Table 1

Tier 1 Residential Soil PCLs[1]

May 24, 2011

		0.5 acre source area											30 acre source area										
Chemical of Concern	CAS	$^{Tot}Soil^{2}_{Comb}$ (mg/kg)	note3	$^{GW}Soil_{Ing}$ (mg/kg)	note3	$^{GW}Soil_{Class3}$ (mg/kg)	note3	$^{Air}Soil_{Inh-V}$[4] (mg/kg)	note3	$^{Air}GW\text{-}Soil_{Inh-V}$ (mg/kg)	note3	$^{GW}Soil$ for Secondary MCL (mg/kg)	$^{Tot}Soil^{2}_{Comb}$ (mg/kg)	note3	$^{GW}Soil_{Ing}$ (mg/kg)	note3	$^{GW}Soil_{Class3}$ (mg/kg)	note3	$^{Air}Soil_{Inh-V}$[4] (mg/kg)	note 3	$^{Air}GW\text{-}Soil_{Inh-V}$ (mg/kg)	note3	$^{GW}Soil$ for Secondary MCL (mg/kg)
Sodium polyacrylate	9003-04-7	1.2E+02	n	2.4E+01	n	2.4E+03	n	1.2E+02	n	3.0E+04	n		6.2E+01	n	1.2E+01	n	1.2E+03	n	6.2E+01	n	1.9E+03	n	
Strontium	7440-24-6	4.4E+04	n	6.1E+02	n	6.1E+04	n						4.4E+04	n	3.1E+02	n	3.1E+04	n					
Strychnine	57-24-9	2.0E+01	n	3.7E-02	n	3.7E+00	n						2.0E+01	n	1.9E-02	n	1.9E+00	n					
Styrene	100-42-5	6.7E+03	n	3.3E+00	m	3.3E+02	m	1.1E+04	n	4.9E+05	n >S		4.3E+03	n	1.6E+00	m	1.6E+02	m	5.8E+03	n	3.2E+04	n >S	
Sulfate*	14808-79-8																						
Sulfide*	18496-25-8																						
Sulfolane	126-33-0	1.9E+02	n	1.7E-01	n	1.7E+01	n	8.6E+02	n	2.5E+05	n >S		1.6E+02	n	8.7E-02	n	8.7E+00	n	4.4E+02	n	1.6E+04	n >S	
Sulfur*	7704-34-9																						
Sulprofos (Bolstar)	35400-43-2	2.0E+02	n	7.5E+03	n >S	7.5E+05	n >S						2.0E+02	n	3.8E+03	n >S	3.8E+05	n >S					
Tebuconazole	107534-96-3	2.0E+03	n	3.1E+01	n	3.1E+03	n >S						2.0E+03	n	1.6E+01	n	1.6E+03	n >S					
Tebuthiuron	34014-18-1	4.7E+03	n	5.4E+00	n	5.4E+02	n						4.7E+03	n	2.7E+00	n	2.7E+02	n					
Terbufos	13071-79-9	1.7E+00	n	3.4E-01	n	3.4E+01	n						1.7E+00	n	1.7E-01	n	1.7E+01	n					
Tert-amyl ethyl ether (TAEE)	919-94-8	3.3E+03	n	9.5E+00	n	9.5E+02	n						3.3E+03	n	4.7E+00	n	4.7E+02	n					
Tert-amyl-methyl ether (TAME)	994-05-8	3.3E+03	n	3.8E+00	n	3.8E+02	n						3.3E+03	n	1.9E+00	n	1.9E+02	n					
Tert-butyl alcohol (2-methyl-2-propanol)	75-65-0	7.4E+03	n	4.6E+00	n	4.6E+02	n						7.4E+03	n	2.3E+00	n	2.3E+02	n					
Tetrachlorobenzene, 1,2,3,4-	634-66-2	2.0E+01	n	1.2E+01	n	1.2E+03	n						2.0E+01	n	6.0E+00	n	6.0E+02	n					
Tetrachlorobenzene, 1,2,3,5-	634-90-2	1.3E+01	n	1.9E+00	n	1.9E+02	n						1.3E+01	n	9.4E-01	n	9.4E+01	n					
Tetrachlorobenzene, 1,2,4,5-	95-94-3	2.0E+01	n	4.8E-01	n	4.8E+01	n >S						2.0E+01	n	2.4E-01	n	2.4E+01	n >S					
Tetrachloroethane, 1,1,1,2-	630-20-6	6.5E+01	c	1.4E+00	c	1.4E+02	c	9.1E+01	c	4.5E+03	c		3.9E+01	c	7.1E-01	c	7.1E+01	c	4.7E+01	c	2.9E+02	c	
Tetrachloroethane, 1,1,2,2-	79-34-5	3.0E+01	c	2.3E-02	c	2.3E+00	c						3.0E+01	c	1.2E-02	c	1.2E+00	c					
Tetrachloroethylene	127-18-4	1.0E+02	c	5.0E-02	m	5.0E+00	m	9.4E+02	c	5.0E+03	c >S		9.4E+01	c	2.5E-02	m	2.5E+00	m	4.8E+02	c	3.2E+02	c	
Tetrachlorophenol, 2,3,4,5-	4901-51-3	4.0E+02	n	1.5E+01	n	1.5E+03	n						4.0E+02	n	7.4E+00	n	7.4E+02	n					
Tetrachlorophenol, 2,3,4,6-	58-90-2	1.8E+02	n	4.5E+00	n	4.5E+02	n						1.8E+02	n	2.2E+00	n	2.2E+02	n					
Tetrachlorophenol, 2,3,5,6-	935-95-5	2.3E+01	n	2.2E+00	n	2.2E+02	n >S						2.3E+01	n	1.1E+00	n	1.1E+02	n >S					
Tetrachlorvinphos (Stirophos)	22248-79-9	2.6E+03	n	2.4E+03	n	2.4E+05	n >S						2.6E+03	n	1.2E+03	n	1.2E+05	n >S					
Tetradifon	116-29-0	1.0E+03	n	8.7E+01	n	8.7E+03	n >S						1.0E+03	n	4.4E+01	n	4.4E+03	n >S					
Tetraethyl dithiopyrophosphate (sulfotep)	3689-24-5	3.3E+01	n	3.9E-01	n	3.9E+01	n						3.3E+01	n	1.9E-01	n	1.9E+01	n					
Tetraethyl lead	78-00-2	6.7E-03	n	5.0E-04	n	5.0E-02	n						6.7E-03	n	2.5E-04	n	2.5E-02	n					
Tetraethyl pyrophosphate (TEPP)	107-49-3	7.3E-01	n	9.3E-03	n	9.3E-01	n						7.3E-01	n	4.6E-03	n	4.6E-01	n					
Tetraethylene glycol	112-60-7	2.2E+04	n	1.6E+01	n	1.6E+03	n						2.2E+04	n	7.8E+00	n	7.8E+02	n					
Tetrahydrofuran	109-99-9	1.5E+02	c	2.5E-01	c	2.5E+01	c	1.9E+02	c	4.6E+03	c		8.6E+01	c	1.2E-01	c	1.2E+01	c	9.7E+01	c	3.0E+02	c	
Tetrahydropyran	142-68-7	1.6E+02	c	2.7E-01	c	2.7E+01	c	2.0E+02	c	5.9E+03	c		9.2E+01	c	1.4E-01	c	1.4E+01	c	1.0E+02	c	3.8E+02	c	
Tetraoxadodecane, 2,5,8,11-	112-49-2	2.0E+03	n	1.7E+00	n	1.7E+02	n						2.0E+03	n	8.6E-01	n	8.6E+01	n					
Thallium and compounds (as thallium chloride)	7791-12-0	6.3E+00	n	1.7E+00	m	1.7E+02	m						6.3E+00	n	8.7E-01	m	8.7E+01	m					
Thiofanox	39196-18-4	2.0E+01	n	3.1E-02	n	3.1E+00	n						2.0E+01	n	1.6E-02	n	1.6E+00	n					
Thionazin	297-97-2	4.7E+00	n	1.1E-02	n	1.1E+00	n						4.7E+00	n	5.5E-03	n	5.5E-01	n					
Thiophanate-methyl	23564-05-8	5.3E+03	n	4.5E+00	n	4.5E+02	n >S						5.3E+03	n	2.2E+00	n	2.2E+02	n >S					
Thiram	137-26-8	3.3E+02	n	3.5E+00	n	3.5E+02	n						3.3E+02	n	1.8E+00	n	1.8E+02	n					
Tin	7440-31-5	3.5E+04	n	3.7E+04	n >S	1.0E+06	n >S						3.5E+04	n	1.8E+04	n >S	1.0E+06	n >S					
Titanium	7440-32-6	2.2E+05	n		n >S		n >S						2.2E+05	n		n >S		n >S					
Toluene	108-88-3	5.9E+03	n	8.2E+00	m	8.2E+02	m	6.3E+04	n	5.2E+05	n >S		5.4E+03	n	4.1E+00	m	4.1E+02	m	3.2E+04	n	3.4E+04	n >S	
Toluene diisocyanate, 2,4/2,6-	26471-62-5	1.5E+02	n					1.5E+02	n	1.7E+05	n		7.5E+01	n					7.5E+01	n	1.1E+04	n	
Toluenediamine, 2,4-	95-80-7	1.5E+00	c	1.5E-02	c	1.5E+00	c						1.5E+00	c	7.6E-03	c	7.6E-01	c					
Toluenediamine, 2,6-	823-40-5	2.0E+03	n	1.4E+00	n	1.4E+02	n						2.0E+03	n	7.2E-01	n	7.2E+01	n					
Toluidine, o-	95-53-4	1.7E+01	c	3.8E-02	c	3.8E+00	c	1.4E+02	c	2.7E+04	c		1.5E+01	c	1.9E-02	c	1.9E+00	c	7.1E+01	c	1.7E+03	c	
Toluidine, p-	106-49-0	2.5E+01	c	1.4E-02	c	1.4E+00	c						2.5E+01	c	7.0E-03	c	7.0E-01	c					
Toxaphene	8001-35-2	1.2E+00	c	1.2E+01	m	1.2E+03	m	9.6E+02	c	1.0E+06	c >S		1.2E+00	c	5.8E+00	m	5.8E+02	m	4.9E+02	c	4.4E+05	c >S	
TPH, TX1005, C6-C12	TPH-1005-1	1.6E+03	n	6.5E+01	n	6.5E+03	n >S	3.1E+03	n	1.2E+05	n >S		1.1E+03	n	3.3E+01	n	3.3E+03	n >S	1.6E+03	n	7.6E+03	n >S	
TPH, TX1005, >C12-C28	TPH-1005-2	2.3E+03	n	2.0E+02	n	2.0E+04	n >S	1.5E+04	n	1.0E+06	n >S		2.0E+03	n	9.9E+01	n	9.9E+03	n >S	7.8E+03	n	9.8E+04	n >S	
TPH, TX1005, >C12-C35	TPH-1005-3	2.3E+03	n	2.0E+02	n	2.0E+04	n >S	1.5E+04	n	1.0E+06	n >S		2.0E+03	n	9.9E+01	n	9.9E+03	n >S	7.8E+03	n	9.8E+04	n >S	
TPH, TX1005, >C28-C35	TPH-1005-4	2.3E+03	n	2.0E+02	n	2.0E+04	n >S	1.5E+04	n	1.0E+06	n >S		2.0E+03	n	9.9E+01	n	9.9E+03	n >S	7.8E+03	n	9.8E+04	n >S	
TP Silvex, 2,4,5-	93-72-1	5.3E+02	n	5.3E+00	m	5.3E+02	m						5.3E+02	n	2.6E+00	m	2.6E+02	m					
Triademenol	55219-65-3	2.0E+03	n	8.4E+00	n	8.4E+02	n						2.0E+03	n	4.2E+00	n	4.2E+02	n					

Table 1

Tier 1 Residential Soil PCLs[1]

May 24, 2011

		0.5 acre source area												30 acre source area											
Chemical of Concern	CAS	$^{Tot}Soil^{2}_{Comb}$ (mg/kg)	note3	$^{GW}Soil_{Tap}$ (mg/kg)	note3	$^{GW}Soil_{Class3}$ (mg/kg)	note3	$^{Air}Soil_{Inh-V}$[4] (mg/kg)	note3	$^{Air}GW\text{-}Soil_{Inh-V}$ (mg/kg)	note3	$^{GW}Soil$ for Secondary MCL (mg/kg)	$^{Tot}Soil^{2}_{Comb}$ (mg/kg)	note3	$^{GW}Soil_{Tap}$ (mg/kg)	note3	$^{GW}Soil_{Class3}$ (mg/kg)	note3	$^{Air}Soil_{Inh-V}$[4] (mg/kg)	note 3	$^{Air}GW\text{-}Soil_{Inh-V}$ (mg/kg)	note3	$^{GW}Soil$ for Secondary MCL (mg/kg)
Triallate	2303-17-5	3.2E+02	n	1.9E+01	n	1.9E+03	n >S						3.2E+02	n	9.5E+00	n	9.5E+02	n >S					
Triaminotrinitrobenzene (TATB)	3058-38-6	1.6E+02	c	6.4E-02	c	6.4E+00	c						1.6E+02	c	3.2E-02	c	3.2E+00	c					
Tributyltin oxide	56-35-9	2.0E+01	n		n		n						2.0E+01	n		n		n					
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	3.9E+05	n	8.0E+04	n >S	1.0E+06	n >S	4.6E+05	n	1.0E+06	n >S		2.2E+05	n	4.0E+04	n >S	1.0E+06	n >S	2.4E+05	n	6.5E+04	n >S	
Trichlorobenzene, 1,2,3-	87-61-6	1.2E+02	n	2.6E+01	n	2.6E+03	n	3.0E+02	n	4.8E+04	n >S		8.7E+01	n	1.3E+01	n	1.3E+03	n	1.6E+02	n	3.1E+03	n >S	
Trichlorobenzene, 1,2,4-	120-82-1	1.2E+02	n	4.8E+00	m	4.8E+02	m	1.5E+02	n	1.1E+04	n >S		7.0E+01	n	2.4E+00	m	2.4E+02	m	7.8E+01	n	6.9E+02	n	
Trichlorobenzene, 1,3,5-	108-70-3	7.8E+01	n	7.5E+00	n	7.5E+02	n	1.3E+02	n	1.0E+04	n >S		4.9E+01	n	3.7E+00	n	3.7E+02	n	6.5E+01	n	6.7E+02	n	
Trichloroethane, 1,1,1-	71-55-6	5.2E+04	n	1.6E+00	m	1.6E+02	m	7.7E+04	n	3.2E+05	n >S		3.2E+04	n	8.1E-01	m	8.1E+01	m	3.9E+04	n	2.1E+04	n >S	
Trichloroethane, 1,1,2-	79-00-5	1.8E+01	c	2.0E-02	m	2.0E+00	m	2.2E+01	c	3.2E+02	c		1.0E+01	c	1.0E-02	m	1.0E+00	m	1.2E+01	c	2.1E+01	c	
Trichloroethylene	79-01-6	1.2E+02	n	3.4E-02	m	3.4E+00	m	1.5E+02	n	8.0E+02	n		6.8E+01	n	1.7E-02	m	1.7E+00	m	7.9E+01	n	5.1E+01	n	
Trichlorofluoromethane	75-69-4	2.5E+04	n	1.3E+02	n	1.3E+04	n						2.5E+04	n	6.4E+01	n	6.4E+03	n					
Trichloronate	327-98-0	1.4E+02	n	1.2E+02	n	1.2E+04	n >S						1.4E+02	n	6.2E+01	n	6.2E+03	n >S					
Trichlorophenol, 2,3,4-	15950-66-0	6.7E+03	n	5.9E+01	n	5.9E+03	n						6.7E+03	n	3.0E+01	n	3.0E+03	n					
Trichlorophenol, 2,3,5-	933-78-8	6.7E+03	n	2.8E+01	n	2.8E+03	n						6.7E+03	n	1.4E+01	n	1.4E+03	n					
Trichlorophenol, 2,3,6-	933-75-5	5.3E+02	n	2.9E+01	n	2.9E+03	n >S						5.3E+02	n	1.4E+01	n	1.4E+03	n >S					
Trichlorophenol, 2,4,5-	95-95-4	6.7E+03	n	3.4E+01	n	3.4E+03	n						6.7E+03	n	1.7E+01	n	1.7E+03	n					
Trichlorophenol, 2,4,6-	88-06-2	6.7E+01	n	1.7E-01	n	1.7E+01	n	2.0E+03	c	3.5E+05	c >S		6.7E+01	n	8.7E-02	n	8.7E+00	n	1.0E+03	c	2.3E+04	c >S	
Trichlorophenol, 3,4,5-	609-19-8	6.7E+03	n	3.3E+02	n	3.3E+04	n						6.7E+03	n	1.6E+02	n	1.6E+04	n					
Trichlorophenoxyacetic acid, 2,4,5-	93-76-5	6.7E+02	n	9.9E-01	n	9.9E+01	n						6.7E+02	n	4.9E-01	n	4.9E+01	n					
Trichloropropane, 1,1,2-	598-77-6	4.6E+00	n	1.5E+00	n	1.5E+02	n	4.6E+00	n	3.2E+01	n		2.4E+00	n	7.3E-01	n	7.3E+01	n	2.4E+00	n	2.1E+00	n	
Trichloropropane, 1,2,3-	96-18-4	2.0E-01	c	5.3E-04	c	5.3E-02	c	1.4E+01	n	5.7E+02	n		2.0E-01	c	2.7E-04	c	2.7E-02	c	7.2E+00	n	3.7E+01	n	
Triethanolamine	102-71-6	1.3E+04	n	9.4E+00	n	9.4E+02	n						1.3E+04	n	4.7E+00	n	4.7E+02	n					
Triethylamine	121-44-8	1.1E-02	n					1.1E+02	n	1.6E+03	n		5.5E+01	n					5.5E+01	n	1.0E+02	n	
Triethylene glycol	112-27-6	2.0E+05	n	1.4E+02	n	1.4E+04	n						2.0E+05	n	7.0E+01	n	7.0E+03	n					
Triethylphosphorothioate, O, O, O-	126-68-1	5.5E-01	n	4.4E-03	n	4.4E-01	n						5.5E-01	n	2.2E-03	n	2.2E-01	n					
Trifluralin	1582-09-8	2.7E+02	c	6.5E+01	c	6.5E+03	c >S						2.7E+02	c	3.3E+01	c	3.3E+03	c >S					
Trimethylamine	75-50-3	1.5E+02	n					1.5E+02	n	4.4E+03	n		7.6E+01	n					7.6E+01	n	2.8E+02	n	
Trimethylbenzene, 1,2,3-	526-73-8	1.2E+02	n	3.2E+01	n	3.2E+03	n >S	1.2E+02	n	4.9E+03	n >S		6.1E+01	n	1.6E+01	n	1.6E+03	n >S	6.2E+01	n	3.1E+02	n	
Trimethylbenzene, 1,2,4-	95-63-6	1.5E+02	n	4.9E+01	n	4.9E+03	n >S	1.6E+02	n	7.5E+03	n >S		7.9E+01	n	2.4E+01	n	2.4E+03	n >S	8.1E+01	n	4.9E+02	n	
Trimethylbenzene, 1,3,5-	108-67-8	1.1E+02	n	5.3E+01	n	5.3E+03	n >S	1.2E+02	n	5.5E+03	n >S		5.9E+01	n	2.7E+01	n	2.7E+03	n >S	6.0E+01	n	3.5E+02	n	
Trinitrobenzene, 1,3,5-	99-35-4	2.0E+03	n	1.8E+00	n	1.8E+02	n						2.0E+03	n	9.1E-01	n	9.1E+01	n					
Trinitrophenylmethylnitramine (tetryl; nitramine)	479-45-8	2.7E+02	n	1.1E+00	n	1.1E+02	n						2.7E+02	n	5.5E-01	n	5.5E+01	n					
Trinitrotoluene, 2,4,6-	118-96-7	3.3E+01	n	1.7E-01	n	1.7E+01	n						3.3E+01	n	8.6E-02	n	8.6E+00	n					
Uranium (soluble salts)	7440-61-1	2.2E+02	n	1.8E+03	m >S	1.8E+05	m >S						2.2E+02	n	8.9E+02	m >S	8.9E+04	m >S					
Valeric acid (pentanoic acid)	109-52-4	1.3E+02	n	2.3E+01	n >S	2.3E+03	n >S	1.3E+02	n	3.8E+04	n >S		6.8E+01	n	1.2E+01	n >S	1.2E+03	n >S	6.8E+01	n	2.5E+03	n >S	
Vanadium	7440-62-2	2.9E+00	n	3.4E+01	n >S	3.4E+03	n >S						2.9E+00	n	1.7E+01	n >S	1.7E+03	n >S					
Vernam	1929-77-7	6.7E+01	n	2.7E+00	n	2.7E+02	n						6.7E+01	n	1.4E+00	n	1.4E+02	n					
Vinyl acetate	108-05-4	3.0E+03	n	5.3E+01	n	5.3E+03	n	3.1E+03	n	3.1E+04	n		1.5E+03	n	2.7E+01	n	2.7E+03	n	1.6E+03	n	2.0E+03	n	
Vinyl chloride	75-01-4	3.7E+00	c	2.2E-02	m	2.2E+00	m	4.3E+01	c	4.2E+01	c		3.4E+00	c	1.1E-02	m	1.1E+00	m	2.2E+01	c	2.7E+00	c	
Vinylcyclohexane	695-12-5	4.1E+04	n	1.4E+03	n >S	1.4E+05	n >S						4.1E+04	n	7.1E+02	n >S	7.1E+04	n >S					
Warfarin	81-81-2	2.0E+01	n	2.8E+01	n	2.8E+01	n						2.0E+01	n	1.4E+01	n	1.4E+01	n					
Xylene, m-	108-38-3	8.9E+03	n	1.1E+02	m	1.1E+04	m >S	9.4E+03	n	1.1E+05	n >S		4.7E+03	n	5.3E+01	m	5.3E+03	m >S	4.8E+03	n	7.2E+03	n >S	
Xylene, o-	95-47-6	4.8E+04	n	7.1E+01	m	7.1E+03	m >S	6.8E+04	n	1.0E+06	n >S		2.9E+04	n	3.5E+01	m	3.5E+03	m >S	3.5E+04	n	3.5E+05	n >S	
Xylene, p-	106-42-3	8.9E+03	n	1.5E+02	m	1.5E+04	m >S	9.4E+03	n	1.4E+05	n >S		4.7E+03	n	7.5E+01	m	7.5E+03	m >S	4.8E+03	n	9.1E+03	n >S	
Xylenes	1330-20-7	6.0E+03	n	1.2E+02	m	1.2E+04	m >S	9.4E+03	n	1.3E+05	n >S		3.7E+03	n	6.1E+01	m	6.1E+03	m >S	4.8E+03	n	8.1E+03	n >S	
Zinc	7440-66-6	9.9E+03	n	2.4E+03	n >S	2.4E+05	n >S					1.6E+03	9.9E+03	n	1.2E+03	n >S	1.2E+05	n >S					8.0E+02
6 C aliphatics (TPH)	NA	3.3E+03	n	1.7E+02	n ---	1.7E+04	n >S	1.0E+04	n	1.2E+04	n ---	---	2.5E+03	n	8.6E+01	n ---	8.6E+03	n >S	5.3E+03	n	8.1E+02	n ---	---
>6-8 C aliphatics (TPH)	NA	3.3E+03	n	4.2E+02	n ---	4.2E+04	n >S	1.0E+04	n	2.0E+04	n >S	---	2.5E+03	n	2.1E+02	n ---	2.1E+04	n >S	5.3E+03	n	1.3E+03	n >S	---
>8-10 C aliphatics (TPH)	NA	4.0E+03	n	3.6E+03	n >S	3.6E+05	n >S	7.7E+03	n	4.8E+04	n >S	---	2.7E+03	n	1.8E+03	n >S	1.8E+05	n >S	3.9E+03	n	3.1E+03	n >S	---
>10-12 C aliphatics (TPH)	NA	3.6E+03	n	2.5E+04	n >S	1.0E+06	n >S	7.7E+03	n	2.3E+05	n >S	---	2.5E+03	n	1.3E+04	n >S	1.0E+06	n >S	3.9E+03	n	1.5E+04	n >S	---
>12-16 C aliphatics (TPH)	NA	4.3E+03	n	4.9E+05	n >S	1.0E+06	n >S	1.2E+04	n	1.0E+06	n >S	---	3.2E+03	n	2.5E+05	n >S	1.0E+06	n >S	6.2E+03	n	6.6E+04	n >S	---
>16-21 C aliphatics (TPH)	NA	1.3E+05	n	1.0E+06	n >S	1.0E+06	n >S	---	---	---	--- ---	---	1.3E+05	n	1.0E+06	n >S	1.0E+06	n >S	---	---	---	--- ---	---

Table 1

Tier 1 Residential Soil PCLs[1]

May 24, 2011

		0.5 acre source area													30 acre source area												
Chemical of Concern	CAS	$^{Tot}Soil^{2}_{Comb}$ (mg/kg)	note3	$^{GW}Soil_{Ing}$ (mg/kg)	note3		$^{GW}Soil_{Class3}$ (mg/kg)	note3		$^{Air}Soil_{Inh-V}$[4] (mg/kg)	note3	$^{Air}GW\text{-}Soil_{Inh-V}$ (mg/kg)	note3		$^{GW}Soil$ for Secondary MCL (mg/kg)	$^{Tot}Soil^{2}_{Comb}$ (mg/kg)	note3	$^{GW}Soil_{Ing}$ (mg/kg)	note3		$^{GW}Soil_{Class3}$ (mg/kg)	note3		$^{Air}Soil_{Inh-V}$[4] (mg/kg)	note 3	$^{Air}GW\text{-}Soil_{Inh-V}$ (mg/kg)	note3		$^{GW}Soil$ for Secondary MCL (mg/kg)
>16-21 C, >21-35 C aliphatics (TPH) (for transformer mineral oil releases only)	NA	1.1E+05	n	1.0E+06	n	> S	1.0E+06	n	> S	---	---	---	---	---	---	1.1E+05	n	1.0E+06	n	> S	1.0E+06	n	> S	---	---	---	---	---	---
>7-8 C aromatics (TPH)	NA	6.4E+03	n	2.0E+01	n	---	2.0E+03	n	---	2.9E+04	n	2.4E+05	n	> S	---	5.3E+03	n	1.0E+01	n	---	1.0E+03	n	---	1.5E+04	n	1.6E+04	n	> S	---
>8-10 C aromatics (TPH)	NA	1.6E+03	n	6.5E+01	n	---	6.5E+03	n	> S	3.1E+03	n	1.2E+05	n	> S	---	1.1E+03	n	3.3E+01	n	---	3.3E+03	n	> S	1.6E+03	n	7.6E+03	n	> S	---
>10-12 C aromatics (TPH)	NA	1.9E+03	n	1.0E+02	n	---	1.0E+04	n	> S	6.6E+03	n	4.4E+05	n	> S	---	1.5E+03	n	5.0E+01	n	---	5.0E+03	n	> S	3.4E+03	n	2.8E+03	n	> S	---
>12-16 C aromatics (TPH)	NA	2.3E+03	n	2.0E+02	n	---	2.0E+04	n	> S	1.5E+04	n	1.0E+06	n	> S	---	2.0E+03	n	9.9E+01	n	---	9.9E+03	n	> S	7.8E+03	n	9.8E+03	n	> S	---
>16-21 C aromatics (TPH)	NA	1.9E+03	n	4.7E+02	n	> S	4.7E+04	n	> S	---	---	---	---	---	---	1.9E+03	n	2.3E+02	n	> S	2.3E+04	n	> S	---	---	---	---	---	---
>21-35 C aromatics (TPH)	NA	1.9E+03	n	3.7E+03	n	> S	3.7E+05	n	> S	---	---	---	---	---	---	1.9E+03	n	1.8E+03	n	> S	1.8E+05	n	> S	---	---	---	---	---	---
Transformer mineral oil	NA	2.6E+04	n	2.5E+05	n	---	1.0E+06	n	---	8.4E+04	n	1.0E+06	n	---	---	2.0E+04	n	1.3E+05	n	---	1.0E+06	n	---	4.3E+04	n	6.1E+05	n	---	---

Footnotes

[1]In accordance with §350.72(b), when establishing Tier 1 PCLs for individual COCs for each of the individual and combined human health exposure pathways, the person must evaluate whether the PCLs need to be adjusted to lower concentrations to meet the cumulative carcinogenic risk level and hazard index criteria specified in §350.72(c). For COCs which exhibit both carcinogenic and noncarcinogenic characteristics, they shall be evaluated as both a carcinogen and noncarcinogen when determining whether the PCL established for an individual COC for each of the individual and combined human health exposure pathways needs to be adjusted to a lower concentration to meet the cumulative risk and hazard criteria. The person shall then use the lower of the carcinogenic or noncarcinogenic PCL as the Tier 1 human health PCL. In other words, the Tier 1 PCLs provided in this table for an individual COC should not be used as the final Tier 1 human health PCL for any of the individual or combined exposure pathways in cases where there are more than 10 carcinogenic and/or more than 10 noncarcinogenic COCs within a source medium unless it can be demonstrated that further downward adjustment is not necessary to meet the cumulative risk and hazard criteria.

[2]Combined includes inhalation, ingestion, dermal, vegetable consumption pathways

[3]c = carcinogenic; n = noncarcinogenic; m = primary MCL-based; a = EPA Action Level-based; > S = solubility limit exceeded during calculation; < GW Ing = less than GWGWIng value

[4]For subsurface soils only

[5]Please contact the TCEQ for assistance in determining a site-specific approach for GWSoilIng values for these compounds.

[6]Note that much higher PCLs for mercury may be obtained using a pH-dependent Kd based on site-specific information (see Figure 30 TAC §350.73(e)(1)(C)).

[7]Persons must use the value provided in the "GWSoil for Secondary MCL" column of this table as the GWSoil PCL for MTBE if the conditions described in §350.74(f)(3) exist.

[8]Asbestos URF and soil PCLs removed. Contact your TCEQ Project Manager if asbestos may be a chemical of concern

*These compounds, acetic acid, ammonium polyphosphate, ammonium salts, calcium, chloride, ehtylene, hydrogen chloride (hydrochloric acid), iron, limonene, d-, magnesium, phosphorus, total, potassium, sodium, sulfate, sulfide, and sulfure, are not necessarily of concern from a human health standpoint, therefore calculation of human health-based values is not required. However, aesthetics and ecological criteria would still apply. See table entitled "Compounds for which Calculation of a Human Health PCL is Not Required" available on the TCEQ website at http://www.tceq.texas.gov/remediation/trrp/trrp.htm.

All values capped at 1E+06

Texas-Specific Soil Background Concentrations milligrams per kilogram (mg/kg)[1]	
Metal	Median Background Concentration (mg/kg)
Aluminum	30,000
Antimony	1
Arsenic	5.9
Barium	300
Beryllium	1.5
Boron	30
Total Chromium	30
Cobalt	7
Copper	15
Fluoride	190
Iron	15,000
Lead	15
Manganese	300
Mercury	0.04
Nickel	10
Selenium	0.3
Strontium	100
Tin	0.9
Titanium	2,000
Thorium	9.3
Vanadium	50
Zinc	30

[1] Source: "Background Geochemistry of Some Rocks, Soils, Plants, and Vegetables in the Conterminous United States", by Jon J. Connor, Hansford T. Shacklette, et al., Geological Survey Professional Paper 574-F, US Geological Survey.

Appendix C

Soil Stockpile Plan

SAAS Material Stockpiles

Stockpile Number	Approximate Length (ft)	Width (ft)	Height (ft)	Estimated *** Volume (yd^3)	Material Type	Location (See Maps)
SP-1	33	23	12	169	Base Material	North side by Valero
SP-2*	150	115	5	1,600	Topsoil, rock, paint chips	ARFF
SP-3**	350	290	10	18,800	Topsoil, rock, concrete, asphalt, pipe	Mt. Yantis
SP-4	23	25	4	25	4" to 6" Rock	Northeast of Cessna
SP-5	21	15	6	35	2" to 4" Rock	Northeast of Cessna
SP-6	79	27	12	475	Base Material	Northeast of Cessna
SP-7	18	14	5	24	Sand	Northeast of Cessna
SP-8	34	30	10	180	Topsoil	Northeast of Cessna
SP-9	30	16	12	107	Pea gravel	Northeast of Cessna
SP-10	22	17	8	55	Pea gravel	Northeast of Cessna
SP-11	17	14	5	22	1" Rock	Northeast of Cessna
SP-12	14	8	3	6	River Rock	Northeast of Cessna
SP-13	25	24	10	111	Mulch	Northeast of Cessna
SP-14	18	16	8	43	Mulch	Northeast of Cessna
SP-15	65	42	10	506	Recycle Material	Northeast of Cessna
SP-16	17	14	6	26	Topsoil	Northeast of Cessna
SP-17	205	175	18	24,000	Concrete Rubble	Northeast corner of AOA
SP-18	168	65	18	7,300	Concrete Rubble	Northeast corner of AOA
SP-19	215	75	10	6,000	Concrete Rubble	Northeast corner of AOA
SP-20	164	100	6	3,640	Topsoil, concrete, pipe, rock	Northeast corner of AOA
SP-21	21	15	3	18	Rock	Northeast corner of AOA
SP-22	180	15	8	400	Construction Debris	East side near Greenlight
SP-23	355	270	12	21,300	Construction Debris	East side near Greenlight
SP-24	62	32	10	368	Concrete Rubble	East side near Greenlight
SP-25	440	245	15	37,000	Fill Material	Buckhorn
	180	140	15			
SP-26	240	175	3	1,333	Fill Material	Buckhorn
SP-27	190	150	2	1,055	Fill Material	Buckhorn
SP-28	220	135	15	8,250	Fill Material	Buckhorn
SP-29	350	80	10	5,185	Fill Material	Buckhorn
SP-30	315	87	10	5,075	Fill Material	Buckhorn
SP-31	330	140	8	6,845	Fill Material	Buckhorn
SP-32	440	240	5	9,800	Fill Material	Buckhorn
SP-33	200	25	5	460	Fill Material	Buckhorn
SP-34	300	32	5	889	Fill Material	Buckhorn
SP-35	250	50	10	232	Fill Material	Buckhorn

* - See SP-13 photograph and drawing
** - See SP-14 photograph and drawing
*** - Volumes are very rough estimates

SP-1
SP-2
SP-3-16
SP-17-21
SP-22-24
SP-25-35
Wurzbach Pkwy
Wetmore Rd
Sandau Rd
W Ramsey Rd
McCarty Rd
San Pedro Ave
Som Rd
McAllister Fwy
Jones Maltsberger Rd
NE Interstate 410 Loop Frontage Rd
Broadway St
Nacogdoches Rd
Google earth

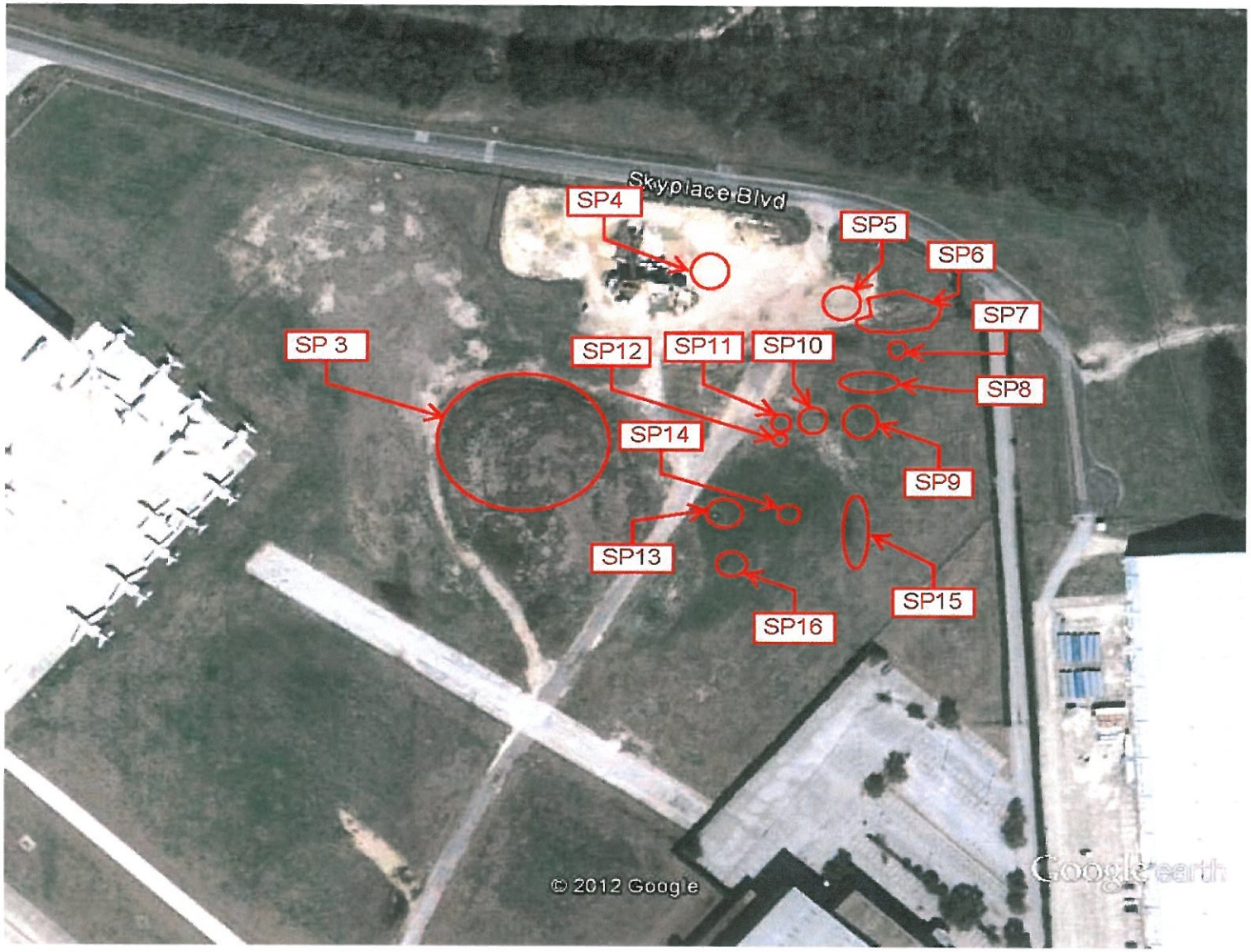
Google earth

feet 800

meters 200

Google earth

feet 700
meters 200



Google earth

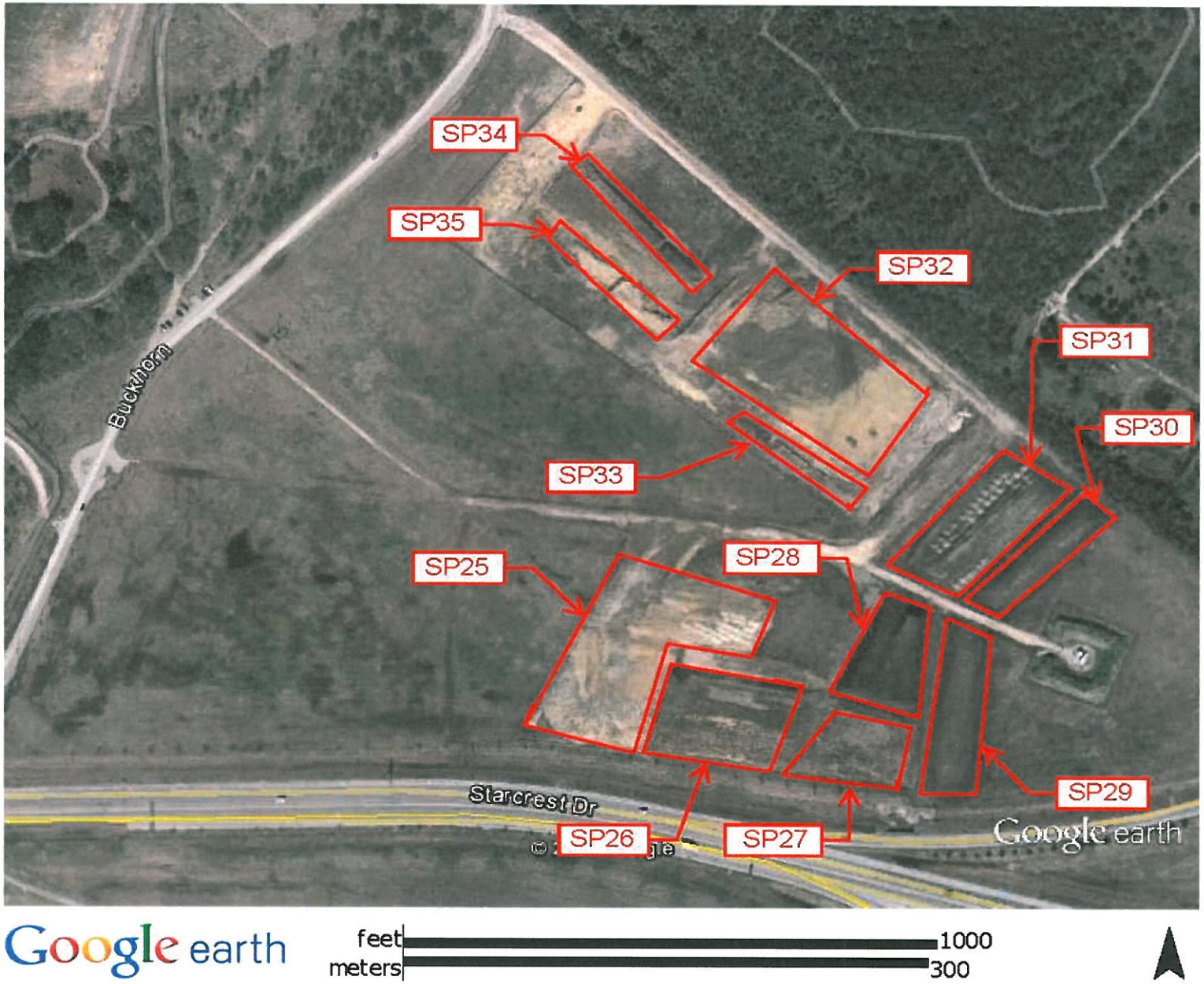
feet 900

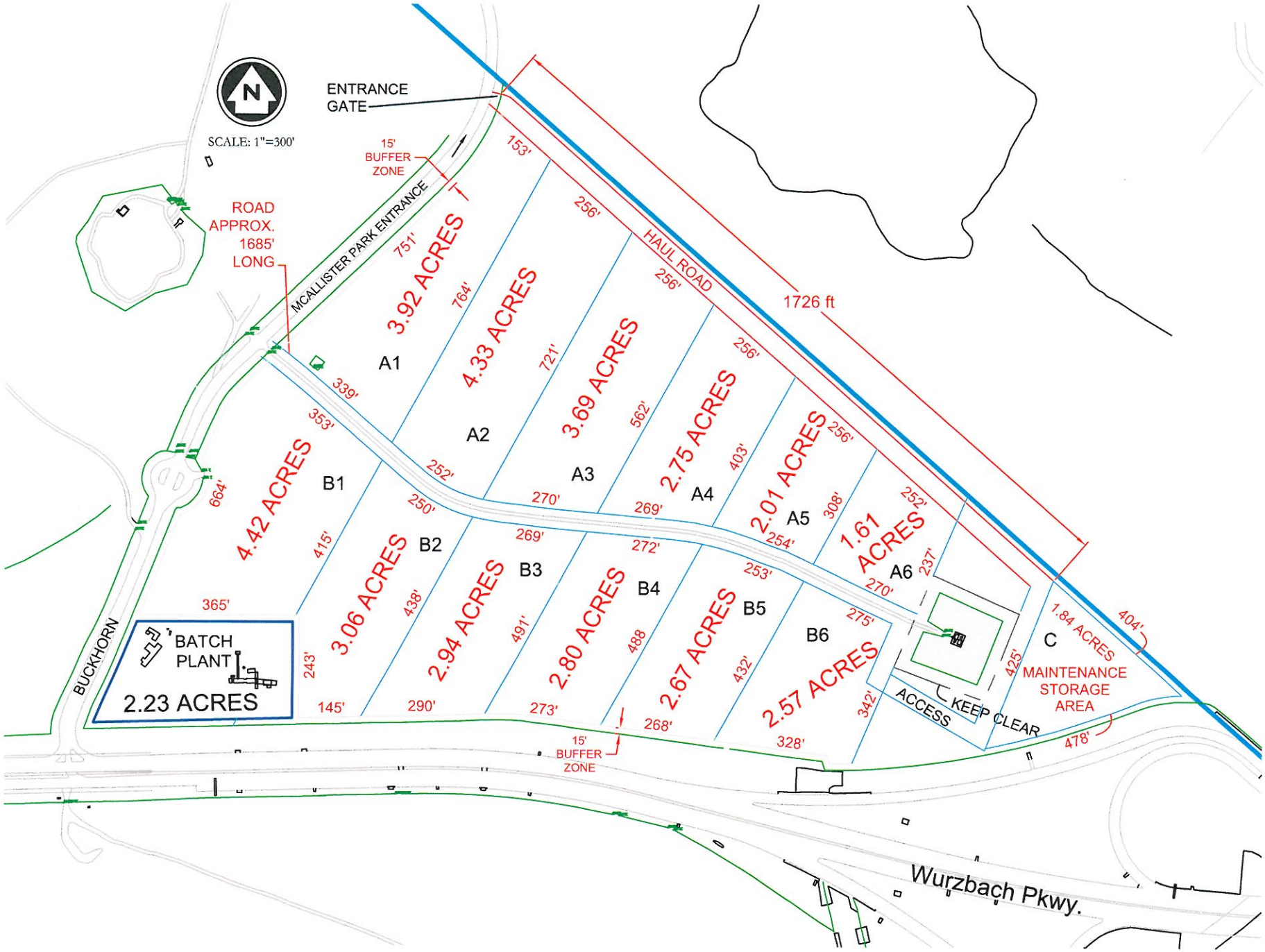
meters 300

SP17
SP18
SP19
SP20
SP21
© 2012 Google
Google earth
Google earth
feet
meters
500
100

Google earth

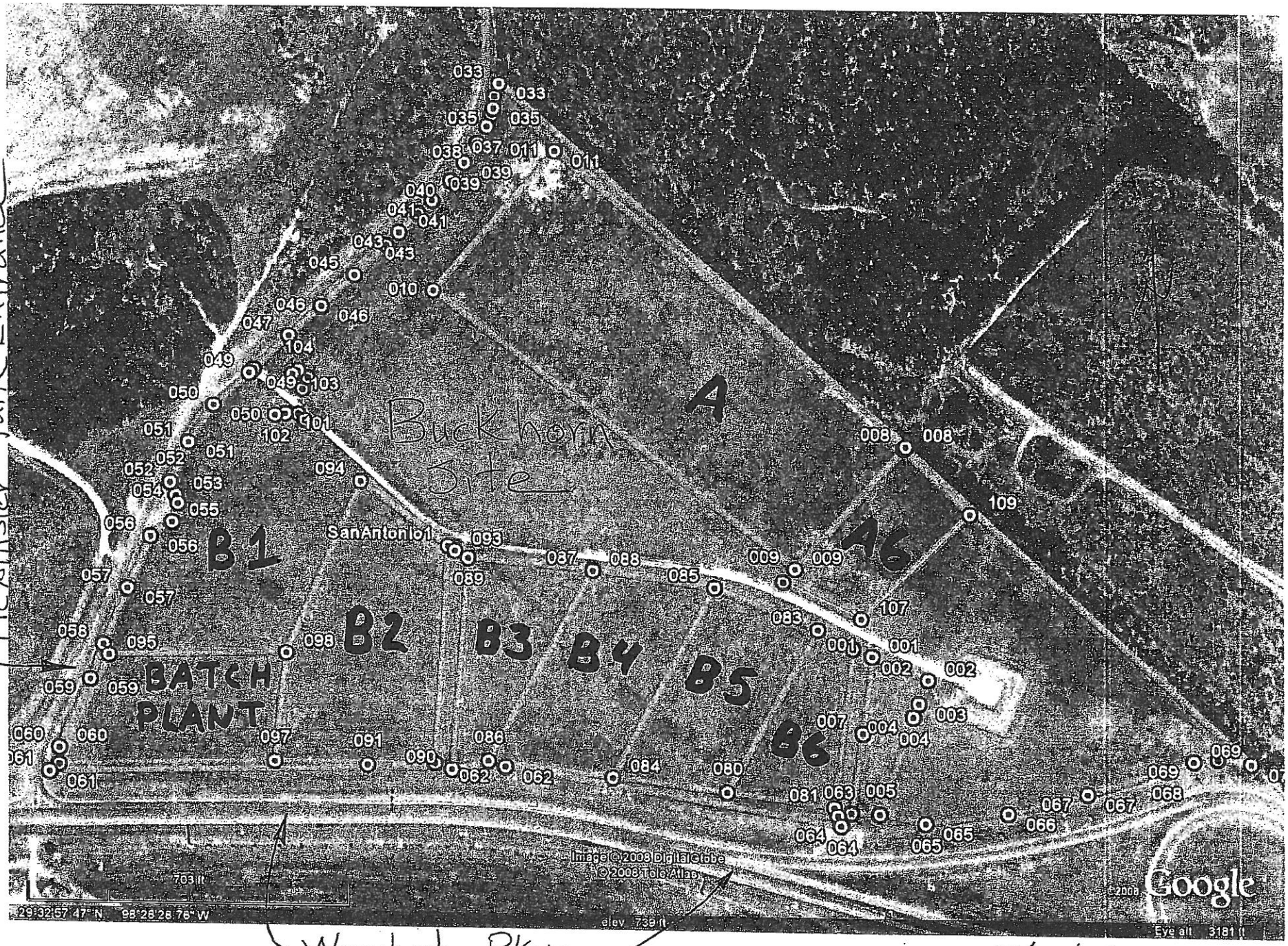
feet 400
meters 100


SP34
SP35
SP32
SP31
SP30
SP33
SP25
SP28
SP29
SP26
SP27
Buckhorn
Starcrest Dr
Google earth
Google earth
feet
meters
1000
300



N
SCALE: 1"=300'
ENTRANCE GATE
15' BUFFER ZONE
ROAD APPROX. 1685' LONG
MCALLISTER PARK ENTRANCE
HAUL ROAD
1726 ft
153'
256'
751'
3.92 ACRES
764'
4.33 ACRES
721'
3.69 ACRES
562'
2.75 ACRES
403'
2.01 ACRES
308'
1.61 ACRES
237'
A1
A2
A3
A4
A5
A6
339'
353'
252'
270'
269'
254'
270'
664'
4.42 ACRES
B1
415'
250'
B2
3.06 ACRES
438'
269'
B3
2.94 ACRES
491'
272'
B4
2.80 ACRES
488'
253'
B5
2.67 ACRES
432'
275'
B6
2.57 ACRES
342'
365'
243'
145'
290'
273'
268'
328'
BATCH PLANT
2.23 ACRES
BUCKHORN
15' BUFFER ZONE
ACCESS
KEEP CLEAR
1.84 ACRES
C
425'
404'
MAINTENANCE STORAGE AREA
478'
Wurzbach Pkwy.

McAllister Park Entrance



Wurzbach Pkwy.

7/19/08

SAT Material Stockpiles

SP -1

SP-2

SP-3

SP-4

SP-5

SP-6

SP-7

SP-8

SP-9

SP-10