TABLE 7.59.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-106U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	1.8E+00	µg/L	1.8E+00	µg/L	M	4.9E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.6E-01
	Manganese	4.4E+02	µg/L	4.4E+02	µg/L	M	1.2E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	5.0E-01
	(Total)												6.6E-01
												Total Hazard Index Across All Exposure Routes/Pathways	7E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.59.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-106U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	9.4E-01	µg/L	9.4E-01	µg/L	M	1.8E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	6.0E-02
	Manganese	1.7E+02	µg/L	1.7E+02	µg/L	M	3.2E-03	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.3E-01
	(Total)												1.9E-01
												Total Hazard Index Across All Exposure Routes/Pathways	2E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.60.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-107R
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Dioxin TEQ	3.4E-06	µg/L	3.4E-06	µg/L	M	9.3E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	8.9E+00	µg/L	8.9E+00	µg/L	M	2.4E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	8.1E-01
	Manganese	1.6E+03	µg/L	1.6E+03	µg/L	M	4.3E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.8E+00
	(Total)												2.6E+00
												Total Hazard Index Across All Exposure Routes/Pathways	3E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.60.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-107R
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Dioxin TEQ	3.4E-06	µg/L	3.4E-06	µg/L	M	6.5E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	6.2E+00	µg/L	6.2E+00	µg/L	M	1.2E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.0E-01
	Manganese (Total)	1.1E+03	µg/L	1.1E+03	µg/L	M	2.2E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	9.0E-01
													1.3E+00
												Total Hazard Index Across All Exposure Routes/Pathways	1E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.61.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-107U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	1.6E+00	µg/L	1.6E+00	µg/L	M	4.4E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	1.1E-01
	Arsenic	3.6E+00	µg/L	3.6E+00	µg/L	M	9.7E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	3.2E-01
	Manganese	3.6E+03	µg/L	3.6E+03	µg/L	M	9.9E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	4.1E+00
	(Total)												4.6E+00
												Total Hazard Index Across All Exposure Routes/Pathways	5E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.61.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-107U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	8.0E-01	µg/L	8.0E-01	µg/L	M	1.5E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	3.8E-02
	Arsenic	3.1E+00	µg/L	3.1E+00	µg/L	M	5.8E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.9E-01
	Manganese	2.7E+03	µg/L	2.7E+03	µg/L	M	5.2E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	2.1E+00
	(Total)												2.4E+00
												Total Hazard Index Across All Exposure Routes/Pathways	2E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.62.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-109U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Carbon tetrachloride	1.0E+00	µg/L	1.0E+00	µg/L	M	2.7E-05	mg/kg-day	7.0E-04	mg/kg-day	N/A	N/A	3.9E-02
	Heptachlor epoxide	1.3E-02	µg/L	1.3E-02	µg/L	M	3.6E-07	mg/kg-day	1.3E-05	mg/kg-day	N/A	N/A	2.7E-02
	Arsenic	2.3E+01	µg/L	2.3E+01	µg/L	M	6.3E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.1E+00
	Manganese	4.2E+03	µg/L	4.2E+03	µg/L	M	1.2E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	4.8E+00
	Thallium	7.5E+00	µg/L	7.5E+00	µg/L	M	2.1E-04	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	2.6E+00
	(Total)												9.6E+00
												Total Hazard Index Across All Exposure Routes/Pathways	1E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.62.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-109U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Carbon tetrachloride	6.7E-01	µg/L	6.7E-01	µg/L	M	1.3E-05	mg/kg-day	7.0E-04	mg/kg-day	N/A	N/A	1.8E-02
	Heptachlor epoxide	1.3E-02	µg/L	1.3E-02	µg/L	M	2.5E-07	mg/kg-day	1.3E-05	mg/kg-day	N/A	N/A	1.9E-02
	Arsenic	1.8E+01	µg/L	1.8E+01	µg/L	M	3.5E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.2E+00
	Manganese	3.9E+03	µg/L	3.9E+03	µg/L	M	7.4E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	3.1E+00
	Thallium	2.7E+00	µg/L	2.7E+00	µg/L	M	5.1E-05	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	6.4E-01
	(Total)												4.9E+00
												Total Hazard Index Across All Exposure Routes/Pathways	5E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.63.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-110R
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic	5.4E+00	µg/L	5.4E+00	µg/L	M	1.5E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.9E-01
	Manganese	1.8E+03	µg/L	1.8E+03	µg/L	M	4.8E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	2.0E+00
	(Total)												2.5E+00
												Total Hazard Index Across All Exposure Routes/Pathways	3E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.63.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-110R
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	4.9E+00	µg/L	4.9E+00	µg/L	M	9.3E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	3.1E-01
	Manganese	1.6E+03	µg/L	1.6E+03	µg/L	M	3.0E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.3E+00
	(Total)												1.6E+00
												Total Hazard Index Across All Exposure Routes/Pathways	2E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.64.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-110U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	1.5E+01	µg/L	1.5E+01	µg/L	M	4.1E-04	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	6.8E-03
	Pentachlorophenol	1.0E+00	µg/L	1.0E+00	µg/L	M	2.7E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	9.1E-04
	Antimony	1.6E+00	µg/L	1.6E+00	µg/L	M	4.4E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	1.1E-01
	Arsenic	2.4E+00	µg/L	2.4E+00	µg/L	M	6.6E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.2E-01
	Manganese	1.5E+03	µg/L	1.5E+03	µg/L	M	4.1E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.7E+00
	(Total)												2.0E+00
												Total Hazard Index Across All Exposure Routes/Pathways	2E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.64.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-110U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	6.8E+00	µg/L	6.8E+00	µg/L	M	1.3E-04	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	2.2E-03
	Pentachlorophenol	1.0E+00	µg/L	1.0E+00	µg/L	M	1.9E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	6.4E-04
	Antimony	1.3E+00	µg/L	1.3E+00	µg/L	M	2.5E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	6.3E-02
	Arsenic	1.5E+00	µg/L	1.5E+00	µg/L	M	2.9E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	9.5E-02
	Manganese	9.6E+02	µg/L	9.6E+02	µg/L	M	1.8E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	7.7E-01
	(Total)												9.3E-01
												Total Hazard Index Across All Exposure Routes/Pathways	9E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.65.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-111U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	2.0E+00	µg/L	2.0E+00	µg/L	M	5.5E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	1.4E-01
	Arsenic	6.5E-01	µg/L	6.5E-01	µg/L	M	1.8E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	5.9E-02
	Manganese	6.9E+02	µg/L	6.9E+02	µg/L	M	1.9E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	7.9E-01
	(Total)												9.9E-01
												Total Hazard Index Across All Exposure Routes/Pathways	1E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.65.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-111U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	8.8E-01	µg/L	8.8E-01	µg/L	M	1.7E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	4.2E-02
	Arsenic	6.5E-01	µg/L	6.5E-01	µg/L	M	1.2E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.2E-02
	Manganese	4.4E+02	µg/L	4.4E+02	µg/L	M	8.4E-03	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	3.5E-01
	(Total)												4.3E-01
												Total Hazard Index Across All Exposure Routes/Pathways	4E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.66.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-112U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	3.3E+00	µg/L	3.3E+00	µg/L	M	9.0E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	2.3E-01
	Arsenic	9.8E-01	µg/L	9.8E-01	µg/L	M	2.7E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	8.9E-02
	(Total)												3.2E-01
												Total Hazard Index Across All Exposure Routes/Pathways	3E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.66.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-112U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	2.0E+00	µg/L	2.0E+00	µg/L	M	3.8E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	9.5E-02
	Arsenic	6.8E-01	µg/L	6.8E-01	µg/L	M	1.3E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.3E-02
	(Total)												1.4E-01
												Total Hazard Index Across All Exposure Routes/Pathways	1E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.67.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-113R
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	5.8E+01	µg/L	5.8E+01	µg/L	M	1.6E-03	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	5.3E+00
	Manganese	1.3E+03	µg/L	1.3E+03	µg/L	M	3.6E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.5E+00
	(Total)												6.8E+00
												Total Hazard Index Across All Exposure Routes/Pathways	7E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.67.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-113R
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	5.8E+01	µg/L	5.8E+01	µg/L	M	1.1E-03	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	3.7E+00
	Manganese	1.3E+03	µg/L	1.3E+03	µg/L	M	2.5E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.0E+00
	(Total)												4.8E+00
												Total Hazard Index Across All Exposure Routes/Pathways	5E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.68.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-114U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,3-Dichlorobenzene	6.9E-01	µg/L	6.9E-01	µg/L	M	1.9E-05	mg/kg-day	9.0E-04	mg/kg-day	N/A	N/A	2.1E-02
	1,4-Dichlorobenzene	7.9E+00	µg/L	7.9E+00	µg/L	M	2.2E-04	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	7.2E-03
	Chlorobenzene	3.6E+01	µg/L	3.6E+01	µg/L	M	9.9E-04	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	4.9E-02
	Tetrachloroethylene	7.8E+01	µg/L	7.8E+01	µg/L	M	2.1E-03	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	2.1E-01
	Arsenic	2.4E+00	µg/L	2.4E+00	µg/L	M	6.6E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.2E-01
	Chromium	1.3E+01	µg/L	1.3E+01	µg/L	M	3.5E-04	mg/kg-day	1.5E+00	mg/kg-day	N/A	N/A	2.3E-04
	Manganese	9.8E+03	µg/L	9.8E+03	µg/L	M	2.7E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.1E+01
	(Total)												1.2E+01
												Total Hazard Index Across All Exposure Routes/Pathways	1E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.68.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-114U
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,3-Dichlorobenzene	6.9E-01	µg/L	6.9E-01	µg/L	M	1.3E-05	mg/kg-day	9.0E-04	mg/kg-day	N/A	N/A	1.5E-02
	1,4-Dichlorobenzene	7.9E+00	µg/L	7.9E+00	µg/L	M	1.5E-04	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	5.1E-03
	Chlorobenzene	3.6E+01	µg/L	3.6E+01	µg/L	M	6.9E-04	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	3.5E-02
	Tetrachloroethylene	7.8E+01	µg/L	7.8E+01	µg/L	M	1.5E-03	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	1.5E-01
	Arsenic	2.4E+00	µg/L	2.4E+00	µg/L	M	4.6E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.5E-01
	Chromium	1.3E+01	µg/L	1.3E+01	µg/L	M	2.5E-04	mg/kg-day	1.5E+00	mg/kg-day	N/A	N/A	1.6E-04
	Manganese	9.8E+03	µg/L	9.8E+03	µg/L	M	1.9E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	7.9E+00
	(Total)												8.2E+00
												Total Hazard Index Across All Exposure Routes/Pathways	8E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.69.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-B-7
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Methylene chloride (Total)	1.9E+04	µg/L	1.9E+04	µg/L	M	5.2E-01	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	8.7E+00
													8.7E+00
												Total Hazard Index Across All Exposure Routes/Pathways	9E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.69.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-B-7
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Methylene chloride (Total)	6.3E+03	µg/L	6.3E+03	µg/L	M	1.2E-01	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	2.0E+00
													2.0E+00
												Total Hazard Index Across All Exposure Routes/Pathways	2E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.70.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-3
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,4-Dichlorobenzene	5.6E-01	µg/L	5.6E-01	µg/L	M	1.5E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	5.1E-04
	Hexavalent Chromium	2.9E+01	µg/L	2.9E+01	µg/L	M	8.0E-04	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	2.7E-01
	Arsenic	1.8E+01	µg/L	1.8E+01	µg/L	M	4.9E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.6E+00
	Manganese	9.8E+03	µg/L	9.8E+03	µg/L	M	2.7E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.1E+01
	(Total)												1.3E+01
												Total Hazard Index Across All Exposure Routes/Pathways	1E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.70.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium; Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-3
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,4-Dichlorobenzene	5.2E-01	µg/L	5.2E-01	µg/L	M	1.0E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	3.3E-04
	Hexavalent Chromium	2.9E+01	µg/L	2.9E+01	µg/L	M	5.6E-04	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	1.9E-01
	Arsenic	1.3E+01	µg/L	1.3E+01	µg/L	M	2.5E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	8.3E-01
	Manganese	7.9E+03	µg/L	7.9E+03	µg/L	M	1.5E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	6.3E+00
	(Total)												7.3E+00
												Total Hazard Index Across All Exposure Routes/Pathways	7E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.71.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-4
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Methylene chloride (Total)	5.9E+02	µg/L	5.9E+02	µg/L	M	1.6E-02	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	2.7E-01
													2.7E-01
												Total Hazard Index Across All Exposure Routes/Pathways	3E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.71.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-4
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Methylene chloride (Total)	2.0E+02	µg/L	2.0E+02	µg/L	M	3.8E-03	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	6.3E-02
													6.3E-02
												Total Hazard Index Across All Exposure Routes/Pathways	6E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.72.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-5
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	6.3E-01	µg/L	6.3E-01	µg/L	M	1.7E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	5.8E-02
	Thallium	8.0E-01	µg/L	8.0E-01	µg/L	M	2.2E-05	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	2.7E-01
	(Total)												3.3E-01
												Total Hazard Index Across All Exposure Routes/Pathways	3E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.72.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-5
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	4.3E-01	µg/L	4.3E-01	µg/L	M	8.2E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.7E-02
	Thallium	4.9E-01	µg/L	4.9E-01	µg/L	M	9.4E-06	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	1.2E-01
	(Total)												1.4E-01
												Total Hazard Index Across All Exposure Routes/Pathways	1E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.73.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-7
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	5.4E+00	µg/L	5.4E+00	µg/L	M	1.5E-04	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	2.5E-03
	Arsenic	8.6E-01	µg/L	8.6E-01	µg/L	M	2.4E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	7.9E-02
	Manganese	8.9E+01	µg/L	8.9E+01	µg/L	M	2.4E-03	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.0E-01
	(Total)												1.8E-01
												Total Hazard Index Across All Exposure Routes/Pathways	2E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.73.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-7
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	2.8E+00	µg/L	2.8E+00	µg/L	M	5.4E-05	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	8.9E-04
	Arsenic	7.6E-01	µg/L	7.6E-01	µg/L	M	1.5E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.8E-02
	Manganese	4.4E+01	µg/L	4.4E+01	µg/L	M	8.5E-04	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	3.5E-02
	(Total)												8.5E-02
												Total Hazard Index Across All Exposure Routes/Pathways	8E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.74.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-9
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	1.0E+01	µg/L	1.0E+01	µg/L	M	2.7E-04	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	4.6E-03
	Cyanide (Total)	2.2E+00	µg/L	2.2E+00	µg/L	M	6.0E-05	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	3.0E-03
													7.6E-03
												Total Hazard Index Across All Exposure Routes/Pathways	8E-03

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.74.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-9
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	4.3E+00	µg/L	4.3E+00	µg/L	M	8.3E-05	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	1.4E-03
	Cyanide (Total)	2.2E+00	µg/L	2.2E+00	µg/L	M	4.2E-05	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	2.1E-03
													3.5E-03
												Total Hazard Index Across All Exposure Routes/Pathways	3E-03

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.75.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-10
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	9.3E+00	µg/L	9.3E+00	µg/L	M	2.5E-04	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	4.2E-03
	Arsenic	8.6E-01	µg/L	8.6E-01	µg/L	M	2.4E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	7.9E-02
	Manganese	2.9E+03	µg/L	2.9E+03	µg/L	M	7.9E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	3.3E+00
	(Total)												3.4E+00
												Total Hazard Index Across All Exposure Routes/Pathways	3E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.75.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-10
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	4.1E+00	µg/L	4.1E+00	µg/L	M	7.8E-05	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	1.3E-03
	Arsenic	8.6E-01	µg/L	8.6E-01	µg/L	M	1.6E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	5.5E-02
	Manganese	1.7E+03	µg/L	1.7E+03	µg/L	M	3.3E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.4E+00
	(Total)												1.4E+00
												Total Hazard Index Across All Exposure Routes/Pathways	1E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.76.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-11
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Atrazine	7.0E+00	µg/L	7.0E+00	µg/L	M	1.9E-04	mg/kg-day	3.5E-02	mg/kg-day	N/A	N/A	5.5E-03
	(Total)												5.5E-03
												Total Hazard Index Across All Exposure Routes/Pathways	5E-03

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.76.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-11
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Atrazine	3.5E+00	µg/L	3.5E+00	µg/L	M	6.7E-05	mg/kg-day	3.5E-02	mg/kg-day	N/A	N/A	1.9E-03
	(Total)												1.9E-03
												Total Hazard Index Across All Exposure Routes/Pathways	2E-03

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.77.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: All On-Site Monitoring Wells
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,3-Dichlorobenzene	6.9E-01	µg/L	6.9E-01	µg/L	M	1.9E-05	mg/kg-day	9.0E-04	mg/kg-day	N/A	N/A	2.1E-02
	1,4-Dichlorobenzene	7.9E+00	µg/L	7.9E+00	µg/L	M	2.2E-04	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	7.2E-03
	Carbon tetrachloride	1.0E+00	µg/L	1.0E+00	µg/L	M	2.7E-05	mg/kg-day	7.0E-04	mg/kg-day	N/A	N/A	3.9E-02
	Chlorobenzene	3.6E+01	µg/L	3.6E+01	µg/L	M	9.9E-04	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	4.9E-02
	Methylene chloride	1.9E+04	µg/L	1.9E+04	µg/L	M	5.2E-01	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	8.7E+00
	Tetrachloroethylene	7.8E+01	µg/L	7.8E+01	µg/L	M	2.1E-03	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	2.1E-01
	Atrazine	7.0E+00	µg/L	7.0E+00	µg/L	M	1.9E-04	mg/kg-day	3.5E-02	mg/kg-day	N/A	N/A	5.5E-03
	Pentachlorophenol	1.0E+00	µg/L	1.0E+00	µg/L	M	2.7E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	9.1E-04
	Heptachlor epoxide	1.3E-02	µg/L	1.3E-02	µg/L	M	3.6E-07	mg/kg-day	1.3E-05	mg/kg-day	N/A	N/A	2.7E-02
	Dioxin TEQ	3.4E-06	µg/L	3.4E-06	µg/L	M	9.3E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Hexavalent Chromium	2.9E+01	µg/L	2.9E+01	µg/L	M	8.0E-04	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	2.7E-01
	Antimony	3.3E+00	µg/L	3.3E+00	µg/L	M	9.0E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	2.3E-01
	Arsenic	5.8E+01	µg/L	5.8E+01	µg/L	M	1.6E-03	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	5.3E+00
	Chromium	1.3E+01	µg/L	1.3E+01	µg/L	M	3.5E-04	mg/kg-day	1.5E+00	mg/kg-day	N/A	N/A	2.3E-04
	Cyanide	2.2E+00	µg/L	2.2E+00	µg/L	M	6.0E-05	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	3.0E-03
	Manganese	9.8E+03	µg/L	9.8E+03	µg/L	M	2.7E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.1E+01
	Thallium	7.5E+00	µg/L	7.5E+00	µg/L	M	2.1E-04	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	2.6E+00
	(Total)												2.9E+01
												Total Hazard Index Across All Exposure Routes/Pathways	3E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.77.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: All On-Site Monitoring Wells
Receptor Population: Resident
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,3-Dichlorobenzene	5.0E-01	µg/L	5.0E-01	µg/L	M	9.6E-06	mg/kg-day	9.0E-04	mg/kg-day	N/A	N/A	1.1E-02
	1,4-Dichlorobenzene	6.1E-01	µg/L	6.1E-01	µg/L	M	1.2E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	3.9E-04
	Carbon tetrachloride	5.1E-01	µg/L	5.1E-01	µg/L	M	9.7E-06	mg/kg-day	7.0E-04	mg/kg-day	N/A	N/A	1.4E-02
	Chlorobenzene	1.0E+00	µg/L	1.0E+00	µg/L	M	2.0E-05	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	9.8E-04
	Methylene chloride	2.9E+02	µg/L	2.9E+02	µg/L	M	5.6E-03	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	9.3E-02
	Tetrachloroethylene	1.6E+00	µg/L	1.6E+00	µg/L	M	3.1E-05	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	3.1E-03
	Atrazine	1.6E+00	µg/L	1.6E+00	µg/L	M	3.0E-05	mg/kg-day	3.5E-02	mg/kg-day	N/A	N/A	8.6E-04
	Pentachlorophenol	1.0E+00	µg/L	1.0E+00	µg/L	M	1.9E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	6.4E-04
	Heptachlor epoxide	5.4E-03	µg/L	5.4E-03	µg/L	M	1.0E-07	mg/kg-day	1.3E-05	mg/kg-day	N/A	N/A	7.9E-03
	Dioxin TEQ	1.0E-07	µg/L	1.0E-07	µg/L	M	1.9E-12	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Hexavalent Chromium	6.4E+00	µg/L	6.4E+00	µg/L	M	1.2E-04	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	4.1E-02
	Antimony	7.4E-01	µg/L	7.4E-01	µg/L	M	1.4E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	3.6E-02
	Arsenic	3.4E+00	µg/L	3.4E+00	µg/L	M	6.5E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.2E-01
	Chromium	1.6E+00	µg/L	1.6E+00	µg/L	M	3.1E-05	mg/kg-day	1.5E+00	mg/kg-day	N/A	N/A	2.1E-05
	Cyanide	1.8E+00	µg/L	1.8E+00	µg/L	M	3.5E-05	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.7E-03
	Manganese	1.1E+03	µg/L	1.1E+03	µg/L	M	2.1E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	8.9E-01
	Thallium	6.0E-01	µg/L	6.0E-01	µg/L	M	1.1E-05	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	1.4E-01
	(Total)												1.5E+00
												Total Hazard Index Across All Exposure Routes/Pathways	1E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.78.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil
Exposure Point: Warehouse Area
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Acetophenone	9.8E-02	mg/kg	9.8E-02	mg/kg	M	5.4E-07	mg/kg-day	1.0E-01	mg/kg-day	N/A	N/A	5.4E-06
	Benzo(a)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.6E-01	mg/kg	2.6E-01	mg/kg	M	1.4E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)fluoranthene	5.8E-01	mg/kg	5.8E-01	mg/kg	M	3.2E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dibenz(a,h)anthracene	1.8E-01	mg/kg	1.8E-01	mg/kg	M	9.6E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Indeno(1,2,3-cd)pyrene	1.9E-01	mg/kg	1.9E-01	mg/kg	M	1.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dioxin TEQ	9.6E-06	mg/kg	9.6E-06	mg/kg	M	5.3E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	7.0E+00	mg/kg	7.0E+00	mg/kg	M	3.8E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.3E-01
	Chromium	3.2E+01	mg/kg	3.2E+01	mg/kg	M	1.7E-04	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	5.8E-02
	Manganese	6.8E+02	mg/kg	6.8E+02	mg/kg	M	3.7E-03	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	5.3E-02
	Mercury	1.1E-01	mg/kg	1.1E-01	mg/kg	M	6.0E-07	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	6.0E-03
	Thallium	6.0E+00	mg/kg	6.0E+00	mg/kg	M	3.3E-05	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	4.1E-01
	Vanadium	1.3E+01	mg/kg	1.3E+01	mg/kg	M	7.0E-05	mg/kg-day	9.0E-03	mg/kg-day	N/A	N/A	7.8E-03
	(Total)												6.6E-01
Dermal													
	Benzo(a)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	6.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.6E-01	mg/kg	2.6E-01	mg/kg	M	8.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)fluoranthene	5.8E-01	mg/kg	5.8E-01	mg/kg	M	1.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dibenz(a,h)anthracene	1.8E-01	mg/kg	1.8E-01	mg/kg	M	5.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Indeno(1,2,3-cd)pyrene	1.9E-01	mg/kg	1.9E-01	mg/kg	M	5.9E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dioxin TEQ	9.6E-06	mg/kg	9.6E-06	mg/kg	M	6.9E-12	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	7.0E+00	mg/kg	7.0E+00	mg/kg	M	5.0E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.7E-02
	(Total)												1.7E-02
												Total Hazard Index Across All Exposure Routes/Pathways	7E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.78.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil
Exposure Point: Warehouse Area
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Acetophenone	9.8E-02	mg/kg	9.8E-02	mg/kg	M	2.7E-07	mg/kg-day	1.0E-01	mg/kg-day	N/A	N/A	2.7E-06
	Benzo(a)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	6.0E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.6E-01	mg/kg	2.6E-01	mg/kg	M	7.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)fluoranthene	5.8E-01	mg/kg	5.8E-01	mg/kg	M	1.6E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dibenz(a,h)anthracene	1.8E-01	mg/kg	1.8E-01	mg/kg	M	4.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Indeno(1,2,3-cd)pyrene	1.9E-01	mg/kg	1.9E-01	mg/kg	M	5.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dioxin TEQ	9.4E-06	mg/kg	9.4E-06	mg/kg	M	2.6E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	7.0E+00	mg/kg	7.0E+00	mg/kg	M	1.9E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	6.4E-02
	Chromium	3.2E+01	mg/kg	3.2E+01	mg/kg	M	8.7E-05	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	2.9E-02
	Manganese	6.8E+02	mg/kg	6.8E+02	mg/kg	M	1.9E-03	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	2.7E-02
	Mercury	1.1E-01	mg/kg	1.1E-01	mg/kg	M	3.0E-07	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	3.0E-03
	Thallium	6.0E+00	mg/kg	6.0E+00	mg/kg	M	1.6E-05	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	2.1E-01
	Vanadium	1.3E+01	mg/kg	1.3E+01	mg/kg	M	3.5E-05	mg/kg-day	9.0E-03	mg/kg-day	N/A	N/A	3.9E-03
	(Total)												3.3E-01
Dermal													
	Benzo(a)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	6.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.6E-01	mg/kg	2.6E-01	mg/kg	M	8.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)fluoranthene	5.8E-01	mg/kg	5.8E-01	mg/kg	M	1.8E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dibenz(a,h)anthracene	1.8E-01	mg/kg	1.8E-01	mg/kg	M	5.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Indeno(1,2,3-cd)pyrene	1.9E-01	mg/kg	1.9E-01	mg/kg	M	5.9E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dioxin TEQ	9.4E-06	mg/kg	9.4E-06	mg/kg	M	6.7E-12	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	7.0E+00	mg/kg	7.0E+00	mg/kg	M	5.0E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.7E-02
	(Total)												1.7E-02

Total Hazard Index Across All Exposure Routes/Pathways 3E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.79.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-101U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	2.6E+01	µg/L	2.6E+01	µg/L	M	2.5E-03	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	4.2E-02
	Antimony	1.7E+00	µg/L	1.7E+00	µg/L	M	1.6E-04	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	4.1E-01
	Arsenic	1.5E+00	µg/L	1.5E+00	µg/L	M	1.4E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.8E-01
	Chromium	1.1E+01	µg/L	1.1E+01	µg/L	M	1.1E-03	mg/kg-day	1.5E+00	mg/kg-day	N/A	N/A	7.2E-04
	Manganese	2.1E+02	µg/L	2.1E+02	µg/L	M	2.1E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	8.6E-01
	Thallium	8.5E-01	µg/L	8.5E-01	µg/L	M	8.2E-05	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	1.0E+00
	(Total)												2.8E+00
												Total Hazard Index Across All Exposure Routes/Pathways	3E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.79.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-101U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	9.8E+00	µg/L	9.8E+00	µg/L	M	5.5E-04	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	9.1E-03
	Antimony	8.5E-01	µg/L	8.5E-01	µg/L	M	4.7E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	1.2E-01
	Arsenic	6.1E-01	µg/L	6.1E-01	µg/L	M	3.4E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.1E-01
	Chromium	4.3E+00	µg/L	4.3E+00	µg/L	M	2.4E-04	mg/kg-day	1.5E+00	mg/kg-day	N/A	N/A	1.6E-04
	Manganese	8.6E+01	µg/L	8.6E+01	µg/L	M	4.8E-03	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	2.0E-01
	Thallium	7.6E-01	µg/L	7.6E-01	µg/L	M	4.2E-05	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	5.2E-01
	(Total)												9.7E-01
												Total Hazard Index Across All Exposure Routes/Pathways	1E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.60.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-102U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic (Total)	2.6E-01	µg/L	2.6E-01	µg/L	M	2.5E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	8.3E-02 8.3E-02
												Total Hazard Index Across All Exposure Routes/Pathways	8E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.80.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-102U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic (Total)	2.6E-01	µg/L	2.6E-01	µg/L	M	1.4E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.8E-02 4.8E-02
												Total Hazard Index Across All Exposure Routes/Pathways	5E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.81.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-103R
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	2.1E+00	µg/L	2.1E+00	µg/L	M	2.0E-04	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	5.0E-01
	Arsenic	1.9E+00	µg/L	1.9E+00	µg/L	M	1.8E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	6.1E-01
	Manganese	1.3E+02	µg/L	1.3E+02	µg/L	M	1.2E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	5.2E-01
	(Total)												1.6E+00
												Total Hazard Index Across All Exposure Routes/Pathways	2E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.81.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-103R
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	1.2E+00	µg/L	1.2E+00	µg/L	M	6.5E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	1.6E-01
	Arsenic	1.5E+00	µg/L	1.5E+00	µg/L	M	8.1E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.7E-01
	Manganese	1.0E+02	µg/L	1.0E+02	µg/L	M	5.8E-03	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	2.4E-01
	(Total)												6.7E-01
												Total Hazard Index Across All Exposure Routes/Pathways	7E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.82.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-103U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic (Total)	8.1E-01	µg/L	8.1E-01	µg/L	M	7.8E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.6E-01 2.6E-01
												Total Hazard Index Across All Exposure Routes/Pathways	3E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.82.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-103U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Arsenic (Total)	4.9E-01	µg/L	4.9E-01	µg/L	M	2.7E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	9.1E-02 9.1E-02
												Total Hazard Index Across All Exposure Routes/Pathways	9E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.83.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-104U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	2.2E+00	µg/L	2.2E+00	µg/L	M	2.1E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	7.0E-01
	Manganese	1.1E+03	µg/L	1.1E+03	µg/L	M	1.1E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	4.4E+00
	(Total)												5.1E+00
												Total Hazard Index Across All Exposure Routes/Pathways	5E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.83.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-104U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	2.0E+00	µg/L	2.0E+00	µg/L	M	1.1E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	3.7E-01
	Manganese	7.4E+02	µg/L	7.4E+02	µg/L	M	4.1E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.7E+00
	(Total)												2.1E+00
												Total Hazard Index Across All Exposure Routes/Pathways	2E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.84.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-106U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	1.8E+00	µg/L	1.8E+00	µg/L	M	1.7E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	5.8E-01
	Manganese	4.4E+02	µg/L	4.4E+02	µg/L	M	4.2E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.7E+00
	(Total)												2.3E+00
												Total Hazard Index Across All Exposure Routes/Pathways	2E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.84.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-106U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	9.4E-01	µg/L	9.4E-01	µg/L	M	5.2E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.7E-01
	Manganese	1.7E+02	µg/L	1.7E+02	µg/L	M	9.2E-03	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	3.8E-01
	(Total)												5.6E-01
												Total Hazard Index Across All Exposure Routes/Pathways	6E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.85.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-107R
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Dioxin TEQ	3.4E-06	µg/L	3.4E-06	µg/L	M	3.3E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	8.9E+00	µg/L	8.9E+00	µg/L	M	8.5E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.8E+00
	Manganese	1.6E+03	µg/L	1.6E+03	µg/L	M	1.5E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	6.2E+00
	(Total)												9.1E+00
												Total Hazard Index Across All Exposure Routes/Pathways	9E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.85.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-107R
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Dioxin TEQ	3.4E-06	µg/L	3.4E-06	µg/L	M	1.9E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	6.2E+00	µg/L	6.2E+00	µg/L	M	3.4E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.1E+00
	Manganese	1.1E+03	µg/L	1.1E+03	µg/L	M	6.2E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	2.6E+00
	(Total)												3.8E+00
												Total Hazard Index Across All Exposure Routes/Pathways	4E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.86.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-107U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	1.6E+00	µg/L	1.6E+00	µg/L	M	1.5E-04	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	3.8E-01
	Arsenic	3.6E+00	µg/L	3.6E+00	µg/L	M	3.4E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.1E+00
	Manganese	3.6E+03	µg/L	3.6E+03	µg/L	M	3.5E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.4E+01
	(Total)												1.6E+01
												Total Hazard Index Across All Exposure Routes/Pathways	2E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.86.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-107U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	8.0E-01	µg/L	8.0E-01	µg/L	M	4.4E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	1.1E-01
	Arsenic	3.1E+00	µg/L	3.1E+00	µg/L	M	1.7E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	5.7E-01
	Manganese	2.7E+03	µg/L	2.7E+03	µg/L	M	1.5E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	6.2E+00
	(Total)												6.9E+00
												Total Hazard Index Across All Exposure Routes/Pathways	7E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.87.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-109U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Carbon tetrachloride	1.0E+00	µg/L	1.0E+00	µg/L	M	9.6E-05	mg/kg-day	7.0E-04	mg/kg-day	N/A	N/A	1.4E-01
	Heptachlor epoxide	1.3E-02	µg/L	1.3E-02	µg/L	M	1.2E-06	mg/kg-day	1.3E-05	mg/kg-day	N/A	N/A	9.6E-02
	Arsenic	2.3E+01	µg/L	2.3E+01	µg/L	M	2.2E-03	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	7.4E+00
	Manganese	4.2E+03	µg/L	4.2E+03	µg/L	M	4.1E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.7E+01
	Thallium	7.5E+00	µg/L	7.5E+00	µg/L	M	7.2E-04	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	9.0E+00
	(Total)												3.4E+01
												Total Hazard Index Across All Exposure Routes/Pathways	3E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.87.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-109U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Carbon tetrachloride	6.7E-01	µg/L	6.7E-01	µg/L	M	3.7E-05	mg/kg-day	7.0E-04	mg/kg-day	N/A	N/A	5.3E-02
	Heptachlor epoxide	1.3E-02	µg/L	1.3E-02	µg/L	M	7.2E-07	mg/kg-day	1.3E-05	mg/kg-day	N/A	N/A	5.6E-02
	Arsenic	1.8E+01	µg/L	1.8E+01	µg/L	M	1.0E-03	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	3.3E+00
	Manganese	3.9E+03	µg/L	3.9E+03	µg/L	M	2.2E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	9.0E+00
	Thallium	2.7E+00	µg/L	2.7E+00	µg/L	M	1.5E-04	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	1.9E+00
	(Total)												1.4E+01
												Total Hazard Index Across All Exposure Routes/Pathways	1E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.88.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-110R
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	5.4E+00	µg/L	5.4E+00	µg/L	M	5.2E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.7E+00
	Manganese	1.8E+03	µg/L	1.8E+03	µg/L	M	1.7E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	7.1E+00
	(Total)												8.8E+00
												Total Hazard Index Across All Exposure Routes/Pathways	9E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.88.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-110R
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	4.9E+00	µg/L	4.9E+00	µg/L	M	2.7E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	9.0E-01
	Manganese	1.6E+03	µg/L	1.6E+03	µg/L	M	8.8E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	3.7E+00
	(Total)												4.6E+00
												Total Hazard Index Across All Exposure Routes/Pathways	5E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.89.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-110U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	1.5E+01	µg/L	1.5E+01	µg/L	M	1.4E-03	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	2.4E-02
	Pentachlorophenol	1.0E+00	µg/L	1.0E+00	µg/L	M	9.6E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	3.2E-03
	Antimony	1.6E+00	µg/L	1.6E+00	µg/L	M	1.5E-04	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	3.8E-01
	Arsenic	2.4E+00	µg/L	2.4E+00	µg/L	M	2.3E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	7.7E-01
	Manganese	1.5E+03	µg/L	1.5E+03	µg/L	M	1.4E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	6.0E+00
	(Total)												7.2E+00
												Total Hazard Index Across All Exposure Routes/Pathways	7E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.89.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-110U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	6.8E+00	µg/L	6.8E+00	µg/L	M	3.8E-04	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	6.3E-03
	Pentachlorophenol	1.0E+00	µg/L	1.0E+00	µg/L	M	5.6E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.9E-03
	Antimony	1.3E+00	µg/L	1.3E+00	µg/L	M	7.3E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	1.8E-01
	Arsenic	1.5E+00	µg/L	1.5E+00	µg/L	M	8.3E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.8E-01
	Manganese	9.6E+02	µg/L	9.6E+02	µg/L	M	5.4E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	2.2E+00
	(Total)												2.7E+00
												Total Hazard Index Across All Exposure Routes/Pathways	3E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.90.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-111U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	2.0E+00	µg/L	2.0E+00	µg/L	M	1.9E-04	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	4.8E-01
	Arsenic	6.5E-01	µg/L	6.5E-01	µg/L	M	6.2E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.1E-01
	Manganese	6.9E+02	µg/L	6.9E+02	µg/L	M	6.6E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	2.8E+00
	(Total)												3.5E+00
												Total Hazard Index Across All Exposure Routes/Pathways	3E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.90.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-111U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	8.8E-01	µg/L	8.8E-01	µg/L	M	4.9E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	1.2E-01
	Arsenic	6.5E-01	µg/L	6.5E-01	µg/L	M	3.6E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.2E-01
	Manganese	4.4E+02	µg/L	4.4E+02	µg/L	M	2.4E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.0E+00
	(Total)												1.3E+00
												Total Hazard Index Across All Exposure Routes/Pathways	1E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.91.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-112U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	3.3E+00	µg/L	3.3E+00	µg/L	M	3.2E-04	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	7.9E-01
	Arsenic	9.8E-01	µg/L	9.8E-01	µg/L	M	9.4E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	3.1E-01
	(Total)												1.1E+00
												Total Hazard Index Across All Exposure Routes/Pathways	1E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
• - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.91.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-112U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Antimony	2.0E+00	µg/L	2.0E+00	µg/L	M	1.1E-04	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	2.8E-01
	Arsenic	6.8E-01	µg/L	6.8E-01	µg/L	M	3.8E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.3E-01
	(Total)												4.0E-01
												Total Hazard Index Across All Exposure Routes/Pathways	4E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.92.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-113R
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	5.8E+01	µg/L	5.8E+01	µg/L	M	5.6E-03	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.9E+01
	Manganese	1.3E+03	µg/L	1.3E+03	µg/L	M	1.3E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	5.2E+00
	(Total)												2.4E+01
												Total Hazard Index Across All Exposure Routes/Pathways	2E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.92.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-113R
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	5.8E+01	µg/L	5.8E+01	µg/L	M	3.2E-03	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.1E+01
	Manganese	1.3E+03	µg/L	1.3E+03	µg/L	M	7.3E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	3.0E+00
	(Total)												1.4E+01
												Total Hazard Index Across All Exposure Routes/Pathways	1E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.93.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-114U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,3-Dichlorobenzene	6.9E-01	µg/L	6.9E-01	µg/L	M	6.6E-05	mg/kg-day	9.0E-04	mg/kg-day	N/A	N/A	7.4E-02
	1,4-Dichlorobenzene	7.9E+00	µg/L	7.9E+00	µg/L	M	7.6E-04	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	2.5E-02
	Chlorobenzene	3.6E+01	µg/L	3.6E+01	µg/L	M	3.5E-03	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.7E-01
	Tetrachloroethylene	7.8E+01	µg/L	7.8E+01	µg/L	M	7.5E-03	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	7.5E-01
	Arsenic	2.4E+00	µg/L	2.4E+00	µg/L	M	2.3E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	7.7E-01
	Chromium	1.3E+01	µg/L	1.3E+01	µg/L	M	1.2E-03	mg/kg-day	1.5E+00	mg/kg-day	N/A	N/A	8.2E-04
	Manganese	9.8E+03	µg/L	9.8E+03	µg/L	M	9.4E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	3.9E+01
	(Total)												4.1E+01
												Total Hazard Index Across All Exposure Routes/Pathways	4E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.93.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-114U
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,3-Dichlorobenzene	6.9E-01	µg/L	6.9E-01	µg/L	M	3.8E-05	mg/kg-day	9.0E-04	mg/kg-day	N/A	N/A	4.3E-02
	1,4-Dichlorobenzene	7.9E+00	µg/L	7.9E+00	µg/L	M	4.4E-04	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.5E-02
	Chlorobenzene	3.6E+01	µg/L	3.6E+01	µg/L	M	2.0E-03	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.0E-01
	Tetrachloroethylene	7.8E+01	µg/L	7.8E+01	µg/L	M	4.3E-03	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	4.3E-01
	Arsenic	2.4E+00	µg/L	2.4E+00	µg/L	M	1.3E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.4E-01
	Chromium	1.3E+01	µg/L	1.3E+01	µg/L	M	7.1E-04	mg/kg-day	1.5E+00	mg/kg-day	N/A	N/A	4.7E-04
	Manganese	9.8E+03	µg/L	9.8E+03	µg/L	M	5.5E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	2.3E+01
	(Total)												2.4E+01
												Total Hazard Index Across All Exposure Routes/Pathways	2E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.94.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-B-7
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Methylene chloride (Total)	1.9E+04	µg/L	1.9E+04	µg/L	M	1.8E+00	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	3.0E+01 3.0E+01
												Total Hazard Index Across All Exposure Routes/Pathways	3E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.94.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-B-7
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride (Total)	6.3E+03	µg/L	6.3E+03	µg/L	M	3.5E-01	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	5.9E+00
													5.9E+00
												Total Hazard Index Across All Exposure Routes/Pathways	6E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.95.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-3
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,4-Dichlorobenzene	5.6E-01	µg/L	5.6E-01	µg/L	M	5.4E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.8E-03
	Hexavalent Chromium	2.9E+01	µg/L	2.9E+01	µg/L	M	2.8E-03	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	9.3E-01
	Arsenic	1.8E+01	µg/L	1.8E+01	µg/L	M	1.7E-03	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	5.7E+00
	Manganese	9.8E+03	µg/L	9.8E+03	µg/L	M	9.4E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	3.9E+01
	(Total)												4.6E+01
												Total Hazard Index Across All Exposure Routes/Pathways	5E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.95.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-3
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,4-Dichlorobenzene	5.2E-01	µg/L	5.2E-01	µg/L	M	2.9E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	9.7E-04
	Hexavalent Chromium	2.9E+01	µg/L	2.9E+01	µg/L	M	1.6E-03	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	5.4E-01
	Arsenic	1.3E+01	µg/L	1.3E+01	µg/L	M	7.2E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.4E+00
	Manganese	7.9E+03	µg/L	7.9E+03	µg/L	M	4.4E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.8E+01
	(Total)												2.1E+01
												Total Hazard Index Across All Exposure Routes/Pathways	2E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.96.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-4
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route - EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Referehce Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride (Total)	5.9E+02	µg/L	5.9E+02	µg/L	M	5.7E-02	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	9.4E-01
													9.4E-01
												Total Hazard Index Across All Exposure Routes/Pathways	9E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.96.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-4
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Methylene chloride (Total)	2.0E+02	µg/L	2.0E+02	µg/L	M	1.1E-02	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	1.8E-01 1.8E-01
												Total Hazard Index Across All Exposure Routes/Pathways	2E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.97.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-5
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	6.3E-01	µg/L	6.3E-01	µg/L	M	6.0E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.0E-01
	Thallium	8.0E-01	µg/L	8.0E-01	µg/L	M	7.7E-05	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	9.6E-01
	(Total)												1.2E+00
												Total Hazard Index Across All Exposure Routes/Pathways	1E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.97.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-5
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Arsenic	4.3E-01	µg/L	4.3E-01	µg/L	M	2.4E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	8.0E-02
	Thallium	4.9E-01	µg/L	4.9E-01	µg/L	M	2.7E-05	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	3.4E-01
	(Total)												4.2E-01
												Total Hazard Index Across All Exposure Routes/Pathways	4E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.98.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-7
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	5.4E+00	µg/L	5.4E+00	µg/L	M	5.2E-04	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	8.6E-03
	Arsenic	8.6E-01	µg/L	8.6E-01	µg/L	M	8.2E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.7E-01
	Manganese	8.9E+01	µg/L	8.9E+01	µg/L	M	8.6E-03	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	3.6E-01
	(Total)												6.4E-01
												Total Hazard Index Across All Exposure Routes/Pathways	6E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.98.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-7
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	2.8E+00	µg/L	2.8E+00	µg/L	M	1.6E-04	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	2.6E-03
	Arsenic	7.6E-01	µg/L	7.6E-01	µg/L	M	4.2E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.4E-01
	Manganese	4.4E+01	µg/L	4.4E+01	µg/L	M	2.5E-03	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.0E-01
	(Total)												2.5E-01
												Total Hazard Index Across All Exposure Routes/Pathways	2E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.99.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-9
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	1.0E+01	µg/L	1.0E+01	µg/L	M	9.6E-04	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	1.6E-02
	Cyanide (Total)	2.2E+00	µg/L	2.2E+00	µg/L	M	2.1E-04	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.1E-02
													2.7E-02
												Total Hazard Index Across All Exposure Routes/Pathways	3E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.99.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-9
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	4.3E+00	µg/L	4.3E+00	µg/L	M	2.4E-04	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	4.0E-03
	Cyanide (Total)	2.2E+00	µg/L	2.2E+00	µg/L	M	1.2E-04	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	6.1E-03
													1.0E-02
												Total Hazard Index Across All Exposure Routes/Pathways	1E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.100.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-10
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	9.3E+00	µg/L	9.3E+00	µg/L	M	8.9E-04	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	1.5E-02
	Arsenic	8.6E-01	µg/L	8.6E-01	µg/L	M	8.2E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.7E-01
	Manganese	2.9E+03	µg/L	2.9E+03	µg/L	M	2.8E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	1.2E+01
	(Total)												1.2E+01
												Total Hazard Index Across All Exposure Routes/Pathways	1E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.100.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-10
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Methylene chloride	4.1E+00	µg/L	4.1E+00	µg/L	M	2.3E-04	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	3.8E-03
	Arsenic	8.6E-01	µg/L	8.6E-01	µg/L	M	4.8E-05	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.6E-01
	Manganese	1.7E+03	µg/L	1.7E+03	µg/L	M	9.6E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	4.0E+00
	(Total)												4.2E+00
												Total Hazard Index Across All Exposure Routes/Pathways	4E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.101.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-11
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Atrazine	7.0E+00	µg/L	7.0E+00	µg/L	M	6.7E-04	mg/kg-day	3.5E-02	mg/kg-day	N/A	N/A	1.9E-02
	(Total)												1.9E-02
												Total Hazard Index Across All Exposure Routes/Pathways	2E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.101.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: On-Site Monitoring Well - MW-L-11
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Atrazine	3.5E+00	µg/L	3.5E+00	µg/L	M	1.9E-04	mg/kg-day	3.5E-02	mg/kg-day	N/A	N/A	5.6E-03
	(Total)												5.6E-03
												Total Hazard Index Across All Exposure Routes/Pathways	6E-03

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.102.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: All On-Site Monitoring Wells
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,3-Dichlorobenzene	6.9E-01	µg/L	6.9E-01	µg/L	M	6.6E-05	mg/kg-day	9.0E-04	mg/kg-day	N/A	N/A	7.4E-02
	1,4-Dichlorobenzene	7.9E+00	µg/L	7.9E+00	µg/L	M	7.6E-04	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	2.5E-02
	Carbon tetrachloride	1.0E+00	µg/L	1.0E+00	µg/L	M	9.6E-05	mg/kg-day	7.0E-04	mg/kg-day	N/A	N/A	1.4E-01
	Chlorobenzene	3.6E+01	µg/L	3.6E+01	µg/L	M	3.5E-03	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.7E-01
	Methylene chloride	1.9E+04	µg/L	1.9E+04	µg/L	M	1.8E+00	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	3.0E+01
	Tetrachloroethylene	7.8E+01	µg/L	7.8E+01	µg/L	M	7.5E-03	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	7.5E-01
	Atrazine	7.0E+00	µg/L	7.0E+00	µg/L	M	6.7E-04	mg/kg-day	3.5E-02	mg/kg-day	N/A	N/A	1.9E-02
	Pentachlorophenol	1.0E+00	µg/L	1.0E+00	µg/L	M	9.6E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	3.2E-03
	Heptachlor epoxide	1.3E-02	µg/L	1.3E-02	µg/L	M	1.2E-06	mg/kg-day	1.3E-05	mg/kg-day	N/A	N/A	9.5E-02
	Dioxin TEQ	3.4E-06	µg/L	3.4E-06	µg/L	M	3.3E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Hexavalent Chromium	2.9E+01	µg/L	2.9E+01	µg/L	M	2.8E-03	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	9.3E-01
	Antimony	3.3E+00	µg/L	3.3E+00	µg/L	M	3.2E-04	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	7.9E-01
	Arsenic	5.8E+01	µg/L	5.8E+01	µg/L	M	5.6E-03	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.9E+01
	Chromium	1.3E+01	µg/L	1.3E+01	µg/L	M	1.2E-03	mg/kg-day	1.5E+00	mg/kg-day	N/A	N/A	8.2E-04
	Cyanide	2.2E+00	µg/L	2.2E+00	µg/L	M	2.1E-04	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.1E-02
	Manganese	9.8E+03	µg/L	9.8E+03	µg/L	M	9.4E-01	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	3.9E+01
	Thallium	7.5E+00	µg/L	7.5E+00	µg/L	M	7.2E-04	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	9.0E+00
	(Total)												1.0E+02
												Total Hazard Index Across All Exposure Routes/Pathways	1E+02

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.102.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater
Exposure Point: All On-Site Monitoring Wells
Receptor Population: Resident
Receptor Age: Young Child (Ages 1-6)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,3-Dichlorobenzene	5.0E-01	µg/L	5.0E-01	µg/L	M	2.8E-05	mg/kg-day	9.0E-04	mg/kg-day	N/A	N/A	3.1E-02
	1,4-Dichlorobenzene	6.1E-01	µg/L	6.1E-01	µg/L	M	3.4E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.1E-03
	Carbon tetrachloride	5.1E-01	µg/L	5.1E-01	µg/L	M	2.8E-05	mg/kg-day	7.0E-04	mg/kg-day	N/A	N/A	4.0E-02
	Chlorobenzene	1.0E+00	µg/L	1.0E+00	µg/L	M	5.7E-05	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	2.8E-03
	Methylene chloride	2.9E+02	µg/L	2.9E+02	µg/L	M	1.6E-02	mg/kg-day	6.0E-02	mg/kg-day	N/A	N/A	2.7E-01
	Tetrachloroethylene	1.6E+00	µg/L	1.6E+00	µg/L	M	9.1E-05	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	9.1E-03
	Atrazine	1.6E+00	µg/L	1.6E+00	µg/L	M	8.8E-05	mg/kg-day	3.5E-02	mg/kg-day	N/A	N/A	2.5E-03
	Pentachlorophenol	1.0E+00	µg/L	1.0E+00	µg/L	M	5.6E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.9E-03
	Heptachlor epoxide	5.4E-03	µg/L	5.4E-03	µg/L	M	3.0E-07	mg/kg-day	1.3E-05	mg/kg-day	N/A	N/A	2.3E-02
	Dioxin TEQ	1.0E-07	µg/L	1.0E-07	µg/L	M	5.6E-12	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Hexavalent Chromium	6.4E+00	µg/L	6.4E+00	µg/L	M	3.6E-04	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	1.2E-01
	Antimony	7.4E-01	µg/L	7.4E-01	µg/L	M	4.1E-05	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	1.0E-01
	Arsenic	3.4E+00	µg/L	3.4E+00	µg/L	M	1.9E-04	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	6.3E-01
	Chromium	1.6E+00	µg/L	1.6E+00	µg/L	M	8.9E-05	mg/kg-day	1.5E+00	mg/kg-day	N/A	N/A	6.0E-05
	Cyanide	1.8E+00	µg/L	1.8E+00	µg/L	M	1.0E-04	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	5.1E-03
	Manganese	1.1E+03	µg/L	1.1E+03	µg/L	M	6.2E-02	mg/kg-day	2.4E-02	mg/kg-day	N/A	N/A	2.6E+00
	Thallium	6.0E-01	µg/L	6.0E-01	µg/L	M	3.3E-05	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	4.2E-01
	(Total)												4.2E+00
												Total Hazard Index Across All Exposure Routes/Pathways	4E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.103.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 1
Receptor Population: Commercial Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,2-Dichlorobenzene	4.0E+00	mg/kg	4.0E+00	mg/kg	M	3.9E-08	mg/kg-day	9.0E-02	mg/kg-day	N/A	N/A	4.3E-05
	1,2-Dichloroethane	2.9E-01	mg/kg	2.9E-01	mg/kg	M	2.8E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	9.3E-06
	1,3-Dichlorobenzene	1.9E-01	mg/kg	1.9E-01	mg/kg	M	1.9E-07	mg/kg-day	9.0E-04	mg/kg-day	N/A	N/A	2.1E-04
	1,4-Dichlorobenzene	3.4E-01	mg/kg	3.4E-01	mg/kg	M	3.3E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.1E-05
	Benzene	2.1E-01	mg/kg	2.1E-01	mg/kg	M	2.1E-07	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	8.8E-05
	Bromodichloromethane	2.9E-01	mg/kg	2.9E-01	mg/kg	M	2.8E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.4E-05
	Carbon tetrachloride	2.9E-01	mg/kg	2.9E-01	mg/kg	M	2.8E-07	mg/kg-day	7.0E-04	mg/kg-day	N/A	N/A	4.0E-04
	Chlorobenzene	3.3E-01	mg/kg	3.3E-01	mg/kg	M	3.2E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.6E-05
	Chloroform	2.9E-01	mg/kg	2.9E-01	mg/kg	M	2.8E-07	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	2.8E-05
	Tetrachloroethylene	2.9E-01	mg/kg	2.9E-01	mg/kg	M	2.8E-07	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	2.8E-05
	Trichloroethene	1.9E-01	mg/kg	1.9E-01	mg/kg	M	1.9E-07	mg/kg-day	6.0E-03	mg/kg-day	N/A	N/A	3.1E-05
	Xylene (total)	2.4E+01	mg/kg	2.4E+01	mg/kg	M	2.3E-05	mg/kg-day	2.0E+00	mg/kg-day	N/A	N/A	1.2E-05
	2-Methylnaphthalene	7.3E+00	mg/kg	7.3E+00	mg/kg	M	7.1E-06	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	3.6E-04
	4-Methylphenol	6.5E+00	mg/kg	6.5E+00	mg/kg	M	6.4E-06	mg/kg-day	5.0E-03	mg/kg-day	N/A	N/A	1.3E-03
	Benzo(a)anthracene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	2.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	2.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.3E+01	mg/kg	2.3E+01	mg/kg	M	2.3E-05	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.1E-03
	Pentachlorophenol	3.0E+01	mg/kg	3.0E+01	mg/kg	M	2.9E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	9.8E-04
	Dieldrin	5.9E-03	mg/kg	5.9E-03	mg/kg	M	5.8E-09	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	1.2E-04
	Dioxin TEQ	1.2E-02	mg/kg	1.2E-02	mg/kg	M	1.1E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Antimony	3.4E+00	mg/kg	3.4E+00	mg/kg	M	3.3E-06	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	8.3E-03
	Arsenic	8.4E+00	mg/kg	8.4E+00	mg/kg	M	8.2E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.7E-02
	Barium	4.1E+02	mg/kg	4.1E+02	mg/kg	M	4.0E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	5.7E-03
	Cadmium	2.2E+01	mg/kg	2.2E+01	mg/kg	M	2.1E-05	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	2.1E-02
	Chromium	3.1E+04	mg/kg	3.1E+04	mg/kg	M	3.0E-02	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	1.0E+01
	Cyanide	1.1E+00	mg/kg	1.1E+00	mg/kg	M	1.1E-06	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	5.5E-05
	Manganese	5.1E+02	mg/kg	5.1E+02	mg/kg	M	5.0E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	7.2E-03
	Mercury	8.5E+01	mg/kg	8.5E+01	mg/kg	M	8.3E-05	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	8.3E-01
	Thallium	9.4E+00	mg/kg	9.4E+00	mg/kg	M	9.2E-06	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	1.1E-01
	(Total)												1.1E+01
Dermal													
	Benzo(a)anthracene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	5.9E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	5.9E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.3E+01	mg/kg	2.3E+01	mg/kg	M	6.8E-06	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	3.4E-04
	Pentachlorophenol	3.0E+01	mg/kg	3.0E+01	mg/kg	M	1.7E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	5.7E-04
	Dioxin TEQ	1.2E-02	mg/kg	1.2E-02	mg/kg	M	7.8E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	8.4E+00	mg/kg	8.4E+00	mg/kg	M	5.7E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.9E-03
	Cadmium	2.2E+01	mg/kg	2.2E+01	mg/kg	M	4.9E-08	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	4.9E-03
	(Total)												7.7E-03
										Total Hazard Index Across All Exposure Routes/Pathways			1E+01

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.103.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 1
Receptor Population: Commercial Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,2-Dichlorobenzene	4.0E+00	mg/kg	4.0E+00	mg/kg	M	1.7E-06	mg/kg-day	9.0E-02	mg/kg-day	N/A	N/A	1.9E-05
	1,2-Dichloroethane	2.9E-01	mg/kg	2.9E-01	mg/kg	M	1.2E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	4.1E-06
	1,3-Dichlorobenzene	1.9E-01	mg/kg	1.9E-01	mg/kg	M	8.1E-08	mg/kg-day	9.0E-04	mg/kg-day	N/A	N/A	9.0E-05
	1,4-Dichlorobenzene	3.4E-01	mg/kg	3.4E-01	mg/kg	M	1.5E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	4.9E-06
	Benzene	2.1E-01	mg/kg	2.1E-01	mg/kg	M	9.0E-08	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	3.0E-05
	Bromodichloromethane	2.9E-01	mg/kg	2.9E-01	mg/kg	M	1.2E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	6.1E-06
	Carbon tetrachloride	2.9E-01	mg/kg	2.9E-01	mg/kg	M	1.2E-07	mg/kg-day	7.0E-04	mg/kg-day	N/A	N/A	1.7E-04
	Chlorobenzene	3.3E-01	mg/kg	3.3E-01	mg/kg	M	1.4E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	7.1E-06
	Chloroform	2.9E-01	mg/kg	2.9E-01	mg/kg	M	1.2E-07	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	1.2E-05
	Tetrachloroethylene	2.9E-01	mg/kg	2.9E-01	mg/kg	M	1.2E-07	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	1.2E-05
	Trichloroethene	1.9E-01	mg/kg	1.9E-01	mg/kg	M	8.1E-08	mg/kg-day	6.0E-03	mg/kg-day	N/A	N/A	1.4E-05
	Xylene (total)	2.4E+01	mg/kg	2.4E+01	mg/kg	M	1.0E-05	mg/kg-day	2.0E+00	mg/kg-day	N/A	N/A	5.1E-06
	2-Methylnaphthalene	7.3E+00	mg/kg	7.3E+00	mg/kg	M	3.1E-06	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.6E-04
	4-Methylphenol	6.5E+00	mg/kg	6.5E+00	mg/kg	M	2.8E-06	mg/kg-day	5.0E-03	mg/kg-day	N/A	N/A	5.6E-04
	Benzo(a)anthracene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	8.6E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	8.6E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.3E+01	mg/kg	2.3E+01	mg/kg	M	9.9E-06	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	4.9E-04
	Pentachlorophenol	3.0E+01	mg/kg	3.0E+01	mg/kg	M	1.3E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	4.3E-04
	Dieldrin	5.9E-03	mg/kg	5.9E-03	mg/kg	M	2.5E-09	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	5.1E-05
	Dioxin TEQ	1.8E-03	mg/kg	1.8E-03	mg/kg	M	7.8E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Antimony	3.4E+00	mg/kg	3.4E+00	mg/kg	M	1.5E-06	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	3.8E-03
	Arsenic	6.4E+00	mg/kg	6.4E+00	mg/kg	M	3.6E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.2E-02
	Barium	4.1E+02	mg/kg	4.1E+02	mg/kg	M	1.8E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	2.5E-03
	Cadmium	2.2E+01	mg/kg	2.2E+01	mg/kg	M	9.3E-06	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	9.3E-03
	Chromium	3.1E+04	mg/kg	3.1E+04	mg/kg	M	1.3E-02	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	4.4E+00
	Cyanide	1.1E+00	mg/kg	1.1E+00	mg/kg	M	4.9E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	2.4E-05
	Manganese	5.1E+02	mg/kg	5.1E+02	mg/kg	M	2.2E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	3.1E-03
	Mercury	9.5E+00	mg/kg	9.6E+00	mg/kg	M	4.1E-06	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	4.1E-02
	Thallium	9.4E+00	mg/kg	9.4E+00	mg/kg	M	4.0E-06	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	5.0E-02
	(Total)												4.6E+00
Dermal													
	Benzo(a)anthracene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	5.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	5.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.3E+01	mg/kg	2.3E+01	mg/kg	M	5.9E-06	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	3.0E-04
	Pentachlorophenol	3.0E+01	mg/kg	3.0E+01	mg/kg	M	1.5E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	5.0E-04
	Dioxin TEQ	1.8E-03	mg/kg	1.8E-03	mg/kg	M	1.1E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	8.4E+00	mg/kg	8.4E+00	mg/kg	M	5.0E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.7E-03
	Cadmium	2.2E+01	mg/kg	2.2E+01	mg/kg	M	4.3E-08	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	4.3E-03
	(Total)												6.8E-03
										Total Hazard Index Across All Exposure Routes/Pathways			5E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.104.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 2
Receptor Population: Commercial Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Acetophenone	7.7E-02	mg/kg	7.7E-02	mg/kg	M	7.5E-08	mg/kg-day	1.0E-01	mg/kg-day	N/A	N/A	7.5E-07
	Dioxin TEQ	1.6E-04	mg/kg	1.6E-04	mg/kg	M	1.5E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.4E+00	mg/kg	4.4E+00	mg/kg	M	4.3E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.4E-02
	Cadmium	2.2E+00	mg/kg	2.2E+00	mg/kg	M	2.2E-06	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	2.2E-03
	Chromium	5.6E+02	mg/kg	5.6E+02	mg/kg	M	5.5E-04	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	1.8E-01
	Cyanide	1.8E+00	mg/kg	1.8E+00	mg/kg	M	1.8E-06	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	8.6E-05
	Manganese	1.7E+03	mg/kg	1.7E+03	mg/kg	M	1.6E-03	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	2.3E-02
	Mercury	3.8E-01	mg/kg	3.8E-01	mg/kg	M	3.7E-07	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	3.7E-03
	Thallium	1.8E+00	mg/kg	1.8E+00	mg/kg	M	1.8E-06	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	2.2E-02
	(Total)												2.5E-01
Dermal													
	Dioxin TEQ	1.6E-04	mg/kg	1.6E-04	mg/kg	M	1.1E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.4E+00	mg/kg	4.4E+00	mg/kg	M	3.0E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	9.9E-04
	Cadmium	2.2E+00	mg/kg	2.2E+00	mg/kg	M	5.0E-09	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	5.0E-04
	(Total)												1.5E-03
												Total Hazard Index Across All Exposure Routes/Pathways	2E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.104.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 2
Receptor Population: Commercial Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Acetophenone	7.7E-02	mg/kg	7.7E-02	mg/kg	M	3.3E-08	mg/kg-day	1.0E-01	mg/kg-day	N/A	N/A	3.3E-07
	Dioxin TEQ	1.6E-04	mg/kg	1.6E-04	mg/kg	M	6.7E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.4E+00	mg/kg	4.4E+00	mg/kg	M	1.9E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	6.3E-03
	Cadmium	2.2E+00	mg/kg	2.2E+00	mg/kg	M	9.4E-07	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	9.4E-04
	Chromium	5.6E+02	mg/kg	5.6E+02	mg/kg	M	2.4E-04	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	8.0E-02
	Cyanide	1.8E+00	mg/kg	1.8E+00	mg/kg	M	7.7E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	3.9E-05
	Manganese	1.7E+03	mg/kg	1.7E+03	mg/kg	M	7.2E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	1.0E-02
	Mercury	3.8E-01	mg/kg	3.8E-01	mg/kg	M	1.6E-07	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	1.6E-03
	Thallium	1.8E+00	mg/kg	1.8E+00	mg/kg	M	7.7E-07	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	9.6E-03
	(Total)												1.1E-01
Dermal													
	Dioxin TEQ	1.6E-04	mg/kg	1.6E-04	mg/kg	M	9.2E-12	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.4E+00	mg/kg	4.4E+00	mg/kg	M	2.6E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	8.7E-04
	Cadmium	2.2E+00	mg/kg	2.2E+00	mg/kg	M	4.4E-09	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	4.4E-04
	(Total)												1.3E-03
												Total Hazard Index Across All Exposure Routes/Pathways	1E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.105.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 3
Receptor Population: Commercial Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Dioxin TEQ	2.6E-03	mg/kg	2.6E-03	mg/kg	M	2.5E-09	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Antimony	3.0E+00	mg/kg	3.0E+00	mg/kg	M	2.9E-06	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	7.3E-03
	Arsenic	8.3E+00	mg/kg	8.3E+00	mg/kg	M	8.1E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.7E-02
	Cadmium	4.2E+01	mg/kg	4.2E+01	mg/kg	M	4.1E-05	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	4.1E-02
	Chromium	1.8E+04	mg/kg	1.8E+04	mg/kg	M	1.8E-02	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	5.9E+00
	Manganese	1.7E+03	mg/kg	1.7E+03	mg/kg	M	1.7E-03	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	2.4E-02
	Mercury	1.1E+01	mg/kg	1.1E+01	mg/kg	M	1.1E-05	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	1.1E-01
	Thallium	6.0E-01	mg/kg	6.0E-01	mg/kg	M	5.9E-07	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	7.3E-03
	(Total)												6.1E+00
Dermal	Dioxin TEQ	2.6E-03	mg/kg	2.6E-03	mg/kg	M	1.7E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	8.3E+00	mg/kg	8.3E+00	mg/kg	M	5.6E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.9E-03
	Cadmium	4.2E+01	mg/kg	4.2E+01	mg/kg	M	9.6E-08	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	9.6E-03
	(Total)												1.1E-02
												Total Hazard Index Across All Exposure Routes/Pathways	6E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.105.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 3
Receptor Population: Commercial Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Dioxin TEQ	2.4E-04	mg/kg	2.4E-04	mg/kg	M	1.0E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Antimony	3.0E+00	mg/kg	3.0E+00	mg/kg	M	1.3E-06	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	3.2E-03
	Arsenic	8.3E+00	mg/kg	8.3E+00	mg/kg	M	3.5E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.2E-02
	Cadmium	4.2E+01	mg/kg	4.2E+01	mg/kg	M	1.8E-05	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	1.8E-02
	Chromium	4.9E+03	mg/kg	4.9E+03	mg/kg	M	2.1E-03	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	7.1E-01
	Manganese	1.7E+03	mg/kg	1.7E+03	mg/kg	M	7.5E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	1.1E-02
	Mercury	1.1E+01	mg/kg	1.1E+01	mg/kg	M	4.6E-06	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	4.6E-02
	Thallium	6.0E-01	mg/kg	6.0E-01	mg/kg	M	2.6E-07	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	3.2E-03
	(Total)												8.0E-01
Dermal													
	Dioxin TEQ	2.4E-04	mg/kg	2.4E-04	mg/kg	M	1.4E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	8.3E+00	mg/kg	8.3E+00	mg/kg	M	4.9E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.6E-03
	Cadmium	4.2E+01	mg/kg	4.2E+01	mg/kg	M	8.4E-08	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	8.4E-03
	(Total)												1.0E-02
												Total Hazard Index Across All Exposure Routes/Pathways	8E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.106.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 4
Receptor Population: Commercial Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Benzo(a)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	2.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	2.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)fluoranthene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	2.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dibenz(a,h)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	2.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Indeno(1,2,3-cd)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	2.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	2.1E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.1E-05
	Pentachlorophenol	5.5E-01	mg/kg	5.5E-01	mg/kg	M	5.4E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.8E-05
	Dioxin TEQ	7.7E-04	mg/kg	7.7E-04	mg/kg	M	7.5E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.6E+00	mg/kg	4.6E+00	mg/kg	M	4.5E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.5E-02
	Cadmium	2.3E-01	mg/kg	2.3E-01	mg/kg	M	2.3E-07	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	2.3E-04
	Chromium	7.6E+01	mg/kg	7.6E+01	mg/kg	M	7.4E-05	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	2.5E-02
	Manganese	5.1E+02	mg/kg	5.1E+02	mg/kg	M	5.0E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	7.2E-03
	Mercury	2.2E-01	mg/kg	2.2E-01	mg/kg	M	2.2E-07	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	2.2E-03
	Thallium	2.1E+00	mg/kg	2.1E+00	mg/kg	M	2.1E-06	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	2.6E-02
	(Total)												7.5E-02
Dermal													
	Benzo(a)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	6.3E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	6.3E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)fluoranthene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	6.3E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dibenz(a,h)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	6.3E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Indeno(1,2,3-cd)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	6.3E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	6.3E-08	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	3.2E-06
	Pentachlorophenol	5.5E-01	mg/kg	5.5E-01	mg/kg	M	3.1E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.0E-05
	Dioxin TEQ	7.7E-04	mg/kg	7.7E-04	mg/kg	M	5.2E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.6E+00	mg/kg	4.6E+00	mg/kg	M	3.1E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.0E-03
	Cadmium	2.3E-01	mg/kg	2.3E-01	mg/kg	M	5.2E-10	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	5.2E-05
	(Total)												1.1E-03

Total Hazard Index Across All Exposure Routes/Pathways: 8E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.106.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 4
Receptor Population: Commercial Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Benzo(a)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	9.2E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	9.2E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)fluoranthene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	9.2E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dibenz(a,h)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	9.2E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Indeno(1,2,3-cd)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	9.2E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	9.2E-08	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	4.6E-06
	Pentachlorophenol	5.5E-01	mg/kg	5.5E-01	mg/kg	M	2.4E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	7.9E-06
	Dioxin TEQ	1.4E-04	mg/kg	1.4E-04	mg/kg	M	5.9E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.6E+00	mg/kg	4.6E+00	mg/kg	M	2.0E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	6.6E-03
	Cadmium	2.3E-01	mg/kg	2.3E-01	mg/kg	M	9.9E-08	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	9.9E-05
	Chromium	7.6E+01	mg/kg	7.6E+01	mg/kg	M	3.3E-05	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	1.1E-02
	Manganese	5.1E+02	mg/kg	5.1E+02	mg/kg	M	2.2E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	3.1E-03
	Mercury	2.2E-01	mg/kg	2.2E-01	mg/kg	M	9.4E-08	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	9.4E-04
	Thallium	2.1E+00	mg/kg	2.1E+00	mg/kg	M	9.0E-07	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	1.1E-02
	(Total)												3.3E-02
Dermal													
	Benzo(a)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	5.5E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	5.5E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)fluoranthene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	5.5E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dibenz(a,h)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	5.5E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Indeno(1,2,3-cd)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	5.5E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	5.5E-08	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	2.8E-06
	Pentachlorophenol	5.5E-01	mg/kg	5.5E-01	mg/kg	M	2.7E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	9.1E-06
	Dioxin TEQ	1.4E-04	mg/kg	1.4E-04	mg/kg	M	8.1E-12	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.6E+00	mg/kg	4.6E+00	mg/kg	M	2.7E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	9.1E-04
	Cadmium	2.3E-01	mg/kg	2.3E-01	mg/kg	M	4.6E-10	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	4.6E-05
	(Total)												9.7E-04

Total Hazard Index Across All Exposure Routes/Pathways: 3E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.107.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 5
Receptor Population: Commercial Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Benzo(a)pyrene	3.1E-01	mg/kg	3.1E-01	mg/kg	M	3.0E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	bis(2-Chloroethoxy)methane	6.2E-01	mg/kg	6.2E-01	mg/kg	M	6.0E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Bis(2-chloroethyl)ether	3.2E-01	mg/kg	3.2E-01	mg/kg	M	3.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	N-Nitroso-di-n-propylamine	4.9E-01	mg/kg	4.9E-01	mg/kg	M	4.8E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Nitrobenzene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	2.3E-07	mg/kg-day	5.0E-04	mg/kg-day	N/A	N/A	4.5E-04
	Pentachlorophenol	6.1E-01	mg/kg	6.1E-01	mg/kg	M	6.0E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	2.0E-05
	Aroclor 1248	6.0E-02	mg/kg	6.0E-02	mg/kg	M	5.9E-08	mg/kg-day	2.0E-05	mg/kg-day	N/A	N/A	2.9E-03
	Dioxin TEQ	1.9E-03	mg/kg	1.9E-03	mg/kg	M	1.9E-09	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Antimony	8.0E+00	mg/kg	8.0E+00	mg/kg	M	7.9E-06	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	2.0E-02
	Arsenic	5.0E+00	mg/kg	5.0E+00	mg/kg	M	4.9E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.6E-02
	Cadmium	1.0E+01	mg/kg	1.0E+01	mg/kg	M	9.9E-06	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	9.9E-03
	Chromium	8.1E+03	mg/kg	8.1E+03	mg/kg	M	7.9E-03	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	2.6E+00
	Manganese	1.1E+03	mg/kg	1.1E+03	mg/kg	M	1.1E-03	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	1.5E-02
	Mercury	4.7E+00	mg/kg	4.7E+00	mg/kg	M	4.6E-06	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	4.6E-02
	Thallium	1.3E+01	mg/kg	1.3E+01	mg/kg	M	1.3E-05	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	1.6E-01
	(Total)												2.9E+00
Dermal													
	Benzo(a)pyrene	3.1E-01	mg/kg	3.1E-01	mg/kg	M	9.1E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Pentachlorophenol	6.1E-01	mg/kg	6.1E-01	mg/kg	M	3.4E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.1E-05
	Aroclor 1248	6.0E-02	mg/kg	6.0E-02	mg/kg	M	1.9E-08	mg/kg-day	2.0E-05	mg/kg-day	N/A	N/A	9.5E-04
	Dioxin TEQ	1.9E-03	mg/kg	1.9E-03	mg/kg	M	1.3E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	5.0E+00	mg/kg	5.0E+00	mg/kg	M	3.4E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.1E-03
	Cadmium	1.0E+01	mg/kg	1.0E+01	mg/kg	M	2.3E-08	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	2.3E-03
	(Total)												4.4E-03
												Total Hazard Index Across All Exposure Routes/Pathways	3E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.107.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 5
Receptor Population: Commercial Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Benzo(a)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	9.3E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	bis(2-Chloroethoxy)methane	6.2E-01	mg/kg	6.2E-01	mg/kg	M	2.6E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Bis(2-chloroethyl)ether	2.8E-01	mg/kg	2.8E-01	mg/kg	M	1.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	N-Nitroso-di-n-propylamine	2.9E-01	mg/kg	2.9E-01	mg/kg	M	1.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Nitrobenzene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	9.9E-08	mg/kg-day	5.0E-04	mg/kg-day	N/A	N/A	2.0E-04
	Pentachlorophenol	6.1E-01	mg/kg	6.1E-01	mg/kg	M	2.6E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	8.7E-06
	Aroclor 1248	6.0E-02	mg/kg	6.0E-02	mg/kg	M	2.6E-08	mg/kg-day	2.0E-05	mg/kg-day	N/A	N/A	1.3E-03
	Dioxin TEQ	1.9E-03	mg/kg	1.9E-03	mg/kg	M	8.2E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Antimony	8.0E+00	mg/kg	8.0E+00	mg/kg	M	3.4E-06	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	8.6E-03
	Arsenic	2.3E+00	mg/kg	2.3E+00	mg/kg	M	9.7E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	3.2E-03
	Cadmium	1.0E+01	mg/kg	1.0E+01	mg/kg	M	4.3E-06	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	4.3E-03
	Chromium	8.1E+03	mg/kg	8.1E+03	mg/kg	M	3.5E-03	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	1.2E+00
	Manganese	1.1E+03	mg/kg	1.1E+03	mg/kg	M	4.7E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	6.8E-03
	Mercury	1.5E+00	mg/kg	1.5E+00	mg/kg	M	6.5E-07	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	6.5E-03
	Thallium	1.3E+01	mg/kg	1.3E+01	mg/kg	M	5.6E-06	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	7.0E-02
	(Total)												1.3E+00
Dermal													
	Benzo(a)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	5.6E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Pentachlorophenol	6.1E-01	mg/kg	6.1E-01	mg/kg	M	3.0E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.0E-05
	Aroclor 1248	6.0E-02	mg/kg	6.0E-02	mg/kg	M	1.7E-08	mg/kg-day	2.0E-05	mg/kg-day	N/A	N/A	8.3E-04
	Dioxin TEQ	1.9E-03	mg/kg	1.9E-03	mg/kg	M	1.1E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	2.3E+00	mg/kg	2.3E+00	mg/kg	M	1.3E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.5E-04
	Cadmium	1.0E+01	mg/kg	1.0E+01	mg/kg	M	2.0E-08	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	2.0E-03
	(Total)												3.3E-03

Total Hazard Index Across All Exposure Routes/Pathways: 1E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.108.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 1
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,2-Dichlorobenzene	4.0E+00	mg/kg	4.0E+00	mg/kg	M	2.0E-06	mg/kg-day	9.0E-02	mg/kg-day	N/A	N/A	2.3E-05
	1,2-Dichloroethane	2.9E-01	mg/kg	2.9E-01	mg/kg	M	1.5E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	4.9E-06
	1,3-Dichlorobenzene	1.9E-01	mg/kg	1.9E-01	mg/kg	M	9.8E-08	mg/kg-day	9.0E-04	mg/kg-day	N/A	N/A	1.1E-04
	1,4-Dichlorobenzene	3.4E-01	mg/kg	3.4E-01	mg/kg	M	1.8E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	5.9E-06
	Benzene	2.1E-01	mg/kg	2.1E-01	mg/kg	M	1.1E-07	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	3.6E-05
	Bromodichloromethane	2.9E-01	mg/kg	2.9E-01	mg/kg	M	1.5E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	7.4E-06
	Carbon tetrachloride	2.9E-01	mg/kg	2.9E-01	mg/kg	M	1.5E-07	mg/kg-day	7.0E-04	mg/kg-day	N/A	N/A	2.1E-04
	Chlorobenzene	3.3E-01	mg/kg	3.3E-01	mg/kg	M	1.7E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	8.5E-06
	Chloroform	2.9E-01	mg/kg	2.9E-01	mg/kg	M	1.5E-07	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	1.5E-05
	Tetrachloroethylene	2.9E-01	mg/kg	2.9E-01	mg/kg	M	1.5E-07	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	1.5E-05
	Trichloroethane	1.9E-01	mg/kg	1.9E-01	mg/kg	M	9.8E-08	mg/kg-day	5.0E-03	mg/kg-day	N/A	N/A	1.8E-05
	Xylene (total)	2.4E+01	mg/kg	2.4E+01	mg/kg	M	1.2E-05	mg/kg-day	2.0E+00	mg/kg-day	N/A	N/A	6.2E-06
	2-Methylnaphthalene	7.3E+00	mg/kg	7.3E+00	mg/kg	M	3.8E-06	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.9E-04
	4-Methylphenol	6.5E+00	mg/kg	6.5E+00	mg/kg	M	3.4E-06	mg/kg-day	5.0E-03	mg/kg-day	N/A	N/A	6.7E-04
	Benzo(a)anthracene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	1.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	1.0E-06	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.3E+01	mg/kg	2.3E+01	mg/kg	M	1.2E-05	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	5.9E-04
	Pentachlorophenol	3.0E+01	mg/kg	3.0E+01	mg/kg	M	1.5E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	5.2E-04
	Dieldrin	5.9E-03	mg/kg	5.9E-03	mg/kg	M	3.0E-09	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	6.1E-05
	Dioxin TEQ	1.2E-02	mg/kg	1.2E-02	mg/kg	M	6.0E-09	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Antimony	3.4E+00	mg/kg	3.4E+00	mg/kg	M	1.8E-06	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	4.4E-03
	Arsenic	8.4E+00	mg/kg	8.4E+00	mg/kg	M	4.3E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.4E-02
	Barium	4.1E+02	mg/kg	4.1E+02	mg/kg	M	2.1E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	3.0E-03
	Cadmium	2.2E+01	mg/kg	2.2E+01	mg/kg	M	1.1E-05	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	1.1E-02
	Chromium	3.1E+04	mg/kg	3.1E+04	mg/kg	M	1.6E-02	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	5.3E+00
	Cyanide	1.1E+00	mg/kg	1.1E+00	mg/kg	M	5.9E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	2.9E-05
	Manganese	5.1E+02	mg/kg	5.1E+02	mg/kg	M	2.7E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	3.8E-03
	Mercury	8.5E+01	mg/kg	8.5E+01	mg/kg	M	4.4E-05	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	4.4E-01
	Thallium	9.4E+00	mg/kg	9.4E+00	mg/kg	M	4.9E-06	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	6.1E-02
	(Total)												5.9E+00
Dermal													
	Benzo(a)anthracene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	4.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	4.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.3E+01	mg/kg	2.3E+01	mg/kg	M	5.1E-06	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	2.5E-04
	Pentachlorophenol	3.0E+01	mg/kg	3.0E+01	mg/kg	M	1.3E-05	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	4.3E-04
	Dioxin TEQ	1.2E-02	mg/kg	1.2E-02	mg/kg	M	5.9E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	8.4E+00	mg/kg	8.4E+00	mg/kg	M	4.3E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.4E-03
	Cadmium	2.2E+01	mg/kg	2.2E+01	mg/kg	M	3.7E-08	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	3.7E-03
	(Total)												5.8E-03

Total Hazard Index Across All Exposure Routes/Pathways 6E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.108.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 1
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	1,2-Dichlorobenzene	4.0E+00	mg/kg	4.0E+00	mg/kg	M	6.8E-07	mg/kg-day	9.0E-02	mg/kg-day	N/A	N/A	7.6E-06
	1,2-Dichloroethane	2.9E-01	mg/kg	2.9E-01	mg/kg	M	4.9E-08	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.6E-06
	1,3-Dichlorobenzene	1.9E-01	mg/kg	1.9E-01	mg/kg	M	3.3E-08	mg/kg-day	9.0E-04	mg/kg-day	N/A	N/A	3.6E-05
	1,4-Dichlorobenzene	3.4E-01	mg/kg	3.4E-01	mg/kg	M	5.9E-08	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	2.0E-06
	Benzene	2.1E-01	mg/kg	2.1E-01	mg/kg	M	3.6E-08	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	1.2E-05
	Bromodichloromethane	2.9E-01	mg/kg	2.9E-01	mg/kg	M	4.9E-08	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	2.5E-06
	Carbon tetrachloride	2.9E-01	mg/kg	2.9E-01	mg/kg	M	4.9E-08	mg/kg-day	7.0E-04	mg/kg-day	N/A	N/A	7.0E-05
	Chlorobenzene	3.3E-01	mg/kg	3.3E-01	mg/kg	M	5.7E-08	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	2.8E-06
	Chloroform	2.9E-01	mg/kg	2.9E-01	mg/kg	M	4.9E-08	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	4.9E-06
	Tetrachloroethylene	2.9E-01	mg/kg	2.9E-01	mg/kg	M	4.9E-08	mg/kg-day	1.0E-02	mg/kg-day	N/A	N/A	4.9E-06
	Trichloroethene	1.9E-01	mg/kg	1.9E-01	mg/kg	M	3.3E-08	mg/kg-day	6.0E-03	mg/kg-day	N/A	N/A	5.5E-06
	Xylene (total)	2.4E+01	mg/kg	2.4E+01	mg/kg	M	4.1E-06	mg/kg-day	2.0E+00	mg/kg-day	N/A	N/A	2.1E-06
	2-Methylnaphthalene	7.3E+00	mg/kg	7.3E+00	mg/kg	M	1.3E-06	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	6.3E-05
	4-Methylphenol	6.5E+00	mg/kg	6.5E+00	mg/kg	M	1.1E-06	mg/kg-day	5.0E-03	mg/kg-day	N/A	N/A	2.2E-04
	Benzo(a)anthracene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	3.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	3.4E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.3E+01	mg/kg	2.3E+01	mg/kg	M	4.0E-06	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	2.0E-04
	Pentachlorophenol	3.0E+01	mg/kg	3.0E+01	mg/kg	M	5.2E-06	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.7E-04
	Dieldrin	5.9E-03	mg/kg	5.9E-03	mg/kg	M	1.0E-09	mg/kg-day	5.0E-05	mg/kg-day	N/A	N/A	2.0E-05
	Dioxin TEQ	1.8E-03	mg/kg	1.8E-03	mg/kg	M	3.1E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Antimony	3.4E+00	mg/kg	3.4E+00	mg/kg	M	5.9E-07	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	1.5E-03
	Arsenic	8.4E+00	mg/kg	8.4E+00	mg/kg	M	1.4E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.8E-03
	Barium	4.1E+02	mg/kg	4.1E+02	mg/kg	M	7.1E-05	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	1.0E-03
	Cadmium	2.2E+01	mg/kg	2.2E+01	mg/kg	M	3.7E-06	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	3.7E-03
	Chromium	3.1E+04	mg/kg	3.1E+04	mg/kg	M	5.3E-03	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	1.8E+00
	Cyanide	1.1E+00	mg/kg	1.1E+00	mg/kg	M	2.0E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	9.8E-06
	Manganese	5.1E+02	mg/kg	5.1E+02	mg/kg	M	8.8E-05	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	1.3E-03
	Mercury	9.5E+00	mg/kg	9.5E+00	mg/kg	M	1.6E-06	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	1.6E-02
	Thallium	9.4E+00	mg/kg	9.4E+00	mg/kg	M	1.6E-06	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	2.0E-02
	(Total)												1.8E+00
Dermal													
	Benzo(a)anthracene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	1.5E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.0E+00	mg/kg	2.0E+00	mg/kg	M	1.5E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.3E+01	mg/kg	2.3E+01	mg/kg	M	1.7E-06	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	8.5E-05
	Pentachlorophenol	3.0E+01	mg/kg	3.0E+01	mg/kg	M	4.3E-06	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.4E-04
	Dioxin TEQ	1.8E-03	mg/kg	1.8E-03	mg/kg	M	3.1E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	8.4E+00	mg/kg	8.4E+00	mg/kg	M	1.4E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.8E-04
	Cadmium	2.2E+01	mg/kg	2.2E+01	mg/kg	M	1.2E-06	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	1.2E-03
	(Total)												1.9E-03
												Total Hazard Index Across All Exposure Routes/Pathways	2E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.109.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 2
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Acetophenone	7.7E-02	mg/kg	7.7E-02	mg/kg	M	1.3E-08	mg/kg-day	1.0E-01	mg/kg-day	N/A	N/A	1.3E-07
	Dioxin TEQ	1.6E-04	mg/kg	1.6E-04	mg/kg	M	2.7E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.4E+00	mg/kg	4.4E+00	mg/kg	M	7.6E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.5E-03
	Cadmium	2.2E+00	mg/kg	2.2E+00	mg/kg	M	3.8E-07	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	3.8E-04
	Chromium	5.6E+02	mg/kg	5.6E+02	mg/kg	M	9.6E-05	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	3.2E-02
	Cyanide	1.8E+00	mg/kg	1.8E+00	mg/kg	M	3.1E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.6E-05
	Manganese	1.7E+03	mg/kg	1.7E+03	mg/kg	M	2.9E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	4.1E-03
	Mercury	3.8E-01	mg/kg	3.8E-01	mg/kg	M	6.5E-08	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	6.5E-04
	Thallium	1.8E+00	mg/kg	1.8E+00	mg/kg	M	3.1E-07	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	3.9E-03
	(Total)												4.4E-02
Dermal													
	Dioxin TEQ	1.6E-04	mg/kg	1.6E-04	mg/kg	M	2.7E-12	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.4E+00	mg/kg	4.4E+00	mg/kg	M	7.5E-08	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.5E-04
	Cadmium	2.2E+00	mg/kg	2.2E+00	mg/kg	M	1.3E-09	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	1.3E-04
	(Total)												3.8E-04
												Total Hazard Index Across All Exposure Routes/Pathways	4E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.110.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 3
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Dioxin TEQ	2.6E-03	mg/kg	2.6E-03	mg/kg	M	1.3E-09	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Antimony	3.0E+00	mg/kg	3.0E+00	mg/kg	M	1.5E-06	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	3.9E-03
	Arsenic	8.3E+00	mg/kg	8.3E+00	mg/kg	M	4.3E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.4E-02
	Cadmium	4.2E+01	mg/kg	4.2E+01	mg/kg	M	2.2E-05	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	2.2E-02
	Chromium	1.8E+04	mg/kg	1.8E+04	mg/kg	M	9.4E-03	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	3.1E+00
	Manganese	1.7E+03	mg/kg	1.7E+03	mg/kg	M	9.0E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	1.3E-02
	Mercury	1.1E+01	mg/kg	1.1E+01	mg/kg	M	5.6E-06	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	5.6E-02
	Thallium	6.0E-01	mg/kg	6.0E-01	mg/kg	M	3.1E-07	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	3.9E-03
	(Total)												3.2E+00
Dermal													
	Dioxin TEQ	2.6E-03	mg/kg	2.6E-03	mg/kg	M	1.3E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	8.3E+00	mg/kg	8.3E+00	mg/kg	M	4.2E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.4E-03
	Cadmium	4.2E+01	mg/kg	4.2E+01	mg/kg	M	7.2E-08	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	7.2E-03
	(Total)												8.6E-03
												Total Hazard Index Across All Exposure Routes/Pathways	3E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.110.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 3
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Dioxin TEQ	2.4E-04	mg/kg	2.4E-04	mg/kg	M	4.1E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Antimony	3.0E+00	mg/kg	3.0E+00	mg/kg	M	5.2E-07	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	1.3E-03
	Arsenic	8.3E+00	mg/kg	8.3E+00	mg/kg	M	1.4E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.7E-03
	Cadmium	4.2E+01	mg/kg	4.2E+01	mg/kg	M	7.3E-06	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	7.3E-03
	Chromium	4.9E+03	mg/kg	4.9E+03	mg/kg	M	8.5E-04	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	2.8E-01
	Manganese	1.7E+03	mg/kg	1.7E+03	mg/kg	M	3.0E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	4.3E-03
	Mercury	1.1E+01	mg/kg	1.1E+01	mg/kg	M	1.9E-06	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	1.9E-02
	Thallium	6.0E-01	mg/kg	6.0E-01	mg/kg	M	1.0E-07	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	1.3E-03
	(Total)												3.2E-01
Dermal													
	Dioxin TEQ	2.4E-04	mg/kg	2.4E-04	mg/kg	M	4.1E-12	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	8.3E+00	mg/kg	8.3E+00	mg/kg	M	1.4E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	4.7E-04
	Cadmium	4.2E+01	mg/kg	4.2E+01	mg/kg	M	2.4E-08	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	2.4E-03
	(Total)												2.9E-03
												Total Hazard Index Across All Exposure Routes/Pathways	3E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.111.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 4
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Benzo(a)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)fluoranthene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dibenz(a,h)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Indeno(1,2,3-cd)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.1E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	5.6E-06
	Pentachlorophenol	5.5E-01	mg/kg	5.5E-01	mg/kg	M	2.8E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	9.5E-06
	Dioxin TEQ	7.7E-04	mg/kg	7.7E-04	mg/kg	M	4.0E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.6E+00	mg/kg	4.6E+00	mg/kg	M	2.4E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	7.9E-03
	Cadmium	2.3E-01	mg/kg	2.3E-01	mg/kg	M	1.2E-07	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	1.2E-04
	Chromium	7.6E+01	mg/kg	7.6E+01	mg/kg	M	3.9E-05	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	1.3E-02
	Manganese	5.1E+02	mg/kg	5.1E+02	mg/kg	M	2.6E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	3.8E-03
	Mercury	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.1E-07	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	1.1E-03
	Thallium	2.1E+00	mg/kg	2.1E+00	mg/kg	M	1.1E-06	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	1.4E-02
	(Total)												4.0E-02
Dermal													
	Benzo(a)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	4.8E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	4.8E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)fluoranthene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	4.8E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dibenz(a,h)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	4.8E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Indeno(1,2,3-cd)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	4.8E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	4.8E-08	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	2.4E-06
	Pentachlorophenol	5.5E-01	mg/kg	5.5E-01	mg/kg	M	2.3E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	7.8E-06
	Dioxin TEQ	7.7E-04	mg/kg	7.7E-04	mg/kg	M	3.9E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.6E+00	mg/kg	4.6E+00	mg/kg	M	2.4E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	7.8E-04
	Cadmium	2.3E-01	mg/kg	2.3E-01	mg/kg	M	3.9E-10	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	3.9E-05
	(Total)												8.3E-04
												Total Hazard Index Across All Exposure Routes/Pathways	4E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.111.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 4
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Benzo(a)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	3.7E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	3.7E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)fluoranthene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	3.7E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dibenz(a,h)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	3.7E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Indeno(1,2,3-cd)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	3.7E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	3.7E-08	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.9E-06
	Pentachlorophenol	5.5E-01	mg/kg	5.5E-01	mg/kg	M	9.5E-08	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	3.2E-06
	Dioxin TEQ	1.4E-04	mg/kg	1.4E-04	mg/kg	M	2.4E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.6E+00	mg/kg	4.6E+00	mg/kg	M	7.9E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.6E-03
	Cadmium	2.3E-01	mg/kg	2.3E-01	mg/kg	M	4.0E-08	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	4.0E-05
	Chromium	7.6E+01	mg/kg	7.6E+01	mg/kg	M	1.3E-05	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	4.4E-03
	Manganese	5.1E+02	mg/kg	5.1E+02	mg/kg	M	8.8E-05	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	1.3E-03
	Mercury	2.2E-01	mg/kg	2.2E-01	mg/kg	M	3.8E-08	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	3.8E-04
	Thallium	2.1E+00	mg/kg	2.1E+00	mg/kg	M	3.6E-07	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	4.5E-03
	(Total)												1.3E-02
Dermal													
	Benzo(a)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.6E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(a)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.6E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Benzo(b)fluoranthene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.6E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Dibenz(a,h)anthracene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.6E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Indeno(1,2,3-cd)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.6E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Naphthalene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.6E-08	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	7.9E-07
	Pentachlorophenol	5.5E-01	mg/kg	5.5E-01	mg/kg	M	7.8E-08	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	2.6E-06
	Dioxin TEQ	1.4E-04	mg/kg	1.4E-04	mg/kg	M	2.3E-12	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.6E+00	mg/kg	4.6E+00	mg/kg	M	7.8E-08	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	2.6E-04
	Cadmium	2.3E-01	mg/kg	2.3E-01	mg/kg	M	1.3E-10	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	1.3E-05
	(Total)												2.8E-04
										Total Hazard Index Across All Exposure Routes/Pathways			1E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.112.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 5
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Benzo(a)pyrene	3.1E-01	mg/kg	3.1E-01	mg/kg	M	1.6E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	bis(2-Chloroethoxy)methane	6.2E-01	mg/kg	6.2E-01	mg/kg	M	3.2E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Bis(2-chloroethyl)ether	3.2E-01	mg/kg	3.2E-01	mg/kg	M	1.7E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	N-Nitroso-di-n-propylamine	4.9E-01	mg/kg	4.9E-01	mg/kg	M	2.5E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Nitrobenzene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	1.2E-07	mg/kg-day	5.0E-04	mg/kg-day	N/A	N/A	2.4E-04
	Pentachlorophenol	6.1E-01	mg/kg	6.1E-01	mg/kg	M	3.2E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	1.1E-05
	Aroclor 1248	6.0E-02	mg/kg	6.0E-02	mg/kg	M	3.1E-08	mg/kg-day	2.0E-05	mg/kg-day	N/A	N/A	1.5E-03
	Dioxin TEQ	1.9E-03	mg/kg	1.9E-03	mg/kg	M	9.9E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Antimony	8.0E+00	mg/kg	8.0E+00	mg/kg	M	4.1E-06	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	1.0E-02
	Arsenic	5.0E+00	mg/kg	5.0E+00	mg/kg	M	2.6E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	8.6E-03
	Cadmium	1.0E+01	mg/kg	1.0E+01	mg/kg	M	5.2E-06	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	5.2E-03
	Chromium	8.1E+03	mg/kg	8.1E+03	mg/kg	M	4.2E-03	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	1.4E+00
	Manganese	1.1E+03	mg/kg	1.1E+03	mg/kg	M	5.7E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	8.2E-03
	Mercury	4.7E+00	mg/kg	4.7E+00	mg/kg	M	2.4E-06	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	2.4E-02
	Thallium	1.3E+01	mg/kg	1.3E+01	mg/kg	M	6.8E-06	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	8.5E-02
	(Total)												1.5E+00
Dermal													
	Benzo(a)pyrene	3.1E-01	mg/kg	3.1E-01	mg/kg	M	6.9E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Pentachlorophenol	6.1E-01	mg/kg	6.1E-01	mg/kg	M	2.6E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	8.7E-06
	Aroclor 1248	6.0E-02	mg/kg	6.0E-02	mg/kg	M	1.4E-08	mg/kg-day	2.0E-05	mg/kg-day	N/A	N/A	7.2E-04
	Dioxin TEQ	1.9E-03	mg/kg	1.9E-03	mg/kg	M	9.8E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	5.0E+00	mg/kg	5.0E+00	mg/kg	M	2.6E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	8.5E-04
	Cadmium	1.0E+01	mg/kg	1.0E+01	mg/kg	M	1.7E-08	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	1.7E-03
	(Total)												3.3E-03
												Total Hazard Index Across All Exposure Routes/Pathways	2E+00

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.112.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 5
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Benzo(a)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	3.7E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	bis(2-Chloroethoxy)methane	6.2E-01	mg/kg	6.2E-01	mg/kg	M	1.1E-07	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Bis(2-chloroethyl)ether	2.8E-01	mg/kg	2.8E-01	mg/kg	M	4.8E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	N-Nitroso-di-n-propylamine	2.9E-01	mg/kg	2.9E-01	mg/kg	M	5.0E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Nitrobenzene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	4.0E-08	mg/kg-day	5.0E-04	mg/kg-day	N/A	N/A	7.9E-05
	Pentachlorophenol	6.1E-01	mg/kg	6.1E-01	mg/kg	M	1.1E-07	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	3.5E-06
	Aroclor 1248	6.0E-02	mg/kg	6.0E-02	mg/kg	M	1.0E-08	mg/kg-day	2.0E-05	mg/kg-day	N/A	N/A	5.2E-04
	Dioxin TEQ	1.9E-03	mg/kg	1.9E-03	mg/kg	M	3.3E-10	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Antimony	8.0E+00	mg/kg	8.0E+00	mg/kg	M	1.4E-06	mg/kg-day	4.0E-04	mg/kg-day	N/A	N/A	3.5E-03
	Arsenic	2.3E+00	mg/kg	2.3E+00	mg/kg	M	3.9E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.3E-03
	Cadmium	1.0E+01	mg/kg	1.0E+01	mg/kg	M	1.7E-06	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	1.7E-03
	Chromium	8.1E+03	mg/kg	8.1E+03	mg/kg	M	1.4E-03	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	4.6E-01
	Manganese	1.1E+03	mg/kg	1.1E+03	mg/kg	M	1.9E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	2.7E-03
	Mercury	1.5E+00	mg/kg	1.5E+00	mg/kg	M	2.6E-07	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	2.6E-03
	Thallium	1.3E+01	mg/kg	1.3E+01	mg/kg	M	2.3E-06	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	2.8E-02
	(Total)												5.1E-01
Dermal													
	Benzo(a)pyrene	2.2E-01	mg/kg	2.2E-01	mg/kg	M	1.6E-08	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Pentachlorophenol	6.1E-01	mg/kg	6.1E-01	mg/kg	M	8.7E-08	mg/kg-day	3.0E-02	mg/kg-day	N/A	N/A	2.9E-06
	Aroclor 1248	6.0E-02	mg/kg	6.0E-02	mg/kg	M	4.9E-09	mg/kg-day	2.0E-05	mg/kg-day	N/A	N/A	2.4E-04
	Dioxin TEQ	1.9E-03	mg/kg	1.9E-03	mg/kg	M	3.3E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	2.3E+00	mg/kg	2.3E+00	mg/kg	M	3.9E-08	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.3E-04
	Cadmium	1.0E+01	mg/kg	1.0E+01	mg/kg	M	5.7E-09	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	5.7E-04
	(Total)												9.4E-04
												Total Hazard Index Across All Exposure Routes/Pathways	5E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.113.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Lagoon 1
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal													
	Arsenic	2.4E+00	µg/L	2.4E+00	µg/L	M	2.0E-08	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	6.6E-05
	Manganese	1.0E+03	µg/L	1.0E+03	µg/L	M	8.9E-06	mg/kg-day	9.6E-04	mg/kg-day	N/A	N/A	9.2E-03
	Mercury	3.5E-01	µg/L	3.5E-01	µg/L	M	3.0E-09	mg/kg-day	2.1E-05	mg/kg-day	N/A	N/A	1.4E-04
	Thallium	1.6E+00	µg/L	1.6E+00	µg/L	M	1.4E-08	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	1.7E-04
	(Total)												9.6E-03
												Total Hazard Index Across All Exposure Routes/Pathways	1E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.113.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Lagoon 1
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal													
	Arsenic	2.4E+00	µg/L	2.4E+00	µg/L	M	3.4E-09	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	1.1E-05
	Manganese	1.0E+03	µg/L	1.0E+03	µg/L	M	1.5E-06	mg/kg-day	9.6E-04	mg/kg-day	N/A	N/A	1.5E-03
	Mercury	3.5E-01	µg/L	3.5E-01	µg/L	M	5.0E-10	mg/kg-day	2.1E-05	mg/kg-day	N/A	N/A	2.4E-05
	Thallium	1.6E+00	µg/L	1.6E+00	µg/L	M	2.3E-09	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	2.8E-05
	(Total)												1.6E-03
												Total Hazard Index Across All Exposure Routes/Pathways	2E-03

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.114.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Lagoon 2
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal													
	Dioxin TEQ	5.0E-07	µg/L	5.0E-07	µg/L	M	1.4E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Manganese (Total)	7.4E+02	µg/L	7.4E+02	µg/L	M	6.3E-06	mg/kg-day	9.6E-04	mg/kg-day	N/A	N/A	6.6E-03 6.6E-03
												Total Hazard Index Across All Exposure Routes/Pathways	7E-03

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.114.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Lagoon 2
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal													
	Dioxin TEQ	5.0E-07	µg/L	5.0E-07	µg/L	M	3.2E-12	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Manganese	7.4E+02	µg/L	7.4E+02	µg/L	M	1.1E-06	mg/kg-day	9.6E-04	mg/kg-day	N/A	N/A	1.1E-03
	(Total)												1.1E-03
												Total Hazard Index Across All Exposure Routes/Pathways	1E-03

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.115.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Lagoon 4
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal													
	Dioxin TEQ	4.3E-08	µg/L	4.3E-08	µg/L	M	1.2E-12	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Manganese	1.1E+03	µg/L	1.1E+03	µg/L	M	9.7E-06	mg/kg-day	9.6E-04	mg/kg-day	N/A	N/A	1.0E-02
	Mercury	2.0E-01	µg/L	2.0E-01	µg/L	M	1.7E-09	mg/kg-day	2.1E-05	mg/kg-day	N/A	N/A	8.1E-05
	(Total)												1.0E-02
												Total Hazard Index Across All Exposure Routes/Pathways	1E-02

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.115.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Lagoon 4
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal													
	Dioxin TEQ	4.3E-08	µg/L	4.3E-08	µg/L	M	2.8E-13	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Manganese	4.7E+02	µg/L	4.7E+02	µg/L	M	6.6E-07	mg/kg-day	9.6E-04	mg/kg-day	N/A	N/A	6.9E-04
	Mercury	1.0E-01	µg/L	1.0E-01	µg/L	M	1.4E-10	mg/kg-day	2.1E-05	mg/kg-day	N/A	N/A	6.8E-06
	(Total)												7.0E-04
												Total Hazard Index Across All Exposure Routes/Pathways	7E-04

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.116.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Lagoon 5
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal													
	Dioxin TEQ	4.2E-07	µg/L	4.2E-07	µg/L	M	1.1E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Chromium	1.2E+01	µg/L	1.2E+01	µg/L	M	2.1E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.1E-05
	Manganese	2.6E+02	µg/L	2.6E+02	µg/L	M	2.2E-06	mg/kg-day	9.6E-04	mg/kg-day	N/A	N/A	2.3E-03
	Mercury	2.1E-01	µg/L	2.1E-01	µg/L	M	1.8E-09	mg/kg-day	2.1E-05	mg/kg-day	N/A	N/A	8.5E-05
	(Total)												2.4E-03
												Total Hazard Index Across All Exposure Routes/Pathways	2E-03

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.116.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water
Exposure Point: Lagoon 5
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal													
	Dioxin TEQ	4.2E-07	µg/L	4.2E-07	µg/L	M	2.7E-12	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Chromium	1.2E+01	µg/L	1.2E+01	µg/L	M	3.5E-08	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	1.8E-06
	Manganese	2.6E+02	µg/L	2.6E+02	µg/L	M	3.7E-07	mg/kg-day	9.6E-04	mg/kg-day	N/A	N/A	3.8E-04
	Mercury	2.1E-01	µg/L	2.1E-01	µg/L	M	3.0E-10	mg/kg-day	2.1E-05	mg/kg-day	N/A	N/A	1.4E-05
	(Total)												4.0E-04
												Total Hazard Index Across All Exposure Routes/Pathways	4E-04

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.117.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soil/Groundwater
Exposure Medium: Air
Exposure Point: Lagoons (1 through 5)
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation													
	1,2-Dichlorobenzene	1.1E-01	ug/m^3	1.1E-01	ug/m^3	M	6.6E-03	ug/m^3	N/A	N/A	N/A	N/A	N/A
	1,2-Dichloroethane	8.6E-03	ug/m^3	8.6E-03	ug/m^3	M	5.2E-04	ug/m^3	N/A	N/A	N/A	N/A	N/A
	1,3-Dichlorobenzene	9.4E-03	ug/m^3	9.4E-03	ug/m^3	M	5.7E-04	ug/m^3	N/A	N/A	N/A	N/A	N/A
	1,4-Dichlorobenzene	2.8E-02	ug/m^3	2.8E-02	ug/m^3	M	1.7E-03	ug/m^3	8.0E+02	ug/m3	N/A	N/A	2.1E-06
	Benzene	9.6E-03	ug/m^3	9.6E-03	ug/m^3	M	5.8E-04	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Bromodichloromethane	2.1E-02	ug/m^3	2.1E-02	ug/m^3	M	1.2E-03	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Carbon tetrachloride	6.9E-02	ug/m^3	6.9E-02	ug/m^3	M	4.2E-03	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Chlorobenzene	1.6E-02	ug/m^3	1.6E-02	ug/m^3	M	9.8E-04	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Chloroform	7.1E-02	ug/m^3	7.1E-02	ug/m^3	M	4.3E-03	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Methylene chloride	1.9E-04	ug/m^3	1.9E-04	ug/m^3	M	1.2E-05	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Tetrachloroethylene	3.2E-02	ug/m^3	3.2E-02	ug/m^3	M	1.9E-03	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Trichloroethene	3.3E-02	ug/m^3	3.3E-02	ug/m^3	M	2.0E-03	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Xylene (total)	7.3E-02	ug/m^3	7.3E-02	ug/m^3	M	4.4E-03	ug/m^3	N/A	N/A	N/A	N/A	N/A
	(Total)												2.1E-06
												Total Hazard Index Across All Exposure Routes/Pathways	2E-06

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.109.RME
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soils
Exposure Medium: Soil/Sludge
Exposure Point: Lagoon 2
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion													
	Acetophenone	7.7E-02	mg/kg	7.7E-02	mg/kg	M	4.0E-08	mg/kg-day	1.0E-01	mg/kg-day	N/A	N/A	4.0E-07
	Dioxin TEQ	1.6E-04	mg/kg	1.6E-04	mg/kg	M	8.0E-11	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.4E+00	mg/kg	4.4E+00	mg/kg	M	2.3E-06	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	7.6E-03
	Cadmium	2.2E+00	mg/kg	2.2E+00	mg/kg	M	1.1E-06	mg/kg-day	1.0E-03	mg/kg-day	N/A	N/A	1.1E-03
	Chromium	5.6E+02	mg/kg	5.6E+02	mg/kg	M	2.9E-04	mg/kg-day	3.0E-03	mg/kg-day	N/A	N/A	9.6E-02
	Cyanide	1.8E+00	mg/kg	1.8E+00	mg/kg	M	9.3E-07	mg/kg-day	2.0E-02	mg/kg-day	N/A	N/A	4.7E-05
	Manganese	1.7E+03	mg/kg	1.7E+03	mg/kg	M	8.6E-04	mg/kg-day	7.0E-02	mg/kg-day	N/A	N/A	1.2E-02
	Mercury	3.8E-01	mg/kg	3.8E-01	mg/kg	M	2.0E-07	mg/kg-day	1.0E-04	mg/kg-day	N/A	N/A	2.0E-03
	Thallium	1.8E+00	mg/kg	1.8E+00	mg/kg	M	9.3E-07	mg/kg-day	8.0E-05	mg/kg-day	N/A	N/A	1.2E-02
	(Total)												1.3E-01
Dermal													
	Dioxin TEQ	1.6E-04	mg/kg	1.6E-04	mg/kg	M	8.0E-12	mg/kg-day	N/A	N/A	N/A	N/A	N/A
	Arsenic	4.4E+00	mg/kg	4.4E+00	mg/kg	M	2.3E-07	mg/kg-day	3.0E-04	mg/kg-day	N/A	N/A	7.5E-04
	Cadmium	2.2E+00	mg/kg	2.2E+00	mg/kg	M	3.8E-09	mg/kg-day	1.0E-05	mg/kg-day	N/A	N/A	3.8E-04
	(Total)												1.1E-03
												Total Hazard Index Across All Exposure Routes/Pathways	1E-01

(1) Medium-Specific (M) EPC selected for hazard calculation.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose

TABLE 7.117.CT
CALCULATION OF NON-CANCER HAZARDS
CENTRAL TENDENCY

POWNAL TANNERY

Scenario Timeframe: Future
Medium: Soil/Groundwater
Exposure Medium: Air
Exposure Point: Lagoons (1 through 5)
Receptor Population: Utility Worker
Receptor Age: Adult

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Hazard Calculation (1)	Intake (Non-Cancer)	Intake (Non-Cancer) Units	Reference Dose	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Inhalation													
	1,2-Dichlorobenzene	1.1E-01	ug/m^3	1.1E-01	ug/m^3	M	2.2E-03	ug/m^3	N/A	N/A	N/A	N/A	N/A
	1,2-Dichloroethane	8.6E-03	ug/m^3	8.6E-03	ug/m^3	M	1.7E-04	ug/m^3	N/A	N/A	N/A	N/A	N/A
	1,3-Dichlorobenzene	9.4E-03	ug/m^3	9.4E-03	ug/m^3	M	1.9E-04	ug/m^3	N/A	N/A	N/A	N/A	N/A
	1,4-Dichlorobenzene	2.8E-02	ug/m^3	2.8E-02	ug/m^3	M	5.6E-04	ug/m^3	8.0E+02	ug/m3	N/A	N/A	7.0E-07
	Benzene	9.6E-03	ug/m^3	9.6E-03	ug/m^3	M	1.9E-04	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Bromodichloromethane	2.1E-02	ug/m^3	2.1E-02	ug/m^3	M	4.1E-04	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Carbon tetrachloride	6.9E-02	ug/m^3	6.9E-02	ug/m^3	M	1.4E-03	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Chlorobenzene	1.6E-02	ug/m^3	1.6E-02	ug/m^3	M	3.3E-04	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Chloroform	7.1E-02	ug/m^3	7.1E-02	ug/m^3	M	1.4E-03	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Methylene chloride	1.9E-04	ug/m^3	1.9E-04	ug/m^3	M	3.9E-06	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Tetrachloroethylene	3.2E-02	ug/m^3	3.2E-02	ug/m^3	M	6.5E-04	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Trichloroethene	3.3E-02	ug/m^3	3.3E-02	ug/m^3	M	6.6E-04	ug/m^3	N/A	N/A	N/A	N/A	N/A
	Xylene (total)	7.3E-02	ug/m^3	7.3E-02	ug/m^3	M	1.5E-03	ug/m^3	N/A	N/A	N/A	N/A	N/A
	(Total)												7.0E-07
												Total Hazard Index Across All Exposure Routes/Pathways	7E-07

(1) Medium-Specific (M) EPC selected for hazard calculation.
- - Not detected at this exposure point.
N/A = Not Applicable
EPC = Exposure Point Concentration
Hazard Quotient = Non-Cancer Intake / Reference Dose