

TABLE 2.0

**OCCURRENCE, DISTRIBUTION AND SELECTION OF
CHEMICALS OF POTENTIAL CONCERN**

TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Current
Medium: Soils
Exposure Medium: Surface Soil/Sludge
Exposure Point: Lagoon 1*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
95-50-1	1,2-Dichlorobenzene	0.002	J	0.072	J	mg/Kg	SBL1-03	2 / 7	0.005 - 0.008	0.072	N/A	37 N	N/A	N/A	NO	BSL
106-46-7	1,4-Dichlorobenzene	0.0075	J	0.0075	J	mg/Kg	SBL1-03	1 / 7	0.005 - 0.008	0.0075	N/A	3.4 C	N/A	N/A	NO	BSL
78-93-3	2-Butanone	0.014	J	0.18	J	mg/Kg	SBL1-03	7 / 7	-	0.18	N/A	730 N	N/A	N/A	NO	BSL
67-64-1	Acetone	0.049	J	0.56	J	mg/Kg	SBL1-03	4 / 7	0.11 - 0.15	0.56	N/A	160 N	N/A	N/A	NO	BSL
71-43-2	Benzene	0.007	J	0.019	J	mg/Kg	SBL1-03	2 / 7	0.006 - 0.008	0.019	N/A	0.65 C	N/A	N/A	NO	BSL
75-15-0	Carbon disulfide	0.002	J	0.021	J	mg/Kg	SBL1-03	3 / 7	0.006 - 0.008	0.021	N/A	36 N	N/A	N/A	NO	BSL
67-66-3	Chloroform	0.001	J	0.001	J	mg/Kg	TP-500	3 / 7	0.005 - 0.008	0.001	N/A	0.24 C	N/A	N/A	NO	BSL
110-82-7	Cyclohexane	0.097	J	0.097	J	mg/Kg	SBL1-03	1 / 7	0.005 - 0.008	0.097	N/A	14 N	N/A	N/A	NO	BSL
100-41-4	Ethylbenzene	0.001	J	1.2	J	mg/Kg	SBL1-03	2 / 7	0.005 - 0.008	1.2	N/A	23 N	N/A	N/A	NO	BSL
98-82-8	Isopropylbenzene	1.0	J	1.0	J	mg/Kg	SBL1-03	1 / 7	0.005 - 0.008	1.0	N/A	16 N	N/A	N/A	NO	BSL
79-20-9	Methyl Acetate	0.004	J	0.006	J	mg/Kg	SBL1-02	2 / 7	0.005 - 0.008	0.006	N/A	2200 N	N/A	N/A	NO	BSL
108-87-2	Methylcyclohexane	0.001	J	0.80	J	mg/Kg	SBL1-03	2 / 7	0.005 - 0.008	0.80	N/A	260 N	N/A	N/A	NO	BSL
108-88-3	Toluene	0.001	J	0.30	J	mg/Kg	SBL1-03	4 / 7	0.006 - 0.008	0.30	N/A	52 N	N/A	N/A	NO	BSL
79-01-6	Trichloroethene	0.006	J	0.0095	J	mg/Kg	SBL1-03	2 / 7	0.006 - 0.008	0.0095	N/A	2.8 C	N/A	N/A	NO	BSL
1330-20-7	Xylene (total)	0.002	J	3.0	J	mg/Kg	SBL1-03	3 / 7	0.005 - 0.008	3.0	N/A	21 N	N/A	N/A	NO	BSL
100-52-7	Benzaldehyde	0.21	J	0.21	J	mg/Kg	TP-500	1 / 7	0.38 - 0.46	0.21	N/A	610 N	N/A	N/A	NO	BSL
56-55-3	Benzo(a)anthracene	0.059	J	0.12	J	mg/Kg	SBL1-01	3 / 7	0.38 - 0.46	0.12	N/A	0.62 C	N/A	N/A	NO	BSL
50-32-8	Benzo(a)pyrene	0.055	J	0.09	J	mg/Kg	SBL1-01	3 / 7	0.38 - 0.46	0.09	N/A	0.062 C	N/A	N/A	YES	ASL
205-99-2	Benzo(b)fluoranthene	0.072	J	0.12	J	mg/Kg	SBL1-01	2 / 7	0.38 - 0.46	0.12	N/A	0.62 C	N/A	N/A	NO	BSL
191-24-2	Benzo(g,h,i)perylene	0.06	J	0.075	J	mg/Kg	TP-501	2 / 7	0.38 - 0.46	0.075	N/A	5.6 N	N/A	N/A	NO	BSL
207-08-9	Benzo(k)fluoranthene	0.044	J	0.07	J	mg/Kg	TP-501	3 / 7	0.38 - 0.46	0.07	N/A	6.2 C	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.056	J	0.078	J	mg/Kg	SBL1-11	3 / 7	0.38 - 0.43	0.078	N/A	35 C	N/A	N/A	NO	BSL
218-01-9	Chrysene	0.055	J	0.11	J	mg/Kg	TP-501	3 / 7	0.38 - 0.46	0.11	N/A	62 C	N/A	N/A	NO	BSL
84-74-2	Di-n-butylphthalate	0.049	J	0.049	J	mg/Kg	SBL1-03	1 / 7	0.38 - 0.46	0.049	N/A	610 N	N/A	N/A	NO	BSL
206-44-0	Fluoranthene	0.065	J	0.17	J	mg/Kg	SBL1-01	3 / 7	0.38 - 0.46	0.17	N/A	230 N	N/A	N/A	NO	BSL
193-39-5	Indeno(1,2,3-cd)pyrene	0.049	J	0.066	J	mg/Kg	SBL1-01	2 / 7	0.38 - 0.46	0.066	N/A	0.62 C	N/A	N/A	NO	BSL
85-01-8	Phenanthrene	0.042	J	0.11	J	mg/Kg	TP-501	3 / 7	0.38 - 0.46	0.11	N/A	5.6 N	N/A	N/A	NO	BSL
129-00-0	Pyrene	0.1	J	0.16	J	mg/Kg	SBL1-01	3 / 7	0.38 - 0.46	0.16	N/A	230 N	N/A	N/A	NO	BSL
72-54-8	4,4'-DDD	0.0011	J	0.0039	J	mg/Kg	TP-500	2 / 7	0.0038 - 0.0046	0.0039	N/A	2.4 C	N/A	N/A	NO	BSL
72-55-9	4,4'-DDE	0.000095	J	0.0043	J	mg/Kg	TP-500	5 / 7	0.0038 - 0.0046	0.0043	N/A	1.7 C	N/A	N/A	NO	BSL
50-29-3	4,4'-DDT	0.00024	J	0.018	J	mg/Kg	TP-500	4 / 7	0.0038 - 0.0043	0.018	N/A	1.7 C	N/A	N/A	NO	BSL
319-84-6	alpha-BHC	0.0014	J	0.0014	J	mg/Kg	SBL1-11	1 / 7	0.002 - 0.0022	0.0014	N/A	0.09 C	N/A	N/A	NO	BSL
5103-71-9	alpha-Chlordane	0.00042	J	0.0034	J	mg/Kg	SBL1-01	4 / 7	0.002 - 0.0024	0.0034	N/A	1.6 C	N/A	N/A	NO	BSL

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 POWNAL TANNERY

Scenario Timeframe: Current
 Medium: Soils
 Exposure Medium: Surface Soil/Sludge
 Exposure Point: Lagoon 1*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
11097-69-1	Aroclor 1254	0.018	J	0.018	J	mg/Kg	SBL1-01	1 / 7	0.038 - 0.046	0.018	N/A	0.22 C	N/A	N/A	NO	BSL
319-85-7	beta-BHC	0.00039	J	0.00039	J	mg/Kg	TP-500	1 / 7	0.002 - 0.0024	0.00039	N/A	0.32 C	N/A	N/A	NO	BSL
319-86-8	delta-BHC	0.00036	J	0.00023	J	mg/Kg	TP-501	3 / 7	0.002 - 0.0024	0.00023	N/A	0.09 C	N/A	N/A	NO	BSL
60-57-1	Dieldrin	0.00085	J	0.00085	J	mg/Kg	TP-500	1 / 7	0.0038 - 0.0046	0.00085	N/A	0.03 C	N/A	N/A	NO	BSL
959-98-8	Endosulfan I	0.00039	J	0.00039	J	mg/Kg	SBL1-01	1 / 7	0.002 - 0.0024	0.00039	N/A	37 N	N/A	N/A	NO	BSL
33213-65-9	Endosulfan II	0.00018	J	0.0063	J	mg/Kg	SBL1-02	3 / 5	0.0043 - 0.0046	0.0063	N/A	37 N	N/A	N/A	NO	BSL
1031-07-8	Endosulfan sulfate	0.00086	J	0.00086	J	mg/Kg	TP-500	1 / 7	0.0038 - 0.0046	0.00086	N/A	37 N	N/A	N/A	NO	BSL
72-20-8	Endrin	0.0015	J	0.0015	J	mg/Kg	SBL1-01	1 / 7	0.0038 - 0.0046	0.0015	N/A	1.8 N	N/A	N/A	NO	BSL
7421-38-3	Endrin aldehyde	0.00068	J	0.00068	J	mg/Kg	TP-500	4 / 7	0.0038 - 0.0046	0.00068	N/A	1.8 N	N/A	N/A	NO	BSL
53494-70-5	Endrin ketone	0.00028	J	0.0048	J	mg/Kg	SBL1-11	5 / 7	0.0041 - 0.0043	0.0048	N/A	1.8 N	N/A	N/A	NO	BSL
58-89-9	gamma-BHC(Lindane)	0.00034	J	0.00034	J	mg/Kg	SBL1-03	1 / 7	0.002 - 0.0024	0.00034	N/A	0.44 C	N/A	N/A	NO	BSL
5103-74-2	gamma-Chlordane	0.0024		0.0024		mg/Kg	SBL1-11	1 / 7	0.002 - 0.0024	0.0024	N/A	1.6 C	N/A	N/A	NO	BSL
1024-57-3	Heptachlor epoxide	0.00022	J	0.00074	J	mg/Kg	SBL1-02	4 / 7	0.002 - 0.0024	0.00074	N/A	0.053 C	N/A	N/A	NO	BSL
1746-01-6	Dioxin TEQ	7.9E-07	J	2.1E-04	J	mg/Kg	SBL1-12	7 / 7	-	2.1E-04	N/A	3.9E-06 C	N/A	N/A	YES	ASL
7429-90-5	Aluminum	7230		13600		mg/Kg	SBL1-12	8 / 8	-	13600	N/A	N/A	N/A	N/A	NO	NTX
7440-38-0	Antimony	0.21	J	3.4	J	mg/Kg	TP-500	4 / 8	0.97 - 1.1	3.4	N/A	3.1 N	N/A	N/A	YES	ASL
7440-38-2	Arsenic	3		13.1		mg/Kg	SBL1-11	8 / 8	-	13.1	N/A	0.39 C	N/A	N/A	YES	ASL
7440-39-3	Barium	35.3	J	99.7	J	mg/Kg	SBL1-02	8 / 8	-	99.7	N/A	540 N	N/A	N/A	NO	BSL
7440-41-7	Beryllium	0.21	J	0.61	J	mg/Kg	SBL1-02	8 / 8	-	0.61	N/A	15 N	N/A	N/A	NO	BSL
7440-43-9	Cadmium	1.6	J	7.6	J	mg/Kg	SBL1-01	4 / 8	0.067 - 0.25	7.6	N/A	3.7 N	N/A	N/A	YES	ASL
7440-70-2	Calcium	1370		29800		mg/Kg	SBL1-01	8 / 8	-	29800	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	10.7		3770		mg/Kg	SBL1-11	8 / 8	-	3770	N/A	30 C	N/A	N/A	YES	ASL
7440-48-4	Cobalt	7.6	J	15.55	J	mg/Kg	SBL1-03	8 / 8	-	15.55	N/A	N/A	N/A	N/A	NO	NTX
7440-50-8	Copper	14.1		34.6	J	mg/Kg	SBL1-02	8 / 8	-	34.6	N/A	N/A	N/A	N/A	NO	NTX
57-12-5	Cyanide	0.09	J	0.32	J	mg/Kg	SBL1-11	6 / 7	0.018 - 0.018	0.32	N/A	1.1 N	N/A	N/A	NO	BSL
7439-89-6	Iron	17400		29800		mg/Kg	SBL1-11	8 / 8	-	29800	N/A	N/A	N/A	N/A	NO	NTX
7439-92-1	Lead	7.4	J	154	J	mg/Kg	TP-500	8 / 8	-	154	N/A	400 N	N/A	N/A	NO	BSL
7439-95-4	Magnesium	3130		8920	J	mg/Kg	SBL1-12	8 / 8	-	8920	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	341		1190		mg/Kg	SBL1-11	8 / 8	-	1190	N/A	180 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.042	J	2	J	mg/Kg	SBL1-01	6 / 8	0.043 - 0.08	2	N/A	0.61 N	N/A	N/A	YES	ASL
7440-02-0	Nickel	14.1	J	27.55	J	mg/Kg	SBL1-03	8 / 8	-	27.55	N/A	180 N	N/A	N/A	NO	BSL
7440-09-7	Potassium	428		1020		mg/Kg	SBL1-12	8 / 8	-	1020	N/A	N/A	N/A	N/A	NO	NUT
7782-49-2	Selenium	0.48	J	1.8	J	mg/Kg	SBL1-11	2 / 8	0.73 - 0.99	1.6	N/A	39 N	N/A	N/A	NO	BSL

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POWNAI TANNERY

Scenario Timeframe: Current
Medium: Soils
Exposure Medium: Surface Soil/Sludge
Exposure Point: Lagoon 1*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
7440-22-4	Silver	0.12	J	0.95	J	mg/Kg	SBL1-11	4 / 8	0.089 - 0.49	0.95	N/A	39 N	N/A	N/A	NO	BSL
7440-23-5	Sodium	174	J	329		mg/Kg	SBL1-11	8 / 8	-	329	N/A	N/A	N/A	N/A	NO	NUT
7440-28-0	Thallium	0.094	J	14.2		mg/Kg	TP-508	7 / 8	1 - 1	14.2	N/A	0.52 N	N/A	N/A	YES	ASL
7440-62-2	Vanadium	8.4	J	18.1		mg/Kg	SBL1-11	8 / 8	-	18.1	N/A	55 N	N/A	N/A	NO	BSL
7440-66-6	Zinc	48.8		96.9		mg/Kg	TP-500	8 / 8	-	96.9	N/A	2300 N	N/A	N/A	NO	BSL

* Data presented are from samples SBL1-01(0-0.5), SBL1-02(0-0.5), SBL1-03(0-0.5) and its duplicate, SBL1-08(0-0.5), SBL1-09(0-0.5), SBL1-11(0-0.5), SBL1-12(0-0.5), TP-500(0-1), TP-501(0-1), and TP-508(0-1).

- (1) Minimum/maximum detected concentration.
 (2) Refer to supporting information for background discussion.
 (3) USEPA Region 9 PRGs for residential soil (adjusted to a hazard quotient = 0.1 for noncarcinogens), November 1, 2000.
 The most conservative PRG for all noncarcinogenic PAHs has been used for phenanthrene and benzo(g,h,i)perylene.
 The most conservative PRG for all BHCs has been used for delta-BHC.
 PRG for endosulfan has been used for endosulfan I, endosulfan II, and endosulfan sulfate.
 PRG for endrin has been used for endrin aldehyde and endrin ketone.
 PRG for chromium VI used for chromium.
 PRG for mercury and compounds used for mercury.
 PRG for chlordane has been used for alpha-chlordane and gamma chlordane.
 The screening toxicity value for lead is the residential soil lead guidance level of 400 mg/Kg (USEPA, 1994a).

- Definitions: COPC = Chemical of Potential Concern
 ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
 PRG = Preliminary Remedial Goal
 N/A = Not Applicable or Not Available
 J = Estimated Value
 C = Carcinogenic
 N = Non-Carcinogenic

- (4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
 Deletion Reason: No Toxicity Information (NTX)
 Essential Nutrient (NUT)
 Below Screening Level (BSL)

TABLE 2.2
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 POWNAL TANNERY

Scenario Timeframe: Future
 Medium: Soils
 Exposure Medium: Soil/Sludge
 Exposure Point: Lagoon 1*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
71-55-6	1,1,1-Trichloroethane	0.003	J	25	J	mg/Kg	SBL1-11	2 / 22	0.005 - 3.2	25	N/A	63 N	N/A	N/A	NO	BSL
75-34-3	1,1-Dichloroethane	17	J	17	J	mg/Kg	SBL1-11	1 / 22	0.005 - 3.2	17	N/A	59 N	N/A	N/A	NO	BSL
120-82-1	1,2,4-Trichlorobenzene	0.004	J	15	J	mg/Kg	SBL1-04	7 / 21	0.005 - 0.81	15	N/A	65 N	N/A	N/A	NO	BSL
95-50-1	1,2-Dichlorobenzene	0.002	J	550	J	mg/Kg	SBL1-11	19 / 26	0.005 - 0.008	550	N/A	37 N	N/A	N/A	YES	ASL
107-06-2	1,2-Dichloroethane	14	J	14	J	mg/Kg	SBL1-11	1 / 22	0.005 - 3.2	14	N/A	0.35 C	N/A	N/A	YES	ASL
541-73-1	1,3-Dichlorobenzene	0.001	J	28	J	mg/Kg	SBL1-11	4 / 21	0.005 - 0.81	28	N/A	1.3 N	N/A	N/A	YES	ASL
106-46-7	1,4-Dichlorobenzene	0.0075	J	110	J	mg/Kg	SBL1-11	17 / 25	0.005 - 0.008	110	N/A	3.4 C	N/A	N/A	YES	ASL
78-93-3	2-Butanone	0.007	J	2.1	J	mg/Kg	SBL1-03	17 / 25	0.013 - 3.2	2.1	N/A	730 N	N/A	N/A	NO	BSL
591-78-6	2-Hexanone	0.058	J	0.058	J	mg/Kg	SBL1-13	1 / 21	0.005 - 3.2	0.058	N/A	79 N	N/A	N/A	NO	BSL
108-10-1	4-Methyl-2-pentanone	11	J	11	J	mg/Kg	SBL1-11	1 / 22	0.005 - 3.2	11	N/A	79 N	N/A	N/A	NO	BSL
67-64-1	Acetone	0.029	J	3.8	J	mg/Kg	SBL1-07	10 / 27	0.013 - 5	3.8	N/A	160 N	N/A	N/A	NO	BSL
71-43-2	Benzene	0.001	J	3.9	J	mg/Kg	SBL1-11	8 / 23	0.006 - 3.2	3.9	N/A	0.65 C	N/A	N/A	YES	ASL
75-27-4	Bromodichloromethane	27	J	27	J	mg/Kg	SBL1-11	1 / 22	0.005 - 3.2	27	N/A	1 C	N/A	N/A	YES	ASL
75-25-2	Bromoform	20	J	20	J	mg/Kg	SBL1-11	1 / 22	0.005 - 3.2	20	N/A	62 C	N/A	N/A	NO	BSL
74-83-9	Bromomethane	0.048	J	0.048	J	mg/Kg	SBL1-04	1 / 21	0.005 - 3.2	0.048	N/A	0.39 N	N/A	N/A	NO	BSL
75-15-0	Carbon disulfide	0.002	J	0.1	J	mg/Kg	SBL1-11	8 / 23	0.005 - 3.2	0.1	N/A	36 N	N/A	N/A	NO	BSL
56-23-5	Carbon tetrachloride	10	J	10	J	mg/Kg	SBL1-11	1 / 22	0.005 - 3.2	10	N/A	0.24 C	N/A	N/A	YES	ASL
108-90-7	Chlorobenzene	0.005	J	19	J	mg/Kg	SBL1-11	4 / 22	0.005 - 3.2	19	N/A	15 N	N/A	N/A	YES	ASL
67-66-3	Chloroform	0.001	J	38	J	mg/Kg	SBL1-11	7 / 22	0.005 - 3.2	38	N/A	0.24 C	N/A	N/A	YES	ASL
110-82-7	Cyclohexane	0.008	J	0.36	J	mg/Kg	SBL1-11	8 / 22	0.005 - 2.5	0.36	N/A	14 N	N/A	N/A	NO	BSL
100-41-4	Ethylbenzene	0.001	J	14	J	mg/Kg	SBL1-11	20 / 27	0.005 - 0.008	14	N/A	23 N	N/A	N/A	NO	BSL
98-82-8	Isopropylbenzene	0.017	J	14	J	mg/Kg	SBL1-07	17 / 26	0.005 - 0.008	14	N/A	16 N	N/A	N/A	NO	BSL
79-20-9	Methyl Acetate	0.004	J	2.8	J	mg/Kg	SBL1-04	14 / 25	0.005 - 2.5	2.8	N/A	2200 N	N/A	N/A	NO	BSL
108-87-2	Methylcyclohexane	0.001	J	3.2	J	mg/Kg	SBL1-11	16 / 25	0.005 - 2.5	3.2	N/A	260 N	N/A	N/A	NO	BSL
75-09-2	Methylene chloride	0.007	J	0.022	J	mg/Kg	SBL1-07	3 / 22	0.005 - 3.2	0.022	N/A	8.9 C	N/A	N/A	NO	BSL
100-42-5	Styrene	0.37	J	0.37	J	mg/Kg	SBL1-03	1 / 22	0.005 - 3.2	0.37	N/A	170 N	N/A	N/A	NO	BSL
127-18-4	Tetrachloroethylene	6.7	J	6.7	J	mg/Kg	SBL1-11	1 / 21	0.005 - 2.5	6.7	N/A	5.7 C	N/A	N/A	YES	ASL
109-99-9	Tetrahydrofuran	0.003	J	0.003	J	mg/Kg	SBL1-13	1 / 20	0.1 - 50	0.003	N/A	64 C	N/A	N/A	NO	BSL
108-88-3	Toluene	0.001	J	17	J	mg/Kg	SBL1-11	22 / 27	0.006 - 3.2	17	N/A	52 N	N/A	N/A	NO	BSL
158-60-5	trans-1,2-Dichloroethene	0.027	J	0.027	J	mg/Kg	SBL1-07	1 / 21	0.005 - 2.5	0.027	N/A	8.3 N	N/A	N/A	NO	BSL
79-01-6	Trichloroethene	0.006	J	12	J	mg/Kg	SBL1-11	4 / 23	0.005 - 3.2	12	N/A	2.8 C	N/A	N/A	YES	ASL
1330-20-7	Xylene (total)	0.002	J	69	J	mg/Kg	SBL1-11	22 / 27	0.005 - 0.008	69	N/A	21 N	N/A	N/A	YES	ASL

TABLE 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 1*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
92-52-4	1,1-Biphenyl	0.05	J	2.7	J	mg/Kg	SBL1-04	4 / 23	0.12 - 29	2.7	N/A	35 N	N/A	N/A	NO	BSL
95-95-4	2,4,5-Trichlorophenol	0.17	J	33	J	mg/Kg	SBL1-10	13 / 27	0.3 - 73	33	N/A	610 N	N/A	N/A	NO	BSL
88-06-2	2,4,6-Trichlorophenol	0.11	J	6.7	J	mg/Kg	SBL1-05	9 / 26	0.12 - 29	6.7	N/A	44 C	N/A	N/A	NO	BSL
91-57-6	2-Methylnaphthalene	0.083	J	18	J	mg/Kg	SBL1-04	17 / 27	0.35 - 13	18	N/A	5.6 N	N/A	N/A	YES	ASL
95-48-7	2-Methylphenol	5.6	J	5.6	J	mg/Kg	SBL1-07	1 / 23	0.12 - 29	5.6	N/A	310 N	N/A	N/A	NO	BSL
106-44-5	4-Methylphenol	0.14	J	380	J	mg/Kg	SBL1-07	10 / 26	0.35 - 29	380	N/A	31 N	N/A	N/A	YES	ASL
208-96-8	Acenaphthylene	0.04	J	0.041	J	mg/Kg	TP-508	2 / 22	0.12 - 29	0.041	N/A	5.6 N	N/A	N/A	NO	BSL
120-12-7	Anthracene	0.085	J	0.085	J	mg/Kg	TP-501	1 / 22	0.12 - 29	0.085	N/A	2200 N	N/A	N/A	NO	BSL
100-52-7	Benzaldehyde	0.21	J	54	J	mg/Kg	SBL1-07	5 / 22	0.12 - 13	54	N/A	610 N	N/A	N/A	NO	BSL
56-55-3	Benzo(a)anthracene	0.059	J	2	J	mg/Kg	TP-500	7 / 22	0.14 - 29	2	N/A	0.62 C	N/A	N/A	YES	ASL
50-32-8	Benzo(a)pyrene	0.055	J	2	J	mg/Kg	TP-500	7 / 22	0.14 - 29	2	N/A	0.062 C	N/A	N/A	YES	ASL
205-99-2	Benzo(b)fluoranthene	0.062	J	0.27	J	mg/Kg	TP-501	5 / 22	0.14 - 29	0.27	N/A	0.62 C	N/A	N/A	NO	BSL
191-24-2	Benzo(g,h,i)perylene	0.06	J	0.25	J	mg/Kg	TP-501	4 / 22	0.12 - 29	0.25	N/A	5.6 N	N/A	N/A	NO	BSL
207-08-9	Benzo(k)fluoranthene	0.044	J	2	J	mg/Kg	TP-500	7 / 22	0.14 - 29	2	N/A	6.2 C	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.056	J	5.4	J	mg/Kg	SBL1-04	9 / 26	0.14 - 38	5.4	N/A	35 C	N/A	N/A	NO	BSL
218-01-9	Chrysene	0.055	J	2.1	J	mg/Kg	TP-500	7 / 22	0.14 - 29	2.1	N/A	62 C	N/A	N/A	NO	BSL
84-74-2	Di-n-butylphthalate	0.049	J	0.049	J	mg/Kg	SBL1-03	1 / 22	0.12 - 29	0.049	N/A	810 N	N/A	N/A	NO	BSL
206-44-0	Fluoranthene	0.065	J	4	J	mg/Kg	TP-500	7 / 22	0.14 - 29	4	N/A	230 N	N/A	N/A	NO	BSL
193-39-5	Indeno(1,2,3-cd)pyrene	0.049	J	0.17	J	mg/Kg	TP-501	4 / 22	0.12 - 29	0.17	N/A	0.62 C	N/A	N/A	NO	BSL
91-20-3	Naphthalene	0.1	J	75	J	mg/Kg	SBL1-12	17 / 26	0.38 - 13	75	N/A	5.6 N	N/A	N/A	YES	ASL
87-86-5	Pentachlorophenol	1	J	92	J	mg/Kg	SBL1-05	13 / 27	0.3 - 73	92	N/A	3 C	N/A	N/A	YES	ASL
85-01-8	Phenanthrene	0.042	J	2.1	J	mg/Kg	TP-500	9 / 24	0.14 - 29	2.1	N/A	5.6 N	N/A	N/A	NO	BSL
108-95-2	Phenol	1.9	J	240	J	mg/Kg	SBL1-11	8 / 26	0.12 - 29	240	N/A	3700 N	N/A	N/A	NO	BSL
129-00-0	Pyrene	0.1	J	3.9	J	mg/Kg	TP-500	7 / 22	0.14 - 29	3.9	N/A	230 N	N/A	N/A	NO	BSL

TABLE 2.2
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 POWNAL TANNERY

Scenario Timeframe: Future
 Medium: Soils
 Exposure Medium: Soil/Sludge
 Exposure Point: Lagoon 1*

CAS Number	Chemical	(1) Minimum Concentration	Minimum Qualifier	(1) Maximum Concentration	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	(2) Background Value	(3) Screening Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	(4) Rationale for Contaminant Deletion or Selection
72-54-8	4,4'-DDD	0.00074	J	0.43		mg/Kg	SBL1-11	23 / 29	0.0038 - 0.0046	0.43	N/A	2.4 C	N/A	N/A	NO	BSL
72-55-9	4,4'-DDE	0.000095	J	0.18	J	mg/Kg	SBL1-12	27 / 29	0.0038 - 0.0046	0.18	N/A	1.7 C	N/A	N/A	NO	BSL
50-29-3	4,4'-DDT	0.00024	J	0.047	J	mg/Kg	SBL1-14	13 / 25	0.0033 - 0.01	0.047	N/A	1.7 C	N/A	N/A	NO	BSL
309-00-2	Aldrin	0.000165	J	0.01	J	mg/Kg	TP-500	12 / 28	0.0018 - 0.0092	0.01	N/A	0.029 C	N/A	N/A	NO	BSL
319-84-6	alpha-BHC	0.00057	J	0.044	J	mg/Kg	SBL1-14	9 / 25	0.0016 - 0.0092	0.044	N/A	0.09 C	N/A	N/A	NO	BSL
5103-71-9	alpha-Chlordane	0.000415	J	0.2	J	mg/Kg	SBL1-04	24 / 29	0.0018 - 0.0024	0.2	N/A	1.6 C	N/A	N/A	NO	BSL
11097-89-1	Aroclor 1254	0.018	J	0.058		mg/Kg	SBL1-13	2 / 24	0.033 - 0.42	0.058	N/A	0.22 C	N/A	N/A	NO	BSL
319-85-7	beta-BHC	0.00030	J	0.026	J	mg/Kg	SBL1-12	10 / 26	0.0016 - 0.022	0.026	N/A	0.32 C	N/A	N/A	NO	BSL
319-86-8	delta-BHC	0.000036	J	0.054	J	mg/Kg	SBL1-05	11 / 27	0.0016 - 0.0092	0.054	N/A	0.09 C	N/A	N/A	NO	BSL
60-57-1	Dieldrin	0.00067	J	0.1	J	mg/Kg	SBL1-07	13 / 27	0.0032 - 0.018	0.1	N/A	0.03 C	N/A	N/A	YES	ASL
959-98-8	Endosulfan I	0.00014	J	0.0099	J	mg/Kg	SBL1-02	8 / 25	0.0017 - 0.022	0.0099	N/A	37 N	N/A	N/A	NO	BSL
33213-65-9	Endosulfan II	0.00018	J	0.0063	J	mg/Kg	SBL1-02	6 / 22	0.0032 - 0.018	0.0063	N/A	37 N	N/A	N/A	NO	BSL
1031-07-8	Endosulfan sulfate	0.00059	J	0.026	J	mg/Kg	SBL1-02	11 / 27	0.0033 - 0.018	0.026	N/A	37 N	N/A	N/A	NO	BSL
72-20-8	Endrin	0.00038	J	0.017	J	mg/Kg	TP-500	7 / 26	0.0032 - 0.018	0.017	N/A	1.8 N	N/A	N/A	NO	BSL
7421-36-3	Endrin aldehyde	0.000068	J	0.023	J	mg/Kg	SBL1-12	12 / 25	0.0033 - 0.018	0.023	N/A	1.8 N	N/A	N/A	NO	BSL
53494-70-5	Endrin ketone	0.00028	J	0.049	J	mg/Kg	SBL1-11	14 / 26	0.0032 - 0.018	0.049	N/A	1.8 N	N/A	N/A	NO	BSL
58-89-9	gamma-BHC(Lindane)	0.00034	J	0.033	J	mg/Kg	SBL1-07	14 / 28	0.0016 - 0.0092	0.033	N/A	0.44 C	N/A	N/A	NO	BSL
5103-74-2	gamma-Chlordane	0.0002	J	0.16	J	mg/Kg	SBL1-04	22 / 29	0.002 - 0.022	0.16	N/A	1.6 C	N/A	N/A	NO	BSL
76-44-8	Heptachlor	0.0015	J	0.017	J	mg/Kg	TP-500	8 / 26	0.0016 - 0.0092	0.017	N/A	0.11 C	N/A	N/A	NO	BSL
1024-57-3	Heptachlor epoxide	0.00012	J	0.02	J	mg/Kg	SBL1-14	11 / 26	0.0016 - 0.022	0.02	N/A	0.053 C	N/A	N/A	NO	BSL
8001-35-2	Toxaphene	0.18	J	0.18	J	mg/Kg	SBL1-02	2 / 24	0.16 - 2.2	0.18	N/A	0.44 C	N/A	N/A	NO	BSL
1746-01-6	Dioxin TEQ	7.9E-07	J	1.2E-02	J	mg/Kg	LAG-01-00-L100	15 / 15	-	1.2E-02	N/A	3.9E-06 C	N/A	N/A	YES	ASL
7429-90-5	Aluminum	1300		13600		mg/Kg	SBL1-12	29 / 29	-	13600	N/A	N/A	N/A	N/A	NO	NTX
7440-36-0	Antimony	0.14	J	78.6	J	mg/Kg	LAG-01-100-L200	20 / 26	0.97 - 40.7	78.6	N/A	3.1 N	N/A	N/A	YES	ASL
7440-38-2	Arsenic	2.2		20.6	J	mg/Kg	SBL1-03	23 / 23	-	20.6	N/A	0.39 C	N/A	N/A	YES	ASL
7440-39-3	Barium	32.1	J	1530	J	mg/Kg	SBL1-05	29 / 29	-	1530	N/A	540 N	N/A	N/A	YES	ASL
7440-41-7	Beryllium	0.093	J	2.3	J	mg/Kg	SBL1-05	22 / 28	0.25 - 0.6	2.3	N/A	15 N	N/A	N/A	NO	BSL
7440-43-9	Cadmium	1.6	J	430	J	mg/Kg	SBL1-05	21 / 29	0.061 - 3.9	430	N/A	3.7 N	N/A	N/A	YES	ASL
7440-70-2	Calcium	1370		211500		mg/Kg	SBL1-08	29 / 29	-	211500	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	10.7		73000	J	mg/Kg	SBL1-03	29 / 29	-	73000	N/A	30 C	N/A	N/A	YES	ASL
7440-48-4	Cobalt	1.9	J	15.55		mg/Kg	SBL1-03	25 / 28	1.1 - 10	15.55	N/A	N/A	N/A	N/A	NO	NTX
7440-50-6	Copper	13.4	J	130.35	J	mg/Kg	SBL1-08	29 / 29	-	130.35	N/A	N/A	N/A	N/A	NO	NTX
57-12-5	Cyanide	0.027	J	2.7	J	mg/Kg	SBL1-09	20 / 25	0.018 - 0.42	2.7	N/A	1.1 N	N/A	N/A	YES	ASL
7439-89-6	Iron	4970		39600		mg/Kg	SBL1-14	29 / 29	-	39600	N/A	N/A	N/A	N/A	NO	NTX

TABLE 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 1*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
7439-92-1	Lead	7.4	J	2870	J	mg/Kg	LAG-01-100-L200	29 / 29	-	2870	N/A	400 N	N/A	N/A	YES	ASL
7439-95-4	Magnesium	2370		8920	J	mg/Kg	SBL1-12	29 / 29	-	8920	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	100	J	1190		mg/Kg	SBL1-11	28 / 29	148 - 148	1190	N/A	180 N	N/A	N/A	YES	ASL
7439-97-8	Mercury	0.042	J	85.2	J	mg/Kg	LAG-01-50-L200	23 / 29	0.043 - 15.2	85.2	N/A	0.61 N	N/A	N/A	YES	ASL
7440-02-0	Nickel	4.4		27.55		mg/Kg	SBL1-03	27 / 29	8.3 - 11.1	27.55	N/A	160 N	N/A	N/A	NO	BSL
7440-09-7	Potassium	126		1020		mg/Kg	SBL1-12	26 / 29	123 - 339	1020	N/A	N/A	N/A	N/A	NO	NUT
7782-49-2	Selenium	0.38	J	1.7	J	mg/Kg	LAG-01-100-L200	11 / 26	0.7 - 1.7	1.7	N/A	39 N	N/A	N/A	NO	BSL
7440-22-4	Silver	0.12	J	22.8	J	mg/Kg	SBL1-03	22 / 29	0.089 - 1.8	22.8	N/A	39 N	N/A	N/A	NO	BSL
7440-23-5	Sodium	166	J	10700		mg/Kg	SBL1-12	25 / 29	436 - 2550	10700	N/A	N/A	N/A	N/A	NO	NUT
7440-28-0	Thallium	0.041	J	18.2		mg/Kg	TP-500	18 / 27	0.035 - 2.1	18.2	N/A	0.52 N	N/A	N/A	YES	ASL
7440-62-2	Vanadium	6.95	J	39.3	J	mg/Kg	SBL1-03	27 / 29	1.1 - 1.7	39.3	N/A	55 N	N/A	N/A	NO	BSL
7440-66-6	Zinc	48.8		526	J	mg/Kg	SBL1-05	29 / 29	-	526	N/A	2300 N	N/A	N/A	NO	BSL

* Data presented are from samples SBL1-01(0-0.5), SBL1-01(3-5), SBL1-01(9-12), SBL1-02(0-0.5), SBL1-02(2-4) and its duplicate, SBL1-02(7-10), SBL1-03(0-0.5) and its duplicate, SBL1-03(4-7), SBL1-04(5-8), SBL1-05(5-8), SBL1-07(4-7), SBL1-08(0-0.5),

SBL1-08(2-4) and its duplicate, SBL1-09(0-0.5), SBL1-09(5-7), SBL1-10(6-8), SBL1-11(0-0.5), SBL1-11(8-11), SBL1-12(0-0.5), SBL1-12(5-8) and its duplicate, SBL1-13(6-8), SBL1-14(8-11), SBL1-15(8-10), TP-500(0-1), TP-500(7-8), TP-501(0-1),

TP-501(6-7) and its duplicate, TP-508(0-1), TP-508(5-6), LAG-01-00-L100(8), LAG-01-50-L200(3), LAG-01-50-L200(8), LAG-01-100-L150(2), LAG-01-100-L200(8), LAG-01-150-L100(2), LAG-01-150-L100(8), and LAG-01-250-L150(8).

(1) Minimum/maximum detected concentration.

(2) Refer to supporting information for background discussion.

(3) USEPA Region 9 PRGs for residential soil (adjusted to a hazard quotient = 0.1 for noncarcinogens), November 1, 2000.

The most conservative PRG for all noncarcinogenic PAHs has been used for 2-methylnaphthalene, acenaphthylene, benzo(g,h,i)perylene and phenanthrene.

The most conservative PRG for all BHCs has been used for delta-BHC.

PRG for endosulfan has been used for endosulfan I, endosulfan II, and endosulfan sulfate.

PRG for endrin has been used for endrin aldehyde and endrin ketone.

PRG for chromium VI used for chromium.

PRG for mercury and compounds used for mercury.

PRG for chlordane has been used for alpha-chlordane and gamma chlordane.

PRG for 4-methyl-2-pentanone has been used for 2-hexanone.

The screening toxicity value for lead is the residential soil lead guidance level of 400 mg/Kg (USEPA, 1994a).

(4) Rationale Codes Selection Reason:

Deletion Reason:

Above Screening Levels (ASL)

No Toxicity Information (NTX)

Essential Nutrient (NUT)

Below Screening Level (BSL)

Definitions:

COPC = Chemical of Potential Concern

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

PRG = Preliminary Remedial Goal

N/A = Not Applicable or Not Available

J = Estimated Value

C = Carcinogenic

N = Non-Carcinogenic

TABLE 2.3
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Current
Medium: Soils
Exposure Medium: Surface Soil/Sludge
Exposure Point: Lagoon 2*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
78-93-3	2-Butanone	0.019	J	0.019	J	mg/Kg	SBL2-07	1/7	0.005 - 0.02	0.019	N/A	730 N	N/A	N/A	NO	BSL
71-43-2	Benzene	0.002	J	0.002	J	mg/Kg	SBL2-07	1/7	0.005 - 0.006	0.002	N/A	0.65 C	N/A	N/A	NO	BSL
75-15-0	Carbon disulfide	0.003	J	0.007	J	mg/Kg	SBL2-04	4/7	0.005 - 0.008	0.007	N/A	36 N	N/A	N/A	NO	BSL
79-20-9	Methyl Acetate	0.014	J	0.02	J	mg/Kg	SBL2-02	2/7	0.005 - 0.008	0.02	N/A	2200 N	N/A	N/A	NO	BSL
109-99-9	Tetrahydrofuran	0.006	J	0.007	J	mg/Kg	SBL2-04	2/7	0.097 - 0.16	0.007	N/A	64 C	N/A	N/A	NO	BSL
108-88-3	Toluene	0.005	J	0.005	J	mg/Kg	SBL2-01	1/7	0.005 - 0.006	0.005	N/A	52 N	N/A	N/A	NO	BSL
1330-20-7	Xylene (total)	0.001	J	0.003	J	mg/Kg	SBL2-01	2/7	0.005 - 0.008	0.003	N/A	21 N	N/A	N/A	NO	BSL
56-55-3	Benzo(a)anthracene	0.091	J	0.091	J	mg/Kg	SBL2-01	1/7	0.11 - 0.46	0.091	N/A	0.62 C	N/A	N/A	NO	BSL
205-99-2	Benzo(b)fluoranthene	0.08	J	0.08	J	mg/Kg	SBL2-01	1/7	0.11 - 0.46	0.08	N/A	0.62 C	N/A	N/A	NO	BSL
207-08-9	Benzo(k)fluoranthene	0.086	J	0.086	J	mg/Kg	SBL2-01	1/7	0.11 - 0.46	0.086	N/A	6.2 C	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.052	J	0.19	J	mg/Kg	SBL2-04	6/7	0.41 - 0.41	0.19	N/A	35 C	N/A	N/A	NO	BSL
218-01-9	Chrysene	0.097	J	0.097	J	mg/Kg	SBL2-01	1/7	0.11 - 0.46	0.097	N/A	62 C	N/A	N/A	NO	BSL
84-66-2	Diethylphthalate	1.7	J	1.7	J	mg/Kg	SBL2-04	1/7	0.11 - 0.47	1.7	N/A	4900 N	N/A	N/A	NO	BSL
206-44-0	Fluoranthene	0.1	J	0.1	J	mg/Kg	SBL2-01	1/7	0.11 - 0.46	0.1	N/A	230 N	N/A	N/A	NO	BSL
193-39-5	Indeno(1,2,3-cd)pyrene	0.049	J	0.049	J	mg/Kg	SBL2-01	1/7	0.11 - 0.46	0.049	N/A	0.62 C	N/A	N/A	NO	BSL
129-00-0	Pyrene	0.1	J	0.1	J	mg/Kg	SBL2-01	1/7	0.11 - 0.46	0.1	N/A	230 N	N/A	N/A	NO	BSL
72-55-9	4,4'-DDE	0.00051	J	0.00092	J	mg/Kg	SBL2-06	2/6	0.0031 - 0.0047	0.00092	N/A	1.7 C	N/A	N/A	NO	BSL
319-84-6	alpha-BHC	0.0025	J	0.0025	J	mg/Kg	SBL2-04	1/6	0.002 - 0.0024	0.0025	N/A	0.09 C	N/A	N/A	NO	BSL
5103-71-9	alpha-Chlordane	0.0014	J	0.0017	J	mg/Kg	SBL2-06	2/6	0.0016 - 0.0024	0.0017	N/A	1.6 C	N/A	N/A	NO	BSL
319-85-7	beta-BHC	0.0019	J	0.0075	J	mg/Kg	SBL2-04	2/6	0.0021 - 0.0024	0.0075	N/A	0.32 C	N/A	N/A	NO	BSL
319-86-8	delta-BHC	0.00015	J	0.0053	J	mg/Kg	SBL2-04	2/6	0.002 - 0.0024	0.0053	N/A	0.09 C	N/A	N/A	NO	BSL
959-98-8	Endosulfan I	0.00023	J	0.00023	J	mg/Kg	SBL2-05	1/6	0.0016 - 0.0024	0.00023	N/A	37 N	N/A	N/A	NO	BSL
1031-07-8	Endosulfan sulfate	0.00029	J	0.00049	J	mg/Kg	SBL2-06	2/6	0.0031 - 0.0047	0.00049	N/A	37 N	N/A	N/A	NO	BSL
7421-36-3	Endrin aldehyde	0.00037	J	0.00037	J	mg/Kg	SBL2-05	1/6	0.0031 - 0.0047	0.00037	N/A	1.8 N	N/A	N/A	NO	BSL
53494-70-5	Endrin ketone	0.00019	J	0.00043	J	mg/Kg	SBL2-05	2/6	0.0031 - 0.0047	0.00043	N/A	1.8 N	N/A	N/A	NO	BSL
58-89-9	gamma-BHC(Lindane)	0.00055	J	0.001	J	mg/Kg	SBL2-05	2/6	0.0016 - 0.0024	0.001	N/A	0.44 C	N/A	N/A	NO	BSL
5103-74-2	gamma-Chlordane	0.00041	J	0.0014	J	mg/Kg	SBL2-06	3/6	0.0016 - 0.0021	0.0014	N/A	1.6 C	N/A	N/A	NO	BSL
76-44-8	Heptachlor	0.002	J	0.002	J	mg/Kg	SBL2-05	1/6	0.0016 - 0.0024	0.002	N/A	0.11 C	N/A	N/A	NO	BSL
1024-57-3	Heptachlor epoxide	0.00016	J	0.0016	J	mg/Kg	SBL2-05	4/6	0.0016 - 0.0021	0.0016	N/A	0.053 C	N/A	N/A	NO	BSL
72-43-5	Methoxychlor	0.0011	J	0.0018	J	mg/Kg	SBL2-05	2/6	0.016 - 0.024	0.0016	N/A	31 N	N/A	N/A	NO	BSL
1746-01-6	Dioxin TEQ	6.7E-05	J	2.8E-04	J	mg/Kg	SBL2-06	7/7	-	2.8E-04	N/A	3.9E-06 C	N/A	N/A	YES	ASL

TABLE 2.3
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 POWNAL TANNERY

Scenario Timeframe: Current
 Medium: Soils
 Exposure Medium: Surface Soil/Sludge
 Exposure Point: Lagoon 2*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
7429-90-5	Aluminum	4840	J	8910		mg/Kg	SBL2-04	7 / 7	-	8910	N/A	N/A	N/A	N/A	NO	NTX
7440-38-0	Antimony	0.1	J	0.14	J	mg/Kg	SBL2-04	2 / 7	0.64 - 0.8	0.14	N/A	3.1 N	N/A	N/A	NO	BSL
7440-38-2	Arsenic	2.3		4.7		mg/Kg	SBL2-07	7 / 7	-	4.7	N/A	0.39 C	N/A	N/A	YES	ASL
7440-39-3	Barium	35.2	J	97.8		mg/Kg	SBL2-06	7 / 7	-	97.8	N/A	540 N	N/A	N/A	NO	BSL
7440-41-7	Beryllium	0.25	J	0.35	J	mg/Kg	SBL2-03	4 / 7	0.21 - 0.26	0.35	N/A	15 N	N/A	N/A	NO	BSL
7440-43-9	Cadmium	1.6		4.6		mg/Kg	SBL2-04	6 / 7	0.21 - 0.21	4.6	N/A	3.7 N	N/A	N/A	YES	ASL
7440-70-2	Calcium	1590		57600		mg/Kg	SBL2-07	7 / 7	-	57600	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	9.6		1230	J	mg/Kg	SBL2-04	7 / 7	-	1230	N/A	30 C	N/A	N/A	YES	ASL
7440-48-4	Cobalt	6.6	J	16.1		mg/Kg	SBL2-03	7 / 7	-	16.1	N/A	N/A	N/A	N/A	NO	NTX
7440-50-8	Copper	13.1		27.9		mg/Kg	SBL2-01	7 / 7	-	27.9	N/A	N/A	N/A	N/A	NO	NTX
57-12-5	Cyanide	0.165	J	2.5		mg/Kg	SBL2-07	4 / 7	0.05 - 0.27	2.5	N/A	1.1 N	N/A	N/A	YES	ASL
7439-89-6	Iron	14800	J	20400	J	mg/Kg	SBL2-03	7 / 7	-	20400	N/A	N/A	N/A	N/A	NO	NTX
7439-92-1	Lead	4.3		90.75		mg/Kg	SBL2-05	7 / 7	-	90.75	N/A	400 N	N/A	N/A	NO	BSL
7439-95-4	Magnesium	2450	J	32600	J	mg/Kg	SBL2-07	7 / 7	-	32600	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	618		2860		mg/Kg	SBL2-06	7 / 7	-	2860	N/A	180 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.29		1.5		mg/Kg	SBL2-04	6 / 7	0.05 - 0.05	1.5	N/A	0.61 N	N/A	N/A	YES	ASL
7440-02-0	Nickel	11.6		23.5		mg/Kg	SBL2-03	7 / 7	-	23.5	N/A	160 N	N/A	N/A	NO	BSL
7440-09-7	Potassium	222	J	574	J	mg/Kg	SBL2-03	7 / 7	-	574	N/A	N/A	N/A	N/A	NO	NUT
7782-49-2	Selenium	0.2	J	0.44	J	mg/Kg	SBL2-04	2 / 7	0.64 - 0.8	0.44	N/A	39 N	N/A	N/A	NO	BSL
7440-22-4	Silver	0.11	J	0.14	J	mg/Kg	SBL2-04	2 / 7	0.21 - 0.27	0.14	N/A	39 N	N/A	N/A	NO	BSL
7440-23-5	Sodium	41.9	J	304	J	mg/Kg	SBL2-03	7 / 7	-	304	N/A	N/A	N/A	N/A	NO	NUT
7440-28-0	Thallium	0.12	J	2.1	J	mg/Kg	SBL2-05	7 / 7	-	2.1	N/A	0.52 N	N/A	N/A	YES	ASL
7440-82-2	Vanadium	7.1	J	12.2		mg/Kg	SBL2-02	7 / 7	-	12.2	N/A	55 N	N/A	N/A	NO	BSL
7440-66-6	Zinc	42		78.7	J	mg/Kg	SBL2-03	7 / 7	-	78.7	N/A	2300 N	N/A	N/A	NO	BSL

* Data presented are from samples SBL2-01(0-0.5), SBL2-02(0-0.5), SBL2-03(0-0.5), SBL2-04(0-0.5), SBL2-05(0-0.5) and its duplicate, SBL2-06(0-0.5), SBL2-07(0-0.5), SBL2-08(0-0.5), and SBL2-09(0-0.5).

(1) Minimum/maximum detected concentration.

(2) Refer to supporting information for background discussion.

(3) USEPA Region 9 PRGs for residential soil (adjusted to a hazard quotient = 0.1 for noncarcinogens), November 1, 2000.

The most conservative PRG for all BHCs has been used for delta-BHC.

PRG for endosulfan has been used for endosulfan I and endosulfan sulfate.

PRG for endrin has been used for endrin aldehyde and endrin ketone.

PRG for chromium VI used for chromium.

PRG for mercury and compounds used for mercury.

PRG for chlordane has been used for alpha-chlordane and gamma-chlordane.

The screening toxicity value for lead is the residential soil lead guidance level of 400 mg/Kg (USEPA, 1994a).

(4) Rationale Codes Selection Reason:

Deletion Reason:

Above Screening Levels (ASL)

No Toxicity Information (NTX)

Essential Nutrient (NUT)

Below Screening Level (BSL)

Definitions: COPC = Chemical of Potential Concern

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

PRG = Preliminary Remedial Goal

N/A = Not Applicable or Not Available

J = Estimated Value

C = Carcinogenic

N = Non-Carcinogenic

TABLE 2.4
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 2*

CAS Number	Chemical	(1) Minimum Concentration	(1) Minimum Qualifier	(1) Maximum Concentration	(1) Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background (2) Value	Screening (3) Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	(4) Rationale for Contaminant Deletion or Selection
78-93-3	2-Butanone	0.019	J	0.019	J	mg/Kg	SBL2-07	1 / 12	0.005 - 0.02	0.019	N/A	730 N	N/A	N/A	NO	BSL
71-43-2	Benzene	0.002	J	0.002	J	mg/Kg	SBL2-07	1 / 12	0.005 - 0.012	0.002	N/A	0.65 C	N/A	N/A	NO	BSL
75-15-0	Carbon disulfide	0.003	J	0.007	J	mg/Kg	SBL2-01	5 / 12	0.005 - 0.012	0.007	N/A	36 N	N/A	N/A	NO	BSL
79-20-9	Methyl Acetate	0.014	J	0.02	J	mg/Kg	SBL2-02	2 / 11	0.005 - 0.008	0.02	N/A	2200 N	N/A	N/A	NO	BSL
109-99-9	Tetrahydrofuran	0.006	J	0.007	J	mg/Kg	SBL2-04	2 / 11	0.097 - 0.16	0.007	N/A	64 C	N/A	N/A	NO	BSL
108-88-3	Toluene	0.001	J	0.005	J	mg/Kg	SBL2-01	2 / 12	0.005 - 0.012	0.005	N/A	52 N	N/A	N/A	NO	BSL
1330-20-7	Xylene (total)	0.001	J	0.003	J	mg/Kg	SBL2-01	3 / 12	0.005 - 0.012	0.003	N/A	21 N	N/A	N/A	NO	BSL
98-86-2	Acetophenone	0.077	J	0.077	J	mg/Kg	SBL2-03	1 / 11	0.11 - 0.47	0.077	N/A	0.049 N	N/A	N/A	YES	ASL
56-55-3	Benzo(a)anthracene	0.091	J	0.091	J	mg/Kg	SBL2-01	1 / 12	0.11 - 0.49	0.091	N/A	0.62 C	N/A	N/A	NO	BSL
205-99-2	Benzo(b)fluoranthene	0.08	J	0.08	J	mg/Kg	SBL2-01	1 / 12	0.11 - 0.49	0.08	N/A	0.62 C	N/A	N/A	NO	BSL
207-08-9	Benzo(k)fluoranthene	0.086	J	0.086	J	mg/Kg	SBL2-01	1 / 12	0.11 - 0.49	0.086	N/A	6.2 C	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.052	J	0.19	J	mg/Kg	SBL2-04	8 / 12	0.38 - 0.49	0.19	N/A	35 C	N/A	N/A	NO	BSL
218-01-9	Chrysene	0.097	J	0.097	J	mg/Kg	SBL2-01	1 / 12	0.11 - 0.49	0.097	N/A	62 C	N/A	N/A	NO	BSL
84-66-2	Diethylphthalate	0.33	J	1.7	J	mg/Kg	SBL2-04	2 / 12	0.11 - 0.49	1.7	N/A	4900 N	N/A	N/A	NO	BSL
206-44-0	Fluoranthene	0.1	J	0.1	J	mg/Kg	SBL2-01	1 / 12	0.11 - 0.49	0.1	N/A	230 N	N/A	N/A	NO	BSL
193-39-5	Indeno(1,2,3-cd)pyrene	0.049	J	0.049	J	mg/Kg	SBL2-01	1 / 12	0.11 - 0.49	0.049	N/A	0.62 C	N/A	N/A	NO	BSL
129-00-0	Pyrene	0.1	J	0.1	J	mg/Kg	SBL2-01	1 / 12	0.11 - 0.49	0.1	N/A	230 N	N/A	N/A	NO	BSL
72-55-9	4,4'-DDE	0.000074	J	0.00092	J	mg/Kg	SBL2-06	3 / 11	0.0031 - 0.0049	0.00092	N/A	1.7 C	N/A	N/A	NO	BSL
319-84-6	alpha-BHC	0.0025	J	0.0025	J	mg/Kg	SBL2-03	1 / 11	0.0019 - 0.0025	0.0025	N/A	0.09 C	N/A	N/A	NO	BSL
5103-71-9	alpha-Chlordane	0.0014	J	0.0017	J	mg/Kg	SBL2-06	2 / 11	0.0016 - 0.0025	0.0017	N/A	1.6 C	N/A	N/A	NO	BSL
319-85-7	beta-BHC	0.0019	J	0.0075	J	mg/Kg	SBL2-04	2 / 11	0.0019 - 0.0025	0.0075	N/A	0.32 C	N/A	N/A	NO	BSL
319-86-8	delta-BHC	0.00015	J	0.0053	J	mg/Kg	SBL2-04	2 / 11	0.0019 - 0.0025	0.0053	N/A	0.09 C	N/A	N/A	NO	BSL
959-98-8	Endosulfan I	0.00023	J	0.00023	J	mg/Kg	SBL2-05	1 / 11	0.0016 - 0.0025	0.00023	N/A	37 N	N/A	N/A	NO	BSL
1031-07-8	Endosulfan sulfate	0.000098	J	0.00049	J	mg/Kg	SBL2-06	3 / 11	0.0031 - 0.0047	0.00049	N/A	37 N	N/A	N/A	NO	BSL
7421-36-3	Endrin aldehyde	0.00037	J	0.00037	J	mg/Kg	SBL2-05	1 / 11	0.0031 - 0.0049	0.00037	N/A	1.8 N	N/A	N/A	NO	BSL
53494-70-5	Endrin ketone	0.00019	J	0.00043	J	mg/Kg	SBL2-05	2 / 11	0.0031 - 0.0049	0.00043	N/A	1.8 N	N/A	N/A	NO	BSL
58-89-9	gamma-BHC(Lindane)	0.00055	J	0.001	J	mg/Kg	SBL2-05	3 / 11	0.0016 - 0.0024	0.001	N/A	0.44 C	N/A	N/A	NO	BSL
5103-74-2	gamma-Chlordane	0.00013	J	0.0014	J	mg/Kg	SBL2-06	5 / 11	0.0016 - 0.0021	0.0014	N/A	1.6 C	N/A	N/A	NO	BSL
76-44-8	Heptachlor	0.002	J	0.002	J	mg/Kg	LAG-02-150-R100	1 / 11	0.0016 - 0.0025	0.002	N/A	0.11 C	N/A	N/A	NO	BSL
1024-57-3	Heptachlor epoxide	0.00016	J	0.0016	J	mg/Kg	SBL2-05	5 / 11	0.0016 - 0.0025	0.0016	N/A	0.053 C	N/A	N/A	NO	BSL
72-43-5	Methoxychlor	0.001	J	0.0016	J	mg/Kg	SBL2-05	3 / 11	0.016 - 0.025	0.0016	N/A	31 N	N/A	N/A	NO	BSL
1746-01-6	Dioxin TEQ	3.2E-08	J	2.8E-04	J	mg/Kg	SBL2-06	13 / 13	-	2.8E-04	N/A	3.9E-06 C	N/A	N/A	YES	ASL

TABLE 2.4
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 2*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
7429-90-5	Aluminum	4840	J	12700	J	mg/Kg	SBL2-06	13 / 13	-	12700	N/A	N/A	N/A	N/A	NO	NTX
7440-36-0	Antimony	0.1	J	0.86	J	mg/Kg	SBL2-03	5 / 13	0.64 - 3	0.86	N/A	3.1 N	N/A	N/A	NO	BSL
7440-38-2	Arsenic	1.7		5.7		mg/Kg	SBL2-03	13 / 13	-	5.7	N/A	0.39 C	N/A	N/A	YES	ASL
7440-39-3	Barium	20.3	J	97.8		mg/Kg	SBL2-06	13 / 13	-	97.8	N/A	540 N	N/A	N/A	NO	BSL
7440-41-7	Beryllium	0.25	J	0.55	J	mg/Kg	SBL2-03	8 / 13	0.21 - 0.27	0.55	N/A	15 N	N/A	N/A	NO	BSL
7440-43-9	Cadmium	1.6		11.4		mg/Kg	SBL2-06	7 / 13	0.2 - 0.26	11.4	N/A	3.7 N	N/A	N/A	YES	ASL
7440-70-2	Calcium	1150	J	57600		mg/Kg	SBL2-07	13 / 13	-	57600	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	9.6		2690		mg/Kg	SBL2-06	13 / 13	-	2690	N/A	30 C	N/A	N/A	YES	ASL
7440-48-4	Cobalt	5	J	16.1		mg/Kg	SBL2-03	13 / 13	-	16.1	N/A	N/A	N/A	N/A	NO	NTX
7440-50-8	Copper	9.6		45.9		mg/Kg	SBL2-08	13 / 13	-	45.9	N/A	N/A	N/A	N/A	NO	NTX
57-12-5	Cyanide	0.08	J	2.5		mg/Kg	SBL2-07	7 / 11	0.05 - 0.27	2.5	N/A	1.1 N	N/A	N/A	YES	ASL
7439-89-6	Iron	14800	J	27800	J	mg/Kg	SBL2-03	13 / 13	-	27800	N/A	N/A	N/A	N/A	NO	NTX
7439-92-1	Lead	4.3		192		mg/Kg	SBL2-06	13 / 13	-	192	N/A	400 N	N/A	N/A	NO	BSL
7439-95-4	Magnesium	2450	J	32600	J	mg/Kg	SBL2-07	13 / 13	-	32600	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	143		2860		mg/Kg	SBL2-06	13 / 13	-	2860	N/A	180 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.23		2.2		mg/Kg	SBL2-06	8 / 13	0.05 - 0.06	2.2	N/A	0.61 N	N/A	N/A	YES	ASL
7440-02-0	Nickel	10.9		26.5		mg/Kg	LAG-02-200-R50	13 / 13	-	26.5	N/A	160 N	N/A	N/A	NO	BSL
7440-09-7	Potassium	217		1630		mg/Kg	SBL2-03	13 / 13	-	1630	N/A	N/A	N/A	N/A	NO	NUT
7782-49-2	Selenium	0.2	J	0.44	J	mg/Kg	SBL2-04	2 / 12	0.56 - 0.82	0.44	N/A	39 N	N/A	N/A	NO	BSL
7440-22-4	Silver	0.11	J	0.14	J	mg/Kg	SBL2-04	2 / 13	0.21 - 1.3	0.14	N/A	39 N	N/A	N/A	NO	BSL
7440-23-5	Sodium	41.9	J	450	J	mg/Kg	SBL2-03	11 / 13	35.9 - 37.6	450	N/A	N/A	N/A	N/A	NO	NUT
7440-28-0	Thallium	0.12	J	2.6		mg/Kg	SBL2-03	11 / 13	1.1 - 1.2	2.6	N/A	0.52 N	N/A	N/A	YES	ASL
7440-62-2	Vanadium	6.2	J	15.1		mg/Kg	SBL2-06	13 / 13	-	15.1	N/A	55 N	N/A	N/A	NO	BSL
7440-66-6	Zinc	32.5	J	106	J	mg/Kg	SBL2-06	13 / 13	-	106	N/A	2300 N	N/A	N/A	NO	BSL

* Data presented are from samples SBL2-01(0-0.5), SBL2-01(2-4), SBL2-02(0-0.5), SBL2-03(0-0.5), SBL2-03(9-12), SBL2-04(0-0.5), SBL2-05(0-0.5) and its duplicate, SBL2-05(3-5),

SBL2-06(0-0.5), SBL2-06(6-8), SBL2-07(0-0.5), SBL2-08(0-0.5), SBL2-09(0-0.5), LAG-02-150-R100(8), LAG-02-150-R50(8), LAG-02-150-R200(1), LAG-02-200-R50(1), LAG-02-200-R50(8), and LAG-02-200-R100(8).

(1) Minimum/maximum detected concentration.

(2) Refer to supporting information for background discussion.

(3) USEPA Region 9 PRGs for residential soil (adjusted to an hazard quotient = 0.1 for noncarcinogens), November 1, 2000.

The most conservative PRG for all BHCs has been used for delta-BHC.

PRG for endosulfan has been used for endosulfan I and endosulfan sulfate.

PRG for endrin has been used for endrin aldehyde and endrin ketone.

PRG for chromium VI used for chromium.

PRG for mercury and compounds used for mercury.

PRG for chlordane has been used for alpha-chlordane and gamma-chlordane.

The screening toxicity value for lead is the residential soil lead guidance level of 400 mg/Kg (USEPA, 1994a).

(4) Rationale Codes Selection Reason:

Deletion Reason: Above Screening Levels (ASL)

No Toxicity Information (NTX)

Essential Nutrient (NUT)

Below Screening Level (BSL)

Definitions:

COPC = Chemical of Potential Concern

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

PRG = Preliminary Remedial Goal

N/A = Not Applicable or Not Available

J = Estimated Value

C = Carcinogenic

N = Non-Carcinogenic

TABLE 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Current
Medium: Soils
Exposure Medium: Surface Soil/Sludge
Exposure Point: Lagoon 3*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
95-50-1	1,2-Dichlorobenzene	0.009		0.009		mg/Kg	SBL3B-03	1 / 5	0.005 - 0.006	0.009	N/A	37 N	N/A	N/A	NO	BSL
106-46-7	1,4-Dichlorobenzene	0.002	J	0.003	J	mg/Kg	SBL3B-03	2 / 5	0.005 - 0.006	0.003	N/A	3.4 C	N/A	N/A	NO	BSL
78-93-3	2-Butanone	0.063		0.063		mg/Kg	SBL3B-02	1 / 5	0.009 - 0.021	0.063	N/A	730 N	N/A	N/A	NO	BSL
67-64-1	Acetone	0.093	J	0.093	J	mg/Kg	SBL3B-02	1 / 5	0.042 - 0.071	0.093	N/A	160 N	N/A	N/A	NO	BSL
71-43-2	Benzene	0.001	J	0.001	J	mg/Kg	SBL3AB-01	1 / 5	0.005 - 0.006	0.001	N/A	0.65 C	N/A	N/A	NO	BSL
75-15-0	Carbon disulfide	0.003	J	0.008		mg/Kg	SBL3AB-01	4 / 5	0.006 - 0.006	0.008	N/A	36 N	N/A	N/A	NO	BSL
100-41-4	Ethylbenzene	0.001	J	0.001	J	mg/Kg	SBL3AB-01	1 / 5	0.005 - 0.006	0.001	N/A	23 N	N/A	N/A	NO	BSL
75-09-2	Methylene chloride	0.003	J	0.003	J	mg/Kg	SBL3A-01	2 / 5	0.005 - 0.006	0.003	N/A	8.9 C	N/A	N/A	NO	BSL
108-88-3	Toluene	0.003	J	0.003	J	mg/Kg	SBL3AB-01	1 / 5	0.005 - 0.006	0.003	N/A	52 N	N/A	N/A	NO	BSL
1330-20-7	Xylene (total)	0.001	J	0.005		mg/Kg	SBL3A-01	2 / 5	0.005 - 0.006	0.005	N/A	21 N	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.21	J	0.32	J	mg/Kg	SBL3AB-01	3 / 5	0.36 - 0.38	0.32	N/A	35 C	N/A	N/A	NO	BSL
5103-71-9	alpha-Chlordane	0.00039	J	0.00039	J	mg/Kg	SBL3B-02	1 / 5	0.0018 - 0.002	0.00039	N/A	1.6 C	N/A	N/A	NO	BSL
319-85-7	beta-BHC	0.00061	J	0.00061	J	mg/Kg	SBL3B-03	1 / 5	0.0018 - 0.002	0.00061	N/A	0.32 C	N/A	N/A	NO	BSL
58-89-9	gamma-BHC(Lindane)	0.00036	J	0.00036	J	mg/Kg	SBL3B-03	1 / 5	0.0018 - 0.002	0.00036	N/A	0.44 C	N/A	N/A	NO	BSL
5103-74-2	gamma-Chlordane	0.000076	J	0.00028	J	mg/Kg	SBL3AB-01	3 / 5	0.002 - 0.002	0.00028	N/A	1.6 C	N/A	N/A	NO	BSL
76-44-8	Heptachlor	0.00049	J	0.00049	J	mg/Kg	SBL3B-03	1 / 5	0.0018 - 0.002	0.00049	N/A	0.11 C	N/A	N/A	NO	BSL
72-43-5	Methoxychlor	0.00034	J	0.00079	J	mg/Kg	SBL3B-03	2 / 5	0.02 - 0.02	0.00079	N/A	31 N	N/A	N/A	NO	BSL
1746-01-6	Dioxin TEQ	4.9E-07	J	1.1E-04	J	mg/Kg	SBL3AB-01	6 / 6	-	1.1E-04	N/A	3.9E-06 C	N/A	N/A	YES	ASL

TABLE 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAL TANNERY

Scenario Timeframe: Current
Medium: Soils
Exposure Medium: Surface Soil/Sludge
Exposure Point: Lagoon 3^a

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
7429-90-5	Aluminum	8730		16000		mg/Kg	SBL3B-02	5 / 5	-	16000	N/A	N/A	N/A	N/A	NO	NTX
7440-38-2	Arsenic	3.4		9.4		mg/Kg	SBL3B-01	5 / 5	-	9.4	N/A	0.39 C	N/A	N/A	YES	ASL
7440-39-3	Barium	27.8	J	115		mg/Kg	SBL3B-02	5 / 5	-	115	N/A	540 N	N/A	N/A	NO	BSL
7440-41-7	Beryllium	0.28	J	0.8	J	mg/Kg	SBL3B-02	5 / 5	-	0.8	N/A	15 N	N/A	N/A	NO	BSL
7440-70-2	Calcium	1380		12900		mg/Kg	SBL3B-01	5 / 5	-	12900	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	23.3		246		mg/Kg	SBL3B-03	5 / 5	-	246	N/A	30 C	N/A	N/A	YES	ASL
7440-48-4	Cobalt	9.1	J	15.7		mg/Kg	SBL3B-02	5 / 5	-	15.7	N/A	N/A	N/A	N/A	NO	NTX
7440-50-8	Copper	18.1	J	39	J	mg/Kg	SBL3B-03	5 / 5	-	39.1	N/A	N/A	N/A	N/A	NO	NTX
57-12-5	Cyanide	0.07	J	0.15	J	mg/Kg	SBL3B-03	2 / 5	0.05 - 0.06	0.15	N/A	1.1 N	N/A	N/A	NO	BSL
7439-89-6	Iron	20700		32400		mg/Kg	SBL3B-02	5 / 5	-	32400	N/A	N/A	N/A	N/A	NO	NTX
7439-92-1	Lead	13.5	J	23.1	J	mg/Kg	SBL3B-03	5 / 5	-	23.1	N/A	400 N	N/A	N/A	NO	BSL
7439-95-4	Magnesium	3690		9250		mg/Kg	SBL3B-01	5 / 5	-	9250	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	444	J	876	J	mg/Kg	SBL3B-02	5 / 5	-	876	N/A	180 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.11		4.4		mg/Kg	SBL3B-01	5 / 5	-	4.4	N/A	0.61 N	N/A	N/A	YES	ASL
7440-02-0	Nickel	17.7		30.4		mg/Kg	SBL3B-02	5 / 5	-	30.4	N/A	160 N	N/A	N/A	NO	BSL
7440-09-7	Potassium	245	J	1650		mg/Kg	SBL3B-01	5 / 5	-	1650	N/A	N/A	N/A	N/A	NO	NUT
7782-49-2	Selenium	0.94	J	0.94	J	mg/Kg	SBL3B-01	1 / 5	0.63 - 0.72	0.94	N/A	39 N	N/A	N/A	NO	BSL
7440-23-5	Sodium	258	J	347	J	mg/Kg	SBL3B-02	5 / 5	-	347	N/A	N/A	N/A	N/A	NO	NUT
7440-62-2	Vanadium	8.5	J	17.5		mg/Kg	SBL3B-02	5 / 5	-	17.5	N/A	55 N	N/A	N/A	NO	BSL
7440-66-6	Zinc	57.5	J	111	J	mg/Kg	SBL3B-01	5 / 5	-	111	N/A	2300 N	N/A	N/A	NO	BSL

^a Data presented are from samples SBL3A-01(0-0.5), SBL3A-02(0-0.5), SBL3A-03(0-0.5), SBL3AB-01(0-0.5), SBL3B-01(0-0.5), SBL3B-02(0-0.5), and SBL3B-03(0-0.5).

- (1) Minimum/maximum detected concentration.
 (2) Refer to supporting information for background discussion.
 (3) USEPA Region 9 PRGs for residential soil (adjusted to a hazard quotient = 0.1 for noncarcinogens), November 1, 2000.
 PRG for chromium VI used for chromium.
 PRG for mercury and compounds used for mercury.
 PRG for chlordane has been used for alpha-chlordane and gamma-chlordane.
 The screening toxicity value for lead is the residential soil lead guidance level of 400 mg/Kg (USEPA, 1994a).
 (4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
 Deletion Reason: No Toxicity Information (NTX)
 Essential Nutrient (NUT)
 Below Screening Level (BSL)

Definitions:
 COPC = Chemical of Potential Concern
 ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
 PRG = Preliminary Remedial Goal
 N/A = Not Applicable or Not Available
 J = Estimated Value
 C = Carcinogenic
 N = Non-Carcinogenic

TABLE 2.6
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNA TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 3*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
95-50-1	1,2-Dichlorobenzene	0.009		0.79	J	mg/Kg	SBL3A-01	5 / 10	0.005 - 0.006	0.79	N/A	37 N	N/A	N/A	NO	BSL
108-46-7	1,4-Dichlorobenzene	0.002	J	0.17	J	mg/Kg	SBL3A-01	6 / 10	0.005 - 0.006	0.17	N/A	3.4 C	N/A	N/A	NO	BSL
78-93-3	2-Butanone	0.019		0.063		mg/Kg	SBL3B-02	2 / 10	0.006 - 1	0.063	N/A	730 N	N/A	N/A	NO	BSL
67-84-1	Acetone	0.093	J	0.093	J	mg/Kg	SBL3B-02	1 / 10	0.019 - 1.2	0.093	N/A	160 N	N/A	N/A	NO	BSL
71-43-2	Benzene	0.001	J	0.001	J	mg/Kg	SBL3AB-01	1 / 10	0.005 - 0.54	0.001	N/A	0.65 C	N/A	N/A	NO	BSL
75-15-0	Carbon disulfide	0.003	J	0.29	J	mg/Kg	SBL3A-03	8 / 10	0.006 - 0.54	0.29	N/A	36 N	N/A	N/A	NO	BSL
100-41-4	Ethylbenzene	0.001	J	0.93	J	mg/Kg	SBL3A-01	4 / 10	0.005 - 0.006	0.93	N/A	23 N	N/A	N/A	NO	BSL
98-82-8	Isopropylbenzene	0.008		1.1	J	mg/Kg	SBL3A-01	3 / 10	0.005 - 0.006	1.1	N/A	16 N	N/A	N/A	NO	BSL
79-20-9	Methyl Acetate	0.59	J	0.68	J	mg/Kg	SBL3A-01	2 / 10	0.005 - 0.006	0.68	N/A	2200 N	N/A	N/A	NO	BSL
108-87-2	Methylcyclohexane	0.61	J	0.66	J	mg/Kg	SBL3A-03	2 / 10	0.005 - 0.006	0.66	N/A	260 N	N/A	N/A	NO	BSL
75-09-2	Methylene chloride	0.003	J	0.003	J	mg/Kg	SBL3A-01	3 / 10	0.005 - 0.54	0.003	N/A	8.9 C	N/A	N/A	NO	BSL
108-88-3	Toluene	0.003	J	1.8	J	mg/Kg	SBL3A-03	4 / 10	0.005 - 0.006	1.8	N/A	52 N	N/A	N/A	NO	BSL
1330-20-7	Xylene (total)	0.001	J	8.5	J	mg/Kg	SBL3A-01	7 / 10	0.005 - 0.006	8.5	N/A	21 N	N/A	N/A	NO	BSL
92-52-4	1,1-Biphenyl	0.02	J	0.15	J	mg/Kg	SBL3A-01	3 / 10	0.36 - 18	0.15	N/A	35 N	N/A	N/A	NO	BSL
105-87-9	2,4-Dimethylphenol	0.035	J	0.035	J	mg/Kg	SBL3A-02	1 / 10	0.36 - 18	0.035	N/A	120 N	N/A	N/A	NO	BSL
91-57-6	2-Methylnaphthalene	0.066	J	2.6		mg/Kg	SBL3A-01	4 / 10	0.36 - 0.44	2.6	N/A	5.6 N	N/A	N/A	NO	BSL
106-44-5	4-Methylphenol	0.24	J	25	J	mg/Kg	SBL3A-03	3 / 10	0.36 - 0.47	25	N/A	31 N	N/A	N/A	NO	BSL
56-55-3	Benzo(a)anthracene	0.038	J	0.038	J	mg/Kg	SBL3A-02	1 / 10	0.36 - 18	0.038	N/A	0.82 C	N/A	N/A	NO	BSL
50-32-8	Benzo(a)pyrene	0.039	J	0.039	J	mg/Kg	SBL3A-02	1 / 10	0.36 - 18	0.039	N/A	0.062 C	N/A	N/A	NO	BSL
205-99-2	Benzo(b)fluoranthene	0.033	J	0.033	J	mg/Kg	SBL3A-02	1 / 10	0.36 - 18	0.033	N/A	0.62 C	N/A	N/A	NO	BSL
191-24-2	Benzo(g,h,i)perylene	0.02	J	0.02	J	mg/Kg	SBL3A-02	1 / 10	0.36 - 18	0.02	N/A	5.6 N	N/A	N/A	NO	BSL
207-08-9	Benzo(k)fluoranthene	0.035	J	0.035	J	mg/Kg	SBL3A-02	1 / 10	0.36 - 18	0.035	N/A	6.2 C	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.21	J	0.99	J	mg/Kg	SBL3A-01	6 / 10	0.36 - 18	0.99	N/A	35 C	N/A	N/A	NO	BSL
218-01-9	Chrysene	0.045	J	0.045	J	mg/Kg	SBL3A-02	1 / 10	0.36 - 18	0.045	N/A	62 C	N/A	N/A	NO	BSL
117-84-0	Di-n-octylphthalate	0.41	J	0.41	J	mg/Kg	SBL3B-01	1 / 10	0.36 - 18	0.41	N/A	120 N	N/A	N/A	NO	BSL
206-44-0	Fluoranthene	0.072	J	0.072	J	mg/Kg	SBL3A-02	1 / 10	0.36 - 18	0.072	N/A	230 N	N/A	N/A	NO	BSL
193-39-5	Indeno(1,2,3-cd)pyrene	0.02	J	0.02	J	mg/Kg	SBL3A-02	1 / 10	0.36 - 18	0.02	N/A	0.82 C	N/A	N/A	NO	BSL
91-20-3	Naphthalene	0.1	J	5.1	J	mg/Kg	SBL3A-03	4 / 10	0.36 - 0.44	5.1	N/A	5.8 N	N/A	N/A	NO	BSL
87-86-5	Pentachlorophenol	1.4	J	1.4	J	mg/Kg	SBL3A-02	1 / 10	0.9 - 46	1.4	N/A	3 C	N/A	N/A	NO	BSL
85-01-8	Phenanthrene	0.042	J	0.082	J	mg/Kg	SBL3A-01	2 / 10	0.36 - 18	0.082	N/A	5.8 N	N/A	N/A	NO	BSL
108-95-2	Phenol	0.062	J	4.5		mg/Kg	SBL3A-01	3 / 10	0.36 - 0.47	4.5	N/A	3700 N	N/A	N/A	NO	BSL
129-00-0	Pyrene	0.071	J	0.071	J	mg/Kg	SBL3A-02	1 / 10	0.36 - 18	0.071	N/A	230 N	N/A	N/A	NO	BSL

TABLE 2.6
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 POWNAL TANNERY

Scenario Timeframe: Future
 Medium: Soils
 Exposure Medium: Soil/Sludge
 Exposure Point: Lagoon 3*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
72-54-8	4,4'-DDD	0.00023	J	0.0015	J	mg/Kg	SBL3B-01	3 / 10	0.0036 - 0.0061	0.0015	N/A	2.4 C	N/A	N/A	NO	BSL
72-55-9	4,4'-DDE	0.00098	J	0.015	J	mg/Kg	SBL3A-03	5 / 10	0.0036 - 0.0039	0.015	N/A	1.7 C	N/A	N/A	NO	BSL
319-84-6	alpha-BHC	0.003	J	0.003	J	mg/Kg	SBL3A-01	1 / 10	0.0018 - 0.0049	0.003	N/A	0.09 C	N/A	N/A	NO	BSL
5103-71-9	alpha-Chlordane	0.00039	J	0.0045	J	mg/Kg	SBL3B-01	5 / 10	0.0018 - 0.0031	0.0045	N/A	1.6 C	N/A	N/A	NO	BSL
319-85-7	beta-BHC	0.00061	J	0.00061	J	mg/Kg	SBL3B-03	1 / 10	0.0018 - 0.0049	0.00061	N/A	0.32 C	N/A	N/A	NO	BSL
1031-07-8	Endosulfan sulfate	0.00014	J	0.0017	J	mg/Kg	SBL3B-01	2 / 10	0.0036 - 0.0062	0.0017	N/A	37 N	N/A	N/A	NO	BSL
7421-38-3	Endrin aldehyde	0.00087	J	0.0018	J	mg/Kg	SBL3B-01	2 / 10	0.0036 - 0.0062	0.0018	N/A	1.8 N	N/A	N/A	NO	BSL
58-89-9	gamma-BHC(Lindane)	0.00036	J	0.00036	J	mg/Kg	SBL3B-03	1 / 10	0.0018 - 0.0049	0.00036	N/A	0.44 C	N/A	N/A	NO	BSL
5103-74-2	gamma-Chlordane	0.000076	J	0.0038	J	mg/Kg	SBL3B-01	6 / 10	0.002 - 0.0032	0.0038	N/A	1.6 C	N/A	N/A	NO	BSL
76-44-8	Heptachlor	0.00049	J	0.003	J	mg/Kg	SBL3A-01	2 / 10	0.0018 - 0.0048	0.003	N/A	0.11 C	N/A	N/A	NO	BSL
72-43-5	Methoxychlor	0.00034	J	0.023	J	mg/Kg	SBL3B-02	4 / 10	0.019 - 0.048	0.023	N/A	31 N	N/A	N/A	NO	BSL
1746-01-6	Dioxin TEQ	5.7E-08		2.6E-03		mg/Kg	LAG-3A-400-R300	18 / 18	-	2.6E-03	N/A	3.9E-06 C	N/A	N/A	YES	ASL
7429-90-5	Aluminum	3950		26500		mg/Kg	LAG-3A-350-R300	12 / 12	-	26500	N/A	N/A	N/A	N/A	NO	NTX
7440-36-0	Antimony	1.3	J	36	J	mg/Kg	LAG-3A-350-R250	3 / 12	0.83 - 6	36	N/A	3.1 N	N/A	N/A	YES	ASL
7440-38-2	Arsenic	2.2	J	9.4	J	mg/Kg	SBL3B-01	10 / 10	-	9.4	N/A	0.39 C	N/A	N/A	YES	ASL
7440-39-3	Barium	27.8	J	196	J	mg/Kg	SBL3A-03	12 / 12	-	196	N/A	540 N	N/A	N/A	NO	BSL
7440-41-7	Beryllium	0.27		0.8	J	mg/Kg	SBL3B-02	7 / 12	0.26 - 0.67	0.8	N/A	15 N	N/A	N/A	NO	BSL
7440-43-9	Cadmium	5.3		51		mg/Kg	LAG-3A-350-R250	5 / 12	0.21 - 0.39	51	N/A	3.7 N	N/A	N/A	YES	ASL
7440-70-2	Calcium	1380		202000		mg/Kg	LAG-3A-350-R250	12 / 12	-	202000	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	23.3		18100		mg/Kg	SBL3A-03	12 / 12	-	18100	N/A	30 C	N/A	N/A	YES	ASL
7440-48-4	Cobalt	6	J	15.7	J	mg/Kg	SBL3B-02	12 / 12	-	15.7	N/A	N/A	N/A	N/A	NO	NTX
7440-50-8	Copper	17.6	J	68.9	J	mg/Kg	SBL3A-01	12 / 12	-	68.9	N/A	N/A	N/A	N/A	NO	NTX
57-12-5	Cyanide	0.07	J	0.37	J	mg/Kg	SBL3A-01	5 / 10	0.05 - 0.61	0.37	N/A	1.1 N	N/A	N/A	NO	BSL
7439-89-6	Iron	2880		32400		mg/Kg	SBL3B-02	12 / 12	-	32400	N/A	N/A	N/A	N/A	NO	NTX
7439-92-1	Lead	8.7	J	767	J	mg/Kg	LAG-3A-350-R250	12 / 12	-	767	N/A	400 N	N/A	N/A	YES	ASL
7439-95-4	Magnesium	1690		9250		mg/Kg	SBL3B-01	12 / 12	-	9250	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	404	J	3780	J	mg/Kg	LAG-3A-350-R250	12 / 12	-	3780	N/A	180 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.11		15.7		mg/Kg	SBL3A-01	12 / 12	-	15.7	N/A	0.61 N	N/A	N/A	YES	ASL
7440-02-0	Nickel	6.8		30.4		mg/Kg	SBL3B-02	12 / 12	-	30.4	N/A	160 N	N/A	N/A	NO	BSL
7440-09-7	Potassium	174		1850		mg/Kg	SBL3B-01	11 / 12	162 - 162	1850	N/A	N/A	N/A	N/A	NO	NUT
7782-49-2	Selenium	0.9	J	0.94	J	mg/Kg	SBL3B-01	2 / 12	0.52 - 1.2	0.94	N/A	39 N	N/A	N/A	NO	BSL
7440-22-4	Silver	0.49	J	3.8	J	mg/Kg	SBL3A-01	5 / 12	0.42 - 0.95	3.8	N/A	39 N	N/A	N/A	NO	BSL
7440-23-5	Sodium	258	J	4110	J	mg/Kg	LAG-3A-350-R250	10 / 12	135 - 174	4110	N/A	N/A	N/A	N/A	NO	NUT
7440-28-0	Thallium	3.8	J	4.3	J	mg/Kg	LAG-3A-350-R250	2 / 12	0.83 - 1.2	4.3	N/A	0.52 N	N/A	N/A	YES	ASL

TABLE 2.6
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
POWNAI TANNERY

Scenario Timeframe: Future Medium: Soils Exposure Medium: Soil/Sludge Exposure Point: Lagoon 3*
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CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
7440-62-2	Vanadium	8.1	J	20.3		mg/Kg	SBL3A-01	11 / 12	1.1 - 1.1	20.3	N/A	55 N	N/A	N/A	NO	BSL
7440-66-6	Zinc	55.7	J	229	J	mg/Kg	LAG-3A-350-R250	12 / 12	-	229	N/A	2300 N	N/A	N/A	NO	BSL

* Data presented are from samples SBL3A-01(0-0.5), SBL3A-01(6-8), SBL3A-02(0-0.5), SBL3A-02(6-9), SBL3A-03(0-0.5), SBL3A-03(5-7), SBL3AB-01(0-0.5), SBL3B-01(0-0.5), SBL3B-01(7-10), SBL3B-02(0-0.5), SBL3B-02(8-10), SBL3B-03(0-0.5), SBL3B-03(14-16:dioxins only), LAG-3A-350-R250(2), LAG-3A-350-R250(8), LAG-3A-350-R300(8), LAG-3A-400-R200(8), LAG-3A-400-R300(2), LAG-3A-400-R300(8), LAG-3B-250-R50(1), LAG-3B-250-R50(8), LAG-3B-300-R50(8), LAG-3B-300-R250(1), and LAG-3B-350-R100(1).

- (1) Minimum/maximum detected concentration.
 (2) Refer to supporting information for background discussion.
 (3) USEPA Region 9 PRGs for residential soil (adjusted to a hazard quotient = 0.1 for noncarcinogens), November 1, 2000.
 The most conservative PRG for all noncarcinogenic PAHs has been used for 2-methylnaphthalene, benzo(g,h,i)perylene and phenanthrene.
 PRG for endosulfan has been used for endosulfan sulfate.
 PRG for endrin has been used for endrin aldehyde.
 PRG for chromium VI used for chromium.
 PRG for mercury and compounds used for mercury.
 PRG for chlordane has been used for alpha-chlordane and gamma-chlordane.
 The screening toxicity value for lead is the residential soil lead guidance level of 400 mg/Kg (USEPA, 1994a).

Definitions:
 COPC = Chemical of Potential Concern
 ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
 PRG = Preliminary Remedial Goal
 N/A = Not Applicable or Not Available
 J = Estimated Value
 C = Carcinogenic
 N = Non-Carcinogenic

- (4) Rationale Codes Selection Reason:
 Deletion Reason:
 Above Screening Levels (ASL)
 No Toxicity Information (NTX)
 Essential Nutrient (NUT)
 Below Screening Level (BSL)

TABLE 2.7
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Current
Medium: Soils
Exposure Medium: Surface Soil/Sludge
Exposure Point: Lagoon 4*

CAS Number	Chemical	(1)		(1)		Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	(2)		(3)		COPC Flag	Rationale for Contaminant Deletion or Selection (4)
		Minimum Concentration	Minimum Qualifier	Maximum Concentration	Maximum Qualifier						Background Value	Screening Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source		
78-93-3	2-Butanone	0.003	J	0.051	J	mg/Kg	SDOL-4C	19 / 30	0.005 - 0.032	0.051	N/A	730 N	N/A	N/A	NO	BSL
67-64-1	Acetone	0.007	J	0.18	J	mg/Kg	SBL4-04	18 / 30	0.007 - 0.12	0.18	N/A	160 N	N/A	N/A	NO	BSL
71-43-2	Benzene	0.001	J	0.001	J	mg/Kg	SBL4-27	1 / 28	0.005 - 0.007	0.001	N/A	0.65 C	N/A	N/A	NO	BSL
75-15-0	Carbon disulfide	0.004	J	0.017	J	mg/Kg	TP-504	6 / 29	0.005 - 0.007	0.017	N/A	36 N	N/A	N/A	NO	BSL
67-66-3	Chloroform	0.001	J	0.001	J	mg/Kg	TP-504	3 / 28	0.005 - 0.007	0.001	N/A	0.24 C	N/A	N/A	NO	BSL
79-20-9	Methyl Acetate	0.004	J	0.015	J	mg/Kg	TP-505	5 / 28	0.005 - 0.007	0.015	N/A	2200 N	N/A	N/A	NO	BSL
75-09-2	Methylene chloride	0.004	J	0.014	J	mg/Kg	SBL4-17	3 / 28	0.005 - 0.007	0.014	N/A	8.9 C	N/A	N/A	NO	BSL
108-88-3	Toluene	0.001	J	0.006	J	mg/Kg	SBL4-04	8 / 28	0.005 - 0.007	0.006	N/A	52 N	N/A	N/A	NO	BSL
1330-20-7	Xylene (total)	0.001	J	0.002	J	mg/Kg	TP-503	3 / 29	0.005 - 0.007	0.002	N/A	21 N	N/A	N/A	NO	BSL
91-57-6	2-Methylnaphthalene	0.075	J	0.075	J	mg/Kg	SBL4-07	1 / 31	0.13 - 3	0.075	N/A	5.6 N	N/A	N/A	NO	BSL
83-32-9	Acenaphthene	0.056	J	0.13	J	mg/Kg	SBL4-07	2 / 31	0.13 - 3	0.13	N/A	370 N	N/A	N/A	NO	BSL
208-96-8	Acenaphthylene	0.26	J	0.26	J	mg/Kg	SBL4-15	1 / 31	0.13 - 3	0.26	N/A	5.6 N	N/A	N/A	NO	BSL
120-12-7	Anthracene	0.074	J	0.69	J	mg/Kg	SBL4-15	5 / 31	0.13 - 3	0.69	N/A	2200 N	N/A	N/A	NO	BSL
100-52-7	Benzaldehyde	0.73	J	0.73	J	mg/Kg	SBL4-14	1 / 31	0.13 - 3	0.73	N/A	610 N	N/A	N/A	NO	BSL
56-55-3	Benzo(a)anthracene	0.058	J	3.4	J	mg/Kg	SBL4-15	11 / 31	0.13 - 3	3.4	N/A	0.62 C	N/A	N/A	YES	ASL
50-32-8	Benzo(a)pyrene	0.047	J	3.2	J	mg/Kg	SBL4-15	11 / 31	0.13 - 3	3.2	N/A	0.62 C	N/A	N/A	YES	ASL
205-99-2	Benzo(b)fluoranthene	0.05	J	2.4	J	mg/Kg	SBL4-15	11 / 31	0.13 - 3	2.4	N/A	0.62 C	N/A	N/A	YES	ASL
191-24-2	Benzo(g,h,i)perylene	0.052	J	1.7	J	mg/Kg	SBL4-15	9 / 31	0.13 - 3	1.7	N/A	5.6 N	N/A	N/A	NO	BSL
207-08-9	Benzo(k)fluoranthene	0.057	J	2.8	J	mg/Kg	SBL4-15	10 / 31	0.13 - 3	2.8	N/A	6.2 C	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.046	J	1.6	J	mg/Kg	SBL4-10	16 / 31	0.13 - 3	1.6	N/A	35 C	N/A	N/A	NO	BSL
86-74-8	Carbazole	0.046	J	0.14	J	mg/Kg	SBL4-07	3 / 31	0.13 - 3	0.14	N/A	24 C	N/A	N/A	NO	BSL
218-01-9	Chrysene	0.074	J	3.5	J	mg/Kg	SBL4-15	11 / 31	0.13 - 3	3.5	N/A	62 C	N/A	N/A	NO	BSL
84-74-2	Di-n-butylphthalate	0.044	J	0.091	J	mg/Kg	SBL4-22	14 / 31	0.13 - 3	0.091	N/A	610 N	N/A	N/A	NO	BSL
53-70-3	Dibenz(a,h)anthracene	0.071	J	0.62	J	mg/Kg	SBL4-15	4 / 31	0.13 - 3	0.62	N/A	0.62 C	N/A	N/A	YES	ASL
132-84-9	Dibenzofuran	0.092	J	0.092	J	mg/Kg	SBL4-07	1 / 31	0.13 - 3	0.092	N/A	29 N	N/A	N/A	NO	BSL
84-66-2	Diethylphthalate	0.089	J	0.089	J	mg/Kg	SBL4-22	1 / 31	0.13 - 3	0.089	N/A	4900 N	N/A	N/A	NO	BSL
206-44-0	Fluoranthene	0.048	J	6.6	J	mg/Kg	SBL4-15	12 / 31	0.13 - 3	6.6	N/A	230 N	N/A	N/A	NO	BSL
86-73-7	Fluorene	0.08	J	0.15	J	mg/Kg	SBL4-07	2 / 31	0.13 - 3	0.15	N/A	260 N	N/A	N/A	NO	BSL
193-39-5	Indeno(1,2,3-cd)pyrene	0.048	J	1.7	J	mg/Kg	SBL4-15	10 / 31	0.13 - 3	1.7	N/A	0.62 C	N/A	N/A	YES	ASL
91-20-3	Naphthalene	0.049	J	0.12	J	mg/Kg	SBL4-07	3 / 31	0.13 - 3	0.12	N/A	5.6 N	N/A	N/A	NO	BSL
85-01-8	Phenanthrene	0.055	J	2.8	J	mg/Kg	SBL4-15	9 / 31	0.13 - 3	2.8	N/A	5.6 N	N/A	N/A	NO	BSL
129-00-0	Pyrene	0.047	J	6.5	J	mg/Kg	SBL4-15	12 / 31	0.13 - 3	6.5	N/A	230 N	N/A	N/A	NO	BSL

TABLE 2.7
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 POWNAL TANNERY

Scenario Timeframe: Current
 Medium: Soils
 Exposure Medium: Surface Soil/Sludge
 Exposure Point: Lagoon 4*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
72-54-8	4,4'-DDD	0.00035	J	0.00058	J	mg/Kg	TP-504	2 / 30	0.0033 - 0.0059	0.00058	N/A	2.4 C	N/A	N/A	NO	BSL
72-55-9	4,4'-DDE	0.00041	J	0.0017	J	mg/Kg	TP-503	3 / 30	0.0033 - 0.0059	0.0017	N/A	1.7 C	N/A	N/A	NO	BSL
50-29-3	4,4'-DDT	0.00011	J	0.00069	J	mg/Kg	TP-503	5 / 30	0.0033 - 0.0059	0.00069	N/A	1.7 C	N/A	N/A	NO	BSL
309-00-2	Aldrin	0.00021	J	0.00061	J	mg/Kg	TP-504	2 / 30	0.0016 - 0.0031	0.00061	N/A	0.029 C	N/A	N/A	NO	BSL
319-84-6	alpha-BHC	0.00054	J	0.00054	J	mg/Kg	TP-504	1 / 30	0.0016 - 0.0031	0.00054	N/A	0.09 C	N/A	N/A	NO	BSL
5103-71-9	alpha-Chlordane	0.00038	J	0.0058	J	mg/Kg	SBL4-14	3 / 30	0.0016 - 0.0027	0.0058	N/A	1.8 C	N/A	N/A	NO	BSL
319-85-7	beta-BHC	0.0018	J	0.0018	J	mg/Kg	SBL4-01	1 / 30	0.0016 - 0.0031	0.0018	N/A	0.32 C	N/A	N/A	NO	BSL
319-86-8	delta-BHC	0.00026	J	0.00072	J	mg/Kg	TP-503	3 / 30	0.0016 - 0.0031	0.00072	N/A	0.09 C	N/A	N/A	NO	BSL
60-57-1	Dieldrin	0.00024	J	0.0015	J	mg/Kg	TP-503	4 / 30	0.0033 - 0.0059	0.0015	N/A	0.03 C	N/A	N/A	NO	BSL
959-98-8	Endosulfan I	0.00024	J	0.00024	J	mg/Kg	SBL4-01	1 / 30	0.0016 - 0.0031	0.00024	N/A	37 N	N/A	N/A	NO	BSL
33213-65-9	Endosulfan II	0.00036	J	0.00036	J	mg/Kg	TP-503	1 / 27	0.0033 - 0.0059	0.00036	N/A	37 N	N/A	N/A	NO	BSL
72-20-8	Endrin	0.00044	J	0.00068	J	mg/Kg	SBL4-04	2 / 30	0.0033 - 0.0059	0.00068	N/A	1.8 N	N/A	N/A	NO	BSL
7421-36-3	Endrin aldehyde	0.00034	J	0.00085	J	mg/Kg	TP-503	5 / 30	0.0033 - 0.0059	0.00085	N/A	1.8 N	N/A	N/A	NO	BSL
53494-70-5	Endrin ketone	0.00013	J	0.0024	J	mg/Kg	TP-503	5 / 30	0.0033 - 0.0059	0.0024	N/A	1.9 N	N/A	N/A	NO	BSL
58-89-9	gamma-BHC(Lindane)	0.00034	J	0.00034	J	mg/Kg	TP-504	1 / 30	0.0016 - 0.0031	0.00034	N/A	0.44 C	N/A	N/A	NO	BSL
5103-74-2	gamma-Chlordane	0.0051		0.0052		mg/Kg	SBL4-14	2 / 30	0.0016 - 0.0027	0.0052	N/A	1.6 C	N/A	N/A	NO	BSL
76-44-8	Heptachlor	0.00045	J	0.00052	J	mg/Kg	SBL4-04	2 / 30	0.0016 - 0.0031	0.00052	N/A	0.11 C	N/A	N/A	NO	BSL
1024-57-3	Heptachlor epoxide	0.00028	J	0.0015	J	mg/Kg	SBL4-01	3 / 30	0.0016 - 0.0031	0.0015	N/A	0.053 C	N/A	N/A	NO	BSL
1746-01-6	Dioxin TEQ	3.7E-06	J	7.7E-04	J	mg/Kg	SBL4-14	12 / 12	-	7.7E-04	N/A	3.9E-06 C	N/A	N/A	YES	ASL
7429-90-5	Aluminum	5430		15100		mg/Kg	SBL4-14	31 / 31	-	15100	N/A	N/A	N/A	N/A	NO	NTX
7440-36-0	Antimony	0.14	J	1.1	J	mg/Kg	SBL4-01	6 / 31	0.46 - 1.1	1.1	N/A	3.1 N	N/A	N/A	NO	BSL
7440-38-2	Arsenic	0.85	J	6.5		mg/Kg	SBL4-21	30 / 31	1.1 - 1.1	6.5	N/A	0.39 C	N/A	N/A	YES	ASL
7440-39-3	Barium	24.5	J	128		mg/Kg	SBL4-14	31 / 31	-	128	N/A	540 N	N/A	N/A	NO	BSL
7440-41-7	Beryllium	0.1	J	0.4	J	mg/Kg	SBL4-24	30 / 31	0.26 - 0.26	0.4	N/A	15 N	N/A	N/A	NO	BSL
7440-43-9	Cadmium	0.2	J	38.2		mg/Kg	SBL4-14	21 / 31	0.045 - 0.26	38.2	N/A	3.7 N	N/A	N/A	YES	ASL
7440-70-2	Calcium	865	J	122000		mg/Kg	SBL4-14	31 / 31	-	122000	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	9.3		11500	J	mg/Kg	SBL4-14	31 / 31	-	11500	N/A	30 C	N/A	N/A	YES	ASL
7440-48-4	Cobalt	5.4	J	13.8		mg/Kg	SBL4-21	31 / 31	-	13.8	N/A	N/A	N/A	N/A	NO	NTX
7440-50-8	Copper	11.8		67		mg/Kg	SBL4-21	31 / 31	-	67	N/A	N/A	N/A	N/A	NO	NTX
57-12-5	Cyanide	0.064	J	0.65	J	mg/Kg	SBL4-08	24 / 31	0.053 - 0.33	0.65	N/A	1.1 N	N/A	N/A	NO	BSL
7439-89-6	Iron	12800		28500		mg/Kg	SBL4-24	31 / 31	-	28500	N/A	N/A	N/A	N/A	NO	NTX
7439-92-1	Lead	6.9	J	471		mg/Kg	SBL4-14	31 / 31	-	471	N/A	400 N	N/A	N/A	YES	ASL
7439-95-4	Magnesium	2040		6470		mg/Kg	SBL4-21	31 / 31	-	6470	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	166		2440		mg/Kg	SBL4-14	31 / 31	-	2440	N/A	180 N	N/A	N/A	YES	ASL

TABLE 2.7
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Current
Medium: Soils
Exposure Medium: Surface Soil/Sludge
Exposure Point: Lagoon 4*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
7439-97-6	Mercury	0.054	J	9.3		mg/Kg	SBL4-14	24 / 31	0.046 - 0.54	9.3	N/A	0.61 N	N/A	N/A	YES	ASL
7440-02-0	Nickel	10.2		27		mg/Kg	SBL4-21	31 / 31	-	27	N/A	180 N	N/A	N/A	NO	BSL
7440-09-7	Potassium	343		1220	J	mg/Kg	SBL4-21	31 / 31	-	1220	N/A	N/A	N/A	N/A	NO	NUT
7782-49-2	Selenium	0.23	J	1.9		mg/Kg	SBL4-14	21 / 31	0.53 - 1.1	1.9	N/A	39 N	N/A	N/A	NO	BSL
7440-22-4	Silver	0.076	J	0.44	J	mg/Kg	SBL4-15	4 / 31	0.088 - 0.53	0.44	N/A	39 N	N/A	N/A	NO	BSL
7440-23-5	Sodium	32	J	701	J	mg/Kg	SBL4-14	31 / 31	-	701	N/A	N/A	N/A	N/A	NO	NUT
7440-28-0	Thallium	0.1	J	16.2		mg/Kg	TP-505	23 / 31	0.66 - 1	16.2	N/A	0.52 N	N/A	N/A	YES	ASL
7440-62-2	Vanadium	8	J	16.9		mg/Kg	SBL4-14	31 / 31	-	16.9	N/A	55 N	N/A	N/A	NO	BSL
7440-66-6	Zinc	41.2		144		mg/Kg	SBL4-14	31 / 31	-	144	N/A	2300 N	N/A	N/A	NO	BSL

* Data presented are from samples SBL4-01(0-0.5), SBL4-04(0-0.5) and its duplicate, SBL4-05(0-0.5), SBL4-05(0-0.6), SBL4-07(0-2), SBL4-08(0-0.5), SBL4-08(0-0.6), SBL4-09(0-0.5), SBL4-10(0-0.5), SBL4-11(0-0.5) and its duplicate, SBL4-12(0-0.5), SBL4-13(0-2), SBL4-14(0-0.5), SBL4-15(0-0.5), SBL4-16(0-0.5), SBL4-16(0-2), SBL4-17(0-0.5), SBL4-18(0-0.5), SBL4-19(0-0.5) and its duplicate, SBL4-20(0-2), SBL4-21(0-0.5), SBL4-22(0-1), SBL4-23(0-2), SBL4-24(0-0.5), SBL4-24(0-2), SBL4-25(0-2), SBL4-26(0-0.5), SBL4-26(0-2), SBL4-27(0-2), SBL4-28(0-0.5), SDOL-4B, SDOL-4C, TP-503(0-1), TP-504(0-1), TP-505(0-1), and TP-506(0-1).

(1) Minimum/maximum detected concentration.

(2) Refer to supporting information for background discussion.

(3) USEPA Region 9 PRGs for residential soil (adjusted to a hazard quotient = 0.1 for noncarcinogens), November 1, 2000.

The most conservative PRG for all noncarcinogenic PAHs has been used for 2-methylnaphthalene, acenaphthylene, benzo(g,h,i)perylene and phenanthrene.

The most conservative PRG for all BHCs has been used for delta-BHC.

PRG for endosulfan has been used for endosulfan I and endosulfan II.

PRG for endrin has been used for endrin aldehyde and endrin ketone.

PRG for chromium VI used for chromium.

PRG for mercury and compounds used for mercury.

PRG for chlordane has been used for alpha-chlordane and gamma-chlordane.

The screening toxicity value for lead is the residential soil lead guidance level of 400 mg/Kg (USEPA, 1994a).

(4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions:

COPC = Chemical of Potential Concern

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

PRG = Preliminary Remedial Goal

N/A = Not Applicable or Not Available

J = Estimated Value

C = Carcinogenic

N = Non-Carcinogenic

TABLE 2.8
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 POWNAL TANNERY

Scenario Timeframe: Future
 Medium: Soils
 Exposure Medium: Soil/Sludge
 Exposure Point: Lagoon 4*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
95-50-1	1,2-Dichlorobenzene	0.002	J	0.003	J	mg/Kg	SBL4-08	2 / 51	0.005 - 0.007	0.003	N/A	37 N	N/A	N/A	NO	BSL
78-93-3	2-Butanone	0.003	J	0.051	J	mg/Kg	SDOL-4C	31 / 56	0.005 - 1	0.051	N/A	730 N	N/A	N/A	NO	BSL
67-64-1	Acetone	0.007	J	0.18	J	mg/Kg	SBL4-04	32 / 58	0.007 - 1.6	0.18	N/A	160 N	N/A	N/A	NO	BSL
71-43-2	Benzene	0.001	J	0.001	J	mg/Kg	SBL4-27	1 / 52	0.005 - 0.012	0.001	N/A	0.65 C	N/A	N/A	NO	BSL
75-15-0	Carbon disulfide	0.003	J	0.39	J	mg/Kg	SBL4-21	10 / 55	0.005 - 0.012	0.39	N/A	36 N	N/A	N/A	NO	BSL
67-66-3	Chloroform	0.001	J	0.001	J	mg/Kg	TP-503	7 / 52	0.005 - 0.012	0.001	N/A	0.24 C	N/A	N/A	NO	BSL
100-41-4	Ethylbenzene	0.8	J	0.8	J	mg/Kg	SBL4-21	1 / 53	0.005 - 0.012	0.8	N/A	23 N	N/A	N/A	NO	BSL
98-82-8	Isopropylbenzene	0.84	J	0.84	J	mg/Kg	SBL4-21	1 / 52	0.005 - 0.007	0.84	N/A	16 N	N/A	N/A	NO	BSL
79-20-9	Methyl Acetate	0.004	J	1	J	mg/Kg	SBL4-21	10 / 52	0.005 - 0.007	1	N/A	2200 N	N/A	N/A	NO	BSL
108-87-2	Methylcyclohexane	0.25	J	0.25	J	mg/Kg	SBL4-21	1 / 52	0.005 - 0.007	0.25	N/A	260 N	N/A	N/A	NO	BSL
75-09-2	Methylene chloride	0.004	J	0.014	J	mg/Kg	SBL4-17	4 / 52	0.005 - 0.012	0.014	N/A	8.9 C	N/A	N/A	NO	BSL
108-88-3	Toluene	0.001	J	0.85	J	mg/Kg	SBL4-21	11 / 53	0.005 - 0.012	0.85	N/A	52 N	N/A	N/A	NO	BSL
1330-20-7	Xylene (total)	0.001	J	7.3	J	mg/Kg	SBL4-21	4 / 54	0.005 - 0.012	7.3	N/A	21 N	N/A	N/A	NO	BSL
95-95-4	2,4,5-Trichlorophenol	1.2	J	1.2	J	mg/Kg	SBL4-16	1 / 58	0.32 - 7.5	1.2	N/A	610 N	N/A	N/A	NO	BSL
91-57-6	2-Methylnaphthalene	0.05	J	3.8	J	mg/Kg	SBL4-21	4 / 58	0.13 - 3	3.6	N/A	5.6 N	N/A	N/A	NO	BSL
106-44-5	4-Methylphenol	5.8	J	5.6	J	mg/Kg	SBL4-21	1 / 58	0.13 - 3	5.6	N/A	31 N	N/A	N/A	NO	BSL
83-32-9	Acenaphthene	0.056	J	0.16	J	mg/Kg	TP-503	3 / 58	0.13 - 8.7	0.16	N/A	370 N	N/A	N/A	NO	BSL
208-96-8	Acenaphthylene	0.051	J	0.26	J	mg/Kg	SBL4-15	2 / 58	0.13 - 8.7	0.26	N/A	5.8 N	N/A	N/A	NO	BSL
120-12-7	Anthracene	0.06	J	0.69	J	mg/Kg	SBL4-15	7 / 58	0.13 - 8.7	0.69	N/A	2200 N	N/A	N/A	NO	BSL
100-52-7	Benzaldehyde	0.52	J	0.73	J	mg/Kg	SBL4-14	2 / 57	0.13 - 8.7	0.73	N/A	610 N	N/A	N/A	NO	BSL
56-55-3	Benzo(a)anthracene	0.058	J	3.4	J	mg/Kg	SBL4-15	13 / 58	0.13 - 8.7	3.4	N/A	0.62 C	N/A	N/A	YES	ASL
50-32-8	Benzo(a)pyrene	0.047	J	3.2	J	mg/Kg	SBL4-15	13 / 58	0.13 - 8.7	3.2	N/A	0.062 C	N/A	N/A	YES	ASL
205-99-2	Benzo(b)fluoranthene	0.05	J	2.4	J	mg/Kg	SBL4-15	13 / 58	0.13 - 8.7	2.4	N/A	0.62 C	N/A	N/A	YES	ASL
191-24-2	Benzo(g,h,i)perylene	0.052	J	1.7	J	mg/Kg	SBL4-15	11 / 58	0.13 - 8.7	1.7	N/A	5.6 N	N/A	N/A	NO	BSL
207-08-9	Benzo(k)fluoranthene	0.057	J	2.8	J	mg/Kg	SBL4-15	12 / 58	0.13 - 8.7	2.8	N/A	6.2 C	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.046	J	1.8	J	mg/Kg	SBL4-10	31 / 58	0.13 - 8.7	1.8	N/A	35 C	N/A	N/A	NO	BSL
86-74-6	Carbazole	0.046	J	0.25	J	mg/Kg	TP-503	4 / 58	0.13 - 8.7	0.25	N/A	24 C	N/A	N/A	NO	BSL
218-01-9	Chrysene	0.074	J	3.5	J	mg/Kg	SBL4-15	13 / 58	0.13 - 8.7	3.5	N/A	62 C	N/A	N/A	NO	BSL
84-74-2	Di-n-butylphthalate	0.042	J	0.091	J	mg/Kg	SBL4-22	29 / 58	0.13 - 8.7	0.091	N/A	610 N	N/A	N/A	NO	BSL
53-70-3	Dibenz(a,h)anthracene	0.071	J	0.62	J	mg/Kg	SBL4-15	5 / 58	0.13 - 8.7	0.62	N/A	0.062 C	N/A	N/A	YES	ASL
132-64-9	Dibenzofuran	0.092	J	0.11	J	mg/Kg	TP-503	2 / 58	0.13 - 8.7	0.11	N/A	29 N	N/A	N/A	NO	BSL
84-66-2	Diethylphthalate	0.089	J	0.089	J	mg/Kg	SBL4-22	1 / 58	0.13 - 8.7	0.089	N/A	4900 N	N/A	N/A	NO	BSL
206-44-0	Fluoranthene	0.048	J	6.6	J	mg/Kg	SBL4-15	14 / 58	0.13 - 8.7	6.6	N/A	230 N	N/A	N/A	NO	BSL
86-73-7	Fluorene	0.08	J	0.15	J	mg/Kg	SBL4-07	3 / 58	0.13 - 8.7	0.15	N/A	260 N	N/A	N/A	NO	BSL
193-39-5	Indeno(1,2,3-cd)pyrene	0.046	J	1.7	J	mg/Kg	SBL4-15	12 / 58	0.13 - 8.7	1.7	N/A	0.62 C	N/A	N/A	YES	ASL

TABLE 2.8
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 4*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
91-20-3	Naphthalene	0.046	J	11		mg/Kg	SBL4-21	7 / 58	0.13 - 3	11	N/A	5.6 N	N/A	N/A	YES	ASL
87-86-5	Pentachlorophenol	3.8	J	3.8	J	mg/Kg	SBL4-21	1 / 58	0.32 - 7.5	3.8	N/A	3 C	N/A	N/A	YES	ASL
85-01-8	Phenanthrene	0.055	J	2.8		mg/Kg	SBL4-15	11 / 58	0.13 - 8.7	2.8	N/A	5.6 N	N/A	N/A	NO	BSL
108-95-2	Phenol	3.5	J	3.5	J	mg/Kg	SBL4-21	1 / 58	0.13 - 3	3.5	N/A	3700 N	N/A	N/A	NO	BSL
129-00-0	Pyrene	0.047	J	6.5		mg/Kg	SBL4-15	14 / 58	0.13 - 8.7	6.5	N/A	230 N	N/A	N/A	NO	BSL
72-54-8	4,4'-DDD	0.00028	J	0.0063	J	mg/Kg	SBL4-29	5 / 57	0.0033 - 0.02	0.0063	N/A	2.4 C	N/A	N/A	NO	BSL
72-55-9	4,4'-DDE	0.00019	J	0.0096	J	mg/Kg	SBL4-29	7 / 57	0.0033 - 0.02	0.0096	N/A	1.7 C	N/A	N/A	NO	BSL
50-29-3	4,4'-DDT	0.00011	J	0.006	J	mg/Kg	SBL4-29	8 / 57	0.0033 - 0.02	0.006	N/A	1.7 C	N/A	N/A	NO	BSL
309-00-2	Aldrin	0.00021	J	0.0026	J	mg/Kg	SBL4-29	4 / 57	0.0016 - 0.01	0.0026	N/A	0.029 C	N/A	N/A	NO	BSL
319-84-6	alpha-BHC	0.00054	J	0.0048	J	mg/Kg	SBL4-29	2 / 57	0.0016 - 0.01	0.0048	N/A	0.09 C	N/A	N/A	NO	BSL
5103-71-9	alpha-Chlordane	0.00038	J	0.013	J	mg/Kg	SBL4-29	5 / 57	0.0016 - 0.01	0.013	N/A	1.6 C	N/A	N/A	NO	BSL
319-85-7	beta-BHC	0.0018	J	0.015	J	mg/Kg	SBL4-29	2 / 57	0.0016 - 0.01	0.015	N/A	0.32 C	N/A	N/A	NO	BSL
319-86-8	delta-BHC	0.00028	J	0.0038	J	mg/Kg	SBL4-29	6 / 57	0.0016 - 0.01	0.0038	N/A	0.09 C	N/A	N/A	NO	BSL
60-57-1	Dieldrin	0.00024	J	0.0059	J	mg/Kg	SBL4-08	7 / 57	0.0033 - 0.02	0.0059	N/A	0.03 C	N/A	N/A	NO	BSL
959-98-8	Endosulfan I	0.00024	J	0.0032	J	mg/Kg	SBL4-29	2 / 57	0.0016 - 0.01	0.0032	N/A	37 N	N/A	N/A	NO	BSL
33213-65-9	Endosulfan II	0.00017	J	0.0034	J	mg/Kg	SBL4-29	4 / 52	0.0033 - 0.02	0.0034	N/A	37 N	N/A	N/A	NO	BSL
1031-07-8	Endosulfan sulfate	0.0053	J	0.0053	J	mg/Kg	SBL4-14	1 / 57	0.0033 - 0.02	0.0053	N/A	37 N	N/A	N/A	NO	BSL
72-20-8	Endrin	0.00044	J	0.00066	J	mg/Kg	SBL4-04	2 / 57	0.0033 - 0.02	0.00066	N/A	1.8 N	N/A	N/A	NO	BSL
7421-36-3	Endrin aldehyde	0.00034	J	0.017	J	mg/Kg	SBL4-29	8 / 57	0.0033 - 0.02	0.017	N/A	1.8 N	N/A	N/A	NO	BSL
53494-70-5	Endrin ketone	0.000072	J	0.014	J	mg/Kg	SBL4-29	10 / 57	0.0033 - 0.02	0.014	N/A	1.8 N	N/A	N/A	NO	BSL
58-89-9	gamma-BHC(Lindane)	0.00034	J	0.006	J	mg/Kg	SBL4-29	3 / 57	0.0016 - 0.01	0.006	N/A	0.44 C	N/A	N/A	NO	BSL
5103-74-2	gamma-Chlordane	0.00012	J	0.011	J	mg/Kg	SBL4-21	6 / 57	0.0016 - 0.01	0.011	N/A	1.6 C	N/A	N/A	NO	BSL
76-44-8	Heptachlor	0.00045	J	0.0025	J	mg/Kg	TP-504	3 / 57	0.0016 - 0.01	0.0025	N/A	0.11 C	N/A	N/A	NO	BSL
1024-57-3	Heptachlor epoxide	0.00028	J	0.0015	J	mg/Kg	SBL4-01	3 / 57	0.0016 - 0.01	0.0015	N/A	0.053 C	N/A	N/A	NO	BSL
1746-01-6	Dioxin TEQ	8.0E-09		7.7E-04	J	mg/Kg	SBL4-14	16 / 18	-	7.7E-04	N/A	3.9E-06 C	N/A	N/A	YES	ASL
7429-90-5	Aluminum	5430		15400		mg/Kg	SBL4-14	59 / 59	-	15400	N/A	N/A	N/A	N/A	NO	NTX
7440-36-0	Antimony	0.14	J	1.4	J	mg/Kg	TP-504	11 / 57	0.46 - 1.1	1.4	N/A	3.1 N	N/A	N/A	NO	BSL
7440-38-2	Arsenic	0.85	J	6.5		mg/Kg	SBL4-21	58 / 59	1.1 - 1.1	6.5	N/A	0.39 C	N/A	N/A	YES	ASL
7440-39-3	Barium	18.1	J	171	J	mg/Kg	SBL4-21	59 / 59	-	171	N/A	540 N	N/A	N/A	NO	BSL
7440-41-7	Beryllium	0.1	J	0.4	J	mg/Kg	SBL4-24	56 / 59	0.25 - 0.35	0.4	N/A	15 N	N/A	N/A	NO	BSL
7440-43-9	Cadmium	0.0475	J	44.5		mg/Kg	SBL4-21	35 / 59	0.045 - 0.26	44.5	N/A	3.7 N	N/A	N/A	YES	ASL
7440-70-2	Calcium	718	J	151000		mg/Kg	SBL4-21	59 / 59	-	151000	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	7.3		16600		mg/Kg	SBL4-21	59 / 59	-	16600	N/A	30 C	N/A	N/A	YES	ASL

TABLE 2.3
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 POWNAL TANNERY

Scenario Timeframe: Future
 Medium: Soils
 Exposure Medium: Soil/Sludge
 Exposure Point: Lagoon 4*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
7440-48-4	Cobalt	5.2	J	13.9		mg/Kg	TP-504	59 / 59	-	13.9	N/A	N/A	N/A	N/A	NO	NTX
7440-50-8	Copper	7	J	67		mg/Kg	SBL4-21	59 / 59	-	67	N/A	N/A	N/A	N/A	NO	NTX
57-12-5	Cyanide	0.059	J	0.65	J	mg/Kg	SBL4-08	40 / 57	0.053 - 0.33	0.65	N/A	1.1 N	N/A	N/A	NO	BSL
7439-89-6	Iron	11300	J	26500		mg/Kg	SBL4-24	59 / 59	-	26500	N/A	N/A	N/A	N/A	NO	NTX
7439-92-1	Lead	4.6		689		mg/Kg	SBL4-21	59 / 59	-	689	N/A	400 N	N/A	N/A	YES	ASL
7439-95-4	Magnesium	2040		6470		mg/Kg	SBL4-21	59 / 59	-	6470	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	166		2500	J	mg/Kg	SBL4-21	59 / 59	-	2500	N/A	160 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.053	J	10.4		mg/Kg	SBL4-21	36 / 59	0.044 - 0.54	10.4	N/A	0.61 N	N/A	N/A	YES	ASL
7440-02-0	Nickel	10.2	J	27		mg/Kg	SBL4-21	59 / 59	-	27	N/A	160 N	N/A	N/A	NO	BSL
7440-09-7	Potassium	285.5		1220	J	mg/Kg	SBL4-21	59 / 59	-	1220	N/A	N/A	N/A	N/A	NO	NUT
7782-49-2	Selenium	0.23	J	1.9		mg/Kg	SBL4-14	34 / 59	0.53 - 1.1	1.9	N/A	39 N	N/A	N/A	NO	BSL
7440-22-4	Silver	0.076	J	0.47	J	mg/Kg	LAG-04-800-R70	9 / 59	0.088 - 0.63	0.47	N/A	39 N	N/A	N/A	NO	BSL
7440-23-5	Sodium	32	J	2240		mg/Kg	SBL4-21	57 / 59	38 - 47.1	2240	N/A	N/A	N/A	N/A	NO	NUT
7440-28-0	Thallium	0.1	J	16.2		mg/Kg	TP-505	44 / 59	0.66 - 1.2	16.2	N/A	0.52 N	N/A	N/A	YES	ASL
7440-62-2	Vanadium	6.1		16.9		mg/Kg	SBL4-14	59 / 59	-	16.9	N/A	55 N	N/A	N/A	NO	BSL
7440-66-6	Zinc	41.2		144		mg/Kg	SBL4-14	59 / 59	-	144	N/A	2300 N	N/A	N/A	NO	BSL

* Data presented are from samples SBL4-01(0-0.5), SBL4-02(0.5-1), SBL4-04(0-0.5) and its duplicate, SBL4-05(0-0.5), SBL4-05(0-0.6), SBL4-05(2-4), SBL4-07(0-2), SBL4-07(6-8),

SBL4-08(0-0.5), SBL4-08(0-0.6), SBL4-08(2-4), SBL4-08(4-6), SBL4-09(0-0.5), SBL4-09(2-4), SBL4-10(0-0.5), SBL4-10(2-4), SBL4-11(0-0.5) and its duplicate, SBL4-11(2-4), SBL4-12(0-0.5), SBL4-12(2-3), SBL4-13(0-2), SBL4-13(4-6), SBL4-14(0-0.5), SBL4-14(2-4), SBL4-15(0-0.5), SBL4-15(8-10), SBL4-16(0-0.5), SBL4-16(0-2), SBL4-16(7-8), SBL4-17(0-0.5), SBL4-17(8-8), SBL4-18(0-0.5), SBL4-18(8-10), SBL4-19(0-0.5) and its duplicate, SBL4-19(2-4), SBL4-20(0-2), SBL4-21(0-0.5), SBL4-21(6-8), SBL4-22(0-1), SBL4-22(3-5), SBL4-23(0-2), SBL4-23(4-6), SBL4-24(0-0.5), SBL4-24(0-2), SBL4-24(4-6) and its duplicate, SBL4-25(0-2), SBL4-25(4-6), SBL4-26(0-0.5), SBL4-26(0-2), SBL4-28(4-6), SBL4-27(0-2), SBL4-27(3-4), SBL4-28(0-0.5), SBL4-29(5-7), SDOL-4B, SDOL-4C, TP-503(0-1), TP-503(6-7), TP-504(0-1), TP-504(5-6), TP-505(0-1), TP-505(5-6), TP-506(0-1), TP-506(5-6), LAG-04-550-R125(1), LAG-04-650-R100(8), LAG-04-800-R70(1), LAG-04-800-R380(1), LAG-04-800-R70(8) and its duplicate, LAG-04-800-R825(8) and its duplicate, and LAG-04-870-R825(1).

- (1) Minimum/maximum detected concentration.
- (2) Refer to supporting information for background discussion.
- (3) USEPA Region 9 PRGs for residential soil (adjusted to a hazard quotient = 0.1 for noncarcinogens), November 1, 2000.
 The most conservative PRG for all noncarcinogenic PAHs has been used for 2-methylnaphthalene, acenaphthylene, benzo(g,h,i)perylene and phenanthrene.
 The most conservative PRG for all BHCs has been used for delta-BHC.
 PRG for endosulfan has been used for endosulfan I, endosulfan II, and endosulfan sulfate.
 PRG for endrin has been used for endrin aldehyde and endrin ketone.
 PRG for chromium VI used for chromium.
 PRG for mercury and compounds used for mercury.
 PRG for chlordanes has been used for alpha-chlordane and gamma-chlordane.
 The screening toxicity value for lead is the residential soil lead guidance level of 400 mg/Kg (USEPA, 1994a).
- (4) Rationale Codes Selection Reason:
 Deletion Reason:

Definitions:
 COPC = Chemical of Potential Concern
 ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
 PRG = Preliminary Remedial Goal
 N/A = Not Applicable or Not Available
 J = Estimated Value
 C = Carcinogenic
 N = Non-Carcinogenic

TABLE 2.9
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Current
Medium: Soils
Exposure Medium: Surface Soil/Sludge
Exposure Point: Lagoon 5*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
95-50-1	1,2-Dichlorobenzene	0.011		0.011		mg/Kg	SBL5-01	1/4	0.006 - 0.012	0.011	N/A	37 N	N/A	N/A	NO	BSL
106-46-7	1,4-Dichlorobenzene	0.002	J	0.002	J	mg/Kg	SBL5-01	1/4	0.006 - 0.012	0.002	N/A	3.4 C	N/A	N/A	NO	BSL
78-93-3	2-Butanone	0.003	J	0.016		mg/Kg	TP-502	2/4	0.012 - 0.046	0.016	N/A	730 N	N/A	N/A	NO	BSL
67-64-1	Acetone	0.008		0.19	J	mg/Kg	SBL5-01	3/4	0.012 - 0.012	0.19	N/A	160 N	N/A	N/A	NO	BSL
67-66-3	Chloroform	0.001	J	0.001	J	mg/Kg	TP-502	2/4	0.007 - 0.012	0.001	N/A	0.24 C	N/A	N/A	NO	BSL
79-20-9	Methyl Acetate	0.003	J	0.06		mg/Kg	SBL5-01	3/4	0.012 - 0.012	0.06	N/A	2200 N	N/A	N/A	NO	BSL
108-88-3	Toluene	0.002	J	0.002	J	mg/Kg	SBL5-01	1/4	0.006 - 0.012	0.002	N/A	52 N	N/A	N/A	NO	BSL
1330-20-7	Xylene (total)	0.001	J	0.001	J	mg/Kg	SBL5-01	1/4	0.006 - 0.012	0.001	N/A	21 N	N/A	N/A	NO	BSL
120-12-7	Anthracene	0.022	J	0.022	J	mg/Kg	SBL5-01	1/4	0.38 - 1.8	0.022	N/A	2200 N	N/A	N/A	NO	BSL
56-55-3	Benzo(a)anthracene	0.068	J	0.068	J	mg/Kg	SBL5-01	1/4	0.38 - 1.8	0.068	N/A	0.62 C	N/A	N/A	NO	BSL
50-32-8	Benzo(a)pyrene	0.064	J	0.064	J	mg/Kg	SBL5-01	1/4	0.38 - 1.8	0.064	N/A	0.062 C	N/A	N/A	YES	ASL
205-99-2	Benzo(b)fluoranthene	0.072	J	0.072	J	mg/Kg	SBL5-01	1/4	0.38 - 1.8	0.072	N/A	0.62 C	N/A	N/A	NO	BSL
207-08-9	Benzo(k)fluoranthene	0.048	J	0.048	J	mg/Kg	SBL5-01	1/4	0.38 - 1.8	0.048	N/A	6.2 C	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.076	J	0.076	J	mg/Kg	SBL5-01	1/4	0.38 - 1.8	0.076	N/A	35 C	N/A	N/A	NO	BSL
218-01-9	Chrysene	0.067	J	0.067	J	mg/Kg	SBL5-01	1/4	0.38 - 1.8	0.067	N/A	62 C	N/A	N/A	NO	BSL
84-66-2	Diethylphthalate	0.13	J	0.13	J	mg/Kg	SBL5-01	1/4	0.38 - 1.8	0.13	N/A	4900 N	N/A	N/A	NO	BSL
206-44-0	Fluoranthene	0.11	J	0.11	J	mg/Kg	SBL5-01	1/4	0.38 - 1.8	0.11	N/A	230 N	N/A	N/A	NO	BSL
87-86-5	Pentachlorophenol	6.3		6.3		mg/Kg	SBL5-07	1/4	0.94 - 1.1	6.3	N/A	3 C	N/A	N/A	YES	ASL
85-01-8	Phenanthrene	0.085	J	0.085	J	mg/Kg	SBL5-01	1/4	0.38 - 1.8	0.085	N/A	5.8 N	N/A	N/A	NO	BSL
129-00-0	Pyrene	0.13	J	0	J	mg/Kg	SBL5-01	1/4	0.38 - 1.8	0.13	N/A	230 N	N/A	N/A	NO	BSL
72-54-8	4,4'-DDD	0.00043	J	0.011		mg/Kg	SBL5-07	2/4	0.0038 - 0.0039	0.011	N/A	2.4 C	N/A	N/A	NO	BSL
72-55-9	4,4'-DDE	0.000076	J	0.0023	J	mg/Kg	SBL5-07	3/4	0.0039 - 0.0039	0.0023	N/A	1.7 C	N/A	N/A	NO	BSL
50-29-3	4,4'-DDT	0.0013	J	0.0034	J	mg/Kg	SBL5-07	2/4	0.0038 - 0.0039	0.0034	N/A	1.7 C	N/A	N/A	NO	BSL
309-00-2	Aldrin	0.0003	J	0.0031	J	mg/Kg	SBL5-07	2/4	0.0019 - 0.002	0.0031	N/A	0.029 C	N/A	N/A	NO	BSL
5103-71-9	alpha-Chlordane	0.0011	J	0.011	J	mg/Kg	SBL5-07	2/4	0.0019 - 0.002	0.011	N/A	1.6 C	N/A	N/A	NO	BSL
319-85-7	beta-BHC	0.00043	J	0.015	J	mg/Kg	SBL5-07	3/4	0.0019 - 0.0019	0.015	N/A	0.32 C	N/A	N/A	NO	BSL
33213-65-9	Endosulfan II	0.00048	J	0.00048	J	mg/Kg	SBL5-01	1/2	0.0089 - 0.0089	0.00048	N/A	37 N	N/A	N/A	NO	BSL
1031-07-8	Endosulfan sulfate	0.00045	J	0.0085	J	mg/Kg	SBL5-07	2/4	0.0038 - 0.0039	0.0085	N/A	37 N	N/A	N/A	NO	BSL
72-20-8	Endrin	0.00042	J	0.0012	J	mg/Kg	SBL5-07	2/4	0.0038 - 0.0039	0.0012	N/A	1.8 N	N/A	N/A	NO	BSL
7421-36-3	Endrin aldehyde	0.001	J	0.001	J	mg/Kg	SBL5-07	1/4	0.0038 - 0.0044	0.001	N/A	1.8 N	N/A	N/A	NO	BSL
53494-70-5	Endrin ketone	0.00041	J	0.0012	J	mg/Kg	SBL5-07	2/4	0.0038 - 0.0039	0.0012	N/A	1.8 N	N/A	N/A	NO	BSL
5103-74-2	gamma-Chlordane	0.0082	J	0.0082	J	mg/Kg	SBL5-07	1/4	0.0019 - 0.0023	0.0082	N/A	1.6 C	N/A	N/A	NO	BSL
1024-57-3	Heptachlor epoxide	0.00029	J	0.00037	J	mg/Kg	SBL5-07	2/4	0.0019 - 0.002	0.00037	N/A	0.053 C	N/A	N/A	NO	BSL
1746-01-6	Dioxin TEQ	8.3E-05	J	2.3E-03	J	mg/Kg	SBL5-11	6/8		2.3E-03	N/A	3.9E-06 C	N/A	N/A	YES	ASL

TABLE 2.9
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Current
Medium: Soils
Exposure Medium: Surface Soil/Sludge
Exposure Point: Lagoon 5*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
7429-90-5	Aluminum	4150		23800		mg/Kg	SBL5-07	4 / 4	-	23800	N/A	N/A	N/A	N/A	NO	NTX
7440-38-0	Antimony	0.58	J	14.8		mg/Kg	SBL5-07	4 / 4	-	14.8	N/A	3.1 N	N/A	N/A	YES	ASL
7440-38-2	Arsenic	3.2		3.2		mg/Kg	TP-502	1 / 2	0.79 - 0.79	3.2	N/A	0.39 C	N/A	N/A	YES	ASL
7440-39-3	Barium	24.7		153		mg/Kg	SBL5-07	4 / 4	-	153	N/A	540 N	N/A	N/A	NO	BSL
7440-41-7	Beryllium	0.099	J	0.75	J	mg/Kg	SBL5-07	4 / 4	-	0.75	N/A	15 N	N/A	N/A	NO	BSL
7440-43-9	Cadmium	1.1	J	35.2	J	mg/Kg	SBL5-07	2 / 4	0.068 - 0.07	35.2	N/A	3.7 N	N/A	N/A	YES	ASL
7440-70-2	Calcium	662	J	141000		mg/Kg	SBL5-07	4 / 4	-	141000	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	9.4		16100		mg/Kg	SBL5-07	4 / 4	-	16100	N/A	30 C	N/A	N/A	YES	ASL
7440-48-4	Cobalt	5.3	J	10.2		mg/Kg	SBL5-07	4 / 4	-	10.2	N/A	N/A	N/A	N/A	NO	NTX
7440-50-8	Copper	8		61.4	J	mg/Kg	SBL5-07	4 / 4	-	61.4	N/A	N/A	N/A	N/A	NO	NTX
57-12-5	Cyanide	0.1	J	0.61	J	mg/Kg	SBL5-07	3 / 3	-	0.61	N/A	1.1 N	N/A	N/A	NO	BSL
7439-89-6	Iron	12100		20800		mg/Kg	TP-507	4 / 4	-	20800	N/A	N/A	N/A	N/A	NO	NTX
7439-92-1	Lead	7.8	J	624		mg/Kg	SBL5-07	4 / 4	-	624	N/A	400 N	N/A	N/A	YES	ASL
7439-95-4	Magnesium	2700		3470		mg/Kg	TP-502	4 / 4	-	3470	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	158		2830		mg/Kg	SBL5-07	4 / 4	-	2830	N/A	180 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.045	J	0.045	J	mg/Kg	TP-507	1 / 4	0.039 - 5	0.045	N/A	0.61 N	N/A	N/A	NO	BSL
7440-02-0	Nickel	10.8		17.1	J	mg/Kg	SBL5-07	4 / 4	-	17.1	N/A	160 N	N/A	N/A	NO	BSL
7440-09-7	Potassium	270		674	J	mg/Kg	SBL5-07	4 / 4	-	674	N/A	N/A	N/A	N/A	NO	NUT
7782-49-2	Selenium	1.7		1.7		mg/Kg	SBL5-07	1 / 4	0.58 - 1	1.7	N/A	39 N	N/A	N/A	NO	BSL
7440-22-4	Silver	1.2		1.6	J	mg/Kg	SBL5-07	2 / 4	0.091 - 0.093	1.6	N/A	39 N	N/A	N/A	NO	BSL
7440-23-5	Sodium	177	J	237	J	mg/Kg	TP-507	2 / 4	114 - 606	237	N/A	N/A	N/A	N/A	NO	NUT
7440-28-0	Thallium	16.1		17.2		mg/Kg	TP-507	2 / 4	0.98 - 1.6	17.2	N/A	0.52 N	N/A	N/A	YES	ASL
7440-62-2	Vanadium	5.3		34.8		mg/Kg	SBL5-07	4 / 4	-	34.8	N/A	55 N	N/A	N/A	NO	BSL
7440-66-6	Zinc	42		248	J	mg/Kg	SBL5-07	4 / 4	-	248	N/A	2300 N	N/A	N/A	NO	BSL

* Data presented are from samples SBL5-01(0-0.5), SBL5-07(0-0.5), SBL5-08(0-0.5) and its duplicate, SBL5-09(0-0.5), SBL5-10(0-0.5) and its duplicate, SBL5-11(0-0.5), TP-502(0-1), and TP-507(0-1).

(1) Minimum/maximum detected concentration.

(2) Refer to supporting information for background discussion.

(3) USEPA Region 9 PRGs for residential soil (adjusted to a hazard quotient = 0.1 for noncarcinogens), November 1, 2000.

The most conservative PRG for all noncarcinogenic PAHs has been used for phenanthrene.

PRG for endosulfan has been used for endosulfan II and endosulfan sulfate.

PRG for endrin has been used for endrin aldehyde and endrin ketone.

PRG for chromium VI used for chromium.

PRG for mercury and compounds used for mercury.

PRG for chlordane has been used for alpha-chlordane and gamma-chlordane.

The screening toxicity value for lead is the residential soil lead guidance level of 400 mg/Kg (USEPA, 1994a).

(4) Rationale Codes Selection Reason:

Deletion Reason:

Above Screening Levels (ASL)

No Toxicity Information (NTX)

Essential Nutrient (NUT)

Below Screening Level (BSL)

Definitions:

COPC = Chemical of Potential Concern

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

PRG = Preliminary Remedial Goal

N/A = Not Applicable or Not Available

J = Estimated Value

C = Carcinogenic

N = Non-Carcinogenic

TABLE 2.10
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 5*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
120-82-1	1,2,4-Trichlorobenzene	0.008	J	0.43	J	mg/Kg	SBL5-02	5 / 11	0.006 - 0.012	0.43	N/A	65 N	N/A	N/A	NO	BSL
95-50-1	1,2-Dichlorobenzene	0.0085	J	0.37	J	mg/Kg	SBL5-02	6 / 11	0.006 - 0.012	0.37	N/A	37 N	N/A	N/A	NO	BSL
541-73-1	1,3-Dichlorobenzene	0.002	J	0.002	J	mg/Kg	SBL5-03	1 / 11	0.006 - 0.46	0.002	N/A	1.3 N	N/A	N/A	NO	BSL
106-46-7	1,4-Dichlorobenzene	0.002	J	0.165	J	mg/Kg	SBL5-02	6 / 11	0.006 - 0.012	0.165	N/A	3.4 C	N/A	N/A	NO	BSL
78-93-3	2-Butanone	0.003	J	0.19	J	mg/Kg	LAG-05-450-L100	5 / 12	0.012 - 0.46	0.19	N/A	730 N	N/A	N/A	NO	BSL
67-64-1	Acetone	0.008	J	0.19	J	mg/Kg	SBL5-01	5 / 12	0.012 - 1.3	0.19	N/A	160 N	N/A	N/A	NO	BSL
75-15-0	Carbon disulfide	0.012	J	1.3	J	mg/Kg	SBL5-02	6 / 12	0.006 - 0.012	1.3	N/A	36 N	N/A	N/A	NO	BSL
67-66-3	Chloroform	0.001	J	0.001	J	mg/Kg	TP-502	4 / 12	0.006 - 0.46	0.001	N/A	0.24 C	N/A	N/A	NO	BSL
98-82-8	Isopropylbenzene	0.001	J	0.001	J	mg/Kg	SBL5-03	1 / 11	0.006 - 0.46	0.001	N/A	16 N	N/A	N/A	NO	BSL
79-20-9	Methyl Acetate	0.003	J	0.95	J	mg/Kg	SBL5-02	6 / 11	0.006 - 0.012	0.95	N/A	2200 N	N/A	N/A	NO	BSL
75-09-2	Methylene chloride	0.004	J	0.035	J	mg/Kg	LAG-05-450-L100	2 / 12	0.006 - 0.46	0.035	N/A	8.9 C	N/A	N/A	NO	BSL
127-18-4	Tetrachloroethylene	0.32	J	0.32	J	mg/Kg	SBL5-02	1 / 11	0.006 - 0.048	0.32	N/A	5.7 C	N/A	N/A	NO	BSL
108-88-3	Toluene	0.002	J	0.004	J	mg/Kg	SBL5-06	3 / 12	0.006 - 0.46	0.004	N/A	52 N	N/A	N/A	NO	BSL
1330-20-7	Xylene (total)	0.001	J	0.004	J	mg/Kg	SBL5-08	2 / 12	0.006 - 0.46	0.004	N/A	21 N	N/A	N/A	NO	BSL
108-60-1	2,2-oxybis(1-Chloropropane)	0.34	J	0.34	J	mg/Kg	SBL5-02	1 / 14	0.12 - 1.9	0.34	N/A	2.9 C	N/A	N/A	NO	BSL
120-83-2	2,4-Dichlorophenol	1.4	J	1.4	J	mg/Kg	SBL5-02	1 / 14	0.12 - 1.9	1.4	N/A	18 N	N/A	N/A	NO	BSL
105-67-9	2,4-Dimethylphenol	1.5	J	1.5	J	mg/Kg	SBL5-02	1 / 14	0.12 - 1.9	1.5	N/A	120 N	N/A	N/A	NO	BSL
88-74-4	2-Nitroaniline	0.19	J	0.19	J	mg/Kg	SBL5-02	1 / 14	0.3 - 4.8	0.19	N/A	0.35 N	N/A	N/A	NO	BSL
88-75-5	2-Nitrophenol	0.4	J	0.4	J	mg/Kg	SBL5-02	1 / 14	0.12 - 1.9	0.4	N/A	49 N	N/A	N/A	NO	BSL
59-50-7	4-Chloro-3-methylphenol	0.26	J	0.26	J	mg/Kg	SBL5-02	1 / 14	0.12 - 1.9	0.26	N/A	6.3 N	N/A	N/A	NO	BSL
106-47-8	4-Chloroaniline	0.94	J	0.94	J	mg/Kg	SBL5-02	1 / 10	0.12 - 1.8	0.94	N/A	24 N	N/A	N/A	NO	BSL
106-44-5	4-Methylphenol	0.071	J	0.071	J	mg/Kg	SBL5-08	1 / 14	0.12 - 3.5	0.071	N/A	31 N	N/A	N/A	NO	BSL
100-02-7	4-Nitrophenol	0.19	J	0.19	J	mg/Kg	SBL5-02	1 / 13	0.38 - 4.8	0.19	N/A	49 N	N/A	N/A	NO	BSL
120-12-7	Anthracene	0.022	J	0.022	J	mg/Kg	SBL5-01	1 / 14	0.12 - 3.5	0.022	N/A	2200 N	N/A	N/A	NO	BSL
100-52-7	Benzaldehyde	0.14	J	0.15	J	mg/Kg	SBL5-05	2 / 13	0.12 - 3.5	0.15	N/A	610 N	N/A	N/A	NO	BSL
56-55-3	Benzo(a)anthracene	0.068	J	0.34	J	mg/Kg	TP-502	4 / 14	0.12 - 1.8	0.34	N/A	0.62 C	N/A	N/A	NO	BSL
50-32-8	Benzo(a)pyrene	0.064	J	0.31	J	mg/Kg	TP-502	3 / 14	0.12 - 1.8	0.31	N/A	0.062 C	N/A	N/A	YES	ASL
205-99-2	Benzo(b)fluoranthene	0.07	J	0.072	J	mg/Kg	SBL5-01	2 / 14	0.12 - 3.5	0.072	N/A	0.62 C	N/A	N/A	NO	BSL
191-24-2	Benzo(g,h,i)perylene	0.24	J	0.24	J	mg/Kg	SBL5-04	1 / 14	0.12 - 3.5	0.24	N/A	5.6 N	N/A	N/A	NO	BSL
207-08-9	Benzo(k)fluoranthene	0.048	J	0.27	J	mg/Kg	SBL5-02	4 / 14	0.12 - 1.8	0.27	N/A	6.2 C	N/A	N/A	NO	BSL
111-91-1	bis(2-Chloroethoxy)methane	1	J	1	J	mg/Kg	SBL5-02	1 / 14	0.12 - 1.9	1	N/A	0.21 C	N/A	N/A	YES	ASL
111-44-4	Bis(2-chloroethyl)ether	0.32	J	0.32	J	mg/Kg	SBL5-02	1 / 14	0.12 - 1.9	0.32	N/A	0.21 C	N/A	N/A	YES	ASL
117-81-7	Bis(2-ethylhexyl)phthalate	0.078	J	13	J	mg/Kg	TP-502	7 / 14	0.12 - 1.8	13	N/A	35 C	N/A	N/A	NO	BSL
105-60-2	Caprolactam	1	J	1	J	mg/Kg	SBL5-02	1 / 13	0.12 - 1.9	1	N/A	3100 N	N/A	N/A	NO	BSL
218-01-9	Chrysene	0.067	J	0.33	J	mg/Kg	TP-502	3 / 14	0.12 - 3.5	0.33	N/A	62 C	N/A	N/A	NO	BSL
117-84-0	Di-n-Octylphthalate	0.47	J	0.47	J	mg/Kg	TP-502	1 / 14	0.12 - 3.5	0.47	N/A	120 N	N/A	N/A	NO	BSL

TABLE 2.10
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 5*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
84-86-2	Diethylphthalate	0.13	J	0.13	J	mg/Kg	SBL5-01	1 / 14	0.12 - 3.5	0.13	N/A	4900 N	N/A	N/A	NO	BSL
206-44-0	Fluoranthene	0.11	J	0.48	J	mg/Kg	TP-502	4 / 14	0.12 - 1.8	0.48	N/A	230 N	N/A	N/A	NO	BSL
78-59-1	Isophorone	1.3	J	1.3	J	mg/Kg	SBL5-02	1 / 14	0.12 - 1.9	1.3	N/A	510 C	N/A	N/A	NO	BSL
621-64-7	N-Nitroso-di-n-propylamine	0.49	J	0.49	J	mg/Kg	SBL5-02	1 / 14	0.12 - 1.8	0.49	N/A	0.069 C	N/A	N/A	YES	ASL
91-20-3	Naphthalene	0.057	J	0.42	J	mg/Kg	SBL5-02	2 / 14	0.12 - 1.9	0.42	N/A	5.6 N	N/A	N/A	NO	BSL
98-95-3	Nitrobenzene	3.3	J	3.3	J	mg/Kg	SBL5-02	1 / 14	0.12 - 1.9	3.3	N/A	2 N	N/A	N/A	YES	ASL
87-86-5	Pentachlorophenol	0.61	J	6.3	J	mg/Kg	SBL5-07	2 / 14	0.3 - 8.8	6.3	N/A	3 C	N/A	N/A	YES	ASL
85-01-8	Phenanthrene	0.085	J	0.53	J	mg/Kg	TP-502	4 / 14	0.12 - 1.8	0.53	N/A	5.6 N	N/A	N/A	NO	BSL
129-00-0	Pyrene	0.13	J	0.73	J	mg/Kg	TP-502	4 / 14	0.12 - 1.8	0.73	N/A	230 N	N/A	N/A	NO	BSL
72-54-8	4,4'-DDD	0.00042	J	0.034	J	mg/Kg	SBL5-02	8 / 12	0.0035 - 0.028	0.034	N/A	2.4 C	N/A	N/A	NO	BSL
72-55-9	4,4'-DDE	0.000076	J	0.016	J	mg/Kg	SBL5-02	9 / 12	0.0035 - 0.028	0.016	N/A	1.7 C	N/A	N/A	NO	BSL
50-29-3	4,4'-DDT	0.0012	J	0.0034	J	mg/Kg	SBL5-07	4 / 12	0.0033 - 0.028	0.0034	N/A	1.7 C	N/A	N/A	NO	BSL
309-00-2	Aldrin	0.00017	J	0.0031	J	mg/Kg	SBL5-06	7 / 12	0.0018 - 0.015	0.0031	N/A	0.029 C	N/A	N/A	NO	BSL
319-84-6	alpha-BHC	0.00072	J	0.0017	J	mg/Kg	SBL5-04	3 / 12	0.0018 - 0.015	0.0017	N/A	0.09 C	N/A	N/A	NO	BSL
5103-71-9	alpha-Chlordane	0.00027	J	0.011	J	mg/Kg	SBL5-07	7 / 12	0.0018 - 0.015	0.011	N/A	1.6 C	N/A	N/A	NO	BSL
53469-21-9	Aroclor 1242	0.061	J	0.093	J	mg/Kg	SBL5-04	3 / 12	0.035 - 0.28	0.093	N/A	0.22 C	N/A	N/A	NO	BSL
12672-29-6	Aroclor 1248	0.45	J	0.45	J	mg/Kg	SBL5-02	1 / 12	0.033 - 0.28	0.45	N/A	0.22 C	N/A	N/A	YES	ASL
11097-69-1	Aroclor 1254	0.054	J	0.054	J	mg/Kg	SBL5-04	1 / 12	0.033 - 0.28	0.054	N/A	0.22 C	N/A	N/A	NO	BSL
319-85-7	beta-BHC	0.00043	J	0.015	J	mg/Kg	LAG-05-450-L100	5 / 12	0.0016 - 0.015	0.015	N/A	0.32 C	N/A	N/A	NO	BSL
319-86-8	delta-BHC	0.00074	J	0.0034	J	mg/Kg	SBL5-04	4 / 12	0.0018 - 0.015	0.0034	N/A	0.09 C	N/A	N/A	NO	BSL
60-57-1	Dieldrin	0.00058	J	0.0021	J	mg/Kg	SBL5-03	2 / 12	0.0033 - 0.028	0.0021	N/A	0.03 C	N/A	N/A	NO	BSL
33213-65-9	Endosulfan II	0.0004	J	0.00048	J	mg/Kg	SBL5-01	2 / 9	0.0033 - 0.028	0.00048	N/A	37 N	N/A	N/A	NO	BSL
1031-07-8	Endosulfan sulfate	0.00045	J	0.0085	J	mg/Kg	SBL5-07	4 / 12	0.0033 - 0.028	0.0085	N/A	37 N	N/A	N/A	NO	BSL
72-20-8	Endrin	0.00042	J	0.0012	J	mg/Kg	SBL5-07	3 / 12	0.0033 - 0.028	0.0012	N/A	1.8 N	N/A	N/A	NO	BSL
7421-36-3	Endrin aldehyde	0.001	J	0.0017	J	mg/Kg	SBL5-03	3 / 12	0.0033 - 0.028	0.0017	N/A	1.8 N	N/A	N/A	NO	BSL
53494-70-5	Endrin ketone	0.00041	J	0.0058	J	mg/Kg	SBL5-05	7 / 12	0.0033 - 0.028	0.0058	N/A	1.8 N	N/A	N/A	NO	BSL
58-89-9	gamma-BHC(Lindane)	0.0015	J	0	J	mg/Kg	SBL5-02	1 / 12	0.0016 - 0.015	0.0015	N/A	0.44 C	N/A	N/A	NO	BSL
5103-74-2	gamma-Chlordane	0.00012	J	0.0082	J	mg/Kg	SBL5-07	6 / 12	0.0018 - 0.015	0.0082	N/A	1.6 C	N/A	N/A	NO	BSL
1024-57-3	Heptachlor epoxide	0.00029	J	0.0026	J	mg/Kg	SBL5-03	5 / 12	0.0016 - 0.015	0.0026	N/A	0.053 C	N/A	N/A	NO	BSL
72-43-5	Methoxychlor	0.0092	J	0.0092	J	mg/Kg	SBL5-03	1 / 12	0.016 - 0.15	0.0092	N/A	31 N	N/A	N/A	NO	BSL
1746-01-6	Dioxin TEQ	8.3E-05	J	3.4E-03	J	mg/Kg	LAG-05-550-L150	13 / 13	-	3.4E-03	N/A	3.9E-06 C	N/A	N/A	YES	ASL
7429-90-5	Aluminum	4150	J	23600	J	mg/Kg	SBL5-07	13 / 13	-	23600	N/A	N/A	N/A	N/A	NO	NTX
7440-36-0	Antimony	0.1	J	14.6	J	mg/Kg	SBL5-07	13 / 13	-	14.6	N/A	3.1 N	N/A	N/A	YES	ASL
7440-38-2	Arsenic	1	J	5	J	mg/Kg	TP-502	8 / 9	0.79 - 0.79	5	N/A	0.39 C	N/A	N/A	YES	ASL
7440-39-3	Barium	24.7	J	153	J	mg/Kg	SBL5-07	13 / 13	-	153	N/A	540 N	N/A	N/A	NO	BSL

TABLE 2.10
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 5*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
7440-41-7	Beryllium	0.099	J	0.75	J	mg/Kg	SBL5-07	13 / 13	-	0.75	N/A	15 N	N/A	N/A	NO	BSL
7440-43-9	Cadmium	0.41	J	35.2	J	mg/Kg	SBL5-07	8 / 13	0.067 - 0.08	35.2	N/A	3.7 N	N/A	N/A	YES	ASL
7440-70-2	Calcium	662	J	166000		mg/Kg	SBL5-06	13 / 13	-	166000	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	9.4		16100		mg/Kg	SBL5-07	13 / 13	-	16100	N/A	30 C	N/A	N/A	YES	ASL
7440-48-4	Cobalt	5.3	J	10.2		mg/Kg	SBL5-07	13 / 13	-	10.2	N/A	N/A	N/A	N/A	NO	NTX
7440-50-8	Copper	8		61.4	J	mg/Kg	SBL5-07	13 / 13	-	61.4	N/A	N/A	N/A	N/A	NO	NTX
57-12-5	Cyanide	0.038	J	0.61	J	mg/Kg	SBL5-07	9 / 12	0.12 - 0.37	0.61	N/A	1.1 N	N/A	N/A	NO	BSL
7439-89-6	Iron	12100		20800		mg/Kg	TP-507	13 / 13	-	20800	N/A	N/A	N/A	N/A	NO	NTX
7439-92-1	Lead	7.8	J	624		mg/Kg	SBL5-07	13 / 13	-	624	N/A	400 N	N/A	N/A	YES	ASL
7439-95-4	Magnesium	2700		4890	J	mg/Kg	SBL5-06	13 / 13	-	4890	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	158		2630		mg/Kg	SBL5-07	13 / 13	-	2630	N/A	180 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.045	J	4.7		mg/Kg	SBL5-08	8 / 13	0.039 - 5	4.7	N/A	0.61 N	N/A	N/A	YES	ASL
7440-02-0	Nickel	10.8		22.5		mg/Kg	SBL5-06	13 / 13	-	22.5	N/A	160 N	N/A	N/A	NO	BSL
7440-09-7	Potassium	270		674	J	mg/Kg	SBL5-07	13 / 13	-	674	N/A	N/A	N/A	N/A	NO	NUT
7782-49-2	Selenium	0.13	J	2	J	mg/Kg	TP-507	7 / 13	0.58 - 1	2	N/A	39 N	N/A	N/A	NO	BSL
7440-22-4	Silver	0.075	J	1.75	J	mg/Kg	SBL5-02	10 / 13	0.091 - 0.093	1.75	N/A	39 N	N/A	N/A	NO	BSL
7440-23-5	Sodium	51.3	J	414	J	mg/Kg	SBL5-06	9 / 13	114 - 667	414	N/A	N/A	N/A	N/A	NO	NUT
7440-28-0	Thallium	0.08	J	17.2		mg/Kg	TP-507	9 / 13	0.95 - 1.6	17.2	N/A	0.52 N	N/A	N/A	YES	ASL
7440-62-2	Vanadium	5.3		34.8		mg/Kg	SBL5-07	13 / 13	-	34.8	N/A	55 N	N/A	N/A	NO	BSL
7440-66-6	Zinc	42		246	J	mg/Kg	SBL5-07	13 / 13	-	246	N/A	2300 N	N/A	N/A	NO	BSL

* Data presented are from samples SBL5-01(0-0.5), SBL5-02(0.5-1) and its duplicate, SBL5-03(3-4), SBL5-04(0.5-1) and its duplicate, SBL5-05(0.5-1) and its duplicate, SBL5-05(2-4), SBL5-06(0.5-1), SBL5-07(0-0.5), SBL5-08(0-0.5) and its duplicate, SBL5-08(2-4), SBL5-09(0-0.5), SBL5-10(0-0.5) and its duplicate, SBL5-10(2-4), SBL5-11(0-0.5), TP-502(0-1), TP-502(6-7), TP-507(0-1), TP-507(5-6), LAG-05-450-L100(2), LAG-05-450-L150(2), LAG-05-550-L100(1), LAG-05-550-L150(1), LAG-05-800-L150(2), and LAG-05-650-L100(1).

(1) Minimum/maximum detected concentration.

(2) Refer to supporting information for background discussion.

(3) USEPA Region 9 PRGs for residential soil (adjusted to a hazard quotient = 0.1 for noncarcinogens), November 1, 2000.

The most conservative PRG for all noncarcinogenic PAHs has been used for phenanthrene and benzo(g,h,i)perylene.

PRG for 2-chlorophenol has been used for 4-chloro-3-methylphenol.

PRG for bis(2-chloroethyl)ether has been used for bis(2-chloroethoxy)methane.

PRG for 4-nitrophenol has been used for 2-nitrophenol.

The most conservative PRG for all BHCs has been used for delta-BHC.

PRG for endosulfan has been used for endosulfan II and endosulfan sulfate.

PRG for endrin has been used for endrin aldehyde and endrin ketone.

PRG for chromium VI used for chromium.

PRG for mercury and compounds used for mercury.

PRG for chlordane has been used for alpha-chlordane and gamma-chlordane.

The screening toxicity value for lead is the residential soil lead guidance level of 400 mg/Kg (USEPA, 1994a).

(4) Rationale Codes Selection Reason:

Deletion Reason: Above Screening Levels (ASL)

No Toxicity Information (NTX)

Essential Nutrient (NUT)

Below Screening Level (BSL)

Definitions: COPC = Chemical of Potential Concern

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

PRG = Preliminary Remedial Goal

N/A = Not Applicable or Not Available

J = Estimated Value

C = Carcinogenic

N = Non-Carcinogenic

TABLE 2.11
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNA TANNERY

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Lagoon 1*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
78-93-3	2-Butanone	2		2		ug/L	SWOL-1	1/1	-	2	N/A	190 N	N/A	N/A	NO	BSL
67-84-1	Acetone	3		3		ug/L	SWOL-1	1/1	-	3	N/A	61 N	N/A	N/A	NO	BSL
108-88-3	Toluene	4		4		ug/L	SWOL-1	1/1	-	4	N/A	72 N	6800	AWQC	NO	BSL
7440-38-2	Arsenic	2.4	J	2.4	J	ug/L	SWOL-1	1/1	-	2.4	N/A	0.045 C	0.018	AWQC	YES	ASL
7440-39-3	Barium	26.7		26.7		ug/L	SWOL-1	1/1	-	26.7	N/A	260 N	N/A	N/A	NO	BSL
7440-70-2	Calcium	58500	J	58500	J	ug/L	SWOL-1	1/1	-	58500	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	2.7	J	2.7	J	ug/L	SWOL-1	1/1	-	2.7	N/A	11 N	N/A	N/A	NO	BSL
7440-50-8	Copper	1.4	J	1.4	J	ug/L	SWOL-1	1/1	-	1.4	N/A	N/A	1300	AWQC	NO	BSL
7439-89-8	Iron	411		411		ug/L	SWOL-1	1/1	-	411	N/A	N/A	N/A	N/A	NO	NTX
7439-95-4	Magnesium	8600	J	8600	J	ug/L	SWOL-1	1/1	-	8600	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	1040	J	1040	J	ug/L	SWOL-1	1/1	-	1040	N/A	88 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.35	J	0.35	J	ug/L	SWOL-1	1/1	-	0.35	N/A	1.1 N	0.05	AWQC	YES	ASL
7440-02-0	Nickel	1	J	1	J	ug/L	SWOL-1	1/1	-	1	N/A	73 N	610	AWQC	NO	BSL
7440-09-7	Potassium	6160		6160		ug/L	SWOL-1	1/1	-	6160	N/A	N/A	N/A	N/A	NO	NUT
7440-23-5	Sodium	19100	J	19100	J	ug/L	SWOL-1	1/1	-	19100	N/A	N/A	N/A	N/A	NO	NUT
7440-28-0	Thallium	1.6	J	1.6	J	ug/L	SWOL-1	1/1	-	1.6	N/A	0.24 N	1.7	AWQC	YES	ASL
7440-66-6	Zinc	16.1		16.1		ug/L	SWOL-1	1/1	-	16.1	N/A	1100 N	9100	AWQC	NO	BSL

* Data presented are from surface water sample SWOL-1.

- (1) Minimum/maximum detected concentration.
- (2) Refer to supporting information for background discussion.
- (3) USEPA Region 9 PRGs for tap water (adjusted to a hazard quotient = 0.1 for noncarcinogens), October 1, 1999b
PRG for chromium VI has been used for chromium.
- (4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)

- Definitions:
- COPC = Chemical of Potential Concern
 - ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
 - PRG = Preliminary Remedial Goal
 - N/A = Not Applicable or Not Available
 - J = Estimated Value
 - C = Carcinogenic
 - N = Non-Carcinogenic
 - AWQC = Ambient Water Quality Criterion for Human Health (1998b)

TABLE 2.12
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Lagoon 2*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
67-64-1	Acetone	2		2		ug/L	SWOL-2	1/1	-	2	N/A	61 N	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.5	J	0.5	J	ug/L	SWOL-2	1/1	-	0.5	N/A	4.8 C	1.8	AWQC	NO	BSL
1746-01-6	Dioxin TEQ	5.0E-07	J	5.0E-07	J	ug/L	SWOL-2	1/1	-	5.0E-07	N/A	4.5E-07 C	0.000000013	AWQC	YES	ASL
7440-39-3	Barium	22.6		22.6		ug/L	SWOL-2	1/1	-	22.6	N/A	280 N	N/A	N/A	NO	BSL
7440-70-2	Calcium	56100	J	56100	J	ug/L	SWOL-2	1/1	-	56100	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	3.4	J	3.4	J	ug/L	SWOL-2	1/1	-	3.4	N/A	11 N	N/A	N/A	NO	BSL
7440-50-8	Copper	1.6	J	1.6	J	ug/L	SWOL-2	1/1	-	1.6	N/A	N/A	1300	AWQC	NO	BSL
7439-89-6	Iron	537		537		ug/L	SWOL-2	1/1	-	537	N/A	N/A	N/A	N/A	NO	NTX
7439-95-4	Magnesium	6470	J	6470	J	ug/L	SWOL-2	1/1	-	6470	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	743	J	743	J	ug/L	SWOL-2	1/1	-	743	N/A	88 N	N/A	N/A	YES	ASL
7440-02-0	Nickel	1.1	J	1.1	J	ug/L	SWOL-2	1/1	-	1.1	N/A	73 N	610	AWQC	NO	BSL
7440-09-7	Potassium	808		808		ug/L	SWOL-2	1/1	-	808	N/A	N/A	N/A	N/A	NO	NUT
7440-23-5	Sodium	11900	J	11900	J	ug/L	SWOL-2	1/1	-	11900	N/A	N/A	N/A	N/A	NO	NUT
7440-66-6	Zinc	8		8		ug/L	SWOL-2	1/1	-	8	N/A	1100 N	9100	AWQC	NO	BSL

* Data presented are from surface water sample SWOL-2.

- (1) Minimum/maximum detected concentration.
 (2) Refer to supporting information for background discussion.
 (3) USEPA Region 9 PRGs for tap water (adjusted to an hazard quotient = 0.1 for noncarcinogens), October 1, 1999b
 PRG for chromium VI has been used for chromium.
 (4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
 Deletion Reason: No Toxicity Information (NTX)
 Essential Nutrient (NUT)
 Below Screening Level (BSL)

- Definitions: COPC = Chemical of Potential Concern
 ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
 PRG = Preliminary Remedial Goal
 N/A = Not Applicable or Not Available
 J = Estimated Value
 C = Carcinogenic
 N = Non-Carcinogenic
 AWQC = Ambient Water Quality Criterion for Human Health (1998b)

TABLE 2.13
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Lagoon 4*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
67-64-1	Acetone	2		2		ug/L	SWOL-4A	1 / 3	2 - 3	2	N/A	61 N	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.5	J	0.5	J	ug/L	SWOL-4A	1 / 3	5 - 5	0.5	N/A	4.8 C	1.8	AWQC	NO	BSL
1746-01-6	Dioxin TEQ	4.3E-08	J	4.3E-08	J	ug/L	SWOL-4C	1 / 3	-	4.3E-08	N/A	4.5E-07 C	0.000000013	AWQC	YES	ASL
7440-39-3	Barium	7.8		21		ug/L	SWOL-4C	3 / 3	-	21	N/A	260 N	N/A	N/A	NO	BSL
7440-43-9	Cadmium	0.088	J	0.15	J	ug/L	SWOL-4C	2 / 3	0.05 - 0.05	0.15	N/A	1.8 N	N/A	N/A	NO	BSL
7440-70-2	Calcium	47200	J	96600	J	ug/L	SWOL-4C	3 / 3	-	96600	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	1	J	3.1	J	ug/L	SWOL-4B	3 / 3	-	3.1	N/A	11 N	N/A	N/A	NO	BSL
7440-50-8	Copper	0.094	J	3.9	J	ug/L	SWOL-4C	3 / 3	-	3.9	N/A	N/A	1300	AWQC	NO	BSL
7439-89-6	Iron	112	J	347	J	ug/L	SWOL-4C	3 / 3	-	347	N/A	N/A	N/A	N/A	NO	NTX
7439-92-1	Lead	2		2		ug/L	SWOL-4C	1 / 3	0.32 - 0.32	2	N/A	15 N	N/A	N/A	NO	BSL
7439-95-4	Magnesium	4930	J	10600	J	ug/L	SWOL-4C	3 / 3	-	10600	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	112	J	1140	J	ug/L	SWOL-4C	3 / 3	-	1140	N/A	88 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.2	J	0.2	J	ug/L	SWOL-4B	1 / 3	0.1 - 0.1	0.2	N/A	1.1 N	0.05	AWQC	YES	ASL
7440-02-0	Nickel	2.2	J	2.2	J	ug/L	SWOL-4C	1 / 3	0.35 - 0.51	2.2	N/A	73 N	610	AWQC	NO	BSL
7440-09-7	Potassium	2390	J	4670	J	ug/L	SWOL-4A	3 / 3	-	4670	N/A	N/A	N/A	N/A	NO	NUT
7440-23-5	Sodium	9740	J	22300	J	ug/L	SWOL-4C	3 / 3	-	22300	N/A	N/A	N/A	N/A	NO	NUT
7440-66-6	Zinc	16.5		16.5		ug/L	SWOL-4C	1 / 3	3.8 - 7.8	16.5	N/A	1100 N	9100	AWQC	NO	BSL

* Data presented are from surface water samples SWOL-4A, SWOL-4B, and SWOL-4C.

- (1) Minimum/maximum detected concentration.
 (2) Refer to supporting information for background discussion.
 (3) USEPA Region 9 PRGs for tap water (adjusted to a hazard quotient = 0.1 for noncarcinogens), October 1, 1999b
 Lead value is a drinking water criterion protective of blood lead levels in children (USEPA, 1996b).
 PRG for chromium VI has been used for chromium.
 (4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
 Deletion Reason: No Toxicity Information (NTX)
 Essential Nutrient (NUT)
 Below Screening Level (BSL)

- Definitions: COPC = Chemical of Potential Concern
 ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
 PRG = Preliminary Remedial Goal
 N/A = Not Applicable or Not Available
 J = Estimated Value
 C = Carcinogenic
 N = Non-Carcinogenic
 AWQC = Ambient Water Quality Criterion for Human Health (1998b)

TABLE 2.14
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Lagoon 5*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
67-64-1	Acetone	3		3		ug/L	SWOL-5	1/1	-	3	N/A	61 N	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.5	J	0.5	J	ug/L	SWOL-5	1/1	-	0.5	N/A	4.8 C	1.8	AWQC	NO	BSL
1746-01-6	Dioxin TEQ	4.2E-07	J	4.2E-07	J	ug/L	SWOL-5	1/1	-	4.2E-07	N/A	4.5E-07 C	0.000000013	AWQC	YES	ASL
7429-90-5	Aluminum	127	J	127	J	ug/L	SWOL-5	1/1	-	127	N/A	N/A	N/A	N/A	NO	NTX
7440-39-3	Barium	11.2		11.2		ug/L	SWOL-5	1/1	-	11.2	N/A	260 N	N/A	N/A	NO	BSL
7440-70-2	Calcium	53500	J	53500	J	ug/L	SWOL-5	1/1	-	53500	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	12.3	J	12.3	J	ug/L	SWOL-5	1/1	-	12.3	N/A	11 N	N/A	N/A	YES	ASL
7440-50-8	Copper	0.66	J	0.66	J	ug/L	SWOL-5	1/1	-	0.66	N/A	N/A	1300	AWQC	NO	BSL
7439-89-6	Iron	121		121		ug/L	SWOL-5	1/1	-	121	N/A	N/A	N/A	N/A	NO	NTX
7439-95-4	Magnesium	6440	J	6440	J	ug/L	SWOL-5	1/1	-	6440	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	258	J	258	J	ug/L	SWOL-5	1/1	-	258	N/A	88 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.21	J	0.21	J	ug/L	SWOL-5	1/1	-	0.21	N/A	1.1 N	0.05	AWQC	YES	ASL
7440-09-7	Potassium	2420		2420		ug/L	SWOL-5	1/1	-	2420	N/A	N/A	N/A	N/A	NO	NUT
7440-22-4	Silver	1.1		1.1		ug/L	SWOL-5	1/1	-	1.1	N/A	18 N	N/A	N/A	NO	BSL
7440-23-5	Sodium	10100	J	10100	J	ug/L	SWOL-5	1/1	-	10100	N/A	N/A	N/A	N/A	NO	NUT

* Data presented are from surface water sample SWOL-5.

(1) Minimum/maximum detected concentration.

(2) Refer to supporting information for background discussion.

(3) USEPA Region 9 PRGs for tap water (adjusted to an hazard quotient = 0.1 for noncarcinogens), October 1, 1999b
PRG for chromium VI has been used for chromium.

(4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions: COPC = Chemical of Potential Concern

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

PRG = Preliminary Remedial Goal

N/A = Not Applicable or Not Available

J = Estimated Value

C = Carcinogenic

N = Non-Carcinogenic

AWQC = Ambient Water Quality Criterion for Human Health (1998b)

TABLE 2.15
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Current
Medium: Soils
Exposure Medium: Surface Soil
Exposure Point: Warehouse Area*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
78-93-3	2-Butanone	0.007		0.03	J	mg/Kg	SS-002	5 / 5	-	0.03	N/A	730 N	N/A	N/A	NO	BSL
67-64-1	Acetone	0.024	J	0.15		mg/Kg	SS-002	3 / 5	0.033 - 0.065	0.15	N/A	160 N	N/A	N/A	NO	BSL
75-15-0	Carbon disulfide	0.002	J	0.002	J	mg/Kg	SS-007	1 / 5	0.005 - 0.006	0.002	N/A	36 N	N/A	N/A	NO	BSL
108-68-3	Toluene	0.002	J	0.006	J	mg/Kg	SS-004	2 / 5	0.005 - 0.006	0.006	N/A	52 N	N/A	N/A	NO	BSL
91-57-6	2-Methylnaphthalene	0.023	J	0.035	J	mg/Kg	SBW-3	2 / 8	0.34 - 0.38	0.035	N/A	5.6 N	N/A	N/A	NO	BSL
59-50-7	4-Chloro-3-methylphenol	0.027	J	0.027	J	mg/Kg	SS-001	1 / 8	0.34 - 0.43	0.027	N/A	6.3 N	N/A	N/A	NO	BSL
106-44-5	4-Methylphenol	0.034	J	0.034	J	mg/Kg	SBW-5	1 / 8	0.34 - 0.43	0.034	N/A	31 N	N/A	N/A	NO	BSL
83-32-9	Acenaphthene	0.043	J	0.083	J	mg/Kg	SS-007	3 / 8	0.34 - 0.38	0.083	N/A	370 N	N/A	N/A	NO	BSL
208-98-8	Acenaphthylene	0.03	J	0.042	J	mg/Kg	SBW-3	3 / 8	0.34 - 0.38	0.042	N/A	5.8 N	N/A	N/A	NO	BSL
98-86-2	Acetophenone	0.018	J	0.036	J	mg/Kg	SBW-5	6 / 8	0.34 - 0.43	0.036	N/A	0.049 N	N/A	N/A	NO	BSL
120-12-7	Anthracene	0.019	J	0.21	J	mg/Kg	SS-007	7 / 8	0.34 - 0.34	0.21	N/A	2200 N	N/A	N/A	NO	BSL
100-52-7	Benzaldehyde	0.033	J	0.057	J	mg/Kg	SBW-5	4 / 8	0.34 - 0.38	0.057	N/A	610 N	N/A	N/A	NO	BSL
56-55-3	Benzo(a)anthracene	0.026	J	0.71	J	mg/Kg	SS-007	8 / 8	-	0.71	N/A	0.62 C	N/A	N/A	YES	ASL
50-32-8	Benzo(a)pyrene	0.025	J	0.65	J	mg/Kg	SS-007	8 / 8	-	0.65	N/A	0.062 C	N/A	N/A	YES	ASL
205-99-2	Benzo(b)fluoranthene	0.035	J	0.67	J	mg/Kg	SS-007	8 / 8	-	0.67	N/A	0.62 C	N/A	N/A	YES	ASL
191-24-2	Benzo(g,h,i)perylene	0.018	J	0.32	J	mg/Kg	SS-007	8 / 8	-	0.32	N/A	5.6 N	N/A	N/A	NO	BSL
207-08-9	Benzo(k)fluoranthene	0.02	J	0.59	J	mg/Kg	SS-007	8 / 8	-	0.59	N/A	6.2 C	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.13	J	0.16	J	mg/Kg	SBW-3	2 / 8	0.34 - 0.43	0.16	N/A	35 C	N/A	N/A	NO	BSL
86-74-8	Carbazole	0.019	J	0.088	J	mg/Kg	SBW-2	5 / 8	0.34 - 0.38	0.088	N/A	24 C	N/A	N/A	NO	BSL
218-01-9	Chrysene	0.029	J	0.74	J	mg/Kg	SS-007	8 / 8	-	0.74	N/A	62 C	N/A	N/A	NO	BSL
84-74-2	Di-n-butylphthalate	0.023	J	0.05	J	mg/Kg	SS-002	5 / 8	0.34 - 0.38	0.05	N/A	610 N	N/A	N/A	NO	BSL
117-84-0	Di-n-octylphthalate	0.076	J	0.16	J	mg/Kg	SBW-3	3 / 8	0.34 - 0.43	0.16	N/A	120 N	N/A	N/A	NO	BSL
53-70-3	Dibenz(a,h)anthracene	0.026	J	0.074	J	mg/Kg	SBW-3	7 / 8	0.34 - 0.34	0.074	N/A	0.062 C	N/A	N/A	YES	ASL
132-64-9	Dibenzofuran	0.025	J	0.045	J	mg/Kg	SS-007	3 / 8	0.34 - 0.38	0.045	N/A	29 N	N/A	N/A	NO	BSL
84-66-2	Diethylphthalate	0.018	J	0.039	J	mg/Kg	SS-001	3 / 8	0.34 - 0.43	0.039	N/A	4900 N	N/A	N/A	NO	BSL
206-44-0	Fluoranthene	0.044	J	1.1	J	mg/Kg	SS-007	8 / 8	-	1.1	N/A	230 N	N/A	N/A	NO	BSL
86-73-7	Fluorene	0.021	J	0.087	J	mg/Kg	SS-007	4 / 8	0.34 - 0.38	0.087	N/A	260 N	N/A	N/A	NO	BSL
193-39-5	Indeno(1,2,3-cd)pyrene	0.029	J	0.29	J	mg/Kg	SS-007	7 / 8	0.34 - 0.34	0.29	N/A	0.62 C	N/A	N/A	NO	BSL
91-20-3	Naphthalene	0.019	J	0.043	J	mg/Kg	SS-007	4 / 8	0.34 - 0.38	0.043	N/A	5.8 N	N/A	N/A	NO	BSL
85-01-8	Phenanthrene	0.033	J	0.82	J	mg/Kg	SS-007	8 / 8	-	0.82	N/A	5.6 N	N/A	N/A	NO	BSL
129-00-0	Pyrene	0.048	J	1.3	J	mg/Kg	SS-007	8 / 8	-	1.3	N/A	230 N	N/A	N/A	NO	BSL

TABLE 2.15
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Current
Medium: Soils
Exposure Medium: Surface Soil
Exposure Point: Warehouse Area*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
72-55-9	4,4'-DDE	0.00077	J	0.0032	J	mg/Kg	SS-007	4 / 5	0.0034 - 0.0034	0.0032	N/A	1.7 C	N/A	N/A	NO	BSL
50-29-3	4,4'-DDT	0.00091	J	0.0056	J	mg/Kg	SS-007	4 / 5	0.0034 - 0.0034	0.0056	N/A	1.7 C	N/A	N/A	NO	BSL
5103-71-9	alpha-Chlordane	0.001	J	0.003	J	mg/Kg	SS-004	2 / 5	0.0019 - 0.0023	0.003	N/A	1.8 C	N/A	N/A	NO	BSL
319-85-7	beta-BHC	0.00078	J	0.00078	J	mg/Kg	SS-002	1 / 5	0.0018 - 0.0023	0.00078	N/A	0.32 C	N/A	N/A	NO	BSL
60-57-1	Dieldrin	0.007	J	0.007	J	mg/Kg	SS-007	1 / 5	0.0034 - 0.0038	0.007	N/A	0.03 C	N/A	N/A	NO	BSL
959-98-8	Endosulfan I	0.0022	J	0.0022	J	mg/Kg	SS-004	1 / 5	0.0018 - 0.0023	0.0022	N/A	37 N	N/A	N/A	NO	BSL
72-20-8	Endrin	0.001	J	0.005	J	mg/Kg	SS-007	4 / 5	0.0036 - 0.0036	0.005	N/A	1.8 N	N/A	N/A	NO	BSL
7421-36-3	Endrin aldehyde	0.0021	J	0.011	J	mg/Kg	SS-007	5 / 5	-	0.011	N/A	1.8 N	N/A	N/A	NO	BSL
5103-74-2	gamma-Chlordane	0.0015	J	0.0021	J	mg/Kg	SS-004	2 / 5	0.0018 - 0.002	0.0021	N/A	1.6 C	N/A	N/A	NO	BSL
76-44-8	Heptachlor	0.0011	J	0.0029	J	mg/Kg	SS-007	5 / 5	-	0.0029	N/A	0.11 C	N/A	N/A	NO	BSL
1024-57-3	Heptachlor epoxide	0.0016	J	0.0016	J	mg/Kg	SS-007	1 / 5	0.0018 - 0.002	0.0016	N/A	0.053 C	N/A	N/A	NO	BSL
1746-01-6	Dioxin TEQ	9.0E-06	J	9.6E-06	J	mg/Kg	SS-001	3 / 3	-	9.6E-06	N/A	3.9E-06 C	N/A	N/A	YES	ASL
7429-90-5	Aluminum	2870		8670		mg/Kg	SS-007	8 / 8	-	8670	N/A	N/A	N/A	N/A	NO	NTX
7440-38-2	Arsenic	2.95		8.6		mg/Kg	SBW-5	8 / 8	-	8.6	N/A	0.39 C	N/A	N/A	YES	ASL
7440-39-3	Barium	23.2	J	183		mg/Kg	SBW-2	8 / 8	-	183	N/A	540 N	N/A	N/A	NO	BSL
7440-41-7	Beryllium	0.27	J	0.48	J	mg/Kg	SBW-2	8 / 8	-	0.48	N/A	15 N	N/A	N/A	NO	BSL
7440-43-9	Cadmium	0.46	J	0.63	J	mg/Kg	SBW-3	2 / 8	0.12 - 0.26	0.63	N/A	3.7 N	N/A	N/A	NO	BSL
7440-70-2	Calcium	2030		65200		mg/Kg	SBW-2	8 / 8	-	65200	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	16.6		118		mg/Kg	SS-004	8 / 8	-	118	N/A	30 C	N/A	N/A	YES	ASL
7440-48-4	Cobalt	5.7	J	9.7	J	mg/Kg	SS-007	8 / 8	-	9.7	N/A	N/A	N/A	N/A	NO	NTX
7440-50-8	Copper	11.8		41.5		mg/Kg	SBW-2	8 / 8	-	41.5	N/A	N/A	N/A	N/A	NO	NTX
57-12-5	Cyanide	0.06	J	0.77		mg/Kg	SS-001	6 / 8	0.22 - 0.23	0.77	N/A	1.1 N	N/A	N/A	NO	BSL
7439-89-6	Iron	11180		20200		mg/Kg	SS-007	8 / 8	-	20200	N/A	N/A	N/A	N/A	NO	NTX
7439-92-1	Lead	12.7	J	56.1		mg/Kg	SBW-5	8 / 8	-	56.1	N/A	400 N	N/A	N/A	NO	BSL
7439-95-4	Magnesium	2210		32600		mg/Kg	SBW-2	8 / 8	-	32600	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	357		1100		mg/Kg	SBW-2	8 / 8	-	1100	N/A	180 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.0575	J	0.2		mg/Kg	SBW-5	7 / 8	0.05 - 0.05	0.2	N/A	0.61 N	N/A	N/A	NO	BSL
7440-02-0	Nickel	11.5		15.8		mg/Kg	SS-007	8 / 8	-	15.8	N/A	160 N	N/A	N/A	NO	BSL
7440-09-7	Potassium	217	J	1050		mg/Kg	SBW-2	8 / 8	-	1050	N/A	N/A	N/A	N/A	NO	NUT
7782-49-2	Selenium	0.64	J	1	J	mg/Kg	SS-007	2 / 8	0.62 - 0.91	1	N/A	39 N	N/A	N/A	NO	BSL
7440-22-4	Silver	0.5475	J	0.8	J	mg/Kg	SBW-2	3 / 8	0.41 - 0.46	0.8	N/A	39 N	N/A	N/A	NO	BSL
7440-23-5	Sodium	254	J	597	J	mg/Kg	SS-001	8 / 8	-	597	N/A	N/A	N/A	N/A	NO	NUT
7440-62-2	Vanadium	9.3	J	21.45		mg/Kg	SBW-3	8 / 8	-	21.45	N/A	55 N	N/A	N/A	NO	BSL
7440-66-6	Zinc	39.7	J	278.1		mg/Kg	SBW-3	8 / 8	-	278.1	N/A	2300 N	N/A	N/A	NO	BSL

TABLE 2.15
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 POWNAL TANNERY

Scenario Timeframe: Current
 Medium: Soils
 Exposure Medium: Surface Soil
 Exposure Point: Warehouse Area*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾

* Data presented are from samples SS-001(0-0.5), SS-002(0-0.5), SS-004(0-0.5) and its duplicate, SS-005(0-0.5), SS-007(0-0.5), SBW-2(0-0.5), SBW-3(0-0.5) and its duplicate, and SBW-5(0-0.5).

(1) Minimum/maximum detected concentration.

(2) Refer to supporting information for background discussion.

(3) USEPA Region 9 PRGs for residential soil (adjusted to a hazard quotient = 0.1 for noncarcinogens), November 1, 2000.

The most conservative PRG for all noncarcinogenic PAHs has been used for 2-methylnaphthalene, acenaphthylene, benzo(g,h,i)perylene and phenanthrene.

PRG for 2-chlorophenol has been used for 4-chloro-3-methylphenol.

PRG for endosulfan has been used for endosulfan I.

PRG for endrin has been used for endrin aldehyde.

PRG for chromium VI used for chromium.

PRG for mercury and compounds used for mercury.

PRG for chlordane has been used for alpha-chlordane and gamma-chlordane.

The screening toxicity value for lead is the residential soil lead guidance level of 400 mg/Kg (USEPA, 1994a).

(4) Rationale Codes Selection Reason: Above Screening Levels (ASL)

Deletion Reason: No Toxicity Information (NTX)

Essential Nutrient (NUT)

Below Screening Level (BSL)

Definitions:

COPC = Chemical of Potential Concern

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

PRG = Preliminary Remedial Goal

N/A = Not Applicable or Not Available

J = Estimated Value

C = Carcinogenic

N = Non-Carcinogenic

TABLE 2.16
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNAI TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil
Exposure Point: Warehouse Area*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
78-93-3	2-Butanone	0.003	J	0.03	J	mg/Kg	SS-002	12 / 16	0.005 - 0.007	0.03	N/A	730 N	N/A	N/A	NO	BSL
67-64-1	Acetone	0.024	J	0.15	J	mg/Kg	SS-002	7 / 16	0.007 - 0.065	0.15	N/A	160 N	N/A	N/A	NO	BSL
71-43-2	Benzene	0.002	J	0.002	J	mg/Kg	SBW-8	1 / 16	0.005 - 0.007	0.002	N/A	0.65 C	N/A	N/A	NO	BSL
75-15-0	Carbon disulfide	0.002	J	0.002	J	mg/Kg	SS-007	1 / 16	0.005 - 0.007	0.002	N/A	36 N	N/A	N/A	NO	BSL
67-68-3	Chloroform	0.003	J	0.003	J	mg/Kg	SBW-7	1 / 16	0.005 - 0.007	0.003	N/A	0.24 C	N/A	N/A	NO	BSL
74-87-3	Chloromethane	0.001	J	0.003	J	mg/Kg	SBW-11	5 / 16	0.005 - 0.007	0.003	N/A	1.2 C	N/A	N/A	NO	BSL
100-41-4	Ethylbenzene	0.008	J	0.008	J	mg/Kg	SBW-8	1 / 15	0.005 - 0.007	0.008	N/A	23 N	N/A	N/A	NO	BSL
79-20-9	Methyl Acetate	0.002	J	0.01	J	mg/Kg	SBW-10	8 / 16	0.005 - 0.007	0.01	N/A	2200 N	N/A	N/A	NO	BSL
1634-04-4	Methyl tert-butyl ether	0.001	J	0.001	J	mg/Kg	SBW-8	1 / 16	0.005 - 0.007	0.001	N/A	N/A	N/A	N/A	NO	NTX
108-87-2	Methylcyclohexane	0.001	J	0.006	J	mg/Kg	SBW-10	2 / 16	0.005 - 0.007	0.006	N/A	260 N	N/A	N/A	NO	BSL
108-88-3	Toluene	0.002	J	0.006	J	mg/Kg	SBW-10	5 / 16	0.005 - 0.007	0.006	N/A	52 N	N/A	N/A	NO	BSL
1330-20-7	Xylene (total)	0.024	J	0.024	J	mg/Kg	SBW-8	1 / 16	0.005 - 0.009	0.024	N/A	21 N	N/A	N/A	NO	BSL
92-52-4	1,1-Biphenyl	0.068	J	0.15	J	mg/Kg	SBW-7	4 / 31	0.34 - 0.73	0.15	N/A	35 N	N/A	N/A	NO	BSL
95-95-4	2,4,5-Trichlorophenol	0.049	J	0.45	J	mg/Kg	SBW-8	3 / 31	0.85 - 1.8	0.45	N/A	610 N	N/A	N/A	NO	BSL
88-06-2	2,4,6-Trichlorophenol	0.087	J	0.087	J	mg/Kg	SBW-12	1 / 31	0.34 - 0.73	0.087	N/A	44 C	N/A	N/A	NO	BSL
91-57-6	2-Methylnaphthalene	0.023	J	0.85	J	mg/Kg	SBW-7	12 / 31	0.34 - 0.4	0.85	N/A	5.8 N	N/A	N/A	NO	BSL
59-50-7	4-Chloro-3-methylphenol	0.027	J	0.027	J	mg/Kg	SS-001	1 / 31	0.34 - 0.73	0.027	N/A	6.3 N	N/A	N/A	NO	BSL
106-44-5	4-Methylphenol	0.034	J	0.034	J	mg/Kg	SBW-5	1 / 31	0.34 - 0.73	0.034	N/A	31 N	N/A	N/A	NO	BSL
83-32-9	Acenaphthene	0.043	J	0.083	J	mg/Kg	SS-007	4 / 31	0.34 - 0.73	0.083	N/A	370 N	N/A	N/A	NO	BSL
208-96-8	Acenaphthylene	0.024	J	0.23	J	mg/Kg	SBW-9	14 / 31	0.34 - 0.4	0.23	N/A	5.6 N	N/A	N/A	NO	BSL
98-86-2	Acetophenone	0.018	J	0.098	J	mg/Kg	SBW-7	11 / 31	0.34 - 0.73	0.098	N/A	0.049 N	N/A	N/A	YES	ASL
120-12-7	Anthracene	0.019	J	0.33	J	mg/Kg	SBW-9	18 / 31	0.34 - 0.4	0.33	N/A	2200 N	N/A	N/A	NO	BSL
100-52-7	Benzaldehyde	0.026	J	0.13	J	mg/Kg	SBW-8	15 / 31	0.34 - 0.4	0.13	N/A	610 N	N/A	N/A	NO	BSL
56-55-3	Benzo(a)anthracene	0.026	J	1.9	J	mg/Kg	SBW-9	21 / 31	0.35 - 0.4	1.9	N/A	0.62 C	N/A	N/A	YES	ASL
50-32-8	Benzo(a)pyrene	0.025	J	2.2	J	mg/Kg	SBW-9	22 / 31	0.35 - 0.4	2.2	N/A	0.062 C	N/A	N/A	YES	ASL
205-99-2	Benzo(b)fluoranthene	0.021	J	2.5	J	mg/Kg	SBW-9	24 / 31	0.35 - 0.4	2.5	N/A	0.62 C	N/A	N/A	YES	ASL
191-24-2	Benzo(g,h,i)perylene	0.018	J	1.5	J	mg/Kg	SBW-9	20 / 31	0.35 - 0.4	1.5	N/A	5.6 N	N/A	N/A	NO	BSL
207-08-9	Benzo(k)fluoranthene	0.02	J	1.7	J	mg/Kg	SBW-9	22 / 31	0.35 - 0.4	1.7	N/A	6.2 C	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.041	J	0.6	J	mg/Kg	SBW-10	15 / 31	0.34 - 0.43	0.6	N/A	35 C	N/A	N/A	NO	BSL
86-74-8	Carbazole	0.019	J	0.16	J	mg/Kg	SBW-7	13 / 31	0.34 - 0.4	0.16	N/A	24 C	N/A	N/A	NO	BSL
218-01-9	Chrysene	0.029	J	2.1	J	mg/Kg	SBW-9	22 / 31	0.35 - 0.4	2.1	N/A	62 C	N/A	N/A	NO	BSL
84-74-2	Di-n-butylphthalate	0.023	J	0.05	J	mg/Kg	SS-002	6 / 31	0.34 - 0.73	0.05	N/A	610 N	N/A	N/A	NO	BSL
117-84-0	Di-n-octylphthalate	0.047	J	0.87	J	mg/Kg	SBW-3	15 / 31	0.34 - 0.73	0.87	N/A	120 N	N/A	N/A	NO	BSL
53-70-3	Dibenz(a,h)anthracene	0.026	J	0.51	J	mg/Kg	SBW-9	17 / 31	0.34 - 0.4	0.51	N/A	0.062 C	N/A	N/A	YES	ASL
132-84-9	Dibenzofuran	0.022	J	0.23	J	mg/Kg	SBW-7	13 / 31	0.34 - 0.4	0.23	N/A	29 N	N/A	N/A	NO	BSL

TABLE 2.16
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil
Exposure Point: Warehouse Area*

CAS Number	Chemical	Minimum Concentration (1)	Minimum Qualifier	Maximum Concentration (1)	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value (2)	Screening Toxicity Value (3)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (4)
84-66-2	Diethylphthalate	0.018	J	0.039	J	mg/Kg	SS-001	4 / 31	0.34 - 0.73	0.039	N/A	4900 N	N/A	N/A	NO	BSL
206-44-0	Fluoranthene	0.044	J	2.5	J	mg/Kg	SBW-9	22 / 31	0.35 - 0.4	2.5	N/A	230 N	N/A	N/A	NO	BSL
86-73-7	Fluorene	0.021	J	0.14	J	mg/Kg	SBW-7	11 / 31	0.34 - 0.4	0.14	N/A	260 N	N/A	N/A	NO	BSL
193-39-5	Indeno(1,2,3-cd)pyrene	0.021	J	1.3	J	mg/Kg	SBW-9	21 / 31	0.34 - 0.4	1.3	N/A	0.62 C	N/A	N/A	YES	ASL
91-20-3	Naphthalene	0.019	J	0.39	J	mg/Kg	SBW-1	14 / 31	0.34 - 0.4	0.39	N/A	5.6 N	N/A	N/A	NO	BSL
87-86-5	Pentachlorophenol	0.048	J	2.5	J	mg/Kg	SBW-12	3 / 31	0.85 - 1.8	2.5	N/A	3 C	N/A	N/A	NO	BSL
85-01-8	Phenanthrene	0.024	J	1.5	J	mg/Kg	SBW-7	22 / 31	0.35 - 0.4	1.5	N/A	5.6 N	N/A	N/A	NO	BSL
108-95-2	Phenol	0.051	J	0.051	J	mg/Kg	SBW-12	1 / 31	0.34 - 0.73	0.051	N/A	3700 N	N/A	N/A	NO	BSL
129-00-0	Pyrene	0.048	J	2.3	J	mg/Kg	SBW-9	22 / 31	0.35 - 0.4	2.3	N/A	230 N	N/A	N/A	NO	BSL
72-55-9	4,4'-DDE	0.00077	J	0.0032	J	mg/Kg	SS-007	4 / 5	0.0034 - 0.0034	0.0032	N/A	1.7 C	N/A	N/A	NO	BSL
50-29-3	4,4'-DDT	0.00091	J	0.0056	J	mg/Kg	SS-007	4 / 5	0.0034 - 0.0034	0.0056	N/A	1.7 C	N/A	N/A	NO	BSL
5103-71-9	alpha-Chlordane	0.001	J	0.003	J	mg/Kg	SS-004	2 / 5	0.0019 - 0.0023	0.003	N/A	1.6 C	N/A	N/A	NO	BSL
319-85-7	beta-BHC	0.00078	J	0.00078	J	mg/Kg	SS-002	1 / 5	0.0018 - 0.0023	0.00078	N/A	0.32 C	N/A	N/A	NO	BSL
80-57-1	Dieldrin	0.007	J	0.007	J	mg/Kg	SS-007	1 / 5	0.0034 - 0.0038	0.007	N/A	0.03 C	N/A	N/A	NO	BSL
959-98-8	Endosulfan I	0.0022	J	0.0022	J	mg/Kg	SS-004	1 / 5	0.0018 - 0.0023	0.0022	N/A	37 N	N/A	N/A	NO	BSL
72-20-8	Endrin	0.001	J	0.005	J	mg/Kg	SS-007	4 / 5	0.0038 - 0.0038	0.005	N/A	1.8 N	N/A	N/A	NO	BSL
7421-36-3	Endrin aldehyde	0.0021	J	0.011	J	mg/Kg	SS-007	5 / 5	-	0.011	N/A	1.8 N	N/A	N/A	NO	BSL
5103-74-2	gamma-Chlordane	0.0015	J	0.0021	J	mg/Kg	SS-004	2 / 5	0.0018 - 0.002	0.0021	N/A	1.6 C	N/A	N/A	NO	BSL
76-44-8	Heptachlor	0.0011	J	0.0029	J	mg/Kg	SS-007	5 / 5	-	0.0029	N/A	0.11 C	N/A	N/A	NO	BSL
1024-57-3	Heptachlor epoxide	0.0016	J	0.0016	J	mg/Kg	SS-007	1 / 5	0.0018 - 0.002	0.0016	N/A	0.053 C	N/A	N/A	NO	BSL
1746-01-6	Dioxin TEQ	9.0E-06	J	9.6E-06	J	mg/Kg	SS-001	3 / 3	-	9.6E-06	N/A	3.9E-06 C	N/A	N/A	YES	ASL
7429-90-5	Aluminum	2870		16800		mg/Kg	SBW-1	31 / 31	-	16800	N/A	N/A	N/A	N/A	NO	NTX
7440-36-0	Antimony	0.645	J	1.9	J	mg/Kg	SBW-7	13 / 31	0.83 - 1.2	1.9	N/A	3.1 N	N/A	N/A	NO	BSL
7440-38-2	Arsenic	2.5		16.9		mg/Kg	SBW-9	31 / 31	-	16.9	N/A	0.39 C	N/A	N/A	YES	ASL
7440-39-3	Barium	16.8	J	183		mg/Kg	SBW-2	31 / 31	-	183	N/A	540 N	N/A	N/A	NO	BSL
7440-41-7	Beryllium	0.098	J	0.91	J	mg/Kg	SBW-11	31 / 31	-	0.91	N/A	15 N	N/A	N/A	NO	BSL
7440-43-9	Cadmium	0.24	J	0.75	J	mg/Kg	SBW-1	7 / 31	0.059 - 0.26	0.75	N/A	3.7 N	N/A	N/A	NO	BSL
7440-70-2	Calcium	772	J	65200		mg/Kg	SBW-2	31 / 31	-	65200	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	4.5	J	118		mg/Kg	SS-004	31 / 31	-	118	N/A	30 C	N/A	N/A	YES	ASL
7440-48-4	Cobalt	4.2	J	16		mg/Kg	SBW-1	31 / 31	-	16	N/A	N/A	N/A	N/A	NO	NTX
7440-50-8	Copper	11.8		56		mg/Kg	SBW-10	31 / 31	-	56	N/A	N/A	N/A	N/A	NO	NTX
57-12-5	Cyanide	0.06	J	0.77		mg/Kg	SS-001	17 / 31	0.044 - 0.26	0.77	N/A	1.1 N	N/A	N/A	NO	BSL
7439-89-6	Iron	10500		29700		mg/Kg	SBW-1	31 / 31	-	29700	N/A	N/A	N/A	N/A	NO	NTX

TABLE 2.16
 OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
 POWNAL TANNERY

Scenario Timeframe: Future
 Medium: Soils
 Exposure Medium: Soil
 Exposure Point: Warehouse Area*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
7439-92-1	Lead	4		138	J	mg/Kg	SBW-10	31 / 31	-	138	N/A	400 N	N/A	N/A	NO	BSL
7439-95-4	Magnesium	243	J	32600		mg/Kg	SBW-2	31 / 31	-	32600	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	60.9		1210		mg/Kg	SBW-4	31 / 31	-	1210	N/A	180 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.054	J	2	J	mg/Kg	SBW-10	23 / 31	0.045 - 0.06	2	N/A	0.61 N	N/A	N/A	YES	ASL
7440-02-0	Nickel	8.5		74.1		mg/Kg	SBW-3	31 / 31	-	74.1	N/A	160 N	N/A	N/A	NO	BSL
7440-09-7	Potassium	204	J	2420		mg/Kg	SBW-2	31 / 31	-	2420	N/A	N/A	N/A	N/A	NO	NUT
7782-49-2	Selenium	0.64	J	4.5		mg/Kg	SBW-11	10 / 31	0.62 - 1.1	4.5	N/A	39 N	N/A	N/A	NO	BSL
7440-22-4	Silver	0.14	J	1.2	J	mg/Kg	SBW-1	9 / 31	0.12 - 0.46	1.2	N/A	39 N	N/A	N/A	NO	BSL
7440-23-5	Sodium	89.9	J	13300	J	mg/Kg	SBW-8	31 / 31	-	13300	N/A	N/A	N/A	N/A	NO	NUT
7440-28-0	Thallium	6		14.1		mg/Kg	SBW-11	11 / 31	0.83 - 1.9	14.1	N/A	0.52 N	N/A	N/A	YES	ASL
7440-62-2	Vanadium	4.4	J	315		mg/Kg	SBW-1	31 / 31	-	315	N/A	55 N	N/A	N/A	YES	ASL
7440-66-8	Zinc	6.6		278.1		mg/Kg	SBW-3	31 / 31	-	278.1	N/A	2300 N	N/A	N/A	NO	BSL

* Data presented are from samples SS-001(0-0.5), SS-002(0-0.5), SS-004(0-0.5) and its duplicate, SS-005(0-0.5), SS-007(0-0.5), SBW-1(2-4), SBW-1(6-8), SBW-2(0-0.5), SBW-2(2-4), SBW-2(6-8), SBW-3(0-0.5) and its duplicate, SBW-3(2-4), SBW-3(6-8), SBW-4(2-4), SBW-4(6-8), SBW-5(0-0.5), SBW-5(2-4), SBW-5(6-8), SBW-6(2-4), SBW-6(6-8), SBW-7(0-2), SBW-7(4-5), SBW-8(0-2) and its duplicate, SBW-8(4-5), SBW-9(0-2), SBW-9(4-6), SBW-10(0-2), SBW-10(4-5), SBW-11(0-2), SBW-11(3-4), and SBW-12(4-6).

(1) Minimum/maximum detected concentration.
 (2) Refer to supporting information for background discussion.
 (3) USEPA Region 9 PRGs for residential soil (adjusted to a hazard quotient = 0.1 for noncarcinogens), November 1, 2000.
 The most conservative PRG for all noncarcinogenic PAHs has been used for 2-methylnaphthalene, acenaphthylene, benzo(g,h,i)perylene and phenanthrene.
 PRG for 2-chlorophenol has been used for 4-chloro-3-methylphenol.
 PRG for endosulfan has been used for endosulfan I.
 PRG for endrin has been used for endrin aldehyde.
 PRG for chromium VI used for chromium.
 PRG for mercury and compounds used for mercury.
 PRG for chlordane has been used for alpha-chlordane and gamma-chlordane.
 The screening toxicity value for lead is the residential soil lead guidance level of 400 mg/Kg (USEPA, 1994a).

Definitions: COPC = Chemical of Potential Concern
 ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered
 PRG = Preliminary Remedial Goal
 N/A = Not Applicable or Not Available
 J = Estimated Value
 C = Carcinogenic
 N = Non-Carcinogenic

(4) Rationale Codes Selection Reason: Above Screening Levels (ASL)
 Deletion Reason: No Toxicity Information (NTX)
 Essential Nutrient (NUT)
 Below Screening Level (BSL)

TABLE 2.17
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

POWNA TANNERY

Scenario Timeframe: Current/Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: River and Wetlands*

CAS Number	Chemical	Minimum Concentration ⁽¹⁾	Minimum Qualifier	Maximum Concentration ⁽¹⁾	Maximum Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value ⁽²⁾	Screening Toxicity Value ⁽³⁾	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection ⁽⁴⁾
1634-04-4	Methyl tert-butyl ether	2		2		ug/L	SW-050	1 / 12	1 - 10	2	N/A	2 N	N/A	N/A	NO	BSL
117-81-7	Bis(2-ethylhexyl)phthalate	0.9	J	0.9	J	ug/L	SW-050	1 / 12	5 - 10	0.9	N/A	4.8 C	1.8	AWQC	NO	BSL
1746-01-6	Dioxin TEQ	1.3E-08	J	1.8E-06	J	ug/L	SW-034	4 / 11	-	1.8E-06	N/A	4.5E-07 C	0.000000013	AWQC	YES	ASL
7429-90-5	Aluminum	14.6	J	1230	J	ug/L	SW-011	10 / 12	67.1 - 88.8	1230	N/A	N/A	N/A	N/A	NO	NTX
7440-36-0	Antimony	0.5	J	1	J	ug/L	SW-009	4 / 12	0.52 - 1.9	1	N/A	1.5 N	14	AWQC	NO	BSL
7440-39-3	Barium	6.1		43.75	J	ug/L	OF-1	12 / 12	-	43.75	N/A	260 N	N/A	N/A	NO	BSL
7440-41-7	Beryllium	0.068	J	0.12	J	ug/L	OF-1	2 / 12	0.032 - 0.05	0.12	N/A	7.3 N	N/A	N/A	NO	BSL
7440-43-9	Cadmium	0.078	J	0.18	J	ug/L	SW-011	4 / 12	0.032 - 0.3	0.18	N/A	1.8 N	N/A	N/A	NO	BSL
7440-70-2	Calcium	4260	J	73150		ug/L	OF-1	12 / 12	-	73150	N/A	N/A	N/A	N/A	NO	NUT
7440-47-3	Chromium	1	J	5.6		ug/L	SW-013	7 / 12	0.26 - 0.41	5.6	N/A	11 N	N/A	N/A	NO	BSL
7440-48-4	Cobalt	0.38	J	2		ug/L	SW-011	3 / 12	0.048 - 0.5	2	N/A	N/A	N/A	N/A	NO	NTX
7440-50-8	Copper	0.44	J	14.4		ug/L	SW-011	12 / 12	-	14.4	N/A	N/A	1300	AWQC	NO	BSL
7439-89-6	Iron	132	J	2050	J	ug/L	SW-020	11 / 12	2 - 2	2050	N/A	N/A	N/A	N/A	NO	NTX
7439-92-1	Lead	0.42	J	8.8		ug/L	SW-011	8 / 12	0.32 - 2	8.8	N/A	15 N	N/A	N/A	NO	BSL
7439-95-4	Magnesium	1350	J	18000	J	ug/L	SW-021	12 / 12	-	18000	N/A	N/A	N/A	N/A	NO	NUT
7439-96-5	Manganese	6.35	J	530	J	ug/L	SW-020	12 / 12	-	530	N/A	88 N	N/A	N/A	YES	ASL
7439-97-6	Mercury	0.16	J	0.955	J	ug/L	OF-1	2 / 12	0.1 - 0.1	0.955	N/A	1.1 N	0.05	AWQC	YES	ASL
7440-02-0	Nickel	0.36	J	4.9		ug/L	SW-011	8 / 12	0.26 - 0.69	4.9	N/A	73 N	610	AWQC	NO	BSL
7440-09-7	Potassium	294	J	4105	J	ug/L	OF-1	11 / 12	98.1 - 98.1	4105	N/A	N/A	N/A	N/A	NO	NUT
7782-49-2	Selenium	0.51		0.51		ug/L	SW-050	1 / 12	0.24 - 5	0.51	N/A	18 N	170	AWQC	NO	BSL
7440-23-5	Sodium	1830	J	68250		ug/L	OF-1	11 / 12	359 - 359	68250	N/A	N/A	N/A	N/A	NO	NUT
7440-62-2	Vanadium	0.86		3.9	J	ug/L	SW-011	4 / 12	0.048 - 0.26	3.9	N/A	26 N	N/A	N/A	NO	BSL
7440-66-6	Zinc	7.2	J	28		ug/L	SW-011	3 / 12	3.3 - 19.2	28	N/A	1100 N	9100	AWQC	NO	BSL

* Data presented are from surface water samples OF-1 and its duplicate, SW-008, SW-009, SW-011, SW-012, SW-013, SW-020, SW-021, SW-030, SW-034 and its duplicate, SW-036, SW-038, and SW-050.

(1) Minimum/maximum detected concentration.

(2) Refer to supporting information for background discussion.

(3) USEPA Region 9 PRGs for tap water (adjusted to a hazard quotient = 0.1 for noncarcinogens), October 1, 1999b

Lead value is a drinking water criterion protective of blood lead levels in children (USEPA, 1996b).

PRG for chromium VI has been used for chromium.

(4) Rationale Codes Selection Reason: Above Screening Levels (ASL)

Deletion Reason: No Toxicity Information (NTX)

Essential Nutrient (NUT)

Below Screening Level (BSL)

Definitions: COPC = Chemical of Potential Concern

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/To Be Considered

PRG = Preliminary Remedial Goal

N/A = Not Applicable or Not Available

J = Estimated Value

C = Carcinogenic

N = Non-Carcinogenic

AWQC = Ambient Water Quality Criterion for Human Health (1998b)