5	0.2J	0.8J	<0.5	<0.5	<0.5	<0.5	0.2J
Jan-04	<0.5	0.24J	0.72	<0.5	<0.5	<0.5	<0.5	<0.5

Location	MW-19							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Dec-00	<1.0	6700	45	18	9	1.2	31	12
Feb-01	<1.0	5700	33	16	8	1	29	9.7
May-03	<50	1000	<50	<50	<50	<50	<50	39J
Jan-04	<0.5	450D	11	2.8J	1.5	0.19J	3	34D
July-04	<0.5	99D	4.5	1.6J	0.65	0.25J	0.77	33D

Location	MW-20							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Feb-03	5.6	300	110	7.6	5.4	<5.0	32	6.4
May-03	<13	520	140	<13	<13	<13	41	<13
Dec-03	5.2	570	150	16	7.8	3.6	44	7.6
Feb-04	4.1	490	140	14	7.3	2.8	39	7.8
Apr-04	5.1	670	180	15	8.9	<0.5	48	8
July-04	4.0	470D	140D	16	7.6	3.0	45	7.3
Nov-04	5.1	770D	200E	24	11	8.3	58D	12

TABLE 16 (Continued)

Location	MW-21							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Dec-03	2.3	870	370	25	14	5.2	61	17
Feb-04	2.2	680	330	27	16J	4.9	51	17
Apr-04	3	980	490	50J	20	5	80	20
July-04	2.8	640D	340D	29	15	5.8	69	17
Nov-04	2.1	720D	430D	24	11	28E	59D	21

Location	MW-22							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Jan-04	<0.5	7.2	2.9	<0.5	0.21J	<0.5	<0.5	<0.5
Nov-04	<0.5	9.6	9.7	<0.5	0.53	0.56	0.38J	<0.5

Location	MW-23							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Jan-04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nov-04	<0.5	<0.5	0.69	<0.5	<0.5	<0.5	0.21J	<0.5

Location	MW-24							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Jan-04	<0.5	3.1	1.6	<0.5	<0.5	<0.5	<0.5	1.6
Nov-04	<0.5	3.1	2.3	<0.5	<0.5	<0.5	<0.5	2.3

Location	MW-25							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Jan-04	0.37J	50D	40D	2.3J	3.9	0.98	6.2	5.5J
July-04	<0.5	62D	64D	1.2	3.3	0.7	2.2	3.0

Location	MW-26							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Jan-04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nov-04	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 16 (Continued)

Location	MW-27							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Jan-04	<0.5	4.9	2.4	<0.5	0.17J	<0.5	<0.5	1.8
July-07	<0.5	3.4	2.3	<0.5	0.20J	<0.5	<0.5	1.7

Location	MW-28							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Jan-04	<0.5	11	10	<0.5	0.48J	<0.5	<0.5	1.8J
Nov-04	<0.5	18	21	<0.5	1.1	0.73	<0.5	2.4

Location	MW-29							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Jan-04	<0.5	16	4.7	<0.5	0.63	<0.5	<0.5	1.5
Nov-04	<0.5	21	5.7	0.38J	0.96	0.38J	<0.5	<0.5

Location	MW-30							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Jan-04	<0.5	110D	5.1	0.43J	0.84	<0.5	<0.5	2.7
July-04	<0.5	110D	6.1	0.77	1.4	0.20J	0.42J	3.7

Location	MW-31							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Jan-04	<0.5	79D	22D	1.4	2	<0.5	<0.5	8
July-04	<0.5	63D	17	1.3	1.6	0.26J	0.36J	5.5

Location	MW-32							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Jan-04	<0.5	1.3	0.17J	<0.5	<0.5	<0.5	<0.5	<0.5
Nov-04	<0.5	0.46J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 16 (Continued)

Location	EW-1							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Mar-99	<1.0	190	14	1	0.8J	<0.5	1	0.5
Aug-99	8	310	100	21	4	2.7	50	6.3
Oct-00	5	310	100	20	5	3	45	5
May-03	<13	380	170J	19	7J	3J	46	3J
Dec-03	1.0	480	230	41	9.8	4.1	70	3.7
Feb-04	1.0	450	210	39	9J	3.4	65	5.2
Apr-04	1.7	790D	290D	33E	10	<0.5R	83D	5.5
July-04	1.9J	600D	230D	39	9.3	3.7	68	5.8
Nov-04	2.9	830D	250E	53E	13	9.7	75E	7.8

Location	EW-2							
Date	PCE	TCE	cis-1,2-DCE	1,1-DCE	trans-1,2-DCE	VC	1,1-DCA	1,2-DCA
Dec-00	<1.0	150	170	9	10	1.7	20	5.4
Mar-01	0.6J	130	110	10J	12	2.4	20	<0.5
May-03	<50	86	1300J	46J	39J	12J	260	46J
Dec-03	<1.0	16	1200	72	55	13	320	36
Feb-04	<5.0	140	1000	56	44	12	230	39
Apr-04	<0.5	270D	1200D	54E	63J	84	280D	48E
July-04	<2.0	130D	390D	27	51	460D	250D	39
Nov-04	<0.5	130D	210D	34E	72JD	1100D	240D	41E

Index: Analytical results in micrograms per liter (μg/L) or parts per billion (ppb).
D = detection associated with sample dilution
DCA = dichloroethane
DCE = dichloroethene
E = concentration exceeds upper level of instrument calibration range
J = estimated value
ND = not detected at or above laboratory detection limit
PCE = tetrachloroethene
R = the data are unusable. Resampling and reanalysis is necessary for verification.
TCE = trichloroethene
VC = vinyl chloride
VOC = volatile organic compound

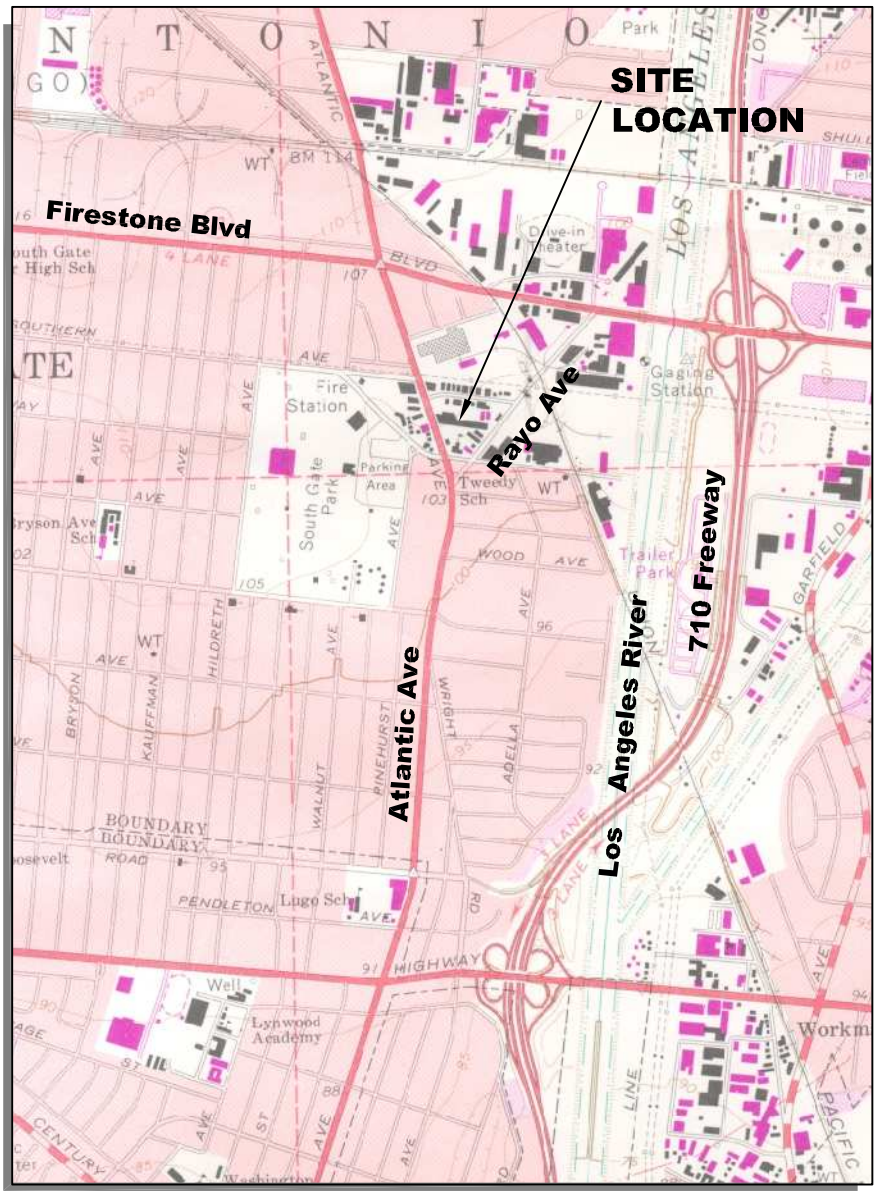
TABLE 17

1,4-Dioxane
Groundwater Analytical Results
Cooper Drum Company Site, South Gate, California

Location	1,4-Dioxane	Sample Date	Location	1,4-Dioxane	Sample Date	Location	1,4-Dioxane	Sample Date
MW-1	1.7	11/04/04	MW-17	0.9	11/02/04	MW-27	0.5J	07/21/04
MW-2	69	04/28/04	MW-18	NS		MW-28	<1.0	11/03/04
MW-3	0.8J	07/22/04	MW-19	17	07/20/04	MW-29	2.2	11/03/04
MW-4	12	11/01/04	MW-20	120	04/27/04	MW-30	8.5	07/21/04
MW-5	230	04/27/04	MW-21	280	04/27/04	MW-31	17	07/21/04
MW-8	NS		MW-22	1.1	11/03/04	MW-32	<1.0	11/04/04
MW-10	4.7 (2.8)	11/02/04	MW-23	2.7	11/02/04	EW-1	550	04/28/04
MW-12	NS		MW-24	<1.0	11/04/04	EW-2	710 (700)	04/28/04
							700 (610)	11/02/04
MW-15	54	07/22/04	MW-25	9.6	07/22/04	SVE-1	120	07/22/04
MW-16	<1.0	11/03/04	MW-26	<1.0	11/04/04	SVE-2	NS	

Index: Analytical results in micrograms per liter or parts per billion.
Duplicate sample analysis shown in parenthesis
J = estimated value
NS = well not sampled

FIGURES



H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\FIG_1_SLM.dwg Plotted:Sep 18, 2007 - 8:26am Last Save:Dec 05, 2006 - 2:45pm

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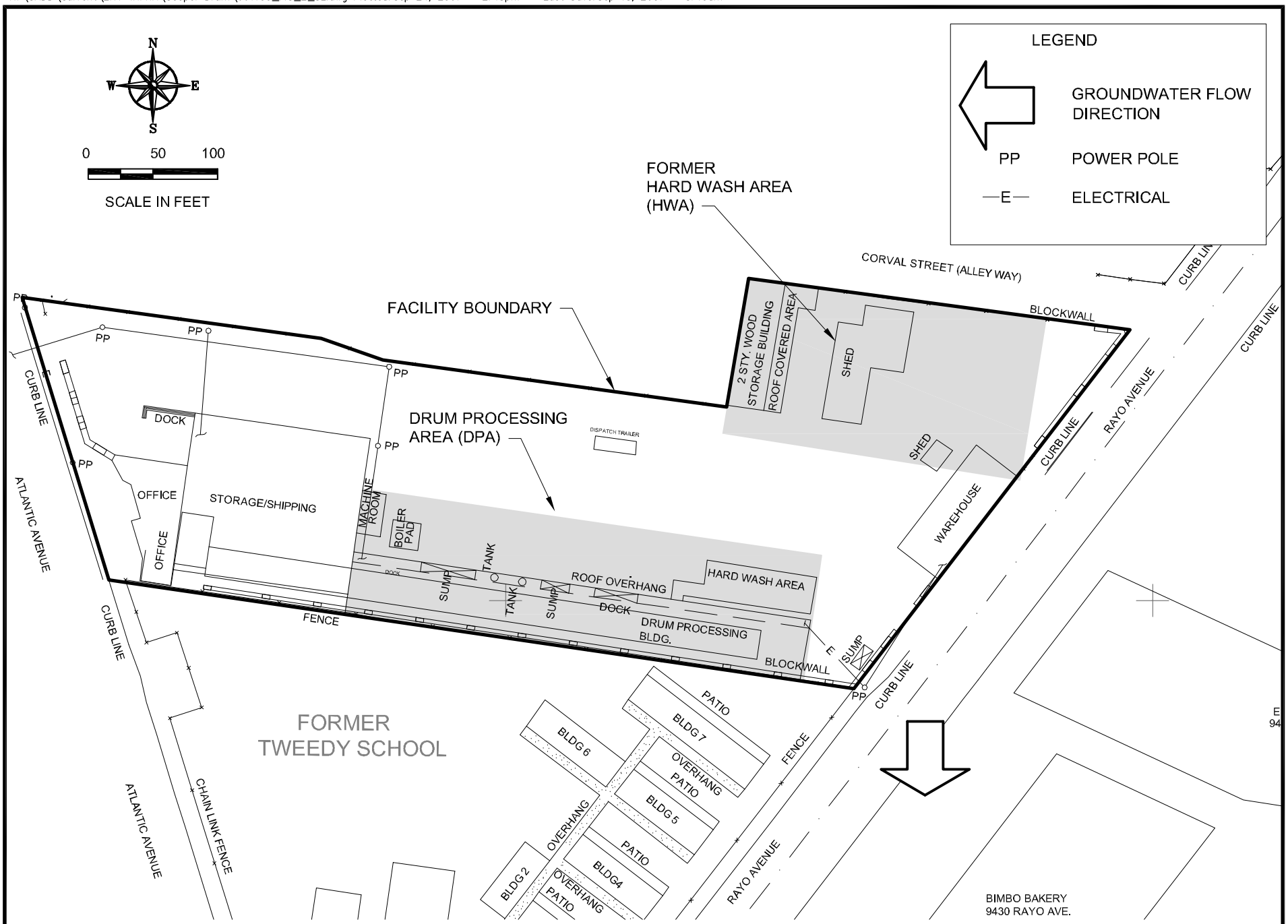
Cooper Drum Company
South Gate, California

FIGURE 1
Site Location Map

H:\CADD\Current\ENV-INFRA\Cooper Drum\061103_FIG_2_SL.dwg Plotted: Sep 24, 2007 – 2:48pm Last Save: Sep 18, 2007 – 8:49am



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SACRAMENTO, CA 95833

Cooper Drum Superfund Site
South Gate, CA

Figure 2
Site Layout Map

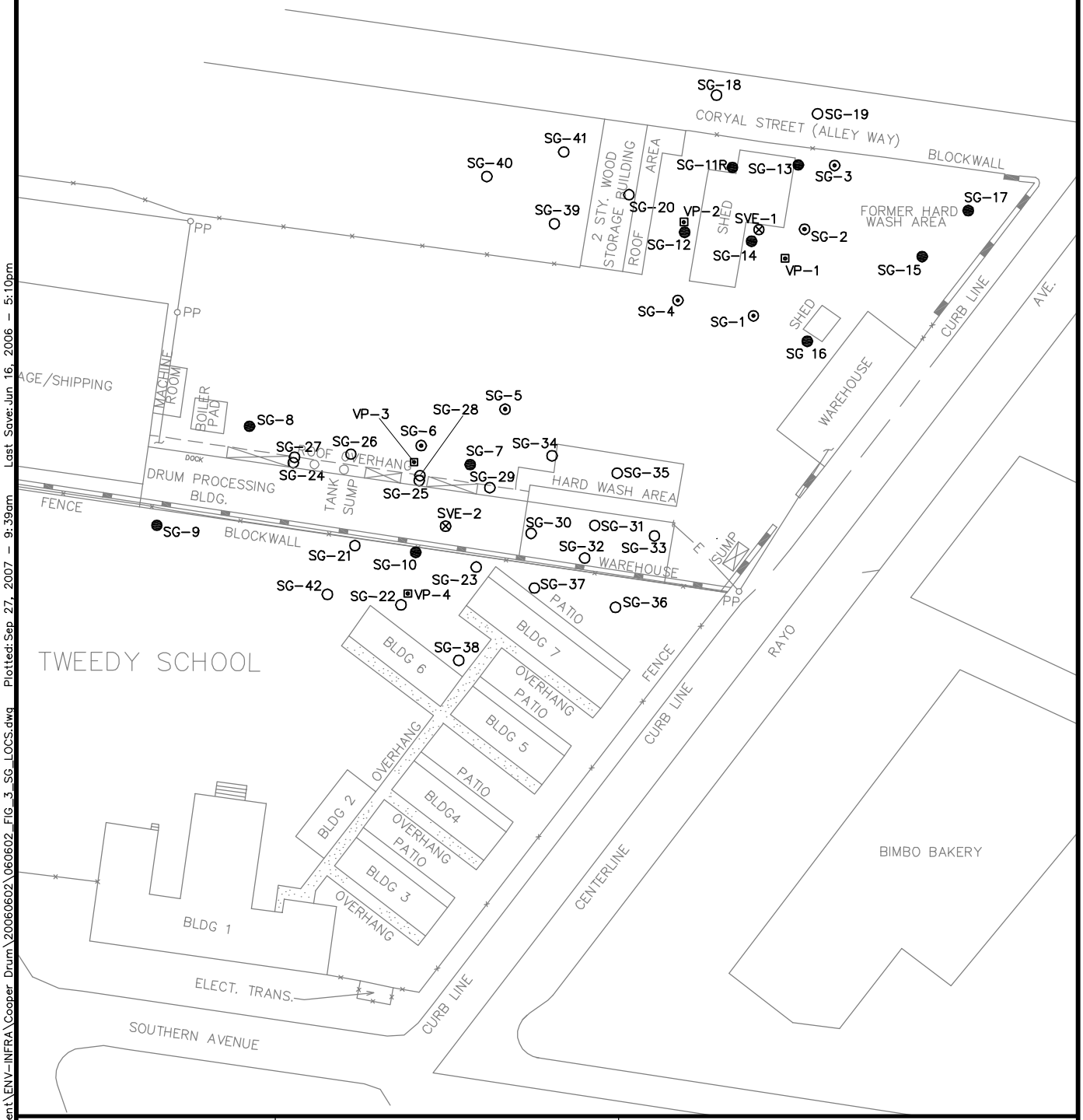
LEGEND

- SG-1 — RI SOIL GAS SAMPLE LOCATION (SG-1 through SG-6 MARCH 1999)
- RI SOIL GAS SAMPLE LOCATION (SG-7 through SG-17 OCTOBER 2000)
- SOIL GAS SAMPLE LOCATION (SG-18 through SG-29 MAY 2003, SG-30 through SG-42 JANUARY 2004)
- VP-2 — VAPOR PROBE LOCATION
- SVE-1 — SOIL VAPOR EXTRACTION WELL LOCATION

N W E S

0 100

Scale in Feet



H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\060602_FIG_3_SG_LOCS.dwg Plotted:Sep 27, 2007 - 9:39am Last Save:Jun 16, 2006 - 5:10pm

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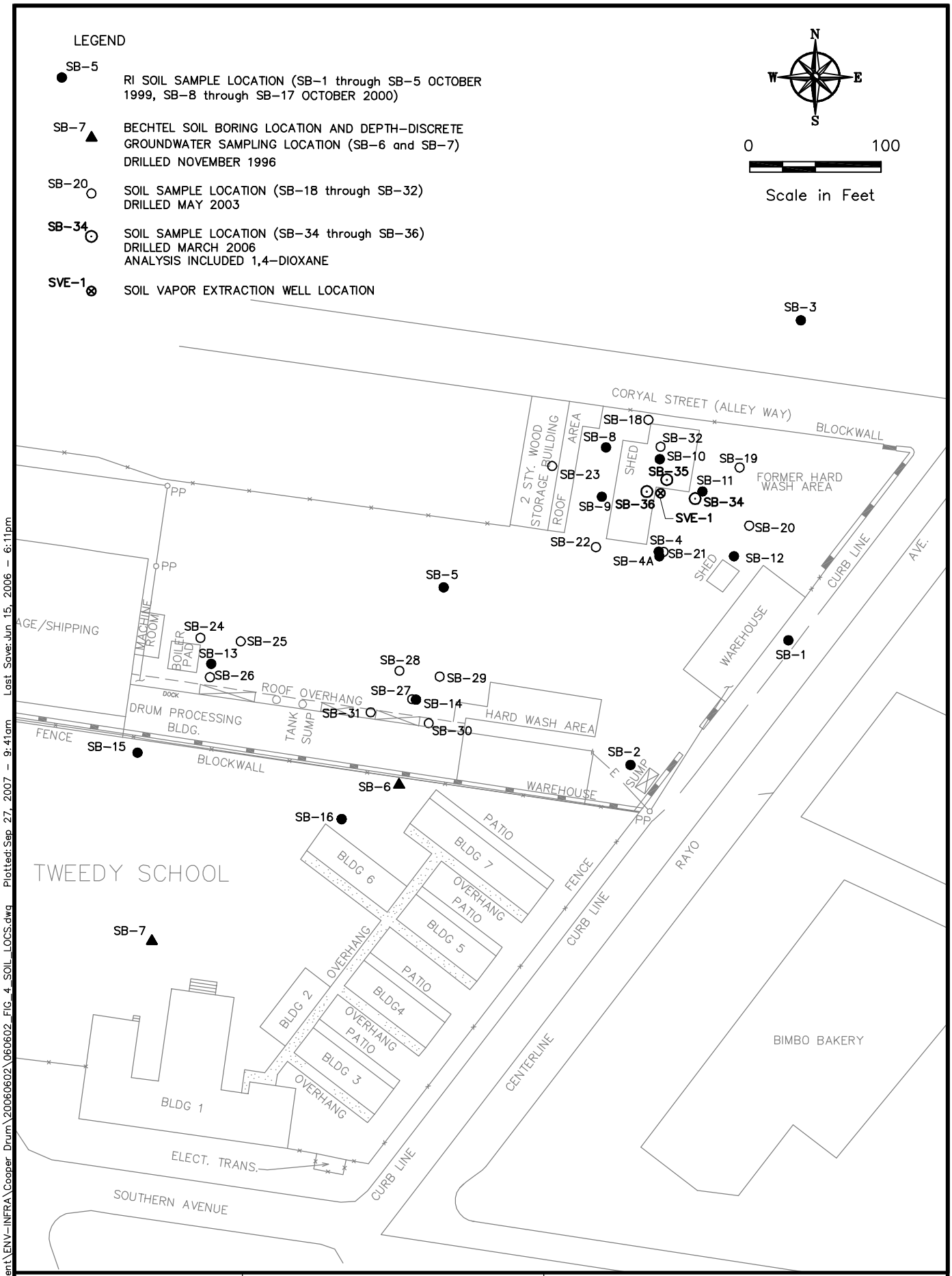
Cooper Drum Company
South Gate, California

FIGURE 3
Soil Gas Sampling Locations



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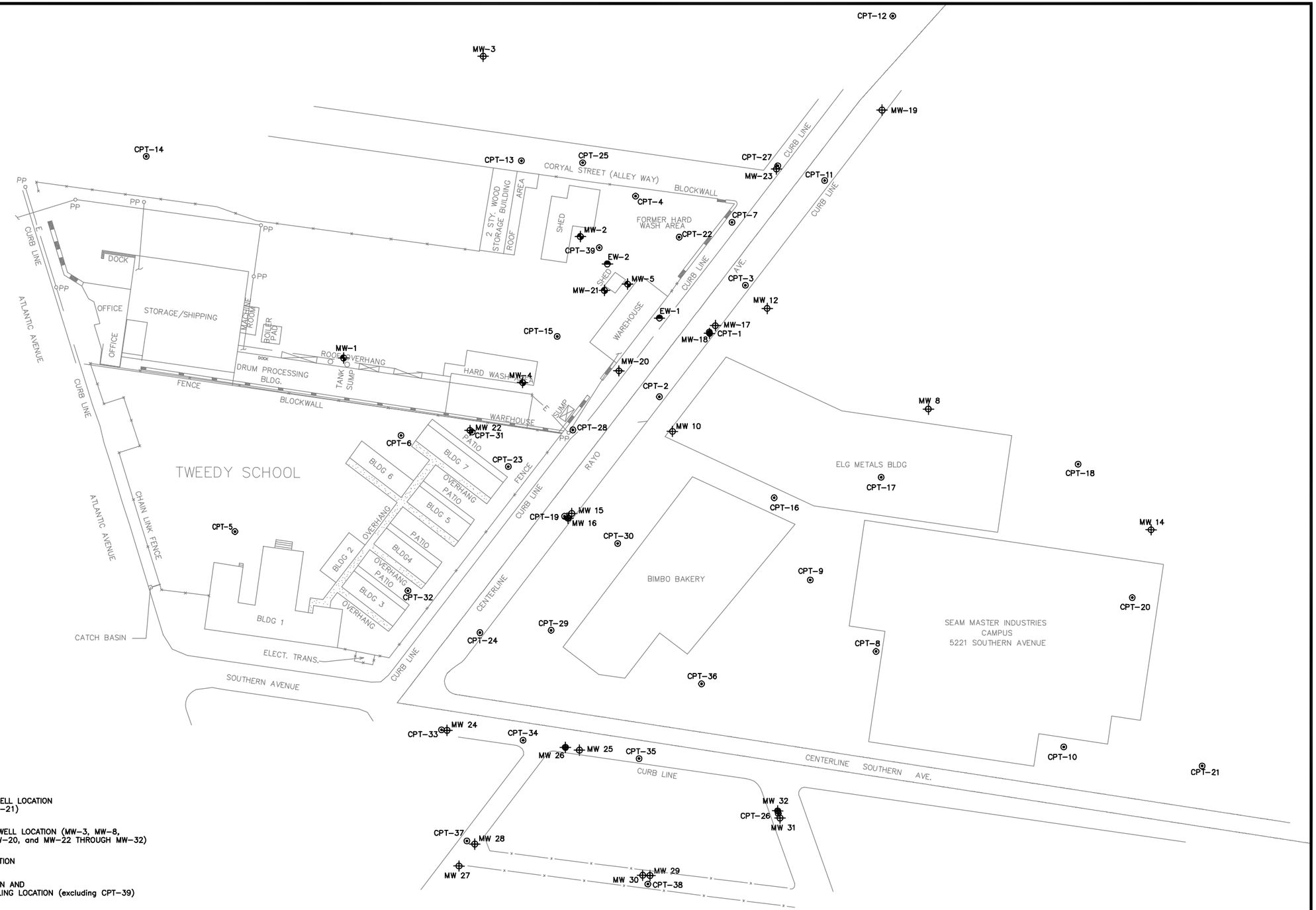
South Gate, California

FIGURE 4
Soil Sampling Locations

H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\060602_FIG_4_SOIL_LOCS.dwg Plotted:Sep 27, 2007 - 9:41am Last Saved:Jun 15, 2006 - 6:11pm



LEGEND

- ON-SITE GROUNDWATER MONITORING WELL LOCATION (MW-1, MW-2, MW-4, MW-5, and MW-21)
- OFF-SITE GROUNDWATER MONITORING WELL LOCATION (MW-3, MW-8, MW-10, MW-12, MW-14 THROUGH MW-20, and MW-22 THROUGH MW-32)
- GROUNDWATER EXTRACTION WELL LOCATION
- CONE PENETROMETER TESTING LOCATION AND DEPTH-DISCRETE GROUNDWATER SAMPLING LOCATION (excluding CPT-39)
- WELL COMPLETED IN DEEPER EXPOSITION AQUIFER (MW-16, MW-18, MW-26, MW-32)

N W E S

120 60 0 120 240

SCALE IN FEET

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SACRAMENTO, CA 95833

Cooper Drum Company
South Gate, California

FIGURE 5
Monitor Well and CPT/HydroPunch ®
Boring Locations

H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\FIG_5_CPT_WELL_LOCS.dwg Plotted:Sep 27, 2007 - 9:46am Last Save:Sep 27, 2007 - 9:46am

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-18	10	12	3.2J	2J	46	113
	20	3J	ND	1J	26	62
	30	4J	ND	1J	30	76

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-11R	5	16,000	44,000	11,000	300	260

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-41	10	<4.5	<4.5	<4.5	<4.5	32
	20	<4.7	<4.7	<4.7	<4.7	15
	30	<4.8	<4.8	<4.8	8.7	44

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-40	10	<4.6	<4.6	<4.6	<4.6	12
	20	<4.4	<4.4	<4.4	<4.4	3.2J
	30	<4.6	<4.6	<4.6	14	57

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-39	10	<4.9	<4.9	<4.9	<4.9	3.3J
	20	<4.6	<4.6	<4.6	3.2J	17
	30	3.1J	2.2J	16	86	39

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-20	10	187	ND	30J	777	4,840
	20	466	38J	98J	1,295	2,640
	27	6,873	1,319	1,353J	18,504	22,002

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-12	10	2,600	1,200	26,000	7,000	16,000
	20	13,000	15,000	16,000	41,000	12,000
	30	760	560	1,500	2,000	720

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-4	15	2,200J	890J	4,200J	3,000J	3,000J
	25	6.9J	2.3J	12J	9.9J	10J
	35	6.5J	3.6J	9.5J	10J	7.3J
	45	6.7J	2J	14J	9J	5.7J

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-1	15	44J	5.2J	110J	79J	57J
	25	11J	<2	17J	11J	5.9J
	35	<2	<2	3.4J	2.4J	3.5J
	35 (DUP)	<2	<2	<2	4.5J	<2
	45	8.2J	<2	32J	46J	2.1J

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-19	10	1,154	ND	ND	389	1,100
	10 (DUP)	1,473	ND	ND	463	1,320
	20	120	ND	ND	80	205
	30	71	ND	ND	33	91

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-13	10	37,000	24,000	49,000	<320	<320
	20	6,200	4,900	4,600	270	110
	30	13,000	12,000	6,400	420	67

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-3	15	65J	<2	85J	12J	33J
	25	6J	<2	11J	3.6J	3.9J
	35	6,600J	1,200J	7,900J	6,000J	1,900J
	45	54J	5.4J	ND	55J	8.3J

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-17	10	80	<17	110	2,500	4,600
	10 (DUP)	80	<17	100	2,400	4,200
	20	<0.88	<0.88	1.6	40	42
	30	<8.8	<8.8	12	2,600	160

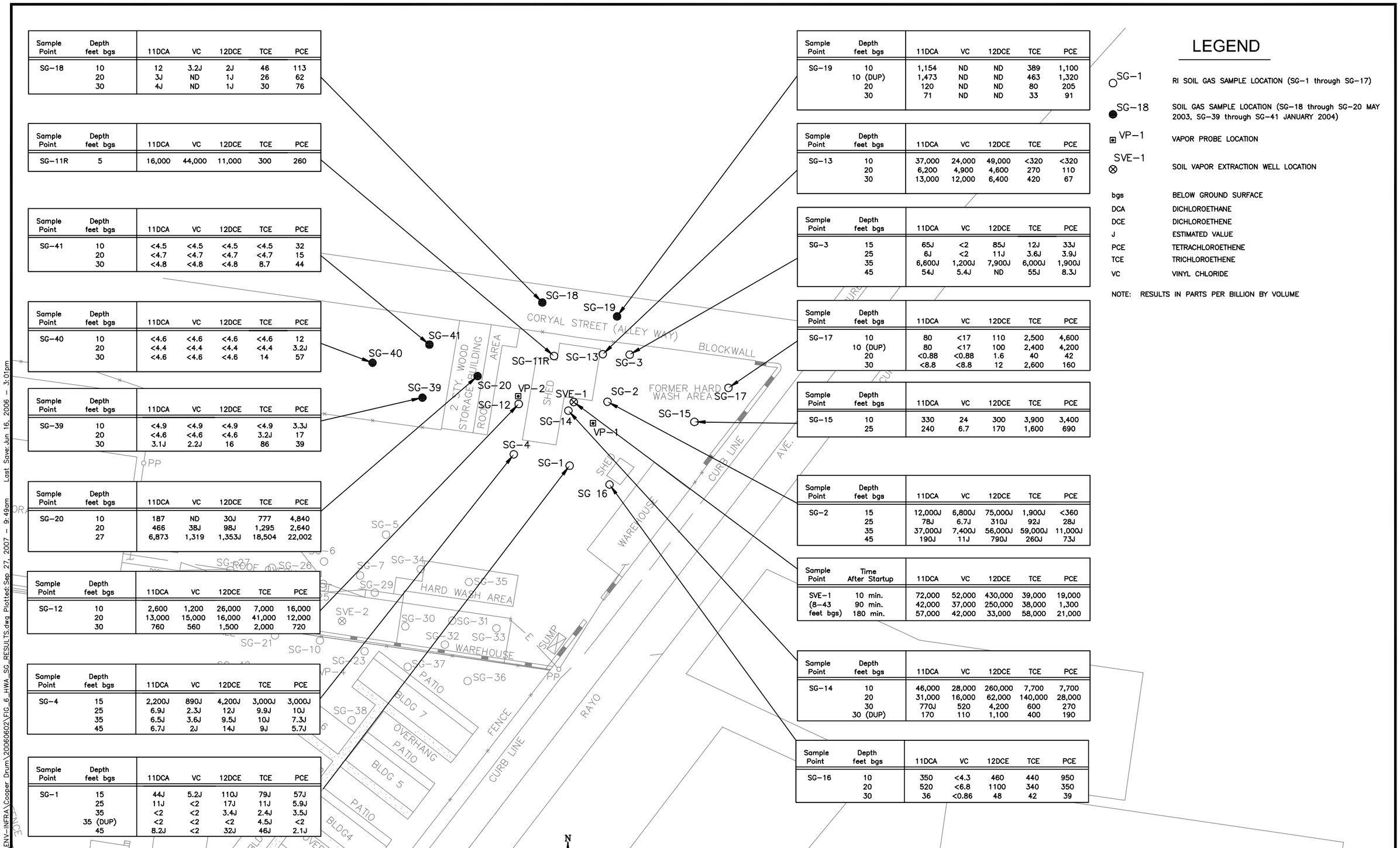
Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-15	10	330	24	300	3,900	3,400
	25	240	6.7	170	1,600	690

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-2	15	12,000J	6,800J	75,000J	1,900J	<360
	25	78J	6.7J	310J	92J	28J
	35	37,000J	7,400J	56,000J	59,000J	11,000J
	45	190J	11J	790J	260J	73J

Sample Point	Time After Startup	11DCA	VC	12DCE	TCE	PCE
SVE-1	10 min.	72,000	52,000	430,000	39,000	19,000
(8-43	90 min.	42,000	37,000	250,000	38,000	1,300
feet bgs)	180 min.	57,000	42,000	33,000	58,000	21,000

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-14	10	46,000	28,000	260,000	7,700	7,700
	20	31,000	16,000	62,000	140,000	28,000
	30	770J	520	4,200	600	270
	30 (DUP)	170	110	1,100	400	190

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-16	10	350	<4.3	460	440	950
	20	520	<6.8	1100	340	350
	30	36	<0.86	48	42	39



LEGEND

SG-1	RI SOIL GAS SAMPLE LOCATION (SG-1 through SG-17)
SG-18	SOIL GAS SAMPLE LOCATION (SG-18 through SG-20 MAY 2003, SG-39 through SG-41 JANUARY 2004)
VP-1	VAPOR PROBE LOCATION
SVE-1	SOIL VAPOR EXTRACTION WELL LOCATION
bgs	BELOW GROUND SURFACE
DCA	DICHLOROETHANE
DCE	DICHLOROETHENE
J	ESTIMATED VALUE
PCE	TETRACHLOROETHENE
TCE	TRICHLOROETHENE
VC	VINYL CHLORIDE

NOTE: RESULTS IN PARTS PER BILLION BY VOLUME

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SACRAMENTO, CA 95833

Cooper Drum Company
South Gate, California

FIGURE 6
Soil Gas Sampling Results
Former Hard Wash Area

H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\FIG_6_HWA_SG_RESULTS.dwg Plotted:Sep 27, 2007 - 9:49am Last Save:Jun 16, 2006 - 3:01pm

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-28	10	39,273	854J	426J	9,622	11,587
	20	7,609	2,483	170J	2,776	3,960
	30	4,909	1,319	115J	1,813	1,467

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-26	10	1,350	18.6J	10J	407	939
	10 (DUP)	1,448	17.5J	11J	426	909
	20	3,191	306	63J	1,036	748

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-8	10	11	<4.4	<4.4	24	1,200
	20	5.7	<1.8	2.3	7.1	22
	30	<0.98	<0.98	<0.98	1.1	18

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-27	10	61	ND	ND	133	1,349
	23	810	62J	17J	389	587

Sample Point	Depth feet-bgs	11DCA	VC	12DCE	TCE	PCE
SG-24*	12.5	204	7.7J	ND	278	953
	25	589	54	9J	146	220

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-25*	12.5	54,001	931J	526J	15,173	12,468

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-9	10	<0.88	<0.82	<0.82	<0.82	7.2

Sample Point	Time After Startup	11DCA	VC	12DCE	TCE	PCE
SVE-2 (8-48 feet bgs)	10 min.	160,000	600J	7,800	90,000	230,000
	30 min.	130,000	1,100	17,000	79,000	180,000
	100 min.	93,000	<2,100	9,500	52,000	150,000
	230 min.	77,000	<1,200	10,000	50,000	170,000

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-21	10	1,080	ND	ND	241	587
	20	10,800	1,086	155J	2,776	2,347
	30	23	0.8J	ND	15	29

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-42	10	40	<21	<21	<21	17J
	20	400	<23	<23	30	35
	30	100	26	7.8J	61	140

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-22	10	442	ND	ND	105	1,056
	10 (DUP)	466	ND	ND	98	1,056
	20	12,028	299J	105J	2,220	2,200
	30	5,646	144J	ND	833	352

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-38	10	22	<4.4	<4.4	5.1	51
	10 (DUP)	12	<4.4	<4.4	3J	31
	20	79	<4.4	<4.4	12	29
	30	4.7	<4.4	<4.4	<4.4	1.2J

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-6	15	7,800J	1,200J	<180	570J	5,100J
	25	<2	<2	<2	<2	<2
	35	2.5J	<2	<2	<2	2.6J
	45	3J	<2	<2	<2	2.2J

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-7	10	1,100	21	300	160	470
	20	960	<34	280	130	260

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-5	15	43J	<5.6	19J	62J	27J
	25	<2	<2	<2	<2	<2
	25 (DUP)	<2	<2	<2	2J	<2
	35	<2	<2	<2	<2	<2
	45	<2	<2	3.9J	3J	2.6J

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-29	10	49,092	543J	376J	22,205	42,536
	20	5,155	466J	70J	2,035	2,200
	30	14,482	2,638	276J	6,661	3,520

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-34	10	2.7J	<4.2	<4.2	6.4	14
	20	1.6J	<4.3	<4.3	2.2J	1.7J
	20	27	4.4	5.2	19	9
	30	280	200	34	260	27

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-35	10	0.95J	<5.0	<5.0	3.2J	36
	20	0.66J	<4.4	<4.4	1.6J	1.3J
	30	12	10	11	36	1.6J

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-30	10	9.6	<4.5	<4.5	6.2	17
	20	150	6.7	3.7J	78	87
	30	510	53	16J	230	170
	30	340	43	13J	160	100

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-31	10	<4.6	<4.6	<4.6	<4.6	11
	20	5.8	<4.8	<4.8	2.4J	5.1
	30	24	14	2.9J	24	4.1J

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-33	10	<4.6	<4.6	<4.6	<4.6	13
	20	<4.7	<4.7	<4.7	<4.7	1.7J
	30	0.84J	0.84J	0.82J	6.3	1J

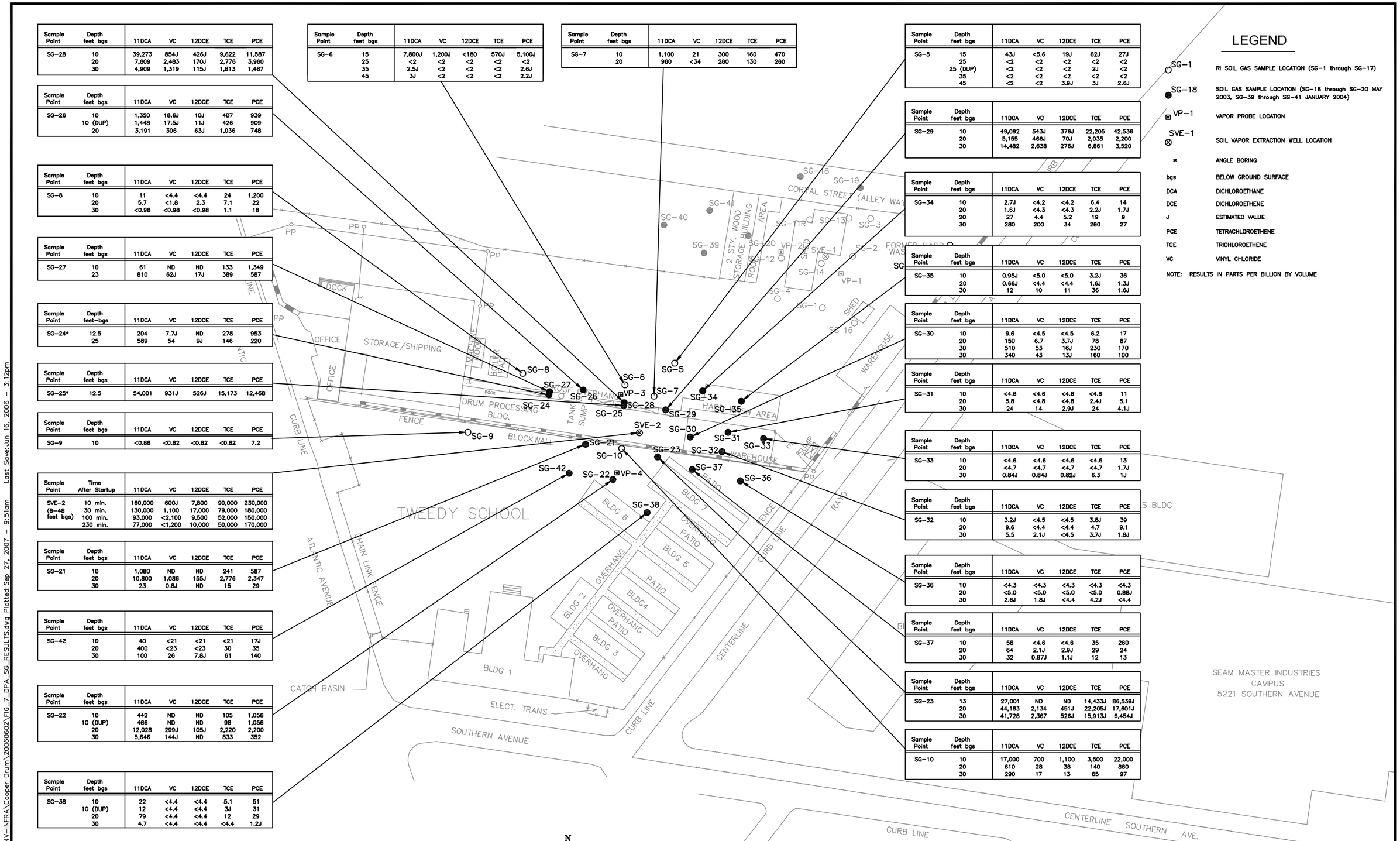
Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-32	10	3.2J	<4.5	<4.5	3.8J	39
	20	9.6	<4.4	<4.4	4.7	9.1
	30	5.5	2.1J	<4.5	3.7J	1.8J

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-36	10	<4.3	<4.3	<4.3	<4.3	<4.3
	20	<5.0	<5.0	<5.0	<5.0	0.88J
	30	2.6J	1.8J	<4.4	4.2J	<4.4

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-37	10	58	<4.6	<4.6	35	260
	20	64	2.1J	2.9J	29	24
	30	32	0.87J	1.1J	12	13

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-23	13	27,001	ND	ND	14,433J	86,539J
	20	44,183	2,134	451J	22,205J	17,601J
	30	41,728	2,367	526J	15,913J	6,454J

Sample Point	Depth feet bgs	11DCA	VC	12DCE	TCE	PCE
SG-10	10	17,000	700	1,100	3,500	22,000
	20	610	28	38	140	860
	30	290	17	13	65	97



LEGEND

SG-1	RI SOIL GAS SAMPLE LOCATION (SG-1 through SG-17)
SG-18	SOIL GAS SAMPLE LOCATION (SG-18 through SG-20 MAY 2003, SG-39 through SG-41 JANUARY 2004)
VP-1	VAPOR PROBE LOCATION
SVE-1	SOIL VAPOR EXTRACTION WELL LOCATION
*	ANGLE BORING
bgs	BELOW GROUND SURFACE
DCA	DICHLOROETHANE
DCE	DICHLOROETHENE
J	ESTIMATED VALUE
PCE	TETRACHLOROETHENE
TCE	TRICHLOROETHENE
VC	VINYL CHLORIDE

NOTE: RESULTS IN PARTS PER BILLION BY VOLUME

N W E S

100 50 0 100 200

SCALE IN FEET

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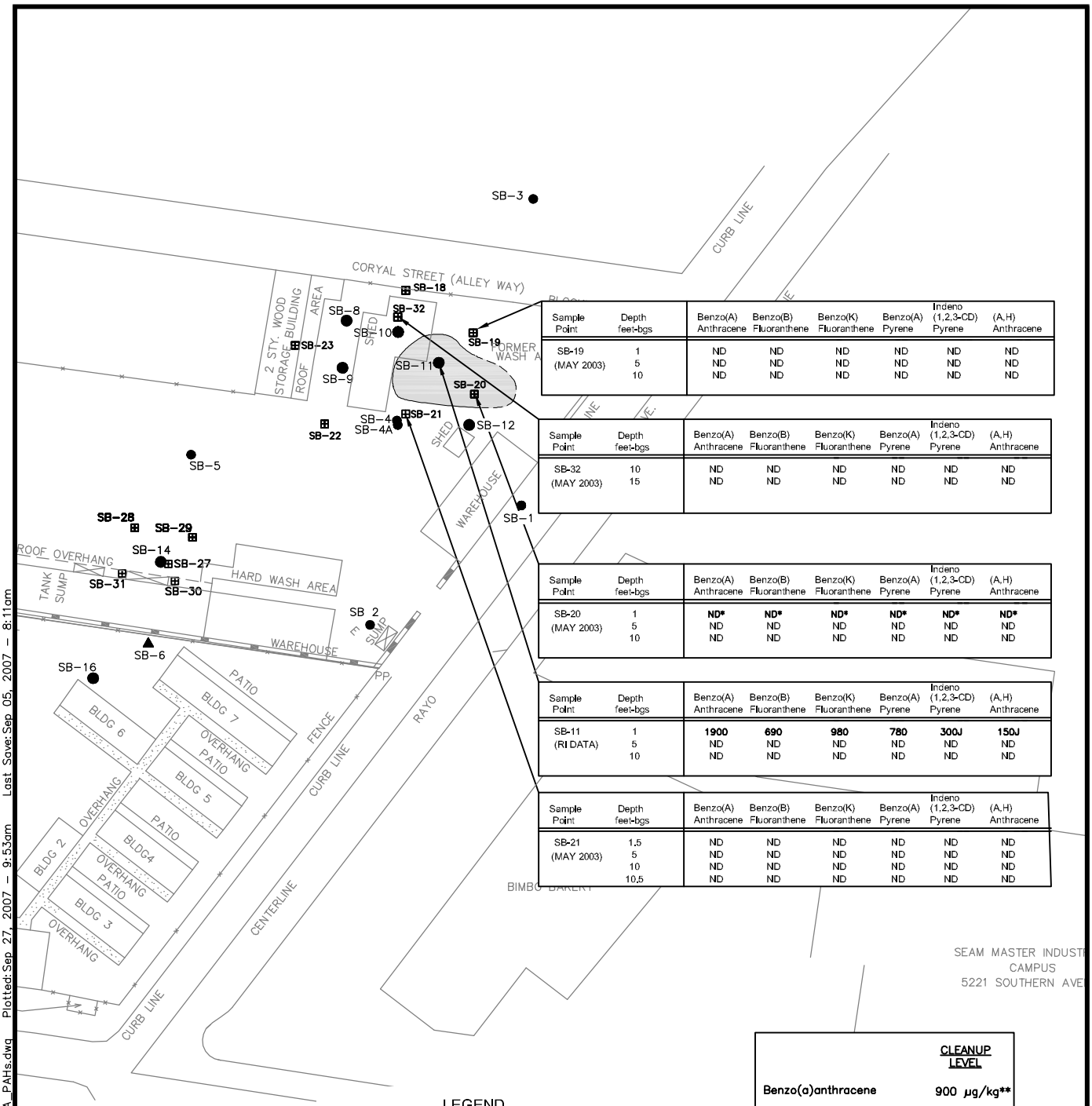
SACRAMENTO, CA 95833

Cooper Drum Company
South Gate, California

FIGURE 7
Soil Gas Sampling Results
Drum Processing Area

H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\FIG_7_DPA_SG_RESULTS.dwg Plotted:Sep 27, 2007 - 9:51am Last Save:Jun 16, 2006 - 3:12pm



Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	(A,H) Anthracene
SB-19	1	ND	ND	ND	ND	ND	ND
(MAY 2003)	5	ND	ND	ND	ND	ND	ND
	10	ND	ND	ND	ND	ND	ND

Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	(A,H) Anthracene
SB-32	10	ND	ND	ND	ND	ND	ND
(MAY 2003)	15	ND	ND	ND	ND	ND	ND

Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	(A,H) Anthracene
SB-20	1	**ND***	**ND***	**ND***	**ND***	**ND***	**ND***
(MAY 2003)	5	ND	ND	ND	ND	ND	ND
	10	ND	ND	ND	ND	ND	ND

Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	(A,H) Anthracene
SB-11	1	**1900**	**690**	**980**	**780**	**300J**	**150J**
(RI DATA)	5	ND	ND	ND	ND	ND	ND
	10	ND	ND	ND	ND	ND	ND

Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	(A,H) Anthracene
SB-21	1.5	ND	ND	ND	ND	ND	ND
(MAY 2003)	5	ND	ND	ND	ND	ND	ND
	10	ND	ND	ND	ND	ND	ND
	10.5	ND	ND	ND	ND	ND	ND

	CLEANUP LEVEL
Benzo(a)anthracene	900 µg/kg**
Benzo(b)fluorathene	900 µg/kg**
Benzo(k)fluorathene	900 µg/kg**
Benzo(a)pyrene	900 µg/kg**
Ideno(1,2,3-cd)pyrene	900 µg/kg**
Dibenz(a,h)anthracene	900 µg/kg**

LEGEND

SB-6 ▲ BECHTEL SOIL BORING LOCATION AND DEPTH-DISCRETE GROUNDWATER SAMPLING LOCATION (SB-6 and SB-7) DRILLED NOVEMBER 1996

SB-1 ● SOIL BORING LOCATION AND DEPTH-DISCRETE GROUNDWATER SAMPLING LOCATION (SB-1 through SB-5 AND SB-8 THROUGH SB17)

SB-24 ⊞ SOIL BORING LOCATION DRILLED MAY 2003

ESTIMATED AREA ABOVE CLEANUP LEVEL

ONLY ANALYTICAL RESULTS FOR ANALYTES WITH CONCENTRATIONS EXCEEDING OR EQUAL TO CALCULATED CLEANUP LEVELS ARE REPRESENTED

Analytical results in micrograms per kilogram (µg/kg) or parts per million

bgs Below Ground Surface
J Estimated Value
ND not detected at or above laboratory detection limits

*Denotes detection limit above calculated cleanup level.

**See text for calculating cleanup level

Bold – results above calculated cleanup level for PAHs.

N W E S

0 120

Approximate Scale in Feet

H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\060602_FIG_8_HWA_PAHs.dwg Plotted:Sep 27, 2007 - 9:53am Last Save:Sep 05, 2007 - 8:11am

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Cooper Drum Company
South Gate, California

FIGURE 8
Soil Sampling Results - PAHs
Former Hard Wash Area

Sample Point	Depth feet-bgs	Aroclor-1254	Aroclor-1260
SB-32 (MAY 2003)	10	82	ND
	15	ND	ND

Sample Point	Depth feet-bgs	Aroclor-1254	Aroclor-1260
SB-18 (MAY 2003)	1	ND	ND
	4	ND	ND
	5	ND	ND
	10	ND	ND

Sample Point	Depth feet-bgs	Aroclor-1254	Aroclor-1260
SB-10 (RI DATA)	1	330	160NJ
	5	ND	ND
	10	**2100NJ**	ND

Sample Point	Depth feet-bgs	Aroclor-1254	Aroclor-1260
SB-19 (MAY 2003)	1	ND	ND
	5	ND	ND
	10	ND	ND

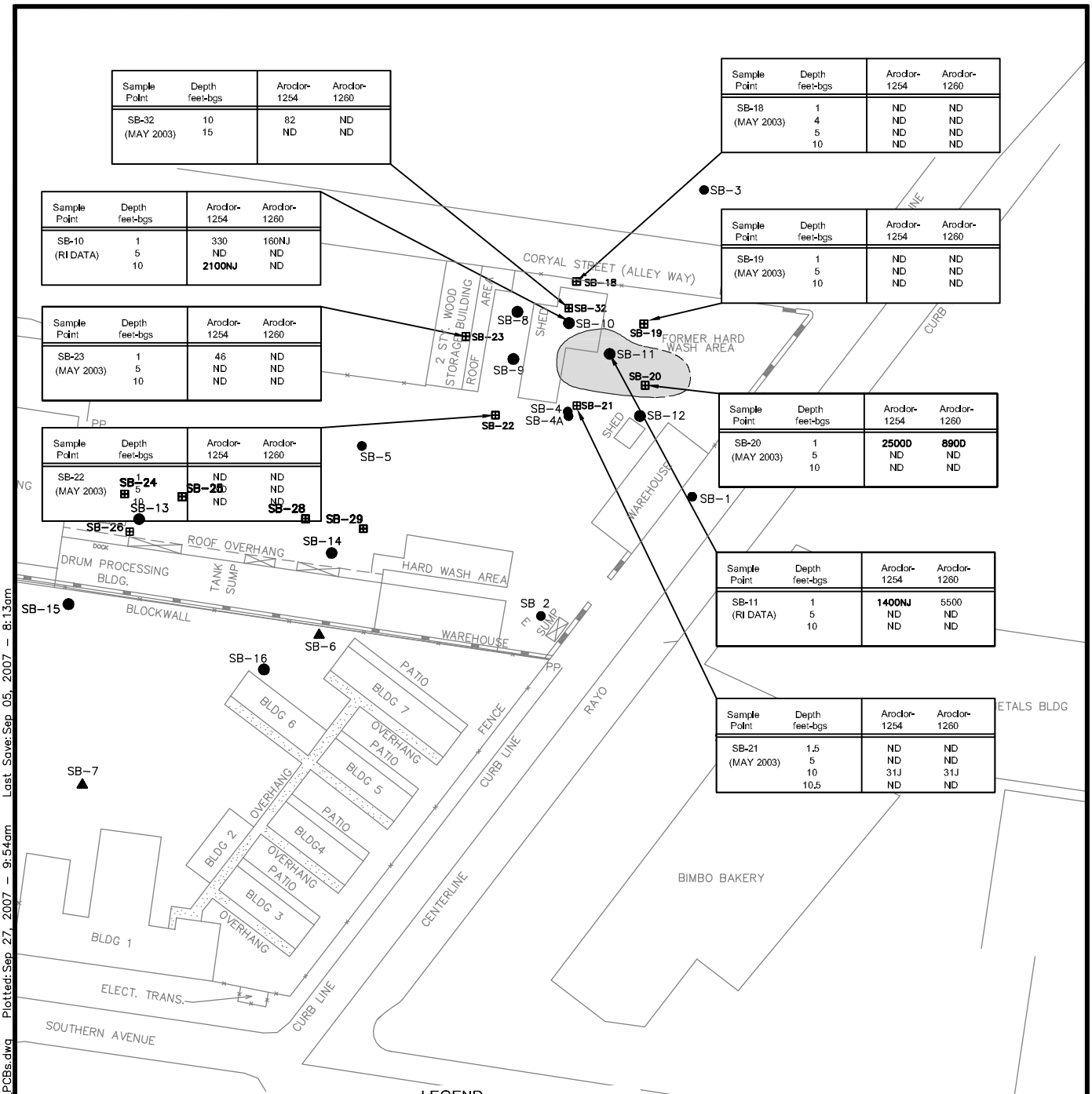
Sample Point	Depth feet-bgs	Aroclor-1254	Aroclor-1260
SB-23 (MAY 2003)	1	46	ND
	5	ND	ND
	10	ND	ND

Sample Point	Depth feet-bgs	Aroclor-1254	Aroclor-1260
SB-20 (MAY 2003)	1	**2500D**	**890D**
	5	ND	ND
	10	ND	ND

Sample Point	Depth feet-bgs	Aroclor-1254	Aroclor-1260
SB-22 (MAY 2003)	1	ND	ND
	5	ND	ND
	10	ND	ND

Sample Point	Depth feet-bgs	Aroclor-1254	Aroclor-1260
SB-11 (RI DATA)	1	**1400NJ**	5500
	5	ND	ND
	10	ND	ND

Sample Point	Depth feet-bgs	Aroclor-1254	Aroclor-1260
SB-21 (MAY 2003)	1.5	ND	ND
	5	ND	ND
	10	31J	31J
	10.5	ND	ND



LEGEND

SB6 ▲ BECHTEL SOIL BORING LOCATION AND DEPTH-DISCRETE GROUNDWATER SAMPLING LOCATION (SB-6 and SB-7) DRILLED NOVEMBER 1996

SB-1 ● SOIL BORING LOCATION AND DEPTH-DISCRETE GROUNDWATER SAMPLING LOCATION (SB-1 through SB-5 AND SB-8 THROUGH SB-17)

SB-24 ⊞ SOIL BORING LOCATION DRILLED MAY 2003

ESTIMATED AREA ABOVE CLEANUP LEVEL. DASHED WHERE LATERAL AND/OR VERTICAL EXTENT IS UNDEFINED.

ONLY ANALYTICAL RESULTS FOR ANALYTES WITH CONCENTRATIONS EXCEEDING OR EQUAL TO CLEANUP LEVELS ARE REPRESENTED

	CLEANUP LEVEL
Aroclor-1254	870 µg/kg
Aroclor-1260	870 µg/kg

Analytical results in micrograms per kilogram (µg/kg) or parts per million

bgs Below Ground Surface
J Estimated Value
N Tentatively Identified
ND not detected at or above laboratory detection limits
Bold – results above cleanup level for PCBs.

N W E S

0 120

Approximate Scale in Feet

H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\060602_FIG_9_HWA_PCBs.dwg Plotted:Sep 27, 2007 - 9:54am Last Saved:Sep 05, 2007 - 8:13am

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SACRAMENTO, CA 95833

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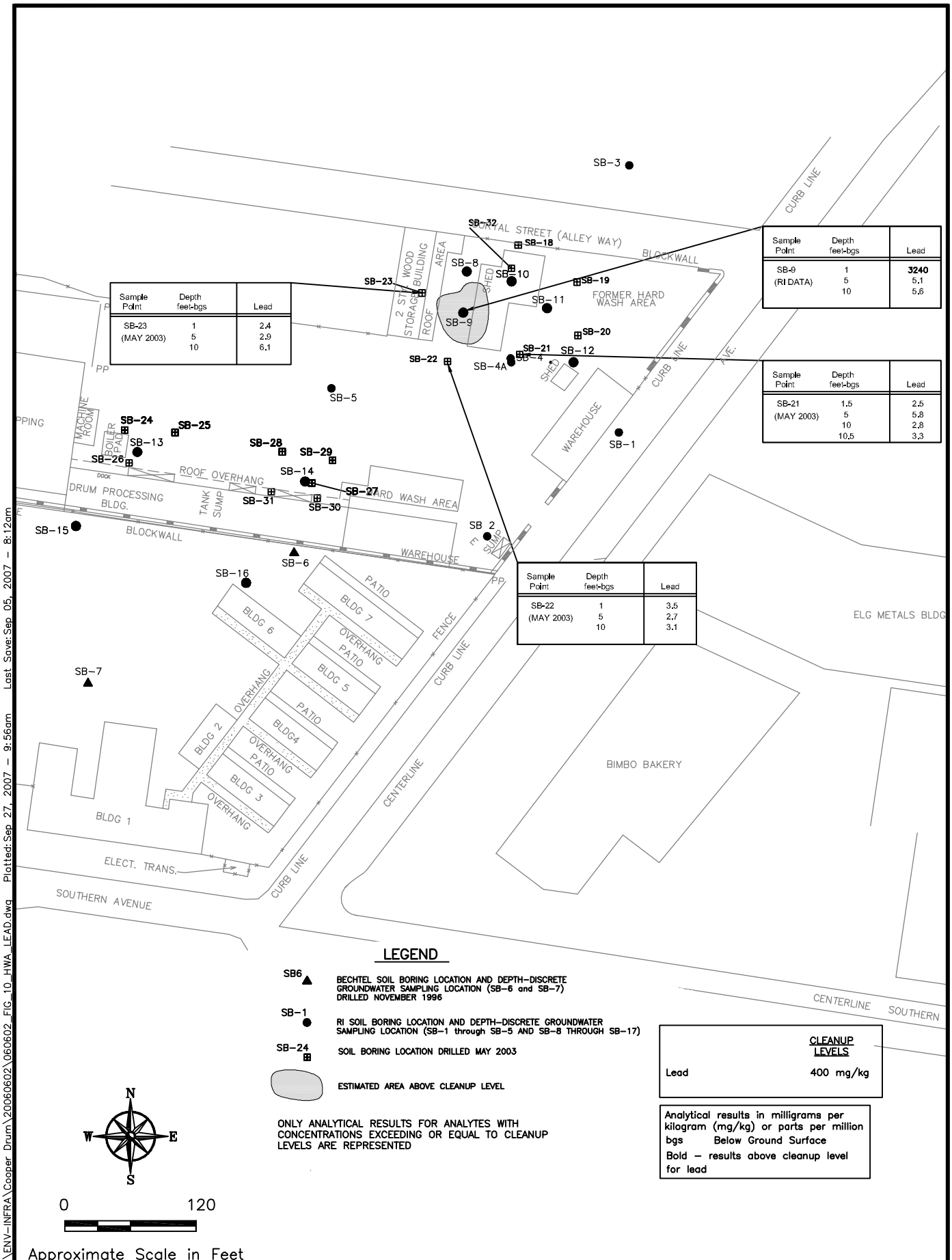
South Gate, California

FIGURE 9
Soil Sampling Results - PCBs
Former Hard Wash Area



Sample Point	Depth feet-bgs	Lead
SB-23 (MAY 2003)	1	2.4
	5	2.9
	10	6.1

Sample Point	Depth feet-bgs	Lead
SB-9 (RI DATA)	1	**3240**
	5	5.1
	10	5.6

Sample Point	Depth feet-bgs	Lead
SB-21 (MAY 2003)	1.5	2.5
	5	5.8
	10	2.8
	10.5	3.3

Sample Point	Depth feet-bgs	Lead
SB-22 (MAY 2003)	1	3.5
	5	2.7
	10	3.1

LEGEND

SB6 ▲ BECHTEL SOIL BORING LOCATION AND DEPTH-DISCRETE GROUNDWATER SAMPLING LOCATION (SB-6 and SB-7) DRILLED NOVEMBER 1996

SB-1 ● RI SOIL BORING LOCATION AND DEPTH-DISCRETE GROUNDWATER SAMPLING LOCATION (SB-1 through SB-5 AND SB-8 THROUGH SB-17)

SB-24 ⊞ SOIL BORING LOCATION DRILLED MAY 2003

ESTIMATED AREA ABOVE CLEANUP LEVEL

ONLY ANALYTICAL RESULTS FOR ANALYTES WITH CONCENTRATIONS EXCEEDING OR EQUAL TO CLEANUP LEVELS ARE REPRESENTED

	CLEANUP LEVELS
Lead	400 mg/kg

Analytical results in milligrams per kilogram (mg/kg) or parts per million
bgs Below Ground Surface
Bold – results above cleanup level for lead

H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\060602_FIG_10_HWA_LEAD.dwg Plotted:Sep 27, 2007 – 9:56am Last Save:Sep 05, 2007 – 8:12am

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SACRAMENTO, CA 95833

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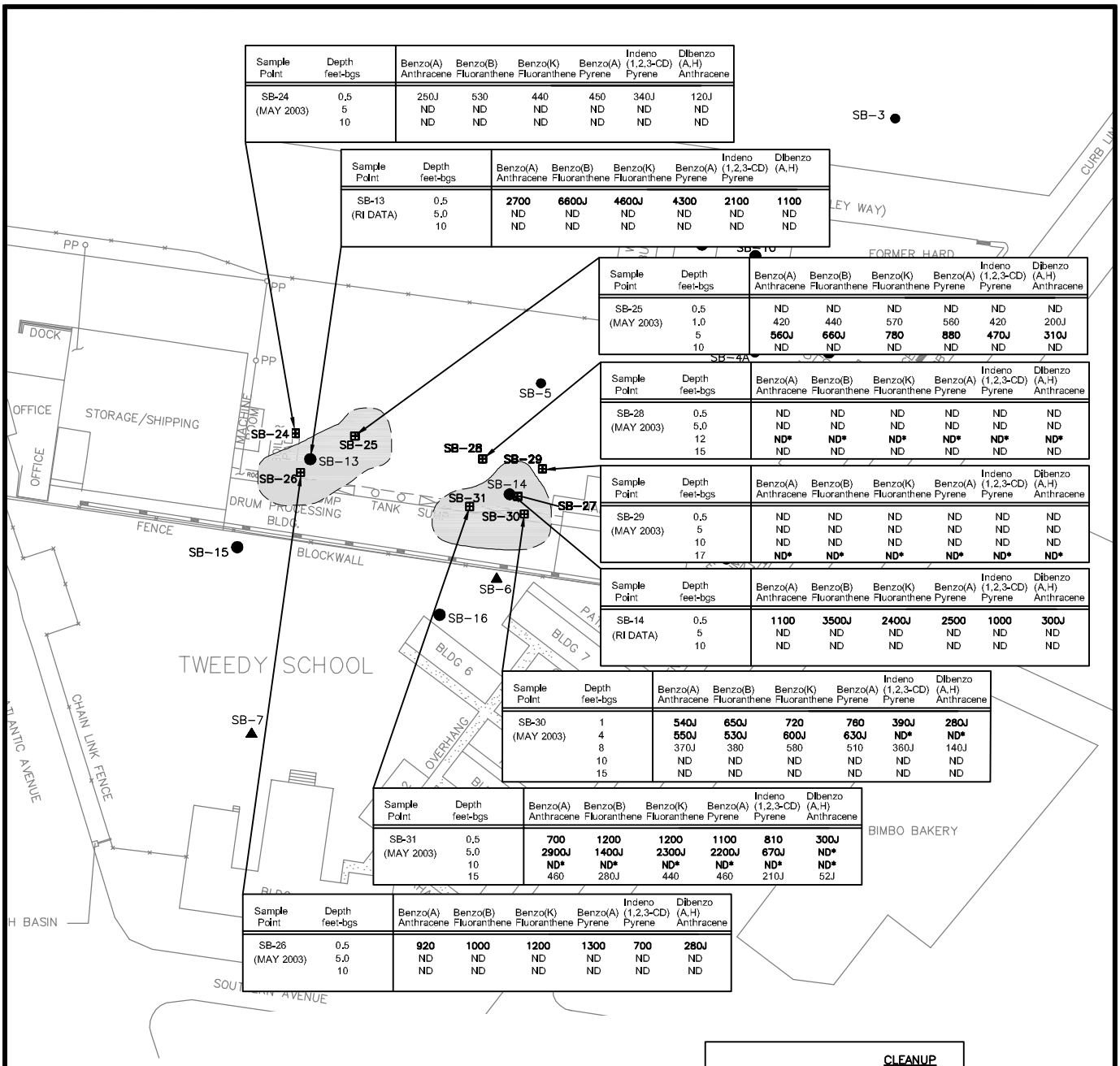
South Gate, California

FIGURE 10
Soil Sampling Results - Lead
Former Hard Wash Area



Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	Dibenzo (A,H) Anthracene
SB-24	0.5	250J	530	440	450	340J	120J
(MAY 2003)	5	ND	ND	ND	ND	ND	ND
	10	ND	ND	ND	ND	ND	ND

Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	Dibenzo (A,H)
SB-13	0.5	**2700**	**6600J**	**4600J**	**4300**	**2100**	**1100**
(RI DATA)	5.0	ND	ND	ND	ND	ND	ND
	10	ND	ND	ND	ND	ND	ND

Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	Dibenzo (A,H) Anthracene
SB-25	0.5	ND	ND	ND	ND	ND	ND
(MAY 2003)	1.0	420	440	570	560	420	200J
	5	**560J**	**660J**	**780**	**880**	**470J**	**310J**
	10	ND	ND	ND	ND	ND	ND

Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	Dibenzo (A,H) Anthracene
SB-28	0.5	ND	ND	ND	ND	ND	ND
(MAY 2003)	5.0	ND	ND	ND	ND	ND	ND
	12	**ND***	**ND***	**ND***	**ND***	**ND***	**ND***
	15	ND	ND	ND	ND	ND	ND

Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	Dibenzo (A,H) Anthracene
SB-29	0.5	ND	ND	ND	ND	ND	ND
(MAY 2003)	5	ND	ND	ND	ND	ND	ND
	10	ND	ND	ND	ND	ND	ND
	17	**ND***	**ND***	**ND***	**ND***	**ND***	**ND***

Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	Dibenzo (A,H) Anthracene
SB-14	0.5	**1100**	**3500J**	**2400J**	**2500**	**1000**	**300J**
(RI DATA)	5	ND	ND	ND	ND	ND	ND
	10	ND	ND	ND	ND	ND	ND

Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	Dibenzo (A,H) Anthracene
SB-30	1	**540J**	**650J**	**720**	**760**	**390J**	**280J**
(MAY 2003)	4	**550J**	**530J**	**600J**	**630J**	**ND***	**ND***
	8	370J	380	580	510	360J	140J
	10	ND	ND	ND	ND	ND	ND
	15	ND	ND	ND	ND	ND	ND

Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	Dibenzo (A,H) Anthracene
SB-31	0.5	**700**	**1200**	**1200**	**1100**	**810**	**300J**
(MAY 2003)	5.0	**2900J**	**1400J**	**2300J**	**2200J**	**670J**	**ND***
	10	**ND***	**ND***	**ND***	**ND***	**ND***	**ND***
	15	460	280J	440	460	210J	52J

Sample Point	Depth feet-bgs	Benzo(A) Anthracene	Benzo(B) Fluoranthene	Benzo(K) Fluoranthene	Benzo(A) Pyrene	Indeno (1,2,3-CD) Pyrene	Dibenzo (A,H) Anthracene
SB-26	0.5	**920**	**1000**	**1200**	**1300**	**700**	**280J**
(MAY 2003)	5.0	ND	ND	ND	ND	ND	ND
	10	ND	ND	ND	ND	ND	ND

LEGEND

SB6 ▲ BECHTEL SOIL BORING LOCATION AND DEPTH-DISCRETE GROUNDWATER SAMPLING LOCATION (SB-6 and SB-7) DRILLED NOVEMBER 1996.

SB-1 ● RI SOIL BORING LOCATION AND DEPTH-DISCRETE GROUNDWATER SAMPLING LOCATION (SB-1 through SB-5 AND SB-8 THROUGH SB17).

SB-24 ⊞ SOIL BORING LOCATION DRILLED MAY 2003

ESTIMATED AREA ABOVE CLEANUP LEVEL. DASHED WHERE LATERAL AND/OR VERTICAL EXTENT IS UNDEFINED.

ONLY ANALYTICAL RESULTS FOR ANALYTES WITH CONCENTRATIONS EXCEEDING OR EQUAL TO CALCULATED CLEANUP LEVELS ARE REPRESENTED

	CLEANUP LEVELS
Benzo(a)anthracene	900 µg/kg**
Benzo(b)fluorathene	900 µg/kg**
Benzo(k)fluorathene	900 µg/kg**
Benzo(a)pyrene	900 µg/kg**
Ideno(1,2,3-cd)pyrene	900 µg/kg**
Dibenz(a,h)anthracene	900 µg/kg**

Analytical results in micrograms per kilogram (µg/kg) or parts per million

bgs Below Ground Surface

J Estimated Value

ND not detected at or above laboratory detection limits

Bold – results above calculated cleanup level for PAHs.

*Denotes detection limit above cleanup level.

**See text for calculating cleanup level

N W E S

0 120

Approximate Scale in Feet

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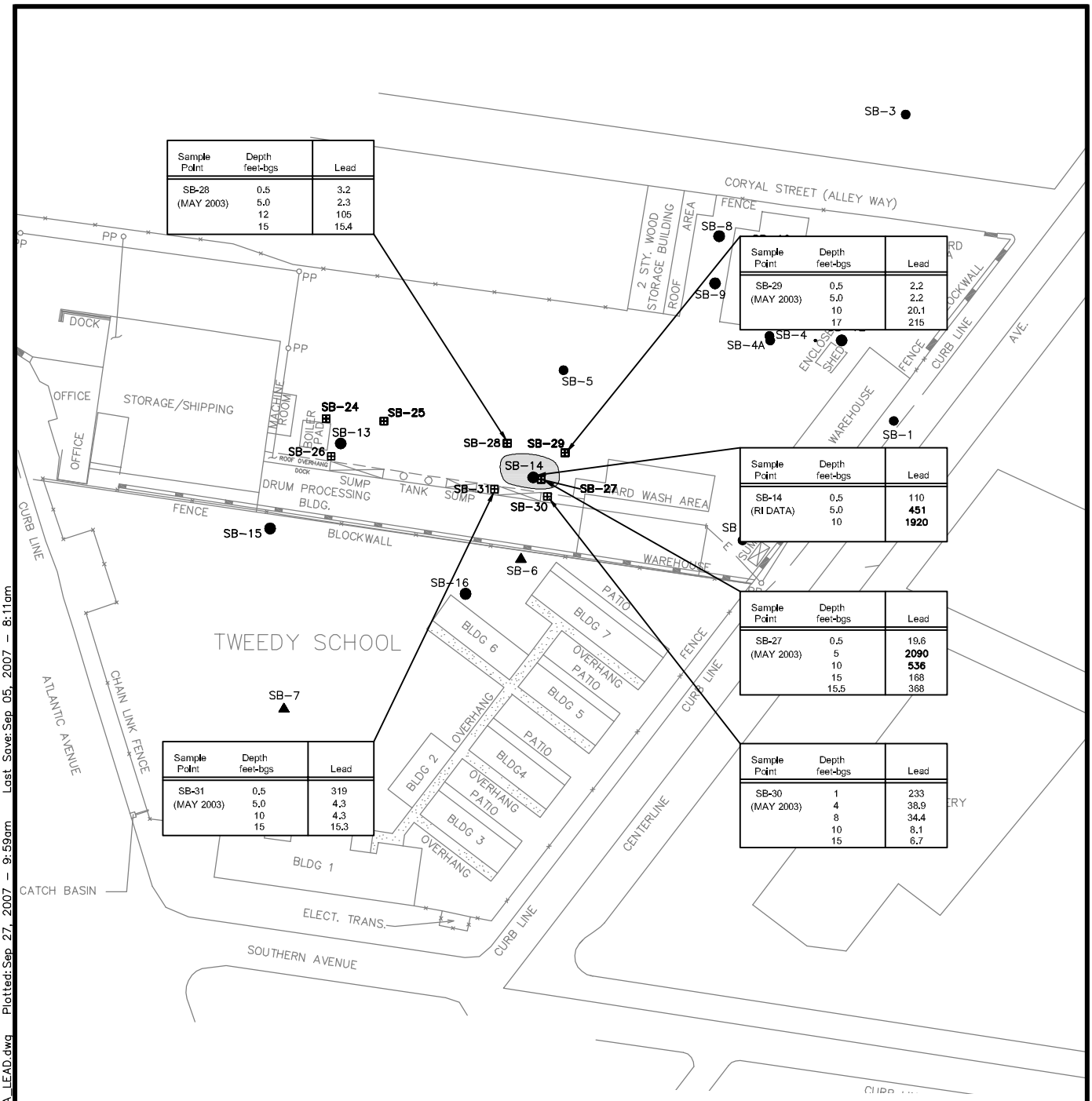
SACRAMENTO, CA 95833

Cooper Drum Company
South Gate, California

FIGURE 11
Soil Sampling Results - PAHs
Drum Processing Area

H:\CADD\CURRENT\ENV-INFRA\COOPER DRUM\20060602\060602_FIG_11_DPA_PAHS.DWG



Sample Point	Depth feet-bgs	Lead
SB-28 (MAY 2003)	0.5	3.2
	5.0	2.3
	12	105
	15	15.4

Sample Point	Depth feet-bgs	Lead
SB-29 (MAY 2003)	0.5	2.2
	5.0	2.2
	10	20.1
	17	215

Sample Point	Depth feet-bgs	Lead
SB-14 (RI DATA)	0.5	110
	5.0	**451**
	10	**1920**

Sample Point	Depth feet-bgs	Lead
SB-27 (MAY 2003)	0.5	19.6
	5	**2090**
	10	**536**
	15	168
	15.5	368

Sample Point	Depth feet-bgs	Lead
SB-31 (MAY 2003)	0.5	319
	5.0	4.3
	10	4.3
	15	15.3

Sample Point	Depth feet-bgs	Lead
SB-30 (MAY 2003)	1	233
	4	38.9
	8	34.4
	10	8.1
	15	6.7

LEGEND

SB6 ▲ BECHTEL SOIL BORING LOCATION AND DEPTH-DISCRETE GROUNDWATER SAMPLING LOCATION (SB-6 and SB-7) DRILLED NOVEMBER 1996

SB-1 ● RI SOIL BORING LOCATION AND DEPTH-DISCRETE GROUNDWATER SAMPLING LOCATION (SB-1 through SB-5 AND SB-8 THROUGH SB-17)

SB-24 ⊞ SOIL BORING LOCATION DRILLED MAY 2003

ESTIMATED AREA ABOVE CLEANUP LEVEL

ONLY ANALYTICAL RESULTS FOR ANALYTES WITH CONCENTRATIONS EXCEEDING OR EQUAL TO CLEANUP LEVELS ARE REPRESENTED

	CLEANUP LEVELS
Lead	400 mg/kg

Analytical results in milligrams per kilogram (mg/kg) or parts per million

bgs Below Ground Surface

Bold – results above cleanup level for lead

ND – not detected at or above laboratory detection limits

N W E S

0 120

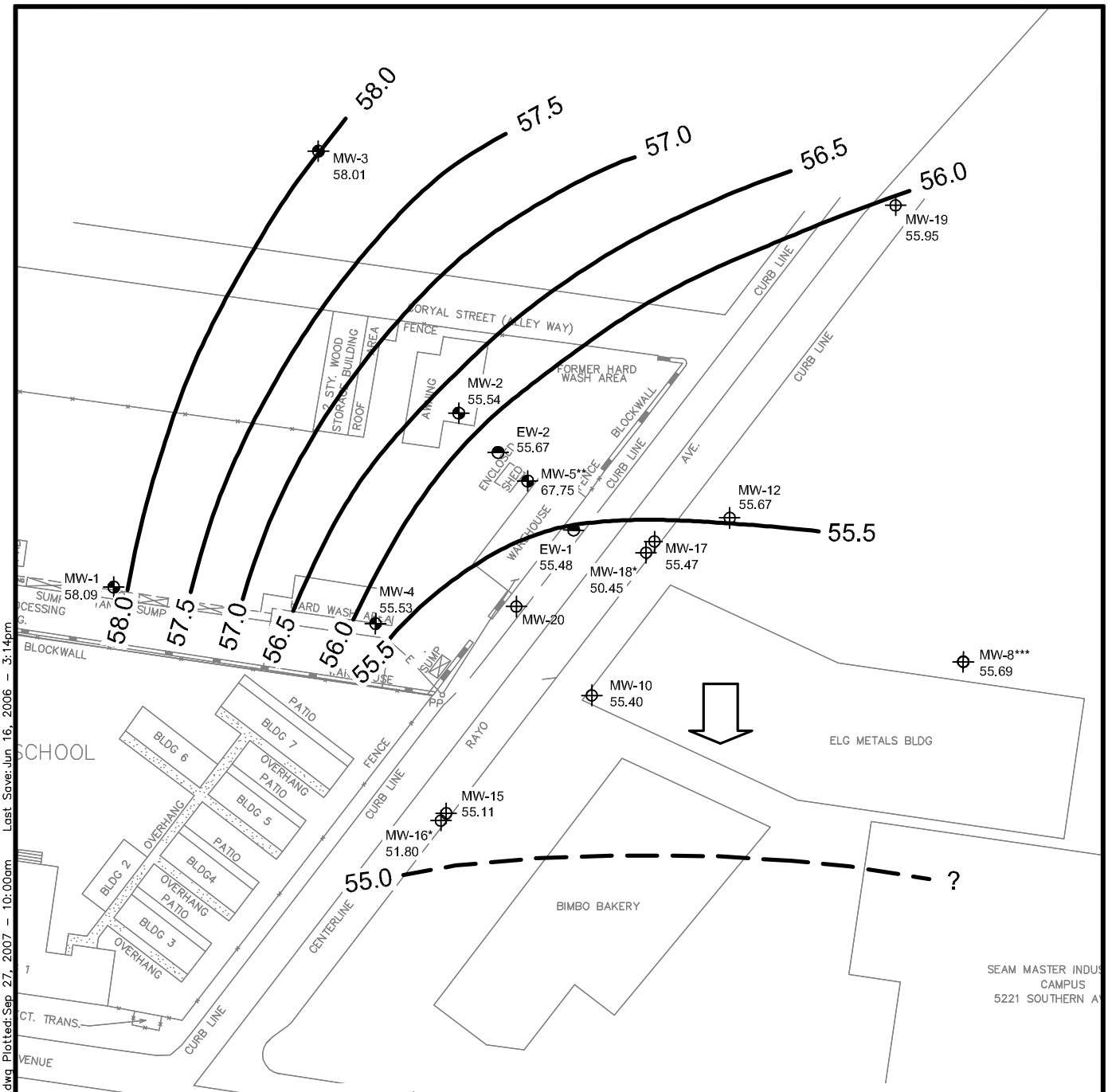
Approximate Scale in Feet

URS
2870 GATEWAY OAKS DRIVE, SUITE 300
SACRAMENTO, CA 95833

Cooper Drum Company
South Gate, California

FIGURE 12
Soil Sampling Results - Lead
Drum Processing Area

H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\060602_FIG_12_DPA_LEAD.dwg Plotted:Sep 27, 2007 - 9:59am Last Save:Sep 05, 2007 - 8:11am



On-site groundwater monitor well location (MW-1 through MW-5)

Off-site groundwater monitor well location (MW-8, MW-10, MW-12, and MW-14 through MW-19)

Groundwater extraction well location

55.67 Groundwater elevation in feet above mean sea level

* Wells MW-16 and MW-18 completed in deeper Exposition Aquifer were not used for contouring

** Well MW-5 completed in perched zone and shallow aquifer was not used for contouring

*** Water level data not used in contouring. However, data indicates the presence of a southwest flow direction in this area

NM Not measured

Estimated groundwater flow direction

—55.0— Groundwater surface elevation contour. Dashed and queried where inferred.

H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\FIG_13_GWGRAD_MAY03.dwg Plotted:Sep 27, 2007 - 10:00am Last Save:Jun 16, 2006 - 3:14pm

URS
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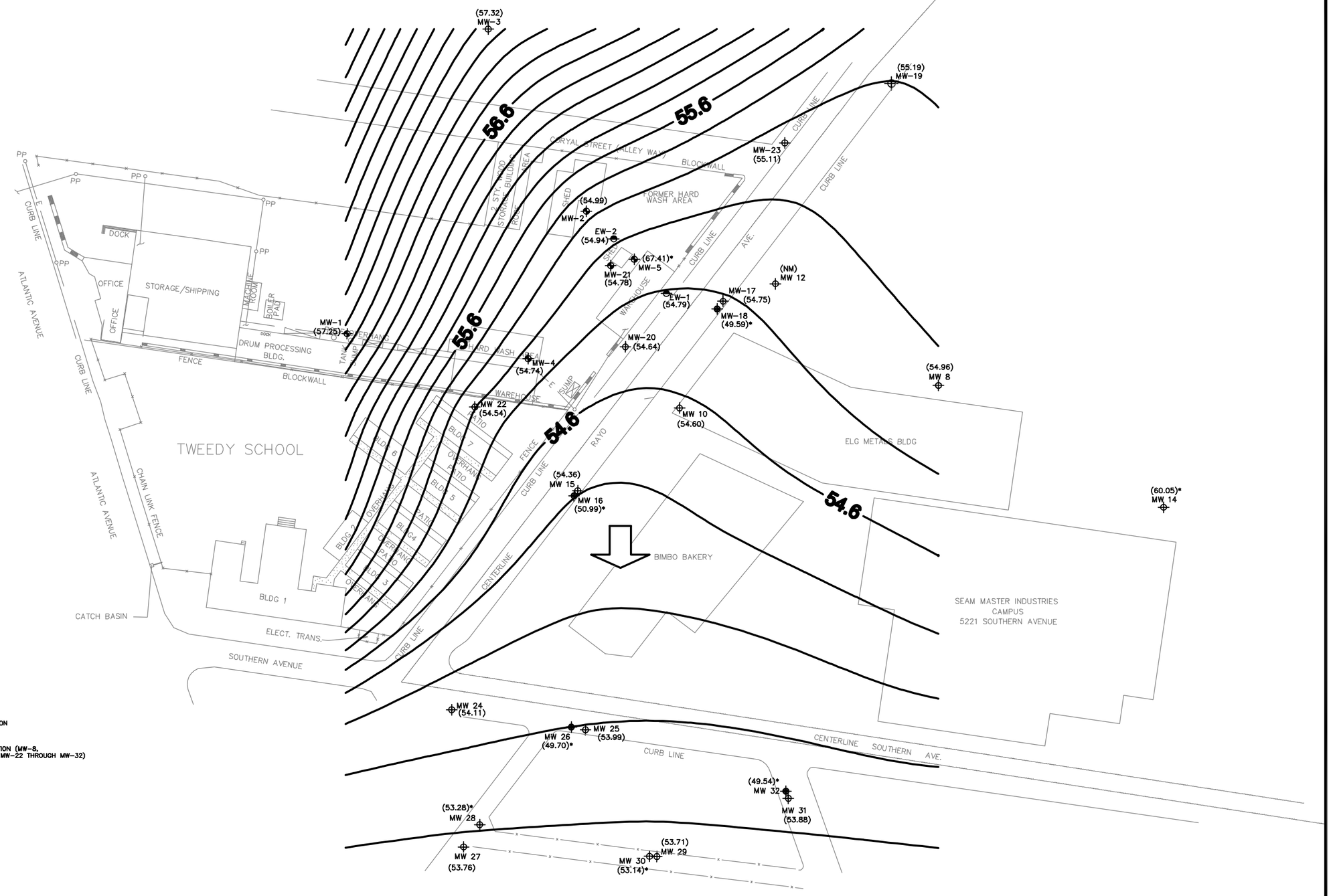
Cooper Drum Company
South Gate, California

FIGURE 13
Groundwater Elevations
May 1, 2003



LEGEND

- ON-SITE GROUNDWATER MONITORING WELL LOCATION (MW-1 through MW-5, and MW-21)
- OFF-SITE GROUNDWATER MONITORING WELL LOCATION (MW-8, MW-10, MW-12, MW-14 THROUGH MW-20, and MW-22 THROUGH MW-32)
- GROUNDWATER EXTRACTION WELL LOCATION
- WELL COMPLETED IN DEEPER EXPOSITION AQUIFER (MW-16, MW-18, MW-26, MW-32)
- (54.29) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- - 54.6 - GROUNDWATER ELEVATION CONTOUR
- NM NOT MEASURED
- * NOT USED IN CONTOURING
- GROUNDWATER FLOW DIRECTION

N W E S

120 60 0 120 240

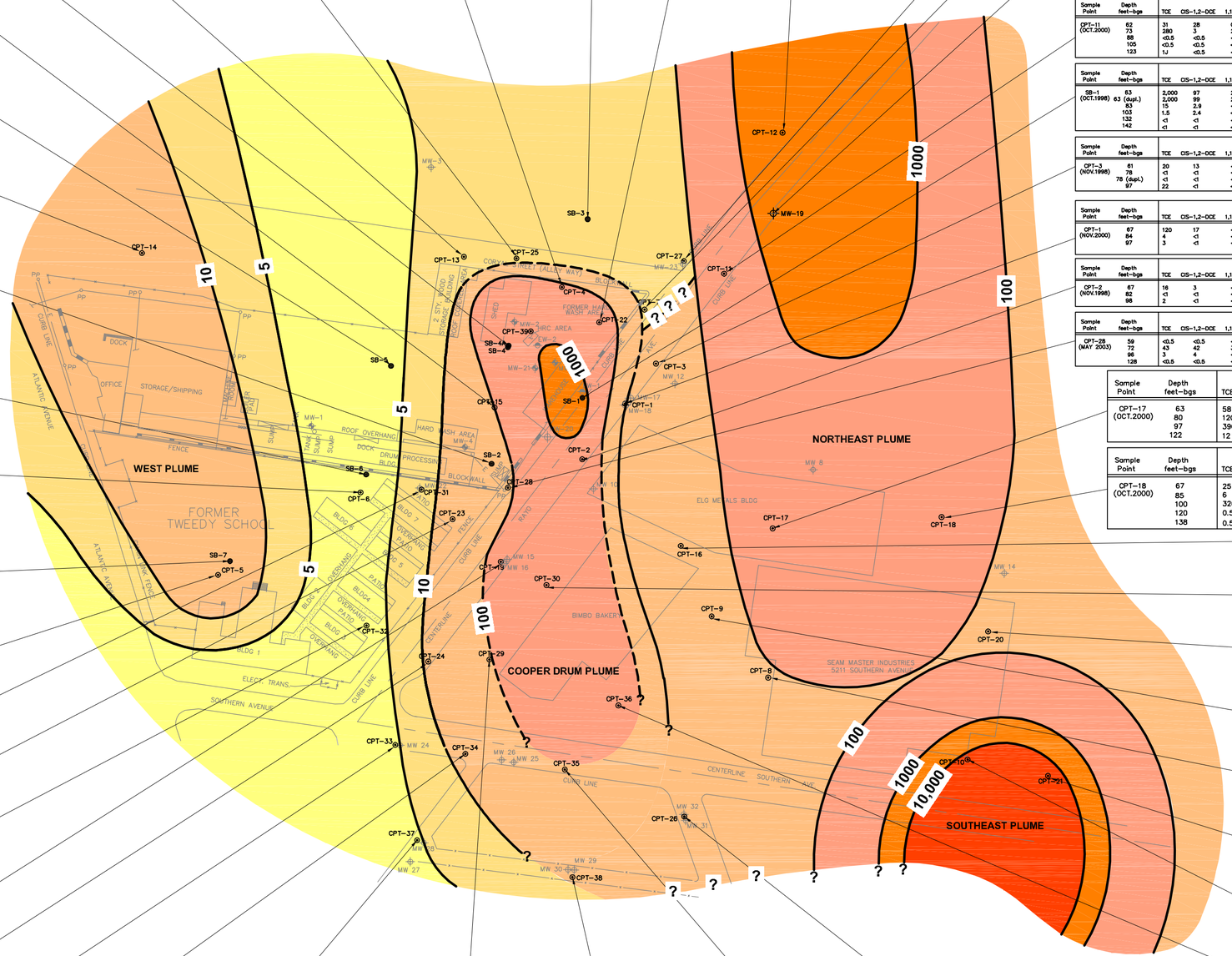
SCALE IN FEET

URS
2870 GATEWAY OAKS DRIVE, SUITE 300
SACRAMENTO, CA 95833

Cooper Drum Company
South Gate, California

FIGURE 14
Groundwater Elevations
December 18, 2003

H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\FIG_14_GWGRAD_DEC03.dwg Plotted:Sep 27, 2007 - 10:04am Last Save:Jun 16, 2006 - 3:16pm



LEGEND

- CPT-1 — CONE PENETROMETER TESTING LOCATION AND DEPTH DISCRETE GROUNDWATER SAMPLING LOCATION (CPT-1 THROUGH CPT-39)
- MW-1 — ON-SITE GROUNDWATER MONITORING WELL LOCATION (MW-1, MW-2, MW-4, MW-5, and MW-21)
- EW-1 — GROUNDWATER EXTRACTION WELL LOCATION
- MW-8 — OFF-SITE GROUNDWATER MONITORING WELL LOCATION (MW-3, MW-8, MW-10, MW-12, AND MW-14 THROUGH MW-20, AND MW-22 THROUGH MW-32)
- SB-1 — SOIL BORING LOCATION AND DEPTH DISCRETE GROUNDWATER SAMPLING LOCATION
- —10— TCE GROUNDWATER CONTOUR IN MICROGRAMS PER LITER

TCE	Trichloroethene
CIS-1,2-DCE	cis-1,2-Dichloroethene
1,1-DCA	1,1-Dichloroethane
ug/L	Micrograms per Liter (parts per billion – ppb)
bgs	Below Ground Surface
N	Tentatively Identified
J	Estimated Value

TCE

- > 1 ug/L – < 5 ug/L
- > 5 ug/L – < 10 ug/L
- > 10 ug/L – < 100 ug/L
- > 100 ug/L – 1,000 ug/L
- > 1,000 ug/L – 10,000 ug/L
- > 10,000 ug/L

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
SB-4 (OCT.1998)	92	2.2	2.9	<1
	102	1.9	1.7	<1
	117	<1	<1	<1
	117 (dupl.)	<1	<1	<1
	142	<1	<1	<1
	162	<1	<1	<1
	192	<1	<1	<1
SB-4A (OCT.1998)	66	100	130	19
	66 (dupl.)	130	160	NA
	83	<1	<1	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-15 (OCT.2000)	62	<0.5	0.9	<0.5
	80	49	86	9
	100	9	20	0.5
	130	<0.5	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
SB-5 (OCT.1998)	63	<1	<1	<1
	63 (dupl.)	<1	<1	<1
	82.5	<1	<1	<1
	82.5 (dupl.)	<1	<1	<1
	102	<1	3.6	<1
	131	<1	<1	<1
	131 (dupl.)	<1	<1	<1
	151	<1	<1	<1
	181	<1	<1	<1
	201	<1	<1	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-14 (OCT.2000)	62	<0.5	0.5J	<0.5
	90	25	0.8	<0.5
	117	0.3J	<0.5	<0.5
	137	1	<1	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
SB-2 (OCT.1998)	62	<1	<1	<1
	82	<1	<1	<1
	90	<1	5.7	<1
	100	3.2	8.7	<1
	130	<1	<1	<1
	140	<1	<1	<1
	160	<1	<1	<1
	191	<1	<1	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
SB-6 (OCT./NOV.1998)	76	<1	<1	NA
	76 (dup)	<1	<1	NA
	90	2	0.4	NA
	90 (dup)	3	0.4	NA
	105	<1	<1	NA
	115	<1	<1	NA
	120	<1	<1	NA
	131	<1	<1	NA
	165	<1	<1	NA
	205	<1	<1	NA

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-6 (MAR.1999)	63	<1	<1	2
	78	<1	<1	0.6J
	78 (dupl.)	<1	<1	<1
	95	<1	<1	1
	111	<1	<1	2

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
SB-7 (OCT./NOV.1996)	70	<1	<1	NA
	70 (dup)	<1	<1	NA
	80	<1	<1	NA
	80 (dup)	<1	<1	NA
	70 (dup)	<1	<1	NA
	90	39	2	NA
	100	43	2	NA
	120	<1	<1	NA
	130	<1	<1	NA
	140	<1	<1	NA
	160	<1	<1	NA

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-5 (MAR.1999)	65	<1	<1	<1
	81	<1	<1	<1
	98	14	<1	<1
	116	<1	<1	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-31 (MAY 2003)	69	16	7.0	<0.5
	90	<0.5	<0.5	<0.5
	108	<0.5	2J	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-23 (NOV.2000)	67	0.8J	0.9J	<1
	82	46	43	<1
	102	23	25	<1
	120	<1	<1	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-32 (MAY 2003)	73	0.3J	<0.5	<0.5
	90	2.0	0.3J	<0.5
	111	<0.5	<0.5	<0.5
	128	<0.5	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-19 (OCT.2000)	62	170	41	19
	80	960	210	49
	100	32	22	2
	125	6	4	1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-24 (OCT.2000)	62	13	8	<1
	80	32	25	<1
	98	12	13	0.7J
	120	<1	<1	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-33 (MAY 2003)	72	5	2	<0.5
	88	1	0.7	<0.5
	102	4	16J	<0.5
	126	<0.5	<0.5J	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-13 (OCT.2000)	62	42	30	<0.5
	73	<1	0.4J	<0.5
	92	<0.5	<0.5	<0.5
	130	<0.5	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-25 (MAY 2003)	72	<0.5	2J	2
	99	<0.5	0.4J	<0.5
	114	<0.5	0.3J	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-4 (NOV.1998)	61	220	270	4
	74	<1	<1	<1
	96	<1	<1	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
SB-3 (SEPT.1998)	62	8.1	7.4	<1
	82	<1	<1	<1
	103	<1	<1	<1
	132	<1	<1	<1
	151	<1	<1	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-22 (NOV.2000)	68	350	200	2
	78	<1	<1	<1
	92	<1	<1	<1
	116	<1	<1	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-27 (MAY 2003)	62	6.5	4.8	1.3
	78	2.4	0.59	<0.5
	103	4.1	0.52	<0.5
	126	<0.5	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-12 (OCT.2000)	62	50	12	<0.5
	73	4,400	25	21
	99	<0.5	<0.5	<0.5
	125	1J	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-7 (MAR.1999)	64	9	5	<1
	81	46	<1	<1
	97	<1	<1	<1
	97 (dupl.)	<1	<1	<1
	116	100	4	2

Sample Point	Screen Interval feet-bgs	TCE	CIS-1,2-DCE	Sample Date
MW-19	67-77	5,700	33	Feb. 2001
MW-19	67-77	1,000	<50	May 2003
MW-19	67-77	450	11	Jan. 2004

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-11 (OCT.2000)	62	31	28	0.9
	73	280	3	2
	88	<0.5	<0.5	<0.5
	105	<0.5	<0.5	<0.5
	123	1J	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
SB-1 (OCT.1998)	63	2,000	97	2.1
	63 (dupl.)	2,000	99	2.3
	83	15	2.9	<1
	103	1.5	2.4	<1
	132	<1	<1	<1
	142	<1	<1	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-3 (NOV.1998)	61	20	13	<1
	78	<1	<1	<1
	78 (dupl.)	<1	<1	<1
	97	22	<1	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-1 (NOV.2000)	67	120	17	<1
	84	4	<1	<1
	97	3	<1	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-2 (NOV.1998)	67	18	3	<1
	82	<1	<1	<1
	98	2	<1	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-28 (MAY 2003)	59	<0.5	<0.5	<0.5
	72	43	42	3
	96	3	4	<0.5
	128	<0.5	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-17 (OCT.2000)	63	58	27	<0.5
	80	120	10	<0.5
	97	390	16	0.4J
	122	12	2	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-18 (OCT.2000)	67	25	11	<0.5
	85	6	0.5J	<0.5
	100	320	14J	<25
	120	0.5J	<0.5	<0.5
	138	0.5J	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-16 (OCT.2000)	60	<0.5	<0.5	<0.5
	72	13	5	0.7
	95	13	0.5J	<0.5
	120	1	0.5J	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-30 (MAY 2003)	64	0.4J	<0.5	<0.5
	80	130	30	1.1
	98	23	7.4	<0.5
	128	<0.5	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-20 (OCT.2000)	64	24	9	<0.5
	80	31	14	<0.5
	97	5	3	<0.5
	118	22	14	1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-9 (MAR.1999)	60	<1	2	<1
	80	16	7	<1
	97	43	6	<1
	119	9	5	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-8 (MAR.1999)	65	21	240	<1
	80	18	2	<1
	96	90	8	<1
	107	2	2	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-21 (OCT.2000)	63	8,000	4,900	<250
	87	11,000	4,900	<250
	100	12	8	<0.5
	120	1	1	<0.5
	140	1	1	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-10 (MAR.1999)	65	16,000	4,500	14
	85	5	12	<1
	102	38	31	<1
	102(dupl.)	80	80	<1
	120	2	2	<1

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-36 (MAY 2003)	58	<0.5	<0.5	<0.5
	72	9	2	<0.5
	89	140	5	2
	108	<0.5	2	<0.5
	128	<0.5	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-34 (MAY 2003)	72	33	17	<0.5
	90	15	14	0.8
	108	<0.5	<0.5	<0.5
	128	<0.5	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-37 (MAY 2003)	72	4.4	3.4	<0.5
	90	1.4	3.5	<0.5
	112	<0.5	<0.5	<0.5
	128	<0.5	0.3J	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-29 (MAY 2003)	60	<0.5	<0.5	<0.5
	74	52	61	1.6
	91	29	29	2.6
	109	<0.5	7.4	<0.5
	128	<0.5	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-38 (MAY 2003)	72	14	4J	<0.5
	90	10	8J	<0.5
	113	<0.5	<0.5	<0.5
	129	<0.5	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-35 (MAY 2003)	58	<0.5	<0.5	<0.5
	72	20	4	<0.5
	90	35	4	<2.0
	110	<0.5	<0.5	<0.5
	128	<0.5	<0.5	<0.5

Sample Point	Depth feet-bgs	TCE	CIS-1,2-DCE	1,1-DCA
CPT-26 (MAY 2003)	72	99	17	<0.5
	88	110	11	0.7
	102	240	12	<0.5
	125	0.3J	<0.5	<0.5

120 60 0 120 240

SCALE IN FEET

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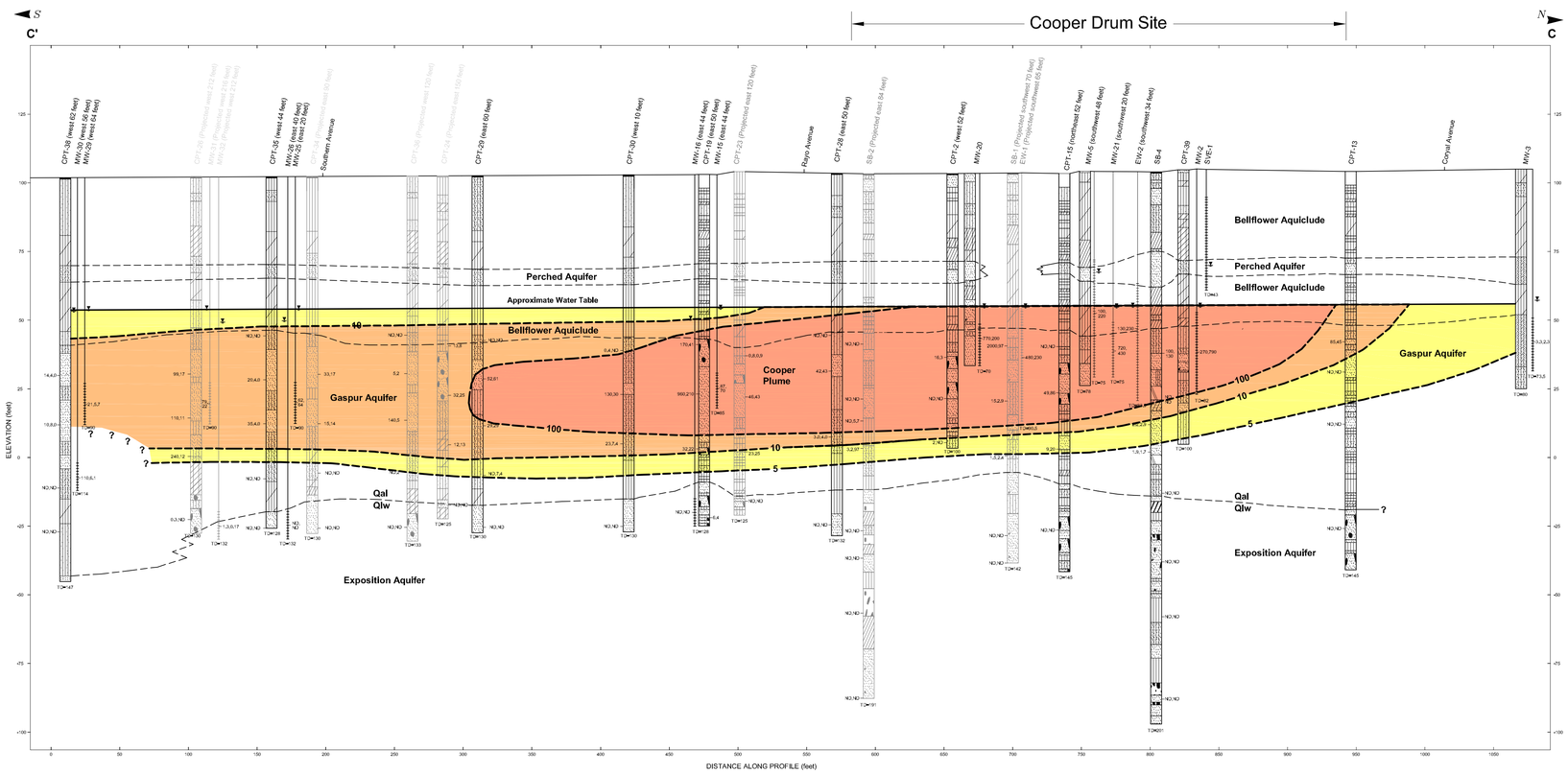
FIGURE 15
Depth Discrete
Groundwater Sample VOC Analytical Results

H:\CAD\Current\ENV-INFRA\Cooper Drum\20060602\060602_FIG-15_CPT data.dwg User:David Larson Plotted:Sep 27, 2007 – 10:06am Last Saved:Jun 16, 2006 – 11:34am



EXPLANATION:

USCS Silt
USCS Clayey Silt
USCS Well-graded Sand
USCS Poorly-graded Gravel
USCS High Plasticity Clay
USCS Sandy Silt
USCS Silty Clay
USCS Low Plasticity Silty Clay
USCS Poorly-graded Sand with Silt
USCS Well-graded Gravel
USCS Silty Sand
USCS Poorly-graded Sand
Asphalt
USCS Low to High Plasticity Clay
USCS Well-graded Sand with Gravel
USCS Low Plasticity Clay
USCS Poorly-graded Gravelly Sand
Sandstone
USCS Clayey Sand
USCS Poorly-graded Sand with Gravel

TCE
> 5 ug/L - < 10 ug/L
> 10 ug/L - < 100 ug/L
> 100 ug/L - 1,000 ug/L

Note:
Isoconcentration contours were generated using TCE data from wells that are within 60 feet or less of the cross section line.

CPT-1
Borehole Number
Borehole Lithology
Well Construction
Depth-discrete Hydropunch Sampling. TCE,DCE12c results in ppb
Screened Interval with TCE and DCE12c Results in ppb
83.28
Water Level December 2003.

TCE = Trichloroethene
DCE12c = cis-1,2- Dichloroethene
ND = Not Detected
Qal = Recent Alluvium
Qlw = Upper Pleistocare Lakewood Formation

0 50
Horizontal Scale (feet)
Scale: 1" = 50'
Vertical Exaggeration: 2x
Scale: 1" = 25'

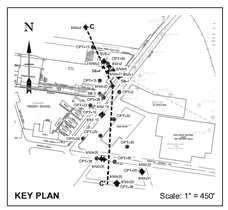


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FIGURE 16
Geologic Cross Section C-C'

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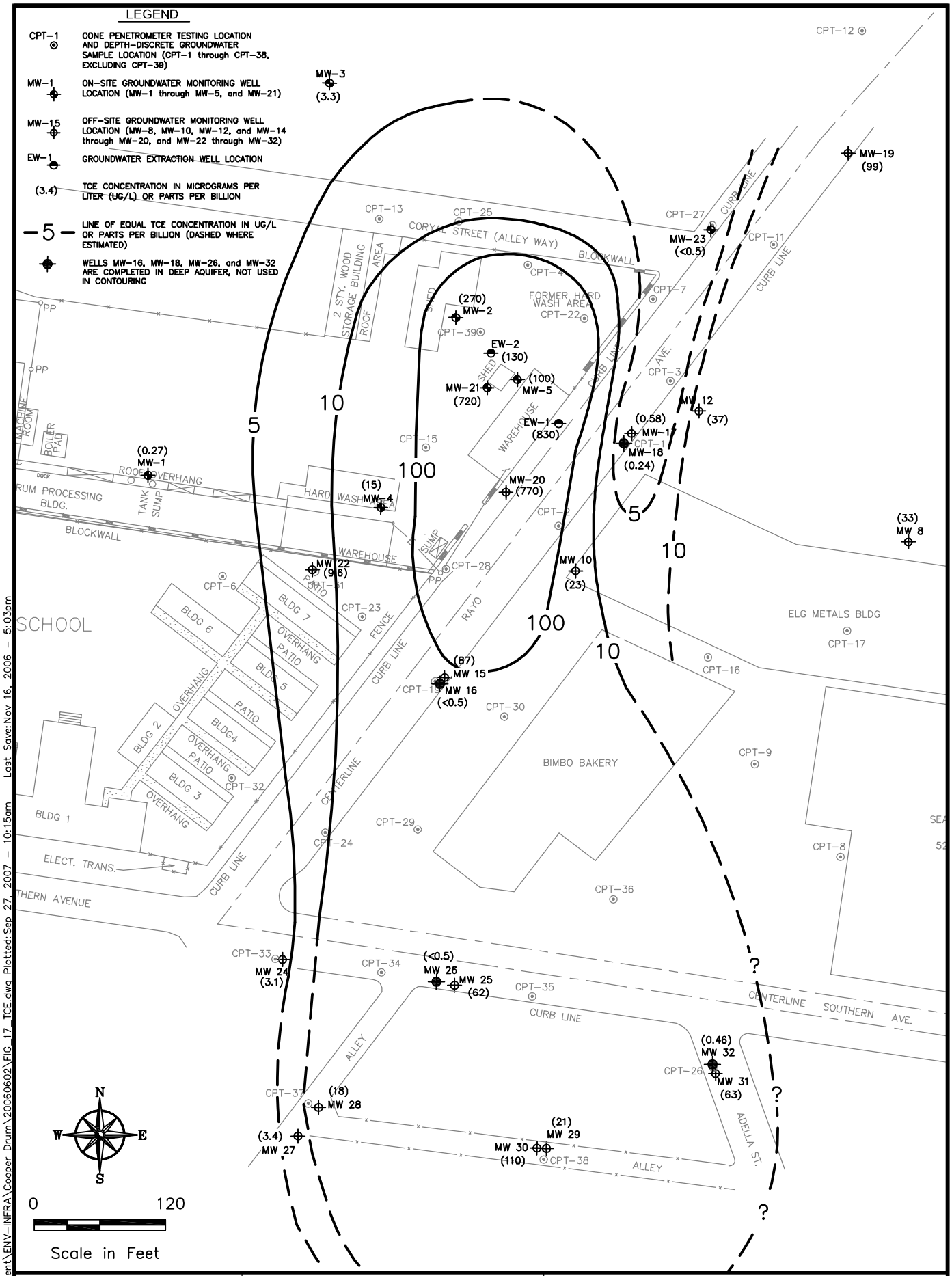

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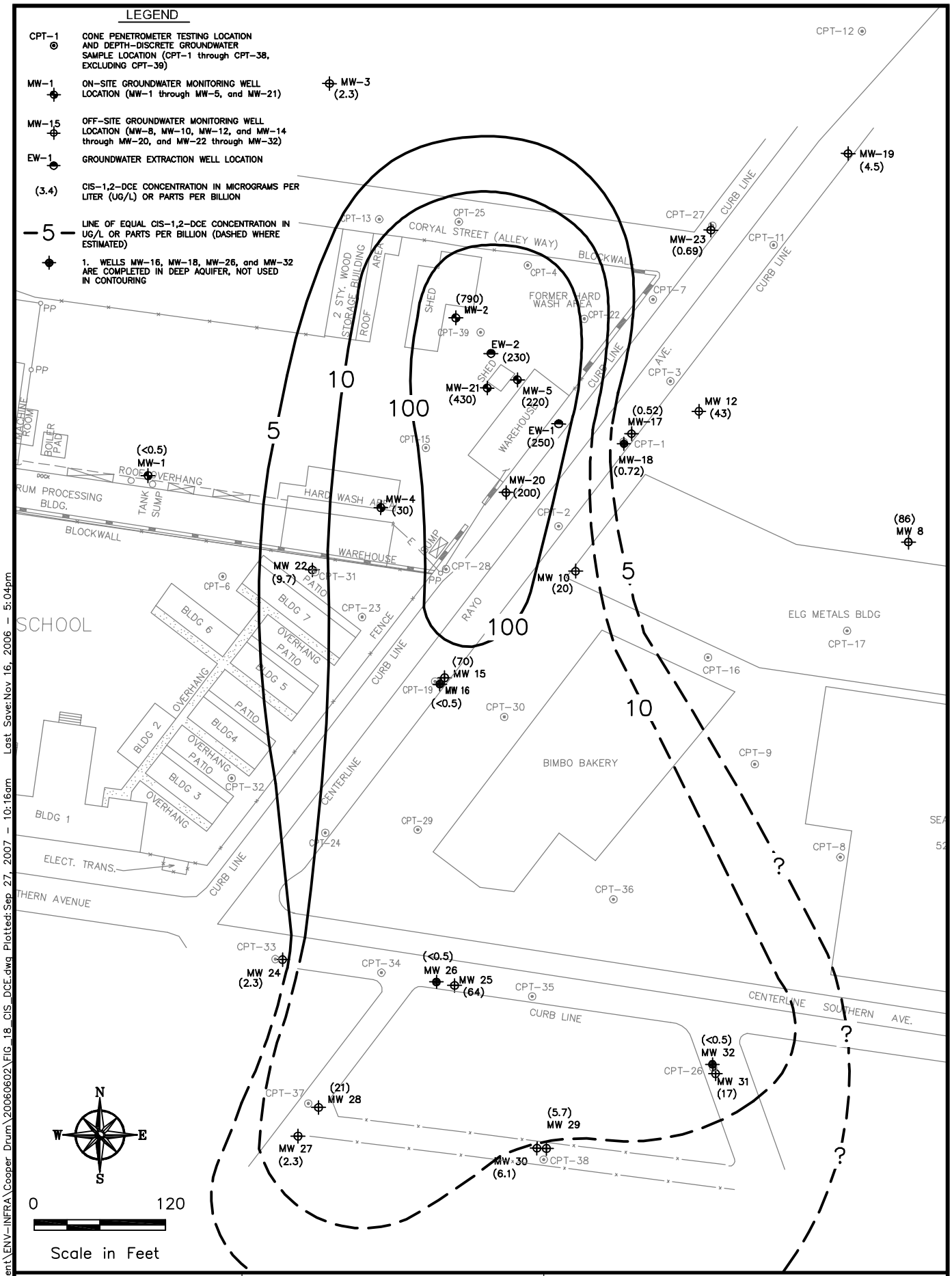
FIGURE 17
Trichloroethene Isopleth Map
July/November 2004

H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\FIG_17_TCE.dwg Plotted:Sep 27, 2007 - 10:15am Last Save:Nov 16, 2006 - 5:03pm



H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\FIG_18_CIS_DCE.dwg Plotted:Sep 27, 2007 - 10:16am Last Save:Nov 16, 2006 - 5:04pm

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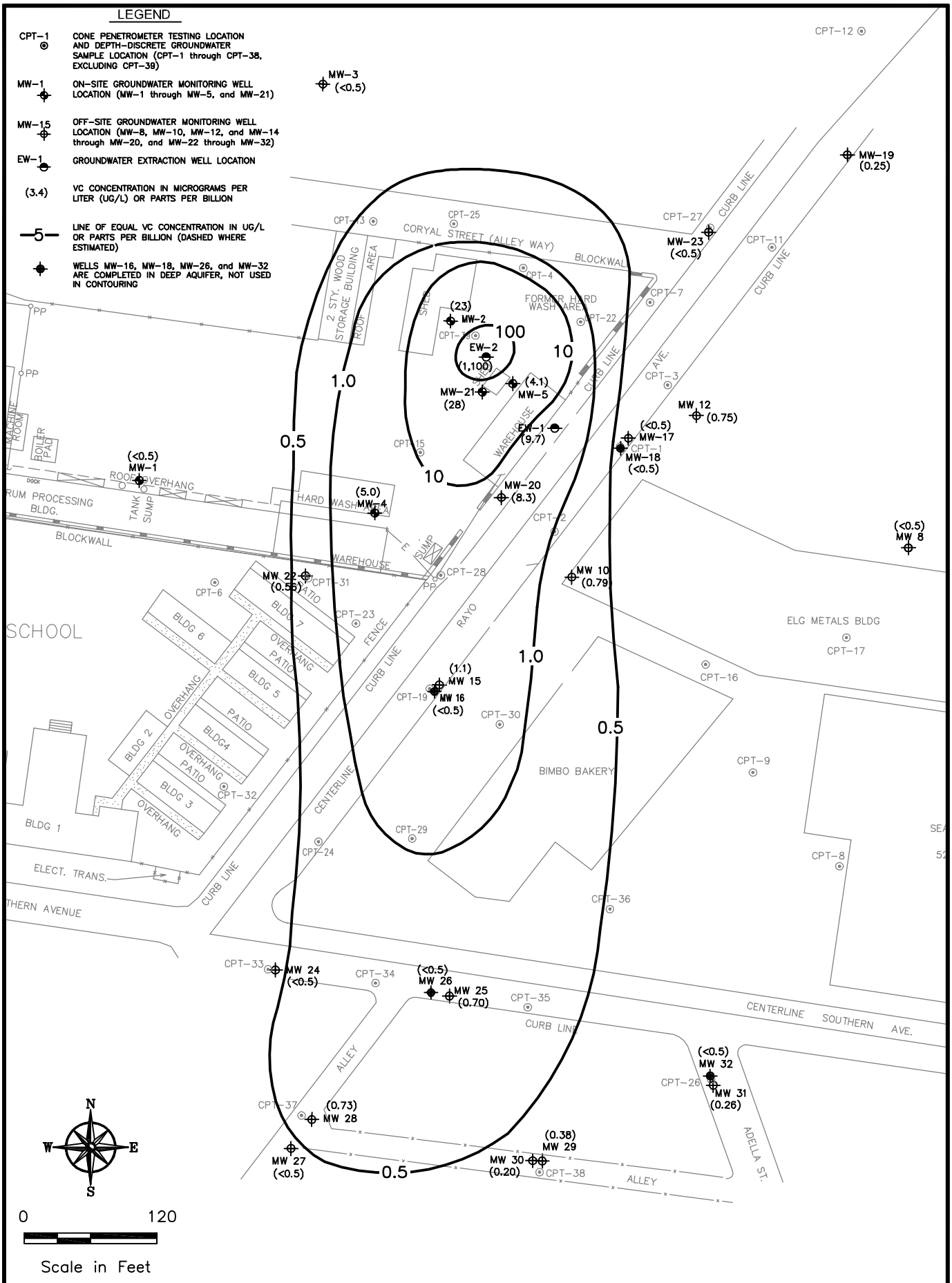
FIGURE 18
cis-1,2-Dichloroethene Isopleth Map
July/November 2004



H:\CADD\CURRENT\ENV-INFRA\COOPER DRUM\20060602\060602_FIG_19_VC.DWG

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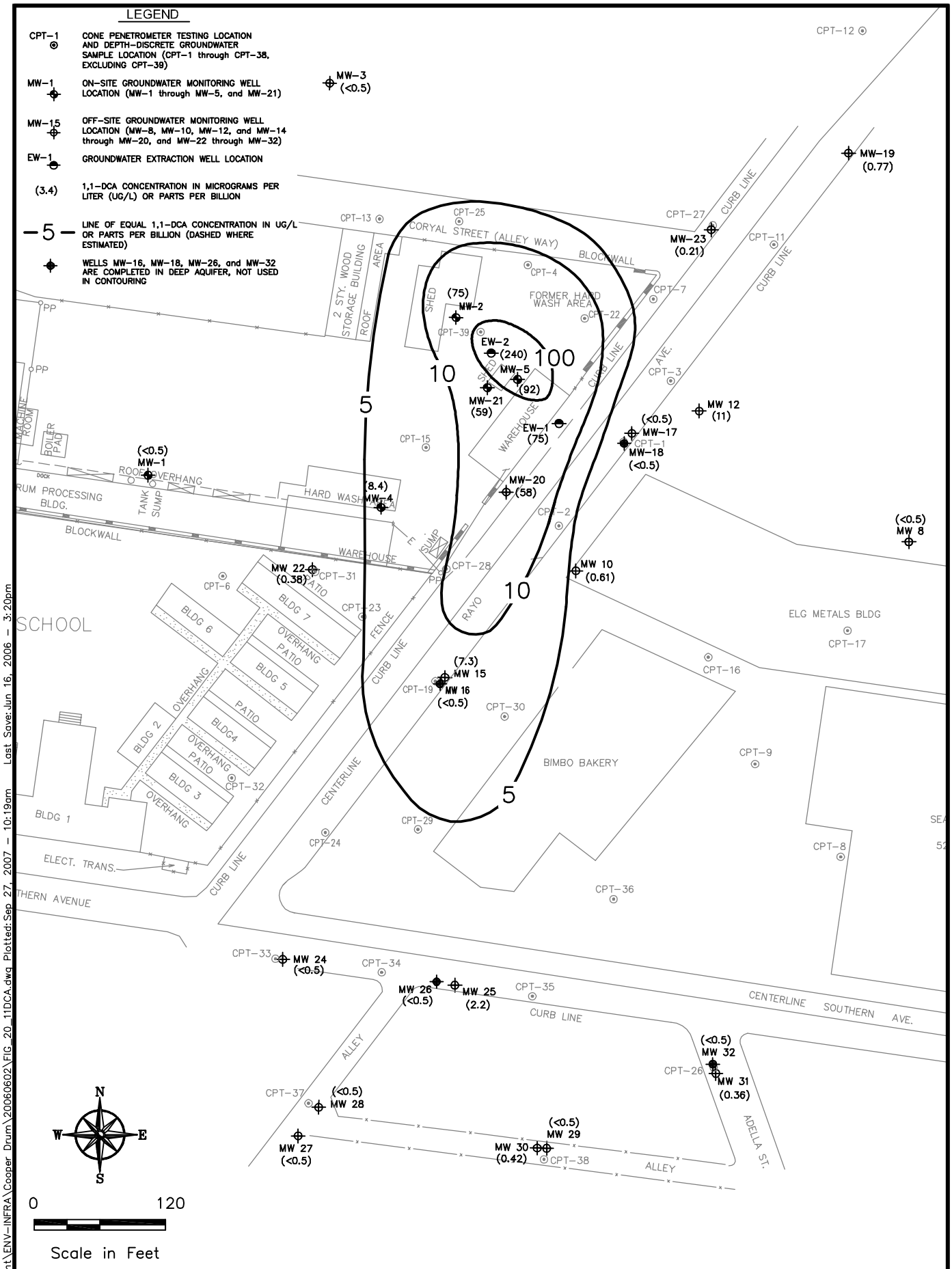
FIGURE 19
Vinyl Chloride Isopleth Map
July/November 2004



H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\FIG_20_11DCA.dwg Plotted:Sep 27, 2007 - 10:19am Last Saved:Jun 16, 2006 - 3:20pm

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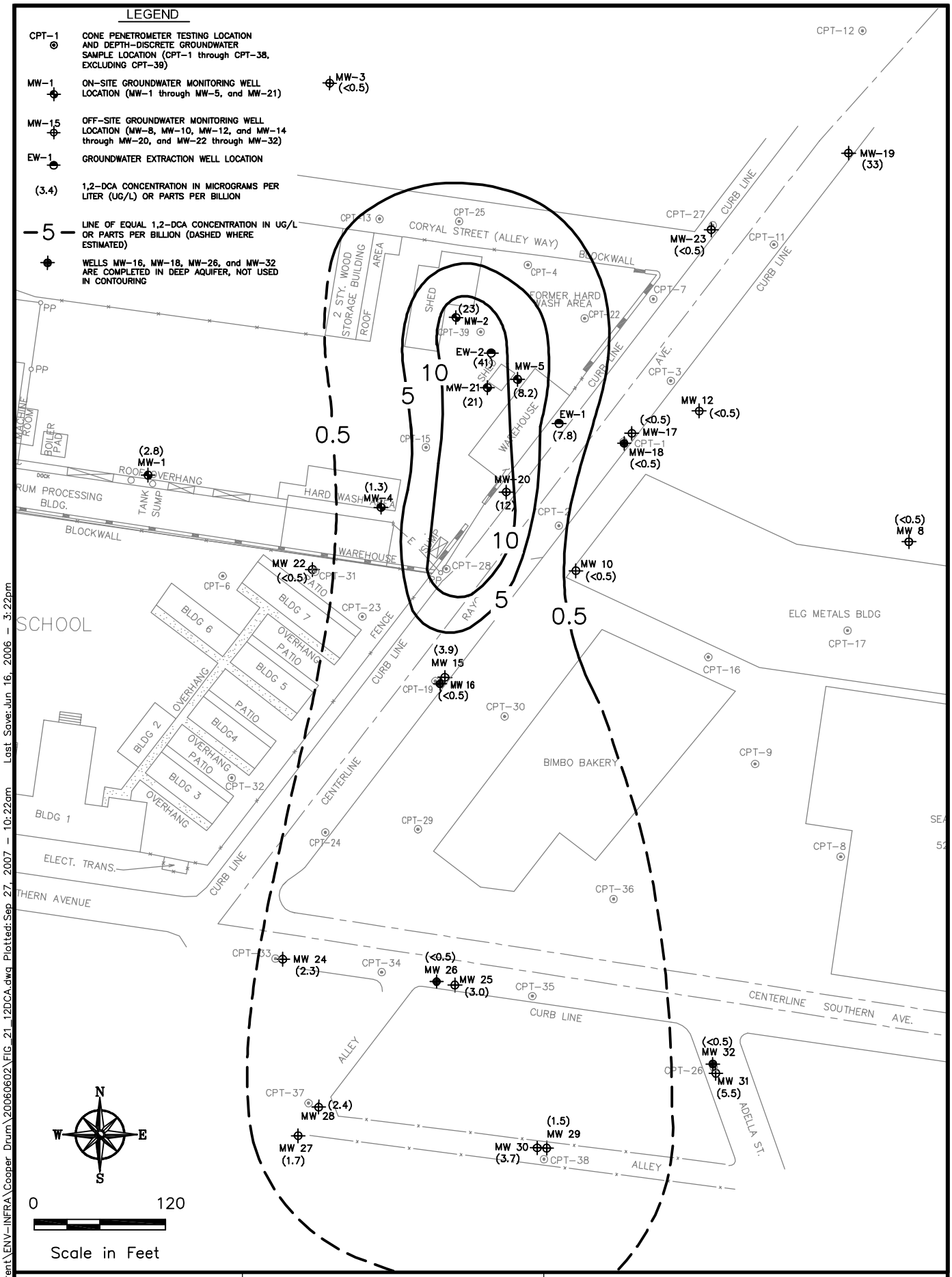
FIGURE 20
1,1-Dichloroethane Isopleth Map
July/November 2004



H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\FIG_21_12DCA.dwg Plotted:Sep 27, 2007 - 10:22am Last Save:Jun 16, 2006 - 3:22pm

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FIGURE 21
1,2-Dichloroethane Isopleth Map
July/November 2004

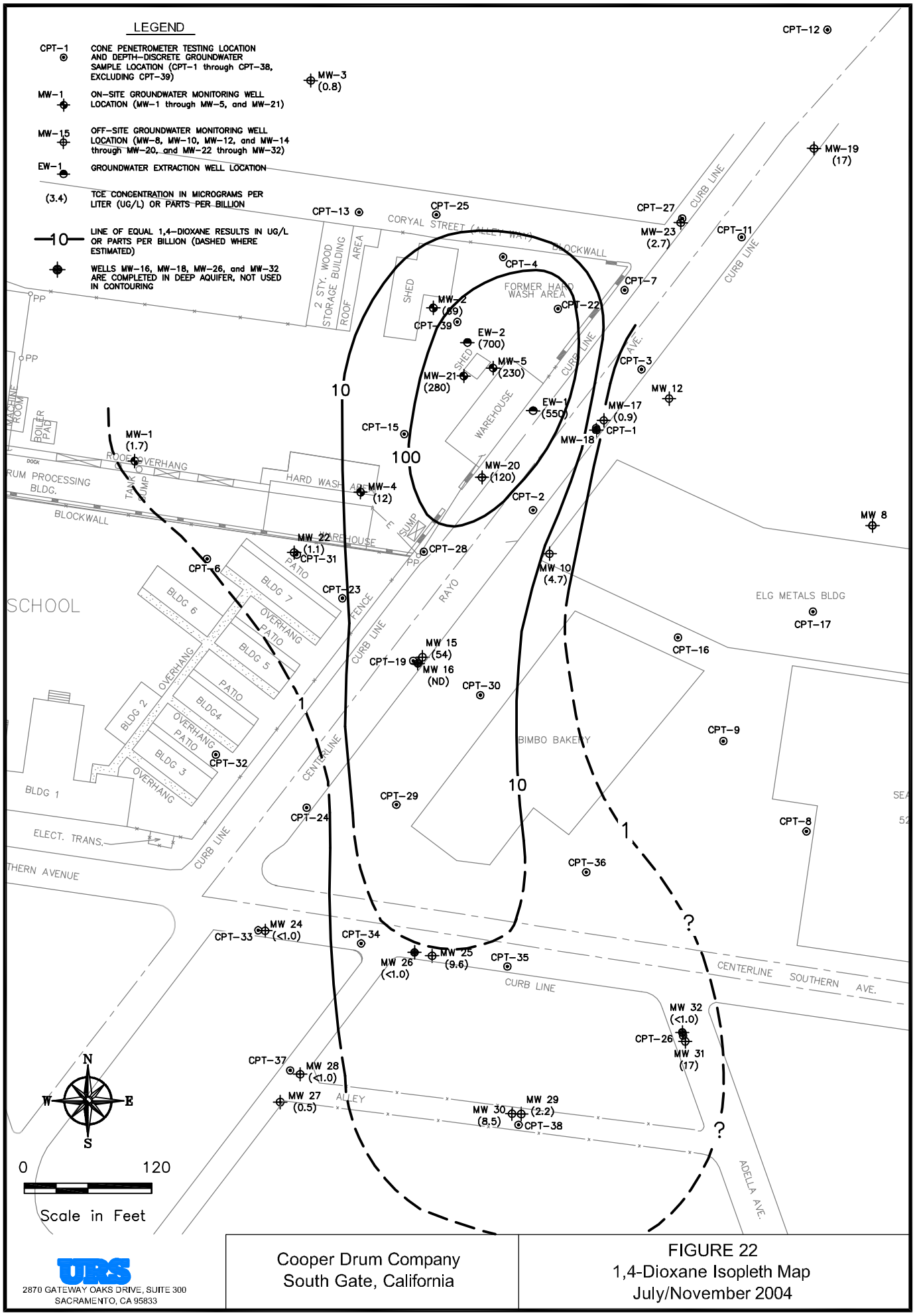

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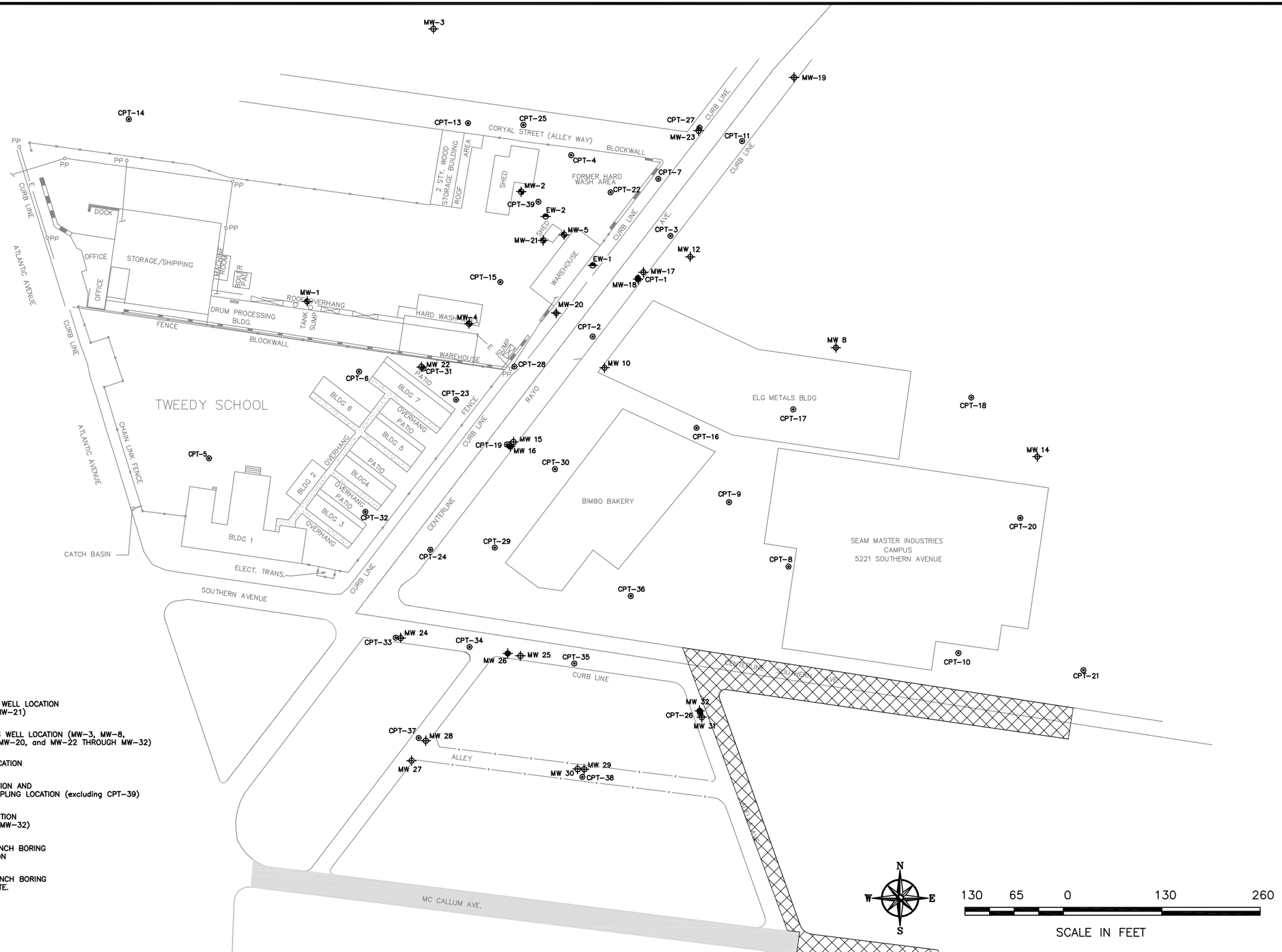
FIGURE 22
1,4-Dioxane Isopleth Map
July/November 2004

H:\CADD\CURRENT\ENV-INFRA\COOPER DRUM\20060602\060602_FIG_22_DIOXANE.DWG



LEGEND

- ON-SITE GROUNDWATER MONITORING WELL LOCATION (MW-1, MW-2, MW-4, MW-5, and MW-21)
- OFF-SITE GROUNDWATER MONITORING WELL LOCATION (MW-3, MW-8, MW-10, MW-12, MW-14 THROUGH MW-20, and MW-22 THROUGH MW-32)
- GROUNDWATER EXTRACTION WELL LOCATION
- CONE PENETROMETER TESTING LOCATION AND DEPTH-DISCRETE GROUNDWATER SAMPLING LOCATION (excluding CPT-39)
- WELL COMPLETED IN DEEPER EXPOSITION AQUIFER (MW-16, MW-18, MW-26, MW-32)
- PROPOSED AREA FOR CPT/HYDROPUNCH BORING FOR COOPER DRUM PLUME DEFINITION
- PROPOSED AREA FOR CPT/HYDROPUNCH BORING INVESTIGATION FOR SEAM MASTER SITE.

N W E S

130 65 0 130 260

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FIGURE 23
Proposed CPT/HydroPunch Boring Locations

H:\CADD\Current\ENV-INFRA\Cooper Drum\20060602\FIG_23_CPT_HPBOR_LOCS.dwg Plotted:Sep 27, 2007 - 10:26am Last Save:Jun 28, 2006 - 10:06am

APPENDIX B-A

Soil Boring Logs, CPT Boring Logs, and Monitoring Well Boring Logs

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-18

Sheet 1 of 1

Date(s) Drilled	5/6/03		Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push		Drill Bit Size/Type	NA	Total Depth Drilled (feet)	10.0
Drill Rig Type			Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)			Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch	Diameter of Well (inches) NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA		Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Direct push with 1x6-inch sleeves.					

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Borehole backfilled with bentonite chips then hydrated.
							No recovery.			
			Y0WA3				Silt (ML). Gray to dark brown, trace very fine grained sand, trace clay, damp.	1338		
							No recovery.			
			Y0WA4 Y0WA5				Silt (ML). Dark gray to almost black, minor clay, trace fine grained sand, damp.	1340		
	5						No recovery.			
			Y0WA6				Silt (ML). Brown to grayish brown, minor fine grained sand, trace clay, damp to moist.	1343		
	10									

Report: ENV_1A; Project File: J:\COOPERMW.GPJ; Data Template:WC_CORP1.GDT Printed: 3/22/04

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-19

Sheet 1 of 1

Date(s) Drilled	5/6/03	Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push	Drill Bit Size/Type	NA	Total Depth Drilled (feet)	10.0
Drill Rig Type		Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch / Diameter of Well (inches) NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA	Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Direct push with 1x6-inch sleeves.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Borehole backfilled with bentonite chips then hydrated.
							Silt (ML). Dark brown, minor sand and gravels up to 0.25" diameter.			
			Y0WA7				Silt (ML). Dark brown, minor very fine grained sand and gravels to 0.5" diameter.	1305		
							No recovery.			
							Silt (ML). Brown, minor very fine grained sand, micaceous, damp to moist.			
	5		Y0WA8					1307		
							No recovery.			
							Silt (ML). Dark brown, trace very fine grained sand, micaceous, damp to moist.			
	10		Y0WA9					1310		

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URS Group, Inc.

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-20

Date(s) Drilled	5/6/03	Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push	Drill Bit Size/Type	NA	Total Depth Drilled (feet)	10.0
Drill Rig Type		Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch / Diameter of Well (inches) NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA	Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Direct push with 1x6-inch sleeves.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Borehole backfilled with bentonite chips then hydrated.
							Silt (ML). Dark brown, minor sand and gravel to 0.25" diameter.			
			Y0WB0				Silty Sand (SM). Brown, very fine grained sand, damp.	1235		
							No recovery.			
							Silt (ML). Dark brown to gray, trace very fine grained sand, micaceous.			
	5		Y0WB1				No recovery.	1238		
							Silt (ML). Dark brown, trace very fine grained sand, trace clay.			
	10		Y0WB2					1242		

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Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-21

Sheet 1 of 1

Date(s) Drilled	5/6/03	Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push	Drill Bit Size/Type	NA	Total Depth Drilled (feet)	10.5
Drill Rig Type		Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch / Diameter of Well (inches) NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA	Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Direct push with 1x6-inch sleeves.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Borehole backfilled with bentonite chips then hydrated.
							Silt (ML). Dark brown, minor sand, trace gravels up to 0.25" diameter, damp.			
			Y0WB3				Silt (ML). Dark brown, trace to minor clay, fine grained sand , damp to moist.	1140		
							No recovery.			
							Silt (ML). Dark brown, minor very fine grained sand, damp to moist.			
	5		Y0WB4				No recovery.	1145		
							Silty Sand (SM). Brown to yellowish brown, damp to moist.			
	10		Y0WB5 Y0WB6					1150		

Report: ENV_1A; Project File: J:\COOPER~1\COOPERMW.GPJ; Data Template:WC_CORP1.GDT Printed: 3/22/04

URS Group, Inc.

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-22

Date(s) Drilled	5/5/03	Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push	Drill Bit Size/Type	NA	Total Depth Drilled (feet)	10.0
Drill Rig Type		Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch / Diameter of Well (inches) NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA	Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Direct push with 1x6-inch sleeves.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Borehole backfilled with bentonite chips then hydrated.
							No recovery.			
			Y0WB7				Silt (ML). Dark brownish gray, minor clay, trace sand, damp to moist.	1515		
							No recovery.			
	5		Y0WB8					1520		
							No recovery.			
							Silty Clay (CL). Dark brown to grayish brown, trace very fine grained sand, damp to moist.			
	10		Y0WB9					1525		

Report: ENV_1A; Project File: J:\COOPER~1\COOPERMW.GPJ; Data Template:WC_CORP1.GDT Printed: 3/22/04

URS Group, Inc.

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-23

Sheet 1 of 1

Date(s) Drilled	5/7/03			Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push			Drill Bit Size/Type	NA	Total Depth Drilled (feet)	10.0
Drill Rig Type	Ram Set			Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)				Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch	Diameter of Well (inches)	NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA			Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Ram set with 1x6-inch sleeves						

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Concrete surface.	1020		Borehole backfilled with bentonite chips then hydrated.
							No recovery.			
			Y0WC0				Silty Sand (SM). Dark brown to grayish brown, very fine grained sand, damp to moist.	1040		
							No recovery.			
	5		Y0WC1				Silt (ML). Dark brown, minor very fine grained sand, moist.	1046		
							No recovery.			
	10		Y0WC2				Silt (ML). Dark brownish gray, minor to trace very fine grained sand and clay, damp to moist.	1055		

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Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-24

Date(s) Drilled	5/5/03 - 5/6/03	Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push	Drill Bit Size/Type	NA	Total Depth Drilled (feet)	10.0
Drill Rig Type		Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch / Diameter of Well (inches) NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA	Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Loading dock area. Direct push with 1x6-inch sleeves.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Borehole backfilled with bentonite chips then hydrated.
							Silt (ML). Dark brown, minor very fine grained sand.			
			Y0WC3 5/5/03					0948		
							No recovery.			
							5/5/03 - Drilled with no recovery from 1.5-5.0', unable to collect 5' soil sample due to insufficient recovery from 5-5.25'. Continued to drill in this boring and collected 10' sample.			
							5/6/03 - Moved over and redrilled to collect 5' sample only - recovery from 4.25-5' - no lithologic description.			
	5		Y0WC4 5/6/03					1105		
							Silty Sand (SM). Brown, very fine grained sand.			
							No recovery.			
					21		Downwind of generator heat and exhaust.			
							Silty Sand (SM). Dark brown, trace gravel to 0.25" diameter.			
			Y0WC5 5/5/03					1015		
	10									

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-25

Sheet 1 of 1

Date(s) Drilled	5/5/03	Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push	Drill Bit Size/Type	NA	Total Depth Drilled (feet)	12.0
Drill Rig Type		Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch / Diameter of Well (inches) NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA	Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Direct push with 1x6-inch sleeves.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Borehole backfilled with bentonite chips then hydrated.
							No recovery.			
							Encountered gravels up to 0.25" diameter and a gray to black obsidian-like material.			
			Y0WC6 Y0WC7				Silt (ML). Dark brown, minor very fine grained sand, trace gravels.	1040		
							No recovery.			
							Silt (ML). Brown to reddish brown, minor very fine grained sand.			
	5		Y0WC8		25.3		No recovery.	1055		
	10				32.7			1115		

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URS Group, Inc.

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-26

Date(s) Drilled	5/5/03	Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push	Drill Bit Size/Type	NA	Total Depth Drilled (feet)	10.0
Drill Rig Type		Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch / Diameter of Well (inches) NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA	Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Direct push with 1x6-inch sleeves.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Borehole backfilled with bentonite chips then hydrated.
					10.7		Silt (ML). Dark brown, minor very fine grained sand, trace fine gravels, moist.			
			Y0WD0				Silt (ML). Dark brown, minor very fine grained sand, moist.	1150		
							No recovery.			
							Silty Sand (SM). Dark brown, very fine grained sand, moist.			
	5		Y0WD1				No recovery.	1200		
							No description.			
	10		Y0WD2		5.3			1210		

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Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-27

Sheet 1 of 1

Date(s) Drilled	5/6/03		Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push		Drill Bit Size/Type	NA	Total Depth Drilled (feet)	15.0
Drill Rig Type			Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)			Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch	Diameter of Well (inches) NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA		Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Direct push with 1x6-inch sleeves.					

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Borehole backfilled with bentonite chips then hydrated.
			Y0WD3				Silt (ML). Dark brown, minor very fine grained sand, trace gravels to 0.25" diameter. Silt (ML). Dark brown, minor very fine grained sand.	0745		
							No recovery.			
	5		Y0WD4				Silt (ML). Dark brown to grayish brown, minor very fine grained sand, trace clay.	0748		
							No recovery.			
	10		Y0WD5				Silt (ML). Light to medium brown to light grayish brown, minor to trace sand and clay.	0755		
							No recovery.			
	15		Y0WD6 Y0WD7					0800		

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URS Group, Inc.

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-28

Date(s) Drilled	5/5/03	Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push	Drill Bit Size/Type	NA	Total Depth Drilled (feet)	15.0
Drill Rig Type		Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch / Diameter of Well (inches) NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA	Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Loading dock area. Direct push with 1x6-inch sleeves.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Borehole backfilled with bentonite chips then hydrated.
					1.2		No recovery.			
			Y0WD8				Silt (ML). Minor very fine grained sand, damp to moist. Sandy gravel lense at 1.5'.	1240		
							No recovery.			
			Y0WD9				Silt (ML). Dark brown, minor to trace sand, damp to moist.	1250		
	5						No recovery.			
	10									
			Y0WE0				Silt (ML). Minor sand, damp to moist.	1300		
							No recovery.			
			Y0WE1				Silt (ML). Dark brown, minor sand, trace gravel to 0.25" diameter.	1310		
	15									

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-29

Sheet 1 of 1

Date(s) Drilled	5/5/03	Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push	Drill Bit Size/Type	NA	Total Depth Drilled (feet)	17.0
Drill Rig Type		Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch	Diameter of Well (inches)	NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA	Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Parking Lot/loading dock area. Direct push with 1x6-inch sleeves.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Borehole backfilled with bentonite chips then hydrated.
							Sandy Silt (ML). Light to medium brown, trace fine gravels, damp.			
			Y0WE2		3.1		No recovery.	1400		
	5		Y0WE3				Silt (ML). Dark brown, minor sand, trace clay, damp to moist.	1405		
							No recovery.			
	10		Y0WE4				Silt (ML). Brown, minor to trace clay, trace sand, damp to moist.	1410		
							No recovery.			
	15						Silt (ML). Brown, minor clay, damp.			
			Y0WE5		5.8			1425		

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Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-30

Sheet 1 of 1

Date(s) Drilled	5/6/03	Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push	Drill Bit Size/Type	NA	Total Depth Drilled (feet)	15.0
Drill Rig Type		Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch / Diameter of Well (inches): NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA	Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Direct push with 1x6-inch sleeves.				

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Borehole backfilled with bentonite chips then hydrated.
					12.6		Silt (ML). Dark brown, trace very fine grained sand, damp.			
			Y0WE6					0825		
							No recovery.			
							Silt (ML). Dark brown, minor to trace sand, damp to moist.			
	5		Y0WE7					0840		
							No recovery. Encountered a hard, 2-3" thick obsidian-like material at 5.5'.			
			Y0WE8					0850		
							Silt (ML). Dark brown, trace very fine grained sand and clay, damp to moist.			
	10		Y0WE9					0858		
							No recovery.			
							Silt (ML). Dark gray to brownish gray, minor clay, damp to moist.			
	15		Y0WF0		67.3			0908		

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URS Group, Inc.

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-31

Sheet 1 of 1

Date(s) Drilled	5/6/03	Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push	Drill Bit Size/Type	NA	Total Depth Drilled (feet)	15.0
Drill Rig Type		Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch / Diameter of Well (inches) NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA	Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Direct push with 1x6-inch sleeves.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Borehole backfilled with bentonite chips then hydrated.
							Silt (ML). Dark gray to brown, minor sand, trace gravel to 0.25" diameter, damp.			
			Y0WF1					0944		
							No recovery.			
							Silt (ML). Dark brown, minor very fine grained sand.			
	5		Y0WF2					0950		
							No recovery.			
							Silt (ML). Grayish brown, minor to trace clay, damp to moist.			
	10		Y0WF3					0955		
							No recovery.			
							Silt (ML). Dark brown, minor very fine grained sand, damp to moist.			
	15		Y0WF4					1000		

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URS Group, Inc.

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring SB-32

Sheet 1 of 1

Date(s) Drilled	5/7/03		Logged By	G. Low	Checked By	Don Gruber
Drilling Method	Direct Push		Drill Bit Size/Type	NA	Total Depth Drilled (feet)	15.0
Drill Rig Type	Ram Set		Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)			Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	2-inch	Diameter of Well (inches) NA	Type of Well Casing	NA	Screen Perforation	NA
Type of Sand Pack	NA		Type/Thickness of Seal(s)	Bentonite Chips		
Comments	Direct push with 1x6-inch sleeves.					

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Concrete surface.			Borehole backfilled with bentonite chips then hydrated.
							No recovery.			
	5									
	10		Y0WA1				Sand (SP). Grayish brown, very fine to fine grained, minor silt, strong chemical or solvent-like odor, damp.	0925		
							No recovery.			
	15		Y0WA2				Silt (ML). Dark gray to brown, minor very fine grained sand and clay, damp to moist.	0930		

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URS Group, Inc.

Project: Cooper Drum

Location: 9316 S. Atlantic Ave., South Gate, CA **Project Number: 18600047.03020**

Log of Monitoring Well: SVE-2

Dates Drilled: 2/27/04	Total Depth: 48 feet bgs		Borehole Name:
Dr[illegible] Contractor: Gregg Drilling and Testing	Well Construction Date: 2/27/04		Logged By: R. Morley
[illegible]e Diameter: 10-inch	Casing Diameter: 4-inch	Casing Type: SCH 40 PVC	Checked By: Don Gruber
Drilling Method: Hollow Stem Auger	Screen Interval: 8-48 feet	Slot Size: 0.020-inch	Sampling Method:

Comments: Soil logged from cuttings. Well constucted on loading dock, 4 ft above ground surface.

Depth (Vertical Feet)	Sample Interval	PID (ppm)	BH/BZ	Time	LITHOLOGY DESCRIPTION
0					Loading Dock.
		423	0.4	0750	Silty Sand (SM). Greenish black (Gley 2.5/10Y), fine grained sand, minor rock fragments from 0.5" to 1" diameter, angular, black staining, strong odor, moist.
5		800	2.1	0753	
					No rock fragments.
10		1500	5.6	0758	Sandy Silt (ML). Very dark greenish gray (Gley 3/10Y), 20% very fine grained sand, staining, strong odor, moist.
		493	3.0	0805	Silty Sand (SM). Dark olive gray (5Y 3/2), 80% fine grained sand, 20% silt, minor silty clay chunks, strong odor, dry.
20		228	0.4	0810	Sandy Silt (ML). Dark olive gray (5Y 3/2), 20% very fine grained sand, strong odor, dry.
25		235	0.3	0815	
30		250	--	0818	Clayey Silt (ML). Black (5Y 2.5/2), 30% clay, slightly plastic, strong odor, moist.
35		55	0.0	0823	Damp.
40		7.5	0.0	0830	Silty Sand (SM). Olive (5Y 4/3), 80% fine grained sand, 20% silt, slight odor, wet.
45		16.9	--	0835	70% fine grained sand, 30% silt, saturated.

WELL CONSTRUCTION

- 12-inch, flush mount, traffic rated vault box
- Neat Cement from near loading dock surface to 3' bgs
- 4-inch SCh 40 PVC to 8' bgs
- Bentonite Chips 3-6' bgs
- 4-inch SCH 40 PVC, 0.020-inch Continuous V-Slot Screen 8-48' bgs, #3 Filter Pack Sand 6-48' bgs

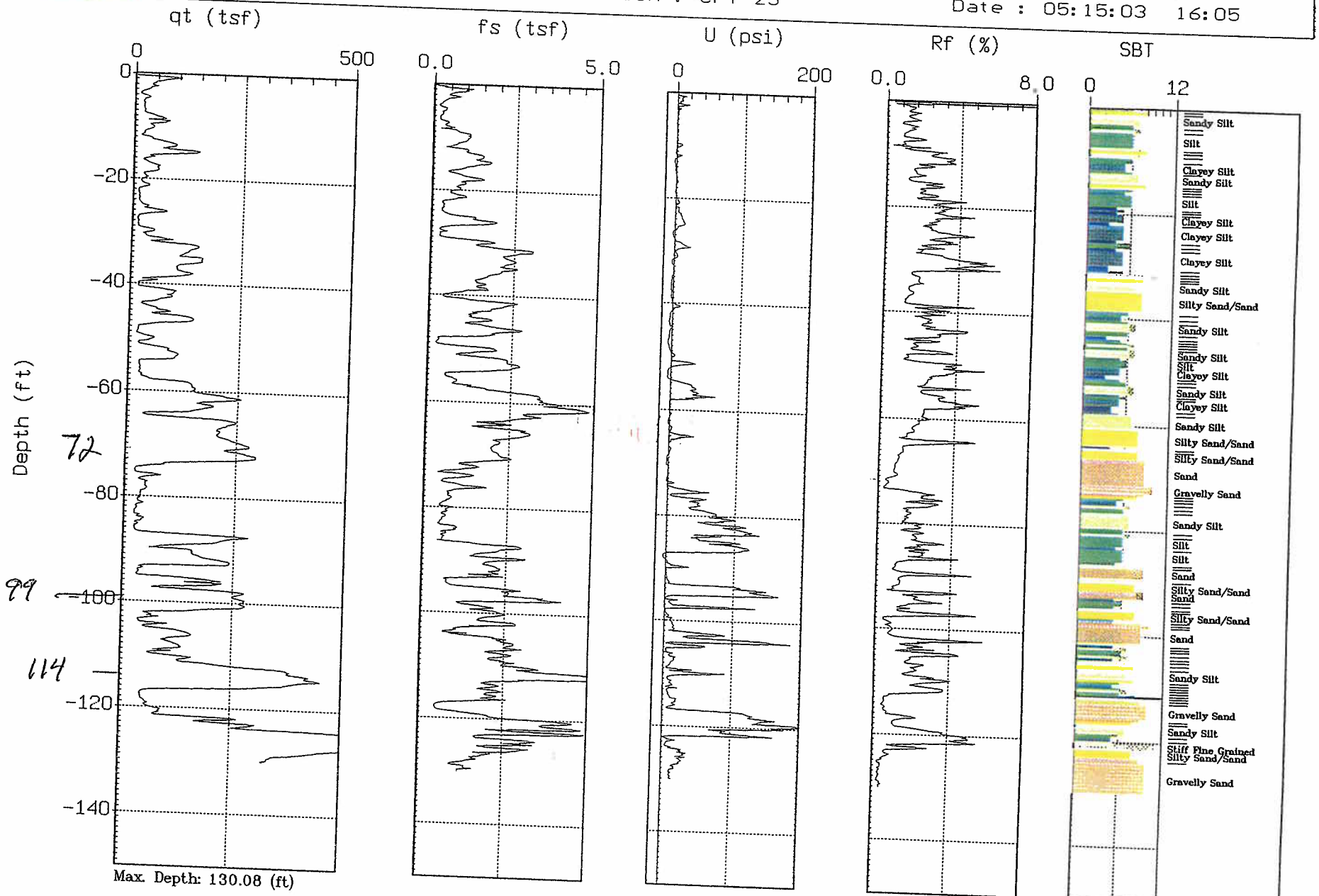
URS
2870 Gateway Oaks Dr., Ste 300
Sacramento, CA 95833
916-679-2000

GREGG

URS

Site : COOPER DRUM
Location : CPT-25

Geologist : DON GRUBER
Date : 05:15:03 16:05



Max. Depth: 130.08 (ft)

Depth Inc.: 0.164 (ft)

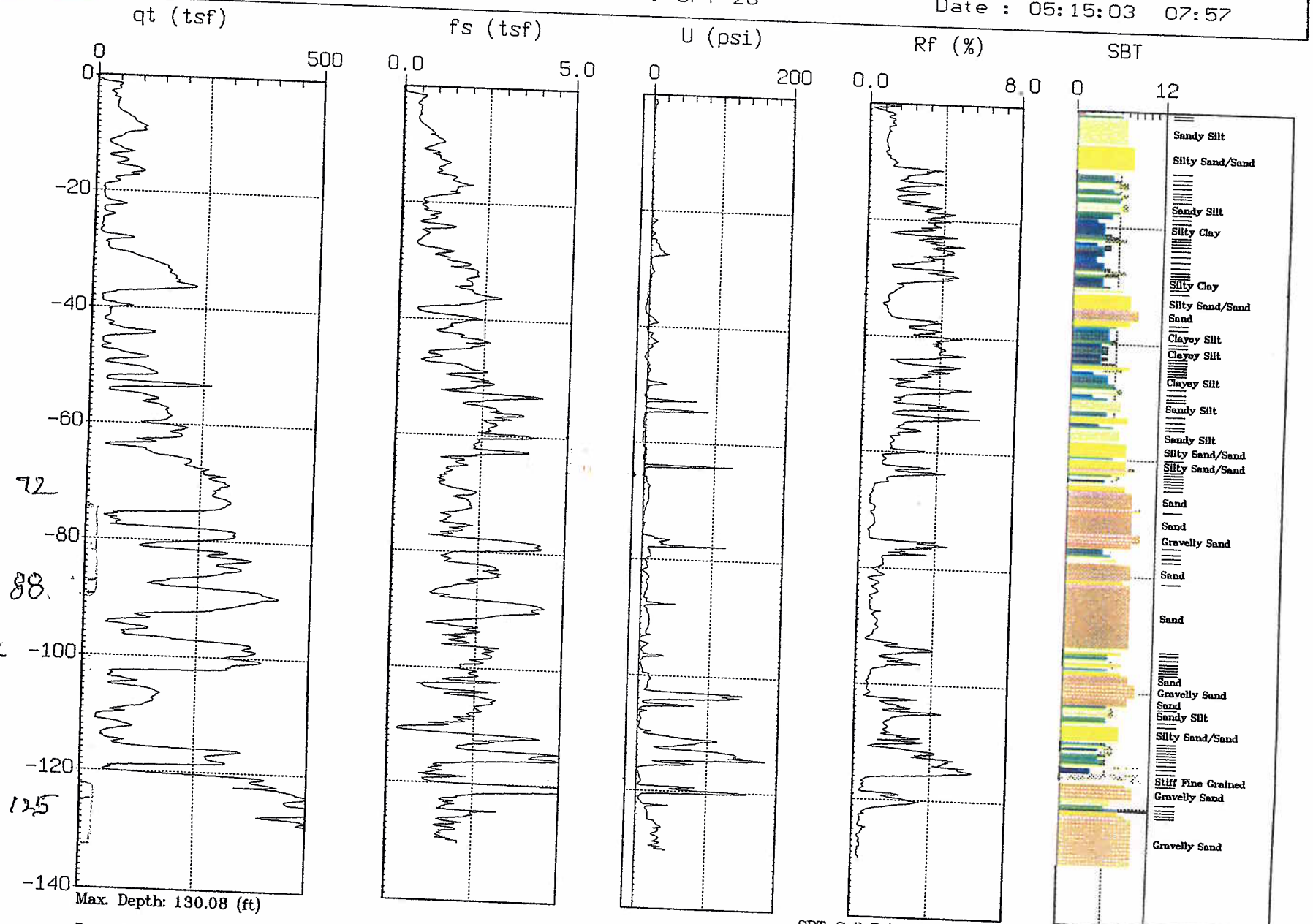
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

URS

Site : COOPER DRUM
Location : CPT-26

Geologist : DON GRUBER
Date : 05:15:03 07:57



Max. Depth: 130.08 (ft)

Depth Inc.: 0.164 (ft)

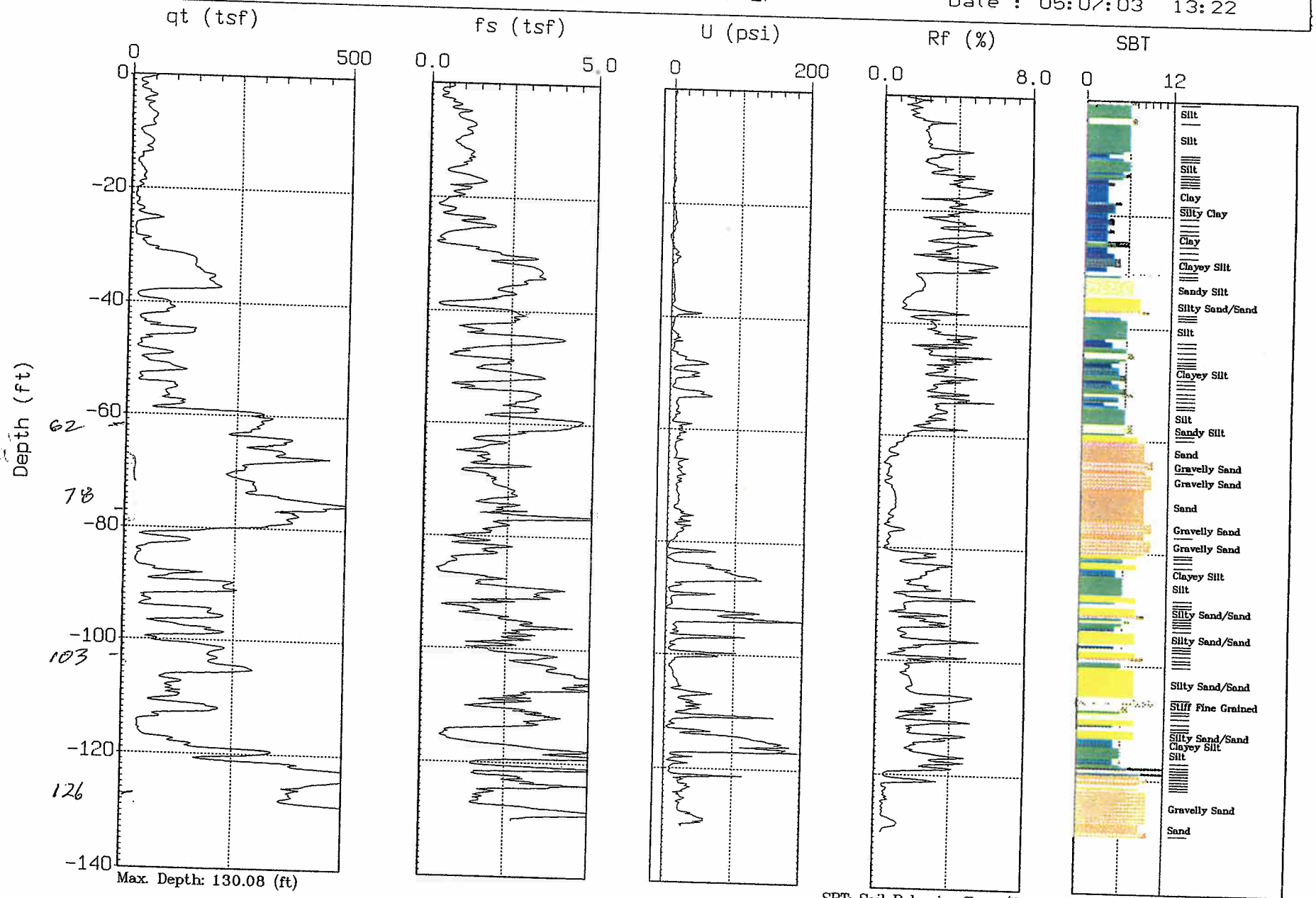
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

URS

Site : COOPER DRUM
Location : CPT-27

Geologist : DON GRUBER
Date : 05:07:03 13:22



Max. Depth: 130.08 (ft)

Depth Inc.: 0.164 (ft)

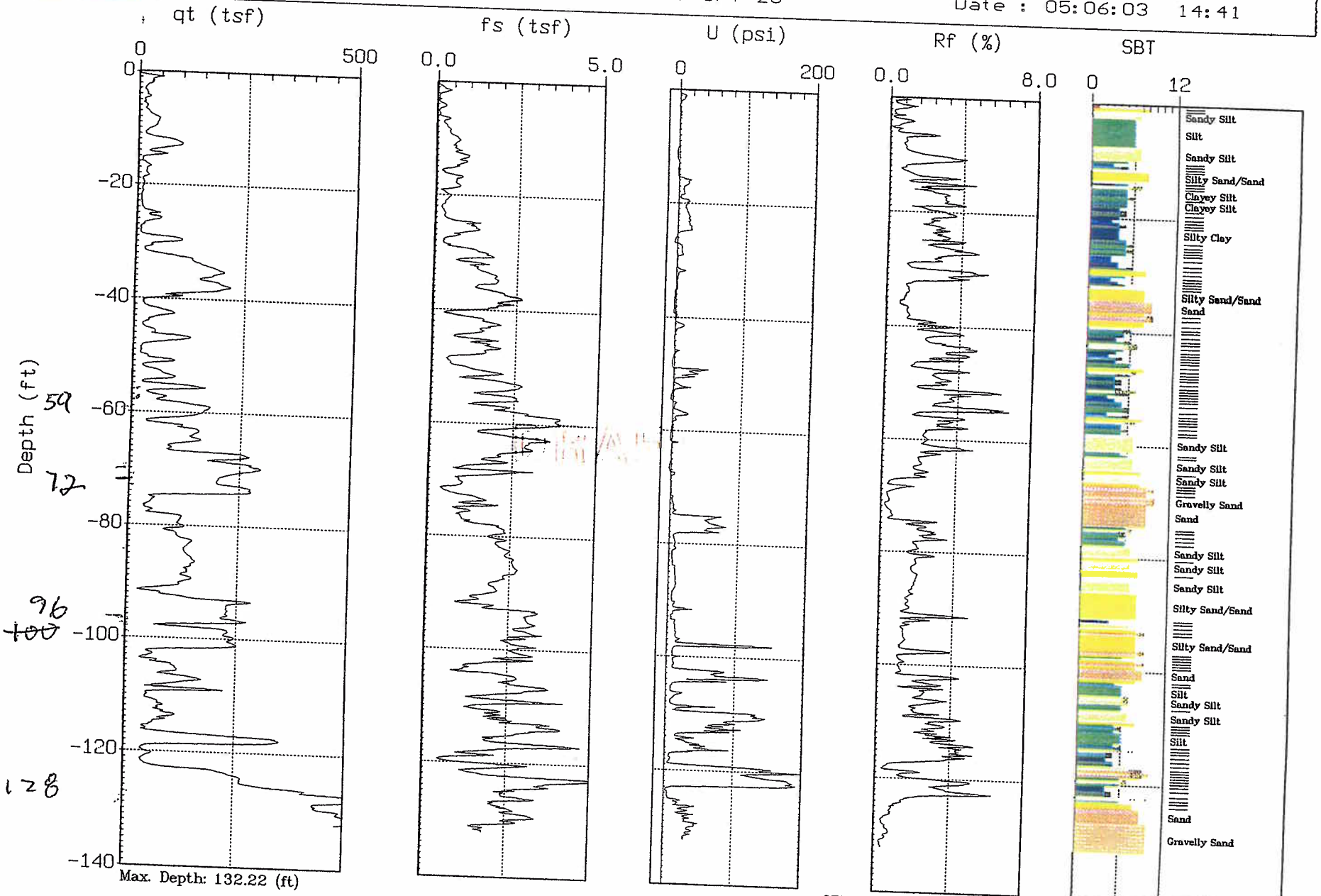
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

URS

Site : COOPER DRUM
Location : CPT-28

Geologist : DON GRUBER
Date : 05:06:03 14:41



Max. Depth: 132.22 (ft)

Depth Inc.: 0.164 (ft)

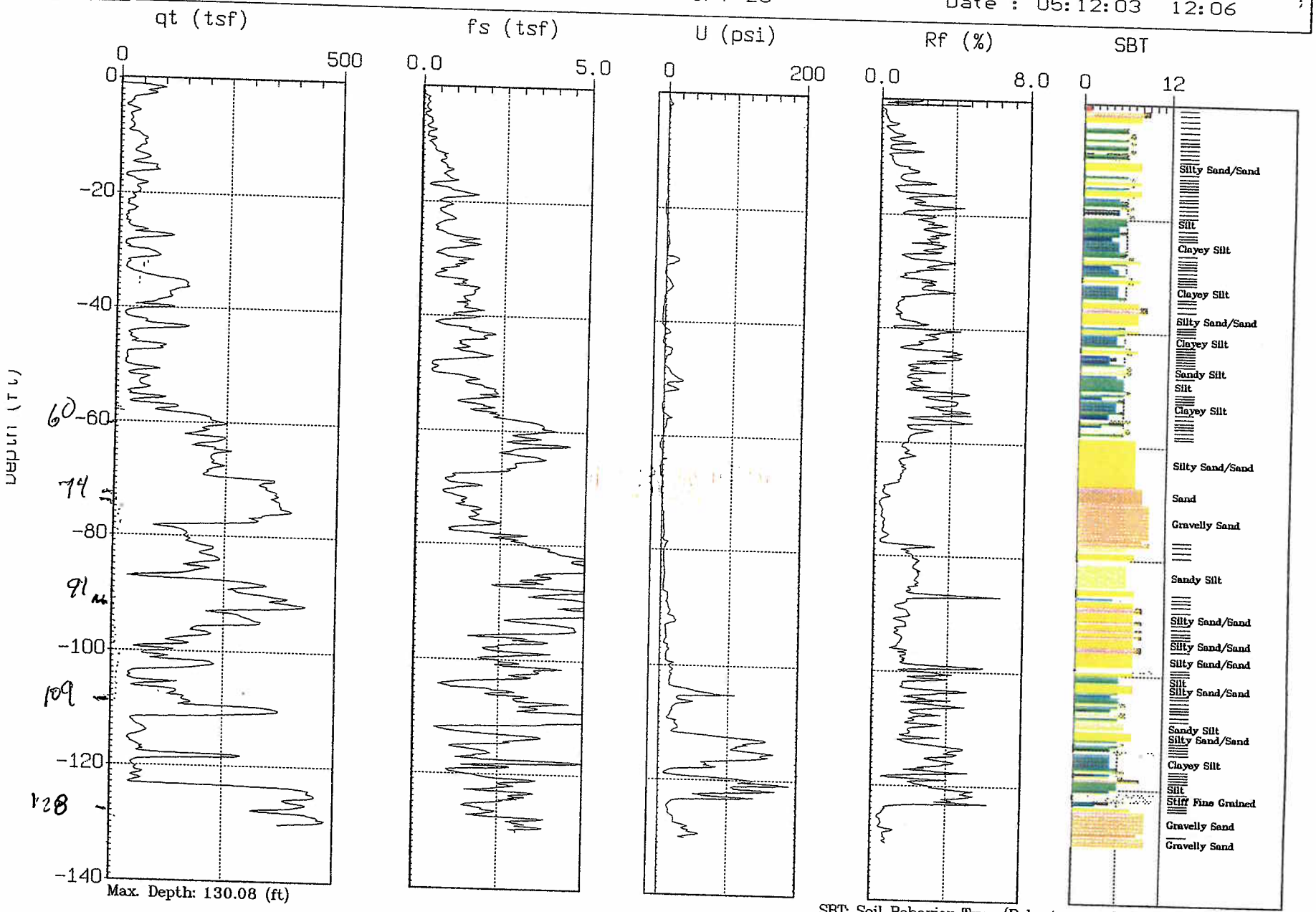
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

URS

Site : COOPER DRUM
Location : CPT-29

Geologist : DON GRUBER
Date : 05:12:03 12:06



Max. Depth: 130.08 (ft)
Depth Inc.: 0.164 (ft)

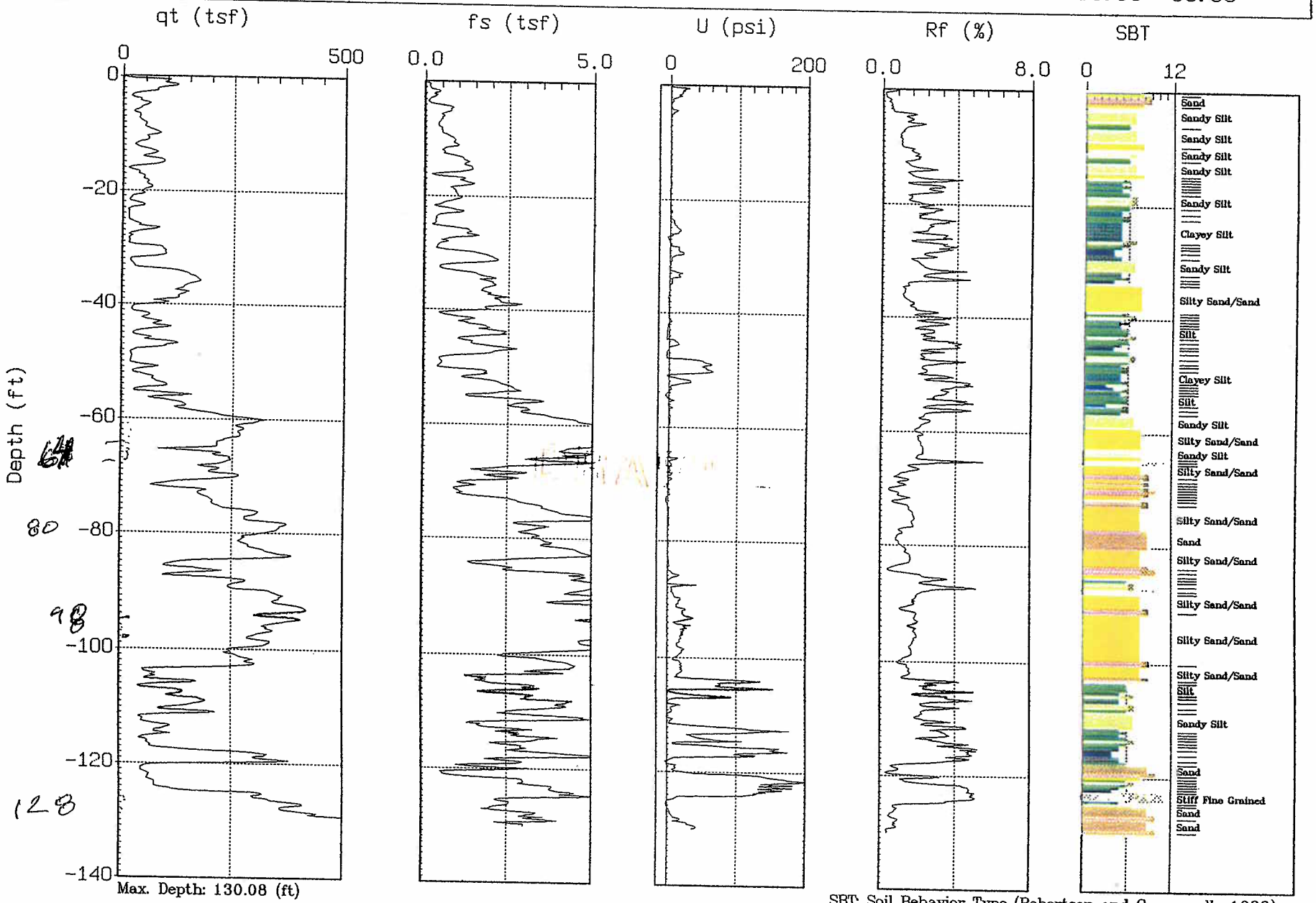
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

URS

Site : COOPER DRUM
Location : CPT-30

Geologist : DON GRUBER
Date : 05:13:03 08:36



Max. Depth: 130.08 (ft)

Depth Inc.: 0.164 (ft)

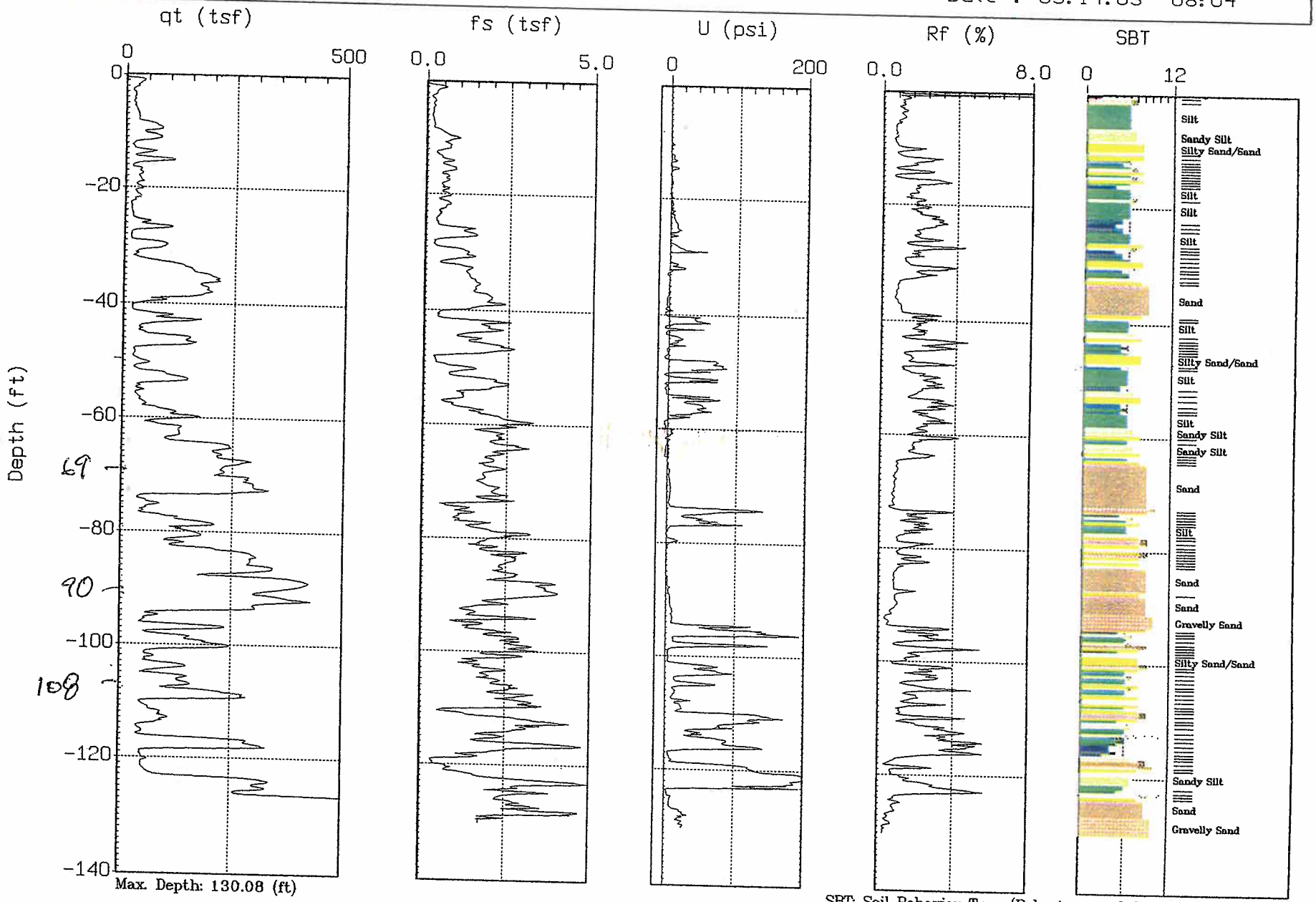
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

URS

Site : COOPER DRUM
Location : CPT-31

Geologist : DON GRUBER
Date : 05:14:03 08:04



Max. Depth: 130.08 (ft)

Depth Inc.: 0.164 (ft)

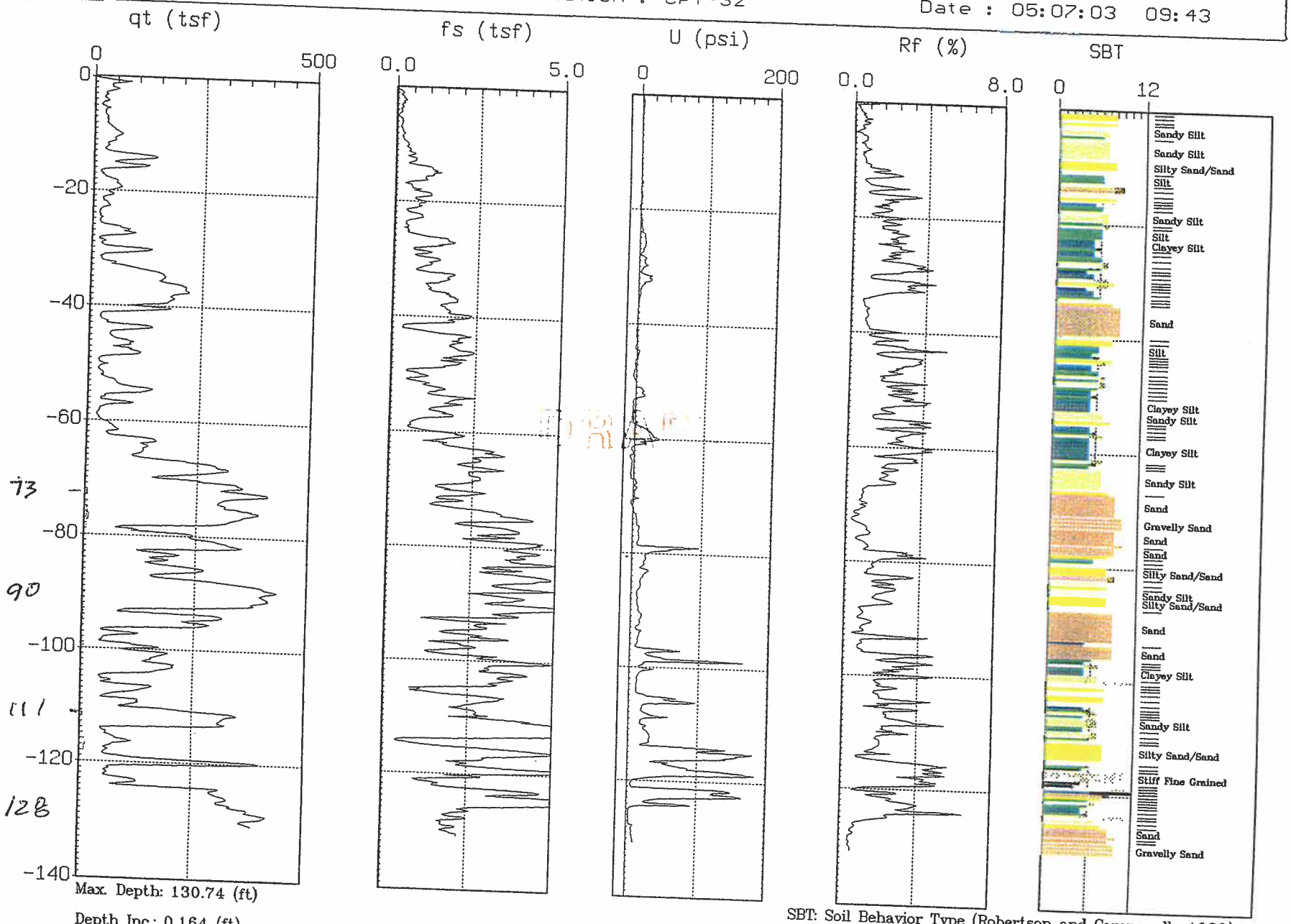
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

URS

Site : COOPER DRUM
Location : CPT-32

Geologist : DON GRUBER
Date : 05:07:03 09:43



Max. Depth: 130.74 (ft)

Depth Inc.: 0.164 (ft)

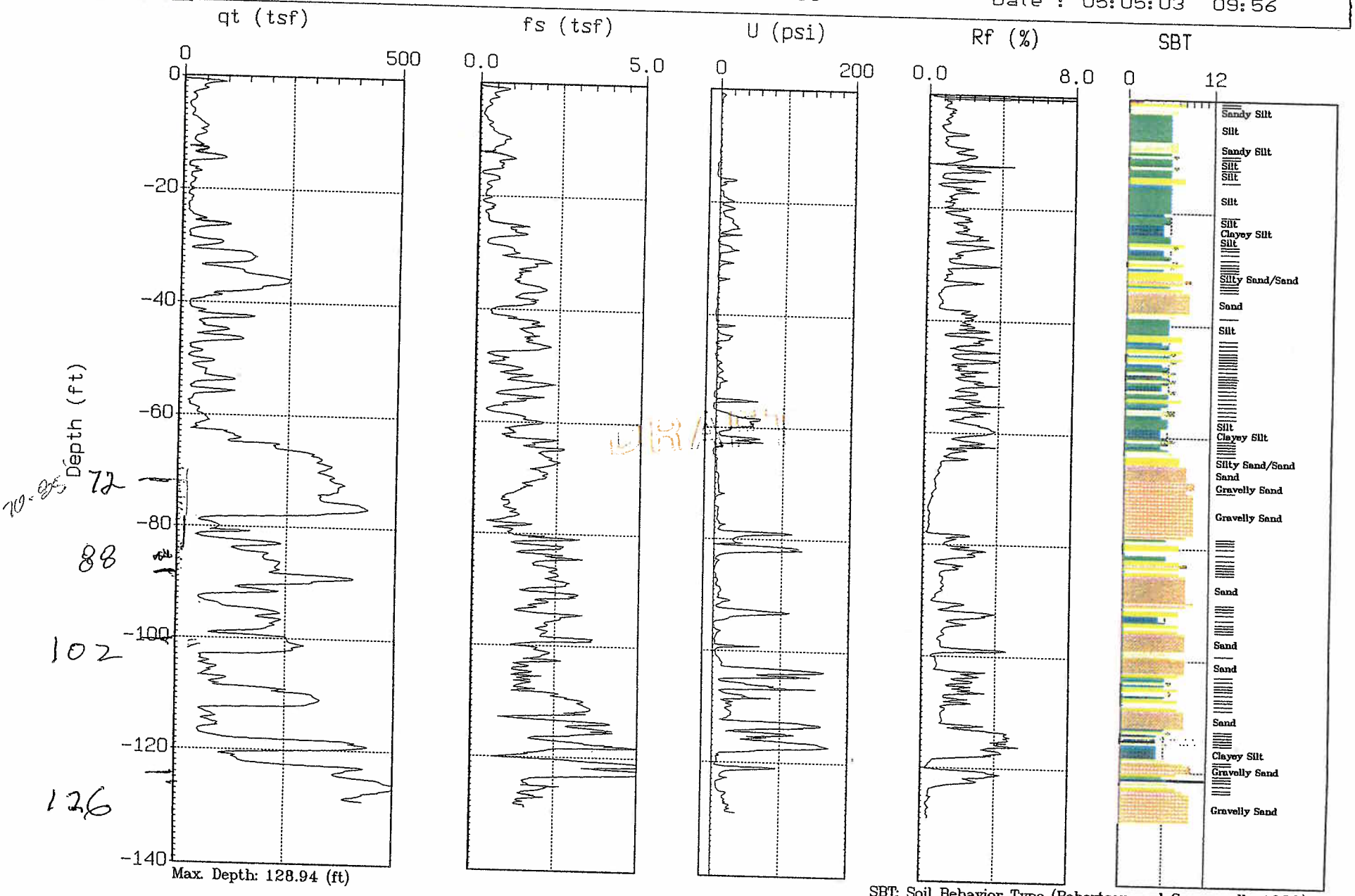
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

URS

Site : COOPER DRUM
Location : CPT-33

Geologist : DON GRUBER
Date : 05:05:03 09:56



Max. Depth: 128.94 (ft)

Depth Inc.: 0.164 (ft)

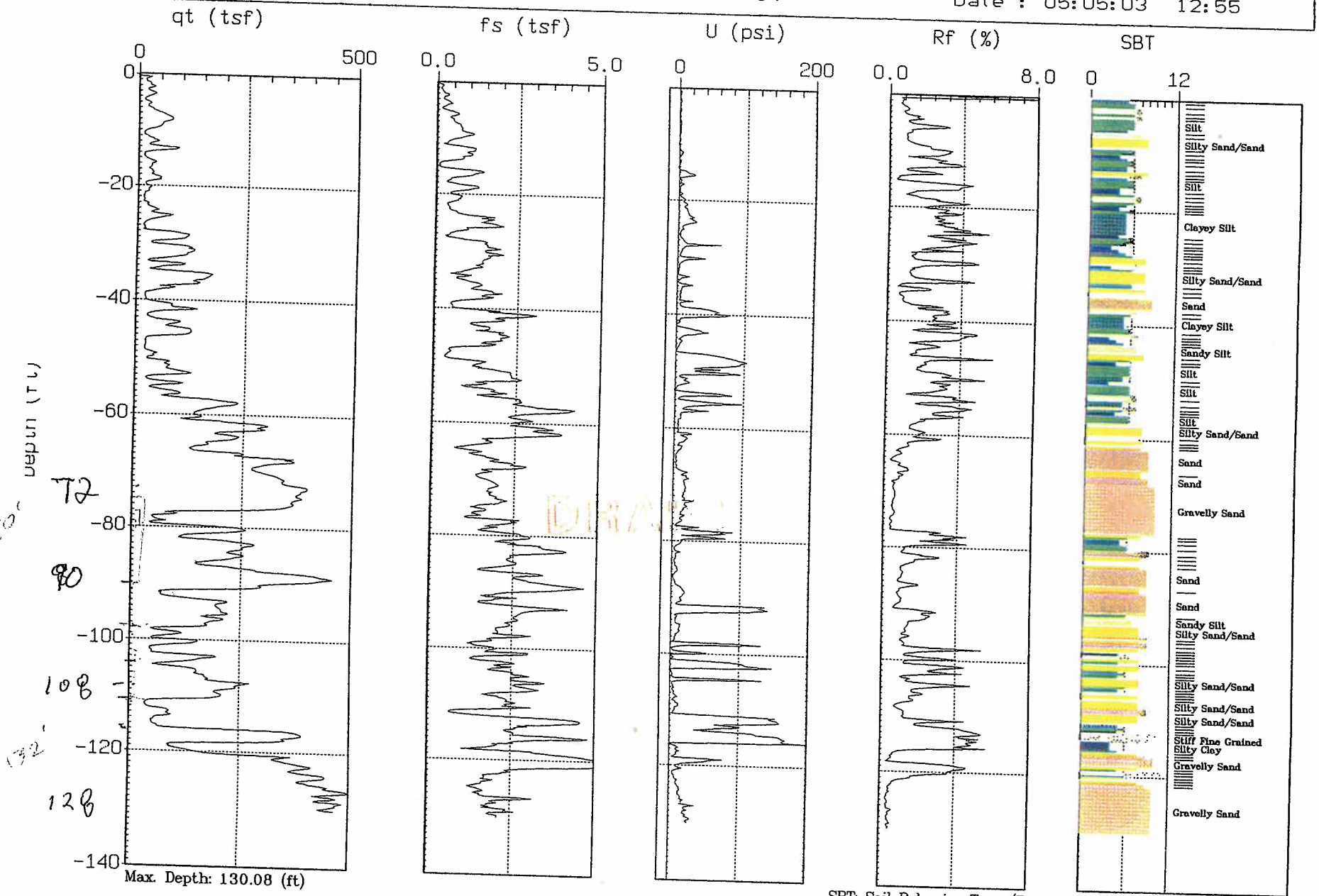
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

URS

Site : COOPER DRUM
Location : CPT-34

Geologist : DON GRUBER
Date : 05:05:03 12:55



Max. Depth: 130.08 (ft)
Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson and Campanella 1988)

T2

90

108

128

-15.90'

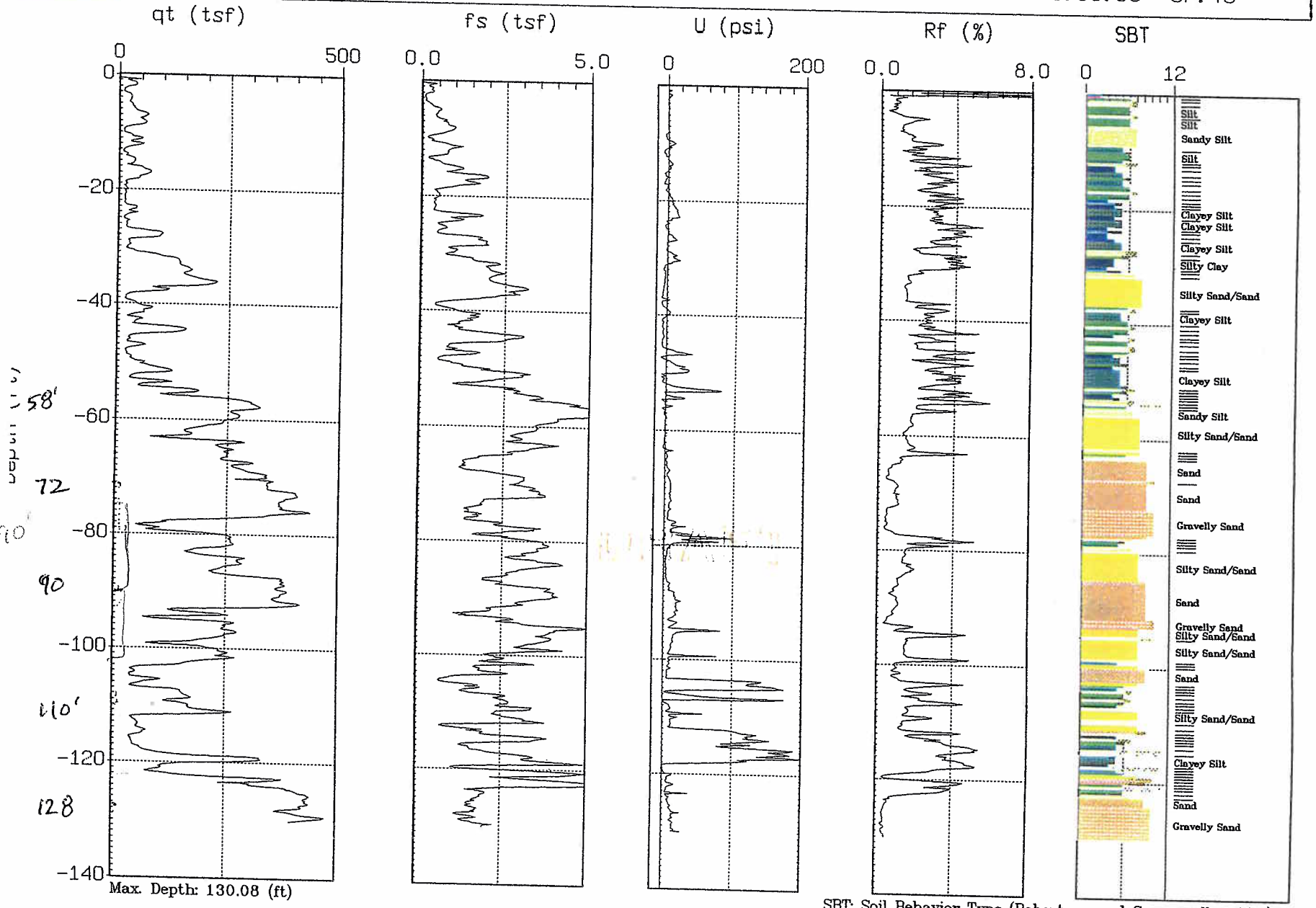
12.0-13.2'

GREGG

URS

Site : COOPER DRUM
Location : CPT-35

Geologist : DON GRUBER
Date : 05:06:03 07:40



Max. Depth: 130.08 (ft)

Depth Inc.: 0.164 (ft)

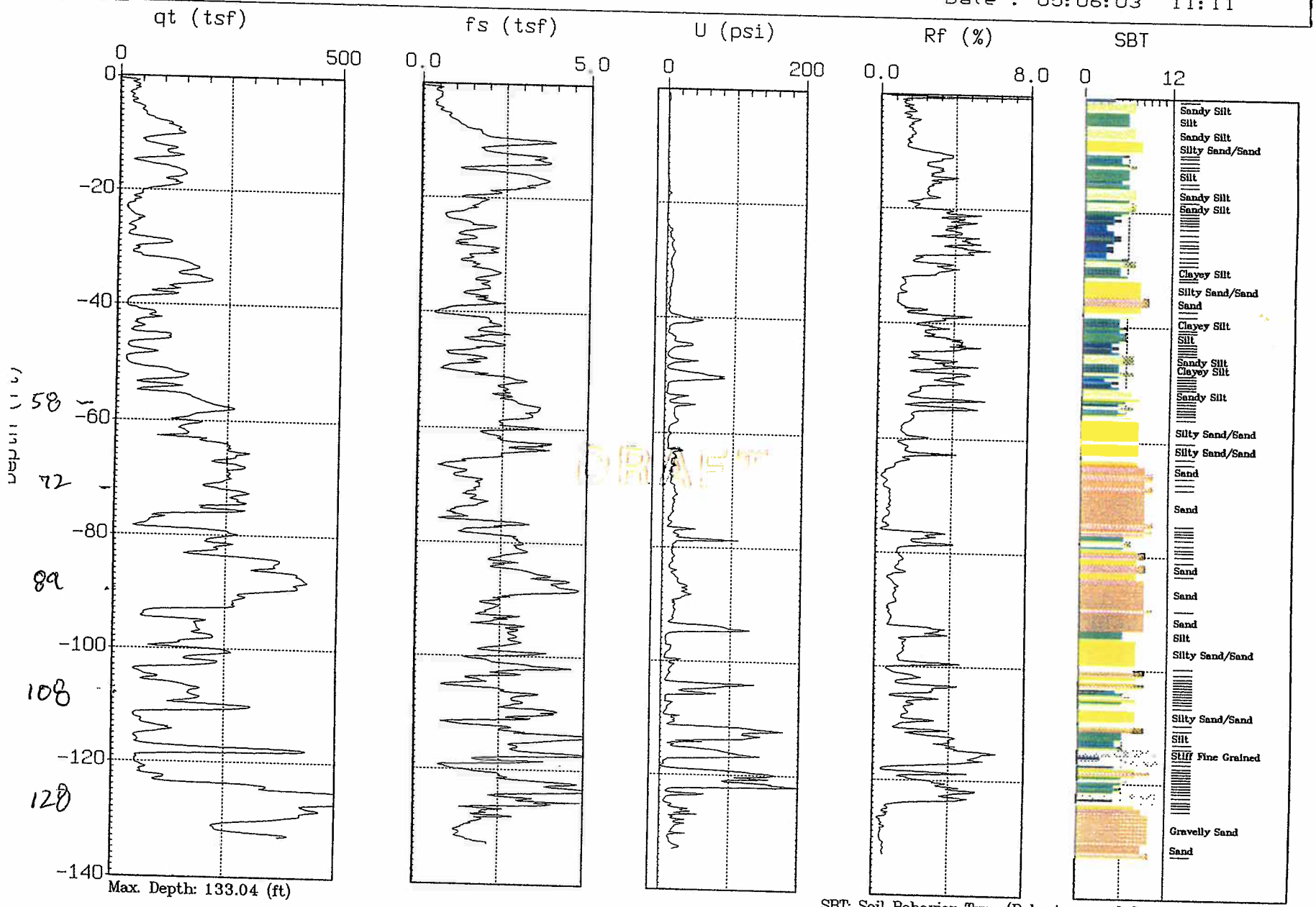
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

URS

Site : COOPER DRUM
Location : CPT-36

Geologist : DON GRUBER
Date : 05:06:03 11:11



Max. Depth: 133.04 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson and Campanella 1988)

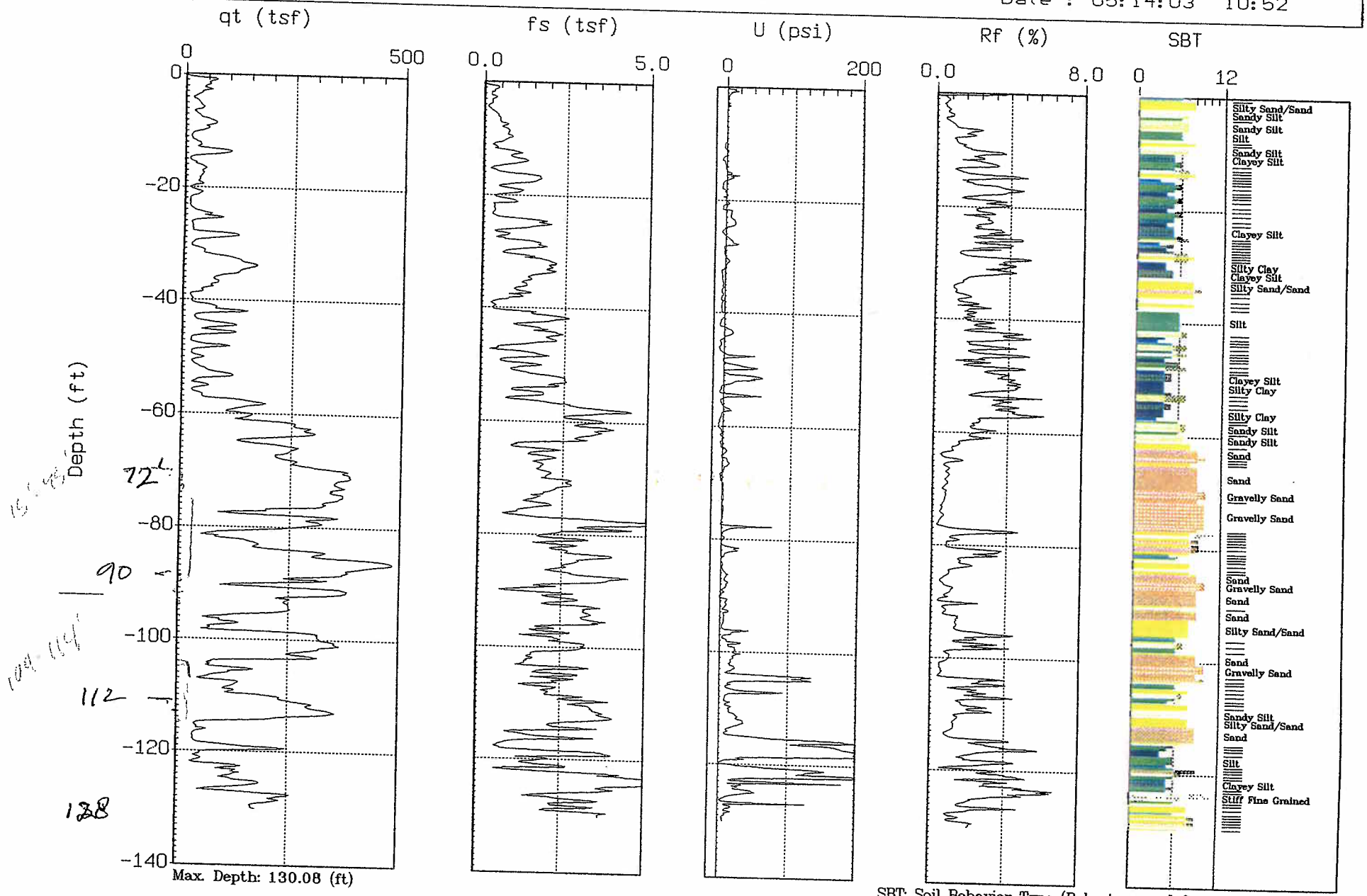
DRAFT

GREGG

URS

Site : COOPER DRUM
Location : CPT-37

Geologist : DON GRUBER
Date : 05:14:03 10:52



Max. Depth: 130.08 (ft)

Depth Inc.: 0.164 (ft)

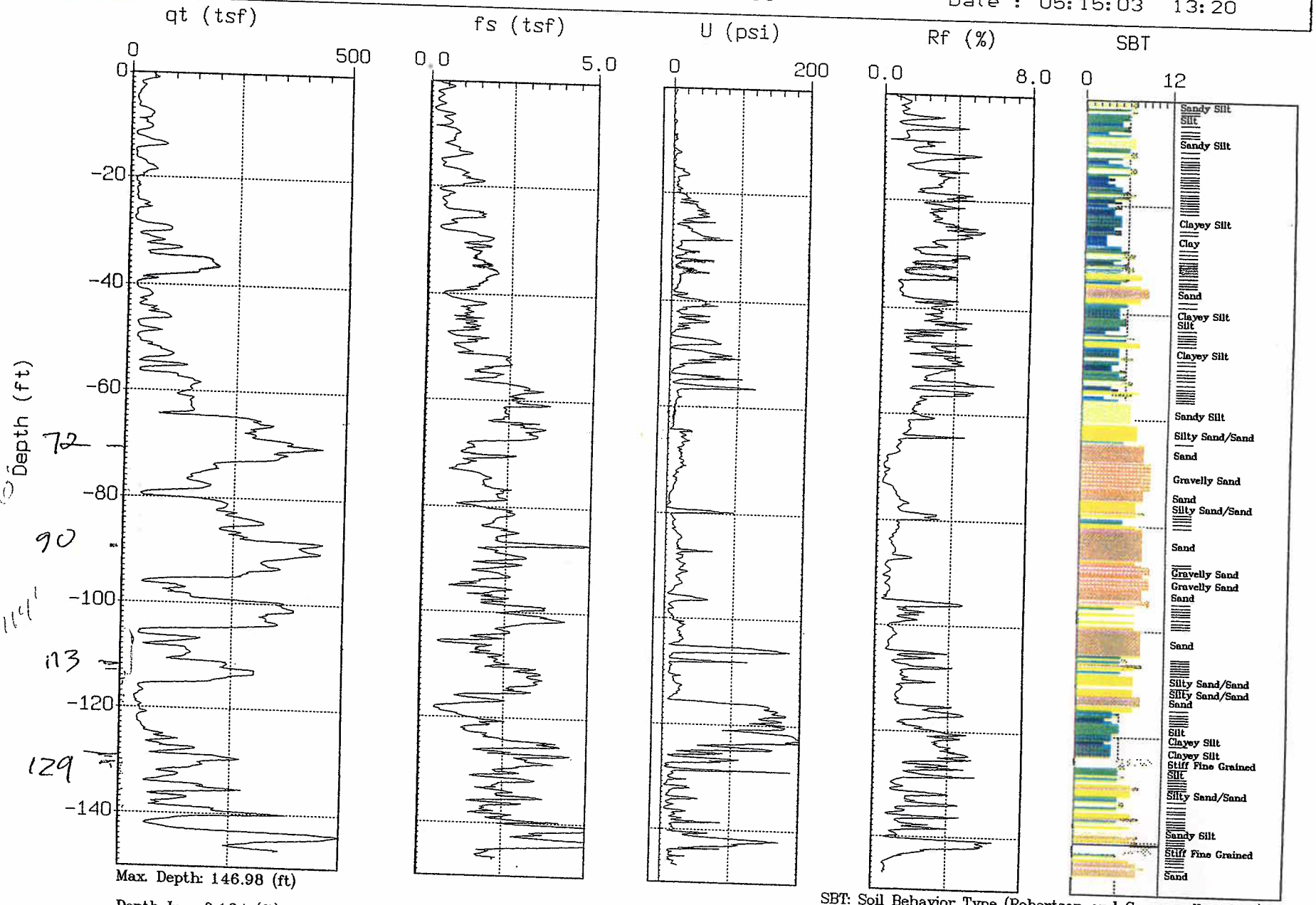
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

URS

Site : COOPER DRUM
Location : CPT-38

Geologist : DON GRUBER
Date : 05:15:03 13:20



Max. Depth: 146.98 (ft)

Depth Inc.: 0.164 (ft)

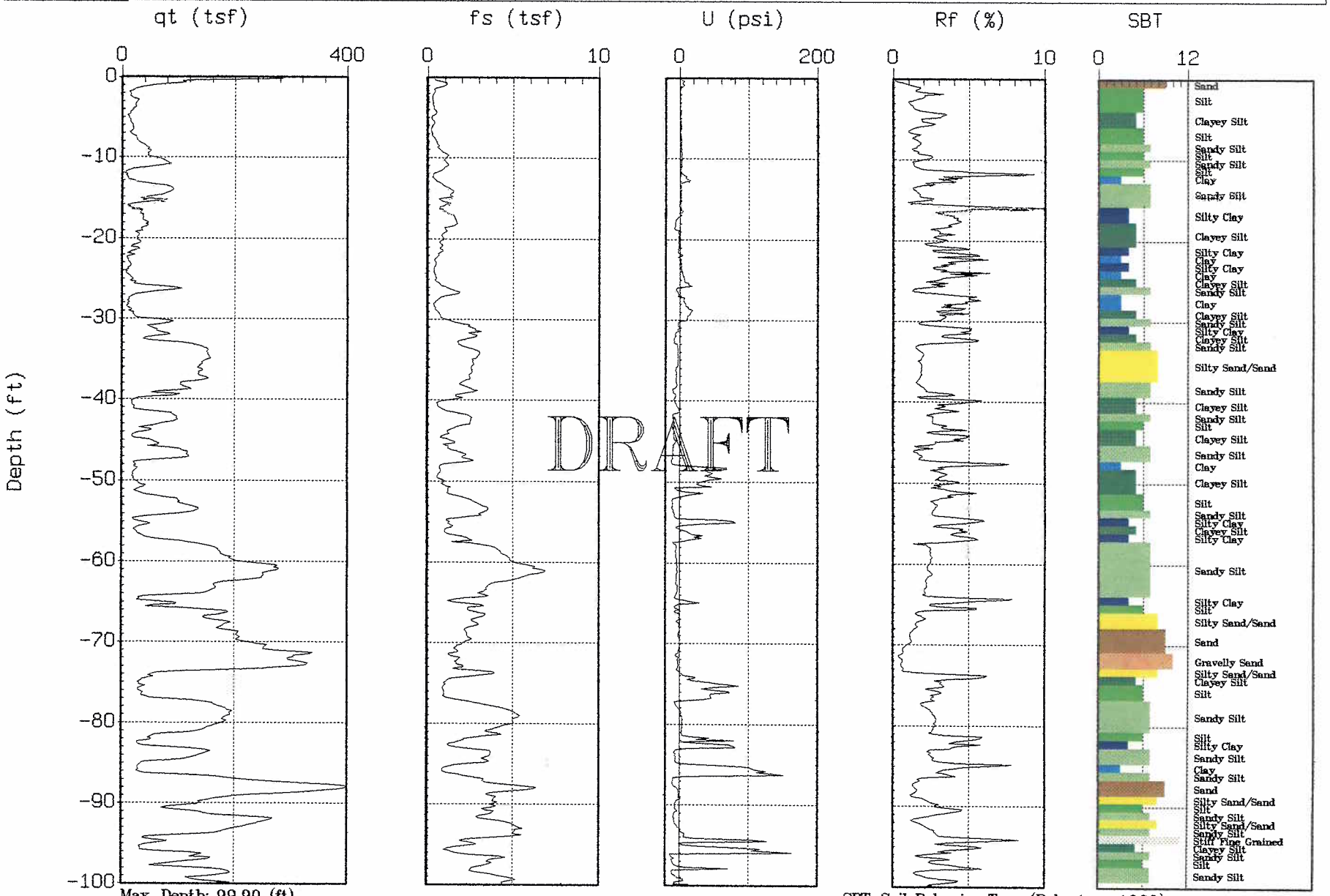
SBT: Soil Behavior Type (Robertson and Campanella 1988)

GREGG

URS

Site : COOPER DRUM
Location : CPT-39

Geologist : DON GRUBER
Date : 12:15:03 10:46



Max. Depth: 99.90 (ft)

Depth Inc.: 0.164 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-20

Date(s) Drilled	2/26/03 - 2/27/03	Logged By	D. Gruber	Checked By	Don Gruber
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	10-inch	Total Depth Drilled (feet)	75.0
Drill Rig Type	CME-95	Drilling Contractor	Water Development Corp.	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	10-inch / Diameter of Well (inches) 4-inch	Type of Well Casing	SCH 40 PVC	Screen Perforation	0.020-inch
Type of Sand Pack	#3 Sand	Type/Thickness of Seal(s)	Neat Cement Grout with 5% Bentonite		
Comments	CME Continuous Core - 5' barrel				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Sand (SP). Gray, medium grained, poorly graded, dry.			Flush-mount well seal (no lock); 12-inch flush mount traffic rated vault box
	5						Sandy Silt (ML). Dark brown, very fine grained, non plastic, slightly moist.			4-inch SCH 40 PVC to 55'
	10						Silty Sand (SM). Brown, very fine grained, slightly moist.			
	15						Sandy Silt (ML). Grayish brown, low plasticity, very fine grained sand, moist.			
	20						Silty Clay (CL). Grayish brown, low plasticity, minor very fine grained sand, moist.			Neat Cement from near surface to 48'
	25									
	30						Clayey Silt (ML). Grayish brown, low plasticity, minor fine grained sand, moist.			
	35						Sand (SP). Brown, poorly graded, minor silt, moist.			
	40						Silty Sand (SM). Gray, very fine grained sand, saturated.			
	45						Silty Clay (CL). Gray, low plasticity, minor fine grained sand, moist.			

Report: ENV_1A; Project File: J:\COOPER~1\COOPERMW.GPJ; Data Template:WC_CORP1.GDT Printed: 4/19/04

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-20

Elevation feet	Depth, feet	SAMPLES: Type	SAMPLES: Description	SAMPLES: Blows/foot	SAMPLES: Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	45						No recovery.			
							Sand (SP). Gray, very fine grained, minor silt, saturated.			First Water 47'
	50									Bentonite Chips 48-51'
	55						Sandy Silt (ML). Gray, moist.			
							No recovery.			
							Sand (SP). Gray, very fine grained, minor silt, saturated.			
	60						Grayish brown, very fine grained sand, moist.			
							No recovery.			4-inch SCH 40 PVC, 0.020-inch Slot Screen 55-70', #3 Filter Pack Sand 51-75'
	65									
	70									
	75									
	80									
	85									
	90									
	95									
	100									
	105									

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-21

Date(s) Drilled	10/22/03		Logged By	M.Annis/D.Gruber	Checked By	Don Gruber
Drilling Method	Hollow Stem Auger		Drill Bit Size/Type	10-inch	Total Depth Drilled (feet)	77.0
Drill Rig Type	CME-95		Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)			Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	10-inch	Diameter of Well (inches) 4-inch	Type of Well Casing	SCH 40 PVC	Screen Perforation	0.020-inch
Type of Sand Pack	#3 Sand		Type/Thickness of Seal(s)	Neat Cement Grout/Bentonite Chips with #30 Sand		
Comments	Split Spoon sampler					

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0				0.0		Asphalt. Silty Sand (SM). Dark brown, fine grained sand, moist.			Flush-mount well seal (no lock); 12-inch flush mount traffic rated vault box
	5	X			0.0		Silty Sand (SM). Dark brown to black, fine grained sand, moist.			4-inch SCH 40 PVC to 55'
	10	X			0.0		Silty Sand (SM). Dark brown, fine grained sand, moist.			
	15	X			0.0					
	20	X			0.0		Silty Clay (CL). Dark brown to black, moist.			Neat Cement from near surface to 43'
	25	X			0.0					
	30	X			0.0		Silty Sand (SM). Dark brown, fine grained, moist.			
	35	X			0.0		Silty Clay (CL). Olive gray, moist.			
	40	X			0.0					
	45									

Report: ENV_1A; Project File: J:\COOPER~1\COOPERMW.GPJ; Data Template:WC_CORP1.GDT Printed: 4/19/04

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-21

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	45				0.0		Silty Sand (SM). Olive gray, fine grained sand, moist.			#30 Sand and Bentonite Chips 43-52'
	50		MW-21-50	37	0.0			1000		
	55									
	60		MW-21-60	26	0.0		Sand (SP). Dark brown, fine grained, saturated.	1010		First Water 60' 4-inch SCH 40 PVC, 0.020-inch V-Slot Screen 55-75', #3 Filter Pack Sand 52-77'
	65									
	70		MW-21-70		0.0		Fine to medium grained.	1020		
	75									
	80									
	85									
	90									
	95									
	100									
	105									

Report: ENV_1A; Project File: J:\COOPER~1\COOPERMW.GPJ; Data Template:WC_CORP1.GDT Printed: 4/19/04

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-22

Date(s) Drilled	12/4/03	Logged By	R.M	Checked By	Don Gruber
Drilling Method	Hollow-Stem-Auger	Drill Bit Size/Type	10 inch	Total Depth Drilled (feet)	75.0
Drill Rig Type	CME-95	Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	10-inch / Diameter of Well (inches) 4-inch	Type of Well Casing	SCH 40 PVC	Screen Perforation	0.020-inch
Type of Sand Pack	#3 Sand	Type/Thickness of Seal(s)	Neat Cement Grout/Bentonite Chips with #30 Sand		
Comments	Asphalt Surface, No sampling, soil description based on drill cuttings, well design based on CPT-31.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Flush-mount well seal (no lock)
				N/A	0.0		Silty SAND: (5Y 4/2) olive gray; 30% silt, 70% very fine grain sand; moist.			12-inch flush mount traffic rated vault box
	5				0.0		Silty SAND: (5Y 3/2) dark olive gray; same as above.			4-inch SCH 40 PVC to 63'
	10				0.0		Same as above.			
	15				0.0		Silty SAND with clay: (5Y 3/2) dark olive gray; 40% very fine grain sand, 30% silt, 30% clay; slightly plastic clayey chunks, moist.			
	20				5.0		Silty CLAY: (5Y 4/2) olive gray; 40% silt, 60% clay; plastic; moist.			Neat Cement from near surface to 56'
	25				7.3		Silty CLAY: (5Y 4/2) olive gray; 30% silt, 70% clay; plastic; damp.			
	30				10.3		Same as above.			
	35				4.0		SAND with silt and clay: (5Y 5/3) olive; 20% silt, 30% clay, 50% fine grain, uniform sand; plastic silty clay clumps; wet.			
	40				2.4		SAND: (5Y 5/3) olive; fine grain; uniform; saturated.			First Water at 40'
	45									

Report: ENV_1A; Project File: J:\COOPER~1\COOPERMW.GPJ; Data Template:WC_CORP1.GDT Printed: 4/19/04

URS Group, Inc.

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-22

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	45				4.0		Silty SAND (5Y 5/3) olive; fine grain; saturated.			
	50				1.6		Same as above.			
	55				1.2		Same as above.			
	60				0.0		Same as above.			#30 Sand and Bentonite Chips 56-60'
	65				0.0		Silty SAND: (5Y 5/3) olive; angular; fine grain sand; quartz rich; saturated.			
	70						Boring terminated at 75 feet below ground surface. Groundwater encountered at approximately 40 feet below ground surface. Geologic descriptions taken from auger cuttings and are depth approximate.			4-inch SCH 40 PVC, 0.020-inch Slot Screen 63-73', #3 Filter Pack Sand 60-75'
	75									
	80									
	85									
	90									
	95									
	100									
	105									

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-23

Date(s) Drilled	12/5/03	Logged By	R.M.	Checked By	Don Gruber
Drilling Method	Hollow-Stem-Auger	Drill Bit Size/Type	10 inch	Total Depth Drilled (feet)	81.0
Drill Rig Type	CME-95	Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	10-inch / Diameter of Well (inches) 4-inch	Type of Well Casing	SCH 40 PVC	Screen Perforation	0.020-inch
Type of Sand Pack	#3 Sand	Type/Thickness of Seal(s)	Neat Cement Grout/Bentonite Chips with #30 Sand		
Comments	Asphalt Surface, No sampling, soil description based on drill cuttings, well design based on CPT-27.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Flush-mount well seal (no lock)
				N/A	16.5		SAND: (2.5 4/4) olive brown; very fine grain sand; few angular pebbles, dry.			12-inch flush mount traffic rated vault box
	5				7.1		Sandy SILT: (2.5Y 3.2) very dark grayish brown; 20% fine grain sand; 80% silt; clumpy; few organic roots.			4-inch SCH 40 PVC to 69'
	10				8.5		Silty SAND: (2.5Y 3/3) dark olive brown; 20% silt, 80% very fine grain sand; moist.			
	15				12.2		SAND: (2.5Y 4/4) olive brown, very fine grain; dry.			
	20				11.4		Sandy SILT: (2.5Y 3/3) dark olive brown; 20% fine grain sand; clumpy; moist.			Neat Cement from near surface to 62'
	25				7.9		Same as above.			
	30				19.5		Sandy, clayey SILT: (2.5Y 4/2) dark grayish brown; 20% fine grain sand, 30% clay, 50% silt; clumpy; plastic; moist.			
	35				18.6		Silty CLAY: (2.5Y 4/2) dark grayish brown; 40% silt, 60% clay; plastic; moist.			
	40				7.1		SAND: (5Y 4/4) olive; fine grain; uniform; damp to wet.			First Water at 40'
	45									

Report: ENV_1A; Project File: J:\COOPER~1\COOPERMW.GPJ; Data Template:WC_CORP1.GDT Printed: 4/19/04

URS Group, Inc.

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-23

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	45				4.2		Sandy Clayey SILT: (5Y 3/2) dark olive gray; 20% fine grain sand, 30% clay, 50% silt; slightly plastic; wet to saturated.			
	50									
	55				0.0		Sandy SILT: (5Y 3/2) dark olive gray; 20% fine grain sand, 80% silt; saturated.			
	60				0.0		Same as above.			
	65				2.5		Same as above.			#30 Sand and Bentonite Chips 62-66'
	70				2.1		Same as above.			
	75						Boring terminated at 81 feet below ground surface. Groundwater encountered at approximately 40 feet below ground surface. Geologic descriptions taken from auger cuttings and are depth approximate.			4-inch SCH 40 PVC, 0.020-inch Slot Screen 69-79', #3 Filter Pack Sand 66-81'
	80									
	85									
	90									
	95									
	100									
	105									

URS Group, Inc.

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-24

Date(s) Drilled	12/1/03	Logged By	R.M.	Checked By	Don Gruber
Drilling Method	Hollow-Stem-Auger	Drill Bit Size/Type	10 inch	Total Depth Drilled (feet)	87.0
Drill Rig Type	CME-95	Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	10-inch / Diameter of Well (inches) 4-inch	Type of Well Casing	SCH 40 PVC	Screen Perforation	0.020-inch
Type of Sand Pack	#3 Sand	Type/Thickness of Seal(s)	Neat Cement Grout/Bentonite Chips with #30 Sand		
Comments	Asphalt Surface, No sampling, soil description based on drill cuttings, well design based on CPT-33.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Flush-mount well seal (no lock); 12-inch flush mount traffic rated vault box
	5			N/A	0.0		Silty SAND: (2.5Y 4/3) olive brown; very fine grain sand; moist.			4-inch SCH 40 PVC to 70'
							No recovery.			
	10				0.0		Silty SAND: (2.5Y 3/2) very dark grayish brown; 20% silt, 80% very fine grain sand; moist.			
	15				0.2		Same as above.			
	20				0.0		SAND with silt: (5Y 4/3) olive; very fine grain sand; wet to saturated.			Neat Cement from near surface to 63'; First Water at 20'
	25				0.0		Silty CLAY: (5Y 3/2) dark olive gray; soft; very plastic; wet to saturated.			
	30				0.0		Same as above.			
	35				0.0		Color change to (5Y 3/2) dark olive gray; same as above.			
	40				0.3		SAND: (5Y 4/2) olive gray; fine grain; wet.			
	45									

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-24

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	45				1.1		Sandy SILT (5Y 2.5/2) black; very fine grain sand; saturated.			
	50				0.0		Same as above.			
	55				0.0		Same as above.			
	60				0.0		Same as above.			
	65				0.0		Same as above.			#30 Sand and Bentonite Chips 63-67'
	70						Boring terminated at 87 feet below ground surface. Groundwater encountered at approximately 20 feet below ground surface. Geologic descriptions taken from auger cuttings and are depth approximate.			
	75									
	80									4-inch SCH 40 PVC, 0.020-inch Slot Screen 70-85', #3 Filter Pack Sand 67-87'
	85									
	90									
	95									
	100									
	105									

URS Group, Inc.

Project: Cooper Drum **Project Location: 9316 S. Atlantic Ave., South Gate, CA** **Project Number: 18600047.03020**	**Log of Boring MW-25** Sheet 1 of 2

Date(s) Drilled	12/3/03	Logged By	R.M.	Checked By	Don Gruber
Drilling Method	Hollow-Stem-Auger	Drill Bit Size/Type	10 inch	Total Depth Drilled (feet)	92.0
Drill Rig Type	CME-95	Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	10-inch; Diameter of Well (inches): 4-inch	Type of Well Casing	SCH 40 PVC	Screen Perforation	0.020-inch
Type of Sand Pack	#3 Sand	Type/Thickness of Seal(s)	Neat Cement Grout/Bentonite Chips with #30 Sand		
Comments	Asphalt Surface, No sampling, soil description based on drill cuttings, well design based on CPT-34 and CPT-35.				

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Flush-mount well seal (no lock)
				N/A	0.0		Clayey SAND: (2.5Y 4/3) olive; fine grain sand; uniform; few clay chunks; plastic; moist.			12-inch flush mount traffic rated vault box
	5				6.5		Sandy SILT: (2.5Y 3/1) very dark gray; fine grain; chunky; moist.			4-inch SCH 40 PVC to 75'
	10				6.4		Sandy SILT: (5Y 4/2) olive gray; fine grain; crumbly; moist.			
	15				8.0		Silty SAND: (5Y 3/2) dark olive gray; reduced silt content; very fine grain; moist.			
	20				7.9		Sandy SILT: (5Y 3/2) dark olive gray; trace clay; very fine grain sand; very slight plasticity; moist.			Neat Cement from near surface to 68'
	25				8.3		Silty CLAY: (5Y 4/2) olive gray; plastic; moist.			
	30				5.2		Same as above.			
	35				5.8		Sandy SILT: (5Y 3/2) dark olive gray; very fine grain; no plasticity; moist.			
	40				7.2		Sandy SILT: (5Y 3/2) dark olive gray; increase in sand content and grain size; fine grain; wet.			First Water at 40'
	45									

Report: ENV_1A; Project File: J:\COOPER~1\COOPERMW.GPJ; Data Template:WC_CORP1.GDT Printed: 4/19/04

URS Group, Inc.

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-25

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	45				7.9		SILT with sand: (5Y 2.5/2) black; saturated.			
	50				5.6		Same as above.			
	55				0.0		Same as above.			
	60				0.0		Boring terminated at 92 feet below ground surface. Groundwater encountered at approximately 40 feet below ground surface. Geologic descriptions taken from auger cuttings and are depth approximate.			
	65									
	70									#30 Sand and Bentonite Chips 68-72'
	75									
	80									4-inch SCH 40 PVC, 0.020-inch Slot Screen 75-90', #3 Filter Pack Sand 72-92'
	85									
	90									
	95									
	100									
	105									

Report: ENV_1A; Project File: J:\COOPER~1\COOPERMW.GPJ; Data Template:WC_CORP1.GDT Printed: 4/19/04

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-26

Date(s) Drilled	12/10/03	Logged By	R.M.	Checked By	Don Gruber
Drilling Method	Mud Rotary	Drill Bit Size/Type	8 inch	Total Depth Drilled (feet)	134.0
Drill Rig Type	Versa Drill V-100	Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	8 inch; Diameter of Well (inches): 2-inch	Type of Well Casing	SCH 40 PVC	Screen Perforation	0.020-inch
Type of Sand Pack	#3 Sand	Type/Thickness of Seal(s)	Neat Cement Grout/Bentonite Chips with #30 Sand		
Comments	Asphalt Surface, No sampling, soil description based on drill cuttings, well design based on CPT-34 and CPT-35.				

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0									Flush-mount well seal (no lock); 12-inch flush mount traffic rated vault box
	5									
	10			N/A			Some fine and few medium grain sands; mostly sandstone; angular and subangular granules			
	15									2-inch SCH 40 PVC to 122'
	20						Some fine grain sands; mostly sandstone; some platy fragments; mostly subangular granules; grayish in color.			
	25									
	30						Few fine grain sands; subangular; mostly sandstone and limestone granules with some quartz; overall grayish coloration.			
	35									
	40						Same as above.			Neat Cement from near surface to 115'
	45									
	50						Same as above.			
	55									
	60									

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-26

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	60						Same as above; slight increase in overall grain size.			
	65									
	70						Same as above; increase in very fine quartz granules; some wood chips present.			
	75									
	80						Increase in overall amount of sand recovered; fine grain sand; black, gray and white evenly distributed; very few pink feldspar granules and very few greenish serpentine granules recovered.			
	85									
	90						Same as above.			
	95									
	100						Same as above; increase in overall grain size.			
	105									
	110						Same as above.			
	115									#30 Sand and Bentonite Chips 115-119'
	120						Same as above.			
	125									2-inch SCH 40 PVC, 0.020-inch Slot Screen 122-132', #3 Filter Pack Sand 119-134'
	130						Same as above; reduced granule size but still in the fine grain range.			
	135						Boring terminated at 134 feet below ground surface. Geologic descriptions taken from Mud Rotary cuttings and are not descriptive for fine sediments encountered. Descriptions are for fine grain and larger sands only and are depth approximate.			
	140									

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-27

Date(s) Drilled	12/3/03	Logged By	R.M.	Checked By	Don Gruber
Drilling Method	Hollow-Stem-Auger	Drill Bit Size/Type	10 inch	Total Depth Drilled (feet)	92.0
Drill Rig Type	CME-95	Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	10 inch / Diameter of Well (inches) 4-inch	Type of Well Casing	SCH 40 PVC	Screen Perforation	0.020-inch
Type of Sand Pack	#3 Sand	Type/Thickness of Seal(s)	Neat Cement Grout/Bentonite Chips with #30 Sand		
Comments	Asphalt Surface, No sampling, soil description based on drill cuttings, well design based on CPT-37.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0									Flush-mount well seal (no lock)
				N/A	3.6		Asphalt. Silty SAND (2.5Y 5/3) light olive brown; very fine grain; moist.			12-inch flush mount traffic rated vault box
	5				1.2		SAND: (2.5Y 4/2) dark grayish brown; very fine grain; uniform; moist.			4-inch SCH 40 PVC to 75'
	10				0.6		Silty SAND: (2.5Y 4/2) dark grayish brown; trace clay; very fine grain sand; very slight plasticity.			
	15				0.2		SAND: (2.5Y 4/2) dark grayish brown; very fine grain; uniform; moist.			
	20				0.1		Clayey SILT: (5Y 4/2) olive gray; very plastic; wet to saturated.			Neat Cement from near surface to 68'
	25				0.7		Silty SAND: (5Y 3/2) dark olive gray; crumbly; damp.			
	30				0.5		Silty CLAY: (5Y 3/2) dark olive gray; very plastic; moist to damp.			
	35				0.5		Same as above; trace fine grain sand.			
	40				1.5		Same as above; increase silt content; wet.			First Water at 40'
	45									

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URS Group, Inc.

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-27

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	45				1.0		Silty SAND: (5Y 2.5/1) black; fine grain sand; saturated.			
	50				1.0		Boring terminated at 92 feet below ground surface. Groundwater encountered at approximately 40 feet below ground surface. Geologic descriptions taken from auger cuttings and are depth approximate.			
	55									
	60									
	65									
	70									#30 Sand and Bentonite Chips 68-72'
	75									
	80									4-inch SCH 40 PVC, 0.020-inch Slot Screen 75-90', #3 Filter Pack Sand 72-92'
	85									
	90									
	95									
	100									
	105									

Report: ENV_1A; Project File: J:\COOPER~1\COOPERMW.GPJ; Data Template:WC_CORP1.GDT Printed: 4/19/04

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-28

Date(s) Drilled	12/11/03	Logged By	R.M.	Checked By	Don Gruber
Drilling Method	Mud Rotary	Drill Bit Size/Type	8 inch	Total Depth Drilled (feet)	115.0
Drill Rig Type	Versa Drill V-100	Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	8 inch / Diameter of Well (inches) 2-inch	Type of Well Casing	SCH 40 PVC	Screen Perforation	0.020-inch
Type of Sand Pack	#3 Sand	Type/Thickness of Seal(s)	Neat Cement Grout/Bentonite Chips with #30 Sand		
Comments	Asphalt Surface, No sampling, soil description based on drill cuttings, well design based on CPT-37.				

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0									Flush-mount well seal (no lock)
										12-inch flush mount traffic rated vault box
	5									
	10			N/A			Few fine grain sands; angular to subangular; few quartz; mostly gray sandstone; some rubbery tar like substance.			
	15									2-inch SCH 40 PVC to 104'
	20						Same as above; very few fine grains.			
	25									
	30						Same as above.			
	35									
	40						Slight increase in grain size; mostly sandstone; little or no quartz.			Neat Cement from near surface to 95'
	45									
	50						Mostly fine grain sand; some few medium grains; predominantly sandstone grains.			
	55									
	60									

Report: ENV_1A; Project File: J:\COOPER~1\COOPERMW.GPJ; Data Template:WC_CORP1.GDT Printed: 3/22/04

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-28

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	60						Same as above.			
	65									
	70						Fine grain SAND; large increase in quartz fraction (25%), 35% sandstone, 30% biotite; few serpentine and feldspar.			
	75									
	80						Same as above.			
	85									
	90						Same as above.			
	95									
	100						Same as above.			#30 Sand and Bentonite Chips 95-101'
	105						Boring terminated at 115 feet below ground surface. Geologic descriptions taken from Mud Rotary cuttings and are not descriptive for fine sediments encountered. Descriptions are for fine grain and larger sands only and are depth approximate.			
	110									2-inch SCH 40 PVC, 0.020-inch Slot Screen 104-114', #3 Filter Pack Sand 101-115'
	115									
	120									
	125									
	130									
	135									
	140									

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-29

Date(s) Drilled	12/2/03	Logged By	R.M.	Checked By	Don Gruber
Drilling Method	Hollow-Stem-Auger	Drill Bit Size/Type	10 inch	Total Depth Drilled (feet)	92.0
Drill Rig Type	CME-95	Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	10 inch / Diameter of Well (inches) 4-inch	Type of Well Casing	SCH 40 PVC	Screen Perforation	0.020-inch
Type of Sand Pack	#3 Sand	Type/Thickness of Seal(s)	Neat Cement Grout/Bentonite Chips with #30 Sand		
Comments	Asphalt Surface, No sampling, soil description based on drill cuttings, well design based on CPT-38.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0						Asphalt.			Flush-mount well seal (no lock)
				N/A	6.2		SAND: (2.5Y 4/3) olive brown; fine grain sand with few asphalt chunks; moist.			12-inch flush mount traffic rated vault box
	5				3.0		SAND: (2.5Y 5/3) light olive brown; fine grain; uniform; moist.			4-inch SCH 40 PVC to 75'
	10				4.8		Silty SAND: (2.5Y 4/2) dark grayish brown; fine grain; moist.			
	15				3.5		Sandy SILT: (2.5Y 3/2) dark olive brown; fine grain sand; moist.			
	20				2.3		Clayey SILT: (2.5Y 4/2) dark grayish brown; plastic; moist.			Neat Cement from near surface to 68'
	25				1.2		Same as above.			
	30				1.0		Same as above.			
	35				0.0		Silty CLAY: (2.5Y 4/2) dark grayish brown; plastic; moist.			
	40				0.0		SAND: (5Y 3/2) dark olive gray; fine grain; uniform; moist.			
	45									First Water at 45'

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Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-29

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	45				0.0		Silty SAND: (5Y 3/2) dark olive gray; fine grain; saturated.			
	50				0.0		Sandy SILT (5Y 3/2) fine grain; saturated.			
	55				0.0		Same as above.			
	60				0.0		Same as above.			
	65						Boring terminated at 92 feet below ground surface. Groundwater encountered at approximately 45 feet below ground surface. Geologic descriptions taken from auger cuttings and are depth approximate.			
	70									#30 Sand and Bentonite Chips 68-72'
	75									
	80									4-inch SCH 40 PVC, 0.020-inch Slot Screen 75-90', #3 Filter Pack Sand 72-92'
	85									
	90									
	95									
	100									
	105									

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-30

Date(s) Drilled	12/9/03	Logged By	R.M.	Checked By	Don Gruber
Drilling Method	Mud Rotary	Drill Bit Size/Type	8 inch	Total Depth Drilled (feet)	115.0
Drill Rig Type	Versa Drill V-100	Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	8 inch / Diameter of Well (inches) 2-inch	Type of Well Casing	SCH 40 PVC	Screen Perforation	0.020-inch
Type of Sand Pack	#3 Sand	Type/Thickness of Seal(s)	Neat Cement Grout/Bentonite Chips with #30 Sand		
Comments	Asphalt Surface, No sampling, soil description based on drill cuttings, well design based on CPT-38.				

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0									Flush-mount well seal (no lock)
	5									12-inch flush mount traffic rated vault box
	10			N/A			Many very fine grains and some fine grain sands.			
	15									2-inch SCH 40 PVC to 104'
	20						Fine grain sand.			
	25									
	30						Fine and medium grain sands.			
	35									
	40						Little or no fine or larger grains.			Neat Cement from near surface to 97'
	45									
	50						Same as above.			
	55									
	60									

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-30

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	60						Some fine and very fine sands.			
	65									
	70						Fine medium and coarse grain sands; 10% fine, 40% medium, 50% coarse grain.			
	75									
	80						Fine, medium and coarse grain sands; 25% medium, 25% coarse, 50% fine.			
	85									
	90						Same as above.			
	95									
	100						Fine, medium and coarse grain sands; 10% coarse, 40% medium, 50% fine.			#30 Sand and Bentonite Chips 97-101'
	105									
	110						Fine, medium and coarse grain sands; 5% coarse, 35% medium, 60% fine grain.			2-inch SCH 40 PVC, 0.020-inch Slot Screen 104-114', #3 Filter Pack Sand 101-115'
	115						Boring terminated at 115 feet below ground surface. Geologic descriptions taken from Mud Rotary cuttings and are not descriptive for fine sediments encountered. Descriptions are for fine grain and larger sands only and are depth approximate.			
	120									
	125									
	130									
	135									
	140									

Report: ENV_1A; Project File: J:\COOPER~1\COOPERMW.GPJ; Data Template:WC_CORP1.GDT Printed: 3/22/04

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-31

Date(s) Drilled	12/2/03	Logged By	R.M.	Checked By	Don Gruber
Drilling Method	Hollow-Stem-Auger	Drill Bit Size/Type	10 inch	Total Depth Drilled (feet)	92.0
Drill Rig Type	CME-95	Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	10 inch / Diameter of Well (inches) 4-inch	Type of Well Casing	SCH 40 PVC	Screen Perforation	0.020-inch
Type of Sand Pack	#3 Sand	Type/Thickness of Seal(s)	Neat Cement Grout/Bentonite Chips with #30 Sand		
Comments	Asphalt Surface, No sampling, soil description based on drill cuttings, well design based on CPT-26.				

Elevation feet	Depth, feet	SAMPLES Type	Description	Blows/foot	Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0			N/A	0.0		Asphalt. SAND: (2.5Y 5/4) light olive brown; fine grain; uniform; dry.			Flush-mount well seal (no lock); 12-inch flush mount traffic rated vault box
	5				0.0		Silty SAND: (2.5Y 4/2) olive gray; very fine grain sand; moist.			4-inch SCH 40 PVC to 75'
	10				0.0		SAND: (2.5Y 5/4) light olive gray; fine grain; uniform; dry.			
	15				0.0		Silty SAND: (2.5Y 3/2) very dark grayish brown; very fine grain sand; moist.			
	20				0.0		Sandy SILT: (2.5Y 4/3) olive brown; fine grain sand, few round pebbles; moist.			Neat Cement from near surface to 68'
	25				0.0		Clayey SILT: (2.5Y 4/2) dark grayish brown; slightly plastic; crumbly; moist.			
	30				0.2		Silty CLAY: (2.5Y 4/2) dark grayish brown; plastic; moist.			
	35				16.2		Same as above.			
	40				15.1		SAND: (5Y 5/2) olive gray; fine grain; uniform; damp.			
	45									First Water at 45'

URS Group, Inc.

Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-31

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	45				15.3		SAND: (5Y 3/1) very dark gray; fine grain; uniform; wet to saturated.			
	50				15		Clayey SILT: (5Y 2.5/2) black; plastic; saturated.			
	55				1.4		Silty SAND: (5Y 2.5/2) black; fine grain; saturated.			
	60				0.0		Same as above; increased silt content.			
	65				0.0		Same as above; reduced silt content.			
	70				0.0		Same as above.			#30 Sand and Bentonite Chips 68-72'
	75						Boring terminated at 92 feet below ground surface. Groundwater encountered at approximately 45 feet below ground surface. Geologic descriptions taken from auger cuttings and are depth approximate.			
	80									4-inch SCH 40 PVC, 0.020-inch Slot Screen 75-90', #3 Filter Pack Sand 72-92'
	85									
	90									
	95									
	100									
	105									

URS Group, Inc.

Project: Cooper Drum **Project Location: 9316 S. Atlantic Ave., South Gate, CA** **Project Number: 18600047.03020**	**Log of Boring MW-32** Sheet 1 of 2

Date(s) Drilled	12/8/03	Logged By	R.M.	Checked By	Don Gruber
Drilling Method	Mud Rotary	Drill Bit Size/Type	8 inch	Total Depth Drilled (feet)	134.0
Drill Rig Type	Versa Drill V-100	Drilling Contractor	Gregg Drilling and Testing	Hammer Weight/ Drop (lbs/in.)	
Groundwater Level (feet)		Date Measured		Approx. Surface Elevation (feet)	
Diameter of Hole (inches)	8 inch / Diameter of Well (inches) 2-inch	Type of Well Casing	SCH 40 PVC	Screen Perforation	0.020-inch
Type of Sand Pack	#3 Sand	Type/Thickness of Seal(s)	Neat Cement Grout/Bentonite Chips with #30 Sand		
Comments	Asphalt Surface, No sampling, soil description based on drill cuttings, well design based on CPT-26.				

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	0									Flush-mount well seal (no lock)
										12-inch flush mount traffic rated vault box
	5			N/A			SAND: (2.5Y 4/3) olive brown; very fine grain; uniform; dry to moist.			
	10									
	15						Fine grain sands.			2-inch SCH 40 PVC to 122'
	20						Fine grain sands; increase in grain size.			
	25									
	30									
	35									
	40						Very fine and fine grain sands.			Neat Cement from near surface to 115'
	45									
	50						Same as above.			
	55									
	60									

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Project: Cooper Drum
Project Location: 9316 S. Atlantic Ave., South Gate, CA
Project Number: 18600047.03020

Log of Boring MW-32

Elevation feet	Depth, feet	SAMPLES Type	SAMPLES Description	SAMPLES Blows/foot	SAMPLES Headspace (ppm)	Graphic Log	MATERIAL DESCRIPTION	Drilling Progress (24-hour clock)	Well Completion Log	REMARKS AND WELL DETAIL
	60						Same as above; greater proportion of fine grains			
	65									
	70						Same as above.			
	75									
	80						Very fine grain sands.			
	85									
	90						Fine grain sand; some dark brown wood chips.			
	95									
	100						Same as above.			
	105									
	110						Same as above.			
	115									#30 Sand and Bentonite Chips 115-119'
	120						Same as above.			
	125						Boring terminated at 134 feet below ground surface. Geologic descriptions taken from Mud Rotary cuttings and are not descriptive for fine sediments encountered. Descriptions are for fine grain and larger sands only and are depth approximate.			2-inch SCH 40 PVC, 0.020-inch Slot Screen 122-132', #3 Filter Pack Sand 119-134'
	130									
	135									
	140									