Appendix B

RAGS Part D Standard Tables
(Reasonable Maximum Exposure)

List of Standard Tables Included in Appendix B - Reasonable Maximum Exposure Calcasieu Estuary - Calcasieu Parish, Louisiana

1 Selection of Exposure Pathways

2 Occurrence, Distribution and Selection of Chemicals of Potential Concern

- 2.1 Sediment - Bayou d'Inde
- 2.2 Sediment - Upper Calcasieu
- 2.3 Sediment - Lower Calcasieu
- 2.4 Surface Water - Bayou d'Inde
- 2.5 Surface Water - Upper Calcasieu
- 2.6 Surface Water - Lower Calcasieu
- 2.7 Fish - Entire Estuary (Except Bayou Verdine)
- 2.8 Fish - Bayou Verdine
- 2.9 Shellfish - Bayou d'Inde
- 2.10 Shellfish - Upper Calcasieu
- 2.11 Shellfish - Lower Calcasieu
- 2.12 Shellfish - Bayou Verdine

3 Medium-Specific Exposure Point Concentration Summary

- 3.1 Sediment - Bayou d'Inde
- 3.2 Sediment - Upper Calcasieu - Above Lake Charles
- 3.3 Sediment - Upper Calcasieu - Lake Charles
- 3.4 Sediment - Upper Calcasieu - Clooney Island Loop
- 3.5 Sediment - Upper Calcasieu - Below Clooney Island Loop
- 3.6 Sediment - Lower Calcasieu - Lake Prien
- 3.7 Sediment - Lower Calcasieu - Remainder of Lower Calcasieu
- 3.8 Surface Water - Bayou d'Inde
- 3.9 Surface Water - Upper Calcasieu - Above Lake Charles
- 3.10 Surface Water - Upper Calcasieu - Lake Charles
- 3.11 Surface Water - Upper Calcasieu - Clooney Island Loop
- 3.12 Surface Water - Upper Calcasieu - Below Clooney Island Loop
- 3.13 Surface Water - Lower Calcasieu - Lake Prien
- 3.14 Surface Water - Lower Calcasieu - Remainder of Lower Calcasieu
- 3.15 Fish - Entire Estuary (Except Bayou Verdine)
- 3.16 Fish - Bayou Verdine
- 3.17 Shellfish - Bayou d'Inde
- 3.18 Shellfish - Upper Calcasieu
- 3.19 Shellfish - Lower Calcasieu
- 3.20 Shellfish - Bayou Verdine

4 Values and Equations Used for Intake Calculations

- 4.1 Sediment - Commercial Fisher
- 4.2 Sediment - Recreational Fisher
- 4.3 Sediment - Recreational Swimmer
- 4.4 Surface Water - Commercial Fisher
- 4.5 Surface Water - Recreational Fisher
- 4.6 Surface Water - Recreational Swimmer
- 4.7 Fish - Resident
- 4.8 Fish - Resident Near Bayou Verdine
- 4.9 Fish - Subsistence - Resident
- 4.10 Fish - Subsistence - Resident Near Bayou Verdine
- 4.11 Shellfish - Resident
- 4.12 Shellfish - Resident Near Bayou Verdine
- 4.13 Shellfish - Subsistence - Resident
- 4.14 Shellfish - Subsistence - Resident Near Bayou Verdine
- 4.15 Physical/Chemical Parameters for Chemicals of Potential Concern

5 Non-Cancer Toxicity Data

- 5.1 Non-Cancer Toxicity Data -- Oral/Dermal

List of Standard Tables Included in Appendix B - Reasonable Maximum Exposure Calcasieu Estuary - Calcasieu Parish, Louisiana

6 Cancer Toxicity Data
- 6.1 Cancer Toxicity Data -- Oral/Dermal

7 Calculation of Non-Cancer Hazards - Reasonable Maximum Exposure
- 7.1 Sediment - Bayou d'Inde - Recreational Fisher
- 7.2 Sediment - Upper Calcasieu - Above Lake Charles - Recreational Fisher
- 7.3 Sediment - Upper Calcasieu - Above Lake Charles - Recreational Swimmer
- 7.4 Sediment - Upper Calcasieu - Lake Charles - Recreational Fisher
- 7.5 Sediment - Upper Calcasieu - Lake Charles - Recreational Swimmer
- 7.6 Sediment - Upper Calcasieu - Clooney Island Loop - Recreational Fisher
- 7.7 Sediment - Upper Calcasieu - Below Clooney Island Loop - Commercial Fisher
- 7.8 Sediment - Upper Calcasieu - Below Clooney Island Loop - Recreational Fisher
- 7.9 Sediment - Lower Calcasieu - Lake Prien - Commercial Fisher
- 7.10 Sediment - Lower Calcasieu - Lake Prien - Recreational Fisher
- 7.11 Sediment - Lower Calcasieu - Lake Prien - Recreational Swimmer
- 7.12 Sediment - Lower Calcasieu - Remainder of Lower Calcasieu - Commercial Fisher
- 7.13 Sediment - Lower Calcasieu - Remainder of Lower Calcasieu - Recreational Fisher
- 7.14 Surface Water - Bayou d'Inde - Recreational Fisher
- 7.15 Surface Water - Upper Calcasieu - Above Lake Charles - Recreational Fisher
- 7.16 Surface Water - Upper Calcasieu - Above Lake Charles - Recreational Swimmer
- 7.17 Surface Water - Upper Calcasieu - Lake Charles - Recreational Fisher
- 7.18 Surface Water - Upper Calcasieu - Lake Charles - Recreational Swimmer
- 7.19 Surface Water - Upper Calcasieu - Clooney Island Loop - Recreational Fisher
- 7.20 Surface Water - Upper Calcasieu - Below Clooney Island Loop - Commercial Fisher
- 7.21 Surface Water - Upper Calcasieu - Below Clooney Island Loop - Recreational Fisher
- 7.22 Surface Water - Lower Calcasieu - Lake Prien - Commercial Fisher
- 7.23 Surface Water - Lower Calcasieu - Lake Prien - Recreational Fisher
- 7.24 Surface Water - Lower Calcasieu - Lake Prien - Recreational Swimmer
- 7.25 Surface Water - Lower Calcasieu - Remainder of Lower Calcasieu - Commercial Fisher
- 7.26 Surface Water - Lower Calcasieu - Remainder of Lower Calcasieu - Recreational Fisher
- 7.27 Fish - Entire Estuary (Except Bayou Verdine) - Resident
- 7.28 Fish - Entire Estuary (Except Bayou Verdine) - Resident - Subsistence
- 7.29 Fish - Bayou Verdine - Resident
- 7.30 Fish - Bayou Verdine - Resident - Subsistence
- 7.31 Shellfish - Bayou d'Inde - Resident
- 7.32 Shellfish - Upper Calcasieu - Resident
- 7.33 Shellfish - Lower Calcasieu - Resident
- 7.34 Shellfish - Bayou Verdine - Resident
- 7.35 Shellfish - Bayou d'Inde - Resident - Subsistence
- 7.36 Shellfish - Upper Calcasieu - Resident - Subsistence
- 7.37 Shellfish - Lower Calcasieu - Resident - Subsistence
- 7.38 Shellfish - Bayou Verdine - Resident - Subsistence

8 Calculation of Cancer Risks - Reasonable Maximum Exposure
- 8.1 Sediment - Bayou d'Inde - Recreational Fisher
- 8.2 Sediment - Upper Calcasieu - Above Lake Charles - Recreational Fisher
- 8.3 Sediment - Upper Calcasieu - Above Lake Charles - Recreational Swimmer
- 8.4 Sediment - Upper Calcasieu - Lake Charles - Recreational Fisher
- 8.5 Sediment - Upper Calcasieu - Lake Charles - Recreational Swimmer
- 8.6 Sediment - Upper Calcasieu - Clooney Island Loop - Recreational Fisher
- 8.7 Sediment - Upper Calcasieu - Below Clooney Island Loop - Commercial Fisher
- 8.8 Sediment - Upper Calcasieu - Below Clooney Island Loop - Recreational Fisher
- 8.9 Sediment - Lower Calcasieu - Lake Prien - Commercial Fisher
- 8.10 Sediment - Lower Calcasieu - Lake Prien - Recreational Fisher
- 8.11 Sediment - Lower Calcasieu - Lake Prien - Recreational Swimmer

List of Standard Tables Included in Appendix B - Reasonable Maximum Exposure
Calcasieu Estuary - Calcasieu Parish, Louisiana

8.12 Sediment - Lower Calcasieu - Remainder of Lower Calcasieu - Commercial Fisher
8.13 Sediment - Lower Calcasieu - Remainder of Lower Calcasieu - Recreational Fisher
8.14 Surface Water - Bayou d'Inde - Recreational Fisher
8.15 Surface Water - Upper Calcasieu - Above Lake Charles - Recreational Fisher
8.16 Surface Water - Upper Calcasieu - Above Lake Charles - Recreational Swimmer
8.17 Surface Water - Upper Calcasieu - Lake Charles - Recreational Fisher
8.18 Surface Water - Upper Calcasieu - Lake Charles - Recreational Swimmer
8.19 Surface Water - Upper Calcasieu - Clooney Island Loop - Recreational Fisher
8.20 Surface Water - Upper Calcasieu - Below Clooney Island Loop - Commercial Fisher
8.21 Surface Water - Upper Calcasieu - Below Clooney Island Loop - Recreational Fisher
8.22 Surface Water - Lower Calcasieu - Lake Prien - Commercial Fisher
8.23 Surface Water - Lower Calcasieu - Lake Prien - Recreational Fisher
8.24 Surface Water - Lower Calcasieu - Lake Prien - Recreational Swimmer
8.25 Surface Water - Lower Calcasieu - Remainder of Lower Calcasieu - Commercial Fisher
8.26 Surface Water - Lower Calcasieu - Remainder of Lower Calcasieu - Recreational Fisher
8.27 Fish - Entire Estuary (Except Bayou Verdine) - Resident
8.28 Fish - Entire Estuary (Except Bayou Verdine) - Resident - Subsistence
8.29 Fish - Bayou Verdine - Resident
8.30 Fish - Bayou Verdine - Resident - Subsistence
8.31 Shellfish - Bayou d'Inde - Resident
8.32 Shellfish - Upper Calcasieu - Resident
8.33 Shellfish - Lower Calcasieu - Resident
8.34 Shellfish - Bayou Verdine - Resident
8.35 Shellfish - Bayou d'Inde - Resident - Subsistence
8.36 Shellfish - Upper Calcasieu - Resident - Subsistence
8.37 Shellfish - Lower Calcasieu - Resident - Subsistence
8.38 Shellfish - Bayou Verdine - Resident - Subsistence

9 Summary of Receptor Risks and Hazards for COPCs - Reasonable Maximum Exposure

9.1 Bayou d'Inde - Recreational Fisher
9.2 Upper Calcasieu - Above Lake Charles - Recreational Fisher
9.3 Upper Calcasieu - Above Lake Charles - Recreational Swimmer
9.4 Upper Calcasieu - Lake Charles - Recreational Fisher
9.5 Upper Calcasieu - Lake Charles - Recreational Swimmer
9.6 Upper Calcasieu - Clooney Island Loop - Recreational Fisher
9.7 Upper Calcasieu - Below Clooney Island Loop - Commercial Fisher
9.8 Upper Calcasieu - Below Clooney Island Loop - Recreational Fisher
9.9 Lower Calcasieu - Lake Prien - Commercial Fisher
9.10 Lower Calcasieu - Lake Prien - Recreational Fisher
9.11 Lower Calcasieu - Lake Prien - Recreational Swimmer
9.12 Lower Calcasieu - Remainder of Lower Calcasieu - Commercial Fisher
9.13 Lower Calcasieu - Remainder of Lower Calcasieu - Recreational Fisher
9.14 Bayou d'Inde - Resident
9.15 Upper Calcasieu - Resident
9.16 Lower Calcasieu - Resident
9.17 Bayou Verdine - Resident
9.18 Bayou d'Inde - Resident - Subsistence
9.19 Upper Calcasieu - Resident - Subsistence
9.20 Lower Calcasieu - Resident - Subsistence
9.21 Bayou Verdine - Resident - Subsistence

10 Risk Assessment Summary - Reasonable Maximum Exposure

10.1 Bayou d'Inde - Recreational Fisher
10.2 Upper Calcasieu - Above Lake Charles - Recreational Fisher
10.3 Upper Calcasieu - Above Lake Charles - Recreational Swimmer

List of Standard Tables Included in Appendix B - Reasonable Maximum Exposure
Calcasieu Estuary - Calcasieu Parish, Louisiana

10.4 Upper Calcasieu - Lake Charles - Recreational Fisher
10.5 Upper Calcasieu - Lake Charles - Recreational Swimmer
10.6 Upper Calcasieu - Clooney Island Loop - Recreational Fisher
10.7 Upper Calcasieu - Below Clooney Island Loop - Commercial Fisher
10.8 Upper Calcasieu - Below Clooney Island Loop - Recreational Fisher
10.9 Lower Calcasieu - Lake Prien - Commercial Fisher
10.10 Lower Calcasieu - Lake Prien - Recreational Fisher
10.11 Lower Calcasieu - Lake Prien - Recreational Swimmer
10.12 Lower Calcasieu - Remainder of Lower Calcasieu - Commercial Fisher
10.13 Lower Calcasieu - Remainder of Lower Calcasieu - Recreational Fisher
10.14 Bayou d'Inde - Resident
10.15 Upper Calcasieu - Resident
10.16 Lower Calcasieu - Resident
10.17 Bayou Verdine - Resident
10.18 Bayou d'Inde - Resident - Subsistence
10.19 Upper Calcasieu - Resident - Subsistence
10.20 Lower Calcasieu - Resident - Subsistence
10.21 Bayou Verdine - Resident - Subsistence

TABLE 1
SELECTION OF EXPOSURE PATHWAYS
Calcasieu Estuary - Calcasieu Parish, Louisiana

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/Future	Sediment	Sediment	Bayou D'Inde	Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.
			Upper Calcasieu - Above Lake Charles	Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.
				Recreational Swimmer	Youth/Adult	Ingestion	On-site	Quant	This area is used for swimming and other recreational purposes.
						Dermal	On-site	Quant	This area is used for swimming and other recreational purposes.
			Upper Calcasieu - Lake Charles	Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.
				Recreational Swimmer	Youth/Adult	Ingestion	On-site	Quant	This area is used for swimming and other recreational purposes.
						Dermal	On-site	Quant	This area is used for swimming and other recreational purposes.
			Upper Calcasieu - Clooney Island Loop	Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.
			Upper Calcasieu - Below Clooney Island Loop	Commercial Fisher	Adult	Ingestion	On-site	Quant	Commerical fishers may be exposed to sediment that is brought into boat with the catch.
						Dermal	On-site	Quant	Commerical fishers may be exposed to sediment that is brought into boat with the catch.
				Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.

TABLE 1
SELECTION OF EXPOSURE PATHWAYS
Calcasieu Estuary - Calcasieu Parish, Louisiana

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/Future (continued)	Sediment (continued)	Sediment (continued)	Lower Calcasieu - Prien Lake	Commercial Fisher	Adult	Ingestion	On-site	Quant	Commerical fishers may be exposed to sediment that is brought into boat with the catch.
						Dermal	On-site	Quant	Commerical fishers may be exposed to sediment that is brought into boat with the catch.
				Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.
				Recreational Swimmer	Youth/Adult	Ingestion	On-site	Quant	This area is used for swimming and other recreational purposes.
						Dermal	On-site	Quant	This area is used for swimming and other recreational purposes.
			Lower Calcasieu - Remainder	Commercial Fisher	Adult	Ingestion	On-site	Quant	Commerical fishers may be exposed to sediment that is brought into boat with the catch.
						Dermal	On-site	Quant	Commerical fishers may be exposed to sediment that is brought into boat with the catch.
				Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.
	Surface Water	Surface Water	Bayou D'Inde	Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.
			Upper Calcasieu - Above Lake Charles	Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.
				Recreational Swimmer	Youth/Adult	Ingestion	On-site	Quant	This area is used for swimming and other recreational purposes.
						Dermal	On-site	Quant	This area is used for swimming and other recreational purposes.

TABLE 1
SELECTION OF EXPOSURE PATHWAYS
Calcasieu Estuary - Calcasieu Parish, Louisiana

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/Future (continued)	Surface Water (continued)	Surface Water (continued)	Upper Calcasieu - Lake Charles	Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.
				Recreational Swimmer	Youth/Adult	Ingestion	On-site	Quant	This area is used for swimming and other recreational purposes.
						Dermal	On-site	Quant	This area is used for swimming and other recreational purposes.
			Upper Calcasieu - Clooney Island Loop	Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.
			Upper Calcasieu - Below Clooney Island Loop	Commercial Fisher	Adult	Dermal	On-site	Quant	Commerical fishers may be exposed to surface water that is brought into boat with the catch.
				Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.
			Lower Calcasieu - Prien Lake	Commercial Fisher	Adult	Dermal	On-site	Quant	Commerical fishers may be exposed to surface water that is brought into boat with the catch.
				Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.
				Recreational Swimmer	Youth/Adult	Ingestion	On-site	Quant	This area is used for swimming and other recreational purposes.
						Dermal	On-site	Quant	This area is used for swimming and other recreational purposes.

TABLE 1
SELECTION OF EXPOSURE PATHWAYS
Calcasieu Estuary - Calcasieu Parish, Louisiana

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/Future (continued)	Surface Water (continued)	Surface Water (continued)	Lower Calcasieu - Remainder	Commercial Fisher	Adult	Dermal	On-site	Quant	Commerical fishers may be exposed to surface water that is brought into boat with the catch.
				Recreational Fisher	Youth/Adult	Ingestion	On-site	Quant	Recreational fishers may be exposed while wading.
						Dermal	On-site	Quant	Recreational fishers may be exposed while wading.
	Fish Tissue	Fish Tissue	Entire Estuary (Except Bayou Verdine)	Resident	Child/Youth/ Adult	Ingestion	On-site	Quant	Area residents may ingest fish/shellfish caught by recreational fishers.
				Resident - Subsistence	Child/Youth/ Adult	Ingestion	On-site	Quant	Area residents may subsist on fish/shellfish caught locally.
			Bayou Verdine	Resident	Child/Youth/ Adult	Ingestion	On-site	Quant	Area residents may ingest fish/shellfish caught by recreational fishers.
				Resident - Subsistence	Child/Youth/ Adult	Ingestion	On-site	Quant	Area residents may subsist on fish/shellfish caught locally.
	Shellfish Tissue	Shellfish Tissue	Bayou D'Inde	Resident	Child/Youth/ Adult	Ingestion	On-site	Quant	Area residents may ingest fish/shellfish caught by recreational fishers.
				Resident - Subsistence	Child/Youth/ Adult	Ingestion	On-site	Quant	Area residents may subsist on fish/shellfish caught locally.
			Upper Calcasieu	Resident	Child/Youth/ Adult	Ingestion	On-site	Quant	Area residents may ingest fish/shellfish caught by recreational fishers.
				Resident - Subsistence	Child/Youth/ Adult	Ingestion	On-site	Quant	Area residents may subsist on fish/shellfish caught locally.
			Lower Calcasieu	Resident	Child/Youth/ Adult	Ingestion	On-site	Quant	Area residents may ingest fish/shellfish caught by recreational fishers.
				Resident - Subsistence	Child/Youth/ Adult	Ingestion	On-site	Quant	Area residents may subsist on fish/shellfish caught locally.
			Bayou Verdine	Resident	Child/Youth/ Adult	Ingestion	On-site	Quant	Area residents may ingest fish/shellfish caught by recreational fishers.
				Resident - Subsistence	Child/Youth/ Adult	Ingestion	On-site	Quant	Area residents may subsist on fish/shellfish caught locally.

TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
Bayou d'Inde		VOCs													
	78-93-3	2-Butanone	3.0E-03	1.6E-01	mg/kg	BIR5009(BJ), BIR5002(BJ)	49 / 207	1.1E-02 - 2.1E-01	1.6E-01		7.8E+04	NA	NA	N	BSL
	108-10-1	4-Methyl-2-pentanone	3.0E-03	3.0E-03	mg/kg	BIR4019(LJ)	1 / 207	1.1E-02 - 2.7E+01	3.0E-03		1.0E+04	NA	NA	N	IFD
	67-64-1	Acetone	4.0E-03	8.1E+01	mg/kg	BIR2020(J)	64 / 207	1.3E-02 - 7.3E-01	8.1E+01		1.3E+04	NA	NA	N	BSL
	71-43-2	Benzene	6.0E-03	2.9E-02	mg/kg	BIR2020(LJ)	2 / 207	1.1E-02 - 1.0E-01	2.9E-02		6.6E+01	NA	NA	N	IFD
	75-15-0	Carbon disulfide	1.0E-03	9.9E-02	mg/kg	BIR4017()	126 / 207	1.1E-02 - 2.1E-01	9.9E-02		1.3E+04	NA	NA	N	BSL
	75-69-4	CFC-11 (Trichlorofluoromethane)	1.0E-03	1.0E-03	mg/kg	BIR2092(LJ)	1 / 207	1.1E-02 - 2.1E-01	1.0E-03		3.9E+04	NA	NA	N	IFD
	108-90-7	Chlorobenzene	1.0E-03	1.5E-01	mg/kg	BIR1006()	18 / 207	1.1E-02 - 2.7E+01	1.5E-01		2.6E+03	NA	NA	N	BSL
	74-87-3	Chloromethane	4.0E-03	8.0E-03	mg/kg	BIR4024(LJ)	3 / 207	1.1E-02 - 2.1E-01	8.0E-03		2.8E+02	NA	NA	N	IFD
	110-82-7	Cyclohexane	3.0E-03	9.0E+00	mg/kg	BIR2020(J)	5 / 207	1.1E-02 - 1.0E-01	9.0E+00			NA	NA	N	IFD
	75-09-2	Dichloromethane	1.0E-03	2.3E+01	mg/kg	BIR2020(J)	26 / 207	4.0E-03 - 1.0E-01	2.3E+01		4.9E+02	NA	NA	N	BSL
	100-41-4	Ethylbenzene	1.0E-03	7.7E-01	mg/kg	BIR2020(J)	7 / 207	1.1E-02 - 1.0E-01	7.7E-01		1.3E+04	NA	NA	N	IFD
	98-82-8	Isopropylbenzene (Cumene)	1.0E-03	9.0E-03	mg/kg	BIR4017(LJ)	7 / 207	1.1E-02 - 2.7E+01	9.0E-03		1.3E+04	NA	NA	N	IFD
	79-20-9	Methyl acetate	4.0E-03	2.2E-02	mg/kg	BIR3041(LJ)	15 / 207	5.0E-03 - 2.1E-01	2.2E-02		1.3E+05	NA	NA	N	BSL
	108-87-2	Methylcyclohexane	1.0E-03	1.6E-01	mg/kg	BIR3067(_J)	7 / 207	1.1E-02 - 2.1E-01	1.6E-01			NA	NA	N	IFD
	100-42-5	Styrene	3.0E-03	2.9E-02	mg/kg	BIR4005()	4 / 207	1.1E-02 - 2.1E-01	2.9E-02		2.6E+04	NA	NA	N	IFD
	127-18-4	Tetrachloroethene	2.0E-03	1.4E-02	mg/kg	BIR2028(LJ_J)	4 / 207	1.1E-02 - 2.7E+01	1.4E-02		7.0E+01	NA	NA	N	IFD
	108-88-3	Toluene	1.0E-03	3.0E-01	mg/kg	BIR2020(J)	21 / 207	1.1E-02 - 1.0E-01	3.0E-01		2.6E+04	NA	NA	N	BSL
	79-01-6	Trichloroethene	1.0E-03	3.0E-03	mg/kg	BIR2028(LJ_J)	3 / 207	1.1E-02 - 2.1E-01	3.0E-03		3.3E+02	NA	NA	N	IFD
	1330-20-7	Xylenes (total)	2.0E-03	2.0E-02	mg/kg	BIR4030(LJ)	9 / 207	1.1E-02 - 2.7E+01	2.0E-02		2.6E+05	NA	NA	N	IFD
		SVOCs													
	120-82-1	1,2,4-Trichlorobenzene	8.0E-03	8.0E-03	mg/kg	BIR2005(LJ)	1 / 208	1.1E-02 - 4.3E+00	8.0E-03		5.4E+02	NA	NA	N	IFD
	541-73-1	1,3-Dichlorobenzene	1.0E-03	4.8E-02	mg/kg	BIR1006()	45 / 208	1.1E-02 - 4.3E+00	4.8E-02		4.9E+01	NA	NA	N	BSL
	106-46-7	1,4-Dichlorobenzene	1.0E-03	3.2E-02	mg/kg	BIR1007()	33 / 208	1.1E-02 - 4.3E+00	3.2E-02		6.3E+01	NA	NA	N	BSL
	101-55-3	4-Bromophenyl phenylether	1.0E-01	1.0E-01	mg/kg	BIR1010(LJ)	1 / 309	5.3E-02 - 1.8E+02	1.0E-01			NA	NA	N	IFD
	59-50-7	4-Chloro-3-methylphenol	1.1E-01	1.1E-01	mg/kg	BIR2056(LJ)	1 / 309	5.3E-02 - 1.8E+02	1.1E-01			NA	NA	N	IFD
	106-44-5	4-Methylphenol	1.8E-01	8.2E-01	mg/kg	BIR1003(LJ)	3 / 309	5.3E-02 - 1.8E+02	8.2E-01		2.7E+02	NA	NA	N	IFD
	98-86-2	Acetophenone	4.8E-02	3.9E-01	mg/kg	BIR1003(LJ)	3 / 309	5.3E-02 - 1.9E+02	3.9E-01		5.4E+03	NA	NA	N	IFD
	100-52-7	Benzaldehyde	4.1E-02	3.3E-01	mg/kg	BIR2072()	10 / 308	5.3E-02 - 1.9E+02	3.3E-01		5.4E+03	NA	NA	N	IFD
	117-81-7	bis(2-Ethylhexyl) phthalate	3.5E-02	8.0E+01	mg/kg	BIR1003(D)	162 / 309	5.5E-02 - 1.8E+02	8.0E+01		1.1E+02	NA	NA	N	BSL
	85-68-7	Butylbenzyl phthalate	1.3E-01	3.6E-01	mg/kg	BIR3032(J)	3 / 309	5.3E-02 - 1.8E+02	3.6E-01		1.1E+04	NA	NA	N	IFD
	86-74-8	Carbazole	6.4E-02	6.9E-01	mg/kg	BIST008(_J)	5 / 269	9.0E-03 - 1.8E+02	6.9E-01		7.6E+01	NA	NA	N	IFD
	132-64-9	Dibenzofuran	4.2E-02	1.5E-01	mg/kg	BIR2053(J)	6 / 321	9.0E-03 - 1.8E+02	1.5E-01		2.2E+02	NA	NA	N	IFD
	131-11-3	Dimethyl phthalate	7.7E-02	7.7E-02	mg/kg	BIR4033(LJ)	1 / 309	5.3E-02 - 1.8E+02	7.7E-02			NA	NA	N	IFD
	84-74-2	Di-n-butylphthalate	6.7E-02	4.6E-01	mg/kg	BIR2089(LJ)	10 / 309	5.3E-02 - 1.8E+02	4.6E-01		5.4E+03	NA	NA	N	IFD
	117-84-0	Di-n-octylphthalate	2.1E-01	9.3E-01	mg/kg	BIR3043(LJ)	8 / 309	5.3E-02 - 1.8E+02	9.3E-01		1.1E+03	NA	NA	N	IFD
	118-74-1	Hexachlorobenzene	1.3E-01	2.4E+01	mg/kg	BIR1010()	24 / 309	3.9E-02 - 1.8E+02	2.4E+01		9.5E-01	NA	NA	Y	ASL
	87-68-3	Hexachlorobutadiene	1.0E-01	1.6E+00	mg/kg	BIR1010()	15 / 309	3.9E-02 - 1.8E+02	1.6E+00		1.1E+01	NA	NA	N	IFD
	108-95-2	Phenol	4.9E-02	1.7E+00	mg/kg	BIR3036()	14 / 309	5.3E-02 - 1.8E+02	1.7E+00		3.3E+04	NA	NA	N	IFD
		PAHs													
	92-52-4	1,1'-Biphenyl	8.6E-02	6.2E-01	mg/kg	BIR1003(LJ)	9 / 307	5.3E-02 - 1.9E+02	6.2E-01		2.3E+03	NA	NA	N	IFD
	91-57-6	2-Methylnaphthalene	1.5E-02	5.5E-01	mg/kg	BIST027(_J)	16 / 291	9.0E-03 - 1.8E+02	5.5E-01		9.2E+02	NA	NA	N	BSL
	83-32-9	Acenaphthene	1.1E-02	1.5E+00	mg/kg	BIST017(_J)	11 / 289	9.0E-03 - 1.8E+02	1.5E+00		2.8E+03	NA	NA	N	IFD

TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
	208-96-8	Acenaphthylene	1.8E-02	9.0E-01	mg/kg	BIST014(_J)	25 / 300	9.0E-03 - 1.8E+02	9.0E-01			NA	NA	Y	NTX
	120-12-7	Anthracene	1.6E-02	1.3E+00	mg/kg	BIST017(_J)	22 / 295	1.4E-02 - 1.8E+02	1.3E+00		1.4E+04	NA	NA	N	BSL
	56-55-3	Benzo(a)anthracene	2.7E-02	4.9E+00	mg/kg	BIST017(_J)	48 / 300	9.1E-02 - 1.8E+02	4.9E+00		1.8E+00	NA	NA	Y	ASL
	50-32-8	Benzo(a)pyrene	2.5E-02	2.6E+00	mg/kg	BIST017(_J)	41 / 301	7.8E-02 - 1.8E+02	2.6E+00	4.3E-02	1.8E-01	NA	NA	Y	ASL
	205-99-2	Benzo(b)fluoranthene	4.8E-02	7.4E+00	mg/kg	BIST017(_J)	46 / 302	9.1E-02 - 1.8E+02	7.4E+00		1.8E+00	NA	NA	Y	ASL
	191-24-2	Benzo(g,h,i)perylene	1.8E-02	6.7E-01	mg/kg	BIST008(_J)	32 / 298	7.8E-02 - 1.8E+02	6.7E-01	3.6E-02		NA	NA	Y	NTX
	207-08-9	Benzo(k)fluoranthene	2.0E-02	2.6E+00	mg/kg	BIST017(_J)	33 / 296	7.8E-02 - 1.8E+02	2.6E+00		1.8E+01	NA	NA	Y	ASL
	218-01-9	Chrysene	2.1E-02	1.0E+01	mg/kg	BIST017(_J)	63 / 304	9.1E-02 - 1.8E+02	1.0E+01		1.8E+02	NA	NA	N	BSL
	53-70-3	Dibenzo(a,h)anthracene	1.5E-02	5.0E-01	mg/kg	BIST017(_J)	21 / 294	7.8E-02 - 1.8E+02	5.0E-01		1.8E-01	NA	NA	Y	ASL
	206-44-0	Fluoranthene	2.3E-02	1.9E+01	mg/kg	BIST017(_J)	58 / 303	9.1E-02 - 1.8E+02	1.9E+01		1.8E+03	NA	NA	N	BSL
	86-73-7	Fluorene	1.0E-02	1.5E+01	mg/kg	BIR2020()	13 / 289	9.0E-03 - 1.8E+02	1.5E+01		1.8E+03	NA	NA	N	IFD
	193-39-5	Indeno(1,2,3-cd)pyrene	3.5E-02	1.5E+00	mg/kg	BIST017(_J)	32 / 297	7.8E-02 - 1.8E+02	1.5E+00		1.8E+00	NA	NA	Y	ASL
	91-20-3	Naphthalene	2.1E-02	2.2E-01	mg/kg	BIR2053(J)	9 / 289	9.0E-03 - 1.8E+02	2.2E-01		9.2E+02	NA	NA	N	IFD
	85-01-8	Phenanthrene	2.1E-02	5.9E+01	mg/kg	BIR2020(LJ)	43 / 302	7.8E-02 - 1.5E+01	5.9E+01			NA	NA	Y	NTX
	129-00-0	Pyrene	2.5E-02	1.7E+01	mg/kg	BIST017(_J)	94 / 304	9.1E-02 - 1.8E+02	1.7E+01		1.4E+03	NA	NA	N	BSL
		Pesticides/PCBs													
	72-54-8	4,4'-DDD	6.1E-04	1.2E-01	mg/kg	BIST011(DP)	42 / 246	4.1E-03 - 9.4E-01	1.2E-01		1.1E+01	NA	NA	N	BSL
	72-55-9	4,4'-DDE	6.3E-04	1.2E-01	mg/kg	BIST024(), BIST011(D)	58 / 248	4.1E-03 - 9.4E-01	1.2E-01		7.6E+00	NA	NA	N	BSL
	50-29-3	4,4'-DDT	6.6E-04	6.5E-02	mg/kg	BIST016(P_J)	17 / 245	3.7E-03 - 3.6E-01	6.5E-02		7.6E+00	NA	NA	N	BSL
	309-00-2	Aldrin	3.5E-04	3.7E-01	mg/kg	BIR1010(_J)	48 / 247	7.4E-04 - 2.6E-01	3.7E-01		9.0E-02	NA	NA	Y	ASL
	11097-69-1	Aroclor-1254	4.9E-03	1.3E+00	mg/kg	BIR3018()	115 / 248	1.3E-02 - 3.6E+00	1.3E+00	1.2E-01	6.2E-01	NA	NA	Y	ASL
	11096-82-5	Aroclor-1260	5.9E-02	1.9E-01	mg/kg	BIR4018()	6 / 245	1.3E-02 - 3.6E+00	1.9E-01		6.2E-01	NA	NA	N	IFD
	319-84-6	BHC, alpha-	5.4E-04	7.5E-02	mg/kg	BIR1011(_J)	23 / 245	1.9E-03 - 2.6E-01	7.5E-02		3.7E-01	NA	NA	N	BSL
	319-85-7	BHC, beta-	1.5E-03	4.8E-01	mg/kg	BIST011(D)	78 / 245	1.9E-03 - 3.9E-01	4.8E-01		1.3E+00	NA	NA	N	BSL
	319-86-8	BHC, delta-	3.9E-04	8.3E-02	mg/kg	BIST024()	41 / 245	1.9E-03 - 2.6E-01	8.3E-02			NA	NA	Y	NTX
	58-89-9	BHC, gamma- (Lindane)	1.9E-03	3.0E-02	mg/kg	BIST011(_J)	13 / 245	1.9E-03 - 2.6E-01	3.0E-02		1.8E+00	NA	NA	N	BSL
	5103-71-9	Chlordane, alpha-	1.7E-04	8.4E-02	mg/kg	BIST011(D)	32 / 246	2.3E-04 - 9.4E-01	8.4E-02		6.7E+00	NA	NA	N	BSL
	5103-74-2	Chlordane, gamma-	4.0E-04	3.3E-01	mg/kg	BIST029()	44 / 246	1.9E-03 - 2.6E-01	3.3E-01		6.7E+00	NA	NA	N	BSL
	60-57-1	Dieldrin	7.8E-04	4.5E-02	mg/kg	BIST011(DP)	30 / 245	4.1E-03 - 3.6E-01	4.5E-02		9.5E-02	NA	NA	Y	ASL
	959-98-8	Endosulfan I	2.3E-04	8.3E-02	mg/kg	BIST024()	10 / 245	2.1E-03 - 9.4E-01	8.3E-02		3.3E+02	NA	NA	N	IFD
	33213-65-9	Endosulfan II	1.0E-03	1.7E-01	mg/kg	BIR1010(J_J)	16 / 245	3.7E-03 - 3.6E-01	1.7E-01		3.3E+02	NA	NA	N	BSL
	1031-07-8	Endosulfan sulfate	8.6E-04	1.5E-01	mg/kg	BIST011(DP)	86 / 248	3.7E-03 - 3.6E-01	1.5E-01			NA	NA	Y	NTX
	72-20-8	Endrin	9.3E-04	6.0E-02	mg/kg	BIR1010(LJ_J)	29 / 245	3.7E-03 - 9.4E-01	6.0E-02		1.6E+01	NA	NA	N	BSL
	7421-93-4	Endrin aldehyde	8.6E-04	1.0E-01	mg/kg	BIST029(J)	61 / 248	4.1E-03 - 3.6E-01	1.0E-01			NA	NA	Y	NTX
	53494-70-5	Endrin ketone	7.7E-04	2.4E-02	mg/kg	BIR1007(*)	13 / 245	4.1E-03 - 3.6E-01	2.4E-02			NA	NA	Y	NTX
	76-44-8	Heptachlor	1.2E-03	2.4E-01	mg/kg	BIR1010(_J)	12 / 245	1.9E-03 - 2.6E-01	2.4E-01		3.4E-01	NA	NA	N	IFD
	1024-57-3	Heptachlor epoxide	5.1E-04	1.9E-02	mg/kg	BIR1014()	10 / 245	2.1E-03 - 9.4E-01	1.9E-02		1.7E-01	NA	NA	N	IFD
	72-43-5	Methoxychlor	5.0E-04	2.3E-02	mg/kg	BIR2024(LJB)	7 / 245	7.9E-04 - 1.8E+00	2.3E-02		2.7E+02	NA	NA	N	IFD
		Herbicides													
	75-99-0	2,2-Dichloropropionic acid	1.2E-01	1.2E-01	mg/kg	BIR1006(PC_J)	1 / 205	5.1E-02 - 8.1E-01	1.2E-01		1.6E+03	NA	NA	N	IFD
	93-76-5	2,4,5-T	5.4E-03	2.0E-02	mg/kg	BIR2038(J)	6 / 205	2.5E-02 - 4.1E-01	2.0E-02		5.4E+02	NA	NA	N	IFD
	93-72-1	2,4,5-TP (Silvex) (Propionic Acid)	5.5E-03	4.2E-02	mg/kg	BIR1010(JPC_J)	2 / 205	2.5E-02 - 4.1E-01	4.2E-02		4.3E+02	NA	NA	N	IFD
	94-82-6	2,4-DB	2.3E-02	1.2E-01	mg/kg	BIR2038(J)	7 / 205	1.0E-01 - 1.6E+00	1.2E-01		4.3E+02	NA	NA	N	IFD

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CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
	120-36-5	Dichloroprop	2.5E-02	6.4E-01	mg/kg	BIR1010(PC)	5 / 205	1.0E-01 - 1.6E+00	6.4E-01			NA	NA	N	IFD
	88-85-7	Dinitrobutyl phenol	2.0E-03	2.4E-02	mg/kg	BIR2038(J)	3 / 205	1.5E-02 - 2.4E-01	2.4E-02		5.4E+01	NA	NA	N	IFD
	94-74-6	MCPA (2-Methyl-4-chlorophenoxyacetic acid)	1.9E+00	6.8E+00	mg/kg	BIR2038(J_J)	6 / 205	1.0E+01 - 1.6E+02	6.8E+00		2.7E+01	NA	NA	N	IFD
	7085-19-0	Mecoprop	7.9E+00	7.9E+00	mg/kg	BIR2040(J_J)	1 / 205	1.0E+01 - 1.6E+02	7.9E+00			NA	NA	N	IFD
		Dioxins/Furans													
	35822-46-9	1,2,3,4,6,7,8-HpCDD	2.1E-05	2.2E-03	mg/kg	BIR4018()	64 / 64	NA - NA	Dioxins and furans are multiplied by 2,3,7,8-TCDD toxic equivalency factors (TEFs) in order to compare a						
	67562-39-4	1,2,3,4,6,7,8-HpCDF	1.4E-05	2.9E-02	mg/kg	BIR1004()	63 / 64	1.1E-04 - 1.1E-04	total TCDD equivalent concentration to the screening toxicity value. The maximum TCDD equivalent						
	55673-89-7	1,2,3,4,7,8,9-HpCDF	5.0E-06	7.1E-03	mg/kg	BIR1004()	60 / 64	1.4E-06 - 3.7E-06	concentration of 2.4E-3 mg/kg exceeds the screening toxicity value of 1.8E-5 mg/kg and the reference area						
	39227-28-6	1,2,3,4,7,8-HxCDD	2.4E-06	1.1E-04	mg/kg	BIR2038(_J)	31 / 64	4.5E-07 - 7.9E-05	concentration of 5.5E-06 mg/kg.						
	70648-26-9	1,2,3,4,7,8-HxCDF	7.8E-06	8.2E-03	mg/kg	BIST027(E,D)	61 / 64	2.1E-06 - 4.5E-05							
	57653-85-7	1,2,3,6,7,8-HxCDD	3.1E-06	1.7E-04	mg/kg	BIR3018()	52 / 64	8.2E-07 - 1.9E-05							
	57117-44-9	1,2,3,6,7,8-HxCDF	4.5E-06	2.6E-03	mg/kg	BIR1004()	55 / 64	1.8E-06 - 1.2E-05							
	19408-74-3	1,2,3,7,8,9-HxCDD	1.6E-06	8.2E-05	mg/kg	BIR2038()	49 / 64	8.9E-07 - 6.3E-05							
	72918-21-9	1,2,3,7,8,9-HxCDF	1.9E-06	9.5E-04	mg/kg	BIST011()	34 / 64	4.1E-07 - 8.8E-06							
	40321-76-4	1,2,3,7,8-PeCDD	1.2E-06	9.8E-05	mg/kg	BIST027()	26 / 64	3.3E-07 - 6.7E-05							
	57117-41-6	1,2,3,7,8-PeCDF	2.9E-06	2.0E-03	mg/kg	BIR1004()	55 / 64	8.4E-07 - 1.1E-05							
	60851-34-5	2,3,4,6,7,8-HxCDF	2.4E-06	6.7E-04	mg/kg	BIST011(D_J)	45 / 64	6.1E-07 - 1.1E-05							
	57117-31-4	2,3,4,7,8-PeCDF	2.9E-06	1.3E-03	mg/kg	BIST011()	53 / 64	7.3E-07 - 8.8E-06							
	1746-01-6	2,3,7,8-TCDD	4.7E-07	2.9E-05	mg/kg	BIR1004(J)	33 / 64	2.0E-07 - 2.9E-06							
	51207-31-9	2,3,7,8-TCDF	1.1E-06	1.4E-03	mg/kg	BIST027()	63 / 64	1.4E-06 - 1.4E-06							
	3268-87-9	OCDD	5.9E-04	2.3E-02	mg/kg	BIR4018(E_J)	64 / 64	NA - NA							
	39001-02-0	OCDF	3.9E-05	2.9E-01	mg/kg	BIR1004(E_J)	63 / 64	7.6E-04 - 7.6E-04							
		Metals													
	7429-90-5	Aluminum	9.6E+02	2.8E+04	mg/kg	BIR4023()	271 / 271	NA - NA	2.8E+04		1.3E+05	NA	NA	N	BSL
	7440-36-0	Antimony	2.7E+00	5.9E+00	mg/kg	BIR2013(LJv_J)	2 / 98	3.0E-02 - 4.8E+01	5.9E+00		5.2E+01	NA	NA	N	IFD
	7440-38-2	Arsenic	1.2E+00	1.1E+01	mg/kg	BIR3058()	252 / 271	5.1E-01 - 4.9E+00	1.1E+01		1.7E+00	NA	NA	Y	ASL
	7440-39-3	Barium	4.5E+01	2.3E+04	mg/kg	BIR3073()	271 / 271	NA - NA	2.3E+04		9.1E+03	NA	NA	Y	ASL
	7440-41-7	Beryllium	2.4E-01	2.4E+00	mg/kg	BIR3072(LJ^)	240 / 271	8.0E-02 - 2.6E+00	2.4E+00		2.6E+02	NA	NA	N	BSL
	7440-43-9	Cadmium	6.0E-02	3.8E+00	mg/kg	BIR3055(L)	47 / 300	4.0E-02 - 3.9E+00	3.8E+00		6.4E+01	NA	NA	N	BSL
	7440-70-2	Calcium	6.0E+02	3.2E+04	mg/kg	BIR2062()	264 / 271	6.7E+02 - 3.7E+03	3.2E+04			NA	NA	N	NUT
	7440-47-3	Chromium (total)	2.8E+00	7.7E+02	mg/kg	BIR3018()	271 / 271	NA - NA	7.7E+02		3.9E+02	NA	NA	Y	ASL
	7440-48-4	Cobalt	1.6E+00	1.6E+01	mg/kg	BIR1013(L)	240 / 271	6.2E-01 - 1.2E+01	1.6E+01		2.6E+03	NA	NA	N	BSL
	7440-50-8	Copper	7.1E+00	9.4E+02	mg/kg	BIR3046(_J)	302 / 304	1.9E+01 - 2.2E+01	9.4E+02		5.2E+03	NA	NA	N	BSL
	57-12-5	Cyanide	1.4E-01	2.9E+00	mg/kg	BIR3017(Jv)	56 / 240	6.0E-02 - 3.1E+00	2.9E+00		1.1E+03	NA	NA	N	BSL
	7439-89-6	Iron	7.7E+02	2.8E+04	mg/kg	BIR3061()	269 / 271	1.2E+04 - 2.6E+04	2.8E+04		3.9E+04	NA	NA	N	BSL
	7439-92-1	Lead	4.6E+00	9.0E+02	mg/kg	BIR2044(_J)	287 / 304	1.7E+01 - 7.5E+01	9.0E+02	2.3E+01		NA	NA	Y	NTX
	7439-95-4	Magnesium	1.2E+03	1.1E+04	mg/kg	BIR4018()	270 / 271	3.9E+02 - 3.9E+02	1.1E+04			NA	NA	N	NUT
	7439-96-5	Manganese	5.4E+00	1.0E+03	mg/kg	BIR5002(_J)	270 / 271	1.1E+02 - 1.1E+02	1.0E+03		2.6E+03	NA	NA	N	BSL
	7439-97-6	Mercury	7.0E-02	9.4E+01	mg/kg	BIR2013()	253 / 304	7.0E-02 - 7.1E-01	9.4E+01	7.9E-02		NA	NA	Y	NTX
	22967-92-6	Methyl Mercury	6.8E-04	2.0E-02	mg/kg	BIST015()	28 / 34	6.5E-04 - 1.1E-03	2.0E-02		5.4E+00	NA	NA	N	BSL
	7440-02-0	Nickel	4.6E+00	1.1E+02	mg/kg	BIST011()	290 / 304	1.4E+00 - 3.0E+01	1.1E+02		2.6E+03	NA	NA	N	BSL
	7440-09-7	Potassium	7.3E+02	4.2E+03	mg/kg	BIR5009(L)	264 / 271	2.7E+02 - 2.7E+03	4.2E+03			NA	NA	N	NUT
	7782-49-2	Selenium	2.3E-01	3.4E+00	mg/kg	BIR3070(L)	43 / 271	7.0E-02 - 5.9E+00	3.4E+00		6.5E+02	NA	NA	N	BSL

TABLE 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
	7440-22-4	Silver	3.0E-02	1.9E+00	mg/kg	BIR5006(L)	68 / 304	1.0E-02 - 5.1E+00	1.9E+00		6.5E+02	NA	NA	N	BSL
	7440-23-5	Sodium	3.0E+03	5.3E+04	mg/kg	BIR2053(Jv)	242 / 271	2.0E+03 - 1.9E+04	5.3E+04			NA	NA	N	NUT
	7440-28-0	Thallium	5.0E-02	4.4E+00	mg/kg	BIR2089(L)	12 / 271	4.0E-02 - 8.4E+00	4.4E+00		9.1E+00	NA	NA	N	IFD
	7440-62-2	Vanadium	1.8E+00	5.9E+01	mg/kg	BIR5002()	271 / 271	NA - NA	5.9E+01		9.1E+02	NA	NA	N	BSL
	7440-66-6	Zinc	9.9E+00	7.0E+02	mg/kg	BIR3025()	276 / 304	6.3E+01 - 3.5E+02	7.0E+02		3.9E+04	NA	NA	N	BSL

(1) Refer to Section 4.1 for discussion of background values.
(2) Screening Toxicity Value are the Site specific screening values. See Appendix B.
(3) Rationale Codes

Selection Reason: Above Screening Levels (ASL)
No Toxicity Information (NTX)
Deletion Reason: Infrequent Detection (IFD)
Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
Jv = Estimated value with potentially low bias.
J^ = Estimated value with potentially high bias
L = Estimated value.
E = Coumpound concentration exceeds the calibration range.
P = The difference for detected concentration is greater then 25% between the two GC columns.
B = Result value is above instrument detection limit but below contract required detection limit (CRDL).
D = Result represents diluted sample analysis.
C = Identification confirmed by GC-MS.
* = Associated QA/QC performance inferior to that from other analyses.

TABLE 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
Upper Calcasieu		VOCs													
	78-93-3	2-Butanone	2.0E-03	4.9E-02	mg/kg	UCR2021()	19 / 70	1.2E-02 - 5.2E-02	4.9E-02		7.8E+04	NA	NA	N	BSL
	591-78-6	2-Hexanone	1.0E-03	4.0E-03	mg/kg	UCR2026(LJ)	2 / 70	1.2E-02 - 5.2E-02	4.0E-03		5.2E+03	NA	NA	N	IFD
	67-64-1	Acetone	6.0E-03	2.0E-01	mg/kg	UCR2022()	23 / 70	1.2E-02 - 1.1E-01	2.0E-01		1.3E+04	NA	NA	N	BSL
	74-83-9	Bromomethane	3.0E-03	3.0E-03	mg/kg	UCR2026(LJ), UCR2016(LJ)	2 / 106	9.7E-04 - 5.2E-02	3.0E-03		1.8E+02	NA	NA	N	IFD
	75-15-0	Carbon disulfide	6.0E-03	5.7E-02	mg/kg	UCR2025()	14 / 70	1.2E-02 - 5.2E-02	5.7E-02		1.3E+04	NA	NA	N	BSL
	108-90-7	Chlorobenzene	9.0E-03	4.7E-02	mg/kg	UCR2028()	2 / 106	7.3E-04 - 5.2E-02	4.7E-02		2.6E+03	NA	NA	N	IFD
	75-09-2	Dichloromethane	3.0E-03	1.0E-02	mg/kg	UCR3009(LJ)	26 / 106	7.1E-04 - 4.8E-02	1.0E-02		4.9E+02	NA	NA	N	BSL
	100-41-4	Ethylbenzene	3.0E-03	3.0E-03	mg/kg	UCR3010(LJ)	1 / 106	1.5E-03 - 5.2E-02	3.0E-03		1.3E+04	NA	NA	N	IFD
	79-20-9	Methyl acetate	4.0E-03	5.0E-03	mg/kg	UCR2025(LJ), UCR2018(LJ)	3 / 70	1.2E-02 - 5.2E-02	5.0E-03		1.3E+05	NA	NA	N	IFD
	1634-04-4	Methyl tert-butyl ether	3.0E-03	3.0E-03	mg/kg	UCR2018(LJ)	1 / 70	1.2E-02 - 5.2E-02	3.0E-03			NA	NA	N	IFD
	108-88-3	Toluene	1.0E-03	3.0E-03	mg/kg	UCR2018(LJ), UCR2005(LJ)	3 / 106	8.2E-04 - 5.2E-02	3.0E-03		2.6E+04	NA	NA	N	IFD
		SVOCs													
	105-67-9	2,4-Dimethylphenol	8.2E-02	8.2E-02	mg/kg	UCR2031(LJ)	1 / 137	5.1E-02 - 1.7E+00	8.2E-02		1.1E+03	NA	NA	N	IFD
	106-44-5	4-Methylphenol	3.3E-02	3.0E-01	mg/kg	UCST008()	3 / 137	5.1E-02 - 1.7E+00	3.0E-01		2.7E+02	NA	NA	N	IFD
	98-86-2	Acetophenone	6.9E-02	2.2E-01	mg/kg	UCR3006(LJ)	9 / 101	5.1E-02 - 1.7E+00	2.2E-01		5.4E+03	NA	NA	N	BSL
	100-52-7	Benzaldehyde	3.6E-02	7.9E-02	mg/kg	UCR3008(LJ)	2 / 101	5.1E-02 - 1.7E+00	7.9E-02		5.4E+03	NA	NA	N	IFD
	117-81-7	bis(2-Ethylhexyl) phthalate	5.3E-02	2.9E+01	mg/kg	UCR1-08-SD(D)	21 / 137	5.1E-02 - 4.9E+00	2.9E+01		1.1E+02	NA	NA	N	BSL
	85-68-7	Butylbenzyl phthalate	5.5E-02	7.6E-02	mg/kg	UCR3015(LJ)	2 / 137	3.3E-02 - 1.7E+00	7.6E-02		1.1E+04	NA	NA	N	IFD
	86-74-8	Carbazole	1.2E-02	3.7E-01	mg/kg	UCST028(_J)	8 / 76	1.0E-02 - 1.7E+00	3.7E-01		7.6E+01	NA	NA	N	BSL
	132-64-9	Dibenzofuran	2.1E-02	8.5E-01	mg/kg	UCST028(_J)	3 / 143	8.0E-03 - 1.7E+00	8.5E-01		2.2E+02	NA	NA	N	IFD
	117-84-0	Di-n-octylphthalate	4.8E-01	4.8E-01	mg/kg	UCR2002(LJ)	1 / 137	3.3E-02 - 1.7E+00	4.8E-01		1.1E+03	NA	NA	N	IFD
	108-95-2	Phenol	1.3E-01	1.3E-01	mg/kg	UCR1032(LJ)	1 / 137	4.5E-02 - 1.7E+00	1.3E-01		3.3E+04	NA	NA	N	IFD
		PAHs													
	92-52-4	1,1'-Biphenyl	2.9E-01	1.2E+00	mg/kg	UCST028()	2 / 101	5.1E-02 - 1.7E+00	1.2E+00		2.3E+03	NA	NA	N	IFD
	91-57-6	2-Methylnaphthalene	2.0E-02	9.7E+00	mg/kg	UCST028(_J)	7 / 118	1.0E-02 - 1.7E+00	9.7E+00		9.2E+02	NA	NA	N	BSL
	83-32-9	Acenaphthene	2.7E-02	2.1E+00	mg/kg	UCST028(_J)	10 / 119	8.0E-03 - 1.7E+00	2.1E+00		2.8E+03	NA	NA	N	BSL
	208-96-8	Acenaphthylene	7.0E-02	3.1E-01	mg/kg	UCST028(_J)	4 / 116	8.0E-03 - 1.7E+00	3.1E-01			NA	NA	N	IFD
	120-12-7	Anthracene	1.3E-02	9.5E+00	mg/kg	UCST028(_J)	17 / 120	1.6E-02 - 1.7E+00	9.5E+00		1.4E+04	NA	NA	N	BSL
	56-55-3	Benzo(a)anthracene	4.8E-02	1.1E+02	mg/kg	UCST028(_J)	37 / 130	1.6E-02 - 1.7E+00	1.1E+02		1.8E+00	NA	NA	Y	ASL
	50-32-8	Benzo(a)pyrene	3.5E-02	8.4E+01	mg/kg	UCST028(_J)	37 / 131	1.6E-02 - 1.7E+00	8.4E+01	4.3E-02	1.8E-01	NA	NA	Y	ASL
	205-99-2	Benzo(b)fluoranthene	4.5E-02	8.2E+01	mg/kg	UCST028(_J)	40 / 134	1.6E-02 - 1.7E+00	8.2E+01		1.8E+00	NA	NA	Y	ASL
	191-24-2	Benzo(g,h,i)perylene	3.6E-02	2.1E+01	mg/kg	UCST028(_J)	26 / 123	1.6E-02 - 1.7E+00	2.1E+01	3.6E-02		NA	NA	Y	NTX
	207-08-9	Benzo(k)fluoranthene	1.6E-02	9.1E+00	mg/kg	UCST028(_J)	27 / 123	1.6E-02 - 1.7E+00	9.1E+00		1.8E+01	NA	NA	N	BSL
	218-01-9	Chrysene	5.0E-02	2.8E+02	mg/kg	UCST028(_J)	43 / 131	1.6E-02 - 1.7E+00	2.8E+02		1.8E+02	NA	NA	Y	ASL
	53-70-3	Dibenzo(a,h)anthracene	1.7E-02	2.3E+01	mg/kg	UCST028(_J)	13 / 121	1.6E-02 - 1.7E+00	2.3E+01		1.8E-01	NA	NA	Y	ASL
	206-44-0	Fluoranthene	4.4E-02	5.0E+01	mg/kg	UCST028(_J)	50 / 133	1.6E-02 - 1.7E+00	5.0E+01		1.8E+03	NA	NA	N	BSL
	86-73-7	Fluorene	4.2E-02	1.8E+00	mg/kg	UCST028(_J)	6 / 116	8.0E-03 - 1.7E+00	1.8E+00		1.8E+03	NA	NA	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	3.4E-02	1.8E+01	mg/kg	UCST028(_J)	25 / 126	1.6E-02 - 1.7E+00	1.8E+01		1.8E+00	NA	NA	Y	ASL
	91-20-3	Naphthalene	1.0E-02	3.8E+00	mg/kg	UCST028(_J)	7 / 118	1.5E-03 - 1.7E+00	3.8E+00		9.2E+02	NA	NA	N	BSL
	85-01-8	Phenanthrene	1.8E-02	1.3E+01	mg/kg	UCST028(_J)	31 / 128	1.6E-02 - 1.7E+00	1.3E+01			NA	NA	Y	NTX
	129-00-0	Pyrene	4.5E-02	1.9E+02	mg/kg	UCST028(_J)	57 / 134	1.6E-02 - 1.7E+00	1.9E+02		1.4E+03	NA	NA	N	BSL
		Pesticides/PCBs													
	72-55-9	4,4'-DDE	9.1E-04	1.9E-02	mg/kg	UCR3014(J)	3 / 135	1.4E-04 - 5.3E-02	1.9E-02		7.6E+00	NA	NA	N	IFD
	50-29-3	4,4'-DDT	2.2E-03	2.8E-01	mg/kg	UCST029(D)	6 / 135	1.9E-04 - 5.3E-02	2.8E-01		7.6E+00	NA	NA	N	IFD
	11097-69-1	Aroclor-1254	2.8E-02	9.3E-01	mg/kg	UCST012(D)	12 / 135	3.8E-03 - 3.5E-01	9.3E-01	1.2E-01	6.2E-01	NA	NA	Y	ASL

TABLE 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
	11096-82-5	Aroclor-1260	3.8E-02	2.3E-01	mg/kg	UCR1-34-SD()	5 / 135	3.8E-03 - 3.5E-01	2.3E-01		6.2E-01	NA	NA	N	IFD
	319-84-6	BHC, alpha-	1.0E-02	1.0E-02	mg/kg	UCR2002(J^)	1 / 135	1.3E-04 - 5.3E-02	1.0E-02		3.7E-01	NA	NA	N	IFD
	319-85-7	BHC, beta-	1.0E-02	1.0E-02	mg/kg	UCR2002(B)	1 / 135	3.2E-04 - 5.3E-02	1.0E-02		1.3E+00	NA	NA	N	IFD
	319-86-8	BHC, delta-	1.4E-03	8.8E-03	mg/kg	UCR2002(J^)	7 / 135	1.6E-04 - 5.3E-02	8.8E-03			NA	NA	Y	NTX
	58-89-9	BHC, gamma- (Lindane)	1.1E-02	1.1E-02	mg/kg	UCR2002(B)	1 / 135	1.3E-04 - 5.3E-02	1.1E-02		1.8E+00	NA	NA	N	IFD
	5103-71-9	Chlordane, alpha-	4.7E-04	1.9E-03	mg/kg	UCR3017(LJ_J)	2 / 135	1.7E-04 - 5.3E-02	1.9E-03		6.7E+00	NA	NA	N	IFD
	60-57-1	Dieldrin	8.8E-04	8.0E-03	mg/kg	UCR1-34-SD()	2 / 135	2.0E-04 - 5.3E-02	8.0E-03		9.5E-02	NA	NA	N	IFD
	1031-07-8	Endosulfan sulfate	3.0E-03	3.0E-03	mg/kg	UCR1-33-SD()	1 / 135	2.2E-04 - 5.3E-02	3.0E-03			NA	NA	N	IFD
	7421-93-4	Endrin aldehyde	2.0E-03	8.1E-03	mg/kg	UCR1-34-SD()	6 / 135	3.1E-04 - 5.3E-02	8.1E-03			NA	NA	N	IFD
	53494-70-5	Endrin ketone	1.8E-03	1.8E-03	mg/kg	UCR3017(LJ_J)	1 / 99	1.0E-03 - 5.3E-02	1.8E-03			NA	NA	N	IFD
	1024-57-3	Heptachlor epoxide	9.6E-04	8.4E-03	mg/kg	UCR2026(Jv_J)	2 / 135	1.9E-04 - 5.3E-02	8.4E-03		1.7E-01	NA	NA	N	IFD
	72-43-5	Methoxychlor	4.9E-03	1.9E-01	mg/kg	UCR3012()	6 / 135	7.6E-04 - 1.8E-01	1.9E-01		2.7E+02	NA	NA	N	IFD
		Herbicides													
	93-76-5	2,4,5-T	4.0E-03	5.4E-03	mg/kg	UCR1003(J)	3 / 106	5.1E-03 - 1.1E-01	5.4E-03		5.4E+02	NA	NA	N	IFD
	94-82-6	2,4-DB	6.9E-03	2.2E-01	mg/kg	UCR1-15-SD()	8 / 106	1.9E-02 - 4.5E-01	2.2E-01		4.3E+02	NA	NA	N	BSL
	88-85-7	Dinitrobutyl phenol	1.8E-02	1.8E-02	mg/kg	UCR1-15-SD()	1 / 106	4.4E-03 - 6.8E-02	1.8E-02		5.4E+01	NA	NA	N	IFD
	94-74-6	MCPA (2-Methyl-4-chlorophenoxyacetic acid)	2.4E+00	2.4E+00	mg/kg	UCR2022(J)	1 / 106	3.7E+00 - 4.5E+01	2.4E+00		2.7E+01	NA	NA	N	IFD
	7085-19-0	Mecoprop	1.9E+00	4.3E+00	mg/kg	UCR2026(J_J)	5 / 106	2.6E+00 - 4.5E+01	4.3E+00			NA	NA	N	IFD
		Dioxins/Furans													
	35822-46-9	1,2,3,4,6,7,8-HpCDD	6.8E-06	3.1E-03	mg/kg	UCR2031()	25 / 25	NA - NA	Dioxins and furans are multiplied by 2,3,7,8-TCDD toxic equivalency factors (TEFs) in order to compare a						
	67562-39-4	1,2,3,4,6,7,8-HpCDF	6.4E-06	3.7E-04	mg/kg	UCST028()	17 / 25	4.2E-07 - 3.2E-06	total TCDD equivalent concentration to the screening toxicity value. The maximum TCDD equivalent						
	55673-89-7	1,2,3,4,7,8,9-HpCDF	7.4E-06	5.5E-05	mg/kg	UCST028()	7 / 25	3.9E-07 - 7.7E-06	concentration of 6.2E-5 mg/kg exceeds the screening toxicity value of 1.8E-5 mg/kg and the reference area						
	39227-28-6	1,2,3,4,7,8-HxCDD	1.6E-06	9.6E-06	mg/kg	UCR2031()	5 / 25	4.6E-07 - 1.4E-05	concentration of 5.5E-06 mg/kg.						
	70648-26-9	1,2,3,4,7,8-HxCDF	1.0E-06	7.6E-05	mg/kg	UCST028()	9 / 25	4.7E-07 - 7.0E-06							
	57653-85-7	1,2,3,6,7,8-HxCDD	2.9E-06	7.1E-05	mg/kg	UCR2031()	14 / 25	6.2E-07 - 4.0E-06							
	57117-44-9	1,2,3,6,7,8-HxCDF	5.9E-07	3.7E-05	mg/kg	UCST028()	7 / 25	2.7E-07 - 6.5E-06							
	19408-74-3	1,2,3,7,8,9-HxCDD	2.2E-06	1.9E-04	mg/kg	UCR3010()	20 / 25	1.0E-06 - 2.6E-06							
	72918-21-9	1,2,3,7,8,9-HxCDF	3.0E-06	1.4E-05	mg/kg	UCST028()	3 / 25	2.4E-07 - 8.3E-06							
	40321-76-4	1,2,3,7,8-PeCDD	8.2E-07	5.0E-06	mg/kg	UCR2031(J)	5 / 25	5.6E-07 - 8.1E-06							
	57117-41-6	1,2,3,7,8-PeCDF	4.4E-07	1.8E-05	mg/kg	UCST028(_J)	6 / 25	4.0E-07 - 6.4E-06							
	60851-34-5	2,3,4,6,7,8-HxCDF	6.3E-07	2.1E-05	mg/kg	UCR2030()	6 / 25	3.0E-07 - 7.2E-06							
	57117-31-4	2,3,4,7,8-PeCDF	6.4E-07	1.7E-05	mg/kg	UCR2030()	6 / 25	3.7E-07 - 4.6E-06							
	1746-01-6	2,3,7,8-TCDD	6.3E-07	1.2E-06	mg/kg	UCR2031(J)	3 / 25	2.5E-07 - 4.0E-06							
	51207-31-9	2,3,7,8-TCDF	9.0E-07	1.9E-05	mg/kg	UCR2030()	13 / 25	2.7E-07 - 1.1E-06							
	3268-87-9	OCDD	4.5E-04	3.5E-02	mg/kg	UCR2031()	25 / 25	NA - NA							
	39001-02-0	OCDF	7.3E-06	1.4E-03	mg/kg	UCR2031(_J)	18 / 25	8.1E-07 - 7.1E-06							
		Metals													
	7429-90-5	Aluminum	6.7E+02	3.3E+04	mg/kg	UCR2029()	102 / 102	NA - NA	3.3E+04		1.3E+05	NA	NA	N	BSL
	7440-36-0	Antimony	4.6E+00	8.0E+00	mg/kg	UCR2020(LJv)	2 / 48	3.0E-02 - 1.1E+01	8.0E+00		5.2E+01	NA	NA	N	IFD
	7440-38-2	Arsenic	3.2E-01	1.3E+01	mg/kg	UCR2029()	110 / 110	NA - NA	1.3E+01		1.7E+00	NA	NA	Y	ASL
	7440-39-3	Barium	1.5E+01	6.8E+03	mg/kg	UCR2027()	108 / 110	1.4E-01 - 1.4E-01	6.8E+03		9.1E+03	NA	NA	N	BSL
	7440-41-7	Beryllium	9.0E-02	1.5E+00	mg/kg	UCR1032(L), UCR2029(L)	68 / 110	3.7E-02 - 1.2E+00	1.5E+00		2.6E+02	NA	NA	N	BSL
	7440-43-9	Cadmium	2.9E-02	2.1E+00	mg/kg	UCR2001(LJv)	36 / 136	4.0E-02 - 1.4E+00	2.1E+00		6.4E+01	NA	NA	N	BSL
	7440-70-2	Calcium	4.3E+02	2.1E+05	mg/kg	UCR2025()	105 / 110	1.1E+01 - 1.1E+01	2.1E+05			NA	NA	N	NUT
	7440-47-3	Chromium (total)	1.5E+00	4.5E+02	mg/kg	UCR2030()	110 / 110	NA - NA	4.5E+02		3.9E+02	NA	NA	Y	ASL
	7440-48-4	Cobalt	1.0E+00	1.1E+01	mg/kg	UCR2029(L)	67 / 110	4.4E-01 - 7.8E+00	1.1E+01		2.6E+03	NA	NA	N	BSL

TABLE 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
	7440-50-8	Copper	1.2E+00	3.8E+02	mg/kg	UCST037()	131 / 136	1.9E+00 - 9.3E+00	3.8E+02		5.2E+03	NA	NA	N	BSL
	57-12-5	Cyanide	1.2E-01	4.7E+00	mg/kg	UCR2002()	23 / 70	6.0E-02 - 6.5E-01	4.7E+00		1.1E+03	NA	NA	N	BSL
	7439-89-6	Iron	6.1E+02	2.7E+04	mg/kg	UCR2029()	90 / 110	1.3E+03 - 1.5E+04	2.7E+04		3.9E+04	NA	NA	N	BSL
	7439-92-1	Lead	2.3E+00	3.0E+02	mg/kg	UCR1-17-SD()	135 / 136	3.8E+00 - 3.8E+00	3.0E+02	2.3E+01		NA	NA	Y	NTX
	7439-95-4	Magnesium	5.7E+02	1.3E+04	mg/kg	UCR1032()	108 / 110	7.1E+00 - 7.1E+00	1.3E+04			NA	NA	N	NUT
	7439-96-5	Manganese	5.1E+00	1.3E+03	mg/kg	UCR2025()	106 / 110	1.9E+01 - 3.5E+01	1.3E+03		2.6E+03	NA	NA	N	BSL
	7439-97-6	Mercury	1.5E-02	2.4E+00	mg/kg	UCST037()	59 / 136	1.8E-02 - 3.0E-01	2.4E+00	7.9E-02		NA	NA	Y	NTX
	22967-92-6	Methyl Mercury	8.6E-04	4.9E-03	mg/kg	UCST037()	8 / 29	4.9E-04 - 1.2E-03	4.9E-03		5.4E+00	NA	NA	N	BSL
	7440-02-0	Nickel	8.3E-01	1.4E+02	mg/kg	UCR1-35-SD()	132 / 136	9.4E+00 - 1.6E+01	1.4E+02		2.6E+03	NA	NA	N	BSL
	7440-09-7	Potassium	3.3E+02	4.8E+03	mg/kg	UCR2029(L)	100 / 110	1.3E+02 - 2.6E+02	4.8E+03			NA	NA	N	NUT
	7782-49-2	Selenium	8.7E-02	1.9E+00	mg/kg	UCR1-34-SD()	41 / 110	1.6E-01 - 3.2E+00	1.9E+00		6.5E+02	NA	NA	N	BSL
	7440-22-4	Silver	1.3E-02	1.7E+00	mg/kg	UCR3017(L)	64 / 136	5.0E-02 - 2.4E+00	1.7E+00		6.5E+02	NA	NA	N	BSL
	7440-23-5	Sodium	1.3E+03	2.5E+04	mg/kg	UCR2029()	109 / 110	2.4E+03 - 2.4E+03	2.5E+04			NA	NA	N	NUT
	7440-28-0	Thallium	5.5E-02	2.9E+00	mg/kg	UCR1032(L)	27 / 110	4.5E-02 - 5.6E+00	2.9E+00		9.1E+00	NA	NA	N	BSL
	7440-62-2	Vanadium	2.5E+00	4.8E+01	mg/kg	UCR2029(L)	107 / 110	5.2E-01 - 5.2E-01	4.8E+01		9.1E+02	NA	NA	N	BSL
	7440-66-6	Zinc	1.0E+01	8.7E+02	mg/kg	UCR2031()	90 / 136	9.9E+00 - 2.9E+02	8.7E+02		3.9E+04	NA	NA	N	BSL

(1) Refer to Section 4.1 for discussion of background values. Blank indicates that chemical was not detected in reference area samples at concentrations exceeding the screening level.

(2) Screening Toxicity Values are the Site specific screening values. See Appendix C.

(3) Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
	No Toxicity Information (NTX)
Deletion Reason:	Infrequent Detection (IFD)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
Jv = Estimated value with potentially low bias.
J^ = Estimated value with potentially high bias.
L = Estimated value.
B = Result value is above instrument detection limit but below contract required detection limit (CRDL).
D = Result represents diluted sample analysis.

TABLE 2.3
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
Lower Calcasieu		VOCs													
	78-93-3	2-Butanone	3.0E-03	2.6E-02	mg/kg	LCR1029(J)	16 / 151	1.1E-02 - 1.5E-01	2.6E-02		7.8E+04	NA	NA	N	BSL
	67-64-1	Acetone	3.0E-03	7.9E-01	mg/kg	LCR1031(BJ_J)	83 / 151	1.1E-02 - 1.5E-01	7.9E-01		1.3E+04	NA	NA	N	BSL
	75-15-0	Carbon disulfide	1.0E-03	1.2E-01	mg/kg	LCR2025(J)	54 / 151	1.1E-02 - 1.5E-01	1.2E-01		1.3E+04	NA	NA	N	BSL
	75-09-2	Dichloromethane	2.0E-03	2.9E-01	mg/kg	LCR2075()	45 / 151	7.0E-03 - 1.5E-01	2.9E-01		4.9E+02	NA	NA	N	BSL
	100-41-4	Ethylbenzene	1.7E-02	1.9E-02	mg/kg	LCR1031(LJ)	2 / 151	1.1E-02 - 1.5E-01	1.9E-02		1.3E+04	NA	NA	N	IFD
	98-82-8	Isopropylbenzene (Cumene)	5.7E-01	5.9E-01	mg/kg	LCR1031()	2 / 151	1.1E-02 - 1.5E-01	5.9E-01		1.3E+04	NA	NA	N	IFD
	79-20-9	Methyl acetate	8.0E-03	8.0E-03	mg/kg	LCR2051(LJ)	1 / 151	1.1E-02 - 1.5E-01	8.0E-03		1.3E+05	NA	NA	N	IFD
	108-87-2	Methylcyclohexane	2.0E-03	2.5E+01	mg/kg	LCR1031(), LCR1031()	3 / 151	1.1E-02 - 1.5E-01	2.5E+01			NA	NA	N	IFD
	108-88-3	Toluene	1.0E-03	5.0E-03	mg/kg	LCR2057(LJ)	8 / 151	1.1E-02 - 1.5E-01	5.0E-03		2.6E+04	NA	NA	N	BSL
	79-01-6	Trichloroethene	3.5E-02	3.5E-02	mg/kg	LCR2013()	1 / 151	1.1E-02 - 1.5E-01	3.5E-02		3.3E+02	NA	NA	N	IFD
	1330-20-7	Xylenes (total)	2.0E-02	3.5E-02	mg/kg	LCR1031(LJ)	2 / 151	1.1E-02 - 1.5E-01	3.5E-02		2.6E+05	NA	NA	N	IFD
		SVOCs													
	121-14-2	2,4-Dinitrotoluene	2.3E-02	2.3E-02	mg/kg	ECOLC007(LJ)	1 / 174	5.3E-02 - 7.6E+00	2.3E-02		1.1E+02	NA	NA	N	IFD
	59-50-7	4-Chloro-3-methylphenol	5.6E-02	5.6E-02	mg/kg	ECOLC007(LJ)	1 / 174	5.3E-02 - 7.6E+00	5.6E-02			NA	NA	N	IFD
	106-44-5	4-Methylphenol	6.0E-01	6.0E-01	mg/kg	LCR2041(LJ)	1 / 173	5.3E-02 - 7.6E+00	6.0E-01		2.7E+02	NA	NA	N	IFD
	98-86-2	Acetophenone	7.9E-02	7.9E-02	mg/kg	LCR2013(LJv)	1 / 173	5.3E-02 - 7.6E+00	7.9E-02		5.4E+03	NA	NA	N	IFD
	117-81-7	bis(2-Ethylhexyl) phthalate	3.6E-02	1.2E+02	mg/kg	LCR2021()	64 / 174	7.8E-02 - 7.6E+00	1.2E+02		1.1E+02	NA	NA	Y	ASL
	85-68-7	Butylbenzyl phthalate	1.4E-01	1.4E-01	mg/kg	LCR2017(LJ)	1 / 174	5.3E-02 - 7.6E+00	1.4E-01		1.1E+04	NA	NA	N	IFD
	86-74-8	Carbazole	5.4E-02	8.2E-01	mg/kg	LCR1025(LJ)	2 / 156	1.0E-02 - 1.4E+01	8.2E-01		7.6E+01	NA	NA	N	IFD
	132-64-9	Dibenzofuran	1.8E-01	2.6E-01	mg/kg	LCR1025(LJ)	2 / 175	1.0E-02 - 7.6E+00	2.6E-01		2.2E+02	NA	NA	N	IFD
	84-66-2	Diethyl phthalate	4.2E-02	4.2E-02	mg/kg	LCR2007(LJ)	1 / 174	5.3E-02 - 7.6E+00	4.2E-02		4.3E+04	NA	NA	N	IFD
	84-74-2	Di-n-butylphthalate	5.3E-02	1.9E-01	mg/kg	LCR2020(LJ)	16 / 174	5.3E-02 - 7.6E+00	1.9E-01		5.4E+03	NA	NA	N	BSL
	117-84-0	Di-n-octylphthalate	1.3E-01	3.7E+00	mg/kg	LCR1052(J)	3 / 174	5.3E-02 - 7.6E+00	3.7E+00		1.1E+03	NA	NA	N	IFD
	118-74-1	Hexachlorobenzene	5.5E-01	5.5E-01	mg/kg	LCR1006(LJ)	1 / 174	5.3E-02 - 7.6E+00	5.5E-01		9.5E-01	NA	NA	N	IFD
	65794-96-9	Methylphenol, 3- & 4-	1.4E-01	1.4E-01	mg/kg	LCR2041(J_J)	1 / 17	2.9E-01 - 1.4E+01	1.4E-01			NA	NA	Y	NTX
	108-95-2	Phenol	1.7E+00	1.7E+00	mg/kg	LCR2041(J^)	1 / 174	5.3E-02 - 7.6E+00	1.7E+00		3.3E+04	NA	NA	N	IFD
		PAHs													
	91-57-6	2-Methylnaphthalene	5.3E-02	1.5E+01	mg/kg	LCST005(_J)	11 / 165	1.0E-02 - 7.6E+00	1.5E+01		9.2E+02	NA	NA	N	BSL
	83-32-9	Acenaphthene	1.3E-01	1.6E+01	mg/kg	LCST005(_J)	10 / 164	1.0E-02 - 7.6E+00	1.6E+01		2.8E+03	NA	NA	N	BSL
	208-96-8	Acenaphthylene	5.3E-02	8.7E+00	mg/kg	LCST005(_J)	5 / 165	1.0E-02 - 7.6E+00	8.7E+00			NA	NA	N	IFD
	120-12-7	Anthracene	2.2E-02	2.2E+01	mg/kg	LCST005(_J)	19 / 165	1.0E-02 - 7.6E+00	2.2E+01		1.4E+04	NA	NA	N	BSL
	56-55-3	Benzo(a)anthracene	3.8E-02	4.2E+01	mg/kg	LCST005(_J)	28 / 166	5.3E-02 - 7.6E+00	4.2E+01		1.8E+00	NA	NA	Y	ASL
	50-32-8	Benzo(a)pyrene	4.6E-02	2.4E+01	mg/kg	LCST005(_J)	31 / 166	5.3E-02 - 7.6E+00	2.4E+01	4.3E-02	1.8E-01	NA	NA	Y	ASL
	205-99-2	Benzo(b)fluoranthene	2.7E-02	2.1E+01	mg/kg	LCST005(_J)	34 / 167	5.3E-02 - 7.6E+00	2.1E+01		1.8E+00	NA	NA	Y	ASL
	191-24-2	Benzo(g,h,i)perylene	2.4E-02	1.7E+01	mg/kg	LCST005(_J)	25 / 166	5.3E-02 - 7.6E+00	1.7E+01	3.6E-02		NA	NA	Y	NTX
	207-08-9	Benzo(k)fluoranthene	1.7E-02	6.6E+00	mg/kg	LCST005(_J)	21 / 165	5.3E-02 - 7.6E+00	6.6E+00		1.8E+01	NA	NA	N	BSL
	218-01-9	Chrysene	2.5E-02	8.3E+01	mg/kg	LCST005(_J)	37 / 167	5.3E-02 - 7.6E+00	8.3E+01		1.8E+02	NA	NA	N	BSL
	53-70-3	Dibenzo(a,h)anthracene	1.9E-02	1.0E+01	mg/kg	LCST005(_J)	16 / 165	5.3E-02 - 7.6E+00	1.0E+01		1.8E-01	NA	NA	Y	ASL
	206-44-0	Fluoranthene	2.8E-02	2.2E+01	mg/kg	LCST005(_J)	46 / 169	5.3E-02 - 7.6E+00	2.2E+01		1.8E+03	NA	NA	N	BSL
	86-73-7	Fluorene	1.7E-01	1.3E+01	mg/kg	LCST005(_J)	9 / 164	1.0E-02 - 7.6E+00	1.3E+01		1.8E+03	NA	NA	N	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	3.5E-02	2.8E+00	mg/kg	LCST005()	18 / 164	5.3E-02 - 7.6E+00	2.8E+00		1.8E+00	NA	NA	Y	ASL
	91-20-3	Naphthalene	6.5E-02	1.5E+00	mg/kg	LCR1031(DJ)	7 / 163	1.0E-02 - 7.6E+00	1.5E+00		9.2E+02	NA	NA	N	IFD
	85-01-8	Phenanthrene	2.0E-02	1.4E+02	mg/kg	LCST005(_J)	22 / 166	5.3E-02 - 7.6E+00	1.4E+02			NA	NA	Y	NTX
	129-00-0	Pyrene	2.7E-02	1.5E+02	mg/kg	LCST005(_J)	57 / 169	5.3E-02 - 7.6E+00	1.5E+02		1.4E+03	NA	NA	N	BSL

TABLE 2.3
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
		Pesticides/PCBs													
	72-54-8	4,4'-DDD	8.0E-03	8.0E-03	mg/kg	LCR1001()	1 / 168	2.3E-03 - 5.9E-02	8.0E-03		1.1E+01	NA	NA	N	IFD
	72-55-9	4,4'-DDE	4.4E-05	1.9E-03	mg/kg	LCR2052(LJ)	3 / 168	2.3E-03 - 5.9E-02	1.9E-03		7.6E+00	NA	NA	N	IFD
	50-29-3	4,4'-DDT	1.3E-03	1.7E-01	mg/kg	LCR1001()	3 / 168	2.3E-03 - 6.2E-02	1.7E-01		7.6E+00	NA	NA	N	IFD
	309-00-2	Aldrin	1.2E-03	1.2E-03	mg/kg	LCR2009(LJ)	1 / 168	1.2E-03 - 5.9E-02	1.2E-03		9.0E-02	NA	NA	N	IFD
	11097-69-1	Aroclor-1254	5.6E-03	8.6E-01	mg/kg	LCR1031(_J)	16 / 167	1.5E-02 - 3.9E-01	8.6E-01	1.2E-01	6.2E-01	NA	NA	Y	ASL
	11096-82-5	Aroclor-1260	5.7E-02	6.0E-02	mg/kg	LCR1036()	2 / 167	1.5E-02 - 3.9E-01	6.0E-02		6.2E-01	NA	NA	N	IFD
	319-84-6	BHC, alpha-	1.5E-04	9.4E-03	mg/kg	LCR1031(JT_J)	10 / 168	1.2E-03 - 5.9E-02	9.4E-03		3.7E-01	NA	NA	N	BSL
	319-85-7	BHC, beta-	2.2E-04	2.2E-04	mg/kg	ECOUC004(LJ)	1 / 168	1.2E-03 - 5.9E-02	2.2E-04		1.3E+00	NA	NA	N	IFD
	319-86-8	BHC, delta-	2.7E-03	3.0E-02	mg/kg	LCR1031(JT_J)	4 / 168	1.2E-03 - 5.9E-02	3.0E-02			NA	NA	N	IFD
	58-89-9	BHC, gamma- (Lindane)	2.7E-04	9.3E-03	mg/kg	LCR2052(J)	9 / 168	1.2E-03 - 5.9E-02	9.3E-03		1.8E+00	NA	NA	N	BSL
	5103-71-9	Chlordane, alpha-	1.8E-04	2.3E-03	mg/kg	LCR2057(LJ)	3 / 168	1.2E-03 - 5.9E-02	2.3E-03		6.7E+00	NA	NA	N	IFD
	5103-74-2	Chlordane, gamma-	5.2E-04	7.9E-03	mg/kg	LCR1029(J^T)	4 / 168	1.2E-03 - 5.9E-02	7.9E-03		6.7E+00	NA	NA	N	IFD
	60-57-1	Dieldrin	8.7E-04	8.7E-04	mg/kg	LCR2077(LJ)	1 / 168	2.3E-03 - 5.9E-02	8.7E-04		9.5E-02	NA	NA	N	IFD
	959-98-8	Endosulfan I	1.4E-03	1.4E-02	mg/kg	LCR1031(J^_J)	3 / 168	1.2E-03 - 5.9E-02	1.4E-02		3.3E+02	NA	NA	N	IFD
	33213-65-9	Endosulfan II	1.6E-03	6.7E-02	mg/kg	LCR1031(J^_J)	5 / 168	2.3E-03 - 5.9E-02	6.7E-02		3.3E+02	NA	NA	N	IFD
	1031-07-8	Endosulfan sulfate	5.5E-05	5.0E-03	mg/kg	LCR2004(LJ)	3 / 168	3.1E-03 - 5.9E-02	5.0E-03			NA	NA	N	IFD
	72-20-8	Endrin	5.5E-04	3.5E-03	mg/kg	LCR2063(LJ)	8 / 168	2.3E-03 - 5.9E-02	3.5E-03		1.6E+01	NA	NA	N	IFD
	7421-93-4	Endrin aldehyde	1.1E-03	1.1E-03	mg/kg	LCR2062(LJ)	1 / 168	2.3E-03 - 5.9E-02	1.1E-03			NA	NA	N	IFD
	53494-70-5	Endrin ketone	2.3E-04	7.3E-02	mg/kg	LCR1031(JT_J)	7 / 168	2.3E-03 - 5.9E-02	7.3E-02			NA	NA	N	IFD
	76-44-8	Heptachlor	1.5E-03	1.4E-02	mg/kg	LCR1031(J_J)	3 / 168	1.2E-03 - 5.9E-02	1.4E-02		3.4E-01	NA	NA	N	IFD
	1024-57-3	Heptachlor epoxide	1.2E-03	1.2E-03	mg/kg	LCR2017(LJ)	1 / 168	1.2E-03 - 5.9E-02	1.2E-03		1.7E-01	NA	NA	N	IFD
		Dioxins/Furans													
	35822-46-9	1,2,3,4,6,7,8-HpCDD	1.9E-05	5.6E-04	mg/kg	LCR1031()	29 / 29	NA - NA	Dioxins and furans are multiplied by 2,3,7,8-TCDD toxic equivalency factors (TEFs) in order to compare a						
	67562-39-4	1,2,3,4,6,7,8-HpCDF	5.1E-06	2.3E-04	mg/kg	LCR2018()	20 / 29	3.2E-07 - 7.4E-06	total TCDD equivalent concentration to the screening toxicity value. The maximum TCDD equivalent						
	55673-89-7	1,2,3,4,7,8,9-HpCDF	1.5E-06	6.0E-05	mg/kg	LCR2018()	14 / 29	2.8E-07 - 4.4E-06	concentration of 3.9E-5 mg/kg exceeds the screening toxicity value of 1.8E-5 mg/kg and the reference area						
	39227-28-6	1,2,3,4,7,8-HxCDD	9.9E-07	6.7E-06	mg/kg	LCR1031()	3 / 29	5.1E-07 - 5.3E-06	concentration of 5.5E-06 mg/kg.						
	70648-26-9	1,2,3,4,7,8-HxCDF	2.7E-06	9.8E-05	mg/kg	LCR2018()	16 / 29	2.5E-07 - 6.7E-06							
	57653-85-7	1,2,3,6,7,8-HxCDD	2.9E-06	3.0E-05	mg/kg	LCR1031()	6 / 29	6.7E-07 - 8.6E-06							
	57117-44-9	1,2,3,6,7,8-HxCDF	1.2E-06	2.5E-05	mg/kg	LCR2018()	11 / 29	2.1E-07 - 3.6E-06							
	19408-74-3	1,2,3,7,8,9-HxCDD	3.1E-06	1.6E-05	mg/kg	LCR1031()	15 / 29	8.3E-07 - 7.2E-06							
	72918-21-9	1,2,3,7,8,9-HxCDF	3.3E-06	5.3E-06	mg/kg	LCR1031()	2 / 29	2.6E-07 - 4.7E-06							
	40321-76-4	1,2,3,7,8-PeCDD	2.8E-06	5.7E-06	mg/kg	LCR1031(_J)	2 / 29	4.2E-07 - 3.8E-06							
	57117-41-6	1,2,3,7,8-PeCDF	1.2E-06	1.9E-05	mg/kg	LCR1027()	12 / 29	2.7E-07 - 1.3E-05							
	60851-34-5	2,3,4,6,7,8-HxCDF	9.5E-07	1.2E-05	mg/kg	LCR1031()	3 / 29	2.3E-07 - 6.6E-06							
	57117-31-4	2,3,4,7,8-PeCDF	1.2E-06	1.6E-05	mg/kg	LCR1031()	5 / 29	2.7E-07 - 8.3E-06							
	1746-01-6	2,3,7,8-TCDD	4.6E-07	2.1E-06	mg/kg	LCR1031()	4 / 29	2.1E-07 - 3.1E-06							
	51207-31-9	2,3,7,8-TCDF	9.4E-07	2.9E-05	mg/kg	LCR1031()	19 / 29	2.3E-07 - 3.9E-06							
	3268-87-9	OCDD	4.3E-04	8.1E-03	mg/kg	LCR2010()	29 / 29	NA - NA							
	39001-02-0	OCDF	1.1E-05	2.0E-03	mg/kg	LCR2018()	23 / 29	6.2E-07 - 1.6E-05							
		Metals													
	7429-90-5	Aluminum	3.2E+02	2.8E+04	mg/kg	LCR2020()	155 / 155	NA - NA	2.8E+04		1.3E+05	NA	NA	N	BSL
	7440-36-0	Antimony	2.2E+01	2.2E+01	mg/kg	LCR2024(LJv_J)	1 / 93	5.0E-02 - 3.6E+01	2.2E+01		5.2E+01	NA	NA	N	IFD
	7440-38-2	Arsenic	1.8E-01	3.0E+01	mg/kg	LCR1053()	155 / 155	NA - NA	3.0E+01		1.7E+00	NA	NA	Y	ASL
	7440-39-3	Barium	7.2E+00	2.8E+03	mg/kg	LCR2013()	155 / 155	NA - NA	2.8E+03		9.1E+03	NA	NA	N	BSL
	7440-41-7	Beryllium	7.0E-02	1.5E+00	mg/kg	LCR2056(L), LCR2064(L)	96 / 155	5.0E-02 - 2.4E+00	1.5E+00		2.6E+02	NA	NA	N	BSL

TABLE 2.3
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
	7440-43-9	Cadmium	4.6E-02	1.6E+00	mg/kg	LCR1005()	23 / 168	8.0E-02 - 2.9E+00	1.6E+00		6.4E+01	NA	NA	N	BSL
	7440-70-2	Calcium	2.3E+02	1.2E+05	mg/kg	LCR1047()	153 / 155	5.9E+02 - 8.3E+02	1.2E+05			NA	NA	N	NUT
	7440-47-3	Chromium (total)	1.2E+00	2.1E+02	mg/kg	LCR1031()	151 / 155	1.4E+00 - 1.4E+01	2.1E+02		3.9E+02	NA	NA	N	BSL
	7440-48-4	Cobalt	6.9E-01	2.1E+01	mg/kg	LCR1051(L)	136 / 155	5.6E-01 - 9.0E+00	2.1E+01		2.6E+03	NA	NA	N	BSL
	7440-50-8	Copper	3.3E+00	2.9E+02	mg/kg	LCR1031()	142 / 168	4.2E+00 - 6.6E+01	2.9E+02		5.2E+03	NA	NA	N	BSL
	57-12-5	Cyanide	7.0E-02	3.3E+00	mg/kg	LCR2059()	55 / 151	5.0E-02 - 1.2E+00	3.3E+00		1.1E+03	NA	NA	N	BSL
	7439-89-6	Iron	4.5E+02	2.8E+04	mg/kg	LCR1051(J_J)	155 / 155	NA - NA	2.8E+04		3.9E+04	NA	NA	N	BSL
	7439-92-1	Lead	1.5E+00	7.9E+02	mg/kg	LCR1031()	168 / 168	NA - NA	7.9E+02	2.3E+01		NA	NA	Y	NTX
	7439-95-4	Magnesium	2.1E+02	3.9E+04	mg/kg	LCR1047()	155 / 155	NA - NA	3.9E+04			NA	NA	N	NUT
	7439-96-5	Manganese	3.5E+00	1.8E+03	mg/kg	LCR1012()	155 / 155	NA - NA	1.8E+03		2.6E+03	NA	NA	N	BSL
	7439-97-6	Mercury	5.3E-02	2.5E+00	mg/kg	LCR1031()	58 / 168	6.0E-02 - 4.2E-01	2.5E+00	7.9E-02		NA	NA	Y	NTX
	22967-92-6	Methyl Mercury	1.1E-03	2.0E-02	mg/kg	LCST005()	8 / 16	7.1E-04 - 1.1E-03	2.0E-02		5.4E+00	NA	NA	N	BSL
	7440-02-0	Nickel	7.8E-01	3.3E+01	mg/kg	LCR2020(J)	143 / 168	8.5E+00 - 3.9E+01	3.3E+01		2.6E+03	NA	NA	N	BSL
	7440-09-7	Potassium	1.1E+02	5.6E+03	mg/kg	LCR2060()	152 / 155	2.5E+02 - 2.7E+03	5.6E+03			NA	NA	N	NUT
	7782-49-2	Selenium	2.0E-01	3.5E+00	mg/kg	LCR1031(_J), LCR1009(LJv_J)	16 / 155	1.6E-01 - 4.3E+00	3.5E+00		6.5E+02	NA	NA	N	BSL
	7440-22-4	Silver	6.7E-02	3.0E-01	mg/kg	LCST007()	17 / 168	2.7E-01 - 3.8E+00	3.0E-01		6.5E+02	NA	NA	N	BSL
	7440-23-5	Sodium	1.2E+03	4.9E+04	mg/kg	LCR2038()	144 / 155	2.5E+03 - 1.1E+04	4.9E+04			NA	NA	N	NUT
	7440-28-0	Thallium	6.0E-02	2.8E+00	mg/kg	LCR2050(L)	5 / 155	2.6E-01 - 7.5E+00	2.8E+00		9.1E+00	NA	NA	N	IFD
	7440-62-2	Vanadium	5.4E-01	1.1E+02	mg/kg	LCR1031()	153 / 155	3.5E+00 - 1.7E+01	1.1E+02		9.1E+02	NA	NA	N	BSL
	7440-66-6	Zinc	8.2E+00	3.2E+02	mg/kg	LCR1031()	116 / 168	8.0E+00 - 1.1E+02	3.2E+02		3.9E+04	NA	NA	N	BSL

(1) Refer to Section 4.1 for discussion of background values.
(2) Screening Toxicity Value are the Site specific screening values. See Appendix B.
(3) Rationale Codes

Selection Reason: Above Screening Levels (ASL)
No Toxicity Information (NTX)

Deletion Reason: Infrequent Detection (IFD)
Essential Nutrient (NUT)
Below Screening Level (BSL)
Not COPC for Sediment (NSE). See Section 4.2.

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
Jv = Estimated value with potentially low bias.
J^ = Estimated value with potentially high bias.
L = Estimated value.
D = Result represents diluted sample analysis.
T = Identification is questionable because of absence of other commonly coexisting pesticides.

TABLE 2.4
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
Bayou d'Inde		VOCs													
	67-64-1	Acetone	6.0E-03	5.5E-02	mg/L	BIR3013(J_J)	6 / 23	1.0E-02 - 1.8E-02	5.5E-02		2.1E+01	NA	NA	N	BSL
	75-15-0	Carbon disulfide	1.0E-03	2.0E-03	mg/L	BIR3039(LJ)	4 / 23	1.0E-02 - 1.0E-02	2.0E-03		1.6E+00	NA	NA	N	BSL
	67-66-3	Chloroform	2.0E-03	3.0E-03	mg/L	BIR1004(LJ), BIR1004(LJ)	3 / 23	1.0E-03 - 1.0E-02	3.0E-03		1.9E-01	NA	NA	N	BSL
	75-09-2	Dichloromethane	1.0E-03	1.0E-03	mg/L	BIR3013(LJ)	1 / 23	1.0E-02 - 1.0E-02	1.0E-03		2.8E-01	NA	NA	N	IFD
	100-41-4	Ethylbenzene	1.0E-03	1.0E-03	mg/L	BIR2068(LJ)	1 / 23	1.0E-02 - 1.0E-02	1.0E-03		5.1E-01	NA	NA	N	IFD
	1634-04-4	Methyl tert-butyl ether	1.2E-02	1.2E-02	mg/L	BIR2068()	1 / 23	1.0E-02 - 1.0E-02	1.2E-02			NA	NA	N	SED
	108-88-3	Toluene	4.0E-03	4.0E-03	mg/L	BIR2068(LJ)	1 / 23	1.0E-02 - 1.0E-02	4.0E-03		1.7E+00	NA	NA	N	IFD
	75-25-2	Tribromomethane (Bromoform)	2.0E-03	8.0E-03	mg/L	BIR3003(LJ)	3 / 23	1.0E-02 - 1.0E-02	8.0E-03		3.7E-01	NA	NA	N	BSL
	1330-20-7	Xylenes (total)	5.0E-03	5.0E-03	mg/L	BIR2068(LJ)	1 / 23	1.0E-02 - 1.0E-02	5.0E-03		9.4E+00	NA	NA	N	IFD
		SVOCs													
	105-60-2	Caprolactam	2.0E-03	8.4E-02	mg/L	BIR2016()	7 / 23	9.0E-03 - 1.0E-02	8.4E-02		1.3E+02	NA	NA	N	BSL
	84-74-2	Di-n-butylphthalate	1.0E-03	1.0E-03	mg/L	BIR5007(LJ)	1 / 23	9.0E-03 - 1.0E-02	1.0E-03		1.1E+00	NA	NA	N	IFD
		Pesticides/PCBs													
	309-00-2	Aldrin	3.3E-05	3.3E-05	mg/L	BIR2058(LJ)	1 / 23	7.9E-06 - 5.0E-05	3.3E-05		2.2E-04	NA	NA	N	IFD
	11097-69-1	Aroclor-1254	2.1E-04	2.1E-04	mg/L	BIR3013(LJ)	1 / 23	9.1E-04 - 1.0E-03	2.1E-04		7.5E-06	NA	NA	N	IFD
	319-84-6	BHC, alpha-	6.6E-06	6.6E-06	mg/L	BIR2008(LJ)	1 / 23	4.5E-05 - 5.0E-05	6.6E-06		8.8E-05	NA	NA	N	IFD
	319-85-7	BHC, beta-	4.6E-05	4.6E-05	mg/L	BIR2008(LJ)	1 / 23	3.1E-05 - 1.1E-04	4.6E-05		2.7E-04	NA	NA	N	IFD
	319-86-8	BHC, delta-	2.5E-06	1.8E-05	mg/L	BIR2008(LJ)	2 / 23	7.1E-06 - 5.0E-05	1.8E-05	3.3E-06		NA	NA	Y	NTX
	76-44-8	Heptachlor	3.9E-05	3.9E-05	mg/L	BIR2058(LJ)	1 / 23	4.5E-05 - 5.0E-05	3.9E-05		2.1E-04	NA	NA	N	IFD
		Metals													
	7429-90-5	Aluminum	2.0E-02	2.7E+00	mg/L	BIR3013(G_J)	22 / 23	1.7E-01 - 1.7E-01	2.7E+00		1.8E+02	NA	NA	N	BSL
	7440-38-2	Arsenic	7.1E-04	6.6E-03	mg/L	ECOBI014(L)	5 / 23	1.7E-03 - 2.5E-03	6.6E-03	5.4E-03	2.9E-03	NA	NA	Y	ASL
	7440-39-3	Barium	5.1E-02	7.1E-01	mg/L	BIR3073()	23 / 23	NA - NA	7.1E-01		1.3E+01	NA	NA	N	BSL
	7440-43-9	Cadmium	1.1E-03	2.0E-03	mg/L	BIR3039(L), BIR3013(L)	12 / 23	3.0E-04 - 2.5E-02	2.0E-03		9.2E-02	NA	NA	N	BSL
	7440-70-2	Calcium	7.3E+01	2.4E+02	mg/L	BIR3073()	23 / 23	NA - NA	2.4E+02			NA	NA	N	NUT
	7440-47-3	Chromium (total)	1.0E-03	4.6E-02	mg/L	BIR3003(J_J)	14 / 23	7.0E-04 - 5.0E-02	4.6E-02		5.5E-01	NA	NA	N	BSL
	7440-48-4	Cobalt	1.4E-02	1.4E-02	mg/L	BIR2068(BG)	1 / 23	1.3E-03 - 1.4E-02	1.4E-02		3.7E+00	NA	NA	N	IFD
	7440-50-8	Copper	3.1E-03	4.2E-02	mg/L	BIR2098()	21 / 23	3.0E-03 - 6.0E-03	4.2E-02		7.4E+00	NA	NA	N	BSL
	7439-89-6	Iron	8.0E-02	4.3E+00	mg/L	BIR4013(J)	20 / 23	2.2E-02 - 1.0E+00	4.3E+00		5.5E+01	NA	NA	N	BSL
	7439-92-1	Lead	2.9E-04	4.3E-03	mg/L	BIR3013(G)	20 / 23	3.5E-04 - 2.1E-03	4.3E-03	1.4E-02		NA	NA	Y	NTX
	7439-95-4	Magnesium	2.0E+02	7.6E+02	mg/L	BIR3073()	23 / 23	NA - NA	7.6E+02			NA	NA	N	NUT
	7439-96-5	Manganese	7.6E-02	6.0E-01	mg/L	BIR3027()	23 / 23	NA - NA	6.0E-01		3.7E+00	NA	NA	N	BSL
	7439-97-6	Mercury	5.6E-05	3.3E-04	mg/L	BIR3073()	13 / 23	7.3E-05 - 1.0E-04	3.3E-04			NA	NA	Y	NTX
	7440-02-0	Nickel	3.3E-03	2.6E-02	mg/L	BIR3003(L)	21 / 23	2.1E-03 - 2.0E-01	2.6E-02		3.7E+00	NA	NA	N	BSL
	7440-09-7	Potassium	7.7E+01	2.5E+02	mg/L	BIR3073(Jv)	23 / 23	NA - NA	2.5E+02			NA	NA	N	NUT
	7782-49-2	Selenium	2.9E-04	1.2E-02	mg/L	BIR1010(), BIR2068(G), BIR4013(G)	21 / 23	2.2E-03 - 2.6E-03	1.2E-02		9.2E-01	NA	NA	N	BSL
	7440-22-4	Silver	1.5E-04	1.5E-04	mg/L	BIR5004(B)	1 / 23	1.0E-03 - 1.9E-03	1.5E-04		9.2E-01	NA	NA	N	IFD
	7440-23-5	Sodium	1.6E+03	1.5E+04	mg/L	BIR3027()	22 / 22	NA - NA	1.5E+04			NA	NA	N	NUT
	7440-28-0	Thallium	2.2E-04	9.6E-03	mg/L	ECOBI014(LJ)	5 / 23	1.3E-04 - 4.5E-03	9.6E-03		1.3E-02	NA	NA	N	BSL
	7440-62-2	Vanadium	1.5E-03	9.6E-03	mg/L	BIR5007(L)	19 / 23	5.9E-03 - 2.5E-01	9.6E-03		1.3E+00	NA	NA	N	BSL

TABLE 2.4
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
	7440-66-6	Zinc	1.2E-02	1.8E-02	mg/L	ECOBI014(L)	3 / 23	9.8E-03 - 1.0E-01	1.8E-02		5.5E+01	NA	NA	N	BSL

(1) Refer to Section 4.1 for discussion of background values. Blank indicates that chemical was not detected in reference area samples at concentrations exceeding the screening level.
(2) Screening Toxicity Values are the Site specific screening values. See Appendix C.
(3) Rationale Codes

Selection Reason: Above Screening Levels (ASL)
No Toxicity Information (NTX)
Deletion Reason: Infrequent Detection (IFD)
Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
L = Estimated value.
B = Result value is above instrument detection limit but below contract required detection limit (CRDL).
G = Elevated reporting limit due to matrix interference.

TABLE 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
Upper Calcasieu		VOCs													
	1634-04-4	Methyl tert-butyl ether	1.0E-03	2.0E-03	mg/L	UCR1001(LJ)	2 / 9	1.0E-02 - 1.0E-02	2.0E-03			NA	NA	N	SED
	108-88-3	Toluene	1.0E-03	1.0E-03	mg/L	UCR1001(LJ)	1 / 14	1.2E-03 - 1.0E-02	1.0E-03		1.7E+00	NA	NA	N	BSL
		SVOCs													
	117-81-7	bis(2-Ethylhexyl) phthalate	1.0E-03	2.0E-03	mg/L	UCR3018(LJ), UCR2017(LJ)	4 / 14	6.3E-03 - 1.0E-02	2.0E-03		2.3E-02	NA	NA	N	BSL
	105-60-2	Caprolactam	1.4E-02	1.4E-02	mg/L	UCR2020()	1 / 9	1.0E-02 - 1.0E-02	1.4E-02		1.3E+02	NA	NA	N	BSL
		Metals													
	7429-90-5	Aluminum	1.3E-01	1.1E+00	mg/L	UCR1001(G)	11 / 14	3.7E-02 - 7.3E-02	1.1E+00		1.8E+02	NA	NA	N	BSL
	7440-36-0	Antimony	3.5E-02	8.4E-02	mg/L	UCR1-20-SW()	6 / 14	3.7E-03 - 2.9E-02	8.4E-02		7.4E-02	NA	NA	N	SED
	7440-38-2	Arsenic	1.7E-03	6.4E-02	mg/L	UCR2020(J^_J)	5 / 14	8.2E-04 - 2.9E-03	6.4E-02	5.40E-03	2.9E-03	NA	NA	Y	ASL
	7440-39-3	Barium	7.3E-02	1.1E-01	mg/L	UCR3006(L)	9 / 14	1.2E-03 - 1.2E-03	1.1E-01		1.3E+01	NA	NA	N	BSL
	7440-43-9	Cadmium	1.7E-03	1.7E-03	mg/L	UCR3002(L)	1 / 14	1.1E-03 - 4.3E-03	1.7E-03		9.2E-02	NA	NA	N	BSL
	7440-70-2	Calcium	1.4E+02	2.1E+02	mg/L	UCR1-20-SW()	14 / 14	NA - NA	2.1E+02			NA	NA	N	NUT
	7440-50-8	Copper	3.2E-03	1.6E-02	mg/L	UCR2001(G)	13 / 14	3.0E-03 - 3.0E-03	1.6E-02		7.4E+00	NA	NA	N	BSL
	57-12-5	Cyanide	3.8E-03	4.8E-03	mg/L	UCR2001(B)	5 / 9	3.7E-03 - 1.0E-02	4.8E-03		3.7E+00	NA	NA	N	BSL
	7439-89-6	Iron	6.4E-02	4.3E-01	mg/L	UCR1-24-SW()	6 / 14	2.9E-02 - 2.9E+00	4.3E-01		5.5E+01	NA	NA	N	BSL
	7439-92-1	Lead	6.7E-04	2.6E-02	mg/L	UCR2020(L_J)	7 / 14	1.7E-04 - 2.0E-03	2.6E-02	1.4E-02		NA	NA	Y	NTX
	7439-95-4	Magnesium	4.6E+02	7.1E+02	mg/L	UCR2036()	14 / 14	NA - NA	7.1E+02			NA	NA	N	NUT
	7439-96-5	Manganese	5.8E-02	1.7E-01	mg/L	UCR3018()	14 / 14	NA - NA	1.7E-01		3.7E+00	NA	NA	N	BSL
	7440-02-0	Nickel	2.4E-03	6.4E-03	mg/L	UCR3018()	14 / 14	NA - NA	6.4E-03		3.7E+00	NA	NA	N	BSL
	7440-09-7	Potassium	1.5E+02	2.3E+02	mg/L	UCR2036()	14 / 14	NA - NA	2.3E+02			NA	NA	N	NUT
	7782-49-2	Selenium	1.5E-03	1.2E-02	mg/L	UCR3002(G), UCR2036(G)	8 / 14	6.0E-04 - 2.0E-02	1.2E-02		9.2E-01	NA	NA	N	BSL
	7440-23-5	Sodium	4.5E+03	7.5E+03	mg/L	UCR2036()	14 / 14	NA - NA	7.5E+03			NA	NA	N	NUT
	7440-28-0	Thallium	4.7E-03	5.9E-03	mg/L	UCR3018(L)	3 / 14	2.0E-04 - 2.0E-03	5.9E-03		1.3E-02	NA	NA	N	BSL
	7440-62-2	Vanadium	1.5E-02	1.5E-02	mg/L	UCR2001(L)	2 / 14	2.0E-03 - 1.3E-02	1.5E-02		1.3E+00	NA	NA	N	BSL

(1) Refer to Section 4.1 for discussion of background values. Blank indicates that chemical was not detected in reference area samples at concentrations exceeding the screening level.

(2) Screening Toxicity Values are the Site specific screening values. See Appendix C.

(3) Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
	No Toxicity Information (NTX)
Deletion Reason:	Essential Nutrient (NUT)
	Below Screening Level (BSL)
	Not a COPC for Sediment (SED)

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
J^ = Estimated value with potentially high bias.
L = Estimated value.
B = Result value is above instrument detection limit but below contract required detection limit (CRDL).
G = Elevated reporting limit due to matrix interference.

TABLE 2.6
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
Lower Calcasieu		SVOCs													
	117-81-7	bis(2-Ethylhexyl) phthalate	1.0E-03	5.0E-03	mg/L	LCR1045(LJ)	14 / 24	7.0E-03 - 1.0E-02	5.0E-03		2.3E-02	NA	NA	N	BSL
	105-60-2	Caprolactam	6.0E-03	6.0E-03	mg/L	LCR1003(LJ)	1 / 24	1.0E-02 - 1.0E-02	6.0E-03		1.3E+02	NA	NA	N	IFD
	84-74-2	Di-n-butylphthalate	1.0E-03	1.0E-03	mg/L	LCR2039(LJ)	1 / 24	1.0E-02 - 1.0E-02	1.0E-03		1.1E+00	NA	NA	N	IFD
		PAHs													
	91-20-3	Naphthalene	2.0E-03	2.0E-03	mg/L	LCR2053(LJ)	1 / 24	1.0E-02 - 1.0E-02	2.0E-03		1.1E-01	NA	NA	N	IFD
		Metals													
	7429-90-5	Aluminum	1.7E-02	3.8E+00	mg/L	LCR2058(G_J)	21 / 24	7.3E-02 - 1.4E-01	3.8E+00		1.8E+02	NA	NA	N	BSL
	7440-38-2	Arsenic	8.1E-04	7.4E-03	mg/L	ECOLC007(L)	16 / 24	1.4E-03 - 4.0E-03	7.4E-03	5.4E-03	2.9E-03	NA	NA	Y	ASL
	7440-39-3	Barium	5.3E-02	1.2E-01	mg/L	LCR2058(L)	17 / 17	NA - NA	1.2E-01		1.3E+01	NA	NA	N	BSL
	7440-41-7	Beryllium	2.0E-04	2.0E-04	mg/L	LCR2058(L)	1 / 17	1.0E-04 - 3.3E-04	2.0E-04		3.7E-01	NA	NA	N	BSL
	7440-43-9	Cadmium	1.4E-03	2.4E-03	mg/L	LCR2058(L)	3 / 17	3.0E-04 - 4.6E-03	2.4E-03		9.2E-02	NA	NA	N	BSL
	7440-70-2	Calcium	7.9E+01	2.8E+02	mg/L	LCR2070()	17 / 17	NA - NA	2.8E+02			NA	NA	N	NUT
	7440-48-4	Cobalt	2.4E-03	2.4E-03	mg/L	LCR2058(L)	1 / 17	1.3E-03 - 1.4E-02	2.4E-03		3.7E+00	NA	NA	N	BSL
	7440-50-8	Copper	6.8E-03	3.6E-02	mg/L	LCR1024()	20 / 24	3.4E-03 - 6.6E-03	3.6E-02		7.4E+00	NA	NA	N	BSL
	57-12-5	Cyanide	3.8E-03	4.7E-03	mg/L	ECOLC007(B_J)	3 / 24	3.5E-03 - 1.0E-02	4.7E-03		3.7E+00	NA	NA	N	BSL
	7439-89-6	Iron	1.8E-01	2.1E+00	mg/L	LCR2058()	10 / 17	2.2E-02 - 1.6E-01	2.1E+00		5.5E+01	NA	NA	N	BSL
	7439-92-1	Lead	3.0E-04	4.8E-03	mg/L	LCR2058(G)	19 / 24	3.1E-04 - 2.0E-03	4.8E-03	1.44E-02		NA	NA	Y	NTX
	7439-95-4	Magnesium	2.7E+02	9.7E+02	mg/L	LCR2070()	17 / 17	NA - NA	9.7E+02			NA	NA	N	NUT
	7439-96-5	Manganese	3.5E-02	5.5E-01	mg/L	LCR2058(Jv)	17 / 17	NA - NA	5.5E-01		3.7E+00	NA	NA	N	BSL
	7439-97-6	Mercury	4.9E-05	6.1E-05	mg/L	LCR2058(B)	2 / 24	1.0E-04 - 2.0E-04	6.1E-05			NA	NA	Y	NTX
	7440-02-0	Nickel	3.2E-03	8.4E-03	mg/L	LCR2058(G)	24 / 24	NA - NA	8.4E-03		3.7E+00	NA	NA	N	BSL
	7440-09-7	Potassium	1.7E+02	2.8E+02	mg/L	LCR2070(Jv)	17 / 17	NA - NA	2.8E+02			NA	NA	N	NUT
	7782-49-2	Selenium	2.4E-03	1.5E-02	mg/L	LCR2010(G)	7 / 24	2.6E-03 - 2.0E-02	1.5E-02		9.2E-01	NA	NA	N	BSL
	7440-22-4	Silver	6.6E-03	6.6E-03	mg/L	LCR2030(L)	1 / 24	1.2E-03 - 2.0E-03	6.6E-03		9.2E-01	NA	NA	N	IFD
	7440-23-5	Sodium	1.2E+03	1.3E+04	mg/L	LCR2053(J^)	17 / 17	NA - NA	1.3E+04			NA	NA	N	NUT
	7440-28-0	Thallium	5.0E-03	9.0E-03	mg/L	LCR2020(L)	5 / 24	1.5E-04 - 2.0E-03	9.0E-03		1.3E-02	NA	NA	N	BSL
	7440-62-2	Vanadium	2.0E-03	5.8E-03	mg/L	LCR2058(L)	7 / 17	2.0E-03 - 5.9E-03	5.8E-03		1.3E+00	NA	NA	N	BSL
	7440-66-6	Zinc	1.9E-02	3.9E-02	mg/L	LCR2030()	3 / 17	9.8E-03 - 1.0E-02	3.9E-02		5.5E+01	NA	NA	N	BSL

(1) Refer to Section 4.1 for discussion of background values. Blank indicates that chemical was not detected in reference area samples at concentrations exceeding the screening level.

(2) Screening Toxicity Values are the Site specific screening values. See Appendix C.

(3) Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
	No Toxicity Information (NTX)
Deletion Reason:	Infrequent Detection (IFD)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
Jv = Estimated value with potentially low bias.
J^ = Estimated value with potentially high bias.
L = Estimated value.
B = Result value is above instrument detection limit but below contract required detection limit (CRDL).
G = Elevated reporting limit due to matrix interference.

TABLE 2.7
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
ENTIRE ESTUARY (EXCEPT BAYOU VERDINE)

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
Entire Estuary (except Bayou Verdine)		SVOCs													
	100-52-7	Benzaldehyde	2.1E-02	8.5E-02	mg/kg	LCST001()	40 / 55	4.0E-02 - 5.5E-02	8.5E-02		7.1E+00	NA	NA	N	BSL
	85-68-7	Butylbenzyl phthalate	3.8E-02	3.8E-02	mg/kg	BIST021(J)	1 / 51	4.0E-02 - 2.0E+00	3.8E-02		1.4E+01	NA	NA	N	IFD
	105-60-2	Caprolactam	1.3E-01	1.3E-01	mg/kg	UCST007()	1 / 55	4.0E-02 - 5.0E-02	1.3E-01		3.5E+01	NA	NA	N	IFD
	84-66-2	Diethyl phthalate	2.4E-02	8.8E-02	mg/kg	LCST005()	9 / 65	4.0E-02 - 4.0E+00	8.8E-02		5.7E+01	NA	NA	N	BSL
	84-74-2	Di-n-butylphthalate	2.7E-02	6.1E-01	mg/kg	UCST007()	45 / 65	4.0E-02 - 2.0E+00	6.1E-01		7.1E+00	NA	NA	N	BSL
	87-68-3	Hexachlorobutadiene	5.7E-01	5.7E-01	mg/kg	LCST005()	1 / 65	4.0E-02 - 2.0E+00	5.7E-01		1.4E-02	NA	NA	N	IFD
		PAHs													
	91-20-3	Naphthalene	4.1E-02	4.1E-02	mg/kg	LCST005(J)	1 / 65	4.0E-02 - 2.0E+00	4.1E-02		1.4E+00	NA	NA	N	IFD
		Pesticides/PCBs													
	72-54-8	4,4'-DDD	6.9E-04	1.2E-02	mg/kg	ECOLC004(_J)	3 / 65	6.0E-03 - 1.0E-02	1.2E-02		6.9E-03	NA	NA	N	IFD
	72-55-9	4,4'-DDE	1.9E-03	2.5E-02	mg/kg	LCST005(D)	9 / 65	6.0E-03 - 1.0E-02	2.5E-02	3.9E-03	4.9E-03	NA	NA	Y	ASL
	50-29-3	4,4'-DDT	3.9E-03	4.5E-03	mg/kg	ECOBI007(J_J)	2 / 65	6.0E-03 - 1.0E-02	4.5E-03		4.9E-03	NA	NA	N	IFD
	309-00-2	Aldrin	2.3E-03	4.9E-02	mg/kg	LCST005(D)	5 / 65	6.0E-03 - 1.0E-02	4.9E-02	3.3E-03	9.7E-05	NA	NA	Y	ASL
	11097-69-1	Aroclor-1254	2.4E-02	6.7E-01	mg/kg	LCST005(P_J)	7 / 65	1.0E-02 - 1.0E-01	6.7E-01	2.8E-02	8.3E-04	NA	NA	Y	ASL
	11096-82-5	Aroclor-1260	3.6E-01	3.6E-01	mg/kg	LCST005(P_J)	1 / 65	1.0E-02 - 1.0E-01	3.6E-01		8.3E-04	NA	NA	N	IFD
	319-84-6	BHC, alpha-	8.8E-04	8.3E-03	mg/kg	ECOLC004(_J)	5 / 65	6.0E-03 - 1.0E-02	8.3E-03		2.6E-04	NA	NA	Y	ASL
	319-85-7	BHC, beta-	1.4E-02	6.9E-02	mg/kg	LCST005(D_J)	5 / 59	6.0E-03 - 1.0E-02	6.9E-02		9.2E-04	NA	NA	Y	ASL
	319-86-8	BHC, delta-	1.5E-03	1.5E-03	mg/kg	ECOUC005(JCOL_J)	1 / 60	6.0E-03 - 1.0E-02	1.5E-03			NA	NA	N	IFD
	58-89-9	BHC, gamma- (Lindane)	8.4E-04	3.7E-03	mg/kg	ECOBI002(JCOL)	4 / 65	6.0E-03 - 1.0E-02	3.7E-03		1.3E-03	NA	NA	Y	ASL
	5103-71-9	Chlordane, alpha-	9.5E-04	2.1E-02	mg/kg	LCST005(E_J)	9 / 65	6.0E-03 - 1.0E-02	2.1E-02	2.0E-03	4.7E-03	NA	NA	Y	ASL
	5103-74-2	Chlordane, gamma-	2.6E-03	7.2E-03	mg/kg	ECOBI002()	4 / 65	6.0E-03 - 1.0E-02	7.2E-03		4.7E-03	NA	NA	Y	ASL
	60-57-1	Dieldrin	1.3E-03	1.5E-02	mg/kg	ECOBI007(_J)	9 / 65	6.0E-03 - 1.0E-02	1.5E-02	3.8E-03	1.0E-04	NA	NA	Y	ASL
	959-98-8	Endosulfan I	9.5E-04	2.3E-03	mg/kg	ECOBI002(JCOL)	2 / 65	6.0E-03 - 1.0E-02	2.3E-03		4.2E-01	NA	NA	N	IFD
	33213-65-9	Endosulfan II	1.6E-03	8.2E-03	mg/kg	ECOBI007(COL_J)	3 / 65	6.0E-03 - 1.0E-02	8.2E-03		4.2E-01	NA	NA	N	IFD
	1031-07-8	Endosulfan sulfate	3.6E-03	3.6E-03	mg/kg	ECOLC004(JCOL_J)	1 / 64	6.0E-03 - 1.0E-02	3.6E-03			NA	NA	N	IFD
	72-20-8	Endrin	1.8E-03	4.6E-03	mg/kg	ECOUC005(JCOL_J)	2 / 65	6.0E-03 - 1.0E-02	4.6E-03		2.1E-02	NA	NA	N	IFD
	7421-93-4	Endrin aldehyde	7.4E-04	2.9E-03	mg/kg	ECOBI007(JCOL_J)	6 / 65	6.0E-03 - 1.0E-02	2.9E-03	2.3E-03		NA	NA	Y	NTX
	76-44-8	Heptachlor	1.2E-03	9.9E-03	mg/kg	ECOBI007(COL_J)	6 / 65	6.0E-03 - 1.0E-02	9.9E-03		3.7E-04	NA	NA	Y	ASL
	1024-57-3	Heptachlor epoxide	4.6E-03	1.1E-02	mg/kg	ECOLC004(JCOL_J)	3 / 65	1.0E-02 - 2.2E-02	1.1E-02	3.9E-03	1.8E-04	NA	NA	N	IFD
	72-43-5	Methoxychlor	3.2E-03	4.6E-03	mg/kg	ECOBI002(JCOL)	2 / 65	1.0E-02 - 1.1E-02	4.6E-03		3.5E-01	NA	NA	N	IFD
		Dioxins/Furans													
	70648-26-9	1,2,3,4,7,8-HxCDF	5.3E-07	7.8E-07	mg/kg	UCST021()	2 / 12	1.8E-07 - 4.9E-07	Dioxins and furans are multiplied by 2,3,7,8-TCDD toxic equivalency factors (TEFs) in order to compare a						
	57117-44-9	1,2,3,6,7,8-HxCDF	5.7E-07	1.1E-06	mg/kg	UCST021(D)	6 / 12	1.6E-07 - 4.0E-07	total TCDD equivalent concentration to the screening toxicity value. The maximum TCDD equivalent						
	57117-41-6	1,2,3,7,8-PeCDF	3.5E-07	2.4E-06	mg/kg	UCST021()	10 / 12	2.3E-07 - 7.1E-07	concentration of 1.0E-6 mg/kg exceeds the screening toxicity value of 1.1E-8 mg/kg.						
	51207-31-9	2,3,7,8-TCDF	3.2E-07	1.2E-06	mg/kg	BIST021()	11 / 12	1.9E-07 - 1.9E-07							
	3268-87-9	OCDD	1.7E-06	2.7E-06	mg/kg	BIST021()	3 / 12	5.1E-07 - 1.4E-06							
		Metals													
	7429-90-5	Aluminum	3.2E+00	3.2E+01	mg/kg	ECOBI002()	4 / 10	4.4E+00 - 1.0E+01	3.2E+01		7.1E+01	NA	NA	N	BSL
	7440-36-0	Antimony	2.0E-02	5.0E-02	mg/kg	LCST001(B)	12 / 65	2.0E-02 - 1.0E+00	5.0E-02	2.1E-01	2.8E-02	NA	NA	Y	ASL
	7440-38-2	Arsenic	1.3E-01	8.4E-01	mg/kg	ECOBI014(B)	60 / 65	1.0E-02 - 1.0E+00	8.4E-01	1.3E+00	1.1E-03	NA	NA	Y	ASL
	7440-39-3	Barium	1.4E-01	6.6E+00	mg/kg	ECOBI002()	7 / 10	2.0E-01 - 2.1E+00	6.6E+00		5.0E+00	NA	NA	Y	ASL

TABLE 2.7
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
ENTIRE ESTUARY (EXCEPT BAYOU VERDINE)

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
	7440-43-9	Cadmium	5.0E-03	5.0E-03	mg/kg	LCST005(B_J)	1 / 65	1.0E-02 - 5.0E-01	5.0E-03	2.0E-02	3.5E-02	NA	NA	N	IFD
	7440-70-2	Calcium	3.4E+02	2.8E+04	mg/kg	ECOBI002(_J)	10 / 10	NA - NA	2.8E+04			NA	NA	N	NUT
	7440-47-3	Chromium (total)	1.0E-01	5.1E-01	mg/kg	ECOBI002(B)	29 / 65	1.0E-02 - 1.0E+00	5.1E-01		2.1E-01	NA	NA	Y	ASL
	7440-50-8	Copper	1.7E-01	2.8E+00	mg/kg	LCST005(_J)	61 / 65	1.0E-02 - 6.2E-01	2.8E+00		2.8E+00	NA	NA	N	BSL
	7439-89-6	Iron	1.9E+00	2.0E+01	mg/kg	BIST021()	51 / 65	1.5E-01 - 7.8E+00	2.0E+01		2.1E+01	NA	NA	N	BSL
	7439-92-1	Lead	2.0E-02	4.1E-01	mg/kg	ECOBI002(B)	26 / 65	2.0E-02 - 8.0E-01	4.1E-01	3.6E-01		NA	NA	Y	NTX
	7439-95-4	Magnesium	3.1E+02	6.8E+02	mg/kg	ECOBI002()	9 / 10	2.7E+02 - 2.7E+02	6.8E+02			NA	NA	N	NUT
	7439-96-5	Manganese	1.7E-01	5.7E+00	mg/kg	ECOBI002()	8 / 10	2.3E-01 - 7.1E-01	5.7E+00		1.4E+00	NA	NA	Y	ASL
	7439-97-6	Mercury	4.3E-02	5.6E-01	mg/kg	BIST005()	61 / 65	2.0E-02 - 4.2E-02	5.6E-01	8.6E-02	7.1E-03	NA	NA	Y	ASL
	7440-02-0	Nickel	3.0E-02	4.8E-01	mg/kg	LCST013()	25 / 65	3.0E-02 - 4.0E+00	4.8E-01		1.4E+00	NA	NA	Y	ASL
	7440-09-7	Potassium	3.4E+03	4.7E+03	mg/kg	ECOLC005()	10 / 10	NA - NA	4.7E+03			NA	NA	N	NUT
	7782-49-2	Selenium	4.5E-01	1.5E+00	mg/kg	ECOBI002()	61 / 65	3.0E-02 - 1.3E+00	1.5E+00	7.8E-01	3.5E-01	NA	NA	Y	ASL
	7440-23-5	Sodium	1.2E+03	1.2E+03	mg/kg	ECOBI002()	1 / 10	3.5E+02 - 6.8E+02	1.2E+03			NA	NA	N	NUT
	7440-66-6	Zinc	2.7E+00	2.0E+01	mg/kg	ECOBI002()	60 / 65	1.0E-02 - 7.7E+00	2.0E+01		2.1E+01	NA	NA	N	BSL

(1) Refer to Section 4.1 for discussion of background values. Blank indicates that chemical was not detected in reference area samplesat concentrations exceeding the screening level.
(2) Screening Toxicity Values are the Site specific screening values. See Appendix C.
(3) Rationale Codes

Selection Reason: Above Screening Levels (ASL)
No Toxicity Information (NTX)
Deletion Reason: Infrequent Detection (IFD)
Essential Nutrient (NUT)

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
E = Coumpound concentration exceeds the calibration range.
P = The difference for detected concentration is greater then 25% between the two GC columns.
B = Result value is above instrument detection limit but below contract required detection limit (CRDL).
D = Result represents diluted sample analysis.

TABLE 2.8
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU VERDINE

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifiers)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection
Bayou Verdine		Dioxins/Furans													
	35822-46-9	1,2,3,4,6,7,8-HpCDD	1.8E-07	2.5E-06	mg/kg	T-GARF1(_J)	5 / 5	NA - NA	Dioxins and furans are multiplied by 2,3,7,8-TCDD toxic equivalency factors (TEFs) in order to compare a total TCDD equivalent concentration to the screening toxicity value. The maximum TCDD equivalent concentration of 6.7E-6 mg/kg exceeds the screening toxicity value of 1.1E-8 mg/kg.						
	39227-28-6	1,2,3,4,7,8-HxCDD	1.8E-07	2.5E-07	mg/kg	T-GARF5()	2 / 5	1.0E-07 - 1.0E-07							
	70648-26-9	1,2,3,4,7,8-HxCDF	1.3E-07	1.2E-06	mg/kg	T-GARF-11()	4 / 4	NA - NA							
	57653-85-7	1,2,3,6,7,8-HxCDD	1.1E-07	1.9E-06	mg/kg	T-GARF5()	5 / 6	1.0E-07 - 1.0E-07							
	57117-44-9	1,2,3,6,7,8-HxCDF	6.2E-07	7.7E-07	mg/kg	T-GARF-11()	3 / 4	1.0E-07 - 1.0E-07							
	19408-74-3	1,2,3,7,8,9-HxCDD	3.0E-07	4.7E-07	mg/kg	T-GARF5()	2 / 5	1.0E-07 - 1.0E-07							
	40321-76-4	1,2,3,7,8-PeCDD	1.7E-07	1.0E-06	mg/kg	T-GARF5()	3 / 4	1.0E-07 - 1.0E-07							
	57117-41-6	1,2,3,7,8-PeCDF	1.5E-07	2.8E-06	mg/kg	T-GARF5()	4 / 4	NA - NA							
	60851-34-5	2,3,4,6,7,8-HxCDF	1.4E-07	3.0E-07	mg/kg	T-GARF1(_J)	3 / 4	1.0E-07 - 1.0E-07							
	57117-31-4	2,3,4,7,8-PeCDF	9.3E-07	3.4E-06	mg/kg	T-GARF5()	4 / 4	NA - NA							
	1746-01-6	2,3,7,8-TCDD	1.0E-07	1.9E-06	mg/kg	T-GARF5()	5 / 5	NA - NA							
	51207-31-9	2,3,7,8-TCDF	2.7E-07	7.3E-06	mg/kg	T-GARF5()	6 / 6	NA - NA							
	3268-87-9	OCDD	1.8E-06	4.3E-06	mg/kg	T-GARF1(_J)	3 / 6	4.6E-07 - 1.4E-06							
	39001-02-0	OCDF	1.5E-07	5.2E-07	mg/kg	T-GARF5(_J)	3 / 4	1.0E-07 - 1.0E-07							

(1) Dioxins and furans were not detected in reference area fish.

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.

TABLE 2.9
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifiers)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
Bayou d'Inde		SVOCs													
	59-50-7	4-Chloro-3-methylphenol	1.5E-01	1.5E-01	mg/kg	BIST008(J)	1 / 21	4.0E-02 - 2.0E+00	1.5E-01			NA	NA	N	IFD
	106-44-5	4-Methylphenol	4.2E-02	2.6E-01	mg/kg	BIST008(J)	4 / 20	4.0E-02 - 4.0E-01	2.6E-01		3.5E-01	NA	NA	N	BSL
	100-02-7	4-Nitrophenol	4.0E-02	4.0E-02	mg/kg	BIST008(J_J)	1 / 14	1.0E-01 - 1.0E+01	4.0E-02		5.7E-01	NA	NA	Y	ASL
	100-52-7	Benzaldehyde	3.5E-02	3.1E-01	mg/kg	BIST008(J)	16 / 20	4.0E-02 - 4.0E-02	3.1E-01		7.1E+00	NA	NA	N	BSL
	117-81-7	bis(2-Ethylhexyl) phthalate	2.9E-01	1.3E+02	mg/kg	BIST008(DB_J)	3 / 21	4.0E-02 - 2.0E+00	1.3E+02	2.3E-01	1.2E-01	NA	NA	Y	ASL
	84-74-2	Di-n-butylphthalate	1.7E+00	1.2E+01	mg/kg	BIST008(EB_J)	2 / 21	4.0E-02 - 8.4E+00	1.2E+01		7.1E+00	NA	NA	Y	ASL
	117-84-0	Di-n-octylphthalate	1.2E-01	1.2E-01	mg/kg	BIST008(J_J)	1 / 13	4.0E-02 - 4.0E+00	1.2E-01		1.4E+00	NA	NA	Y	ASL
	118-74-1	Hexachlorobenzene	2.0E-02	2.8E-02	mg/kg	BISTC02(J)	3 / 20	4.0E-02 - 2.0E+00	2.8E-02		1.0E-03	NA	NA	Y	ASL
	108-95-2	Phenol	4.4E-01	4.4E-01	mg/kg	BISTC02()	1 / 21	4.0E-02 - 2.0E+00	4.4E-01		4.3E+01	NA	NA	N	IFD
		Pesticides/PCBs													
	72-54-8	4,4'-DDD	1.6E-02	2.9E-02	mg/kg	BISTC01(EP_J)	3 / 21	6.0E-03 - 1.0E-01	2.9E-02		6.9E-03	NA	NA	Y	ASL
	72-55-9	4,4'-DDE	2.1E-03	2.1E-03	mg/kg	ECOBI002(J)	1 / 21	1.0E-02 - 1.0E-01	2.1E-03		4.9E-03	NA	NA	N	IFD
	50-29-3	4,4'-DDT	3.6E-02	4.3E-02	mg/kg	BISTC05(PE_J)	3 / 21	6.0E-03 - 1.0E-01	4.3E-02		4.9E-03	NA	NA	Y	ASL
	309-00-2	Aldrin	1.0E-02	1.0E-02	mg/kg	BISTC05(P_J), BISTC02(PE_J), BISTC01(P_J)	3 / 21	6.0E-03 - 1.0E-01	1.0E-02		9.7E-05	NA	NA	Y	ASL
	11097-69-1	Aroclor-1254	1.3E-02	3.3E-01	mg/kg	BISTC01(E_J)	17 / 21	1.0E-02 - 1.0E-01	3.3E-01		8.3E-04	NA	NA	Y	ASL
	319-85-7	BHC, beta-	2.5E-02	5.6E-02	mg/kg	BISTC02(DP_J)	6 / 21	6.0E-03 - 1.0E-01	5.6E-02		9.2E-04	NA	NA	Y	ASL
	5103-71-9	Chlordane, alpha-	1.9E-03	1.9E-03	mg/kg	ECOBI002(JCOL_J)	1 / 21	1.0E-02 - 1.0E-01	1.9E-03		4.7E-03	NA	NA	N	IFD
	5103-74-2	Chlordane, gamma-	1.5E-02	1.5E-02	mg/kg	BISTC05(E_J)	1 / 21	6.0E-03 - 1.0E-01	1.5E-02		4.7E-03	NA	NA	N	IFD
	60-57-1	Dieldrin	2.0E-03	2.0E-03	mg/kg	ECOBI002(J_J)	1 / 21	1.0E-02 - 1.0E-01	2.0E-03		1.0E-04	NA	NA	N	IFD
	1031-07-8	Endosulfan sulfate	1.1E-02	1.1E-02	mg/kg	BISTC02(_J), BISTC01(P_J)	2 / 21	6.0E-03 - 1.0E-01	1.1E-02			NA	NA	Y	NTX
	72-20-8	Endrin	1.3E-02	2.5E-02	mg/kg	BISTC01(E_J)	3 / 21	6.0E-03 - 1.0E-01	2.5E-02		2.1E-02	NA	NA	Y	ASL
	7421-93-4	Endrin aldehyde	1.4E-02	1.4E-02	mg/kg	BISTC05(_J)	1 / 21	6.0E-03 - 1.0E-01	1.4E-02			NA	NA	N	IFD
	76-44-8	Heptachlor	6.8E-04	6.8E-04	mg/kg	ECOBI002(JCOL_J)	1 / 21	1.0E-02 - 1.0E-01	6.8E-04		3.7E-04	NA	NA	N	IFD
		Dioxins/Furans													
	35822-46-9	1,2,3,4,6,7,8-HpCDD	7.6E-07	1.3E-06	mg/kg	BIST008(B,J)	4 / 5	8.3E-07 - 8.3E-07	Dioxins and furans are multiplied by 2,3,7,8-TCDD toxic equivalency factors (TEFs) in order to compare a						
	67562-39-4	1,2,3,4,6,7,8-HpCDF	2.5E-06	5.5E-06	mg/kg	BISTC01()	5 / 5	NA - NA	total TCDD equivalent concentration to the screening toxicity value. The maximum TCDD equivalent						
	70648-26-9	1,2,3,4,7,8-HxCDF	1.6E-06	1.4E-05	mg/kg	BISTC01()	5 / 5	NA - NA	concentration of 2.5 E-05 mg/kg exceeds the screening toxicity value of 1.1E-8 mg/kg and the reference area						
	57653-85-7	1,2,3,6,7,8-HxCDD	2.2E-07	2.2E-07	mg/kg	BIST008(J)	1 / 5	2.4E-07 - 8.2E-07	concentration of 1.3E-06 mg/kg.						
	57117-44-9	1,2,3,6,7,8-HxCDF	6.1E-07	3.9E-06	mg/kg	BISTC01()	5 / 5	NA - NA							
	40321-76-4	1,2,3,7,8-PeCDD	1.3E-07	2.1E-07	mg/kg	BIST008(J)	2 / 5	1.2E-06 - 2.0E-06							
	57117-41-6	1,2,3,7,8-PeCDF	2.3E-06	2.4E-05	mg/kg	BISTC01()	5 / 5	NA - NA							
	60851-34-5	2,3,4,6,7,8-HxCDF	3.0E-06	4.0E-06	mg/kg	BISTC01()	3 / 5	2.8E-07 - 3.4E-07							
	57117-31-4	2,3,4,7,8-PeCDF	2.3E-06	2.5E-05	mg/kg	BISTC01()	5 / 5	NA - NA							
	1746-01-6	2,3,7,8-TCDD	4.8E-07	4.9E-07	mg/kg	BISTC01()	2 / 5	8.5E-08 - 6.2E-07							
	51207-31-9	2,3,7,8-TCDF	5.2E-06	7.0E-05	mg/kg	BISTC01()	5 / 5	NA - NA							
	3268-87-9	OCDD	1.7E-06	2.1E-05	mg/kg	BIST008(B)	5 / 5	NA - NA							
	39001-02-0	OCDF	7.0E-06	8.5E-06	mg/kg	BIST008(B)	2 / 5	1.5E-06 - 1.9E-06							
		Metals													
	7429-90-5	Aluminum	5.6E+01	5.6E+01	mg/kg	ECOBI002(_J)	1 / 1	NA - NA	5.6E+01		7.1E+01	NA	NA	N	BSL
	7440-38-2	Arsenic	2.5E-01	4.8E-01	mg/kg	BISTC01(_J)	18 / 21	3.7E-01 - 6.2E-01	4.8E-01	6.7E-01	1.1E-03	NA	NA	Y	ASL
	7440-39-3	Barium	9.8E+01	9.8E+01	mg/kg	ECOBI002()	1 / 1	NA - NA	9.8E+01	1.0E+02	5.0E+00	NA	NA	Y	ASL

TABLE 2.9
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifiers)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
	7440-43-9	Cadmium	1.0E-02	5.0E-02	mg/kg	BISTC01(_J)	6 / 19	1.0E-02 - 5.0E-01	5.0E-02	5.0E-02	3.5E-02	NA	NA	Y	ASL
	7440-70-2	Calcium	5.9E+04	5.9E+04	mg/kg	ECOBI002(_J)	1 / 1	NA - NA	5.9E+04			NA	NA	N	NUT
	7440-47-3	Chromium (total)	1.3E-01	1.4E+00	mg/kg	BIST008(_J)	15 / 21	8.0E-02 - 1.7E-01	1.4E+00	4.6E-01	2.1E-01	NA	NA	Y	ASL
	7440-50-8	Copper	7.8E+00	2.4E+01	mg/kg	BIST008(_J)	21 / 21	NA - NA	2.4E+01	1.1E+01	2.8E+00	NA	NA	Y	ASL
	7439-89-6	Iron	3.0E+00	1.5E+02	mg/kg	ECOBI002(_J)	19 / 21	1.9E+00 - 2.5E+00	1.5E+02	5.1E+01	2.1E+01	NA	NA	Y	ASL
	7439-92-1	Lead	5.0E-02	6.7E-01	mg/kg	ECOBI002(B_J)	18 / 21	2.0E-02 - 2.0E-02	6.7E-01	1.8E+00		NA	NA	Y	NTX
	7439-95-4	Magnesium	3.3E+03	3.3E+03	mg/kg	ECOBI002()	1 / 1	NA - NA	3.3E+03			NA	NA	N	NUT
	7439-96-5	Manganese	1.8E+02	1.8E+02	mg/kg	ECOBI002()	1 / 1	NA - NA	1.8E+02	1.7E+02	1.4E+00	NA	NA	Y	ASL
	7439-97-6	Mercury	2.9E-02	3.0E-01	mg/kg	BISTC02()	21 / 21	NA - NA	3.0E-01	5.3E-02	7.1E-03	NA	NA	Y	ASL
	22967-92-6	Methyl Mercury	2.7E-02	3.8E-02	mg/kg	BIST008()	10 / 10	NA - NA	3.8E-02	1.1E-02	7.1E-03	NA	NA	Y	ASL
	7440-02-0	Nickel	7.0E-02	4.7E-01	mg/kg	BIST008(_J)	16 / 21	2.6E-01 - 4.0E+00	4.7E-01	1.2E-01	1.4E+00	NA	NA	Y	ASL
	7440-09-7	Potassium	2.4E+03	2.4E+03	mg/kg	ECOBI002()	1 / 1	NA - NA	2.4E+03			NA	NA	N	NUT
	7782-49-2	Selenium	3.5E-01	8.9E-01	mg/kg	ECOBI002(B)	21 / 21	NA - NA	8.9E-01	6.5E-01	3.5E-01	NA	NA	Y	ASL
	7440-22-4	Silver	3.0E-02	7.0E-02	mg/kg	BIST008(B_J), BIST008(B_J)	20 / 21	1.0E+00 - 1.0E+00	7.0E-02	1.3E-01	3.5E-01	NA	NA	Y	ASL
	7440-23-5	Sodium	5.1E+03	5.1E+03	mg/kg	ECOBI002()	1 / 1	NA - NA	5.1E+03			NA	NA	N	NUT
	7440-66-6	Zinc	1.0E+01	3.6E+01	mg/kg	BISTC01(_J)	21 / 21	NA - NA	3.6E+01	1.9E+01	2.1E+01	NA	NA	Y	ASL

(1) Refer to Section 4.1 for discussion of background values. Blank indicates that chemical was not detected in reference area samples at concentrations exceeding the screening level.

(2) Screening Toxicity Values are the Site specific screening values. See Appendix C.

(3) Rationale Codes

Selection Reason: Above Screening Levels (ASL)
No Toxicity Information (NTX)

Deletion Reason: Infrequent Detection (IFD)
Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions: NA = Not Applicable
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
E = Coumpound concentration exceeds the calibration range.
P = The difference for detected concentration is greater then 25% between the two GC columns.
B = Result value is above instrument detection limit but below contract required detection limit (CRDL).
D = Result represents diluted sample analysis.
COL = 40% difference between primary column and confirmation column results. The lower of the 2 results is reported.

TABLE 2.10
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifiers)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
Upper		SVOCs													
Calcasieu	106-44-5	4-Methylphenol	3.4E-02	2.0E-01	mg/kg	UCSTC10(DJ)	3 / 26	4.0E-02 - 4.0E-01	2.0E-01		3.5E-01	NA	NA	N	BSL
	100-52-7	Benzaldehyde	5.0E-02	2.8E-01	mg/kg	UCSTC10(_J)	25 / 26	4.0E-01 - 4.0E-01	2.8E-01		7.1E+00	NA	NA	N	BSL
	78-59-1	Isophorone	2.9E-02	7.8E-02	mg/kg	UCST003(J)	6 / 26	4.0E-02 - 4.0E-01	7.8E-02		1.7E+00	NA	NA	N	BSL
		PAHs													
	91-57-6	2-Methylnaphthalene	4.1E-02	4.1E-02	mg/kg	UCST026(J)	1 / 26	4.0E-02 - 4.0E-01	4.1E-02		1.4E+00	NA	NA	N	IFD
	129-00-0	Pyrene	1.2E-01	1.2E-01	mg/kg	UCST028()	1 / 26	4.0E-02 - 4.0E-01	1.2E-01		2.1E+00	NA	NA	N	IFD
		Pesticides/PCBs													
	72-54-8	4,4'-DDD	1.4E-02	1.4E-02	mg/kg	UCSTC02()	1 / 26	1.0E-02 - 1.0E-01	1.4E-02		6.9E-03	NA	NA	N	IFD
	50-29-3	4,4'-DDT	1.4E-02	1.5E-02	mg/kg	UCSTC02(P_J)	2 / 26	1.0E-02 - 1.0E-01	1.5E-02		4.9E-03	NA	NA	Y	ASL
	11097-69-1	Aroclor-1254	3.2E-02	1.1E-01	mg/kg	UCSTC02(P_J)	6 / 26	1.0E-02 - 6.7E-01	1.1E-01		8.3E-04	NA	NA	Y	ASL
	319-85-7	BHC, beta-	1.0E-02	1.6E-02	mg/kg	UCSTC02(D)	2 / 26	1.0E-02 - 1.0E-01	1.6E-02		9.2E-04	NA	NA	Y	ASL
	72-43-5	Methoxychlor	2.5E-02	2.5E-02	mg/kg	UCSTC02(P_J)	1 / 26	1.0E-02 - 3.3E-01	2.5E-02		3.5E-01	NA	NA	N	IFD
		Dioxins/Furans													
	35822-46-9	1,2,3,4,6,7,8-HpCDD	1.4E-06	3.5E-06	mg/kg	UCST026()	2 / 4	6.8E-07 - 1.4E-06	Dioxins and furans are multiplied by 2,3,7,8-TCDD toxic equivalency factors (TEFs) in order to compare a						
	67562-39-4	1,2,3,4,6,7,8-HpCDF	6.5E-07	3.2E-06	mg/kg	UCST026()	4 / 4	NA - NA	total TCDD equivalent concentration to the screening toxicity value. The maximum TCDD equivalent						
	55673-89-7	1,2,3,4,7,8,9-HpCDF	5.2E-07	5.2E-07	mg/kg	UCST003(J)	1 / 4	9.0E-08 - 7.3E-07	concentration of 5.5E-06 mg/kg exceeds the screening toxicity value of 1.1E-8 mg/kg and the reference area						
	39227-28-6	1,2,3,4,7,8-HxCDD	3.3E-07	3.3E-07	mg/kg	UCST003(J)	1 / 4	1.9E-07 - 1.0E-06	concentration of 1.3E-06 mg/kg.						
	70648-26-9	1,2,3,4,7,8-HxCDF	4.0E-07	2.5E-06	mg/kg	UCSTC05()	4 / 4	NA - NA							
	57653-85-7	1,2,3,6,7,8-HxCDD	2.2E-07	4.7E-07	mg/kg	UCST003(J)	2 / 4	6.8E-07 - 1.1E-06							
	57117-44-9	1,2,3,6,7,8-HxCDF	3.9E-07	6.5E-07	mg/kg	UCST026(B,D_J)	2 / 4	6.3E-07 - 8.4E-07							
	19408-74-3	1,2,3,7,8,9-HxCDD	3.9E-07	3.9E-07	mg/kg	UCST003(J)	1 / 4	1.9E-07 - 1.0E-06							
	72918-21-9	1,2,3,7,8,9-HxCDF	4.7E-07	4.7E-07	mg/kg	UCST003(J)	1 / 4	7.4E-08 - 9.6E-07							
	40321-76-4	1,2,3,7,8-PeCDD	3.6E-07	3.6E-07	mg/kg	UCST003(J)	1 / 4	2.6E-07 - 9.8E-07							
	57117-41-6	1,2,3,7,8-PeCDF	3.6E-07	4.2E-06	mg/kg	UCSTC05()	4 / 4	NA - NA							
	60851-34-5	2,3,4,6,7,8-HxCDF	3.7E-07	1.3E-06	mg/kg	UCSTC05()	2 / 4	1.5E-07 - 7.0E-07							
	57117-31-4	2,3,4,7,8-PeCDF	5.2E-07	5.2E-06	mg/kg	UCSTC05()	4 / 4	NA - NA							
	1746-01-6	2,3,7,8-TCDD	1.1E-07	1.5E-07	mg/kg	UCST003(J)	2 / 4	2.9E-07 - 4.3E-07							
	51207-31-9	2,3,7,8-TCDF	4.9E-07	1.5E-05	mg/kg	UCSTC05()	4 / 4	NA - NA							
	3268-87-9	OCDD	2.9E-06	3.3E-05	mg/kg	UCST026()	4 / 4	NA - NA							
	39001-02-0	OCDF	1.4E-06	5.4E-06	mg/kg	UCST026(J)	2 / 4	7.2E-07 - 2.4E-06							
		Metals													
	7440-38-2	Arsenic	2.2E-01	5.8E-01	mg/kg	UCSTC02(_J)	26 / 26	NA - NA	5.8E-01	6.7E-01	1.1E-03	NA	NA	Y	ASL
	7440-43-9	Cadmium	3.0E-02	1.2E-01	mg/kg	UCSTC02(_J)	7 / 26	1.0E-02 - 1.0E-02	1.2E-01	5.0E-02	3.5E-02	NA	NA	Y	ASL
	7440-47-3	Chromium (total)	1.6E-01	9.5E-01	mg/kg	UCST021()	10 / 26	1.0E-01 - 1.9E-01	9.5E-01	4.6E-01	2.1E-01	NA	NA	Y	ASL
	7440-50-8	Copper	6.7E+00	1.6E+01	mg/kg	UCST026()	26 / 26	NA - NA	1.6E+01	1.1E+01	2.8E+00	NA	NA	Y	ASL
	7439-89-6	Iron	4.2E+00	7.6E+01	mg/kg	UCST026(_J)	26 / 26	NA - NA	7.6E+01	5.1E+01	2.1E+01	NA	NA	Y	ASL
	7439-92-1	Lead	5.0E-02	1.7E+00	mg/kg	UCST003()	8 / 26	2.0E-02 - 2.0E-01	1.7E+00	1.8E+00		NA	NA	Y	NTX
	7439-97-6	Mercury	6.0E-03	2.0E-01	mg/kg	UCSTC02()	26 / 26	NA - NA	2.0E-01	5.3E-02	7.1E-03	NA	NA	Y	ASL
	22967-92-6	Methyl Mercury	9.4E-03	3.4E-02	mg/kg	UCST026()	9 / 9	NA - NA	3.4E-02	1.1E-02	7.1E-03	NA	NA	Y	ASL
	7440-02-0	Nickel	6.0E-02	4.4E-01	mg/kg	UCST021()	12 / 26	8.0E-02 - 1.6E-01	4.4E-01	1.2E-01	1.4E+00	NA	NA	N	BSL
	7782-49-2	Selenium	3.5E-01	1.2E+00	mg/kg	UCSTC06(_J)	26 / 26	NA - NA	1.2E+00	6.5E-01	3.5E-01	NA	NA	Y	ASL

TABLE 2.10
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifiers)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
	7440-22-4	Silver	1.1E-01	3.0E-01	mg/kg	UCSTC02(_J)	7 / 26	1.0E-02 - 4.0E-02	3.0E-01	1.3E-01	3.5E-01	NA	NA	N	BSL
	7440-66-6	Zinc	8.5E+00	3.7E+01	mg/kg	UCST021()	26 / 26	NA - NA	3.7E+01	1.9E+01	2.1E+01	NA	NA	Y	ASL

(1) Refer to Section 4.1 for discussion of background values. Blank indicates that chemical was not detected in reference area samples at concentrations exceeding the screening level.

(2) Screening Toxicity Values are the Site specific screening values. See Appendix C.

(3) Rationale Codes

Selection Reason: Above Screening Levels (ASL)
No Toxicity Information (NTX)

Deletion Reason: Infrequent Detection (IFD)
Below Screening Level (BSL)

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
P = The difference for detected concentration is greater then 25% between the two GC columns.
B = Result value is above instrument detection limit but below contract required detection limit (CRDL).
D = Result represents diluted sample analysis.

TABLE 2.11
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifiers)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value (2)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
Lower Calcasieu		SVOCs													
	100-52-7	Benzaldehyde	1.6E-02	6.6E-01	mg/kg	LCSTC03(_J)	28 / 31	4.0E-02 - 6.1E-01	6.6E-01		7.1E+00	NA	NA	N	BSL
	117-81-7	bis(2-Ethylhexyl) phthalate	2.3E+00	2.5E+02	mg/kg	LCST001(DB)	2 / 30	4.0E-02 - 1.5E+00	2.5E+02	2.3E-01	1.2E-01	NA	NA	Y	ASL
	84-66-2	Diethyl phthalate	2.9E-02	4.7E-02	mg/kg	LCST001()	3 / 29	4.0E-02 - 6.1E-01	4.7E-02		5.7E+01	NA	NA	N	BSL
	117-84-0	Di-n-octylphthalate	2.0E-02	2.0E-02	mg/kg	LCST005(J_J)	1 / 25	4.0E-02 - 6.1E-01	2.0E-02		1.4E+00	NA	NA	N	IFD
	78-59-1	Isophorone	1.7E-02	2.8E-02	mg/kg	LCST001(J)	2 / 27	4.0E-02 - 6.1E-01	2.8E-02		1.7E+00	NA	NA	N	BSL
	108-95-2	Phenol	1.6E-02	1.6E-02	mg/kg	LCSTC03(J)	1 / 27	4.0E-02 - 6.1E-01	1.6E-02		4.3E+01	NA	NA	N	IFD
		PAHs													
	50-32-8	Benzo(a)pyrene	2.7E-02	2.4E-01	mg/kg	LCST005(_J)	2 / 25	4.0E-02 - 6.1E-01	2.4E-01		2.3E-04	NA	NA	Y	ASL
	205-99-2	Benzo(b)fluoranthene	3.2E-02	3.2E-02	mg/kg	LCST005(J_J)	1 / 25	4.0E-02 - 6.1E-01	3.2E-02		2.3E-03	NA	NA	N	IFD
	207-08-9	Benzo(k)fluoranthene	2.3E-02	2.3E-02	mg/kg	LCST005(J_J)	1 / 25	4.0E-02 - 6.1E-01	2.3E-02		2.3E-02	NA	NA	N	IFD
		Pesticides/PCBs													
	11097-69-1	Aroclor-1254	1.7E-02	3.5E-02	mg/kg	LCSTC04()	6 / 32	1.0E-02 - 6.7E-01	3.5E-02		8.3E-04	NA	NA	Y	ASL
	11096-82-5	Aroclor-1260	4.9E-02	4.9E-02	mg/kg	LCST001()	1 / 32	1.0E-02 - 6.7E-01	4.9E-02		8.3E-04	NA	NA	N	IFD
		Dioxins/Furans													
	35822-46-9	1,2,3,4,6,7,8-HpCDD	6.4E-07	2.5E-06	mg/kg	LCST001()	3 / 4	4.4E-07 - 4.4E-07	Dioxins and furans are multiplied by 2,3,7,8-TCDD toxic equivalency factors (TEFs) in order to compare a						
	67562-39-4	1,2,3,4,6,7,8-HpCDF	5.6E-07	1.3E-06	mg/kg	LCST001()	2 / 4	2.7E-07 - 6.4E-07	total TCDD equivalent concentration to the screening toxicity value. The maximum TCDD equivalent						
	39227-28-6	1,2,3,4,7,8-HxCDD	1.5E-07	1.5E-07	mg/kg	LCST005(J)	1 / 4	4.4E-07 - 8.6E-07	concentration of 2.8E-06 mg/kg exceeds the screening toxicity value of 1.1E-8 mg/kg and the reference area						
	70648-26-9	1,2,3,4,7,8-HxCDF	8.9E-07	2.1E-06	mg/kg	LCST001()	3 / 4	2.6E-07 - 2.6E-07	concentration of 1.3E-06 mg/kg.						
	57653-85-7	1,2,3,6,7,8-HxCDD	2.9E-07	2.9E-07	mg/kg	LCST005(J)	1 / 4	5.2E-07 - 9.6E-07							
	57117-44-9	1,2,3,6,7,8-HxCDF	8.1E-07	8.1E-07	mg/kg	LCST001()	1 / 4	3.1E-07 - 5.5E-07							
	19408-74-3	1,2,3,7,8,9-HxCDD	2.0E-07	2.0E-07	mg/kg	LCST005(J)	1 / 4	4.6E-07 - 8.7E-07							
	40321-76-4	1,2,3,7,8-PeCDD	2.0E-07	2.0E-07	mg/kg	LCST005(J)	1 / 4	6.0E-07 - 1.2E-06							
	57117-41-6	1,2,3,7,8-PeCDF	1.1E-06	2.9E-06	mg/kg	LCST001()	4 / 4	NA - NA							
	57117-31-4	2,3,4,7,8-PeCDF	2.1E-06	2.8E-06	mg/kg	LCST001()	4 / 4	NA - NA							
	1746-01-6	2,3,7,8-TCDD	1.3E-07	1.3E-07	mg/kg	LCST005(J)	1 / 4	2.0E-07 - 4.1E-07							
	51207-31-9	2,3,7,8-TCDF	4.0E-06	6.8E-06	mg/kg	LCST005()	4 / 4	NA - NA							
	3268-87-9	OCDD	3.7E-06	3.1E-05	mg/kg	LCST001()	4 / 4	NA - NA							
	39001-02-0	OCDF	1.4E-06	3.1E-06	mg/kg	LCST001()	3 / 4	1.4E-06 - 1.4E-06							
		Metals													
	7440-38-2	Arsenic	1.3E-01	9.7E-01	mg/kg	LCSTC03(_J)	32 / 32	NA - NA	9.7E-01	6.7E-01	1.1E-03	NA	NA	Y	ASL
	7440-43-9	Cadmium	1.0E-02	3.7E-01	mg/kg	LCST005(_J)	15 / 32	1.0E-02 - 1.0E-02	3.7E-01	5.0E-02	3.5E-02	NA	NA	Y	ASL
	7440-47-3	Chromium (total)	1.6E-01	5.3E-01	mg/kg	LCST001(_J)	21 / 32	5.0E-02 - 1.6E-01	5.3E-01	4.6E-01	2.1E-01	NA	NA	Y	ASL
	7440-50-8	Copper	6.2E+00	1.6E+02	mg/kg	LCST005(_J)	32 / 32	NA - NA	1.6E+02	1.1E+01	2.8E+00	NA	NA	Y	ASL
	7439-89-6	Iron	2.8E+00	1.4E+02	mg/kg	LCST001(_J)	32 / 32	NA - NA	1.4E+02	5.1E+01	2.1E+01	NA	NA	Y	ASL
	7439-92-1	Lead	3.0E-02	4.7E-01	mg/kg	LCST005(_J)	25 / 32	2.0E-02 - 2.3E-01	4.7E-01	1.8E+00		NA	NA	Y	NTX
	7439-97-6	Mercury	1.0E-02	1.6E-01	mg/kg	LCSTC03()	32 / 32	NA - NA	1.6E-01	5.3E-02	7.1E-03	NA	NA	Y	ASL
	22967-92-6	Methyl Mercury	6.1E-03	2.7E-02	mg/kg	LCST001()	17 / 17	NA - NA	2.7E-02	1.1E-02	7.1E-03	NA	NA	Y	ASL
	7440-02-0	Nickel	7.0E-02	4.1E-01	mg/kg	LCST005(_J)	14 / 32	1.4E-01 - 3.3E-01	4.1E-01	1.2E-01	1.4E+00	NA	NA	N	BSL
	7782-49-2	Selenium	1.7E-01	1.6E+00	mg/kg	LCSTC03(_J), LCST005(_J)	32 / 32	NA - NA	1.6E+00	6.5E-01	3.5E-01	NA	NA	Y	ASL
	7440-22-4	Silver	2.0E-02	4.6E-01	mg/kg	LCST005(_J)	26 / 32	2.0E-02 - 3.0E-02	4.6E-01	1.3E-01	3.5E-01	NA	NA	Y	ASL
	7440-66-6	Zinc	6.7E+00	2.1E+03	mg/kg	LCST005(_J)	32 / 32	NA - NA	2.1E+03	1.9E+01	2.1E+01	NA	NA	Y	ASL

TABLE 2.11
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish

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

(1) Refer to Section 4.1 for discussion of background values. Blank indicates that chemical was not detected in reference area samples at concentrations exceeding the screening level.

(2) Screening Toxicity Values are the Site specific screening values. See Appendix C.

(3) Rationale Codes

Selection Reason: Above Screening Levels (ASL)
No Toxicity Information (NTX)

Deletion Reason: Infrequent Detection (IFD)
Below Screening Level (BSL)

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
B = Result value is above instrument detection limit but below contract required detection limit (CRDL).
D = Result represents diluted sample analysis.

TABLE 2.12
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU VERDINE

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifiers)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Reference Area Value (1)	Screening Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (3)
Bayou Verdine		Dioxins/Furans													
	35822-46-9	1,2,3,4,6,7,8-HpCDD	3.8E-07	8.6E-07	mg/kg	T-CE1(_J)	6 / 6	NA - NA	Dioxins and furans are multiplied by 2,3,7,8-TCDD toxic equivalency factors (TEFs) in order to compare a total TCDD equivalent concentration to the screening toxicity value. The maximum TCDD equivalent concentration of 9.7E-7 mg/kg exceeds the screening toxicity value of 1.1E-8 mg/kg.						
	67562-39-4	1,2,3,4,6,7,8-HpCDF	2.9E-07	1.1E-06	mg/kg	T-CE-9()	3 / 3	NA - NA							
	70648-26-9	1,2,3,4,7,8-HxCDF	2.3E-07	8.3E-07	mg/kg	T-CE-13()	5 / 5	NA - NA							
	57653-85-7	1,2,3,6,7,8-HxCDD	1.3E-07	1.3E-07	mg/kg	T-CE-13()	1 / 4	1.0E-07 - 1.0E-07							
	57117-44-9	1,2,3,6,7,8-HxCDF	1.2E-07	4.5E-07	mg/kg	T-CE-9()	7 / 7	NA - NA							
	19408-74-3	1,2,3,7,8,9-HxCDD	1.0E-07	2.3E-07	mg/kg	T-CE1(_J)	2 / 5	1.0E-07 - 1.0E-07							
	40321-76-4	1,2,3,7,8-PeCDD	1.6E-07	1.8E-07	mg/kg	T-CE-13()	2 / 3	1.0E-07 - 1.0E-07							
	57117-41-6	1,2,3,7,8-PeCDF	1.7E-07	5.1E-07	mg/kg	T-CE-9()	5 / 5	NA - NA							
	60851-34-5	2,3,4,6,7,8-HxCDF	1.6E-07	2.3E-07	mg/kg	T-CE1(_J)	3 / 4	1.0E-07 - 1.0E-07							
	57117-31-4	2,3,4,7,8-PeCDF	2.3E-07	2.5E-07	mg/kg	T-CE-9()	3 / 4	1.0E-07 - 1.0E-07							
	1746-01-6	2,3,7,8-TCDD	1.4E-07	1.4E-07	mg/kg	T-CE3(_J)	1 / 3	1.0E-07 - 1.0E-07							
	51207-31-9	2,3,7,8-TCDF	4.8E-07	2.5E-06	mg/kg	T-CE-9()	7 / 7	NA - NA							
	3268-87-9	OCDD	1.7E-06	4.9E-06	mg/kg	T-CE1(_J)	7 / 7	NA - NA							

(1) A maximum 2,3,7,8-TCDD equivalent concentration of 1.3E-6 mg/kg was detected in reference area shellfish

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.

TABLE 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Bayou D'Inde

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
SVOCs								
Hexachlorobenzene	mg/kg	9.2E-01	8.5E-01	2.4E+01	8.5E-01	mg/kg	95% UCL-T	(1)
PAHs								
Acenaphthylene	mg/kg	8.4E-01	8.2E-01	9.0E-01	8.2E-01	mg/kg	95% UCL-T	(1)
Benzo(a)anthracene	mg/kg	8.5E-01	7.4E-01	4.9E+00	7.4E-01	mg/kg	95% UCL-T	(1)
Benzo(a)pyrene	mg/kg	8.5E-01	7.4E-01	2.6E+00	7.4E-01	mg/kg	95% UCL-T	(1)
Benzo(b)fluoranthene	mg/kg	8.9E-01	7.4E-01	7.4E+00	7.4E-01	mg/kg	95% UCL-T	(1)
Benzo(g,h,i)perylene	mg/kg	8.6E-01	7.5E-01	6.7E-01	6.7E-01	mg/kg	Max	(1)
Benzo(k)fluoranthene	mg/kg	8.6E-01	7.8E-01	2.6E+00	7.8E-01	mg/kg	95% UCL-T	(1)
Dibenzo(a,h)anthracene	mg/kg	8.7E-01	7.7E-01	5.0E-01	5.0E-01	mg/kg	Max	(1)
Indeno(1,2,3-cd)pyrene	mg/kg	8.6E-01	7.3E-01	1.5E+00	7.3E-01	mg/kg	95% UCL-T	(1)
Phenanthrene	mg/kg	8.9E-01	7.9E-01	5.9E+01	7.9E-01	mg/kg	95% UCL-T	(1)
Pesticides/PCBs								
Aldrin	mg/kg	9.5E-03	7.3E-03	3.7E-01	7.3E-03	mg/kg	95% UCL-T	(1)
Aroclor-1254	mg/kg	1.1E-01	1.1E-01	1.3E+00	1.1E-01	mg/kg	95% UCL-T	(1)
BHC, delta-	mg/kg	6.1E-03	5.9E-03	8.3E-02	5.9E-03	mg/kg	95% UCL-T	(1)
Dieldrin	mg/kg	7.5E-03	7.6E-03	4.5E-02	7.6E-03	mg/kg	95% UCL-T	(1)
Endosulfan sulfate	mg/kg	9.3E-03	8.9E-03	1.5E-01	8.9E-03	mg/kg	95% UCL-T	(1)
Endrin aldehyde	mg/kg	8.5E-03	8.3E-03	1.0E-01	8.3E-03	mg/kg	95% UCL-T	(1)
Endrin ketone	mg/kg	8.2E-03	8.0E-03	2.4E-02	8.0E-03	mg/kg	95% UCL-T	(1)
Dioxins/Furans								
2,3,7,8-TCDD Equivalents	mg/kg	2.2E-04	3.6E-04	2.4E-03	3.6E-04	mg/kg	95% UCL-T	(1)
Metals								
Arsenic	mg/kg	3.7E+00	3.9E+00	1.1E+01	3.9E+00	mg/kg	95% UCL-T	(1)
Barium	mg/kg	8.8E+02	8.0E+02	2.3E+04	8.0E+02	mg/kg	95% UCL-T	(1)
Chromium (total)	mg/kg	7.9E+01	8.8E+01	7.7E+02	8.8E+01	mg/kg	95% UCL-T	(1)
Lead	mg/kg	6.9E+01	7.0E+01	9.0E+02	7.0E+01	mg/kg	95% UCL-T	(1)
Mercury	mg/kg	1.9E+00	2.3E+00	9.4E+01	2.3E+00	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.

TABLE 3.2
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Above Lake Charles

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
PAHs								
Benzo(a)anthracene	mg/kg	4.1E-01	5.1E-01	2.7E-01	2.7E-01	mg/kg	Max	(1)
Benzo(a)pyrene	mg/kg	4.1E-01	5.1E-01	2.6E-01	2.6E-01	mg/kg	Max	(1)
Benzo(b)fluoranthene	mg/kg	4.2E-01	5.1E-01	3.5E-01	3.5E-01	mg/kg	Max	(1)
Benzo(g,h,i)perylene	mg/kg	4.4E-01	5.7E-01	1.2E-01	1.2E-01	mg/kg	Max	(1)
Chrysene	mg/kg	4.2E-01	5.1E-01	3.9E-01	3.9E-01	mg/kg	Max	(1)
Dibenzo(a,h)anthracene	mg/kg	4.2E-01	6.9E-01	6.4E-02	6.4E-02	mg/kg	Max	(1)
Indeno(1,2,3-cd)pyrene	mg/kg	4.2E-01	5.5E-01	1.4E-01	1.4E-01	mg/kg	Max	(1)
Phenanthrene	mg/kg	4.1E-01	5.2E-01	2.7E-01	2.7E-01	mg/kg	Max	(1)
Pesticides/PCBs								
Aroclor-1254 **								
BHC, delta-	mg/kg	2.7E-03	3.5E-03	1.4E-03	1.4E-03	mg/kg	Max	(1)
Dioxins/Furans								
2,3,7,8-TCDD Equivalents	mg/kg	1.8E-05	(2)	3.3E-05	3.3E-05	mg/kg	Max	(1)
Metals								
Arsenic	mg/kg	2.6E+00	4.0E+00	6.6E+00	4.0E+00	mg/kg	95% UCL-T	(1)
Chromium (total)	mg/kg	1.4E+01	1.7E+01	7.6E+01	1.7E+01	mg/kg	95% UCL-T	(1)
Lead	mg/kg	2.1E+01	2.7E+01	1.1E+02	2.7E+01	mg/kg	95% UCL-T	(1)
Mercury	mg/kg	7.6E-02	9.8E-02	1.9E-01	9.8E-02	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.
(2) UCL was not calculated because less than 10 sample results were available for this chemical.
** Chemical of potential concern in AOC (Upper Calcasieu), but not detected in this Exposure Area (Above Lake Charles).

TABLE 3.3
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Lake Charles

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
PAHs								
Benzo(a)anthracene	mg/kg	3.6E-01	5.2E-01	4.2E-01	4.2E-01	mg/kg	Max	(1)
Benzo(a)pyrene	mg/kg	3.5E-01	5.0E-01	3.3E-01	3.3E-01	mg/kg	Max	(1)
Benzo(b)fluoranthene	mg/kg	3.5E-01	5.0E-01	3.6E-01	3.6E-01	mg/kg	Max	(1)
Benzo(g,h,i)perylene	mg/kg	3.5E-01	5.5E-01	1.5E-01	1.5E-01	mg/kg	Max	(1)
Chrysene	mg/kg	3.8E-01	5.4E-01	5.3E-01	5.3E-01	mg/kg	Max	(1)
Dibenzo(a,h)anthracene **								
Indeno(1,2,3-cd)pyrene	mg/kg	3.3E-01	5.2E-01	1.8E-01	1.8E-01	mg/kg	Max	(1)
Phenanthrene	mg/kg	3.6E-01	6.1E-01	5.9E-01	5.9E-01	mg/kg	Max	(1)
Pesticides/PCBs								
Aroclor-1254 **								
BHC, delta- **								
Dioxins/Furans								
2,3,7,8-TCDD Equivalents	mg/kg	1.0E-05	(2)	2.3E-05	2.3E-05	mg/kg	Max	(1)
Metals								
Arsenic	mg/kg	3.7E+00	5.9E+00	7.0E+00	5.9E+00	mg/kg	95% UCL-T	(1)
Chromium (total)	mg/kg	1.6E+01	2.7E+01	2.9E+01	2.7E+01	mg/kg	95% UCL-T	(1)
Lead	mg/kg	3.1E+01	4.5E+01	1.0E+02	4.5E+01	mg/kg	95% UCL-T	(1)
Mercury	mg/kg	6.1E-02	7.2E-02	1.1E-01	7.2E-02	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.
(2) UCL was not calculated because less than 10 sample results were available for this chemical.
** Chemical of potential concern in AOC (Upper Calcasieu), but not detected in this Exposure Area (Lake Charles).

TABLE 3.4
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Clooney Island Loop

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
PAHs								
Benzo(a)anthracene	mg/kg	2.6E-01	4.4E-01	6.4E-01	4.4E-01	mg/kg	95% UCL-T	(1)
Benzo(a)pyrene	mg/kg	2.5E-01	4.1E-01	4.8E-01	4.1E-01	mg/kg	95% UCL-T	(1)
Benzo(b)fluoranthene	mg/kg	2.8E-01	4.7E-01	6.9E-01	4.7E-01	mg/kg	95% UCL-T	(1)
Benzo(g,h,i)perylene	mg/kg	2.4E-01	4.4E-01	3.4E-01	3.4E-01	mg/kg	Max	(1)
Chrysene	mg/kg	3.1E-01	5.0E-01	1.3E+00	5.0E-01	mg/kg	95% UCL-T	(1)
Dibenzo(a,h)anthracene	mg/kg	2.7E-01	5.6E-01	1.5E-01	1.5E-01	mg/kg	Max	(1)
Indeno(1,2,3-cd)pyrene	mg/kg	2.4E-01	4.5E-01	3.2E-01	3.2E-01	mg/kg	Max	(1)
Phenanthrene	mg/kg	3.0E-01	4.9E-01	2.5E+00	4.9E-01	mg/kg	95% UCL-T	(1)
Pesticides/PCBs								
Aroclor-1254	mg/kg	9.3E-02	1.3E-01	9.3E-01	1.3E-01	mg/kg	95% UCL-T	(1)
BHC, delta- **								
Dioxins/Furans								
2,3,7,8-TCDD Equivalents	mg/kg	2.4E-05	(2)	6.2E-05	6.2E-05	mg/kg	Max	(1)
Metals								
Arsenic	mg/kg	3.2E+00	4.3E+00	1.3E+01	4.3E+00	mg/kg	95% UCL-T	(1)
Chromium (total)	mg/kg	3.6E+01	4.2E+01	4.5E+02	4.2E+01	mg/kg	95% UCL-T	(1)
Lead	mg/kg	1.9E+01	2.3E+01	6.8E+01	2.3E+01	mg/kg	95% UCL-T	(1)
Mercury	mg/kg	2.1E-01	2.6E-01	2.4E+00	2.6E-01	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.
(2) UCL was not calculated because less than 10 sample results were available for this chemical.
** Chemical of potential concern in AOC (Upper Calcasieu), but not detected in this Exposure Area (Clooney Island Loop).

TABLE 3.5
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Below Clooney Island Loop

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
PAHs								
Benzo(a)anthracene	mg/kg	2.3E+00	4.8E-01	1.1E+02	4.8E-01	mg/kg	95% UCL-T	(1)
Benzo(a)pyrene	mg/kg	1.8E+00	4.5E-01	8.4E+01	4.5E-01	mg/kg	95% UCL-T	(1)
Benzo(b)fluoranthene	mg/kg	1.7E+00	5.3E-01	8.2E+01	5.3E-01	mg/kg	95% UCL-T	(1)
Benzo(g,h,i)perylene	mg/kg	6.2E-01	3.7E-01	2.1E+01	3.7E-01	mg/kg	95% UCL-T	(1)
Chrysene	mg/kg	5.7E+00	1.1E+00	2.8E+02	1.1E+00	mg/kg	95% UCL-T	(1)
Dibenzo(a,h)anthracene	mg/kg	5.7E-01	2.4E-01	2.3E+01	2.4E-01	mg/kg	95% UCL-T	(1)
Indeno(1,2,3-cd)pyrene	mg/kg	5.0E-01	2.5E-01	1.8E+01	2.5E-01	mg/kg	95% UCL-T	(1)
Phenanthrene	mg/kg	3.7E-01	2.4E-01	1.3E+01	2.4E-01	mg/kg	95% UCL-T	(1)
Pesticides/PCBs								
Aroclor-1254	mg/kg	2.0E-02	2.9E-02	2.5E-01	2.9E-02	mg/kg	95% UCL-T	(1)
BHC, delta-	mg/kg	3.3E-03	1.7E-02	8.8E-03	8.8E-03	mg/kg	Max	(1)
Dioxins/Furans								
2,3,7,8-TCDD Equivalents	mg/kg	1.0E-05	2.1E-05	3.2E-05	2.1E-05	mg/kg	95% UCL-T	(1)
Metals								
Arsenic	mg/kg	2.4E+00	3.1E+00	6.1E+00	3.1E+00	mg/kg	95% UCL-T	(1)
Chromium (total)	mg/kg	1.2E+01	1.5E+01	9.6E+01	1.5E+01	mg/kg	95% UCL-T	(1)
Lead	mg/kg	2.9E+01	3.6E+01	3.0E+02	3.6E+01	mg/kg	95% UCL-T	(1)
Mercury	mg/kg	6.9E-02	1.0E-01	2.7E-01	1.0E-01	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.

TABLE 3.6
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Lake Prien

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
SVOCs								
bis(2-Ethylhexyl) phthalate	mg/kg	2.4E+00	5.8E-01	1.2E+02	5.8E-01	mg/kg	95% UCL-T	(1)
Methylphenol, 3- & 4- **								
PAHs								
Benzo(a)anthracene	mg/kg	2.7E-01	4.2E-01	5.0E-01	4.2E-01	mg/kg	95% UCL-T	(1)
Benzo(a)pyrene	mg/kg	2.8E-01	4.3E-01	6.1E-01	4.3E-01	mg/kg	95% UCL-T	(1)
Benzo(b)fluoranthene	mg/kg	2.7E-01	4.3E-01	6.2E-01	4.3E-01	mg/kg	95% UCL-T	(1)
Benzo(g,h,i)perylene	mg/kg	2.8E-01	4.7E-01	5.1E-01	4.7E-01	mg/kg	95% UCL-T	(1)
Dibenzo(a,h)anthracene	mg/kg	2.7E-01	4.5E-01	1.3E-01	1.3E-01	mg/kg	Max	(1)
Indeno(1,2,3-cd)pyrene	mg/kg	2.8E-01	4.4E-01	4.1E-01	4.1E-01	mg/kg	Max	(1)
Phenanthrene	mg/kg	2.7E-01	4.6E-01	2.3E-01	2.3E-01	mg/kg	Max	(1)
Pesticides/PCBs								
Aroclor-1254	mg/kg	3.9E-02	5.1E-02	1.3E-01	5.1E-02	mg/kg	95% UCL-T	(1)
Dioxins/Furans								
2,3,7,8-TCDD Equivalents	mg/kg	1.3E-05	(2)	3.1E-05	3.1E-05	mg/kg	Max	(1)
Metals								
Arsenic	mg/kg	4.0E+00	5.6E+00	7.5E+00	5.6E+00	mg/kg	95% UCL-T	(1)
Lead	mg/kg	2.4E+01	3.3E+01	5.0E+01	3.3E+01	mg/kg	95% UCL-T	(1)
Mercury	mg/kg	9.5E-02	1.2E-01	4.5E-01	1.2E-01	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.
(2) UCL was not calculated because less than 10 sample results were available for this chemical.
** Chemical of potential concern in AOC (Lower Calcasieu) , but not detected in this exposure area (Lake Prien).

TABLE 3.7
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Remainder of Lower Calcasieu

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
SVOCs								
bis(2-Ethylhexyl) phthalate	mg/kg	7.6E-01	7.2E-01	3.0E+01	7.2E-01	mg/kg	95% UCL-T	(1)
Methylphenol, 3- & 4-	mg/kg	9.6E-01	2.2E+00	1.4E-01	1.4E-01	mg/kg	Max	(1)
PAHs								
Benzo(a)anthracene	mg/kg	9.1E-01	8.3E-01	4.2E+01	8.3E-01	mg/kg	95% UCL-T	(1)
Benzo(a)pyrene	mg/kg	8.2E-01	8.1E-01	2.4E+01	8.1E-01	mg/kg	95% UCL-T	(1)
Benzo(b)fluoranthene	mg/kg	7.7E-01	8.1E-01	2.1E+01	8.1E-01	mg/kg	95% UCL-T	(1)
Benzo(g,h,i)perylene	mg/kg	7.1E-01	7.3E-01	1.7E+01	7.3E-01	mg/kg	95% UCL-T	(1)
Dibenzo(a,h)anthracene	mg/kg	6.5E-01	7.0E-01	1.0E+01	7.0E-01	mg/kg	95% UCL-T	(1)
Indeno(1,2,3-cd)pyrene	mg/kg	6.1E-01	6.8E-01	2.8E+00	6.8E-01	mg/kg	95% UCL-T	(1)
Phenanthrene	mg/kg	1.5E+00	8.8E-01	1.4E+02	8.8E-01	mg/kg	95% UCL-T	(1)
Pesticides/PCBs								
Aroclor-1254	mg/kg	5.8E-02	6.2E-02	8.6E-01	6.2E-02	mg/kg	95% UCL-T	(1)
Dioxins/Furans								
2,3,7,8-TCDD Equivalents	mg/kg	8.9E-06	1.4E-05	3.9E-05	1.4E-05	mg/kg	95% UCL-T	(1)
Metals								
Arsenic	mg/kg	4.0E+00	4.7E+00	3.0E+01	4.7E+00	mg/kg	95% UCL-T	(1)
Lead	mg/kg	3.9E+01	3.6E+01	7.9E+02	3.6E+01	mg/kg	95% UCL-T	(1)
Mercury	mg/kg	1.7E-01	1.8E-01	2.5E+00	1.8E-01	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.

TABLE 3.8
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Bayou D'Inde

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
Pesticides/PCBs								
BHC, delta-	mg/L	2.2E-05	3.2E-05	1.8E-05	1.8E-05	mg/L	Max	(1)
Metals								
Arsenic	mg/L	1.5E-03	1.9E-03	6.6E-03	1.9E-03	mg/L	95% UCL-T	(1)
Lead	mg/L	1.8E-03	3.8E-03	4.3E-03	3.8E-03	mg/L	95% UCL-T	(1)
Mercury	mg/L	1.0E-04	1.4E-04	3.3E-04	1.4E-04	mg/L	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.

TABLE 3.9
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Above Lake Charles

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
Metals								
Arsenic **								
Lead **								

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
** Chemical of potential concern in AOC (Upper Calcasieu), but not detected in this Exposure Area (Above Lake Charles).

TABLE 3.10
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Lake Charles

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
Metals								
Arsenic	mg/L	3.3E-02	(2)	6.4E-02	6.4E-02	mg/L	Max	(1)
Lead	mg/L	1.3E-02	(2)	2.6E-02	2.6E-02	mg/L	Max	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.
(2) UCL was not calculated because less than 10 sample results were available for this chemical.

TABLE 3.11
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Clooney Island Loop

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
Metals								
Arsenic	mg/L	4.1E-03	(2)	4.1E-03	4.1E-03	mg/L	Max	(1)
Lead	mg/L	7.0E-04	(2)	7.0E-04	7.0E-04	mg/L	Max	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.
(2) UCL was not calculated because less than 10 sample results were available for this chemical.

TABLE 3.12
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Below Clooney Island Loop

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
Metals								
Arsenic	mg/L	7.5E-03	(2)	1.5E-02	1.5E-02	mg/L	Max	(1)
Lead	mg/L	8.0E-04	(2)	1.2E-03	1.2E-03	mg/L	Max	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).

(1) Concentrations were assumed to be log-normally distributed. See text.

(2) UCL was not calculated because less than 10 sample results were available for this chemical.

TABLE 3.13
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	LC - Lake Prien

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
Metals								
Arsenic	mg/L	3.1E-03	(2)	6.3E-03	6.3E-03	mg/L	Max	(1)
Lead	mg/L	5.3E-04	(2)	1.1E-03	1.1E-03	mg/L	Max	(1)
Mercury **								

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).

(1) Concentrations were assumed to be log-normally distributed. See text.

(2) UCL was not calculated because less than 10 sample results were available for this chemical.

** Chemical of potential concern in AOC (Lower Calcasieu) , but not detected in this exposure area (Lake Prien).

TABLE 3.14
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	LC - Remainder of Lower Calcasieu

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
Metals								
Arsenic	mg/L	2.2E-03	3.3E-03	7.4E-03	3.3E-03	mg/L	95% UCL-T	(1)
Lead	mg/L	1.3E-03	2.1E-03	4.8E-03	2.1E-03	mg/L	95% UCL-T	(1)
Mercury	mg/L	7.1E-05	8.5E-05	6.1E-05	6.1E-05	mg/L	Max	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.

TABLE 3.15
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
ENTIRE ESTUARY (EXCEPT BAYOU VERDINE)

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Entire Estuary (except Bayou Verdine)

	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
	Pesticides/PCBs								
	4,4'-DDE	mg/kg	5.4E-03	5.7E-03	2.5E-02	5.7E-03	mg/kg	95% UCL-T	(1)
	Aldrin	mg/kg	5.9E-03	6.0E-03	4.9E-02	6.0E-03	mg/kg	95% UCL-T	(1)
	Aroclor-1254	mg/kg	2.7E-02	2.3E-02	6.7E-01	2.3E-02	mg/kg	95% UCL-T	(1)
	BHC, alpha-	mg/kg	4.7E-03	5.1E-03	8.3E-03	5.1E-03	mg/kg	95% UCL-T	(1)
	BHC, beta-	mg/kg	6.9E-03	7.0E-03	6.9E-02	7.0E-03	mg/kg	95% UCL-T	(1)
	BHC, gamma- (Lindane)	mg/kg	4.6E-03	5.1E-03	3.7E-03	3.7E-03	mg/kg	Max	(1)
	Chlordane, alpha-	mg/kg	5.2E-03	5.8E-03	2.1E-02	5.8E-03	mg/kg	95% UCL-T	(1)
	Chlordane, gamma-	mg/kg	4.8E-03	5.0E-03	7.2E-03	5.0E-03	mg/kg	95% UCL-T	(1)
	Dieldrin	mg/kg	5.2E-03	5.6E-03	1.5E-02	5.6E-03	mg/kg	95% UCL-T	(1)
	Endrin aldehyde	mg/kg	4.6E-03	5.1E-03	2.9E-03	2.9E-03	mg/kg	Max	(1)
	Heptachlor	mg/kg	4.9E-03	5.2E-03	9.9E-03	5.2E-03	mg/kg	95% UCL-T	(1)
	Dioxins/Furans								
	2,3,7,8-TCDD Equivalents	mg/kg	6.1E-07	7.5E-07	1.0E-06	7.5E-07	mg/kg	95% UCL-T	(1)
	Metals								
	Antimony	mg/kg	7.4E-02	7.6E-02	5.0E-02	5.0E-02	mg/kg	Max	(1)
*	Arsenic	mg/kg	8.4E-02	1.0E-01	2.5E-01	1.0E-01	mg/kg	95% UCL-T	(1)
	Barium	mg/kg	7.5E-01	3.6E+00	6.6E+00	3.6E+00	mg/kg	95% UCL-T	(1)
	Chromium (total)	mg/kg	1.5E-01	1.8E-01	5.1E-01	1.8E-01	mg/kg	95% UCL-T	(1)
	Lead	mg/kg	1.1E-01	1.8E-01	4.1E-01	1.8E-01	mg/kg	95% UCL-T	(1)
	Manganese	mg/kg	9.4E-01	3.6E+00	5.7E+00	3.6E+00	mg/kg	95% UCL-T	(1)
	Mercury	mg/kg	1.3E-01	1.7E-01	5.6E-01	1.7E-01	mg/kg	95% UCL-T	(1)
	Nickel	mg/kg	3.6E-01	6.1E-01	4.8E-01	4.8E-01	mg/kg	Max	(1)
	Selenium	mg/kg	8.0E-01	9.9E-01	1.5E+00	9.9E-01	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).

(1) Concentrations were assumed to be log-normally distributed. See text.

* Values shown are for inorganic arsenic. It was assumed that 30 % of the total arsenic is in the inorganic form. See text.

TABLE 3.16
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU VERDINE

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Bayou Verdine

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
Dioxins/Furans 2,3,7,8-TCDD Equivalents	mg/kg	2.3E-06	(1)	6.7E-06	6.7E-06	mg/kg	Max	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) UCL was not calculated because less than 10 sample results were available.

TABLE 3.17
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Bayou d'Inde

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
SVOCs								
4-Nitrophenol	mg/kg	4.7E-01	1.1E+00	4.0E-02	4.0E-02	mg/kg	Max	(1)
bis(2-Ethylhexyl) phthalate	mg/kg	6.5E+00	1.1E+01	1.3E+02	1.1E+01	mg/kg	95% UCL-T	(1)
Di-n-butylphthalate	mg/kg	1.0E+00	3.5E+00	1.2E+01	3.5E+00	mg/kg	95% UCL-T	(1)
Di-n-octylphthalate	mg/kg	2.8E-01	1.8E+00	1.2E-01	1.2E-01	mg/kg	Max	(1)
Hexachlorobenzene	mg/kg	9.8E-02	1.4E-01	2.8E-02	2.8E-02	mg/kg	Max	(1)
Pesticides/PCBs								
4,4'-DDD	mg/kg	1.4E-02	2.2E-02	2.9E-02	2.2E-02	mg/kg	95% UCL-T	(1)
4,4'-DDT	mg/kg	1.6E-02	2.8E-02	4.3E-02	2.8E-02	mg/kg	95% UCL-T	(1)
Aldrin	mg/kg	1.2E-02	1.7E-02	1.0E-02	1.0E-02	mg/kg	Max	(1)
Aroclor-1254	mg/kg	7.6E-02	1.4E-01	3.3E-01	1.4E-01	mg/kg	95% UCL-T	(1)
BHC, beta-	mg/kg	2.0E-02	4.0E-02	5.6E-02	4.0E-02	mg/kg	95% UCL-T	(1)
Endosulfan sulfate	mg/kg	1.2E-02	1.6E-02	1.1E-02	1.1E-02	mg/kg	Max	(1)
Endrin	mg/kg	1.3E-02	2.0E-02	2.5E-02	2.0E-02	mg/kg	95% UCL-T	(1)
Dioxins/Furans								
2,3,7,8-TCDD Equivalents	mg/kg	1.4E-05	(2)	2.5E-05	2.5E-05	mg/kg	Max	(1)
Metals								
* Arsenic	mg/kg	1.0E-01	1.2E-01	1.4E-01	1.2E-01	mg/kg	95% UCL-T	(1)
Barium	mg/kg	9.8E+01	(2)	9.8E+01	9.8E+01	mg/kg	Max	(1)
Cadmium	mg/kg	2.5E-02	3.8E-02	5.0E-02	3.8E-02	mg/kg	95% UCL-T	(1)
Chromium (total)	mg/kg	5.9E-01	1.7E+00	1.4E+00	1.4E+00	mg/kg	Max	(1)
Copper	mg/kg	1.5E+01	1.6E+01	2.4E+01	1.6E+01	mg/kg	95% UCL-T	(1)
Iron	mg/kg	4.7E+01	2.6E+02	1.5E+02	1.5E+02	mg/kg	Max	(1)
Lead	mg/kg	1.5E-01	3.5E-01	6.7E-01	3.5E-01	mg/kg	95% UCL-T	(1)
Manganese	mg/kg	1.8E+02	(2)	1.8E+02	1.8E+02	mg/kg	Max	(1)
Mercury	mg/kg	8.3E-02	1.2E-01	3.0E-01	1.2E-01	mg/kg	95% UCL-T	(1)
Methyl Mercury	mg/kg	3.2E-02	3.5E-02	3.8E-02	3.5E-02	mg/kg	95% UCL-T	(1)
Nickel	mg/kg	3.2E-01	4.6E-01	4.7E-01	4.6E-01	mg/kg	95% UCL-T	(1)
Selenium	mg/kg	5.4E-01	6.0E-01	8.9E-01	6.0E-01	mg/kg	95% UCL-T	(1)
Silver	mg/kg	6.6E-02	7.6E-02	7.0E-02	7.0E-02	mg/kg	Max	(1)
Zinc	mg/kg	1.9E+01	2.4E+01	3.6E+01	2.4E+01	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).

(1) Concentrations were assumed to be log-normally distributed. See text.

(2) UCL was not calculated because less than 10 sample results were available for this chemical.

* Values shown are for inorganic arsenic. It was assumed that 30% of the total arsenic is in inorganic form. See text.

TABLE 3.18
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Upper Calcasieu

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
Pesticides/PCBs								
4,4'-DDT	mg/kg	3.3E-02	6.9E-02	1.5E-02	1.5E-02	mg/kg	Max	(1)
Aroclor-1254	mg/kg	2.2E-01	1.1E+00	1.1E-01	1.1E-01	mg/kg	Max	(1)
BHC, beta-	mg/kg	3.3E-02	6.9E-02	1.6E-02	1.6E-02	mg/kg	Max	(1)
Dioxins/Furans								
2,3,7,8-TCDD Equivalents	mg/kg	2.9E-06	(2)	5.5E-06	5.5E-06	mg/kg	Max	(1)
Metals								
* Arsenic	mg/kg	1.3E-01	1.4E-01	1.7E-01	1.4E-01	mg/kg	95% UCL-T	(1)
Cadmium	mg/kg	1.8E-02	2.7E-02	1.2E-01	2.7E-02	mg/kg	95% UCL-T	(1)
Chromium (total)	mg/kg	1.5E-01	2.0E-01	9.5E-01	2.0E-01	mg/kg	95% UCL-T	(1)
Copper	mg/kg	1.2E+01	1.3E+01	1.6E+01	1.3E+01	mg/kg	95% UCL-T	(1)
Iron	mg/kg	2.8E+01	4.5E+01	7.6E+01	4.5E+01	mg/kg	95% UCL-T	(1)
Lead	mg/kg	2.4E-01	5.1E-01	1.7E+00	5.1E-01	mg/kg	95% UCL-T	(1)
Mercury	mg/kg	4.5E-02	6.7E-02	2.0E-01	6.7E-02	mg/kg	95% UCL-T	(1)
Methyl Mercury	mg/kg	2.0E-02	(2)	3.4E-02	3.4E-02	mg/kg	Max	(1)
Selenium	mg/kg	7.2E-01	8.0E-01	1.2E+00	8.0E-01	mg/kg	95% UCL-T	(1)
Zinc	mg/kg	1.8E+01	2.1E+01	3.7E+01	2.1E+01	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).

(1) Concentrations were assumed to be log-normally distributed. See text.

(2) UCL was not calculated because less than 10 sample results were available for this chemical.

* Values shown are for inorganic arsenic. It was assumed that 30% of the total arsenic is in inorganic form. See text.

TABLE 3.19
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Lower Calcasieu

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
SVOCs								
bis(2-Ethylhexyl) phthalate	mg/kg	8.5E+00	1.7E+00	2.5E+02	1.7E+00	mg/kg	95% UCL-T	(1)
PAHs								
Benzo(a)pyrene	mg/kg	6.6E-02	9.8E-02	2.4E-01	9.8E-02	mg/kg	95% UCL-T	(1)
Pesticides/PCBs								
Aroclor-1254	mg/kg	4.8E-02	7.7E-02	3.5E-02	3.5E-02	mg/kg	Max	(1)
Dioxins/Furans								
2,3,7,8-TCDD Equivalents	mg/kg	2.7E-06	(2)	2.8E-06	2.8E-06	mg/kg	Max	(1)
Metals								
* Arsenic	mg/kg	1.3E-01	1.6E-01	2.9E-01	1.6E-01	mg/kg	95% UCL-T	(1)
Cadmium	mg/kg	4.7E-02	8.7E-02	3.7E-01	8.7E-02	mg/kg	95% UCL-T	(1)
Chromium (total)	mg/kg	2.4E-01	3.9E-01	5.3E-01	3.9E-01	mg/kg	95% UCL-T	(1)
Copper	mg/kg	2.6E+01	3.2E+01	1.6E+02	3.2E+01	mg/kg	95% UCL-T	(1)
Iron	mg/kg	3.8E+01	5.9E+01	1.4E+02	5.9E+01	mg/kg	95% UCL-T	(1)
Lead	mg/kg	1.6E-01	2.5E-01	4.7E-01	2.5E-01	mg/kg	95% UCL-T	(1)
Mercury	mg/kg	3.9E-02	4.8E-02	1.6E-01	4.8E-02	mg/kg	95% UCL-T	(1)
Methyl Mercury	mg/kg	1.9E-02	2.5E-02	2.7E-02	2.5E-02	mg/kg	95% UCL-T	(1)
Selenium	mg/kg	6.9E-01	8.5E-01	1.6E+00	8.5E-01	mg/kg	95% UCL-T	(1)
Silver	mg/kg	7.3E-02	1.0E-01	4.6E-01	1.0E-01	mg/kg	95% UCL-T	(1)
Zinc	mg/kg	1.5E+02	1.9E+02	2.1E+03	1.9E+02	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.
(2) UCL was not calculated because less than 10 sample results were available for this chemical.
* Values shown are for inorganic arsenic. It was assumed that 30% of the total arsenic is in inorganic form. See text.

TABLE 3.20
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU VERDINE

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Bayou Verdine

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
Dioxins/Furans								
2,3,7,8-TCDD Equivalents	mg/kg	5.3E-07	(1)	9.7E-07	9.7E-07	mg/kg	Max	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) UCL was not calculated because less than 10 sample results were available.

TABLE 4.1
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	See below (3)
Receptor Population:	Commercial Fisher
Receptor Age:	Adults (>18 yrs)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Sediment	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/mg	1E-06	--	1E-06	--	CS x CF x IR x EF x ED x 1/BW x 1/AT
	IR	Ingestion Rate	mg/day	100	EPA 2001a	50	EPA 2001a	
	EF	Exposure Frequency	event/yr	196	prof. estimate (1)	98	prof. estimate (1)	
	ED - A	Exposure Duration - Adult	yrs	25	EPA 1991	7	EPA 1997	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT-N	Averaging Time - Noncancer	days	9,125	EPA 1989	2,555	EPA 1989	
Dermal	CS	Chemical Concentration in Sediment	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/mg	1E-06	--	1E-06	--	CS x CF x SA x AF x ABS x EF x ED x 1/BW
	AF	Adherence Factor	mg/cm^2	0.2	EPA 2001d	0.2	EPA 2001d	x 1/AT
	ABS	Absorption Factor	%	Chem-specific		Chem-specific		
	EF	Exposure Frequency	events/yr	196	prof. estimate (1)	98	prof. estimate (1)	
	SA	Surface Area of Exposed Skin	cm^2	7,000	EPA 1997 (2)	5,300	EPA 1997 (2)	
	ED	Exposure Duration	yrs	25	EPA 1991	7	EPA 1997	
	BW	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT-N	Averaging Time - Noncancer	days	9,125	EPA 1989	2,555	EPA 1989	

Notes:
1. 7 days per week X 7 months per year X 4 weeks per month, for RME. One-half that for CT.
2. Based on surface area of lower legs, feet, 1/2 arms, hands (90th percentile for RME and 50th percentile for CT).
3. Exposure Points for which these assumptions apply:
   Upper Calcasieu - Below Clooney Island Loop
   Lower Calcasieu - Prien Lake
   Lower Calcasieu - Remainder (i.e., not Prien Lake)

cm = centimeter
kg = kilogram
mg = milligram
yr = year
chem-specific = chemical-specific

TABLE 4.2
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	See below (3)
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (> 7 yrs)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Sediment	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/mg	1E-06	--	1E-06	--	CS x CF x IR x EF x
	IR	Ingestion Rate	mg/day	100	EPA 2001a	50	EPA 2001a	((ED-A/BW-A) + (ED-Y/BW-Y)) x 1/AT
	EF	Exposure Frequency	event/yr	48	EPA 2001a	24	EPA 2001a	
	ED - A	Exposure Duration - Adult	yrs	24	EPA 1997	7	EPA 1997	
	ED - Y	Exposure Duration - Youth	yrs	6	EPA 1997	2	EPA 1997	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	BW - Y	Body Weight - Youth	kg	50	EPA 1997	50	EPA 1997	
	AT-C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT-N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	
Dermal	CS	Chemical Concentration in Sediment	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/mg	1E-06	--	1E-06	--	CS x CF x AF x ABS x EF x
	AF	Adherence Factor	mg/cm^2	0.2	EPA 2001d	0.2	EPA 2001d	((SA-A x ED-A/BW-A) + (SA-Y x ED-Y/BW-Y))
	ABS	Absorption Factor	%	Chem-specific		Chem-specific		x 1/AT
	EF	Exposure Frequency	event/yr	48	EPA 2001a	24	EPA 2001a	
	SA - A	Surface Area of Exposed Skin - Adult	cm^2	4,030	EPA 1997 (1)	1,120	EPA 1997 (2)	
	SA - Y	Surface Area of Exposed Skin - Youth	cm^2	3,023	EPA 1997 (1)	840	EPA 1997 (2)	
	ED - A	Exposure Duration - Adult	yrs	24	EPA 1997	7	EPA 1997	
	ED - Y	Exposure Duration - Youth	years	6	EPA 1997	2	EPA 1997	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	BW - Y	Body Weight - Youth	kg	50	EPA 1997	50	EPA 1997	
	AT-C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT-N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	

Notes:
1. Based on mean surface area of feet, hands, and lower legs.
2. Based on mean surface area of feet.
3. Exposure Points for which these assumptions apply:
   - Bayou d'Inde
   - Upper Calcasieu - Above Lake Charles
   - Upper Calcasieu - Lake Charles
   - Upper Calcasieu - Clooney Island Loop
   - Upper Calcasieu - Below Clooney Island Loop
   - Lower Calcasieu - Prien Lake
   - Lower Calcasieu - Remainder (i.e., not Prien Lake)

cm = centimeter
kg = kilogram
chem-specific = chemical-specific
mg = milligram
yr = year

TABLE 4.3
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	See below (3)
Receptor Population:	Recreational User - Swimming
Receptor Age:	Individual (> 7 yrs)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CS	Chemical Concentration in Sediment	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/mg	1E-06	--	1E-06	--	CS x CF x IR x EF x
	IR	Ingestion Rate	mg/day	100	EPA 2001a	50	EPA 2001a	((ED-A/BW-A) + (ED-Y/BW-Y)) x 1/AT
	EF	Exposure Frequency	days/yr	60	EPA 1997	12	EPA 1997	
	ED - A	Exposure Duration - Adult	yrs	24	EPA 1997	7	EPA 1997	
	ED - Y	Exposure Duration - Youth	yrs	6	EPA 1997	2	EPA 1997	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	BW - Y	Body Weight - Youth	kg	50	EPA 1997	50	EPA 1997	
	AT-C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT-N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	
Dermal	CS	Chemical Concentration in Sediment	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/mg	1E-06	--	1E-06	--	CS x CF x AF x ABS x EF x
	AF	Adherence Factor	mg/cm^2	0.2	EPA 2001d	0.2	EPA 2001d	((SA-A x ED-A/BW-A) + (SA-Y x ED-Y/BW-Y))
	ABS	Absorption Factor	%	Chem-specific		Chem-specific		x 1/AT
	EF	Exposure Frequency	events/yr	60	EPA 1997	12	EPA 1997	
	SA - A	Surface Area of Exposed Skin - Adult	cm^2	4,030	EPA 1997 (1)	1,120	EPA 1997 (2)	
	SA - Y	Surface Area of Exposed Skin - Youth	cm^2	3,023	EPA 1997 (1)	840	EPA 1997 (2)	
	ED - A	Exposure Duration - Adult	yrs	24	EPA 1997	7	EPA 1997	
	ED - Y	Exposure Duration - Youth	yrs	6	EPA 1997	2	EPA 1997	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	BW - Y	Body Weight - Youth	kg	50	EPA 1997	50	EPA 1997	
	AT-C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT-N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	

Notes:
1. Based on mean surface area of feet, hands, and lower legs.
2. Based on mean surface area of feet.
3. Exposure Points for which these assumptions apply:
   Upper Calcasieu - Above Lake Charles
   Upper Calcasieu - Lake Charles

cm = centimeter
kg = kilogram
chem-specific = chemical-specific
mg = milligram
yr = year

TABLE 4.4
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	See below (3)
Receptor Population:	Commercial Fisher
Receptor Age:	Adults (>18 yrs)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Dermal	CW	Chemical Concentration in Surface Water	mg/L	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	L/cm^3	1E-03	--	1E-03	--	CW x CF x SA x PC x ET x EF x ED x
	PC	Permeability Coefficient	cm/hr	Chem-specific		Chem-specific		1/BW x 1/AT
	ET	Exposure Time	hr/event	3	prof. estimate	1	prof. estimate	
	EF	Exposure Frequency	event/yr	196	prof. estimate (1)	98	prof. estimate (1)	
	SA	Surface Area of Exposed Skin	cm^2	11,500	EPA 1997 (2)	10,000	EPA 1997 (2)	
	ED	Exposure Duration	yrs	25	EPA 1991	7	EPA 1997	
	BW	Body Weight	kg	70	EPA 1991	70	EPA 1991	
	AT-C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT-N	Averaging Time - Noncancer	days	9,125	EPA 1989	2,555	EPA 1989	

Notes:
1. 7 days per week X 7 months per year X 4 weeks per month, for RME. One-half that for CT.
2. Based on one-half total body surface area for adults.
3. Exposure Points for which these assumptions apply:
   Upper Calcasieu - Below Clooney Island Loop
   Lower Calcasieu - Prien Lake
   Lower Calcasieu - Remainder (i.e., not Prien Lake)

cm = centimeter
hr = hour
kg = kilogram
chem-specific = chemical-specific
L = Liter
mg = milligram
yr = year

TABLE 4.5
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	See below (2)
Receptor Population:	Recreational Fisher
Receptor Age:	Individuals (> 7 yrs)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CW	Chemical Concentration in Surface Water	mg/L	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	L/mL	1E-03		1E-03		CW x CF x IR x ET x EF x
	IR	Ingestion Rate	mL/hr	50	EPA 1989	50	EPA 1989	((ED-A/BW-A) + (ED-Y/BW-Y)) x 1/AT
	ET	Exposure Time	hr/event	2	prof. estimate	1	prof. estimate	
	EF	Exposure Frequency	event/yr	48	EPA 2001a	24	EPA 2001a	
	ED - A	Exposure Duration - Adult	yrs	24	EPA 1997	7	EPA 1997	
	ED - Y	Exposure Duration - Youth	yrs	6	EPA 1997	2	EPA 1997	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	BW - Y	Body Weight - Youth	kg	50	EPA 1997	50	EPA 1997	
	AT-C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT-N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	
Dermal	CW	Chemical Concentration in Surface Water	mg/L	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	L/cm^3	1E-03	--	1E-03	--	CW x CF x PC x ET x EF x
	PC	Permeability Coefficient	cm/hr	Chem-specific		Chem-specific		((SA-A x ED-A/BW-A) + (SA-Y x ED-Y/BW-Y))
	ET	Exposure Time	hr/event	2	prof. Estimate	1	prof. estimate	x 1/AT
	EF	Exposure Frequency	event/yr	48	EPA 2001a	24	EPA 2001a	
	SA - A	Surface Area of Exposed Skin	cm^2	11,500	EPA 1997 (1)	10,000	EPA 1997 (1)	
	SA - Y	Surface Area of Exposed Skin - Youth	cm^2	8,000	EPA 1997 (1)	6,500	EPA 1997 (1)	
	ED - A	Exposure Duration - Adult	yrs	24	EPA 1997	7	EPA 1997	
	ED -Y	Exposure Duration - Youth	yrs	6	EPA 1997	2	EPA 1997	
	BW	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	BW - Y	Body Weight - Youth	kg	50	EPA 1997	50	EPA 1997	
	AT-C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT-N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	

Notes:
1. Based on one-half total body surface area for age group.
2. Exposure Points for which these assumptions apply:
   - Bayou d'Inde
   - Upper Calcasieu - Above Lake Charles
   - Upper Calcasieu - Lake Charles
   - Upper Calcasieu - Clooney Island Loop
   - Upper Calcasieu - Below Clooney Island Loop
   - Lower Calcasieu - Prien Lake
   - Lower Calcasieu - Remainder (i.e., not Prien Lake)

cm = centimeter
hr = hour
kg = kilogram
chem-specific = chemical-specific
L = Liter
mg = milligram
yr = year

TABLE 4.6
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	See below (1)
Receptor Population:	Recreational User - Swimming
Receptor Age:	Individuals (> 7 yrs)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CW	Chemical Concentration in Surface Water	mg/L	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	L/mL	1E-03	--	1E-03	--	CW x CF x IR x ET x EF x
	IR	Ingestion Rate	mL/hr	50	EPA 1989	50	EPA 1989	((ED-A/BW-A) + (ED-Y/BW-Y)) x 1/AT
	ET	Exposure Time	hr/event	3	EPA 1997	1	EPA 1997	
	EF	Exposure Frequency	event/yr	60	EPA 1997	12	EPA 1997	
	ED - A	Exposure Duration - Adult	yrs	24	EPA 1997	7	EPA 1997	
	ED - Y	Exposure Duration - Youth	yrs	6	EPA 1997	2	EPA 1997	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	BW - Y	Body Weight - Youth	kg	50	EPA 1997	50	EPA 1997	
	AT-C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT-N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	
Dermal	CW	Chemical Concentration in Surface Water	mg/L	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	L/cm^3	1E-03	--	1E-03	--	CW x CF x PC x ET x EF x
	PC	Permeability Coefficient	cm/hr	Chem-specific		Chem-specific		((SA-A x ED-A/BW-A) + (SA-Y x ED-Y/BW-Y))
	ET	Exposure Time	hr/event	3	EPA 1997	1	EPA 1997	x 1/AT
	EF	Exposure Frequency	event/yr	60	EPA 1997	12	EPA 1997	
	SA - A	Surface Area of Exposed Skin - Adult	cm^2	23,000	EPA 1997	20,000	EPA 1997	
	SA - Y	Surface Area of Exposed Skin - Youth	cm^2	16,000	EPA 1997	13,000	EPA 1997	
	ED - A	Exposure Duration - Adult	yrs	24	EPA 1997	7	EPA 1997	
	ED - Y	Exposure Duration - Youth	yrs	6	EPA 1997	2	EPA 1997	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	BW - Y	Body Weight - Youth	kg	50	EPA 1997	50	EPA 1997	
	AT-C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT-N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	

Notes:
1. Exposure Points for which these assumptions apply:
Upper Calcasieu - Above Lake Charles
Upper Calcasieu - Lake Charles
Lower Calcasieu - Prien Lake

cm = centimeter
hr = hour
kg = kilogram
chem-specific = chemical-specific
L = Liter
mg = milligram
yr = year

TABLE 4.7
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Entire Estuary (except Bayou Verdine)
Receptor Population:	Resident
Receptor Age:	Individual (Child/Youth/Adult)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CFS	Chemical Concentration in Fish	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/g	1E-03	--	1E-03	--	CFS x CF x EF x ((IR-A x ED-A/BW-A) +
	IR - A	Ingestion Rate - Adult	g/day	32	EPA 1997 (1)	10	EPA 1997 (1)	(IR-Y x ED-Y/BW-Y) + (IR-C x ED-C/BW-C)) x 1/AT
	IR - Y	Ingestion Rate - Youth	g/day	23	EPA 1997 (2)	7	EPA 1997 (2)	
	IR - C	Ingestion Rate - Child	g/day	12	EPA 1997 (3)	4	EPA 1997 (3)	
	EF	Exposure Frequency	days/yr	365	EPA 1997	365	EPA 1997	
	ED - A	Exposure Duration - Adult	yr	18	Prof.Estimate	5	Prof.Estimate	
	ED - Y	Exposure Duration - Youth	yr	6	Prof.Estimate	2	Prof.Estimate	
	ED - C	Exposure Duration - Child	yr	6	Prof.Estimate	2	Prof.Estimate	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	BW - Y	Body Weight - Youth	kg	50	EPA 1997	50	EPA 1997	
	BW - C	Body Weight - Child	kg	15	EPA 1991	15	EPA 1991	
	AT - C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT - N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	

Notes: chem-specific = chemical-specific; g = grams; mg = milligram; kg = kilogram; yr = year

1. Based on EPA (1997) recommended fish/shellfish ingestion rates for the general population, assuming that 50% of total fish/shellfish consumption is fish (Dellenbarger et al. 1993).
2. Based on adult fish ingestion rate, assuming that fish ingestion is directly proportional to body weight (IR-Y= IR-A*BW-Y/BW-A)
3. Based on adult fish ingestion rate, assuming that children eat about 1.8 times as much fish per unit body weight when compared with adults (IR-C=IR-A*1.8*BW-C/BW-A).

TABLE 4.8
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Bayou Verdine
Receptor Population:	Resident
Receptor Age:	Individual (Child/Adult)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CFS	Chemical Concentration in Fish	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/g	1E-03	--	1E-03	--	CFS x CF x EF x ((IR-A x ED-A/BW-A) +
	IR - A	Ingestion Rate - Adult	g/day	13	EPA 2001b	2	EPA 2001b	(IR-C x ED-C/BW-C)) x 1/AT
	IR - C	Ingestion Rate - Child	g/day	6.5	EPA 2001b	1	EPA 2001b	
	EF	Exposure Frequency	days/yr	365	EPA 1997	365	EPA 1997	
	ED - A	Exposure Duration - Adult	yr	24	Prof.Estimate	7	Prof.Estimate	
	ED - C	Exposure Duration - Child	yr	6	Prof.Estimate	2	Prof.Estimate	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	BW - C	Body Weight - Child	kg	15	EPA 1991	15	EPA 1991	
	AT - C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT - N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	

Notes: chem-specific = chemical-specific g = grams mg = milligram
kg = kilogram yr = year

1. Bayou Verdine-specific fish ingestion rate. Includes assumption that 50% of shellfish are local for RME scenario, and 25% are local for CT scenario.

TABLE 4.9
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Entire Estuary (except Bayou Verdine)
Receptor Population:	Resident - Subsistence
Receptor Age:	Individual (Child/Youth/Adult)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CFS	Chemical Concentration in Fish	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/g	1E-03	--	1E-03	--	CFS x CF x EF x ((IR-A x ED-A/BW-A) +
	IR - A	Ingestion Rate - Adult	g/day	85	EPA 1997 (1)	35	EPA 1997 (1)	(IR-Y x ED-Y/BW-Y) + (IR-C x ED-C/BW-C)) x 1/AT
	IR - Y	Ingestion Rate - Youth	g/day	61	EPA 1997 (2)	25	EPA 1997 (2)	
	IR - C	Ingestion Rate - Child	g/day	33	EPA 1997 (3)	14	EPA 1997 (3)	
	EF	Exposure Frequency	days/yr	365	EPA 1997	365	EPA 1997	
	ED - A	Exposure Duration - Adult	yr	18	Prof.Estimate	5	Prof.Estimate	
	ED - Y	Exposure Duration - Youth	yr	6	Prof.Estimate	2	Prof.Estimate	
	ED - C	Exposure Duration - Child	yr	6	Prof.Estimate	2	Prof.Estimate	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	BW - Y	Body Weight - Youth	kg	50	EPA 1997	50	EPA 1997	
	BW - C	Body Weight - Child	kg	15	EPA 1991	15	EPA 1991	
	AT - C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT - N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	

Notes: chem-specific = chemical-specific g = grams mg = milligram
kg = kilogram yr = year

1. Based on EPA (1997) recommended fish/shellfish subsistence ingestion rates, assuming that 50% of total fish/shellfish consumption is fish (Dellenbarger et al. 1993).
2. Based on adult fish ingestion rate, assuming that fish ingestion is directly proportional to body weight (IR-Y= IR-A*BW-Y/BW-A)
3. Based on adult fish ingestion rate, and assuming that children eat about 1.8 times as much fish per unit body weight when compared with adults (IR-C=IR-A*1.8*BW-C/BW-A).

TABLE 4.10
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Bayou Verdine
Receptor Population:	Resident - Subsistence
Receptor Age:	Individual (Adult)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CFS	Chemical Concentration in Fish	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/g	1E-03	--	1E-03	--	CFS x CF x EF x IR-A x ED-A * 1/BW-A * 1/AT
	IR - A	Ingestion Rate - Adult	g/day	85	EPA 1997 (1)	35	EPA 1997 (1)	
	EF	Exposure Frequency	days/yr	365	EPA 1997	365	EPA 1997	
	ED - A	Exposure Duration - Adult	yr	30	Prof.Estimate	9	Prof.Estimate	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	AT - C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT - N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	

Notes: chem-specific = chemical-specific g = grams mg = milligram
kg = kilogram yr = year

1. Based on EPA (1997) recommended fish/shellfish subsistence ingestion rates, assuming that 50% of total fish/shellfish consumption is fish (Dellenbarger et al. 1993).

TABLE 4.11
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	See Below (4)
Receptor Population:	Resident
Receptor Age:	Individual (Child/Youth/Adult)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CSH	Chemical Concentration in Shellfish	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/g	1E-03	--	1E-03	--	CFS x CF x EF x ((IR-A x ED-A/BW-A) +
	IR - A	Ingestion Rate - Adult	g/day	32	EPA 1997 (1)	10	EPA 1997 (1)	(IR-Y x ED-Y/BW-Y) + (IR-C x ED-C/BW-C)) x 1/AT
	IR - Y	Ingestion Rate - Youth	g/day	23	EPA 1997 (2)	7	EPA 1997 (2)	
	IR - C	Ingestion Rate - Child	g/day	12	EPA 1997 (3)	4	EPA 1997 (3)	
	EF	Exposure Frequency	days/yr	365	EPA 1997	365	EPA 1997	
	ED - A	Exposure Duration - Adult	yr	18	Prof.Estimate	5	Prof.Estimate	
	ED - Y	Exposure Duration - Youth	yr	6	Prof.Estimate	2	Prof.Estimate	
	ED - C	Exposure Duration - Child	yr	6	Prof.Estimate	2	Prof.Estimate	
	BW - A	Body Weight - Adult	kg	70	EPA, 1991	70	EPA 1991	
	BW - Y	Body Weight - Youth	kg	50	EPA 1997	50	EPA 1997	
	BW - C	Body Weight - Child	kg	15	EPA 1991	15	EPA 1991	
	AT - C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT - N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	

Notes: chem-specific = chemical-specific; g = grams; mg = milligram; kg = kilogram; yr = year

1. Based on EPA (1997) recommended fish/shellfish ingestion rates for the general population, assuming that 50% of total fish/shellfish consumption is fish (Dellenbarger et al. 1993).
2. Based on adult fish ingestion rate, assuming that fish ingestion is directly proportional to body weight (IR-Y= IR-A*BW-Y/BW-A)
3. Based on adult fish ingestion rate, assuming that children eat about 1.8 times as much fish per unit body weight when compared with adults (IR-C=IR-A*1.8*BW-C/BW-A).
4. Exposure Points for which these assumptions apply:
   - Bayou d'Inde
   - Upper Calcasieu
   - Lower Calcasieu

TABLE 4.12
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Bayou Verdine
Receptor Population:	Resident
Receptor Age:	Individual (Child/Adult)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CSH	Chemical Concentration in Shellfish	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/g	1E-03	--	1E-03	--	CFS x CF x EF x ((IR-A x ED-A/BW-A) +
	IR - A	Ingestion Rate - Adult	g/day	2	EPA 2001b (1)	0.25	EPA 2001b (1)	(IR-C x ED-C/BW-C)) x 1/AT
	IR - C	Ingestion Rate - Child	g/day	1	EPA 2001b (1)	0.1	EPA 2001b (1)	
	EF	Exposure Frequency	days/yr	365	EPA 1997	365	EPA 1997	
	ED - A	Exposure Duration - Adult	yr	24	Prof.Estimate	7	Prof.Estimate	
	ED - C	Exposure Duration - Child	yr	6	Prof.Estimate	2	Prof.Estimate	
	BW - A	Body Weight - Adult	kg	70	EPA, 1991	70	EPA 1991	
	BW - C	Body Weight - Child	kg	15	EPA 1991	15	EPA 1991	
	AT - C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT - N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	

Notes: chem-specific = chemical-specific; g = grams; mg = milligram; kg = kilogram; yr = year

1. Bayou Verdine-specific shellfish ingestion rate. Includes assumption that 50% of shellfish are local for RME scenario, and 25% are local for CT scenario.

TABLE 4.13
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	See Below (4)
Receptor Population:	Resident - Subsistence
Receptor Age:	Individual (Child/Youth/Adult)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CSH	Chemical Concentration in Shellfish	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/g	1E-03	--	1E-03	--	CFS x CF x EF x ((IR-A x ED-A/BW-A) +
	IR - A	Ingestion Rate - Adult	g/day	85	EPA 1997 (1)	35	EPA 1997 (1)	(IR-Y x ED-Y/BW-Y) + (IR-C x ED-C/BW-C)) x 1/AT
	IR - Y	Ingestion Rate - Youth	g/day	61	EPA 1997 (2)	25	EPA 1997 (2)	
	IR - C	Ingestion Rate - Child	g/day	33	EPA 1997 (3)	14	EPA 1997 (3)	
	EF	Exposure Frequency	days/yr	365	EPA 1997	365	EPA 1997	
	ED - A	Exposure Duration - Adult	yr	18	Prof.Estimate	5	Prof.Estimate	
	ED - Y	Exposure Duration - Youth	yr	6	Prof.Estimate	2	Prof.Estimate	
	ED - C	Exposure Duration - Child	yr	6	Prof.Estimate	2	Prof.Estimate	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	BW - Y	Body Weight - Youth	kg	50	EPA 1997	50	EPA 1997	
	BW - C	Body Weight - Child	kg	15	EPA 1991	15	EPA 1991	
	AT - C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT - N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	

Notes: chem-specific = chemical-specific g = grams mg = milligram
kg = kilogram yr = year

1. Based on EPA (1997) recommended fish/shellfish subsistence ingestion rates, assuming that 50% of total fish/shellfish consumption is shellfish (Dellenbarger et al. 1993).
2. Based on adult fish ingestion rate, assuming that fish ingestion is directly proportional to body weight (IR-Y= IR-A*BW-Y/BW-A)
3. Based on adult fish ingestion rate, and assuming that children eat about 1.8 times as much fish per unit body weight when compared with adults (IR-C=IR-A*1.8*BW-C/BW-A).
4. Exposure Points for which these assumptions apply:
   Bayou d'Inde
   Upper Calcasieu
   Lower Calcasieu

TABLE 4.14
VALUES AND EQUATIONS USED FOR INTAKE CALCULATIONS
CALCASIEU ESTUARY - LAKE CHARLES, LA

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Bayou Verdine
Receptor Population:	Resident - Subsistence
Receptor Age:	Individual (Adult)

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	CT Value	CT Rationale/ Reference	Intake Equation/ Model Name
Ingestion	CSH	Chemical Concentration in Shellfish	mg/kg	Chem-specific		Chem-specific		Chronic Daily Intake (CDI) (mg/kg-day) =
	CF	Conversion Factor	kg/g	1E-03	--	1E-03	--	CFS x CF x EF x IR-A x ED-A * 1/BW-A * 1/AT
	IR - A	Ingestion Rate - Adult	g/day	85	EPA 1997 (1)	35	EPA 1997 (1)	
	EF	Exposure Frequency	days/yr	365	EPA 1997	365	EPA 1997	
	ED - A	Exposure Duration - Adult	yr	30	Prof.Estimate	9	Prof.Estimate	
	BW - A	Body Weight - Adult	kg	70	EPA 1991	70	EPA 1991	
	AT - C	Averaging Time - Cancer	days	25,550	EPA 1989	25,550	EPA 1989	
	AT - N	Averaging Time - Noncancer	days	10,950	EPA 1989	3,285	EPA 1989	

Notes: chem-specific = chemical-specific g = grams mg = milligram
kg = kilogram yr = year

1. Based on EPA (1997) recommended fish/shellfish subsistence ingestion rates, assuming that 50% of total fish/shellfish consumption is shellfish (Dellenbarger et al. 1993).

TABLE 4.15
CHEMICAL/PHYSICAL PARAMETERS FOR CHEMICALS OF POTENTIAL CONCERN
Calcasieu Estuary - Lake Charles, LA

	Dermal Absorption (ABS) (d)	Dermal Permeability Coefficient (PC) cm/hr	PC note
SVOCs			
4-Nitrophenol	0.1	4.8E-03	e
bis(2-Ethylhexyl)phthalate	0.1	2.5E-02	e
Hexachlorobenzene	0.1	1.3E-01	e
Hexachlorobutadiene	0.1	8.1E-02	e
Methylphenol, 3- & 4-	0.1	7.8E-03	e
PAHs			
Acenaphthylene	0.13		
Benzo(a)anthracene	0.13	4.7E-01	e
Benzo(a)pyrene	0.13	7.0E-01	e
Benzo(b)fluoranthene	0.13	7.0E-01	e
Benzo(g,h,i)perylene	0.13	1.8E+00	b
Benzo(k)fluoranthene	0.13	6.0E-01	b
Chrysene	0.13	4.7E-01	e
Dibenzo(a,h)anthracene	0.13	1.5E+00	e
Indeno(1,2,3-cd)pyrene	0.13	1.0E+00	e
Phenanthrene	0.13	1.4E-01	e
Pesticides/ PCBs			
4,4'-DDD	0.03	1.8E-01	e
4,4'-DDE	0.03	1.6E-01	e
4,4'-DDT	0.03	2.7E-01	e
Aldrin	0.1	1.4E-03	e
Aroclor-1254	0.14	4.3E-01	e
Aroclor-1260	0.14	4.3E-01	e
alpha-BHC	0.04	1.9E-02	b
beta-BHC	0.04	2.2E-02	b
delta-BHC	0.04		
gamma-BHC (Lindane)	0.04	1.1E-02	e
alpha-Chlordane	0.04	3.8E-02	e
Dieldrin	0.1	1.2E-02	e
Endosulfan Sulfate	0.1	2.0E-03	c
Endrin Aldehyde	0.1	8.6E-02	c
Endrin Ketone	0.1		
Heptachlor	0.1	8.6E-03	e
Heptachlor Epoxide	0.1		
Dioxins/ Furans			
2,3,7,8-TCDD	0.03	8.1E-01	e
Metals			
Aluminum	0	1.0E-03	a,f
Antimony	0	1.0E-03	a,f
Arsenic	0.03	1.0E-03	a,f
Barium	0	1.0E-03	a,f
Cadmium	0.001	1.0E-03	a,f
Chromium (total)	0	1.0E-03	a,f
Copper	0	1.0E-03	a,f
Iron	0	1.0E-03	a,f
Lead	0	1.0E-04	f
Manganese	0	1.0E-03	a,f
Mercury	0	1.0E-03	a,f
Nickel	0	2.0E-04	f
Selenium	0	1.0E-03	a,f
Silver	0	6.0E-04	f
Vanadium	0	1.0E-03	a,f
Zinc	0	6.0E-04	f

a = from EPA 1992 Dermal Guidance (Table 5-7)
b = from http://risk.lsd.ornl.gov/cgi-bin/tox/
c = calculated using eqn. 5.8 from EPA 1992 Dermal Guidance
d = from EPA 2001 Dermal Guidance (Exhibit 3-4)
e = from EPA 2001 Dermal Guidance (Exhibit B-2)
f = from EPA 2001 Dermal Guidance (Exhibit 3-1)

TABLE 5.1

NON-CANCER TOXICITY DATA -- ORAL/DERMAL

Calcasieu Estuary - Lake Charles, Louisiana

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal RfD (1)	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD:	Dates of RfD: (MM/DD/YY) (2)
SVOCs										
4-Nitrophenol	Chronic	0.008	mg/kg/day	--	0.008	mg/kg/day			NCEA	05/01/01
bis(2-Ethylhexyl) phthalate	Chronic	0.02	mg/kg/day	--	0.02	mg/kg/day	Liver	1000	IRIS	08/01/01
Hexachlorobenzene	Chronic	0.0008	mg/kg/day	--	0.0008	mg/kg/day	Liver	100	IRIS	08/01/01
Hexachlorobutadiene	Chronic	0.0002	mg/kg/day	--	0.0002	mg/kg/day	Kidney	1000	HEAST	07/01/97
Methylphenol, 3- & 4-										
PAHs										
Acenaphthylene										
Benzo(a)anthracene										
Benzo(a)pyrene										
Benzo(b)fluoranthene										
Benzo(g,h,i)perylene										
Benzo(k)fluoranthene										
Chrysene										
Dibenzo(a,h)anthracene										
Indeno(1,2,3-cd)pyrene										
Phenanthrene										
Pesticides/PCBs										
4,4'-DDD	Chronic	0.0005	mg/kg/day	--	0.0005	mg/kg/day	Liver	100	IRIS	08/01/01
4,4'-DDE	Chronic	0.0005	mg/kg/day	--	0.0005	mg/kg/day	Liver	100	IRIS	08/01/01
4,4'-DDT	Chronic	0.0005	mg/kg/day	--	0.0005	mg/kg/day	Liver	100	IRIS	08/01/01
Aldrin	Chronic	0.00003	mg/kg/day	--	0.00003	mg/kg/day	Liver	1000	IRIS	08/01/01
Aroclor-1254	Chronic	0.00002	mg/kg/day	--	0.00002	mg/kg/day	Eye/Skin/Nails	300	IRIS	08/01/01
Aroclor-1260	Chronic	0.00002	mg/kg/day	--	0.00002	mg/kg/day	Eye/Skin/Nails	300	IRIS	08/01/01
BHC, alpha-										
BHC, beta-										
BHC, delta-										
BHC, gamma- (Lindane)	Chronic	0.0003	mg/kg/day	--	0.0003	mg/kg/day	Liver/Kidney	1000	IRIS	08/01/01
Chlordane, alpha-	Chronic	0.0005	mg/kg/day	--	0.0005	mg/kg/day	Liver	300	IRIS	08/01/01
Dieldrin	Chronic	0.00005	mg/kg/day	--	0.00005	mg/kg/day	Liver	100	IRIS	08/01/01
Endosulfan sulfate										
Endrin aldehyde										
Endrin ketone										
Heptachlor	Chronic	0.0005	mg/kg/day	--	0.0005	mg/kg/day	Liver	300	IRIS	08/01/01
Heptachlor epoxide	Chronic	0.000013	mg/kg/day	--	0.000013	mg/kg/day	Liver	1000	IRIS	08/01/01
Dioxins/Furans										
2,3,7,8-TCDD										

TABLE 5.1

NON-CANCER TOXICITY DATA -- ORAL/DERMAL

Calcasieu Estuary - Lake Charles, Louisiana

	Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal RfD (1)	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD:	Dates of RfD: (MM/DD/YY) (2)
	Metals										
	Aluminum	Chronic	1	mg/kg/day	--	1	mg/kg/day	GI Tract/CNS	100	NCEA	05/01/01
	Antimony	Chronic	0.0004	mg/kg/day	--	0.0004	mg/kg/day	Whole Body/Blood	1000	IRIS	08/01/01
	Arsenic	Chronic	0.0003	mg/kg/day	--	0.0003	mg/kg/day	Skin	3	IRIS	08/01/01
	Barium	Chronic	0.07	mg/kg/day	--	0.07	mg/kg/day	Kidney	3	IRIS	08/01/01
*	Cadmium	Chronic	0.0005	mg/kg/day	--	0.0005	mg/kg/day	Kidney	10	IRIS	08/01/01
	Chromium (total)	Chronic	0.003	mg/kg/day	--	0.003	mg/kg/day	GI Tract	900	IRIS	08/01/01
	Copper	Chronic	0.04	mg/kg/day	--	0.04	mg/kg/day	GI Tract	--	HEAST	07/01/97
	Iron	Chronic	0.3	mg/kg/day	--	0.3	mg/kg/day			NCEA	05/01/01
	Lead										
**	Manganese	Chronic	0.02	mg/kg/day	--	0.02	mg/kg/day	CNS	1	IRIS	08/01/01
	Mercury										
	Nickel	Chronic	0.02	mg/kg/day	--	0.02	mg/kg/day	Whole Body	300	IRIS	08/01/01
	Selenium	Chronic	0.005	mg/kg/day	--	0.005	mg/kg/day	Hair/Nails	3	IRIS	08/01/01
	Silver	Chronic	0.005	mg/kg/day	--	0.005	mg/kg/day	Skin	3	IRIS	08/01/01
	Vanadium	Chronic	0.007	mg/kg/day	--	0.007	mg/kg/day	None	100	HEAST	07/01/97
	Zinc	Chronic	0.3	mg/kg/day	--	0.3	mg/kg/day	Blood	3	IRIS	08/01/01

NCEA - National Center for Environmental Assessment

IRIS = Integrated Risk Information System; August 2001

HEAST = Health Effects Assessment Summary Tables; July 1997

-- = information not available from source

(1) The dermal RfD was assumed to equal the oral RfD. No adjustment factor was applied.

(2) IRIS values were confirmed against the EPA's online database, August 2001. NCEA values were pulled from the EPA Region 3 RBC table (May 2001) or the EPA Region 6 Screening Levels table (November 2000).

* IRIS provides two RfDs for cadmium: 5e-4 mg/kg/day for cadmium in drinking water and 1e-3 mg/kg/day for cadmium in food.

** The RfD of 2e-2 mg/kg/day applies to nondietary exposures, and was calculated from the IRIS RfD of 1.4e-1 mg/kg/day as recommended in IRIS. Dietary exposure (5 mg/day) was subtracted and a modifying factor of 3 was applied.

TABLE 6.1
CANCER TOXICITY DATA -- ORAL/DERMAL
Calcasieu Estuary - Lake Charles, Louisiana

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal Cancer Slope Factor (1)	Units	Weight of Evidence/ Cancer Guideline Description	Source	Date (MM/DD/YY) (2)
SVOCs							
4-Nitrophenol					--	IRIS	08/01/01
bis(2-Ethylhexyl) phthalate	0.014	--	0.014	(mg/kg/day)-1	B2	IRIS	08/01/01
Hexachlorobenzene	1.6	--	1.6	(mg/kg/day)-1	B2	IRIS	08/01/01
Hexachlorobutadiene	0.078	--	0.078	(mg/kg/day)-1	C	IRIS	08/01/01
Methylphenol, 3- & 4-							
PAHs							
Acenaphthylene					D	IRIS	08/01/01
Benzo(a)anthracene	0.73	--	0.73	(mg/kg/day)-1	B2	NCEA	05/01/01
Benzo(a)pyrene	7.3	--	7.3	(mg/kg/day)-1	B2	IRIS	08/01/01
Benzo(b)fluoranthene	0.73	--	0.73	(mg/kg/day)-1	B2	NCEA	05/01/01
Benzo(g,h,i)perylene		--			D	IRIS	08/01/01
Benzo(k)fluoranthene	0.073	--	0.073	(mg/kg/day)-1	B2	NCEA	05/01/01
Chrysene	0.0073	--	0.0073	(mg/kg/day)-1	B2	NCEA	05/01/01
Dibenzo(a,h)anthracene	7.3	--	7.3	(mg/kg/day)-1	B2	NCEA	05/01/01
Indeno(1,2,3-cd)pyrene	0.73	--	0.73	(mg/kg/day)-1	B2	NCEA	05/01/01
Phenanthrene					D	IRIS	08/01/01
Pesticides/PCBs							
4,4'-DDD	0.24	--	0.24	(mg/kg/day)-1	B2	IRIS	08/01/01
4,4'-DDE	0.34	--	0.34	(mg/kg/day)-1	B2	IRIS	08/01/01
4,4'-DDT	0.34	--	0.34	(mg/kg/day)-1	B2	IRIS	08/01/01
Aldrin	17	--	17	(mg/kg/day)-1	B2	IRIS	08/01/01
Aroclor-1254	2	--	2	(mg/kg/day)-1	B2	IRIS	08/01/01
Aroclor-1260	2	--	2	(mg/kg/day)-1	B2	IRIS	08/01/01
BHC, alpha-	6.3	--	6.3	(mg/kg/day)-1	B2	IRIS	08/01/01
BHC, beta-	1.8	--	1.8	(mg/kg/day)-1	C	IRIS	08/01/01
BHC, delta-					D	IRIS	08/01/01
BHC, gamma- (Lindane)	1.3	--	1.3	(mg/kg/day)-1	B2-C	HEAST	07/01/97
Chlordane, alpha-	0.35	--	0.35	(mg/kg/day)-1	B2	IRIS	08/01/01
Dieldrin	16	--	16	(mg/kg/day)-1	B2	IRIS	08/01/01
Endosulfan sulfate							
Endrin aldehyde							
Endrin ketone							
Heptachlor	4.5	--	4.5	(mg/kg/day)-1	B2	IRIS	08/01/01
Heptachlor epoxide	9.1	--	9.1	(mg/kg/day)-1	B2	IRIS	08/01/01

TABLE 6.1
CANCER TOXICITY DATA -- ORAL/DERMAL
Calcasieu Estuary - Lake Charles, Louisiana

	Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal Cancer Slope Factor (1)	Units	Weight of Evidence/ Cancer Guideline Description	Source	Date (MM/DD/YY) (2)
	Dioxins/Furans							
	2,3,7,8-TCDD	150000	--	150000	(mg/kg/day)-1	B2	HEAST	07/01/97
	Metals							
	Aluminum							
	Antimony					--	IRIS	08/01/01
	Arsenic	1.5	--	1.5	(mg/kg/day)-1	A	IRIS	08/01/01
	Barium					D	IRIS	08/01/01
	Cadmium					B1	IRIS	08/01/01
***	Chromium (total)					D	IRIS	08/01/01
	Copper					D	IRIS	08/01/01
	Iron							
	Lead					B2	IRIS	08/01/01
	Manganese					D	IRIS	08/01/01
	Mercury					D	IRIS	08/01/01
	Nickel					--	IRIS	08/01/01
	Selenium					D	IRIS	08/01/01
	Silver					D	IRIS	08/01/01
	Vanadium							
	Zinc					D	IRIS	08/01/01

NCEA - National Center for Environmental Assessment
IRIS = Integrated Risk Information System; August 2001
HEAST = Health Effects Assessment Summary Tables; July 1997
-- = information not available from source

(1) The dermal Cancer Slope Factor was assumed to equal the oral Cancer Slope Factor. No adjustment factor was applied.
(2) IRIS values were confirmed against the EPA's online database, August 2001. NCEA values were pulled from the EPA Region 3 RBC table (May 2001) or the EPA Region 6 Screening Levels table (November 2000).
*** Chromium VI is an A carcinogen by the inhalation route, but a D carcinogen by the oral route.

EPA Weight of Evidence:
A - Human Carcinogen
B1 - Probable human carcinogen - indicates that limited human data are available.
B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans.
C - Possible human carcinogen
D - Not classifiable as human carcinogen
E - Evidence of noncarcinogenicity

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Bayou d'Inde
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.1
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	SVOCs												
	Hexachlorobenzene	8.5E-01	mg/kg	8.5E-01	mg/kg	M	1.7E-07	mg/kg-day	8.0E-04	mg/kg/day	NA	NA	2.1E-04
	PAHs												
	Acenaphthylene	8.2E-01	mg/kg	8.2E-01	mg/kg	M	1.7E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)anthracene	7.4E-01	mg/kg	7.4E-01	mg/kg	M	1.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	7.4E-01	mg/kg	7.4E-01	mg/kg	M	1.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	7.4E-01	mg/kg	7.4E-01	mg/kg	M	1.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	6.7E-01	mg/kg	6.7E-01	mg/kg	M	1.4E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(k)fluoranthene	7.8E-01	mg/kg	7.8E-01	mg/kg	M	1.6E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	5.0E-01	mg/kg	5.0E-01	mg/kg	M	1.0E-07	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7.3E-01	mg/kg	7.3E-01	mg/kg	M	1.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	7.9E-01	mg/kg	7.9E-01	mg/kg	M	1.6E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aldrin	7.3E-03	mg/kg	7.3E-03	mg/kg	M	1.5E-09	mg/kg-day	3.0E-05	mg/kg/day	NA	NA	5.0E-05
	Aroclor-1254	1.1E-01	mg/kg	1.1E-01	mg/kg	M	2.2E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	1.1E-03
	BHC, delta-	5.9E-03	mg/kg	5.9E-03	mg/kg	M	1.2E-09	mg/kg-day	NA	NA	NA	NA	NA
	Dieldrin	7.6E-03	mg/kg	7.6E-03	mg/kg	M	1.5E-09	mg/kg-day	5.0E-05	mg/kg/day	NA	NA	3.1E-05
	Endosulfan sulfate	8.9E-03	mg/kg	8.9E-03	mg/kg	M	1.8E-09	mg/kg-day	NA	NA	NA	NA	NA
	Endrin aldehyde	8.3E-03	mg/kg	8.3E-03	mg/kg	M	1.7E-09	mg/kg-day	NA	NA	NA	NA	NA
	Endrin ketone	8.0E-03	mg/kg	8.0E-03	mg/kg	M	1.6E-09	mg/kg-day	NA	NA	NA	NA	NA
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	3.6E-04	mg/kg	3.6E-04	mg/kg	M	7.3E-11	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	3.9E+00	mg/kg	3.9E+00	mg/kg	M	7.9E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	2.6E-03
	Barium	8.0E+02	mg/kg	8.0E+02	mg/kg	M	1.6E-04	mg/kg-day	7.0E-02	mg/kg/day	NA	NA	2.3E-03
	Chromium (total)	8.8E+01	mg/kg	8.8E+01	mg/kg	M	1.8E-05	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	6.0E-03
	Lead	7.0E+01	mg/kg	7.0E+01	mg/kg	M	1.4E-05	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	2.3E+00	mg/kg	2.3E+00	mg/kg	M	4.7E-07	mg/kg-day	NA	NA	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Bayou d'Inde
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.1
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	SVOCs												
	Hexachlorobenzene	8.5E-01	mg/kg	8.5E-01	mg/kg	M	1.3E-07	mg/kg-day	8.0E-04	mg/kg/day	NA	NA	1.6E-04
	PAHs												
	Acenaphthylene	8.2E-01	mg/kg	8.2E-01	mg/kg	M	1.6E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)anthracene	7.4E-01	mg/kg	7.4E-01	mg/kg	M	1.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	7.4E-01	mg/kg	7.4E-01	mg/kg	M	1.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	7.4E-01	mg/kg	7.4E-01	mg/kg	M	1.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	6.7E-01	mg/kg	6.7E-01	mg/kg	M	1.3E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(k)fluoranthene	7.8E-01	mg/kg	7.8E-01	mg/kg	M	1.6E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	5.0E-01	mg/kg	5.0E-01	mg/kg	M	1.0E-07	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7.3E-01	mg/kg	7.3E-01	mg/kg	M	1.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	7.9E-01	mg/kg	7.9E-01	mg/kg	M	1.6E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aldrin	7.3E-03	mg/kg	7.3E-03	mg/kg	M	1.1E-09	mg/kg-day	3.0E-05	mg/kg/day	NA	NA	3.7E-05
	Aroclor-1254	1.1E-01	mg/kg	1.1E-01	mg/kg	M	2.4E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	1.2E-03
	BHC, delta-	5.9E-03	mg/kg	5.9E-03	mg/kg	M	3.6E-10	mg/kg-day	NA	NA	NA	NA	NA
	Dieldrin	7.6E-03	mg/kg	7.6E-03	mg/kg	M	1.2E-09	mg/kg-day	5.0E-05	mg/kg/day	NA	NA	2.3E-05
	Endosulfan sulfate	8.9E-03	mg/kg	8.9E-03	mg/kg	M	1.4E-09	mg/kg-day	NA	NA	NA	NA	NA
	Endrin aldehyde	8.3E-03	mg/kg	8.3E-03	mg/kg	M	1.3E-09	mg/kg-day	NA	NA	NA	NA	NA
	Endrin ketone	8.0E-03	mg/kg	8.0E-03	mg/kg	M	1.2E-09	mg/kg-day	NA	NA	NA	NA	NA
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	3.6E-04	mg/kg	3.6E-04	mg/kg	M	1.7E-11	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	3.9E+00	mg/kg	3.9E+00	mg/kg	M	1.8E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	6.0E-04
	Barium	8.0E+02	mg/kg	8.0E+02	mg/kg	M	0.0E+00	mg/kg-day	7.0E-02	mg/kg/day	NA	NA	0.0E+00
	Chromium (total)	8.8E+01	mg/kg	8.8E+01	mg/kg	M	0.0E+00	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	0.0E+00
	Lead	7.0E+01	mg/kg	7.0E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	2.3E+00	mg/kg	2.3E+00	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pathways	1.4E-02

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Above Lake Charles
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.2
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	PAHs												
	Benzo(a)anthracene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	5.5E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	2.6E-01	mg/kg	2.6E-01	mg/kg	M	5.3E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	3.5E-01	mg/kg	3.5E-01	mg/kg	M	7.1E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1.2E-01	mg/kg	1.2E-01	mg/kg	M	2.4E-08	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	3.9E-01	mg/kg	3.9E-01	mg/kg	M	7.9E-08	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	6.4E-02	mg/kg	6.4E-02	mg/kg	M	1.3E-08	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	1.4E-01	mg/kg	1.4E-01	mg/kg	M	2.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	5.5E-08	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254 **												
	BHC, delta-	1.4E-03	mg/kg	1.4E-03	mg/kg	M	2.8E-10	mg/kg-day	NA	NA	NA	NA	NA
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	3.3E-05	mg/kg	3.3E-05	mg/kg	M	6.8E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	4.0E+00	mg/kg	4.0E+00	mg/kg	M	8.0E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	2.7E-03
	Chromium (total)	1.7E+01	mg/kg	1.7E+01	mg/kg	M	3.5E-06	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	1.2E-03
	Lead	2.7E+01	mg/kg	2.7E+01	mg/kg	M	5.5E-06	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	9.8E-02	mg/kg	9.8E-02	mg/kg	M	2.0E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	PAHs												
	Benzo(a)anthracene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	5.4E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	2.6E-01	mg/kg	2.6E-01	mg/kg	M	5.1E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	3.5E-01	mg/kg	3.5E-01	mg/kg	M	6.9E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1.2E-01	mg/kg	1.2E-01	mg/kg	M	2.3E-08	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	3.9E-01	mg/kg	3.9E-01	mg/kg	M	7.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	6.4E-02	mg/kg	6.4E-02	mg/kg	M	1.3E-08	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	1.4E-01	mg/kg	1.4E-01	mg/kg	M	2.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	5.4E-08	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254 **												
	BHC, delta-	1.4E-03	mg/kg	1.4E-03	mg/kg	M	8.6E-11	mg/kg-day	NA	NA	NA	NA	NA
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	3.3E-05	mg/kg	3.3E-05	mg/kg	M	1.5E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	4.0E+00	mg/kg	4.0E+00	mg/kg	M	1.8E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	6.1E-04
	Chromium (total)	1.7E+01	mg/kg	1.7E+01	mg/kg	M	0.0E+00	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	0.0E+00
	Lead	2.7E+01	mg/kg	2.7E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	9.8E-02	mg/kg	9.8E-02	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ P	4.5E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
** Chemical of potential concern in AOC, but not detected in this exposure area.
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Above Lake Charles
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 7.3
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	PAHs												
	Benzo(a)anthracene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	6.9E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	2.6E-01	mg/kg	2.6E-01	mg/kg	M	6.6E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	3.5E-01	mg/kg	3.5E-01	mg/kg	M	8.9E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1.2E-01	mg/kg	1.2E-01	mg/kg	M	3.0E-08	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	3.9E-01	mg/kg	3.9E-01	mg/kg	M	9.9E-08	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	6.4E-02	mg/kg	6.4E-02	mg/kg	M	1.6E-08	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	1.4E-01	mg/kg	1.4E-01	mg/kg	M	3.5E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	6.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254 **												
	BHC, delta-	1.4E-03	mg/kg	1.4E-03	mg/kg	M	3.6E-10	mg/kg-day	NA	NA	NA	NA	NA
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	3.3E-05	mg/kg	3.3E-05	mg/kg	M	8.5E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	4.0E+00	mg/kg	4.0E+00	mg/kg	M	1.0E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	3.4E-03
	Chromium (total)	1.7E+01	mg/kg	1.7E+01	mg/kg	M	4.4E-06	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	1.5E-03
	Lead	2.7E+01	mg/kg	2.7E+01	mg/kg	M	6.9E-06	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	9.8E-02	mg/kg	9.8E-02	mg/kg	M	2.5E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	PAHs												
	Benzo(a)anthracene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	6.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	2.6E-01	mg/kg	2.6E-01	mg/kg	M	6.4E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	3.5E-01	mg/kg	3.5E-01	mg/kg	M	8.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1.2E-01	mg/kg	1.2E-01	mg/kg	M	2.9E-08	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	3.9E-01	mg/kg	3.9E-01	mg/kg	M	9.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	6.4E-02	mg/kg	6.4E-02	mg/kg	M	1.6E-08	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	1.4E-01	mg/kg	1.4E-01	mg/kg	M	3.4E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	6.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254 **												
	BHC, delta-	1.4E-03	mg/kg	1.4E-03	mg/kg	M	1.1E-10	mg/kg-day	NA	NA	NA	NA	NA
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	3.3E-05	mg/kg	3.3E-05	mg/kg	M	1.9E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	4.0E+00	mg/kg	4.0E+00	mg/kg	M	2.3E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	7.6E-04
	Chromium (total)	1.7E+01	mg/kg	1.7E+01	mg/kg	M	0.0E+00	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	0.0E+00
	Lead	2.7E+01	mg/kg	2.7E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	9.8E-02	mg/kg	9.8E-02	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ P	5.6E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
** Chemical of potential concern in AOC, but not detected in this exposure area.
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Lake Charles
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.4
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	PAHs												
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	8.5E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	3.3E-01	mg/kg	3.3E-01	mg/kg	M	6.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	3.6E-01	mg/kg	3.6E-01	mg/kg	M	7.3E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1.5E-01	mg/kg	1.5E-01	mg/kg	M	3.0E-08	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	1.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene **												
	Indeno(1,2,3-cd)pyrene	1.8E-01	mg/kg	1.8E-01	mg/kg	M	3.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	5.9E-01	mg/kg	5.9E-01	mg/kg	M	1.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254 **												
	BHC, delta- **												
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	2.3E-05	mg/kg	2.3E-05	mg/kg	M	4.6E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	5.9E+00	mg/kg	5.9E+00	mg/kg	M	1.2E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	4.0E-03
	Chromium (total)	2.7E+01	mg/kg	2.7E+01	mg/kg	M	5.4E-06	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	1.8E-03
	Lead	4.5E+01	mg/kg	4.5E+01	mg/kg	M	9.1E-06	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	7.2E-02	mg/kg	7.2E-02	mg/kg	M	1.5E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	PAHs												
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	8.4E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	3.3E-01	mg/kg	3.3E-01	mg/kg	M	6.6E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	3.6E-01	mg/kg	3.6E-01	mg/kg	M	7.2E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1.5E-01	mg/kg	1.5E-01	mg/kg	M	3.0E-08	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	1.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene **												
	Indeno(1,2,3-cd)pyrene	1.8E-01	mg/kg	1.8E-01	mg/kg	M	3.6E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	5.9E-01	mg/kg	5.9E-01	mg/kg	M	1.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254 **												
	BHC, delta- **												
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	2.3E-05	mg/kg	2.3E-05	mg/kg	M	1.0E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	5.9E+00	mg/kg	5.9E+00	mg/kg	M	2.7E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	9.0E-04
	Chromium (total)	2.7E+01	mg/kg	2.7E+01	mg/kg	M	0.0E+00	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	0.0E+00
	Lead	4.5E+01	mg/kg	4.5E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	7.2E-02	mg/kg	7.2E-02	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ P	6.7E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
** Chemical of potential concern in AOC, but not detected in this exposure area.
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Lake Charles
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 7.5
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	PAHs												
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	1.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	3.3E-01	mg/kg	3.3E-01	mg/kg	M	8.4E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	3.6E-01	mg/kg	3.6E-01	mg/kg	M	9.2E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1.5E-01	mg/kg	1.5E-01	mg/kg	M	3.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	1.3E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene **												
	Indeno(1,2,3-cd)pyrene	1.8E-01	mg/kg	1.8E-01	mg/kg	M	4.6E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	5.9E-01	mg/kg	5.9E-01	mg/kg	M	1.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254 **												
	BHC, delta- **												
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	2.3E-05	mg/kg	2.3E-05	mg/kg	M	5.8E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	5.9E+00	mg/kg	5.9E+00	mg/kg	M	1.5E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	5.0E-03
	Chromium (total)	2.7E+01	mg/kg	2.7E+01	mg/kg	M	6.8E-06	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	2.3E-03
	Lead	4.5E+01	mg/kg	4.5E+01	mg/kg	M	1.1E-05	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	7.2E-02	mg/kg	7.2E-02	mg/kg	M	1.8E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	PAHs												
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	1.0E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	3.3E-01	mg/kg	3.3E-01	mg/kg	M	8.2E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	3.6E-01	mg/kg	3.6E-01	mg/kg	M	9.0E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1.5E-01	mg/kg	1.5E-01	mg/kg	M	3.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	1.3E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene **												
	Indeno(1,2,3-cd)pyrene	1.8E-01	mg/kg	1.8E-01	mg/kg	M	4.5E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	5.9E-01	mg/kg	5.9E-01	mg/kg	M	1.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254 **												
	BHC, delta- **												
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	2.3E-05	mg/kg	2.3E-05	mg/kg	M	1.3E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	5.9E+00	mg/kg	5.9E+00	mg/kg	M	3.4E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	1.1E-03
	Chromium (total)	2.7E+01	mg/kg	2.7E+01	mg/kg	M	0.0E+00	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	0.0E+00
	Lead	4.5E+01	mg/kg	4.5E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	7.2E-02	mg/kg	7.2E-02	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ P	8.4E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
** Chemical of potential concern in AOC, but not detected in this exposure area.
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Clooney Island Loop
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.6
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	PAHs												
	Benzo(a)anthracene	4.4E-01	mg/kg	4.4E-01	mg/kg	M	8.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	8.4E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	9.4E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	3.4E-01	mg/kg	3.4E-01	mg/kg	M	6.9E-08	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	5.0E-01	mg/kg	5.0E-01	mg/kg	M	1.0E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	1.5E-01	mg/kg	1.5E-01	mg/kg	M	3.0E-08	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	3.2E-01	mg/kg	3.2E-01	mg/kg	M	6.4E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	4.9E-01	mg/kg	4.9E-01	mg/kg	M	1.0E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	1.3E-01	mg/kg	1.3E-01	mg/kg	M	2.6E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	1.3E-03
	BHC, delta- **												
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	6.2E-05	mg/kg	6.2E-05	mg/kg	M	1.3E-11	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	4.3E+00	mg/kg	4.3E+00	mg/kg	M	8.6E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	2.9E-03
	Chromium (total)	4.2E+01	mg/kg	4.2E+01	mg/kg	M	8.6E-06	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	2.9E-03
	Lead	2.3E+01	mg/kg	2.3E+01	mg/kg	M	4.7E-06	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	2.6E-01	mg/kg	2.6E-01	mg/kg	M	5.3E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	PAHs												
	Benzo(a)anthracene	4.4E-01	mg/kg	4.4E-01	mg/kg	M	8.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	8.2E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	9.2E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	3.4E-01	mg/kg	3.4E-01	mg/kg	M	6.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	5.0E-01	mg/kg	5.0E-01	mg/kg	M	9.9E-08	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	1.5E-01	mg/kg	1.5E-01	mg/kg	M	3.0E-08	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	3.2E-01	mg/kg	3.2E-01	mg/kg	M	6.3E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	4.9E-01	mg/kg	4.9E-01	mg/kg	M	9.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	1.3E-01	mg/kg	1.3E-01	mg/kg	M	2.7E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	1.4E-03
	BHC, delta- **												
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	6.2E-05	mg/kg	6.2E-05	mg/kg	M	2.9E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	4.3E+00	mg/kg	4.3E+00	mg/kg	M	2.0E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	6.5E-04
	Chromium (total)	4.2E+01	mg/kg	4.2E+01	mg/kg	M	0.0E+00	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	0.0E+00
	Lead	2.3E+01	mg/kg	2.3E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	2.6E-01	mg/kg	2.6E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pa	9.0E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
** Chemical of \potential concern in AOC, but not detected in this exposure area.
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Below Clooney Island Loop
Receptor Population:	Commercial Fisher
Receptor Age:	Individual (>7)

TABLE 7.7
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	PAHs												
	Benzo(a)anthracene	4.8E-01	mg/kg	4.8E-01	mg/kg	M	3.7E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	4.5E-01	mg/kg	4.5E-01	mg/kg	M	3.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	4.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	3.7E-01	mg/kg	3.7E-01	mg/kg	M	2.9E-07	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	1.1E+00	mg/kg	1.1E+00	mg/kg	M	8.3E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	1.8E-07	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	2.5E-01	mg/kg	2.5E-01	mg/kg	M	1.9E-07	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	1.8E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	2.9E-02	mg/kg	2.9E-02	mg/kg	M	2.2E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	1.1E-03
	BHC, delta-	8.8E-03	mg/kg	8.8E-03	mg/kg	M	6.8E-09	mg/kg-day	NA	NA	NA	NA	NA
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	2.1E-05	mg/kg	2.1E-05	mg/kg	M	1.6E-11	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	3.1E+00	mg/kg	3.1E+00	mg/kg	M	2.3E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	7.8E-03
	Chromium (total)	1.5E+01	mg/kg	1.5E+01	mg/kg	M	1.2E-05	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	3.9E-03
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	2.8E-05	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.0E-01	mg/kg	1.0E-01	mg/kg	M	7.9E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	PAHs												
	Benzo(a)anthracene	4.8E-01	mg/kg	4.8E-01	mg/kg	M	6.7E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	4.5E-01	mg/kg	4.5E-01	mg/kg	M	6.3E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	7.4E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	3.7E-01	mg/kg	3.7E-01	mg/kg	M	5.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	1.1E+00	mg/kg	1.1E+00	mg/kg	M	1.5E-06	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	3.3E-07	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	2.5E-01	mg/kg	2.5E-01	mg/kg	M	3.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	3.3E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	2.9E-02	mg/kg	2.9E-02	mg/kg	M	4.4E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	2.2E-03
	BHC, delta-	8.8E-03	mg/kg	8.8E-03	mg/kg	M	3.8E-09	mg/kg-day	NA	NA	NA	NA	NA
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	2.1E-05	mg/kg	2.1E-05	mg/kg	M	6.7E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	3.1E+00	mg/kg	3.1E+00	mg/kg	M	9.8E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	3.3E-03
	Chromium (total)	1.5E+01	mg/kg	1.5E+01	mg/kg	M	0.0E+00	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	0.0E+00
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.0E-01	mg/kg	1.0E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ P	1.8E-02

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Below Clooney Island Loop
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.8
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	PAHs												
	Benzo(a)anthracene	4.8E-01	mg/kg	4.8E-01	mg/kg	M	9.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	4.5E-01	mg/kg	4.5E-01	mg/kg	M	9.2E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	1.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	3.7E-01	mg/kg	3.7E-01	mg/kg	M	7.6E-08	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	1.1E+00	mg/kg	1.1E+00	mg/kg	M	2.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	4.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	2.5E-01	mg/kg	2.5E-01	mg/kg	M	5.0E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	4.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	2.9E-02	mg/kg	2.9E-02	mg/kg	M	5.9E-09	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	3.0E-04
	BHC, delta-	8.8E-03	mg/kg	8.8E-03	mg/kg	M	1.8E-09	mg/kg-day	NA	NA	NA	NA	NA
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	2.1E-05	mg/kg	2.1E-05	mg/kg	M	4.2E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	3.1E+00	mg/kg	3.1E+00	mg/kg	M	6.2E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	2.1E-03
	Chromium (total)	1.5E+01	mg/kg	1.5E+01	mg/kg	M	3.1E-06	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	1.0E-03
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	7.3E-06	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.0E-01	mg/kg	1.0E-01	mg/kg	M	2.1E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	PAHs												
	Benzo(a)anthracene	4.8E-01	mg/kg	4.8E-01	mg/kg	M	9.6E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	4.5E-01	mg/kg	4.5E-01	mg/kg	M	9.0E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	1.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	3.7E-01	mg/kg	3.7E-01	mg/kg	M	7.4E-08	mg/kg-day	NA	NA	NA	NA	NA
	Chrysene	1.1E+00	mg/kg	1.1E+00	mg/kg	M	2.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	4.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	2.5E-01	mg/kg	2.5E-01	mg/kg	M	4.9E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	4.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	2.9E-02	mg/kg	2.9E-02	mg/kg	M	6.2E-09	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	3.1E-04
	BHC, delta-	8.8E-03	mg/kg	8.8E-03	mg/kg	M	5.4E-10	mg/kg-day	NA	NA	NA	NA	NA
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	2.1E-05	mg/kg	2.1E-05	mg/kg	M	9.5E-13	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	3.1E+00	mg/kg	3.1E+00	mg/kg	M	1.4E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	4.7E-04
	Chromium (total)	1.5E+01	mg/kg	1.5E+01	mg/kg	M	0.0E+00	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	0.0E+00
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.0E-01	mg/kg	1.0E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ P	4.2E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Lake Prien
Receptor Population:	Commercial Fisher
Receptor Age:	Individual (>7)

TABLE 7.9
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	SVOCs												
	bis(2-Ethylhexyl) phthalate	5.8E-01	mg/kg	5.8E-01	mg/kg	M	4.5E-07	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	2.2E-05
	Methylphenol, 3- & 4- **												
	PAHs												
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	3.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	3.3E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	3.3E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	3.6E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	1.3E-01	mg/kg	1.3E-01	mg/kg	M	1.0E-07	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	3.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	1.8E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	5.1E-02	mg/kg	5.1E-02	mg/kg	M	3.9E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	1.9E-03
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	3.1E-05	mg/kg	3.1E-05	mg/kg	M	2.3E-11	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	5.6E+00	mg/kg	5.6E+00	mg/kg	M	4.3E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	1.4E-02
	Lead	3.3E+01	mg/kg	3.3E+01	mg/kg	M	2.5E-05	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	9.3E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	SVOCs												
	bis(2-Ethylhexyl) phthalate	5.8E-01	mg/kg	5.8E-01	mg/kg	M	6.3E-07	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	3.1E-05
	Methylphenol, 3- & 4- **												
	PAHs												
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	5.9E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	6.0E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	6.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	6.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	1.3E-01	mg/kg	1.3E-01	mg/kg	M	1.8E-07	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	5.7E-07	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	3.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	5.1E-02	mg/kg	5.1E-02	mg/kg	M	7.6E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	3.8E-03
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	3.1E-05	mg/kg	3.1E-05	mg/kg	M	9.9E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	5.6E+00	mg/kg	5.6E+00	mg/kg	M	1.8E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	6.0E-03
	Lead	3.3E+01	mg/kg	3.3E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pa	2.6E-02

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
** Chemical of potential concern in AOC, but not detected in this exposure area.
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Lake Prien
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.10
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	SVOCs												
	bis(2-Ethylhexyl) phthalate	5.8E-01	mg/kg	5.8E-01	mg/kg	M	1.2E-07	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	5.9E-06
	Methylphenol, 3- & 4- **												
	PAHs												
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	8.5E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	8.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	8.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	9.5E-08	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	1.3E-01	mg/kg	1.3E-01	mg/kg	M	2.6E-08	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	8.3E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	4.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	5.1E-02	mg/kg	5.1E-02	mg/kg	M	1.0E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	5.1E-04
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	3.1E-05	mg/kg	3.1E-05	mg/kg	M	6.2E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	5.6E+00	mg/kg	5.6E+00	mg/kg	M	1.1E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	3.8E-03
	Lead	3.3E+01	mg/kg	3.3E+01	mg/kg	M	6.7E-06	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	2.5E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	SVOCs												
	bis(2-Ethylhexyl) phthalate	5.8E-01	mg/kg	5.8E-01	mg/kg	M	8.9E-08	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	4.5E-06
	Methylphenol, 3- & 4- **												
	PAHs												
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	8.3E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	8.6E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	8.6E-08	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	9.3E-08	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	1.3E-01	mg/kg	1.3E-01	mg/kg	M	2.6E-08	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	8.2E-08	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	4.6E-08	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	5.1E-02	mg/kg	5.1E-02	mg/kg	M	1.1E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	5.4E-04
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	3.1E-05	mg/kg	3.1E-05	mg/kg	M	1.4E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	5.6E+00	mg/kg	5.6E+00	mg/kg	M	2.6E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	8.5E-04
	Lead	3.3E+01	mg/kg	3.3E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pathways	5.7E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
** Chemical of potential concern in AOC, but not detected in this exposure area.
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Lake Prien
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 7.11
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	SVOCs												
	bis(2-Ethylhexyl) phthalate	5.8E-01	mg/kg	5.8E-01	mg/kg	M	1.5E-07	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	7.4E-06
	Methylphenol, 3- & 4- **												
	PAHs												
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	1.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	1.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	1.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	1.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	1.3E-01	mg/kg	1.3E-01	mg/kg	M	3.3E-08	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	1.0E-07	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	5.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	5.1E-02	mg/kg	5.1E-02	mg/kg	M	1.3E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	6.4E-04
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	3.1E-05	mg/kg	3.1E-05	mg/kg	M	7.8E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	5.6E+00	mg/kg	5.6E+00	mg/kg	M	1.4E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	4.7E-03
	Lead	3.3E+01	mg/kg	3.3E+01	mg/kg	M	8.3E-06	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	3.1E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	SVOCs												
	bis(2-Ethylhexyl) phthalate	5.8E-01	mg/kg	5.8E-01	mg/kg	M	1.1E-07	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	5.6E-06
	Methylphenol, 3- & 4- **												
	PAHs												
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	1.0E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	1.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	1.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	1.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	1.3E-01	mg/kg	1.3E-01	mg/kg	M	3.2E-08	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	1.0E-07	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	5.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	5.1E-02	mg/kg	5.1E-02	mg/kg	M	1.4E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	6.8E-04
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	3.1E-05	mg/kg	3.1E-05	mg/kg	M	1.8E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	5.6E+00	mg/kg	5.6E+00	mg/kg	M	3.2E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	1.1E-03
	Lead	3.3E+01	mg/kg	3.3E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pathways	7.1E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
** Chemical of potential concern in AOC, but not detected in this exposure area.
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Remainder of Lower Calcasieu
Receptor Population:	Commercial Fisher
Receptor Age:	Individual (>7)

TABLE 7.12
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	SVOCs												
	bis(2-Ethylhexyl) phthalate	7.2E-01	mg/kg	7.2E-01	mg/kg	M	5.5E-07	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	2.8E-05
	Methylphenol, 3- & 4-	1.4E-01	mg/kg	1.4E-01	mg/kg	M	1.1E-07	mg/kg-day	NA	NA	NA	NA	NA
	PAHs												
	Benzo(a)anthracene	8.3E-01	mg/kg	8.3E-01	mg/kg	M	6.4E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	6.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	6.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	7.3E-01	mg/kg	7.3E-01	mg/kg	M	5.6E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	7.0E-01	mg/kg	7.0E-01	mg/kg	M	5.4E-07	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	6.8E-01	mg/kg	6.8E-01	mg/kg	M	5.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	8.8E-01	mg/kg	8.8E-01	mg/kg	M	6.8E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	6.2E-02	mg/kg	6.2E-02	mg/kg	M	4.8E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	2.4E-03
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	1.4E-05	mg/kg	1.4E-05	mg/kg	M	1.1E-11	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	4.7E+00	mg/kg	4.7E+00	mg/kg	M	3.6E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	1.2E-02
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	2.7E-05	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.8E-01	mg/kg	1.8E-01	mg/kg	M	1.4E-07	mg/kg-day	NA	NA	NA	NA	NA
Dermal	SVOCs												
	bis(2-Ethylhexyl) phthalate	7.2E-01	mg/kg	7.2E-01	mg/kg	M	7.7E-07	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	3.9E-05
	Methylphenol, 3- & 4-	1.4E-01	mg/kg	1.4E-01	mg/kg	M	1.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	PAHs												
	Benzo(a)anthracene	8.3E-01	mg/kg	8.3E-01	mg/kg	M	1.2E-06	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	1.1E-06	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	1.1E-06	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	7.3E-01	mg/kg	7.3E-01	mg/kg	M	1.0E-06	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	7.0E-01	mg/kg	7.0E-01	mg/kg	M	9.8E-07	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	6.8E-01	mg/kg	6.8E-01	mg/kg	M	9.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	8.8E-01	mg/kg	8.8E-01	mg/kg	M	1.2E-06	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	6.2E-02	mg/kg	6.2E-02	mg/kg	M	9.4E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	4.7E-03
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	1.4E-05	mg/kg	1.4E-05	mg/kg	M	4.6E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	4.7E+00	mg/kg	4.7E+00	mg/kg	M	1.5E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	5.1E-03
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.8E-01	mg/kg	1.8E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pathways	2.4E-02

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Remainder of Lower Calcasieu
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.13
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	SVOCs												
	bis(2-Ethylhexyl) phthalate	7.2E-01	mg/kg	7.2E-01	mg/kg	M	1.5E-07	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	7.3E-06
	Methylphenol, 3- & 4-	1.4E-01	mg/kg	1.4E-01	mg/kg	M	2.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	PAHs												
	Benzo(a)anthracene	8.3E-01	mg/kg	8.3E-01	mg/kg	M	1.7E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	1.6E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	1.7E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	7.3E-01	mg/kg	7.3E-01	mg/kg	M	1.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	7.0E-01	mg/kg	7.0E-01	mg/kg	M	1.4E-07	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	6.8E-01	mg/kg	6.8E-01	mg/kg	M	1.4E-07	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	8.8E-01	mg/kg	8.8E-01	mg/kg	M	1.8E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	6.2E-02	mg/kg	6.2E-02	mg/kg	M	1.3E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	6.3E-04
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	1.4E-05	mg/kg	1.4E-05	mg/kg	M	2.9E-12	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	4.7E+00	mg/kg	4.7E+00	mg/kg	M	9.6E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	3.2E-03
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	7.3E-06	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.8E-01	mg/kg	1.8E-01	mg/kg	M	3.7E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	SVOCs												
	bis(2-Ethylhexyl) phthalate	7.2E-01	mg/kg	7.2E-01	mg/kg	M	1.1E-07	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	5.5E-06
	Methylphenol, 3- & 4-	1.4E-01	mg/kg	1.4E-01	mg/kg	M	2.1E-08	mg/kg-day	NA	NA	NA	NA	NA
	PAHs												
	Benzo(a)anthracene	8.3E-01	mg/kg	8.3E-01	mg/kg	M	1.7E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(a)pyrene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	1.6E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	1.6E-07	mg/kg-day	NA	NA	NA	NA	NA
	Benzo(g,h,i)perylene	7.3E-01	mg/kg	7.3E-01	mg/kg	M	1.5E-07	mg/kg-day	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	7.0E-01	mg/kg	7.0E-01	mg/kg	M	1.4E-07	mg/kg-day	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	6.8E-01	mg/kg	6.8E-01	mg/kg	M	1.4E-07	mg/kg-day	NA	NA	NA	NA	NA
	Phenanthrene	8.8E-01	mg/kg	8.8E-01	mg/kg	M	1.8E-07	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	6.2E-02	mg/kg	6.2E-02	mg/kg	M	1.3E-08	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	6.7E-04
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	1.4E-05	mg/kg	1.4E-05	mg/kg	M	6.6E-13	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	4.7E+00	mg/kg	4.7E+00	mg/kg	M	2.2E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	7.2E-04
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.8E-01	mg/kg	1.8E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pathways	5.2E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Bayou d'Inde
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.14
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Pesticides/PCBs												
	BHC, delta-	1.8E-05	mg/L	1.8E-05	mg/L	M	3.7E-09	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	1.9E-03	mg/L	1.9E-03	mg/L	M	3.8E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	1.3E-03
	Lead	3.8E-03	mg/L	3.8E-03	mg/L	M	7.8E-07	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.4E-04	mg/L	1.4E-04	mg/L	M	2.9E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	Pesticides/PCBs												
	BHC, delta-	1.8E-05	mg/L	1.8E-05	mg/L	M	0.0E+00	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	1.9E-03	mg/L	1.9E-03	mg/L	M	8.1E-08	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	2.7E-04
	Lead	3.8E-03	mg/L	3.8E-03	mg/L	M	1.7E-08	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	1.4E-04	mg/L	1.4E-04	mg/L	M	6.1E-09	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pathways	1.5E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/L = milligrams per liter
mg/kg-day = milligrams per kilogram per day
NA = Not Available
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because no permeability coefficient is available (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Above Lake Charles
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.15

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Metals												
	Arsenic **												
	Lead **												
Dermal	Metals												
	Arsenic **												
	Lead **												
												Total Hazard Index Across All Exposure Routes/ Pathways	0.0E+00

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Above Lake Charles
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 7.16

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Metals												
	Arsenic **												
	Lead **												
Dermal	Metals												
	Arsenic **												
	Lead **												
									Total Hazard Index Across All Exposure Routes/ Pathways				0.0E+00

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Lake Charles
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.17

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Metals												
	Arsenic	6.4E-02	mg/L	6.4E-02	mg/L	M	1.3E-05	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	4.3E-02
	Lead	2.6E-02	mg/L	2.6E-02	mg/L	M	5.3E-06	mg/kg-day	NA	NA	NA	NA	NA
Dermal	Metals												
	Arsenic	6.4E-02	mg/L	6.4E-02	mg/L	M	2.8E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	9.2E-03
	Lead	2.6E-02	mg/L	2.6E-02	mg/L	M	1.1E-07	mg/kg-day	NA	NA	NA	NA	NA
									Total Hazard Index Across All Exposure Routes/ Pathways				5.3E-02

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Lake Charles
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 7.18

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Metals												
	Arsenic	6.4E-02	mg/L	6.4E-02	mg/L	M	2.4E-05	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	8.1E-02
	Lead	2.6E-02	mg/L	2.6E-02	mg/L	M	9.9E-06	mg/kg-day	NA	NA	NA	NA	NA
Dermal	Metals												
	Arsenic	6.4E-02	mg/L	6.4E-02	mg/L	M	1.0E-05	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	3.4E-02
	Lead	2.6E-02	mg/L	2.6E-02	mg/L	M	4.2E-07	mg/kg-day	NA	NA	NA	NA	NA
									Total Hazard Index Across All Exposure Routes/ Pathways				1.2E-01

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Clooney Island Loop
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.19

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Metals												
	Arsenic	4.1E-03	mg/L	4.1E-03	mg/L	M	8.3E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	2.8E-03
	Lead	7.0E-04	mg/L	7.0E-04	mg/L	M	1.4E-07	mg/kg-day			NA	NA	NA
Dermal	Metals												
	Arsenic	4.1E-03	mg/L	4.1E-03	mg/L	M	1.8E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	5.9E-04
	Lead	7.0E-04	mg/L	7.0E-04	mg/L	M	3.0E-09	mg/kg-day			NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pathways	3.4E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Below Clooney Island Loop
Receptor Population:	Commercial Fisher
Receptor Age:	Individual (>7)

TABLE 7.20

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Metals												
	Arsenic	1.5E-02	mg/L	1.5E-02	mg/L	M	3.9E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	1.3E-02
	Lead	1.2E-03	mg/L	1.2E-03	mg/L	M	3.2E-08	mg/kg-day	NA	NA	NA	NA	NA
									Total Hazard Index Across All Exposure Routes/ Pathways				6.9E-02

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Below Clooney Island Loop
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.21

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Metals												
	Arsenic	1.5E-02	mg/L	1.5E-02	mg/L	M	3.0E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	1.0E-02
	Lead	1.2E-03	mg/L	1.2E-03	mg/L	M	2.4E-07	mg/kg-day	NA	NA	NA	NA	NA
Dermal	Metals												
	Arsenic	1.5E-02	mg/L	1.5E-02	mg/L	M	6.4E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	2.1E-03
	Lead	1.2E-03	mg/L	1.2E-03	mg/L	M	5.2E-09	mg/kg-day	NA	NA	NA	NA	NA
									Total Hazard Index Across All Exposure Routes/ Pathways				6.4E-02

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	LC - Lake Prien
Receptor Population:	Commercial Fisher
Receptor Age:	Individual (>7)

TABLE 7.22
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Dermal	Metals												
	Arsenic	6.3E-03	mg/L	6.3E-03	mg/L	M	1.7E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	5.6E-03
	Lead	1.1E-03	mg/L	1.1E-03	mg/L	M	2.9E-08	mg/kg-day	NA	NA	NA	NA	NA
	Mercury **												
												Total Hazard Index Across All Exposure Routes/ Pathways	5.6E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/L = milligrams per liter
mg/kg-day = milligrams per kilogram per day
NA = Not Available
** Chemical of potential concern in AOC, but not detected in this exposure area.

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	LC - Lake Prien
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.23
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Metals												
	Arsenic	6.3E-03	mg/L	6.3E-03	mg/L	M	1.3E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	4.3E-03
	Lead	1.1E-03	mg/L	1.1E-03	mg/L	M	2.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Mercury **												
Dermal	Metals												
	Arsenic	6.3E-03	mg/L	6.3E-03	mg/L	M	2.7E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	9.0E-04
	Lead	1.1E-03	mg/L	1.1E-03	mg/L	M	4.7E-09	mg/kg-day	NA	NA	NA	NA	NA
	Mercury **												
												Total Hazard Index Across All Exposure Routes/ Pathways	5.2E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/L = milligrams per liter
mg/kg-day = milligrams per kilogram per day
NA = Not Available
** Chemical of potential concern in AOC, but not detected in this exposure area.

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	LC - Lake Prien
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 7.24
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Metals												
	Arsenic	6.3E-03	mg/L	6.3E-03	mg/L	M	2.4E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	8.0E-03
	Lead	1.1E-03	mg/L	1.1E-03	mg/L	M	4.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Mercury **												
Dermal	Metals												
	Arsenic	6.3E-03	mg/L	6.3E-03	mg/L	M	1.0E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	3.4E-03
	Lead	1.1E-03	mg/L	1.1E-03	mg/L	M	1.8E-08	mg/kg-day	NA	NA	NA	NA	NA
	Mercury **												
												Total Hazard Index Across All Exposure Routes/ Pathways	1.1E-02

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/L = milligrams per liter
mg/kg-day = milligrams per kilogram per day
NA = Not Available
** Chemical of potential concern in AOC, but not detected in this exposure area.

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	LC - Remainder of Lower Calcasieu
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 7.25
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Metals												
	Arsenic	3.3E-03	mg/L	3.3E-03	mg/L	M	1.3E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	4.2E-03
	Lead	2.1E-03	mg/L	2.1E-03	mg/L	M	7.9E-07	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	6.1E-05	mg/L	6.1E-05	mg/L	M	2.3E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	Metals												
	Arsenic	3.3E-03	mg/L	3.3E-03	mg/L	M	5.3E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	1.8E-03
	Lead	2.1E-03	mg/L	2.1E-03	mg/L	M	3.4E-08	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	6.1E-05	mg/L	6.1E-05	mg/L	M	9.8E-09	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pathways	5.9E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/L = milligrams per liter
mg/kg-day = milligrams per kilogram per day
NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	LC - Remainder of Lower Calcasieu
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 7.26
CALCULATION OF NON-CANCER HAZARDS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Metals												
	Arsenic	3.3E-03	mg/L	3.3E-03	mg/L	M	6.7E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	2.2E-03
	Lead	2.1E-03	mg/L	2.1E-03	mg/L	M	4.2E-07	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	6.1E-05	mg/L	6.1E-05	mg/L	M	1.2E-08	mg/kg-day	NA	NA	NA	NA	NA
Dermal	Metals												
	Arsenic	3.3E-03	mg/L	3.3E-03	mg/L	M	1.4E-07	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	4.7E-04
	Lead	2.1E-03	mg/L	2.1E-03	mg/L	M	9.0E-09	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	6.1E-05	mg/L	6.1E-05	mg/L	M	2.6E-09	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pathways	2.7E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/L = milligrams per liter
mg/kg-day = milligrams per kilogram per day
NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Entire Estuary (Except Bayou Verdine)
Receptor Population:	Resident
Receptor Age:	Individual (>7)

TABLE 7.27

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

ENTIRE ESTUARY (EXCEPT BAYOU VERDINE)

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Pesticides/PCBs												
	4,4'-DDE	5.7E-03	mg/kg	5.7E-03	mg/kg	M	3.0E-06	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	6.0E-03
	Aldrin	6.0E-03	mg/kg	6.0E-03	mg/kg	M	3.2E-06	mg/kg-day	3.0E-05	mg/kg/day	NA	NA	1.1E-01
	Aroclor-1254	2.3E-02	mg/kg	2.3E-02	mg/kg	M	1.2E-05	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	6.1E-01
	BHC, alpha-	5.1E-03	mg/kg	5.1E-03	mg/kg	M	2.7E-06	mg/kg-day	NA	NA	NA	NA	NA
	BHC, beta-	7.0E-03	mg/kg	7.0E-03	mg/kg	M	3.7E-06	mg/kg-day	NA	NA	NA	NA	NA
	BHC, gamma- (Lindane)	3.7E-03	mg/kg	3.7E-03	mg/kg	M	1.9E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	6.5E-03
	Chlordane, alpha-	5.8E-03	mg/kg	5.8E-03	mg/kg	M	3.0E-06	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	6.1E-03
	Chlordane, gamma-	5.0E-03	mg/kg	5.0E-03	mg/kg	M	2.6E-06	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	5.2E-03
	Dieldrin	5.6E-03	mg/kg	5.6E-03	mg/kg	M	2.9E-06	mg/kg-day	5.0E-05	mg/kg/day	NA	NA	5.9E-02
	Endrin aldehyde	2.9E-03	mg/kg	2.9E-03	mg/kg	M	1.5E-06	mg/kg-day	NA	NA	NA	NA	NA
	Heptachlor	5.2E-03	mg/kg	5.2E-03	mg/kg	M	2.7E-06	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	5.5E-03
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	7.5E-07	mg/kg	7.5E-07	mg/kg	M	4.0E-10	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Antimony	5.0E-02	mg/kg	5.0E-02	mg/kg	M	2.6E-05	mg/kg-day	4.0E-04	mg/kg/day	NA	NA	6.6E-02
	Arsenic	1.0E-01	mg/kg	1.0E-01	mg/kg	M	5.5E-05	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	1.8E-01
	Barium	3.6E+00	mg/kg	3.6E+00	mg/kg	M	1.9E-03	mg/kg-day	7.0E-02	mg/kg/day	NA	NA	2.7E-02
	Chromium (total)	1.8E-01	mg/kg	1.8E-01	mg/kg	M	9.7E-05	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	3.2E-02
	Lead	1.8E-01	mg/kg	1.8E-01	mg/kg	M	9.6E-05	mg/kg-day	NA	NA	NA	NA	NA
	Manganese	3.6E+00	mg/kg	3.6E+00	mg/kg	M	1.9E-03	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	9.3E-02
	Mercury	1.7E-01	mg/kg	1.7E-01	mg/kg	M	8.9E-05	mg/kg-day	NA	NA	NA	NA	NA
	Nickel	4.8E-01	mg/kg	4.8E-01	mg/kg	M	2.5E-04	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	1.3E-02
	Selenium	9.9E-01	mg/kg	9.9E-01	mg/kg	M	5.2E-04	mg/kg-day	5.0E-03	mg/kg/day	NA	NA	1.0E-01
									Total Hazard Index Across All Exposure Routes/ Pathways				1.3E+00

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Entire Estuary (Except Bayou Verdine)
Receptor Population:	Resident (Subsistence)
Receptor Age:	Individual (>7)

TABLE 7.28

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

ENTIRE ESTUARY (EXCEPT BAYOU VERDINE)

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Pesticides/PCBs												
	4,4'-DDE	5.7E-03	mg/kg	5.7E-03	mg/kg	M	8.0E-06	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	1.6E-02
	Aldrin	6.0E-03	mg/kg	6.0E-03	mg/kg	M	8.5E-06	mg/kg-day	3.0E-05	mg/kg/day	NA	NA	2.8E-01
	Aroclor-1254	2.3E-02	mg/kg	2.3E-02	mg/kg	M	3.3E-05	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	1.6E+00
	BHC, alpha-	5.1E-03	mg/kg	5.1E-03	mg/kg	M	7.3E-06	mg/kg-day	NA	NA	NA	NA	NA
	BHC, beta-	7.0E-03	mg/kg	7.0E-03	mg/kg	M	9.9E-06	mg/kg-day	NA	NA	NA	NA	NA
	BHC, gamma- (Lindane)	3.7E-03	mg/kg	3.7E-03	mg/kg	M	5.2E-06	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	1.7E-02
	Chlordane, alpha-	5.8E-03	mg/kg	5.8E-03	mg/kg	M	8.1E-06	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	1.6E-02
	Chlordane, gamma-	5.0E-03	mg/kg	5.0E-03	mg/kg	M	7.0E-06	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	1.4E-02
	Dieldrin	5.6E-03	mg/kg	5.6E-03	mg/kg	M	7.9E-06	mg/kg-day	5.0E-05	mg/kg/day	NA	NA	1.6E-01
	Endrin aldehyde	2.9E-03	mg/kg	2.9E-03	mg/kg	M	4.1E-06	mg/kg-day	NA	NA	NA	NA	NA
	Heptachlor	5.2E-03	mg/kg	5.2E-03	mg/kg	M	7.3E-06	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	1.5E-02
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	7.5E-07	mg/kg	7.5E-07	mg/kg	M	1.1E-09	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Antimony	5.0E-02	mg/kg	5.0E-02	mg/kg	M	7.1E-05	mg/kg-day	4.0E-04	mg/kg/day	NA	NA	1.8E-01
	Arsenic	1.0E-01	mg/kg	1.0E-01	mg/kg	M	1.5E-04	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	4.9E-01
	Barium	3.6E+00	mg/kg	3.6E+00	mg/kg	M	5.1E-03	mg/kg-day	7.0E-02	mg/kg/day	NA	NA	7.3E-02
	Chromium (total)	1.8E-01	mg/kg	1.8E-01	mg/kg	M	2.6E-04	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	8.7E-02
	Lead	1.8E-01	mg/kg	1.8E-01	mg/kg	M	2.6E-04	mg/kg-day	NA	NA	NA	NA	NA
	Manganese	3.6E+00	mg/kg	3.6E+00	mg/kg	M	5.0E-03	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	2.5E-01
	Mercury	1.7E-01	mg/kg	1.7E-01	mg/kg	M	2.4E-04	mg/kg-day	NA	NA	NA	NA	NA
	Nickel	4.8E-01	mg/kg	4.8E-01	mg/kg	M	6.8E-04	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	3.4E-02
	Selenium	9.9E-01	mg/kg	9.9E-01	mg/kg	M	1.4E-03	mg/kg-day	5.0E-03	mg/kg/day	NA	NA	2.8E-01
									Total Hazard Index Across All Exposure Routes/ Pathways				3.6E+00

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Bayou Verdine
Receptor Population:	Resident
Receptor Age:	Individual (>7)

TABLE 7.29

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

BAYOU VERDINE

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Dioxins/Furans 2,3,7,8-TCDD Equivalents	6.7E-06	mg/kg	6.7E-06	mg/kg	M	1.6E-09	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pathways	0.0E+00

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Bayou Verdine
Receptor Population:	Resident (Subsistence)
Receptor Age:	Individual (>7)

TABLE 7.30

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

BAYOU VERDINE

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Dioxins/Furans 2,3,7,8-TCDD Equivalents	6.7E-06	mg/kg	6.7E-06	mg/kg	M	8.1E-09	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pathways	0.0E+00

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Bayou d'Inde
Receptor Population:	Resident
Receptor Age:	Individual (>7)

TABLE 7.31

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

BAYOU D'INDE

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	SVOCs												
	4-Nitrophenol	4.0E-02	mg/kg	4.0E-02	mg/kg	M	2.1E-05	mg/kg-day	8.0E-03	mg/kg/day	NA	NA	2.6E-03
	bis(2-Ethylhexyl) phthalate	1.1E+01	mg/kg	1.1E+01	mg/kg	M	6.0E-03	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	3.0E-01
	Di-n-butylphthalate	3.5E+00	mg/kg	3.5E+00	mg/kg	M	1.8E-03	mg/kg-day	1.0E-01	mg/kg/day	NA	NA	1.8E-02
	Di-n-octylphthalate	1.2E-01	mg/kg	1.2E-01	mg/kg	M	6.3E-05	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	3.2E-03
	Hexachlorobenzene	2.8E-02	mg/kg	2.8E-02	mg/kg	M	1.5E-05	mg/kg-day	8.0E-04	mg/kg/day	NA	NA	1.8E-02
	Pesticides/PCBs												
	4,4'-DDD	2.2E-02	mg/kg	2.2E-02	mg/kg	M	1.2E-05	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	2.3E-02
	4,4'-DDT	2.8E-02	mg/kg	2.8E-02	mg/kg	M	1.5E-05	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	3.0E-02
	Aldrin	1.0E-02	mg/kg	1.0E-02	mg/kg	M	5.3E-06	mg/kg-day	3.0E-05	mg/kg/day	NA	NA	1.8E-01
	Aroclor-1254	1.4E-01	mg/kg	1.4E-01	mg/kg	M	7.5E-05	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	3.8E+00
	BHC, beta-	4.0E-02	mg/kg	4.0E-02	mg/kg	M	2.1E-05	mg/kg-day	NA	NA	NA	NA	NA
	Endosulfan sulfate	1.1E-02	mg/kg	1.1E-02	mg/kg	M	5.8E-06	mg/kg-day	NA	NA	NA	NA	NA
	Endrin	2.0E-02	mg/kg	2.0E-02	mg/kg	M	1.1E-05	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	3.6E-02
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	2.5E-05	mg/kg	2.5E-05	mg/kg	M	1.3E-08	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	1.2E-01	mg/kg	1.2E-01	mg/kg	M	6.1E-05	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	2.0E-01
	Barium	9.8E+01	mg/kg	9.8E+01	mg/kg	M	5.1E-02	mg/kg-day	7.0E-02	mg/kg/day	NA	NA	7.3E-01
	Cadmium	3.8E-02	mg/kg	3.8E-02	mg/kg	M	2.0E-05	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	4.0E-02
	Chromium (total)	1.4E+00	mg/kg	1.4E+00	mg/kg	M	7.4E-04	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	2.5E-01
	Copper	1.6E+01	mg/kg	1.6E+01	mg/kg	M	8.6E-03	mg/kg-day	4.0E-02	mg/kg/day	NA	NA	2.2E-01
	Iron	1.5E+02	mg/kg	1.5E+02	mg/kg	M	7.7E-02	mg/kg-day	3.0E-01	mg/kg/day	NA	NA	2.6E-01
	Lead	3.5E-01	mg/kg	3.5E-01	mg/kg	M	1.9E-04	mg/kg-day	NA	NA	NA	NA	NA
	Manganese	1.8E+02	mg/kg	1.8E+02	mg/kg	M	9.3E-02	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	4.6E+00
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	6.2E-05	mg/kg-day	NA	NA	NA	NA	NA
	Methyl Mercury	3.5E-02	mg/kg	3.5E-02	mg/kg	M	1.8E-05	mg/kg-day	1.0E-04	mg/kg/day	NA	NA	1.8E-01
	Nickel	4.6E-01	mg/kg	4.6E-01	mg/kg	M	2.4E-04	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	1.2E-02
	Selenium	6.0E-01	mg/kg	6.0E-01	mg/kg	M	3.2E-04	mg/kg-day	5.0E-03	mg/kg/day	NA	NA	6.3E-02
	Silver	7.0E-02	mg/kg	7.0E-02	mg/kg	M	3.7E-05	mg/kg-day	5.0E-03	mg/kg/day	NA	NA	7.4E-03
	Zinc	2.4E+01	mg/kg	2.4E+01	mg/kg	M	1.2E-02	mg/kg-day	3.0E-01	mg/kg/day	NA	NA	4.2E-02
												Total Hazard Index Across All Exposure Routes/ Pathways	1.1E+01

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Upper Calcasieu
Receptor Population:	Resident
Receptor Age:	Individual (>7)

TABLE 7.32

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Upper Calcasieu	Pesticides/PCBs												
	4,4'-DDT	1.5E-02	mg/kg	1.5E-02	mg/kg	M	7.9E-06	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	1.6E-02
	Aroclor-1254	1.1E-01	mg/kg	1.1E-01	mg/kg	M	5.8E-05	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	2.9E+00
	BHC, beta-	1.6E-02	mg/kg	1.6E-02	mg/kg	M	8.4E-06	mg/kg-day	NA	NA	NA	NA	NA
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	5.5E-06	mg/kg	5.5E-06	mg/kg	M	2.9E-09	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	1.4E-01	mg/kg	1.4E-01	mg/kg	M	7.5E-05	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	2.5E-01
	Cadmium	2.7E-02	mg/kg	2.7E-02	mg/kg	M	1.4E-05	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	2.8E-02
	Chromium (total)	2.0E-01	mg/kg	2.0E-01	mg/kg	M	1.0E-04	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	3.4E-02
	Copper	1.3E+01	mg/kg	1.3E+01	mg/kg	M	6.8E-03	mg/kg-day	4.0E-02	mg/kg/day	NA	NA	1.7E-01
	Iron	4.5E+01	mg/kg	4.5E+01	mg/kg	M	2.4E-02	mg/kg-day	3.0E-01	mg/kg/day	NA	NA	8.0E-02
	Lead	5.1E-01	mg/kg	5.1E-01	mg/kg	M	2.7E-04	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	6.7E-02	mg/kg	6.7E-02	mg/kg	M	3.5E-05	mg/kg-day	NA	NA	NA	NA	NA
	Methyl Mercury	3.4E-02	mg/kg	3.4E-02	mg/kg	M	1.8E-05	mg/kg-day	1.0E-04	mg/kg/day	NA	NA	1.8E-01
	Selenium	8.0E-01	mg/kg	8.0E-01	mg/kg	M	4.2E-04	mg/kg-day	5.0E-03	mg/kg/day	NA	NA	8.4E-02
	Zinc	2.1E+01	mg/kg	2.1E+01	mg/kg	M	1.1E-02	mg/kg-day	3.0E-01	mg/kg/day	NA	NA	3.7E-02
												Total Hazard Index Across All Exposure Routes/ Pathways	3.8E+00

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Lower Calcasieu
Receptor Population:	Resident
Receptor Age:	Individual (>7)

TABLE 7.33

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

LOWER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	SVOCs												
	bis(2-Ethylhexyl) phthalate	1.7E+00	mg/kg	1.7E+00	mg/kg	M	9.0E-04	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	4.5E-02
	PAHs												
	Benzo(a)pyrene	9.8E-02	mg/kg	9.8E-02	mg/kg	M	5.2E-05	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	3.5E-02	mg/kg	3.5E-02	mg/kg	M	1.8E-05	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	9.2E-01
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	2.8E-06	mg/kg	2.8E-06	mg/kg	M	1.5E-09	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	1.6E-01	mg/kg	1.6E-01	mg/kg	M	8.2E-05	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	2.7E-01
	Cadmium	8.7E-02	mg/kg	8.7E-02	mg/kg	M	4.6E-05	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	9.2E-02
	Chromium (total)	3.9E-01	mg/kg	3.9E-01	mg/kg	M	2.0E-04	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	6.8E-02
	Copper	3.2E+01	mg/kg	3.2E+01	mg/kg	M	1.7E-02	mg/kg-day	4.0E-02	mg/kg/day	NA	NA	4.2E-01
	Iron	5.9E+01	mg/kg	5.9E+01	mg/kg	M	3.1E-02	mg/kg-day	3.0E-01	mg/kg/day	NA	NA	1.0E-01
	Lead	2.5E-01	mg/kg	2.5E-01	mg/kg	M	1.3E-04	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	4.8E-02	mg/kg	4.8E-02	mg/kg	M	2.5E-05	mg/kg-day	NA	NA	NA	NA	NA
	Methyl Mercury	2.5E-02	mg/kg	2.5E-02	mg/kg	M	1.3E-05	mg/kg-day	1.0E-04	mg/kg/day	NA	NA	1.3E-01
	Selenium	8.5E-01	mg/kg	8.5E-01	mg/kg	M	4.5E-04	mg/kg-day	5.0E-03	mg/kg/day	NA	NA	8.9E-02
	Silver	1.0E-01	mg/kg	1.0E-01	mg/kg	M	5.4E-05	mg/kg-day	5.0E-03	mg/kg/day	NA	NA	1.1E-02
	Zinc	1.9E+02	mg/kg	1.9E+02	mg/kg	M	1.0E-01	mg/kg-day	3.0E-01	mg/kg/day	NA	NA	3.4E-01
												Total Hazard Index Across All Exposure Routes/ Pathways	2.5E+00

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Bayou Verdine
Receptor Population:	Resident
Receptor Age:	Individual (>7)

TABLE 7.34

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

BAYOU VERDINE

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Dioxins/Furans 2,3,7,8-TCDD Equivalents	9.7E-07	mg/kg	9.7E-07	mg/kg	M	3.5E-11	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pathways	0.0E+00

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
(2) Chronic
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Bayou d'Inde
Receptor Population:	Resident (Subsistence)
Receptor Age:	Individual (>7)

TABLE 7.35

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

BAYOU D'INDE

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	SVOCs												
	4-Nitrophenol	4.0E-02	mg/kg	4.0E-02	mg/kg	M	5.7E-05	mg/kg-day	8.0E-03	mg/kg/day	NA	NA	7.1E-03
	bis(2-Ethylhexyl) phthalate	1.1E+01	mg/kg	1.1E+01	mg/kg	M	1.6E-02	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	8.0E-01
	Di-n-butylphthalate	3.5E+00	mg/kg	3.5E+00	mg/kg	M	4.9E-03	mg/kg-day	1.0E-01	mg/kg/day	NA	NA	4.9E-02
	Di-n-octylphthalate	1.2E-01	mg/kg	1.2E-01	mg/kg	M	1.7E-04	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	8.5E-03
	Hexachlorobenzene	2.8E-02	mg/kg	2.8E-02	mg/kg	M	4.0E-05	mg/kg-day	8.0E-04	mg/kg/day	NA	NA	4.9E-02
	Pesticides/PCBs												
	4,4'-DDD	2.2E-02	mg/kg	2.2E-02	mg/kg	M	3.1E-05	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	6.2E-02
	4,4'-DDT	2.8E-02	mg/kg	2.8E-02	mg/kg	M	4.0E-05	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	8.0E-02
	Aldrin	1.0E-02	mg/kg	1.0E-02	mg/kg	M	1.4E-05	mg/kg-day	3.0E-05	mg/kg/day	NA	NA	4.7E-01
	Aroclor-1254	1.4E-01	mg/kg	1.4E-01	mg/kg	M	2.0E-04	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	1.0E+01
	BHC, beta-	4.0E-02	mg/kg	4.0E-02	mg/kg	M	5.6E-05	mg/kg-day	NA	NA	NA	NA	NA
	Endosulfan sulfate	1.1E-02	mg/kg	1.1E-02	mg/kg	M	1.6E-05	mg/kg-day	NA	NA	NA	NA	NA
	Endrin	2.0E-02	mg/kg	2.0E-02	mg/kg	M	2.9E-05	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	9.6E-02
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	2.5E-05	mg/kg	2.5E-05	mg/kg	M	3.5E-08	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	1.2E-01	mg/kg	1.2E-01	mg/kg	M	1.6E-04	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	5.5E-01
	Barium	9.8E+01	mg/kg	9.8E+01	mg/kg	M	1.4E-01	mg/kg-day	7.0E-02	mg/kg/day	NA	NA	2.0E+00
	Cadmium	3.8E-02	mg/kg	3.8E-02	mg/kg	M	5.4E-05	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	1.1E-01
	Chromium (total)	1.4E+00	mg/kg	1.4E+00	mg/kg	M	2.0E-03	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	6.6E-01
	Copper	1.6E+01	mg/kg	1.6E+01	mg/kg	M	2.3E-02	mg/kg-day	4.0E-02	mg/kg/day	NA	NA	5.8E-01
	Iron	1.5E+02	mg/kg	1.5E+02	mg/kg	M	2.1E-01	mg/kg-day	3.0E-01	mg/kg/day	NA	NA	6.9E-01
	Lead	3.5E-01	mg/kg	3.5E-01	mg/kg	M	5.0E-04	mg/kg-day	NA	NA	NA	NA	NA
	Manganese	1.8E+02	mg/kg	1.8E+02	mg/kg	M	2.5E-01	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	1.2E+01
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	1.7E-04	mg/kg-day	NA	NA	NA	NA	NA
	Methyl Mercury	3.5E-02	mg/kg	3.5E-02	mg/kg	M	4.9E-05	mg/kg-day	1.0E-04	mg/kg/day	NA	NA	4.9E-01
	Nickel	4.6E-01	mg/kg	4.6E-01	mg/kg	M	6.6E-04	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	3.3E-02
	Selenium	6.0E-01	mg/kg	6.0E-01	mg/kg	M	8.5E-04	mg/kg-day	5.0E-03	mg/kg/day	NA	NA	1.7E-01
	Silver	7.0E-02	mg/kg	7.0E-02	mg/kg	M	9.9E-05	mg/kg-day	5.0E-03	mg/kg/day	NA	NA	2.0E-02
	Zinc	2.4E+01	mg/kg	2.4E+01	mg/kg	M	3.4E-02	mg/kg-day	3.0E-01	mg/kg/day	NA	NA	1.1E-01
												Total Hazard Index Across All Exposure Routes/ Pathways	3.0E+01

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Upper Calcasieu
Receptor Population:	Resident (Subsistence)
Receptor Age:	Individual (>7)

TABLE 7.36

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Upper Calcasieu	Pesticides/PCBs												
	4,4'-DDT	1.5E-02	mg/kg	1.5E-02	mg/kg	M	2.1E-05	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	4.2E-02
	Aroclor-1254	1.1E-01	mg/kg	1.1E-01	mg/kg	M	1.6E-04	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	7.8E+00
	BHC, beta-	1.6E-02	mg/kg	1.6E-02	mg/kg	M	2.3E-05	mg/kg-day	NA	NA	NA	NA	NA
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	5.5E-06	mg/kg	5.5E-06	mg/kg	M	7.7E-09	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	1.4E-01	mg/kg	1.4E-01	mg/kg	M	2.0E-04	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	6.8E-01
	Cadmium	2.7E-02	mg/kg	2.7E-02	mg/kg	M	3.8E-05	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	7.6E-02
	Chromium (total)	2.0E-01	mg/kg	2.0E-01	mg/kg	M	2.8E-04	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	9.2E-02
	Copper	1.3E+01	mg/kg	1.3E+01	mg/kg	M	1.8E-02	mg/kg-day	4.0E-02	mg/kg/day	NA	NA	4.6E-01
	Iron	4.5E+01	mg/kg	4.5E+01	mg/kg	M	6.4E-02	mg/kg-day	3.0E-01	mg/kg/day	NA	NA	2.1E-01
	Lead	5.1E-01	mg/kg	5.1E-01	mg/kg	M	7.2E-04	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	6.7E-02	mg/kg	6.7E-02	mg/kg	M	9.4E-05	mg/kg-day	NA	NA	NA	NA	NA
	Methyl Mercury	3.4E-02	mg/kg	3.4E-02	mg/kg	M	4.8E-05	mg/kg-day	1.0E-04	mg/kg/day	NA	NA	4.8E-01
	Selenium	8.0E-01	mg/kg	8.0E-01	mg/kg	M	1.1E-03	mg/kg-day	5.0E-03	mg/kg/day	NA	NA	2.3E-01
	Zinc	2.1E+01	mg/kg	2.1E+01	mg/kg	M	3.0E-02	mg/kg-day	3.0E-01	mg/kg/day	NA	NA	9.9E-02
												Total Hazard Index Across All Exposure Routes/ Pathways	1.0E+01

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Lower Calcasieu
Receptor Population:	Resident (Subsistence)
Receptor Age:	Individual (>7)

TABLE 7.37

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

LOWER CALCASIEU

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	SVOCs												
	bis(2-Ethylhexyl) phthalate	1.7E+00	mg/kg	1.7E+00	mg/kg	M	2.4E-03	mg/kg-day	2.0E-02	mg/kg/day	NA	NA	1.2E-01
	PAHs												
	Benzo(a)pyrene	9.8E-02	mg/kg	9.8E-02	mg/kg	M	1.4E-04	mg/kg-day	NA	NA	NA	NA	NA
	Pesticides/PCBs												
	Aroclor-1254	3.5E-02	mg/kg	3.5E-02	mg/kg	M	4.9E-05	mg/kg-day	2.0E-05	mg/kg/day	NA	NA	2.5E+00
	Dioxins/Furans												
	2,3,7,8-TCDD Equivalents	2.8E-06	mg/kg	2.8E-06	mg/kg	M	3.9E-09	mg/kg-day	NA	NA	NA	NA	NA
	Metals												
	Arsenic	1.6E-01	mg/kg	1.6E-01	mg/kg	M	2.2E-04	mg/kg-day	3.0E-04	mg/kg/day	NA	NA	7.3E-01
	Cadmium	8.7E-02	mg/kg	8.7E-02	mg/kg	M	1.2E-04	mg/kg-day	5.0E-04	mg/kg/day	NA	NA	2.5E-01
	Chromium (total)	3.9E-01	mg/kg	3.9E-01	mg/kg	M	5.5E-04	mg/kg-day	3.0E-03	mg/kg/day	NA	NA	1.8E-01
	Copper	3.2E+01	mg/kg	3.2E+01	mg/kg	M	4.5E-02	mg/kg-day	4.0E-02	mg/kg/day	NA	NA	1.1E+00
	Iron	5.9E+01	mg/kg	5.9E+01	mg/kg	M	8.4E-02	mg/kg-day	3.0E-01	mg/kg/day	NA	NA	2.8E-01
	Lead	2.5E-01	mg/kg	2.5E-01	mg/kg	M	3.5E-04	mg/kg-day	NA	NA	NA	NA	NA
	Mercury	4.8E-02	mg/kg	4.8E-02	mg/kg	M	6.8E-05	mg/kg-day	NA	NA	NA	NA	NA
	Methyl Mercury	2.5E-02	mg/kg	2.5E-02	mg/kg	M	3.5E-05	mg/kg-day	1.0E-04	mg/kg/day	NA	NA	3.5E-01
	Selenium	8.5E-01	mg/kg	8.5E-01	mg/kg	M	1.2E-03	mg/kg-day	5.0E-03	mg/kg/day	NA	NA	2.4E-01
	Silver	1.0E-01	mg/kg	1.0E-01	mg/kg	M	1.4E-04	mg/kg-day	5.0E-03	mg/kg/day	NA	NA	2.9E-02
	Zinc	1.9E+02	mg/kg	1.9E+02	mg/kg	M	2.7E-01	mg/kg-day	3.0E-01	mg/kg/day	NA	NA	9.2E-01
												Total Hazard Index Across All Exposure Routes/ Pathways	6.7E+00

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Bayou Verdine
Receptor Population:	Resident (Subsistence)
Receptor Age:	Individual (>7)

TABLE 7.38

CALCULATION OF NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

BAYOU VERDINE

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 (2)	Reference Dose Units	Reference Concentration	Reference Concentration Units	Hazard Quotient
Ingestion	Dioxins/Furans 2,3,7,8-TCDD Equivalents	9.7E-07	mg/kg	9.7E-07	mg/kg	M	1.2E-09	mg/kg-day	NA	NA	NA	NA	NA
												Total Hazard Index Across All Exposure Routes/ Pathways	0.0E+00

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Bayou d'Inde
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.1
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	SVOCs										
	Hexachlorobenzene	8.5E-01	mg/kg	8.5E-01	mg/kg	M	7.4E-08	mg/kg-day	1.6E+00	(mg/kg/day)-1	1E-07
	PAHs										
	Acenaphthylene	8.2E-01	mg/kg	8.2E-01	mg/kg	M	7.1E-08	mg/kg-day	NA	NA	NA
	Benzo(a)anthracene	7.4E-01	mg/kg	7.4E-01	mg/kg	M	6.5E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	5E-08
	Benzo(a)pyrene	7.4E-01	mg/kg	7.4E-01	mg/kg	M	6.4E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	5E-07
	Benzo(b)fluoranthene	7.4E-01	mg/kg	7.4E-01	mg/kg	M	6.5E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	5E-08
	Benzo(g,h,i)perylene	6.7E-01	mg/kg	6.7E-01	mg/kg	M	5.8E-08	mg/kg-day	NA	NA	NA
	Benzo(k)fluoranthene	7.8E-01	mg/kg	7.8E-01	mg/kg	M	6.8E-08	mg/kg-day	7.3E-02	(mg/kg/day)-1	5E-09
	Dibenzo(a,h)anthracene	5.0E-01	mg/kg	5.0E-01	mg/kg	M	4.4E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-07
	Indeno(1,2,3-cd)pyrene	7.3E-01	mg/kg	7.3E-01	mg/kg	M	6.4E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	5E-08
	Phenanthrene	7.9E-01	mg/kg	7.9E-01	mg/kg	M	6.9E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aldrin	7.3E-03	mg/kg	7.3E-03	mg/kg	M	6.4E-10	mg/kg-day	1.7E+01	(mg/kg/day)-1	1E-08
	Aroclor-1254	1.1E-01	mg/kg	1.1E-01	mg/kg	M	9.6E-09	mg/kg-day	2.0E+00	(mg/kg/day)-1	2E-08
	BHC, delta-	5.9E-03	mg/kg	5.9E-03	mg/kg	M	5.2E-10	mg/kg-day	NA	NA	NA
	Dieldrin	7.6E-03	mg/kg	7.6E-03	mg/kg	M	6.6E-10	mg/kg-day	1.6E+01	(mg/kg/day)-1	1E-08
	Endosulfan sulfate	8.9E-03	mg/kg	8.9E-03	mg/kg	M	7.7E-10	mg/kg-day	NA	NA	NA
	Endrin aldehyde	8.3E-03	mg/kg	8.3E-03	mg/kg	M	7.3E-10	mg/kg-day	NA	NA	NA
	Endrin ketone	8.0E-03	mg/kg	8.0E-03	mg/kg	M	7.0E-10	mg/kg-day	NA	NA	NA
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	3.6E-04	mg/kg	3.6E-04	mg/kg	M	3.1E-11	mg/kg-day	1.5E+05	(mg/kg/day)-1	5E-06
	Metals										
	Arsenic	3.9E+00	mg/kg	3.9E+00	mg/kg	M	3.4E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	5E-07
	Barium	8.0E+02	mg/kg	8.0E+02	mg/kg	M	7.0E-05	mg/kg-day	NA	NA	NA
	Chromium (total)	8.8E+01	mg/kg	8.8E+01	mg/kg	M	7.7E-06	mg/kg-day	NA	NA	NA
	Lead	7.0E+01	mg/kg	7.0E+01	mg/kg	M	6.1E-06	mg/kg-day	NA	NA	NA
	Mercury	2.3E+00	mg/kg	2.3E+00	mg/kg	M	2.0E-07	mg/kg-day	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Bayou d'Inde
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.1
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	SVOCs										
	Hexachlorobenzene	8.5E-01	mg/kg	8.5E-01	mg/kg	M	5.6E-08	mg/kg-day	1.6E+00	(mg/kg/day)-1	9E-08
	PAHs										
	Acenaphthylene	8.2E-01	mg/kg	8.2E-01	mg/kg	M	7.0E-08	mg/kg-day	NA	NA	NA
	Benzo(a)anthracene	7.4E-01	mg/kg	7.4E-01	mg/kg	M	6.3E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	5E-08
	Benzo(a)pyrene	7.4E-01	mg/kg	7.4E-01	mg/kg	M	6.3E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	5E-07
	Benzo(b)fluoranthene	7.4E-01	mg/kg	7.4E-01	mg/kg	M	6.3E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	5E-08
	Benzo(g,h,i)perylene	6.7E-01	mg/kg	6.7E-01	mg/kg	M	5.7E-08	mg/kg-day	NA	NA	NA
	Benzo(k)fluoranthene	7.8E-01	mg/kg	7.8E-01	mg/kg	M	6.7E-08	mg/kg-day	7.3E-02	(mg/kg/day)-1	5E-09
	Dibenzo(a,h)anthracene	5.0E-01	mg/kg	5.0E-01	mg/kg	M	4.3E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-07
	Indeno(1,2,3-cd)pyrene	7.3E-01	mg/kg	7.3E-01	mg/kg	M	6.2E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	5E-08
	Phenanthrene	7.9E-01	mg/kg	7.9E-01	mg/kg	M	6.8E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aldrin	7.3E-03	mg/kg	7.3E-03	mg/kg	M	4.8E-10	mg/kg-day	1.7E+01	(mg/kg/day)-1	8E-09
	Aroclor-1254	1.1E-01	mg/kg	1.1E-01	mg/kg	M	1.0E-08	mg/kg-day	2.0E+00	(mg/kg/day)-1	2E-08
	BHC, delta-	5.9E-03	mg/kg	5.9E-03	mg/kg	M	1.6E-10	mg/kg-day	NA	NA	NA
	Dieldrin	7.6E-03	mg/kg	7.6E-03	mg/kg	M	5.0E-10	mg/kg-day	1.6E+01	(mg/kg/day)-1	8E-09
	Endosulfan sulfate	8.9E-03	mg/kg	8.9E-03	mg/kg	M	5.8E-10	mg/kg-day	NA	NA	NA
	Endrin aldehyde	8.3E-03	mg/kg	8.3E-03	mg/kg	M	5.5E-10	mg/kg-day	NA	NA	NA
	Endrin ketone	8.0E-03	mg/kg	8.0E-03	mg/kg	M	5.2E-10	mg/kg-day	NA	NA	NA
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	3.6E-04	mg/kg	3.6E-04	mg/kg	M	7.1E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	1E-06
	Metals										
	Arsenic	3.9E+00	mg/kg	3.9E+00	mg/kg	M	7.7E-08	mg/kg-day	1.5E+00	(mg/kg/day)-1	1E-07
	Barium	8.0E+02	mg/kg	8.0E+02	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Chromium (total)	8.8E+01	mg/kg	8.8E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Lead	7.0E+01	mg/kg	7.0E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Mercury	2.3E+00	mg/kg	2.3E+00	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	9E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Above Lake Charles
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.2
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	PAHs										
	Benzo(a)anthracene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	2.4E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-08
	Benzo(a)pyrene	2.6E-01	mg/kg	2.6E-01	mg/kg	M	2.3E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	2E-07
	Benzo(b)fluoranthene	3.5E-01	mg/kg	3.5E-01	mg/kg	M	3.0E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-08
	Benzo(g,h,i)perylene	1.2E-01	mg/kg	1.2E-01	mg/kg	M	1.0E-08	mg/kg-day	NA	NA	NA
	Chrysene	3.9E-01	mg/kg	3.9E-01	mg/kg	M	3.4E-08	mg/kg-day	7.3E-03	(mg/kg/day)-1	2E-10
	Dibenzo(a,h)anthracene	6.4E-02	mg/kg	6.4E-02	mg/kg	M	5.5E-09	mg/kg-day	7.3E+00	(mg/kg/day)-1	4E-08
	Indeno(1,2,3-cd)pyrene	1.4E-01	mg/kg	1.4E-01	mg/kg	M	1.2E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	9E-09
	Phenanthrene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	2.3E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254 **										
	BHC, delta-	1.4E-03	mg/kg	1.4E-03	mg/kg	M	1.2E-10	mg/kg-day	NA	NA	NA
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	3.3E-05	mg/kg	3.3E-05	mg/kg	M	2.9E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	4E-07
	Metals										
	Arsenic	4.0E+00	mg/kg	4.0E+00	mg/kg	M	3.4E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	5E-07
	Chromium (total)	1.7E+01	mg/kg	1.7E+01	mg/kg	M	1.5E-06	mg/kg-day	NA	NA	NA
	Lead	2.7E+01	mg/kg	2.7E+01	mg/kg	M	2.4E-06	mg/kg-day	NA	NA	NA
	Mercury	9.8E-02	mg/kg	9.8E-02	mg/kg	M	8.5E-09	mg/kg-day	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Above Lake Charles
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.2

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	PAHs										
	Benzo(a)anthracene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	2.3E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-08
	Benzo(a)pyrene	2.6E-01	mg/kg	2.6E-01	mg/kg	M	2.2E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	2E-07
	Benzo(b)fluoranthene	3.5E-01	mg/kg	3.5E-01	mg/kg	M	3.0E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-08
	Benzo(g,h,i)perylene	1.2E-01	mg/kg	1.2E-01	mg/kg	M	1.0E-08	mg/kg-day	NA	NA	NA
	Chrysene	3.9E-01	mg/kg	3.9E-01	mg/kg	M	3.3E-08	mg/kg-day	7.3E-03	(mg/kg/day)-1	2E-10
	Dibenzo(a,h)anthracene	6.4E-02	mg/kg	6.4E-02	mg/kg	M	5.4E-09	mg/kg-day	7.3E+00	(mg/kg/day)-1	4E-08
	Indeno(1,2,3-cd)pyrene	1.4E-01	mg/kg	1.4E-01	mg/kg	M	1.2E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	9E-09
	Phenanthrene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	2.3E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254 **										
	BHC, delta-	1.4E-03	mg/kg	1.4E-03	mg/kg	M	3.7E-11	mg/kg-day	NA	NA	NA
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	3.3E-05	mg/kg	3.3E-05	mg/kg	M	6.6E-13	mg/kg-day	1.5E+05	(mg/kg/day)-1	1E-07
	Metals										
	Arsenic	4.0E+00	mg/kg	4.0E+00	mg/kg	M	7.8E-08	mg/kg-day	1.5E+00	(mg/kg/day)-1	1E-07
	Chromium (total)	1.7E+01	mg/kg	1.7E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Lead	2.7E+01	mg/kg	2.7E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Mercury	9.8E-02	mg/kg	9.8E-02	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	2E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Above Lake Charles
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 8.3

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	PAHs										
	Benzo(a)anthracene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	3.0E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-08
	Benzo(a)pyrene	2.6E-01	mg/kg	2.6E-01	mg/kg	M	2.8E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	2E-07
	Benzo(b)fluoranthene	3.5E-01	mg/kg	3.5E-01	mg/kg	M	3.8E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(g,h,i)perylene	1.2E-01	mg/kg	1.2E-01	mg/kg	M	1.3E-08	mg/kg-day	NA	NA	NA
	Chrysene	3.9E-01	mg/kg	3.9E-01	mg/kg	M	4.2E-08	mg/kg-day	7.3E-03	(mg/kg/day)-1	3E-10
	Dibenzo(a,h)anthracene	6.4E-02	mg/kg	6.4E-02	mg/kg	M	6.9E-09	mg/kg-day	7.3E+00	(mg/kg/day)-1	5E-08
	Indeno(1,2,3-cd)pyrene	1.4E-01	mg/kg	1.4E-01	mg/kg	M	1.5E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	1E-08
	Phenanthrene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	2.9E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254 **										
	BHC, delta-	1.4E-03	mg/kg	1.4E-03	mg/kg	M	1.5E-10	mg/kg-day	NA	NA	NA
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	3.3E-05	mg/kg	3.3E-05	mg/kg	M	3.6E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	5E-07
	Metals										
	Arsenic	4.0E+00	mg/kg	4.0E+00	mg/kg	M	4.3E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	6E-07
	Chromium (total)	1.7E+01	mg/kg	1.7E+01	mg/kg	M	1.9E-06	mg/kg-day	NA	NA	NA
	Lead	2.7E+01	mg/kg	2.7E+01	mg/kg	M	2.9E-06	mg/kg-day	NA	NA	NA
	Mercury	9.8E-02	mg/kg	9.8E-02	mg/kg	M	1.1E-08	mg/kg-day	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Above Lake Charles
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 8.3
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	PAHs										
	Benzo(a)anthracene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	2.9E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-08
	Benzo(a)pyrene	2.6E-01	mg/kg	2.6E-01	mg/kg	M	2.8E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	2E-07
	Benzo(b)fluoranthene	3.5E-01	mg/kg	3.5E-01	mg/kg	M	3.7E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(g,h,i)perylene	1.2E-01	mg/kg	1.2E-01	mg/kg	M	1.3E-08	mg/kg-day	NA	NA	NA
	Chrysene	3.9E-01	mg/kg	3.9E-01	mg/kg	M	4.2E-08	mg/kg-day	7.3E-03	(mg/kg/day)-1	3E-10
	Dibenzo(a,h)anthracene	6.4E-02	mg/kg	6.4E-02	mg/kg	M	6.8E-09	mg/kg-day	7.3E+00	(mg/kg/day)-1	5E-08
	Indeno(1,2,3-cd)pyrene	1.4E-01	mg/kg	1.4E-01	mg/kg	M	1.5E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	1E-08
	Phenanthrene	2.7E-01	mg/kg	2.7E-01	mg/kg	M	2.9E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254 **										
	BHC, delta-	1.4E-03	mg/kg	1.4E-03	mg/kg	M	4.6E-11	mg/kg-day	NA	NA	NA
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	3.3E-05	mg/kg	3.3E-05	mg/kg	M	8.2E-13	mg/kg-day	1.5E+05	(mg/kg/day)-1	1E-07
	Metals										
	Arsenic	4.0E+00	mg/kg	4.0E+00	mg/kg	M	9.7E-08	mg/kg-day	1.5E+00	(mg/kg/day)-1	1E-07
	Chromium (total)	1.7E+01	mg/kg	1.7E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Lead	2.7E+01	mg/kg	2.7E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Mercury	9.8E-02	mg/kg	9.8E-02	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	2E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
** Chemical of potential concern in AOC, but not detected in this exposure area.
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Lake Charles
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.4

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	PAHs										
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	3.7E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(a)pyrene	3.3E-01	mg/kg	3.3E-01	mg/kg	M	2.9E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	2E-07
	Benzo(b)fluoranthene	3.6E-01	mg/kg	3.6E-01	mg/kg	M	3.1E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-08
	Benzo(g,h,i)perylene	1.5E-01	mg/kg	1.5E-01	mg/kg	M	1.3E-08	mg/kg-day	NA	NA	NA
	Chrysene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	4.6E-08	mg/kg-day	7.3E-03	(mg/kg/day)-1	3E-10
	Dibenzo(a,h)anthracene **										
	Indeno(1,2,3-cd)pyrene	1.8E-01	mg/kg	1.8E-01	mg/kg	M	1.6E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	1E-08
	Phenanthrene	5.9E-01	mg/kg	5.9E-01	mg/kg	M	5.1E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254 **										
	BHC, delta- **										
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	2.3E-05	mg/kg	2.3E-05	mg/kg	M	2.0E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	3E-07
	Metals										
	Arsenic	5.9E+00	mg/kg	5.9E+00	mg/kg	M	5.1E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	8E-07
	Chromium (total)	2.7E+01	mg/kg	2.7E+01	mg/kg	M	2.3E-06	mg/kg-day	NA	NA	NA
	Lead	4.5E+01	mg/kg	4.5E+01	mg/kg	M	3.9E-06	mg/kg-day	NA	NA	NA
	Mercury	7.2E-02	mg/kg	7.2E-02	mg/kg	M	6.2E-09	mg/kg-day	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Lake Charles
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.4
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	PAHs										
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	3.6E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(a)pyrene	3.3E-01	mg/kg	3.3E-01	mg/kg	M	2.8E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	2E-07
	Benzo(b)fluoranthene	3.6E-01	mg/kg	3.6E-01	mg/kg	M	3.1E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-08
	Benzo(g,h,i)perylene	1.5E-01	mg/kg	1.5E-01	mg/kg	M	1.3E-08	mg/kg-day	NA	NA	NA
	Chrysene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	4.5E-08	mg/kg-day	7.3E-03	(mg/kg/day)-1	3E-10
	Dibenzo(a,h)anthracene **										
	Indeno(1,2,3-cd)pyrene	1.8E-01	mg/kg	1.8E-01	mg/kg	M	1.5E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	1E-08
	Phenanthrene	5.9E-01	mg/kg	5.9E-01	mg/kg	M	5.0E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254 **										
	BHC, delta- **										
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	2.3E-05	mg/kg	2.3E-05	mg/kg	M	4.5E-13	mg/kg-day	1.5E+05	(mg/kg/day)-1	7E-08
	Metals										
	Arsenic	5.9E+00	mg/kg	5.9E+00	mg/kg	M	1.2E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	2E-07
	Chromium (total)	2.7E+01	mg/kg	2.7E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Lead	4.5E+01	mg/kg	4.5E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Mercury	7.2E-02	mg/kg	7.2E-02	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	2E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
** Chemical of potential concern in AOC, but not detected in this exposure area.
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Lake Charles
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 8.5

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	PAHs										
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	4.6E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(a)pyrene	3.3E-01	mg/kg	3.3E-01	mg/kg	M	3.6E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-07
	Benzo(b)fluoranthene	3.6E-01	mg/kg	3.6E-01	mg/kg	M	3.9E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(g,h,i)perylene	1.5E-01	mg/kg	1.5E-01	mg/kg	M	1.6E-08	mg/kg-day	NA	NA	NA
	Chrysene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	5.8E-08	mg/kg-day	7.3E-03	(mg/kg/day)-1	4E-10
	Dibenzo(a,h)anthracene **										
	Indeno(1,2,3-cd)pyrene	1.8E-01	mg/kg	1.8E-01	mg/kg	M	2.0E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	1E-08
	Phenanthrene	5.9E-01	mg/kg	5.9E-01	mg/kg	M	6.4E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254 **										
	BHC, delta- **										
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	2.3E-05	mg/kg	2.3E-05	mg/kg	M	2.5E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	4E-07
	Metals										
	Arsenic	5.9E+00	mg/kg	5.9E+00	mg/kg	M	6.4E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	1E-06
	Chromium (total)	2.7E+01	mg/kg	2.7E+01	mg/kg	M	2.9E-06	mg/kg-day	NA	NA	NA
	Lead	4.5E+01	mg/kg	4.5E+01	mg/kg	M	4.9E-06	mg/kg-day	NA	NA	NA
	Mercury	7.2E-02	mg/kg	7.2E-02	mg/kg	M	7.8E-09	mg/kg-day	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Lake Charles
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 8.5

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	PAHs										
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	4.5E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(a)pyrene	3.3E-01	mg/kg	3.3E-01	mg/kg	M	3.5E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-07
	Benzo(b)fluoranthene	3.6E-01	mg/kg	3.6E-01	mg/kg	M	3.9E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(g,h,i)perylene	1.5E-01	mg/kg	1.5E-01	mg/kg	M	1.6E-08	mg/kg-day	NA	NA	NA
	Chrysene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	5.6E-08	mg/kg-day	7.3E-03	(mg/kg/day)-1	4E-10
	Dibenzo(a,h)anthracene **										
	Indeno(1,2,3-cd)pyrene	1.8E-01	mg/kg	1.8E-01	mg/kg	M	1.9E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	1E-08
	Phenanthrene	5.9E-01	mg/kg	5.9E-01	mg/kg	M	6.3E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254 **										
	BHC, delta- **										
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	2.3E-05	mg/kg	2.3E-05	mg/kg	M	5.6E-13	mg/kg-day	1.5E+05	(mg/kg/day)-1	8E-08
	Metals										
	Arsenic	5.9E+00	mg/kg	5.9E+00	mg/kg	M	1.4E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	2E-07
	Chromium (total)	2.7E+01	mg/kg	2.7E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Lead	4.5E+01	mg/kg	4.5E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Mercury	7.2E-02	mg/kg	7.2E-02	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	2E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Clooney Island Loop
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.6

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	PAHs										
	Benzo(a)anthracene	4.4E-01	mg/kg	4.4E-01	mg/kg	M	3.8E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(a)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	3.6E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-07
	Benzo(b)fluoranthene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	4.0E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(g,h,i)perylene	3.4E-01	mg/kg	3.4E-01	mg/kg	M	2.9E-08	mg/kg-day	NA	NA	NA
	Chrysene	5.0E-01	mg/kg	5.0E-01	mg/kg	M	4.3E-08	mg/kg-day	7.3E-03	(mg/kg/day)-1	3E-10
	Dibenzo(a,h)anthracene	1.5E-01	mg/kg	1.5E-01	mg/kg	M	1.3E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	1E-07
	Indeno(1,2,3-cd)pyrene	3.2E-01	mg/kg	3.2E-01	mg/kg	M	2.8E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-08
	Phenanthrene	4.9E-01	mg/kg	4.9E-01	mg/kg	M	4.3E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	1.3E-01	mg/kg	1.3E-01	mg/kg	M	1.1E-08	mg/kg-day	2.0E+00	(mg/kg/day)-1	2E-08
	BHC, delta- **										
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	6.2E-05	mg/kg	6.2E-05	mg/kg	M	5.4E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	8E-07
	Metals										
	Arsenic	4.3E+00	mg/kg	4.3E+00	mg/kg	M	3.7E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	6E-07
	Chromium (total)	4.2E+01	mg/kg	4.2E+01	mg/kg	M	3.7E-06	mg/kg-day	NA	NA	NA
	Lead	2.3E+01	mg/kg	2.3E+01	mg/kg	M	2.0E-06	mg/kg-day	NA	NA	NA
	Mercury	2.6E-01	mg/kg	2.6E-01	mg/kg	M	2.3E-08	mg/kg-day	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Clooney Island Loop
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.6

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	PAHs										
	Benzo(a)anthracene	4.4E-01	mg/kg	4.4E-01	mg/kg	M	3.7E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(a)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	3.5E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-07
	Benzo(b)fluoranthene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	4.0E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(g,h,i)perylene	3.4E-01	mg/kg	3.4E-01	mg/kg	M	2.9E-08	mg/kg-day	NA	NA	NA
	Chrysene	5.0E-01	mg/kg	5.0E-01	mg/kg	M	4.2E-08	mg/kg-day	7.3E-03	(mg/kg/day)-1	3E-10
	Dibenzo(a,h)anthracene	1.5E-01	mg/kg	1.5E-01	mg/kg	M	1.3E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	9E-08
	Indeno(1,2,3-cd)pyrene	3.2E-01	mg/kg	3.2E-01	mg/kg	M	2.7E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-08
	Phenanthrene	4.9E-01	mg/kg	4.9E-01	mg/kg	M	4.2E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	1.3E-01	mg/kg	1.3E-01	mg/kg	M	1.2E-08	mg/kg-day	2.0E+00	(mg/kg/day)-1	2E-08
	BHC, delta- **										
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	6.2E-05	mg/kg	6.2E-05	mg/kg	M	1.2E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	2E-07
	Metals										
	Arsenic	4.3E+00	mg/kg	4.3E+00	mg/kg	M	8.4E-08	mg/kg-day	1.5E+00	(mg/kg/day)-1	1E-07
	Chromium (total)	4.2E+01	mg/kg	4.2E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Lead	2.3E+01	mg/kg	2.3E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Mercury	2.6E-01	mg/kg	2.6E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	3E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Below Clooney Island Loop
Receptor Population:	Commercial Fisher
Receptor Age:	Individual (>7)

TABLE 8.7

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	PAHs										
	Benzo(a)anthracene	4.8E-01	mg/kg	4.8E-01	mg/kg	M	1.3E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	1E-07
	Benzo(a)pyrene	4.5E-01	mg/kg	4.5E-01	mg/kg	M	1.2E-07	mg/kg-day	7.3E+00	(mg/kg/day)-1	9E-07
	Benzo(b)fluoranthene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	1.4E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	1E-07
	Benzo(g,h,i)perylene	3.7E-01	mg/kg	3.7E-01	mg/kg	M	1.0E-07	mg/kg-day	NA	NA	NA
	Chrysene	1.1E+00	mg/kg	1.1E+00	mg/kg	M	3.0E-07	mg/kg-day	7.3E-03	(mg/kg/day)-1	2E-09
	Dibenzo(a,h)anthracene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	6.5E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	5E-07
	Indeno(1,2,3-cd)pyrene	2.5E-01	mg/kg	2.5E-01	mg/kg	M	6.8E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	5E-08
	Phenanthrene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	6.5E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	2.9E-02	mg/kg	2.9E-02	mg/kg	M	8.0E-09	mg/kg-day	2.0E+00	(mg/kg/day)-1	2E-08
	BHC, delta-	8.8E-03	mg/kg	8.8E-03	mg/kg	M	2.4E-09	mg/kg-day	NA	NA	NA
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	2.1E-05	mg/kg	2.1E-05	mg/kg	M	5.7E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	8E-07
	Metals										
	Arsenic	3.1E+00	mg/kg	3.1E+00	mg/kg	M	8.4E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	1E-06
	Chromium (total)	1.5E+01	mg/kg	1.5E+01	mg/kg	M	4.2E-06	mg/kg-day	NA	NA	NA
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	9.9E-06	mg/kg-day	NA	NA	NA
	Mercury	1.0E-01	mg/kg	1.0E-01	mg/kg	M	2.8E-08	mg/kg-day	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Below Clooney Island Loop
Receptor Population:	Commercial Fisher
Receptor Age:	Individual (>7)

TABLE 8.7
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	PAHs										
	Benzo(a)anthracene	4.8E-01	mg/kg	4.8E-01	mg/kg	M	2.4E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-07
	Benzo(a)pyrene	4.5E-01	mg/kg	4.5E-01	mg/kg	M	2.3E-07	mg/kg-day	7.3E+00	(mg/kg/day)-1	2E-06
	Benzo(b)fluoranthene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	2.6E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-07
	Benzo(g,h,i)perylene	3.7E-01	mg/kg	3.7E-01	mg/kg	M	1.9E-07	mg/kg-day	NA	NA	NA
	Chrysene	1.1E+00	mg/kg	1.1E+00	mg/kg	M	5.4E-07	mg/kg-day	7.3E-03	(mg/kg/day)-1	4E-09
	Dibenzo(a,h)anthracene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	1.2E-07	mg/kg-day	7.3E+00	(mg/kg/day)-1	9E-07
	Indeno(1,2,3-cd)pyrene	2.5E-01	mg/kg	2.5E-01	mg/kg	M	1.2E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	9E-08
	Phenanthrene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	1.2E-07	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	2.9E-02	mg/kg	2.9E-02	mg/kg	M	1.6E-08	mg/kg-day	2.0E+00	(mg/kg/day)-1	3E-08
	BHC, delta-	8.8E-03	mg/kg	8.8E-03	mg/kg	M	1.4E-09	mg/kg-day	NA	NA	NA
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	2.1E-05	mg/kg	2.1E-05	mg/kg	M	2.4E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	4E-07
	Metals										
	Arsenic	3.1E+00	mg/kg	3.1E+00	mg/kg	M	3.5E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	5E-07
	Chromium (total)	1.5E+01	mg/kg	1.5E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Mercury	1.0E-01	mg/kg	1.0E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	8E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Below Clooney Island Loop
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.8

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	PAHs										
	Benzo(a)anthracene	4.8E-01	mg/kg	4.8E-01	mg/kg	M	4.2E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(a)pyrene	4.5E-01	mg/kg	4.5E-01	mg/kg	M	3.9E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-07
	Benzo(b)fluoranthene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	4.6E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(g,h,i)perylene	3.7E-01	mg/kg	3.7E-01	mg/kg	M	3.3E-08	mg/kg-day	NA	NA	NA
	Chrysene	1.1E+00	mg/kg	1.1E+00	mg/kg	M	9.4E-08	mg/kg-day	7.3E-03	(mg/kg/day)-1	7E-10
	Dibenzo(a,h)anthracene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	2.0E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	1E-07
	Indeno(1,2,3-cd)pyrene	2.5E-01	mg/kg	2.5E-01	mg/kg	M	2.2E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-08
	Phenanthrene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	2.1E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	2.9E-02	mg/kg	2.9E-02	mg/kg	M	2.5E-09	mg/kg-day	2.0E+00	(mg/kg/day)-1	5E-09
	BHC, delta-	8.8E-03	mg/kg	8.8E-03	mg/kg	M	7.7E-10	mg/kg-day	NA	NA	NA
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	2.1E-05	mg/kg	2.1E-05	mg/kg	M	1.8E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	3E-07
	Metals										
	Arsenic	3.1E+00	mg/kg	3.1E+00	mg/kg	M	2.7E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	4E-07
	Chromium (total)	1.5E+01	mg/kg	1.5E+01	mg/kg	M	1.3E-06	mg/kg-day	NA	NA	NA
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	3.1E-06	mg/kg-day	NA	NA	NA
	Mercury	1.0E-01	mg/kg	1.0E-01	mg/kg	M	8.9E-09	mg/kg-day	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	UC - Below Clooney Island Loop
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.8
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	PAHs										
	Benzo(a)anthracene	4.8E-01	mg/kg	4.8E-01	mg/kg	M	4.1E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(a)pyrene	4.5E-01	mg/kg	4.5E-01	mg/kg	M	3.9E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-07
	Benzo(b)fluoranthene	5.3E-01	mg/kg	5.3E-01	mg/kg	M	4.5E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(g,h,i)perylene	3.7E-01	mg/kg	3.7E-01	mg/kg	M	3.2E-08	mg/kg-day	NA	NA	NA
	Chrysene	1.1E+00	mg/kg	1.1E+00	mg/kg	M	9.2E-08	mg/kg-day	7.3E-03	(mg/kg/day)-1	7E-10
	Dibenzo(a,h)anthracene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	2.0E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	1E-07
	Indeno(1,2,3-cd)pyrene	2.5E-01	mg/kg	2.5E-01	mg/kg	M	2.1E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-08
	Phenanthrene	2.4E-01	mg/kg	2.4E-01	mg/kg	M	2.0E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	2.9E-02	mg/kg	2.9E-02	mg/kg	M	2.7E-09	mg/kg-day	2.0E+00	(mg/kg/day)-1	5E-09
	BHC, delta-	8.8E-03	mg/kg	8.8E-03	mg/kg	M	2.3E-10	mg/kg-day	NA	NA	NA
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	2.1E-05	mg/kg	2.1E-05	mg/kg	M	4.1E-13	mg/kg-day	1.5E+05	(mg/kg/day)-1	6E-08
	Metals										
	Arsenic	3.1E+00	mg/kg	3.1E+00	mg/kg	M	6.0E-08	mg/kg-day	1.5E+00	(mg/kg/day)-1	9E-08
	Chromium (total)	1.5E+01	mg/kg	1.5E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Mercury	1.0E-01	mg/kg	1.0E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	2E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.
RME = Reasonable Maximum Exposure
EPC = Exposure Point Concentration
mg/kg = milligrams per kilogram
mg/kg-day = milligrams per kilogram per day
NA = Not Available
0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Lake Prien
Receptor Population:	Commercial Fisher
Receptor Age:	Individual (>7)

TABLE 8.9
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	SVOCs										
	bis(2-Ethylhexyl) phthalate	5.8E-01	mg/kg	5.8E-01	mg/kg	M	1.6E-07	mg/kg-day	1.4E-02	(mg/kg/day)-1	2E-09
	Methylphenol, 3- & 4- **										
	PAHs										
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	1.2E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	8E-08
	Benzo(a)pyrene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	1.2E-07	mg/kg-day	7.3E+00	(mg/kg/day)-1	9E-07
	Benzo(b)fluoranthene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	1.2E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	9E-08
	Benzo(g,h,i)perylene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	1.3E-07	mg/kg-day	NA	NA	NA
	Dibenzo(a,h)anthracene	1.3E-01	mg/kg	1.3E-01	mg/kg	M	3.6E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-07
	Indeno(1,2,3-cd)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	1.1E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	8E-08
	Phenanthrene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	6.3E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	5.1E-02	mg/kg	5.1E-02	mg/kg	M	1.4E-08	mg/kg-day	2.0E+00	(mg/kg/day)-1	3E-08
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	3.1E-05	mg/kg	3.1E-05	mg/kg	M	8.4E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	1E-06
	Metals										
	Arsenic	5.6E+00	mg/kg	5.6E+00	mg/kg	M	1.5E-06	mg/kg-day	1.5E+00	(mg/kg/day)-1	2E-06
	Lead	3.3E+01	mg/kg	3.3E+01	mg/kg	M	9.0E-06	mg/kg-day	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	3.3E-08	mg/kg-day	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Lake Prien
Receptor Population:	Commercial Fisher
Receptor Age:	Individual (>7)

TABLE 8.9
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	SVOCs										
	bis(2-Ethylhexyl) phthalate	5.8E-01	mg/kg	5.8E-01	mg/kg	M	2.2E-07	mg/kg-day	1.4E-02	(mg/kg/day)-1	3E-09
	Methylphenol, 3- & 4- **										
	PAHs										
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	2.1E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-07
	Benzo(a)pyrene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	2.2E-07	mg/kg-day	7.3E+00	(mg/kg/day)-1	2E-06
	Benzo(b)fluoranthene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	2.2E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-07
	Benzo(g,h,i)perylene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	2.3E-07	mg/kg-day	NA	NA	NA
	Dibenzo(a,h)anthracene	1.3E-01	mg/kg	1.3E-01	mg/kg	M	6.5E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	5E-07
	Indeno(1,2,3-cd)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	2.0E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	1E-07
	Phenanthrene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	1.1E-07	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	5.1E-02	mg/kg	5.1E-02	mg/kg	M	2.7E-08	mg/kg-day	2.0E+00	(mg/kg/day)-1	5E-08
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	3.1E-05	mg/kg	3.1E-05	mg/kg	M	3.5E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	5E-07
	Metals										
	Arsenic	5.6E+00	mg/kg	5.6E+00	mg/kg	M	6.4E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	1E-06
	Lead	3.3E+01	mg/kg	3.3E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	9E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Lake Prien
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.10
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	SVOCs										
	bis(2-Ethylhexyl) phthalate	5.8E-01	mg/kg	5.8E-01	mg/kg	M	5.1E-08	mg/kg-day	1.4E-02	(mg/kg/day)-1	7E-10
	Methylphenol, 3- & 4- **										
	PAHs										
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	3.7E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(a)pyrene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	3.8E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-07
	Benzo(b)fluoranthene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	3.8E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(g,h,i)perylene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	4.1E-08	mg/kg-day	NA	NA	NA
	Dibenzo(a,h)anthracene	1.3E-01	mg/kg	1.3E-01	mg/kg	M	1.1E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	8E-08
	Indeno(1,2,3-cd)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	3.6E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Phenanthrene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	2.0E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	5.1E-02	mg/kg	5.1E-02	mg/kg	M	4.4E-09	mg/kg-day	2.0E+00	(mg/kg/day)-1	9E-09
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	3.1E-05	mg/kg	3.1E-05	mg/kg	M	2.7E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	4E-07
	Metals										
	Arsenic	5.6E+00	mg/kg	5.6E+00	mg/kg	M	4.8E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	7E-07
	Lead	3.3E+01	mg/kg	3.3E+01	mg/kg	M	2.9E-06	mg/kg-day	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	1.1E-08	mg/kg-day	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Lake Prien
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.10
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	SVOCs										
	bis(2-Ethylhexyl) phthalate	5.8E-01	mg/kg	5.8E-01	mg/kg	M	3.8E-08	mg/kg-day	1.4E-02	(mg/kg/day)-1	5E-10
	Methylphenol, 3- & 4- **										
	PAHs										
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	3.6E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(a)pyrene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	3.7E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-07
	Benzo(b)fluoranthene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	3.7E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(g,h,i)perylene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	4.0E-08	mg/kg-day	NA	NA	NA
	Dibenzo(a,h)anthracene	1.3E-01	mg/kg	1.3E-01	mg/kg	M	1.1E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	8E-08
	Indeno(1,2,3-cd)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	3.5E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Phenanthrene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	2.0E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	5.1E-02	mg/kg	5.1E-02	mg/kg	M	4.6E-09	mg/kg-day	2.0E+00	(mg/kg/day)-1	9E-09
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	3.1E-05	mg/kg	3.1E-05	mg/kg	M	6.0E-13	mg/kg-day	1.5E+05	(mg/kg/day)-1	9E-08
	Metals										
	Arsenic	5.6E+00	mg/kg	5.6E+00	mg/kg	M	1.1E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	2E-07
	Lead	3.3E+01	mg/kg	3.3E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	2E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Lake Prien
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 8.11
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	SVOCs										
	bis(2-Ethylhexyl) phthalate	5.8E-01	mg/kg	5.8E-01	mg/kg	M	6.3E-08	mg/kg-day	1.4E-02	(mg/kg/day)-1	9E-10
	Methylphenol, 3- & 4- **										
	PAHs										
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	4.6E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(a)pyrene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	4.7E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-07
	Benzo(b)fluoranthene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	4.7E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(g,h,i)perylene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	5.1E-08	mg/kg-day	NA	NA	NA
	Dibenzo(a,h)anthracene	1.3E-01	mg/kg	1.3E-01	mg/kg	M	1.4E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	1E-07
	Indeno(1,2,3-cd)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	4.5E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Phenanthrene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	2.5E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	5.1E-02	mg/kg	5.1E-02	mg/kg	M	5.5E-09	mg/kg-day	2.0E+00	(mg/kg/day)-1	1E-08
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	3.1E-05	mg/kg	3.1E-05	mg/kg	M	3.3E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	5E-07
	Metals										
	Arsenic	5.6E+00	mg/kg	5.6E+00	mg/kg	M	6.0E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	9E-07
	Lead	3.3E+01	mg/kg	3.3E+01	mg/kg	M	3.6E-06	mg/kg-day	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	1.3E-08	mg/kg-day	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Lake Prien
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 8.11
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	SVOCs										
	bis(2-Ethylhexyl) phthalate	5.8E-01	mg/kg	5.8E-01	mg/kg	M	4.8E-08	mg/kg-day	1.4E-02	(mg/kg/day)-1	7E-10
	Methylphenol, 3- & 4- **										
	PAHs										
	Benzo(a)anthracene	4.2E-01	mg/kg	4.2E-01	mg/kg	M	4.5E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(a)pyrene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	4.6E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-07
	Benzo(b)fluoranthene	4.3E-01	mg/kg	4.3E-01	mg/kg	M	4.6E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Benzo(g,h,i)perylene	4.7E-01	mg/kg	4.7E-01	mg/kg	M	5.0E-08	mg/kg-day	NA	NA	NA
	Dibenzo(a,h)anthracene	1.3E-01	mg/kg	1.3E-01	mg/kg	M	1.4E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	1E-07
	Indeno(1,2,3-cd)pyrene	4.1E-01	mg/kg	4.1E-01	mg/kg	M	4.4E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-08
	Phenanthrene	2.3E-01	mg/kg	2.3E-01	mg/kg	M	2.4E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	5.1E-02	mg/kg	5.1E-02	mg/kg	M	5.8E-09	mg/kg-day	2.0E+00	(mg/kg/day)-1	1E-08
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	3.1E-05	mg/kg	3.1E-05	mg/kg	M	7.5E-13	mg/kg-day	1.5E+05	(mg/kg/day)-1	1E-07
	Metals										
	Arsenic	5.6E+00	mg/kg	5.6E+00	mg/kg	M	1.4E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	2E-07
	Lead	3.3E+01	mg/kg	3.3E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	3E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Remainder of Lower Calcasieu
Receptor Population:	Commercial Fisher
Receptor Age:	Individual (>7)

TABLE 8.12
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	SVOCs										
	bis(2-Ethylhexyl) phthalate	7.2E-01	mg/kg	7.2E-01	mg/kg	M	2.0E-07	mg/kg-day	1.4E-02	(mg/kg/day)-1	3E-09
	Methylphenol, 3- & 4-	1.4E-01	mg/kg	1.4E-01	mg/kg	M	3.8E-08	mg/kg-day	NA	NA	NA
	PAHs										
	Benzo(a)anthracene	8.3E-01	mg/kg	8.3E-01	mg/kg	M	2.3E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-07
	Benzo(a)pyrene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	2.2E-07	mg/kg-day	7.3E+00	(mg/kg/day)-1	2E-06
	Benzo(b)fluoranthene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	2.2E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-07
	Benzo(g,h,i)perylene	7.3E-01	mg/kg	7.3E-01	mg/kg	M	2.0E-07	mg/kg-day	NA	NA	NA
	Dibenzo(a,h)anthracene	7.0E-01	mg/kg	7.0E-01	mg/kg	M	1.9E-07	mg/kg-day	7.3E+00	(mg/kg/day)-1	1E-06
	Indeno(1,2,3-cd)pyrene	6.8E-01	mg/kg	6.8E-01	mg/kg	M	1.9E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	1E-07
	Phenanthrene	8.8E-01	mg/kg	8.8E-01	mg/kg	M	2.4E-07	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	6.2E-02	mg/kg	6.2E-02	mg/kg	M	1.7E-08	mg/kg-day	2.0E+00	(mg/kg/day)-1	3E-08
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	1.4E-05	mg/kg	1.4E-05	mg/kg	M	3.9E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	6E-07
	Metals										
	Arsenic	4.7E+00	mg/kg	4.7E+00	mg/kg	M	1.3E-06	mg/kg-day	1.5E+00	(mg/kg/day)-1	2E-06
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	9.8E-06	mg/kg-day	NA	NA	NA
	Mercury	1.8E-01	mg/kg	1.8E-01	mg/kg	M	5.0E-08	mg/kg-day	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Remainder of Lower Calcasieu
Receptor Population:	Commercial Fisher
Receptor Age:	Individual (>7)

TABLE 8.12
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	SVOCs										
	bis(2-Ethylhexyl) phthalate	7.2E-01	mg/kg	7.2E-01	mg/kg	M	2.8E-07	mg/kg-day	1.4E-02	(mg/kg/day)-1	4E-09
	Methylphenol, 3- & 4-	1.4E-01	mg/kg	1.4E-01	mg/kg	M	5.4E-08	mg/kg-day	NA	NA	NA
	PAHs										
	Benzo(a)anthracene	8.3E-01	mg/kg	8.3E-01	mg/kg	M	4.1E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-07
	Benzo(a)pyrene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	4.0E-07	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-06
	Benzo(b)fluoranthene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	4.1E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	3E-07
	Benzo(g,h,i)perylene	7.3E-01	mg/kg	7.3E-01	mg/kg	M	3.7E-07	mg/kg-day	NA	NA	NA
	Dibenzo(a,h)anthracene	7.0E-01	mg/kg	7.0E-01	mg/kg	M	3.5E-07	mg/kg-day	7.3E+00	(mg/kg/day)-1	3E-06
	Indeno(1,2,3-cd)pyrene	6.8E-01	mg/kg	6.8E-01	mg/kg	M	3.4E-07	mg/kg-day	7.3E-01	(mg/kg/day)-1	2E-07
	Phenanthrene	8.8E-01	mg/kg	8.8E-01	mg/kg	M	4.4E-07	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	6.2E-02	mg/kg	6.2E-02	mg/kg	M	3.3E-08	mg/kg-day	2.0E+00	(mg/kg/day)-1	7E-08
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	1.4E-05	mg/kg	1.4E-05	mg/kg	M	1.6E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	2E-07
	Metals										
	Arsenic	4.7E+00	mg/kg	4.7E+00	mg/kg	M	5.4E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	8E-07
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Mercury	1.8E-01	mg/kg	1.8E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	1E-05

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Remainder of Lower Calcasieu
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.13
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	SVOCs										
	bis(2-Ethylhexyl) phthalate	7.2E-01	mg/kg	7.2E-01	mg/kg	M	6.3E-08	mg/kg-day	1.4E-02	(mg/kg/day)-1	9E-10
	Methylphenol, 3- & 4-	1.4E-01	mg/kg	1.4E-01	mg/kg	M	1.2E-08	mg/kg-day	NA	NA	NA
	PAHs										
	Benzo(a)anthracene	8.3E-01	mg/kg	8.3E-01	mg/kg	M	7.2E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	5E-08
	Benzo(a)pyrene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	7.0E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	5E-07
	Benzo(b)fluoranthene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	7.1E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	5E-08
	Benzo(g,h,i)perylene	7.3E-01	mg/kg	7.3E-01	mg/kg	M	6.4E-08	mg/kg-day	NA	NA	NA
	Dibenzo(a,h)anthracene	7.0E-01	mg/kg	7.0E-01	mg/kg	M	6.1E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	4E-07
	Indeno(1,2,3-cd)pyrene	6.8E-01	mg/kg	6.8E-01	mg/kg	M	5.9E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	4E-08
	Phenanthrene	8.8E-01	mg/kg	8.8E-01	mg/kg	M	7.7E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	6.2E-02	mg/kg	6.2E-02	mg/kg	M	5.4E-09	mg/kg-day	2.0E+00	(mg/kg/day)-1	1E-08
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	1.4E-05	mg/kg	1.4E-05	mg/kg	M	1.2E-12	mg/kg-day	1.5E+05	(mg/kg/day)-1	2E-07
	Metals										
	Arsenic	4.7E+00	mg/kg	4.7E+00	mg/kg	M	4.1E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	6E-07
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	3.1E-06	mg/kg-day	NA	NA	NA
	Mercury	1.8E-01	mg/kg	1.8E-01	mg/kg	M	1.6E-08	mg/kg-day	NA	NA	NA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	LC - Remainder of Lower Calcasieu
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.13
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	SVOCs										
	bis(2-Ethylhexyl) phthalate	7.2E-01	mg/kg	7.2E-01	mg/kg	M	4.7E-08	mg/kg-day	1.4E-02	(mg/kg/day)-1	7E-10
	Methylphenol, 3- & 4-	1.4E-01	mg/kg	1.4E-01	mg/kg	M	9.2E-09	mg/kg-day	NA	NA	NA
	PAHs										
	Benzo(a)anthracene	8.3E-01	mg/kg	8.3E-01	mg/kg	M	7.1E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	5E-08
	Benzo(a)pyrene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	6.9E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	5E-07
	Benzo(b)fluoranthene	8.1E-01	mg/kg	8.1E-01	mg/kg	M	6.9E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	5E-08
	Benzo(g,h,i)perylene	7.3E-01	mg/kg	7.3E-01	mg/kg	M	6.2E-08	mg/kg-day	NA	NA	NA
	Dibenzo(a,h)anthracene	7.0E-01	mg/kg	7.0E-01	mg/kg	M	6.0E-08	mg/kg-day	7.3E+00	(mg/kg/day)-1	4E-07
	Indeno(1,2,3-cd)pyrene	6.8E-01	mg/kg	6.8E-01	mg/kg	M	5.8E-08	mg/kg-day	7.3E-01	(mg/kg/day)-1	4E-08
	Phenanthrene	8.8E-01	mg/kg	8.8E-01	mg/kg	M	7.5E-08	mg/kg-day	NA	NA	NA
	Pesticides/PCBs										
	Aroclor-1254	6.2E-02	mg/kg	6.2E-02	mg/kg	M	5.7E-09	mg/kg-day	2.0E+00	(mg/kg/day)-1	1E-08
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	1.4E-05	mg/kg	1.4E-05	mg/kg	M	2.8E-13	mg/kg-day	1.5E+05	(mg/kg/day)-1	4E-08
	Metals										
	Arsenic	4.7E+00	mg/kg	4.7E+00	mg/kg	M	9.3E-08	mg/kg-day	1.5E+00	(mg/kg/day)-1	1E-07
	Lead	3.6E+01	mg/kg	3.6E+01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
	Mercury	1.8E-01	mg/kg	1.8E-01	mg/kg	M	0.0E+00	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	3E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Bayou d'Inde
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.14
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Pesticides/PCBs										
	BHC, delta-	1.8E-05	mg/L	1.8E-05	mg/L	M	1.6E-09	mg/kg-day	NA	NA	NA
	Metals										
	Arsenic	1.9E-03	mg/L	1.9E-03	mg/L	M	1.6E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	2E-07
	Lead	3.8E-03	mg/L	3.8E-03	mg/L	M	3.3E-07	mg/kg-day	NA	NA	NA
	Mercury	1.4E-04	mg/L	1.4E-04	mg/L	M	1.2E-08	mg/kg-day	NA	NA	NA
Dermal	Pesticides/PCBs										
	BHC, delta-	1.8E-05	mg/L	1.8E-05	mg/L	M	0.0E+00	mg/kg-day	NA	NA	NA
	Metals										
	Arsenic	1.9E-03	mg/L	1.9E-03	mg/L	M	3.5E-08	mg/kg-day	1.5E+00	(mg/kg/day)-1	5E-08
	Lead	3.8E-03	mg/L	3.8E-03	mg/L	M	7.1E-09	mg/kg-day	NA	NA	NA
	Mercury	1.4E-04	mg/L	1.4E-04	mg/L	M	2.6E-09	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	3E-07

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because no permeability coefficient is available (see Table 4.15).

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Above Lake Charles
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.15

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	VOCs										
	Methyl tert-butyl ether **										
	Metals										
	Antimony **										
	Arsenic **										
	Lead **										
Dermal	VOCs										
	Methyl tert-butyl ether **										
	Metals										
	Antimony **										
	Arsenic **										
	Lead **										
										Total Risk Across All Exposure Routes/Pathways	0E+00

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Above Lake Charles
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 8.16

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	VOCs										
	Methyl tert-butyl ether **										
	Metals										
	Antimony **										
	Arsenic **										
	Lead **										
Dermal	VOCs										
	Methyl tert-butyl ether **										
	Metals										
	Antimony **										
	Arsenic **										
	Lead **										
										Total Risk Across All Exposure Routes/Pathways	0E+00

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Lake Charles
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.17

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	VOCs										
	Methyl tert-butyl ether **										
	Metals										
	Antimony **										
	Arsenic	6.4E-02	mg/L	6.4E-02	mg/L	M	5.6E-06	mg/kg-day	1.5E+00	(mg/kg/day)-1	8E-06
	Lead	2.6E-02	mg/L	2.6E-02	mg/L	M	2.3E-06	mg/kg-day	NA	NA	NA
Dermal	VOCs										
	Methyl tert-butyl ether **										
	Metals										
	Antimony **										
	Arsenic	6.4E-02	mg/L	6.4E-02	mg/L	M	1.2E-06	mg/kg-day	1.5E+00	(mg/kg/day)-1	2E-06
	Lead	2.6E-02	mg/L	2.6E-02	mg/L	M	4.8E-08	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	1E-05

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Lake Charles
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 8.18

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	VOCs										
	Methyl tert-butyl ether **										
	Metals										
	Antimony **										
	Arsenic	6.4E-02	mg/L	6.4E-02	mg/L	M	1.0E-05	mg/kg-day	1.5E+00	(mg/kg/day)-1	2E-05
	Lead	2.6E-02	mg/L	2.6E-02	mg/L	M	4.2E-06	mg/kg-day	NA	NA	NA
Dermal	VOCs										
	Methyl tert-butyl ether **										
	Metals										
	Antimony **										
	Arsenic	6.4E-02	mg/L	6.4E-02	mg/L	M	4.4E-06	mg/kg-day	1.5E+00	(mg/kg/day)-1	7E-06
	Lead	2.6E-02	mg/L	2.6E-02	mg/L	M	1.8E-07	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	2E-05

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Clooney Island Loop
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.19

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	VOCs										
	Methyl tert-butyl ether **										
	Metals										
	Antimony										
	Arsenic	4.1E-03	mg/L	4.1E-03	mg/L	M	3.6E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	5E-07
	Lead	7.0E-04	mg/L	7.0E-04	mg/L	M	6.1E-08	mg/kg-day	NA	NA	NA
Dermal	VOCs										
	Methyl tert-butyl ether **										
	Metals										
	Antimony										
	Arsenic	4.1E-03	mg/L	4.1E-03	mg/L	M	7.6E-08	mg/kg-day	1.5E+00	(mg/kg/day)-1	1E-07
	Lead	7.0E-04	mg/L	7.0E-04	mg/L	M	1.3E-09	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	6E-07

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Below Clooney Island Loop
Receptor Population:	Commercial Fisher
Receptor Age:	Individual (>7)

TABLE 8.20

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	VOCs										
	Methyl tert-butyl ether										
	Metals										
	Antimony	8.4E-02	mg/L	8.4E-02	mg/L	M	7.9E-06	mg/kg-day	NA	NA	NA
	Arsenic	1.5E-02	mg/L	1.5E-02	mg/L	M	1.4E-06	mg/kg-day	1.5E+00	(mg/kg/day)-1	2E-06
	Lead	1.2E-03	mg/L	1.2E-03	mg/L	M	1.1E-08	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	2E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	UC - Below Clooney Island Loop
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.21

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	VOCs										
	Methyl tert-butyl ether										
	Metals										
	Antimony	8.4E-02	mg/L	8.4E-02	mg/L	M	7.3E-06	mg/kg-day	NA	NA	NA
	Arsenic	1.5E-02	mg/L	1.5E-02	mg/L	M	1.3E-06	mg/kg-day	1.5E+00	(mg/kg/day)-1	2E-06
	Lead	1.2E-03	mg/L	1.2E-03	mg/L	M	1.0E-07	mg/kg-day	NA	NA	NA
Dermal	VOCs										
	Methyl tert-butyl ether										
	Metals										
	Antimony	8.4E-02	mg/L	8.4E-02	mg/L	M	1.5E-06	mg/kg-day	NA	NA	NA
	Arsenic	1.5E-02	mg/L	1.5E-02	mg/L	M	2.7E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	4E-07
	Lead	1.2E-03	mg/L	1.2E-03	mg/L	M	2.2E-09	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	2E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	LC - Lake Prien
Receptor Population:	Commercial Fisher
Receptor Age:	Individual (>7)

TABLE 8.22
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Dermal	Metals										
	Arsenic	6.3E-03	mg/L	6.3E-03	mg/L	M	6.0E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	9E-07
	Lead	1.1E-03	mg/L	1.1E-03	mg/L	M	1.0E-08	mg/kg-day	NA	NA	NA
	Mercury **										
										Total Risk Across All Exposure Routes/Pathways	9E-07

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	LC - Lake Prien
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.23
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Metals										
	Arsenic	6.3E-03	mg/L	6.3E-03	mg/L	M	5.5E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	8E-07
	Lead	1.1E-03	mg/L	1.1E-03	mg/L	M	9.6E-08	mg/kg-day	NA	NA	NA
	Mercury **										
Dermal	Metals										
	Arsenic	6.3E-03	mg/L	6.3E-03	mg/L	M	1.2E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	2E-07
	Lead	1.1E-03	mg/L	1.1E-03	mg/L	M	2.0E-09	mg/kg-day	NA	NA	NA
	Mercury **										
										Total Risk Across All Exposure Routes/Pathways	1E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	LC - Lake Prien
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 8.24
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Metals										
	Arsenic	6.3E-03	mg/L	6.3E-03	mg/L	M	1.0E-06	mg/kg-day	1.5E+00	(mg/kg/day)-1	2E-06
	Lead	1.1E-03	mg/L	1.1E-03	mg/L	M	1.8E-07	mg/kg-day	NA	NA	NA
	Mercury **										
Dermal	Metals										
	Arsenic	6.3E-03	mg/L	6.3E-03	mg/L	M	4.4E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	7E-07
	Lead	1.1E-03	mg/L	1.1E-03	mg/L	M	7.6E-09	mg/kg-day	NA	NA	NA
	Mercury **										
										Total Risk Across All Exposure Routes/Pathways	2E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	LC - Remainder of Lower Calcasieu
Receptor Population:	Recreational Swimmer
Receptor Age:	Individual (>7)

TABLE 8.25
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Metals										
	Arsenic	3.3E-03	mg/L	3.3E-03	mg/L	M	2.9E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	4E-07
	Lead	2.1E-03	mg/L	2.1E-03	mg/L	M	1.8E-07	mg/kg-day	NA	NA	NA
	Mercury	6.1E-05	mg/L	6.1E-05	mg/L	M	5.3E-09	mg/kg-day	NA	NA	NA
Dermal	Metals										
	Arsenic	3.3E-03	mg/L	3.3E-03	mg/L	M	6.1E-08	mg/kg-day	1.5E+00	(mg/kg/day)-1	9E-08
	Lead	2.1E-03	mg/L	2.1E-03	mg/L	M	3.8E-09	mg/kg-day	NA	NA	NA
	Mercury	6.1E-05	mg/L	6.1E-05	mg/L	M	1.1E-09	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	5E-07

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	LC - Remainder of Lower Calcasieu
Receptor Population:	Recreational Fisher
Receptor Age:	Individual (>7)

TABLE 8.26
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Metals										
	Arsenic	3.3E-03	mg/L	3.3E-03	mg/L	M	2.9E-07	mg/kg-day	1.5E+00	(mg/kg/day)-1	4E-07
	Lead	2.1E-03	mg/L	2.1E-03	mg/L	M	1.8E-07	mg/kg-day	NA	NA	NA
	Mercury	6.1E-05	mg/L	6.1E-05	mg/L	M	5.3E-09	mg/kg-day	NA	NA	NA
Dermal	Metals										
	Arsenic	3.3E-03	mg/L	3.3E-03	mg/L	M	6.1E-08	mg/kg-day	1.5E+00	(mg/kg/day)-1	9E-08
	Lead	2.1E-03	mg/L	2.1E-03	mg/L	M	3.8E-09	mg/kg-day	NA	NA	NA
	Mercury	6.1E-05	mg/L	6.1E-05	mg/L	M	1.1E-09	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	5E-07

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/L = milligrams per liter

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Entire Estuary (Except Bayou Verdine)
Receptor Population:	Resident
Receptor Age:	Individual (>7)

TABLE 8.27
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
ENTIRE ESTUARY (EXCEPT BAYOU VERDINE)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Pesticides/PCBs										
	4,4'-DDE	5.7E-03	mg/kg	5.7E-03	mg/kg	M	1.3E-06	mg/kg-day	3.4E-01	(mg/kg/day)-1	4E-07
	Aldrin	6.0E-03	mg/kg	6.0E-03	mg/kg	M	1.4E-06	mg/kg-day	1.7E+01	(mg/kg/day)-1	2E-05
	Aroclor-1254	2.3E-02	mg/kg	2.3E-02	mg/kg	M	5.2E-06	mg/kg-day	2.0E+00	(mg/kg/day)-1	1E-05
	BHC, alpha-	5.1E-03	mg/kg	5.1E-03	mg/kg	M	1.2E-06	mg/kg-day	6.3E+00	(mg/kg/day)-1	7E-06
	BHC, beta-	7.0E-03	mg/kg	7.0E-03	mg/kg	M	1.6E-06	mg/kg-day	1.8E+00	(mg/kg/day)-1	3E-06
	BHC, gamma- (Lindane)	3.7E-03	mg/kg	3.7E-03	mg/kg	M	8.3E-07	mg/kg-day	1.3E+00	(mg/kg/day)-1	1E-06
	Chlordane, alpha-	5.8E-03	mg/kg	5.8E-03	mg/kg	M	1.3E-06	mg/kg-day	3.5E-01	(mg/kg/day)-1	5E-07
	Chlordane, gamma-	5.0E-03	mg/kg	5.0E-03	mg/kg	M	1.1E-06	mg/kg-day	3.5E-01	(mg/kg/day)-1	4E-07
	Dieldrin	5.6E-03	mg/kg	5.6E-03	mg/kg	M	1.3E-06	mg/kg-day	1.6E+01	(mg/kg/day)-1	2E-05
	Endrin aldehyde	2.9E-03	mg/kg	2.9E-03	mg/kg	M	6.5E-07	mg/kg-day	NA	NA	NA
	Heptachlor	5.2E-03	mg/kg	5.2E-03	mg/kg	M	1.2E-06	mg/kg-day	4.5E+00	(mg/kg/day)-1	5E-06
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	7.5E-07	mg/kg	7.5E-07	mg/kg	M	1.7E-10	mg/kg-day	1.5E+05	(mg/kg/day)-1	3E-05
	Metals										
	Antimony	5.0E-02	mg/kg	5.0E-02	mg/kg	M	1.1E-05	mg/kg-day	NA	NA	NA
	Arsenic	1.0E-01	mg/kg	1.0E-01	mg/kg	M	2.4E-05	mg/kg-day	1.5E+00	(mg/kg/day)-1	4E-05
	Barium	3.6E+00	mg/kg	3.6E+00	mg/kg	M	8.2E-04	mg/kg-day	NA	NA	NA
	Chromium (total)	1.8E-01	mg/kg	1.8E-01	mg/kg	M	4.2E-05	mg/kg-day	NA	NA	NA
	Lead	1.8E-01	mg/kg	1.8E-01	mg/kg	M	4.1E-05	mg/kg-day	NA	NA	NA
	Manganese	3.6E+00	mg/kg	3.6E+00	mg/kg	M	8.0E-04	mg/kg-day	NA	NA	NA
	Mercury	1.7E-01	mg/kg	1.7E-01	mg/kg	M	3.8E-05	mg/kg-day	NA	NA	NA
	Nickel	4.8E-01	mg/kg	4.8E-01	mg/kg	M	1.1E-04	mg/kg-day	NA	NA	NA
	Selenium	9.9E-01	mg/kg	9.9E-01	mg/kg	M	2.2E-04	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	1E-04

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Entire Estuary (Except Bayou Verdine)
Receptor Population:	Resident (Subsistence)
Receptor Age:	Individual (>7)

TABLE 8.28
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
ENTIRE ESTUARY (EXCEPT BAYOU VERDINE)

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Pesticides/PCBs										
	4,4'-DDE	5.7E-03	mg/kg	5.7E-03	mg/kg	M	3.4E-06	mg/kg-day	3.4E-01	(mg/kg/day)-1	1E-06
	Aldrin	6.0E-03	mg/kg	6.0E-03	mg/kg	M	3.6E-06	mg/kg-day	1.7E+01	(mg/kg/day)-1	6E-05
	Aroclor-1254	2.3E-02	mg/kg	2.3E-02	mg/kg	M	1.4E-05	mg/kg-day	2.0E+00	(mg/kg/day)-1	3E-05
	BHC, alpha-	5.1E-03	mg/kg	5.1E-03	mg/kg	M	3.1E-06	mg/kg-day	6.3E+00	(mg/kg/day)-1	2E-05
	BHC, beta-	7.0E-03	mg/kg	7.0E-03	mg/kg	M	4.2E-06	mg/kg-day	1.8E+00	(mg/kg/day)-1	8E-06
	BHC, gamma- (Lindane)	3.7E-03	mg/kg	3.7E-03	mg/kg	M	2.2E-06	mg/kg-day	1.3E+00	(mg/kg/day)-1	3E-06
	Chlordane, alpha-	5.8E-03	mg/kg	5.8E-03	mg/kg	M	3.5E-06	mg/kg-day	3.5E-01	(mg/kg/day)-1	1E-06
	Chlordane, gamma-	5.0E-03	mg/kg	5.0E-03	mg/kg	M	3.0E-06	mg/kg-day	3.5E-01	(mg/kg/day)-1	1E-06
	Dieldrin	5.6E-03	mg/kg	5.6E-03	mg/kg	M	3.4E-06	mg/kg-day	1.6E+01	(mg/kg/day)-1	5E-05
	Endrin aldehyde	2.9E-03	mg/kg	2.9E-03	mg/kg	M	1.8E-06	mg/kg-day	NA	NA	NA
	Heptachlor	5.2E-03	mg/kg	5.2E-03	mg/kg	M	3.1E-06	mg/kg-day	4.5E+00	(mg/kg/day)-1	1E-05
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	7.5E-07	mg/kg	7.5E-07	mg/kg	M	4.5E-10	mg/kg-day	1.5E+05	(mg/kg/day)-1	7E-05
	Metals										
	Antimony	5.0E-02	mg/kg	5.0E-02	mg/kg	M	3.0E-05	mg/kg-day	NA	NA	NA
	Arsenic	1.0E-01	mg/kg	1.0E-01	mg/kg	M	6.3E-05	mg/kg-day	1.5E+00	(mg/kg/day)-1	9E-05
	Barium	3.6E+00	mg/kg	3.6E+00	mg/kg	M	2.2E-03	mg/kg-day	NA	NA	NA
	Chromium (total)	1.8E-01	mg/kg	1.8E-01	mg/kg	M	1.1E-04	mg/kg-day	NA	NA	NA
	Lead	1.8E-01	mg/kg	1.8E-01	mg/kg	M	1.1E-04	mg/kg-day	NA	NA	NA
	Manganese	3.6E+00	mg/kg	3.6E+00	mg/kg	M	2.1E-03	mg/kg-day	NA	NA	NA
	Mercury	1.7E-01	mg/kg	1.7E-01	mg/kg	M	1.0E-04	mg/kg-day	NA	NA	NA
	Nickel	4.8E-01	mg/kg	4.8E-01	mg/kg	M	2.9E-04	mg/kg-day	NA	NA	NA
	Selenium	9.9E-01	mg/kg	9.9E-01	mg/kg	M	6.0E-04	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	4E-04

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Bayou Verdine
Receptor Population:	Resident
Receptor Age:	Individual (>7)

TABLE 8.29

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

BAYOU VERDINE

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Dioxins/Furans 2,3,7,8-TCDD Equivalents	6.7E-06	mg/kg	6.7E-06	mg/kg	M	6.7E-10	mg/kg-day	1.5E+05	(mg/kg/day)-1	1E-04
										Total Risk Across All Exposure Routes/Pathways	1E-04

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Bayou Verdine
Receptor Population:	Resident (Subsistence)
Receptor Age:	Individual (>7)

TABLE 8.30
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU VERDINE

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Dioxins/Furans 2,3,7,8-TCDD Equivalents	6.7E-06	mg/kg	6.7E-06	mg/kg	M	3.5E-09	mg/kg-day	1.5E+05	(mg/kg/day)-1	5E-04
										Total Risk Across All Exposure Routes/Pathways	5E-04

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Bayou d'Inde
Receptor Population:	Resident
Receptor Age:	Individual (>7)

TABLE 8.31

CALCULATION OF CANCER RISKS

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

BAYOU D'INDE

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	SVOCs										
	4-Nitrophenol	4.0E-02	mg/kg	4.0E-02	mg/kg	M	9.0E-06	mg/kg-day	NA	NA	NA
	bis(2-Ethylhexyl) phthalate	1.1E+01	mg/kg	1.1E+01	mg/kg	M	2.6E-03	mg/kg-day	1.4E-02	(mg/kg/day)-1	4E-05
	Di-n-butylphthalate	3.5E+00	mg/kg	3.5E+00	mg/kg	M	7.8E-04	mg/kg-day	NA	NA	NA
	Di-n-octylphthalate	1.2E-01	mg/kg	1.2E-01	mg/kg	M	2.7E-05	mg/kg-day	NA	NA	NA
	Hexachlorobenzene	2.8E-02	mg/kg	2.8E-02	mg/kg	M	6.3E-06	mg/kg-day	1.6E+00	(mg/kg/day)-1	1E-05
	Pesticides/PCBs										
	4,4'-DDD	2.2E-02	mg/kg	2.2E-02	mg/kg	M	5.0E-06	mg/kg-day	2.4E-01	(mg/kg/day)-1	1E-06
	4,4'-DDT	2.8E-02	mg/kg	2.8E-02	mg/kg	M	6.4E-06	mg/kg-day	3.4E-01	(mg/kg/day)-1	2E-06
	Aldrin	1.0E-02	mg/kg	1.0E-02	mg/kg	M	2.3E-06	mg/kg-day	1.7E+01	(mg/kg/day)-1	4E-05
	Aroclor-1254	1.4E-01	mg/kg	1.4E-01	mg/kg	M	3.2E-05	mg/kg-day	2.0E+00	(mg/kg/day)-1	6E-05
	BHC, beta-	4.0E-02	mg/kg	4.0E-02	mg/kg	M	8.9E-06	mg/kg-day	1.8E+00	(mg/kg/day)-1	2E-05
	Endosulfan sulfate	1.1E-02	mg/kg	1.1E-02	mg/kg	M	2.5E-06	mg/kg-day	NA	NA	NA
	Endrin	2.0E-02	mg/kg	2.0E-02	mg/kg	M	4.6E-06	mg/kg-day	NA	NA	NA
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	2.5E-05	mg/kg	2.5E-05	mg/kg	M	5.6E-09	mg/kg-day	1.5E+05	(mg/kg/day)-1	8E-04
	Metals										
	Arsenic	1.2E-01	mg/kg	1.2E-01	mg/kg	M	2.6E-05	mg/kg-day	1.5E+00	(mg/kg/day)-1	4E-05
	Barium	9.8E+01	mg/kg	9.8E+01	mg/kg	M	2.2E-02	mg/kg-day	NA	NA	NA
	Cadmium	3.8E-02	mg/kg	3.8E-02	mg/kg	M	8.7E-06	mg/kg-day	NA	NA	NA
	Chromium (total)	1.4E+00	mg/kg	1.4E+00	mg/kg	M	3.2E-04	mg/kg-day	NA	NA	NA
	Copper	1.6E+01	mg/kg	1.6E+01	mg/kg	M	3.7E-03	mg/kg-day	NA	NA	NA
	Iron	1.5E+02	mg/kg	1.5E+02	mg/kg	M	3.3E-02	mg/kg-day	NA	NA	NA
	Lead	3.5E-01	mg/kg	3.5E-01	mg/kg	M	8.0E-05	mg/kg-day	NA	NA	NA
	Manganese	1.8E+02	mg/kg	1.8E+02	mg/kg	M	4.0E-02	mg/kg-day	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	2.7E-05	mg/kg-day	NA	NA	NA
	Methyl Mercury	3.5E-02	mg/kg	3.5E-02	mg/kg	M	7.8E-06	mg/kg-day	NA	NA	NA
	Nickel	4.6E-01	mg/kg	4.6E-01	mg/kg	M	1.0E-04	mg/kg-day	NA	NA	NA
	Selenium	6.0E-01	mg/kg	6.0E-01	mg/kg	M	1.4E-04	mg/kg-day	NA	NA	NA
	Silver	7.0E-02	mg/kg	7.0E-02	mg/kg	M	1.6E-05	mg/kg-day	NA	NA	NA
	Zinc	2.4E+01	mg/kg	2.4E+01	mg/kg	M	5.3E-03	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	1E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Upper Calcasieu
Receptor Population:	Resident
Receptor Age:	Individual (>7)

TABLE 8.32
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Upper Calcasieu	Pesticides/PCBs										
	4,4'-DDT	1.5E-02	mg/kg	1.5E-02	mg/kg	M	3.4E-06	mg/kg-day	3.4E-01	(mg/kg/day)-1	1E-06
	Aroclor-1254	1.1E-01	mg/kg	1.1E-01	mg/kg	M	2.5E-05	mg/kg-day	2.0E+00	(mg/kg/day)-1	5E-05
	BHC, beta-	1.6E-02	mg/kg	1.6E-02	mg/kg	M	3.6E-06	mg/kg-day	1.8E+00	(mg/kg/day)-1	6E-06
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	5.5E-06	mg/kg	5.5E-06	mg/kg	M	1.2E-09	mg/kg-day	1.5E+05	(mg/kg/day)-1	2E-04
	Metals										
	Arsenic	1.4E-01	mg/kg	1.4E-01	mg/kg	M	3.2E-05	mg/kg-day	1.5E+00	(mg/kg/day)-1	5E-05
	Cadmium	2.7E-02	mg/kg	2.7E-02	mg/kg	M	6.1E-06	mg/kg-day	NA	NA	NA
	Chromium (total)	2.0E-01	mg/kg	2.0E-01	mg/kg	M	4.4E-05	mg/kg-day	NA	NA	NA
	Copper	1.3E+01	mg/kg	1.3E+01	mg/kg	M	2.9E-03	mg/kg-day	NA	NA	NA
	Iron	4.5E+01	mg/kg	4.5E+01	mg/kg	M	1.0E-02	mg/kg-day	NA	NA	NA
	Lead	5.1E-01	mg/kg	5.1E-01	mg/kg	M	1.1E-04	mg/kg-day	NA	NA	NA
	Mercury	6.7E-02	mg/kg	6.7E-02	mg/kg	M	1.5E-05	mg/kg-day	NA	NA	NA
	Methyl Mercury	3.4E-02	mg/kg	3.4E-02	mg/kg	M	7.6E-06	mg/kg-day	NA	NA	NA
	Selenium	8.0E-01	mg/kg	8.0E-01	mg/kg	M	1.8E-04	mg/kg-day	NA	NA	NA
	Zinc	2.1E+01	mg/kg	2.1E+01	mg/kg	M	4.8E-03	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	3E-04

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Lower Calcasieu
Receptor Population:	Resident
Receptor Age:	Individual (>7)

TABLE 8.33
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	SVOCs										
	bis(2-Ethylhexyl) phthalate	1.7E+00	mg/kg	1.7E+00	mg/kg	M	3.9E-04	mg/kg-day	1.4E-02	(mg/kg/day)-1	5E-06
	PAHs										
	Benzo(a)pyrene	9.8E-02	mg/kg	9.8E-02	mg/kg	M	2.2E-05	mg/kg-day	7.3E+00	(mg/kg/day)-1	2E-04
	Pesticides/PCBs										
	Aroclor-1254	3.5E-02	mg/kg	3.5E-02	mg/kg	M	7.9E-06	mg/kg-day	2.0E+00	(mg/kg/day)-1	2E-05
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	2.8E-06	mg/kg	2.8E-06	mg/kg	M	6.3E-10	mg/kg-day	1.5E+05	(mg/kg/day)-1	9E-05
	Metals										
	Arsenic	1.6E-01	mg/kg	1.6E-01	mg/kg	M	3.5E-05	mg/kg-day	1.5E+00	(mg/kg/day)-1	5E-05
	Cadmium	8.7E-02	mg/kg	8.7E-02	mg/kg	M	2.0E-05	mg/kg-day	NA	NA	NA
	Chromium (total)	3.9E-01	mg/kg	3.9E-01	mg/kg	M	8.8E-05	mg/kg-day	NA	NA	NA
	Copper	3.2E+01	mg/kg	3.2E+01	mg/kg	M	7.2E-03	mg/kg-day	NA	NA	NA
	Iron	5.9E+01	mg/kg	5.9E+01	mg/kg	M	1.3E-02	mg/kg-day	NA	NA	NA
	Lead	2.5E-01	mg/kg	2.5E-01	mg/kg	M	5.7E-05	mg/kg-day	NA	NA	NA
	Mercury	4.8E-02	mg/kg	4.8E-02	mg/kg	M	1.1E-05	mg/kg-day	NA	NA	NA
	Methyl Mercury	2.5E-02	mg/kg	2.5E-02	mg/kg	M	5.6E-06	mg/kg-day	NA	NA	NA
	Selenium	8.5E-01	mg/kg	8.5E-01	mg/kg	M	1.9E-04	mg/kg-day	NA	NA	NA
	Silver	1.0E-01	mg/kg	1.0E-01	mg/kg	M	2.3E-05	mg/kg-day	NA	NA	NA
	Zinc	1.9E+02	mg/kg	1.9E+02	mg/kg	M	4.4E-02	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	3E-04

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Bayou Verdine
Receptor Population:	Resident
Receptor Age:	Individual (>7)

TABLE 8.34
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU VERDINE

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Dioxins/Furans 2,3,7,8-TCDD Equivalents	9.7E-07	mg/kg	9.7E-07	mg/kg	M	1.5E-11	mg/kg-day	1.5E+05	(mg/kg/day)-1	2E-06
										Total Risk Across All Exposure Routes/Pathways	2E-06

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Bayou d'Inde
Receptor Population:	Resident (Subsistence)
Receptor Age:	Individual (>7)

TABLE 8.35
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	SVOCs										
	4-Nitrophenol	4.0E-02	mg/kg	4.0E-02	mg/kg	M	2.4E-05	mg/kg-day	NA	NA	NA
	bis(2-Ethylhexyl) phthalate	1.1E+01	mg/kg	1.1E+01	mg/kg	M	6.9E-03	mg/kg-day	1.4E-02	(mg/kg/day)-1	1E-04
	Di-n-butylphthalate	3.5E+00	mg/kg	3.5E+00	mg/kg	M	2.1E-03	mg/kg-day	NA	NA	NA
	Di-n-octylphthalate	1.2E-01	mg/kg	1.2E-01	mg/kg	M	7.3E-05	mg/kg-day	NA	NA	NA
	Hexachlorobenzene	2.8E-02	mg/kg	2.8E-02	mg/kg	M	1.7E-05	mg/kg-day	1.6E+00	(mg/kg/day)-1	3E-05
	Pesticides/PCBs										
	4,4'-DDD	2.2E-02	mg/kg	2.2E-02	mg/kg	M	1.3E-05	mg/kg-day	2.4E-01	(mg/kg/day)-1	3E-06
	4,4'-DDT	2.8E-02	mg/kg	2.8E-02	mg/kg	M	1.7E-05	mg/kg-day	3.4E-01	(mg/kg/day)-1	6E-06
	Aldrin	1.0E-02	mg/kg	1.0E-02	mg/kg	M	6.1E-06	mg/kg-day	1.7E+01	(mg/kg/day)-1	1E-04
	Aroclor-1254	1.4E-01	mg/kg	1.4E-01	mg/kg	M	8.7E-05	mg/kg-day	2.0E+00	(mg/kg/day)-1	2E-04
	BHC, beta-	4.0E-02	mg/kg	4.0E-02	mg/kg	M	2.4E-05	mg/kg-day	1.8E+00	(mg/kg/day)-1	4E-05
	Endosulfan sulfate	1.1E-02	mg/kg	1.1E-02	mg/kg	M	6.7E-06	mg/kg-day	NA	NA	NA
	Endrin	2.0E-02	mg/kg	2.0E-02	mg/kg	M	1.2E-05	mg/kg-day	NA	NA	NA
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	2.5E-05	mg/kg	2.5E-05	mg/kg	M	1.5E-08	mg/kg-day	1.5E+05	(mg/kg/day)-1	2E-03
	Metals										
	Arsenic	1.2E-01	mg/kg	1.2E-01	mg/kg	M	7.0E-05	mg/kg-day	1.5E+00	(mg/kg/day)-1	1E-04
	Barium	9.8E+01	mg/kg	9.8E+01	mg/kg	M	5.9E-02	mg/kg-day	NA	NA	NA
	Cadmium	3.8E-02	mg/kg	3.8E-02	mg/kg	M	2.3E-05	mg/kg-day	NA	NA	NA
	Chromium (total)	1.4E+00	mg/kg	1.4E+00	mg/kg	M	8.5E-04	mg/kg-day	NA	NA	NA
	Copper	1.6E+01	mg/kg	1.6E+01	mg/kg	M	9.9E-03	mg/kg-day	NA	NA	NA
	Iron	1.5E+02	mg/kg	1.5E+02	mg/kg	M	8.8E-02	mg/kg-day	NA	NA	NA
	Lead	3.5E-01	mg/kg	3.5E-01	mg/kg	M	2.1E-04	mg/kg-day	NA	NA	NA
	Manganese	1.8E+02	mg/kg	1.8E+02	mg/kg	M	1.1E-01	mg/kg-day	NA	NA	NA
	Mercury	1.2E-01	mg/kg	1.2E-01	mg/kg	M	7.1E-05	mg/kg-day	NA	NA	NA
	Methyl Mercury	3.5E-02	mg/kg	3.5E-02	mg/kg	M	2.1E-05	mg/kg-day	NA	NA	NA
	Nickel	4.6E-01	mg/kg	4.6E-01	mg/kg	M	2.8E-04	mg/kg-day	NA	NA	NA
	Selenium	6.0E-01	mg/kg	6.0E-01	mg/kg	M	3.6E-04	mg/kg-day	NA	NA	NA
	Silver	7.0E-02	mg/kg	7.0E-02	mg/kg	M	4.2E-05	mg/kg-day	NA	NA	NA
	Zinc	2.4E+01	mg/kg	2.4E+01	mg/kg	M	1.4E-02	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	3E-03

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

(2) Chronic

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Upper Calcasieu
Receptor Population:	Resident (Subsistence)
Receptor Age:	Individual (>7)

TABLE 8.36
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Upper Calcasieu	Pesticides/PCBs										
	4,4'-DDT	1.5E-02	mg/kg	1.5E-02	mg/kg	M	9.1E-06	mg/kg-day	3.4E-01	(mg/kg/day)-1	3E-06
	Aroclor-1254	1.1E-01	mg/kg	1.1E-01	mg/kg	M	6.7E-05	mg/kg-day	2.0E+00	(mg/kg/day)-1	1E-04
	BHC, beta-	1.6E-02	mg/kg	1.6E-02	mg/kg	M	9.7E-06	mg/kg-day	1.8E+00	(mg/kg/day)-1	2E-05
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	5.5E-06	mg/kg	5.5E-06	mg/kg	M	3.3E-09	mg/kg-day	1.5E+05	(mg/kg/day)-1	5E-04
	Metals										
	Arsenic	1.4E-01	mg/kg	1.4E-01	mg/kg	M	8.7E-05	mg/kg-day	1.5E+00	(mg/kg/day)-1	1E-04
	Cadmium	2.7E-02	mg/kg	2.7E-02	mg/kg	M	1.6E-05	mg/kg-day	NA	NA	NA
	Chromium (total)	2.0E-01	mg/kg	2.0E-01	mg/kg	M	1.2E-04	mg/kg-day	NA	NA	NA
	Copper	1.3E+01	mg/kg	1.3E+01	mg/kg	M	7.9E-03	mg/kg-day	NA	NA	NA
	Iron	4.5E+01	mg/kg	4.5E+01	mg/kg	M	2.7E-02	mg/kg-day	NA	NA	NA
	Lead	5.1E-01	mg/kg	5.1E-01	mg/kg	M	3.1E-04	mg/kg-day	NA	NA	NA
	Mercury	6.7E-02	mg/kg	6.7E-02	mg/kg	M	4.0E-05	mg/kg-day	NA	NA	NA
	Methyl Mercury	3.4E-02	mg/kg	3.4E-02	mg/kg	M	2.0E-05	mg/kg-day	NA	NA	NA
	Selenium	8.0E-01	mg/kg	8.0E-01	mg/kg	M	4.8E-04	mg/kg-day	NA	NA	NA
	Zinc	2.1E+01	mg/kg	2.1E+01	mg/kg	M	1.3E-02	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	8E-04

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Lower Calcasieu
Receptor Population:	Resident (Subsistence)
Receptor Age:	Individual (>7)

TABLE 8.37
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	SVOCs										
	bis(2-Ethylhexyl) phthalate	1.7E+00	mg/kg	1.7E+00	mg/kg	M	1.0E-03	mg/kg-day	1.4E-02	(mg/kg/day)-1	1E-05
	PAHs										
	Benzo(a)pyrene	9.8E-02	mg/kg	9.8E-02	mg/kg	M	5.9E-05	mg/kg-day	7.3E+00	(mg/kg/day)-1	4E-04
	Pesticides/PCBs										
	Aroclor-1254	3.5E-02	mg/kg	3.5E-02	mg/kg	M	2.1E-05	mg/kg-day	2.0E+00	(mg/kg/day)-1	4E-05
	Dioxins/Furans										
	2,3,7,8-TCDD Equivalents	2.8E-06	mg/kg	2.8E-06	mg/kg	M	1.7E-09	mg/kg-day	1.5E+05	(mg/kg/day)-1	3E-04
	Metals										
	Arsenic	1.6E-01	mg/kg	1.6E-01	mg/kg	M	9.4E-05	mg/kg-day	1.5E+00	(mg/kg/day)-1	1E-04
	Cadmium	8.7E-02	mg/kg	8.7E-02	mg/kg	M	5.3E-05	mg/kg-day	NA	NA	NA
	Chromium (total)	3.9E-01	mg/kg	3.9E-01	mg/kg	M	2.4E-04	mg/kg-day	NA	NA	NA
	Copper	3.2E+01	mg/kg	3.2E+01	mg/kg	M	1.9E-02	mg/kg-day	NA	NA	NA
	Iron	5.9E+01	mg/kg	5.9E+01	mg/kg	M	3.6E-02	mg/kg-day	NA	NA	NA
	Lead	2.5E-01	mg/kg	2.5E-01	mg/kg	M	1.5E-04	mg/kg-day	NA	NA	NA
	Mercury	4.8E-02	mg/kg	4.8E-02	mg/kg	M	2.9E-05	mg/kg-day	NA	NA	NA
	Methyl Mercury	2.5E-02	mg/kg	2.5E-02	mg/kg	M	1.5E-05	mg/kg-day	NA	NA	NA
	Selenium	8.5E-01	mg/kg	8.5E-01	mg/kg	M	5.1E-04	mg/kg-day	NA	NA	NA
	Silver	1.0E-01	mg/kg	1.0E-01	mg/kg	M	6.2E-05	mg/kg-day	NA	NA	NA
	Zinc	1.9E+02	mg/kg	1.9E+02	mg/kg	M	1.2E-01	mg/kg-day	NA	NA	NA
										Total Risk Across All Exposure Routes/Pathways	9E-04

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

NA = Not Available

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Bayou Verdine
Receptor Population:	Resident (Subsistence)
Receptor Age:	Individual (>7)

TABLE 8.38
CALCULATION OF CANCER RISKS
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU VERDINE

Exposure Route	Chemical of Potential Concern	Medium EPC Value	Medium EPC Units	Route EPC Value	Route EPC Units	EPC Selected for Risk Calculation (1)	Intake (Cancer)	Intake (Cancer) Units	Cancer Slope Factor	Cancer Slope Factor Units	Cancer Risk
Ingestion	Dioxins/Furans 2,3,7,8-TCDD Equivalents	9.7E-07	mg/kg	9.7E-07	mg/kg	M	5.0E-10	mg/kg-day	1.5E+05	(mg/kg/day)-1	8E-05
										Total Risk Across All Exposure Routes/Pathways	8E-05

(1) Specify Medium-Specific (M) or Route-Specific (R) EPC selected for hazard calculation.

RME = Reasonable Maximum Exposure

EPC = Exposure Point Concentration

mg/kg = milligrams per kilogram

mg/kg-day = milligrams per kilogram per day

TABLE 9.1
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Bayou d'Inde	SVOCs					SVOCs					
			Hexachlorobenzene	1E-07	NA	9E-08	2E-07	Hexachlorobenzene	Liver	2.1E-04	NA	1.6E-04	3.8E-04
			PAHs					PAHs					
			Acenaphthylene	NA	NA	NA	NA	Acenaphthylene		NA	NA	NA	NA
			Benzo(a)anthracene	5E-08	NA	5E-08	9E-08	Benzo(a)anthracene		NA	NA	NA	NA
			Benzo(a)pyrene	5E-07	NA	5E-07	9E-07	Benzo(a)pyrene		NA	NA	NA	NA
			Benzo(b)fluoranthene	5E-08	NA	5E-08	9E-08	Benzo(b)fluoranthene		NA	NA	NA	NA
			Benzo(g,h,i)perylene	NA	NA	NA	NA	Benzo(g,h,i)perylene		NA	NA	NA	NA
			Benzo(k)fluoranthene	5E-09	NA	5E-09	1E-08	Benzo(k)fluoranthene		NA	NA	NA	NA
			Dibenzo(a,h)anthracene	3E-07	NA	3E-07	6E-07	Dibenzo(a,h)anthracene		NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	5E-08	NA	5E-08	9E-08	Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA
			Phenanthrene	NA	NA	NA	NA	Phenanthrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aldrin	1E-08	NA	8E-09	2E-08	Aldrin	Liver	5.0E-05	NA	3.7E-05	8.7E-05
			Aroclor-1254	2E-08	NA	2E-08	4E-08	Aroclor-1254	Eye/Skin/Nails	1.1E-03	NA	1.2E-03	2.3E-03
			BHC, delta-	NA	NA	NA	NA	BHC, delta-		NA	NA	NA	NA
			Dieldrin	1E-08	NA	8E-09	2E-08	Dieldrin	Liver	3.1E-05	NA	2.3E-05	5.4E-05
			Endosulfan sulfate	NA	NA	NA	NA	Endosulfan sulfate		NA	NA	NA	NA
			Endrin aldehyde	NA	NA	NA	NA	Endrin aldehyde		NA	NA	NA	NA
			Endrin ketone	NA	NA	NA	NA	Endrin ketone		NA	NA	NA	NA
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	5E-06	NA	1E-06	6E-06	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	5E-07	NA	1E-07	6E-07	Arsenic	Skin	2.6E-03	NA	6.0E-04	3.2E-03
			Barium	NA	NA	NA	NA	Barium	Kidney	2.3E-03	NA	0.0E+00	2.3E-03
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	6.0E-03	NA	0.0E+00	6.0E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
Surface Water	Surface Water	Bayou d'Inde	Pesticides/PCBs					Pesticides/PCBs					
			BHC, delta-	NA	NA	NA	NA	BHC, delta-		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	2E-07	NA	5E-08	3E-07	Arsenic	Skin	1.3E-03	NA	2.7E-04	1.5E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
			Total Risk Across All Media and All Exposure Routes				9E-06		Total Hazard Index Across All Media and All Exposure Routes				1.6E-02

NA = Not Available

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Total Liver Hazard Index Across All Media:	5.2E-04
Total Eye/Skin/Nail Hazard Index Across All Media:	7.1E-03
Total Kidney Hazard Index Across All Media:	2.3E-03
Total GI Tract Hazard Index Across All Media:	6.0E-03

TABLE 9.2
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Upper Calcasieu	PAHs					PAHs					
		Above Lake	Benzo(a)anthracene	2E-08	NA	2E-08	3E-08	Benzo(a)anthracene		NA	NA	NA	NA
		Charles	Benzo(a)pyrene	2E-07	NA	2E-07	3E-07	Benzo(a)pyrene		NA	NA	NA	NA
			Benzo(b)fluoranthene	2E-08	NA	2E-08	4E-08	Benzo(b)fluoranthene		NA	NA	NA	NA
			Benzo(g,h,i)perylene	NA	NA	NA	NA	Benzo(g,h,i)perylene		NA	NA	NA	NA
			Chrysene	2E-10	NA	2E-10	5E-10	Chrysene		NA	NA	NA	NA
			Dibenzo(a,h)anthracene	4E-08	NA	4E-08	8E-08	Dibenzo(a,h)anthracene		NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	9E-09	NA	9E-09	2E-08	Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA
			Phenanthrene	NA	NA	NA	NA	Phenanthrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254 **					Aroclor-1254 **					
			BHC, delta-	NA	NA	NA	NA	BHC, delta-		NA	NA	NA	NA
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	4E-07	NA	1E-07	5E-07	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	5E-07	NA	1E-07	6E-07	Arsenic	Skin	2.7E-03	NA	6.1E-04	3.3E-03
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	1.2E-03	NA	0.0E+00	1.2E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
Surface Water	Surface Water	Upper Calcasieu	Metals					Metals					
		Above Lake											
		Charles	Arsenic **					Arsenic **					
			Lead **					Lead **					
			Total Risk Across All Media and All Exposure Routes				2E-06	Total Hazard Index Across All Media and All Exposure Routes					4.5E-03

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Total Skin Hazard Index Across All Media:	3.3E-03
Total GI Tract Hazard Index Across All Media:	1.2E-03

TABLE 9.3
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Swimmer
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Upper Calcasieu	PAHs					PAHs					
		Above Lake	Benzo(a)anthracene	2E-08	NA	2E-08	4E-08	Benzo(a)anthracene		NA	NA	NA	NA
		Charles	Benzo(a)pyrene	2E-07	NA	2E-07	4E-07	Benzo(a)pyrene		NA	NA	NA	NA
			Benzo(b)fluoranthene	3E-08	NA	3E-08	5E-08	Benzo(b)fluoranthene		NA	NA	NA	NA
			Benzo(g,h,i)perylene	NA	NA	NA	NA	Benzo(g,h,i)perylene		NA	NA	NA	NA
			Chrysene	3E-10	NA	3E-10	6E-10	Chrysene		NA	NA	NA	NA
			Dibenzo(a,h)anthracene	5E-08	NA	5E-08	1E-07	Dibenzo(a,h)anthracene		NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	1E-08	NA	1E-08	2E-08	Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA
			Phenanthrene	NA	NA	NA	NA	Phenanthrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254 **					Aroclor-1254 **					
			BHC, delta-	NA	NA	NA	NA	BHC, delta-		NA	NA	NA	NA
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	5E-07	NA	1E-07	7E-07	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	6E-07	NA	1E-07	8E-07	Arsenic	Skin	3.4E-03	NA	7.6E-04	4.1E-03
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	1.5E-03	NA	0.0E+00	1.5E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
Surface Water	Surface Water	Upper Calcasieu	Metals					Metals					
		Above Lake	Arsenic **					Arsenic **					
		Charles	Lead **					Lead **					
							Total Risk Across All Media and All Exposure Routes: 2E-06						Total Hazard Index Across All Media and All Exposure Routes: 5.6E-03

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Total Skin Hazard Index Across All Media: 4.1E-03

Total GI Tract Hazard Index Across All Media: 1.5E-03

TABLE 9.4
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Upper Calcasieu Lake Charles	PAHs					PAHs					
			Benzo(a)anthracene	3E-08	NA	3E-08	5E-08	Benzo(a)anthracene		NA	NA	NA	NA
			Benzo(a)pyrene	2E-07	NA	2E-07	4E-07	Benzo(a)pyrene		NA	NA	NA	NA
			Benzo(b)fluoranthene	2E-08	NA	2E-08	5E-08	Benzo(b)fluoranthene		NA	NA	NA	NA
			Benzo(g,h,i)perylene	NA	NA	NA	NA	Benzo(g,h,i)perylene		NA	NA	NA	NA
			Chrysene	3E-10	NA	3E-10	7E-10	Chrysene		NA	NA	NA	NA
			Dibenzo(a,h)anthracene **					Dibenzo(a,h)anthracene **					
			Indeno(1,2,3-cd)pyrene	1E-08	NA	1E-08	2E-08	Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA
			Phenanthrene	NA	NA	NA	NA	Phenanthrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254 **					Aroclor-1254 **					
			BHC, delta- **					BHC, delta- **					
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	3E-07	NA	7E-08	4E-07	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	8E-07	NA	2E-07	9E-07	Arsenic	Skin	4.0E-03	NA	9.0E-04	4.9E-03
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	1.8E-03	NA	0.0E+00	1.8E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
Surface Water	Surface Water	Upper Calcasieu Lake Charles	Metals					Metals					
			Arsenic	8E-06	NA	2E-06	1E-05	Arsenic	Skin	4.3E-02	NA	9.2E-03	5.3E-02
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
							Total Risk Across All Media and All Exposure Routes: 1E-05						Total Hazard Index Across All Media and All Exposure Routes: 5.9E-02

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Total Skin Hazard Index Across All Media: 5.8E-02

Total GI Tract Hazard Index Across All Media: 1.8E-03

TABLE 9.5
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Swimmer
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Upper Calcasieu Lake Charles	PAHs					PAHs					
			Benzo(a)anthracene	3E-08	NA	3E-08	7E-08	Benzo(a)anthracene		NA	NA	NA	NA
			Benzo(a)pyrene	3E-07	NA	3E-07	5E-07	Benzo(a)pyrene		NA	NA	NA	NA
			Benzo(b)fluoranthene	3E-08	NA	3E-08	6E-08	Benzo(b)fluoranthene		NA	NA	NA	NA
			Benzo(g,h,i)perylene	NA	NA	NA	NA	Benzo(g,h,i)perylene		NA	NA	NA	NA
			Chrysene	4E-10	NA	4E-10	8E-10	Chrysene		NA	NA	NA	NA
			Dibenzo(a,h)anthracene **					Dibenzo(a,h)anthracene **					
			Indeno(1,2,3-cd)pyrene	1E-08	NA	1E-08	3E-08	Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA
			Phenanthrene	NA	NA	NA	NA	Phenanthrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254 **					Aroclor-1254 **					
			BHC, delta- **					BHC, delta- **					
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	4E-07	NA	8E-08	5E-07	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	1E-06	NA	2E-07	1E-06	Arsenic	Skin	5.0E-03	NA	1.1E-03	6.1E-03
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	2.3E-03	NA	0.0E+00	2.3E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
Surface Water	Surface Water	Upper Calcasieu Lake Charles	Metals					Metals					
			Arsenic	2E-05	NA	7E-06	2E-05	Arsenic	Skin	8.1E-02	NA	3.4E-02	1.2E-01
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Total Risk Across All Media and All Exposure Routes				2E-05		Total Hazard Index Across All Media and All Exposure Routes				1.2E-01

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Total Skin Hazard Index Across All Media:	1.2E-01
Total GI Tract Hazard Index Across All Media:	2.3E-03

TABLE 9.6
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Upper Calcasieu	PAHs					PAHs					
		Clooney Island	Benzo(a)anthracene	3E-08	NA	3E-08	5E-08	Benzo(a)anthracene		NA	NA	NA	NA
		Loop	Benzo(a)pyrene	3E-07	NA	3E-07	5E-07	Benzo(a)pyrene		NA	NA	NA	NA
			Benzo(b)fluoranthene	3E-08	NA	3E-08	6E-08	Benzo(b)fluoranthene		NA	NA	NA	NA
			Benzo(g,h,i)perylene	NA	NA	NA	NA	Benzo(g,h,i)perylene		NA	NA	NA	NA
			Chrysene	3E-10	NA	3E-10	6E-10	Chrysene		NA	NA	NA	NA
			Dibenzo(a,h)anthracene	1E-07	NA	9E-08	2E-07	Dibenzo(a,h)anthracene		NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	2E-08	NA	2E-08	4E-08	Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA
			Phenanthrene	NA	NA	NA	NA	Phenanthrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254	2E-08	NA	2E-08	5E-08	Aroclor-1254	Eye/Skin/Nails	1.3E-03	NA	1.4E-03	2.7E-03
			BHC, delta- **					BHC, delta- **					
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	8E-07	NA	2E-07	1E-06	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	6E-07	NA	1E-07	7E-07	Arsenic	Skin	2.9E-03	NA	6.5E-04	3.5E-03
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	2.9E-03	NA	0.0E+00	2.9E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
Surface Water	Surface Water	Upper Calcasieu	Metals					Metals					
		Clooney Island	Arsenic	5E-07	NA	1E-07	6E-07	Arsenic	Skin	2.8E-03	NA	5.9E-04	3.4E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
							Total Risk Across All Media and All Exposure Routes: 3E-06						Total Hazard Index Across All Media and All Exposure Routes: 1.2E-02

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Total Skin Hazard Index Across All Media: 9.6E-03
Total GI Tract Hazard Index Across All Media: 2.9E-03
Total Whole Body/Blood Hazard Indez Across All Media:

TABLE 9.7
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Commercial Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Upper Calcasieu	PAHs					PAHs					
		Below Clooney	Benzo(a)anthracene	1E-07	NA	2E-07	3E-07	Benzo(a)anthracene		NA	NA	NA	NA
		Island Loop	Benzo(a)pyrene	9E-07	NA	2E-06	3E-06	Benzo(a)pyrene		NA	NA	NA	NA
			Benzo(b)fluoranthene	1E-07	NA	2E-07	3E-07	Benzo(b)fluoranthene		NA	NA	NA	NA
			Benzo(g,h,i)perylene	NA	NA	NA	NA	Benzo(g,h,i)perylene		NA	NA	NA	NA
			Chrysene	2E-09	NA	4E-09	6E-09	Chrysene		NA	NA	NA	NA
			Dibenzo(a,h)anthracene	5E-07	NA	9E-07	1E-06	Dibenzo(a,h)anthracene		NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	5E-08	NA	9E-08	1E-07	Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA
			Phenanthrene	NA	NA	NA	NA	Phenanthrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254	2E-08	NA	3E-08	5E-08	Aroclor-1254	Eye/Skin/Nails	1.1E-03	NA	2.2E-03	3.3E-03
			BHC, delta-	NA	NA	NA	NA	BHC, delta-		NA	NA	NA	NA
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	8E-07	NA	4E-07	1E-06	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	1E-06	NA	5E-07	2E-06	Arsenic	Skin	7.8E-03	NA	3.3E-03	1.1E-02
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	3.9E-03	NA	0.0E+00	3.9E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
Surface Water	Surface Water	Upper Calcasieu	Metals					Metals					
		Below Clooney	Arsenic	NA	NA	2E-06	2E-06	Arsenic	Skin	NA	NA	1.3E-02	1.3E-02
		Island Loop	Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
							Total Risk Across All Media and All Exposure Routes: 1E-05						Total Hazard Index Across All Media and All Exposure Routes: 8.7E-02

NA = Not Available

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Total Eye/Skin/Nail Hazard Index Across All Media: 2.8E-02
Total GI Tract Hazard Index Across All Media: 3.9E-03
Total Whole Body/Blood Hazard Index Across All Media: 5.6E-02

TABLE 9.8
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Upper Calcasieu	PAHs					PAHs					
		Below Clooney	Benzo(a)anthracene	3E-08	NA	3E-08	6E-08	Benzo(a)anthracene		NA	NA	NA	NA
		Island Loop	Benzo(a)pyrene	3E-07	NA	3E-07	6E-07	Benzo(a)pyrene		NA	NA	NA	NA
			Benzo(b)fluoranthene	3E-08	NA	3E-08	7E-08	Benzo(b)fluoranthene		NA	NA	NA	NA
			Benzo(g,h,i)perylene	NA	NA	NA	NA	Benzo(g,h,i)perylene		NA	NA	NA	NA
			Chrysene	7E-10	NA	7E-10	1E-09	Chrysene		NA	NA	NA	NA
			Dibenzo(a,h)anthracene	1E-07	NA	1E-07	3E-07	Dibenzo(a,h)anthracene		NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	2E-08	NA	2E-08	3E-08	Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA
			Phenanthrene	NA	NA	NA	NA	Phenanthrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254	5E-09	NA	5E-09	1E-08	Aroclor-1254	Eye/Skin/Nails	3.0E-04	NA	3.1E-04	6.1E-04
			BHC, delta-	NA	NA	NA	NA	BHC, delta-		NA	NA	NA	NA
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	3E-07	NA	6E-08	3E-07	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	4E-07	NA	9E-08	5E-07	Arsenic	Skin	2.1E-03	NA	4.7E-04	2.5E-03
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	1.0E-03	NA	0.0E+00	1.0E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
Surface Water	Surface Water	Upper Calcasieu	Metals					Metals					
		Below Clooney	Arsenic	2E-06	NA	4E-07	2E-06	Arsenic	Skin	1.0E-02	NA	2.1E-03	1.2E-02
		Island Loop	Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
							Total Risk Across All Media and All Exposure Routes: 4E-06						Total Hazard Index Across All Media and All Exposure Routes: 6.8E-02

NA = Not Available

0.0E+00 = Dermal intake (and risk) for some chemicals is zero because the dermal absorption fraction is zero percent (see Table 4.15).

Total Eye/Skin/Nail Hazard Index Across All Media:	1.5E-02
Total GI Tract Hazard Index Across All Media:	1.0E-03
Total Whole Body/Blood Hazard Indez Across All Media:	5.2E-02

TABLE 9.9
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Commercial Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Lower Calcasieu Lake Prien	SVOCs					SVOCs					
			bis(2-Ethylhexyl) phthalate	2E-09	NA	3E-09	5E-09	bis(2-Ethylhexyl) phthalate	Liver	2.2E-05	NA	3.1E-05	5.4E-05
			Methylphenol, 3- & 4- **					Methylphenol, 3- & 4- **					
			PAHs					PAHs					
			Benzo(a)anthracene	8E-08	NA	2E-07	2E-07	Benzo(a)anthracene		NA	NA	NA	NA
			Benzo(a)pyrene	9E-07	NA	2E-06	2E-06	Benzo(a)pyrene		NA	NA	NA	NA
			Benzo(b)fluoranthene	9E-08	NA	2E-07	2E-07	Benzo(b)fluoranthene		NA	NA	NA	NA
			Benzo(g,h,i)perylene	NA	NA	NA	NA	Benzo(g,h,i)perylene		NA	NA	NA	NA
			Dibenzo(a,h)anthracene	3E-07	NA	5E-07	7E-07	Dibenzo(a,h)anthracene		NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	8E-08	NA	1E-07	2E-07	Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA
			Phenanthrene	NA	NA	NA	NA	Phenanthrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254	3E-08	NA	5E-08	8E-08	Aroclor-1254	Eye/Skin/Nails	1.9E-03	NA	3.8E-03	5.7E-03
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	1E-06	NA	5E-07	2E-06	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	2E-06	NA	1E-06	3E-06	Arsenic	Skin	1.4E-02	NA	6.0E-03	2.0E-02
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
Surface Water	Surface Water	Lower Calcasieu Lake Prien	Metals					Metals					
			Arsenic	NA	NA	9E-07	9E-07	Arsenic	Skin	NA	NA	5.6E-03	5.6E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury **					Mercury **					
						Total Risk Across All Media and All Exposure Routes	1E-05					Total Hazard Index Across All Media and All Exposure Routes	3.2E-02

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

Total Liver Hazard Index Across All Media: 5.4E-05

Total Eye/Skin/Nails Hazard Index Across All Media: 3.2E-02

TABLE 9.10
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Lower Calcasieu	SVOCs					SVOCs					
		Lake Prien	bis(2-Ethylhexyl) phthalate	7E-10	NA	5E-10	1E-09	bis(2-Ethylhexyl) phthalate	Liver	5.9E-06	NA	4.5E-06	1.0E-05
			Methylphenol, 3- & 4- **					Methylphenol, 3- & 4- **					
			PAHs					PAHs					
			Benzo(a)anthracene	3E-08	NA	3E-08	5E-08	Benzo(a)anthracene		NA	NA	NA	NA
			Benzo(a)pyrene	3E-07	NA	3E-07	5E-07	Benzo(a)pyrene		NA	NA	NA	NA
			Benzo(b)fluoranthene	3E-08	NA	3E-08	5E-08	Benzo(b)fluoranthene		NA	NA	NA	NA
			Benzo(g,h,i)perylene	NA	NA	NA	NA	Benzo(g,h,i)perylene		NA	NA	NA	NA
			Dibenzo(a,h)anthracene	8E-08	NA	8E-08	2E-07	Dibenzo(a,h)anthracene		NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	3E-08	NA	3E-08	5E-08	Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA
			Phenanthrene	NA	NA	NA	NA	Phenanthrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254	9E-09	NA	9E-09	2E-08	Aroclor-1254	Eye/Skin/Nails	5.1E-04	NA	5.4E-04	1.1E-03
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	4E-07	NA	9E-08	5E-07	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	7E-07	NA	2E-07	9E-07	Arsenic	Skin	3.8E-03	NA	8.5E-04	4.6E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
Surface Water	Surface Water	Lower Calcasieu	Metals					Metals					
		Lake Prien	Arsenic	8E-07	NA	2E-07	1E-06	Arsenic	Skin	4.3E-03	NA	9.0E-04	5.2E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury **					Mercury **					
							Total Risk Across All Media and All Exposure Routes: 3E-06						Total Hazard Index Across All Media and All Exposure Routes: 1.1E-02

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

Total Liver Hazard Index Across All Media: 1.0E-05

Total Eye/Skin/Nails Hazard Index Across All Media: 1.1E-02

TABLE 9.11
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Swimmer
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Lower Calcasieu Lake Prien	SVOCs					SVOCs					
			bis(2-Ethylhexyl) phthalate	9E-10	NA	7E-10	2E-09	bis(2-Ethylhexyl) phthalate	Liver	7.4E-06	NA	5.6E-06	1.3E-05
			Methylphenol, 3- & 4- **					Methylphenol, 3- & 4- **					
			PAHs					PAHs					
			Benzo(a)anthracene	3E-08	NA	3E-08	7E-08	Benzo(a)anthracene		NA	NA	NA	NA
			Benzo(a)pyrene	3E-07	NA	3E-07	7E-07	Benzo(a)pyrene		NA	NA	NA	NA
			Benzo(b)fluoranthene	3E-08	NA	3E-08	7E-08	Benzo(b)fluoranthene		NA	NA	NA	NA
			Benzo(g,h,i)perylene	NA	NA	NA	NA	Benzo(g,h,i)perylene		NA	NA	NA	NA
			Dibenzo(a,h)anthracene	1E-07	NA	1E-07	2E-07	Dibenzo(a,h)anthracene		NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	3E-08	NA	3E-08	6E-08	Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA
			Phenanthrene	NA	NA	NA	NA	Phenanthrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254	1E-08	NA	1E-08	2E-08	Aroclor-1254	Eye/Skin/Nails	6.4E-04	NA	6.8E-04	1.3E-03
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	5E-07	NA	1E-07	6E-07	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	9E-07	NA	2E-07	1E-06	Arsenic	Skin	4.7E-03	NA	1.1E-03	5.8E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
Surface Water	Surface Water	Lower Calcasieu Lake Prien	Metals					Metals					
			Arsenic	2E-06	NA	7E-07	2E-06	Arsenic	Skin	8.0E-03	NA	3.4E-03	1.1E-02
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury **					Mercury **					
							Total Risk Across All Media and All Exposure Routes: 5E-06						Total Hazard Index Across All Media and All Exposure Routes: 1.8E-02

NA = Not Available

** Chemical of potential concern in AOC, but not detected in this exposure area.

Total Liver Hazard Index Across All Media: 1.3E-05

Total Eye/Skin/Nails Hazard Index Across All Media: 1.8E-02

TABLE 9.12
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Commercial Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Lower Calcasieu	SVOCs					SVOCs					
		Remainder of	bis(2-Ethylhexyl) phthalate	3E-09	NA	4E-09	7E-09	bis(2-Ethylhexyl) phthalate	Liver	2.8E-05	NA	3.9E-05	6.6E-05
		Lower Calcasieu	Methylphenol, 3- & 4-	NA	NA	NA	NA	Methylphenol, 3- & 4-		NA	NA	NA	NA
			PAHs					PAHs					
			Benzo(a)anthracene	2E-07	NA	3E-07	5E-07	Benzo(a)anthracene		NA	NA	NA	NA
			Benzo(a)pyrene	2E-06	NA	3E-06	5E-06	Benzo(a)pyrene		NA	NA	NA	NA
			Benzo(b)fluoranthene	2E-07	NA	3E-07	5E-07	Benzo(b)fluoranthene		NA	NA	NA	NA
			Benzo(g,h,i)perylene	NA	NA	NA	NA	Benzo(g,h,i)perylene		NA	NA	NA	NA
			Dibenzo(a,h)anthracene	1E-06	NA	3E-06	4E-06	Dibenzo(a,h)anthracene		NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	1E-07	NA	2E-07	4E-07	Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA
			Phenanthrene	NA	NA	NA	NA	Phenanthrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254	3E-08	NA	7E-08	1E-07	Aroclor-1254	Eye/Skin/Nails	2.4E-03	NA	4.7E-03	7.1E-03
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	6E-07	NA	2E-07	8E-07	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	2E-06	NA	8E-07	3E-06	Arsenic	Skin	1.2E-02	NA	5.1E-03	1.7E-02
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
Surface Water	Surface Water	Lower Calcasieu	Metals					Metals					
		Remainder of	Arsenic	4E-07	NA	9E-08	5E-07	Arsenic	Skin	4.2E-03	NA	1.8E-03	5.9E-03
		Lower Calcasieu	Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
						Total Risk Across All Media and All Exposure Routes	1E-05					Total Hazard Index Across All Media and All Exposure Routes	3.0E-02

NA = Not Available

Total Liver Hazard Index Across All Media:	6.6E-05
Total Eye/Skin/Nails Hazard Index Across All Media:	3.0E-02

TABLE 9.13
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Lower Calcasieu	SVOCs					SVOCs					
		Remainder of	bis(2-Ethylhexyl) phthalate	9E-10	NA	7E-10	2E-09	bis(2-Ethylhexyl) phthalate	Liver	7.3E-06	NA	5.5E-06	1.3E-05
		Lower Calcasieu	Methylphenol, 3- & 4-	NA	NA	NA	NA	Methylphenol, 3- & 4-		NA	NA	NA	NA
			PAHs					PAHs					
			Benzo(a)anthracene	5E-08	NA	5E-08	1E-07	Benzo(a)anthracene		NA	NA	NA	NA
			Benzo(a)pyrene	5E-07	NA	5E-07	1E-06	Benzo(a)pyrene		NA	NA	NA	NA
			Benzo(b)fluoranthene	5E-08	NA	5E-08	1E-07	Benzo(b)fluoranthene		NA	NA	NA	NA
			Benzo(g,h,i)perylene	NA	NA	NA	NA	Benzo(g,h,i)perylene		NA	NA	NA	NA
			Dibenzo(a,h)anthracene	4E-07	NA	4E-07	9E-07	Dibenzo(a,h)anthracene		NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	4E-08	NA	4E-08	9E-08	Indeno(1,2,3-cd)pyrene		NA	NA	NA	NA
			Phenanthrene	NA	NA	NA	NA	Phenanthrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254	1E-08	NA	1E-08	2E-08	Aroclor-1254	Eye/Skin/Nails	6.3E-04	NA	6.7E-04	1.3E-03
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	2E-07	NA	4E-08	2E-07	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	6E-07	NA	1E-07	8E-07	Arsenic	Skin	3.2E-03	NA	7.2E-04	3.9E-03
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
Surface Water	Surface Water	Lower Calcasieu	Metals					Metals					
		Remainder of	Arsenic	4E-07	NA	9E-08	5E-07	Arsenic	Skin	2.2E-03	NA	4.7E-04	2.7E-03
		Lower Calcasieu	Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
						Total Risk Across All Media and All Exposure Routes	4E-06					Total Hazard Index Across All Media and All Exposure Routes	7.9E-03

NA = Not Available

Total Liver Hazard Index Across All Media:	1.3E-05
Total Eye/Skin/Nails Hazard Index Across All Media:	7.9E-03

TABLE 9.14

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

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Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Shellfish	Shellfish	Bayou d'Inde	SVOCs					SVOCs					
			4-Nitrophenol	NA	NA	NA	NA	4-Nitrophenol		2.6E-03	NA	NA	2.6E-03
			bis(2-Ethylhexyl) phthalate	4E-05	NA	NA	4E-05	bis(2-Ethylhexyl) phthalate	Liver	3.0E-01	NA	NA	3.0E-01
			Di-n-butylphthalate	NA	NA	NA	NA	Di-n-butylphthalate	Whole Body	1.8E-02	NA	NA	1.8E-02
			Di-n-octylphthalate	NA	NA	NA	NA	Di-n-octylphthalate	Liver/Kidney	3.2E-03	NA	NA	3.2E-03
			Hexachlorobenzene	1E-05	NA	NA	1E-05	Hexachlorobenzene	Liver	1.8E-02	NA	NA	1.8E-02
			Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDD	1E-06	NA	NA	1E-06	4,4'-DDD	Liver	2.3E-02	NA	NA	2.3E-02
			4,4'-DDT	2E-06	NA	NA	2E-06	4,4'-DDT	Liver	3.0E-02	NA	NA	3.0E-02
			Aldrin	4E-05	NA	NA	4E-05	Aldrin	Liver	1.8E-01	NA	NA	1.8E-01
			Aroclor-1254	6E-05	NA	NA	6E-05	Aroclor-1254	Eye/Skin/Nails	3.8E+00	NA	NA	3.8E+00
			BHC, beta-	2E-05	NA	NA	2E-05	BHC, beta-		NA	NA	NA	NA
			Endosulfan sulfate	NA	NA	NA	NA	Endosulfan sulfate		NA	NA	NA	NA
			Endrin	NA	NA	NA	NA	Endrin	Liver/Whole Body	3.6E-02	NA	NA	3.6E-02
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	8E-04	NA	NA	8E-04	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	4E-05	NA	NA	4E-05	Arsenic	Skin	2.0E-01	NA	NA	2.0E-01
			Barium	NA	NA	NA	NA	Barium	Kidney	7.3E-01	NA	NA	7.3E-01
			Cadmium	NA	NA	NA	NA	Cadmium	Kidney	4.0E-02	NA	NA	4.0E-02
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	2.5E-01	NA	NA	2.5E-01
			Copper	NA	NA	NA	NA	Copper	GI Tract	2.2E-01	NA	NA	2.2E-01
			Iron	NA	NA	NA	NA	Iron		2.6E-01	NA	NA	2.6E-01
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	Manganese	CNS	4.6E+00	NA	NA	4.6E+00
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
			Methyl Mercury	NA	NA	NA	NA	Methyl Mercury	CNS	1.8E-01	NA	NA	1.8E-01
			Nickel	NA	NA	NA	NA	Nickel	Whole Body	1.2E-02	NA	NA	1.2E-02
			Selenium	NA	NA	NA	NA	Selenium	Hair/Nails	6.3E-02	NA	NA	6.3E-02
			Silver	NA	NA	NA	NA	Silver	Skin	7.4E-03	NA	NA	7.4E-03
			Zinc	NA	NA	NA	NA	Zinc	Blood	4.2E-02	NA	NA	4.2E-02

TABLE 9.14

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

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Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Fish	Fish	Entire Estuary	Pesticides/PCBs					Pesticides/PCBs					
		(except Bayou Verdine)	4,4'-DDE	4E-07	NA	NA	4E-07	4,4'-DDE	Liver	6.0E-03	NA	NA	6.0E-03
			Aldrin	2E-05	NA	NA	2E-05	Aldrin	Liver	1.1E-01	NA	NA	1.1E-01
			Aroclor-1254	1E-05	NA	NA	1E-05	Aroclor-1254	Eye/Skin/Nails	6.1E-01	NA	NA	6.1E-01
			BHC, alpha-	7E-06	NA	NA	7E-06	BHC, alpha-		NA	NA	NA	NA
			BHC, beta-	3E-06	NA	NA	3E-06	BHC, beta-		NA	NA	NA	NA
			BHC, gamma- (Lindane)	1E-06	NA	NA	1E-06	BHC, gamma- (Lindane)	Liver/Kidney	6.5E-03	NA	NA	6.5E-03
			Chlordane, alpha-	5E-07	NA	NA	5E-07	Chlordane, alpha-	Liver	6.1E-03	NA	NA	6.1E-03
			Chlordane, gamma-	4E-07	NA	NA	4E-07	Chlordane, gamma-	Liver	5.2E-03	NA	NA	5.2E-03
			Dieldrin	2E-05	NA	NA	2E-05	Dieldrin	Liver	5.9E-02	NA	NA	5.9E-02
			Endrin aldehyde	NA	NA	NA	NA	Endrin aldehyde		NA	NA	NA	NA
			Heptachlor	5E-06	NA	NA	5E-06	Heptachlor	Liver	5.5E-03	NA	NA	5.5E-03
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	3E-05	NA	NA	3E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Antimony	NA	NA	NA	NA	Antimony	Whole Body/Blood	6.6E-02	NA	NA	6.6E-02
			Arsenic	4E-05	NA	NA	4E-05	Arsenic	Skin	1.8E-01	NA	NA	1.8E-01
			Barium	NA	NA	NA	NA	Barium	Kidney	2.7E-02	NA	NA	2.7E-02
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	3.2E-02	NA	NA	3.2E-02
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	Manganese	CNS	9.3E-02	NA	NA	9.3E-02
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
			Nickel	NA	NA	NA	NA	Nickel	Whole Body	1.3E-02	NA	NA	1.3E-02
			Selenium	NA	NA	NA	NA	Selenium	Hair/Nails	1.0E-01	NA	NA	1.0E-01
						Total Risk Across All Media and All Exposure Routes	1E-03					Total Hazard Index Across All Media and All Exposure Routes	1.2E+01

NA = Not Available

Total Kidney Hazard Index Across All Media:	8.1E-01
Total Liver Hazard Index Across All Media:	7.8E-01
Total Eye/Skin/Nails/Hair Hazard Index Across All Media:	4.9E+00
Total Body/Whole Blood Hazard Index Across All Media:	1.9E-01
Total GI Tract Hazard Index Across All Media:	4.9E-01
Total CNS Hazard Index Across All Media:	4.9E+00

TABLE 9.15

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Shellfish	Shellfish	Upper Calcasieu	Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDT	1E-06	NA	NA	1E-06	4,4'-DDT	Liver	1.6E-02	NA	NA	1.6E-02
			Aroclor-1254	5E-05	NA	NA	5E-05	Aroclor-1254	Eye/Skin/Nails	2.9E+00	NA	NA	2.9E+00
			BHC, beta-	6E-06	NA	NA	6E-06	BHC, beta-		NA	NA	NA	NA
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	2E-04	NA	NA	2E-04	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	5E-05	NA	NA	5E-05	Arsenic	Skin	2.5E-01	NA	NA	2.5E-01
			Cadmium	NA	NA	NA	NA	Cadmium	Kidney	2.8E-02	NA	NA	2.8E-02
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	3.4E-02	NA	NA	3.4E-02
			Copper	NA	NA	NA	NA	Copper	GI Tract	1.7E-01	NA	NA	1.7E-01
			Iron	NA	NA	NA	NA	Iron		8.0E-02	NA	NA	8.0E-02
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
			Methyl Mercury	NA	NA	NA	NA	Methyl Mercury	CNS	1.8E-01	NA	NA	1.8E-01
			Selenium	NA	NA	NA	NA	Selenium	Hair/Nails	8.4E-02	NA	NA	8.4E-02
			Zinc	NA	NA	NA	NA	Zinc	Blood	3.7E-02	NA	NA	3.7E-02
Fish	Fish	Entire Estuary (except Bayou Verdine)	Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDE	4E-07	NA	NA	4E-07	4,4'-DDE	Liver	6.0E-03	NA	NA	6.0E-03
			Aldrin	2E-05	NA	NA	2E-05	Aldrin	Liver	1.1E-01	NA	NA	1.1E-01
			Aroclor-1254	1E-05	NA	NA	1E-05	Aroclor-1254	Eye/Skin/Nails	6.1E-01	NA	NA	6.1E-01
			BHC, alpha-	7E-06	NA	NA	7E-06	BHC, alpha-		NA	NA	NA	NA
			BHC, beta-	3E-06	NA	NA	3E-06	BHC, beta-		NA	NA	NA	NA
			BHC, gamma- (Lindane)	1E-06	NA	NA	1E-06	BHC, gamma- (Lindane)	Liver/Kidney	6.5E-03	NA	NA	6.5E-03
			Chlordane, alpha-	5E-07	NA	NA	5E-07	Chlordane, alpha-	Liver	6.1E-03	NA	NA	6.1E-03
			Chlordane, gamma-	4E-07	NA	NA	4E-07	Chlordane, gamma-	Liver	5.2E-03	NA	NA	5.2E-03
			Dieldrin	2E-05	NA	NA	2E-05	Dieldrin	Liver	5.9E-02	NA	NA	5.9E-02
			Endrin aldehyde	NA	NA	NA	NA	Endrin aldehyde		NA	NA	NA	NA
			Heptachlor	5E-06	NA	NA	5E-06	Heptachlor	Liver	5.5E-03	NA	NA	5.5E-03
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	3E-05	NA	NA	3E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Antimony	NA	NA	NA	NA	Antimony	Whole Body/Blood	6.6E-02	NA	NA	6.6E-02
			Arsenic	4E-05	NA	NA	4E-05	Arsenic	Skin	1.8E-01	NA	NA	1.8E-01
			Barium	NA	NA	NA	NA	Barium	Kidney	2.7E-02	NA	NA	2.7E-02
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	3.2E-02	NA	NA	3.2E-02
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	Manganese	CNS	9.3E-02	NA	NA	9.3E-02
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
			Nickel	NA	NA	NA	NA	Nickel	Whole Body	1.3E-02	NA	NA	1.3E-02
			Selenium	NA	NA	NA	NA	Selenium	Hair/Nails	1.0E-01	NA	NA	1.0E-01
			Total Risk Across All Media and All Exposure Routes				4E-04	Total Hazard Index Across All Media and All Exposure Routes					5.1E+00

NA = Not Available

Total Kidney Hazard Index Across All Media:	6.2E-02
Total Liver Hazard Index Across All Media:	2.1E-01
Total Eye/Skin/Nails/Hair Hazard Index Across All Media:	4.1E+00
Total Blood/Whole Body Hazard Index Across All Media:	1.2E-01
Total GI Tract Hazard Index Across All Media:	2.4E-01
Total CNS Hazard Index Across All Media:	2.7E-01

TABLE 9.16

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Shellfish	Shellfish	Lower Calcasieu	SVOCs					SVOCs					
			bis(2-Ethylhexyl) phthalate	5E-06	NA	NA	5E-06	bis(2-Ethylhexyl) phthalate	Liver	4.5E-02	NA	NA	4.5E-02
			PAHs					PAHs					
			Benzo(a)pyrene	2E-04	NA	NA	2E-04	Benzo(a)pyrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254	2E-05	NA	NA	2E-05	Aroclor-1254	Eye/Skin/Nails	9.2E-01	NA	NA	9.2E-01
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	9E-05	NA	NA	9E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	5E-05	NA	NA	5E-05	Arsenic	Skin	2.7E-01	NA	NA	2.7E-01
			Cadmium	NA	NA	NA	NA	Cadmium	Kidney	9.2E-02	NA	NA	9.2E-02
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	6.8E-02	NA	NA	6.8E-02
			Copper	NA	NA	NA	NA	Copper	GI Tract	4.2E-01	NA	NA	4.2E-01
			Iron	NA	NA	NA	NA	Iron		1.0E-01	NA	NA	1.0E-01
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
			Methyl Mercury	NA	NA	NA	NA	Methyl Mercury	CNS	1.3E-01	NA	NA	1.3E-01
			Selenium	NA	NA	NA	NA	Selenium	Hair/Nails	8.9E-02	NA	NA	8.9E-02
			Silver	NA	NA	NA	NA	Silver	Skin	1.1E-02	NA	NA	1.1E-02
			Zinc	NA	NA	NA	NA	Zinc	Blood	3.4E-01	NA	NA	3.4E-01

TABLE 9.16

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Fish	Fish	Entire Estuary (except Bayou Verdine)	Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDE	4E-07	NA	NA	4E-07	4,4'-DDE	Liver	6.0E-03	NA	NA	6.0E-03
			Aldrin	2E-05	NA	NA	2E-05	Aldrin	Liver	1.1E-01	NA	NA	1.1E-01
			Aroclor-1254	1E-05	NA	NA	1E-05	Aroclor-1254	Eye/Skin/Nails	6.1E-01	NA	NA	6.1E-01
			BHC, alpha-	7E-06	NA	NA	7E-06	BHC, alpha-		NA	NA	NA	NA
			BHC, beta-	3E-06	NA	NA	3E-06	BHC, beta-		NA	NA	NA	NA
			BHC, gamma- (Lindane)	1E-06	NA	NA	1E-06	BHC, gamma- (Lindane)	Liver/Kidney	6.5E-03	NA	NA	6.5E-03
			Chlordane, alpha-	5E-07	NA	NA	5E-07	Chlordane, alpha-	Liver	6.1E-03	NA	NA	6.1E-03
			Chlordane, gamma-	4E-07	NA	NA	4E-07	Chlordane, gamma-	Liver	5.2E-03	NA	NA	5.2E-03
			Dieldrin	2E-05	NA	NA	2E-05	Dieldrin	Liver	5.9E-02	NA	NA	5.9E-02
			Endrin aldehyde	NA	NA	NA	NA	Endrin aldehyde		NA	NA	NA	NA
			Heptachlor	5E-06	NA	NA	5E-06	Heptachlor	Liver	5.5E-03	NA	NA	5.5E-03
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	3E-05	NA	NA	3E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Antimony	NA	NA	NA	NA	Antimony	Whole Body/Blood	6.6E-02	NA	NA	6.6E-02
			Arsenic	4E-05	NA	NA	4E-05	Arsenic	Skin	1.8E-01	NA	NA	1.8E-01
			Barium	NA	NA	NA	NA	Barium	Kidney	2.7E-02	NA	NA	2.7E-02
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	3.2E-02	NA	NA	3.2E-02
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	Manganese	CNS	9.3E-02	NA	NA	9.3E-02
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
			Nickel	NA	NA	NA	NA	Nickel	Whole Body	1.3E-02	NA	NA	1.3E-02
			Selenium	NA	NA	NA	NA	Selenium	Hair/Nails	1.0E-01	NA	NA	1.0E-01
			Total Risk Across All Media and All Exposure Routes				5E-04	Total Hazard Index Across All Media and All Exposure Routes					3.8E+00

NA = Not Available

Total Liver Hazard Index Across All Media:	2.4E-01
Total Eye/Skin/Nails/Hair Hazard Index Across All Media:	2.2E+00
Total Kidney Hazard Index Across All Media:	1.3E-01
Total GI Tract Hazard Index Across All Media:	5.2E-01
Total Whole Body/Blood Hazard Index Across All Media:	4.2E-01
Total CNS Hazard Index Across All Media:	2.2E-01

TABLE 9.17

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU VERDINE

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Fish	Fish	Bayou Verdine	Dioxins/Furans 2,3,7,8-TCDD Equivalents	1E-04	NA	NA	1E-04	Dioxins/Furans 2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
Shellfish	Shellfish	Bayou Verdine	Dioxins/Furans 2,3,7,8-TCDD Equivalents	2E-06	NA	NA	2E-06	Dioxins/Furans 2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Total Risk Across All Media and All Exposure Routes				1E-04	Total Hazard Index All Media and All Exposure Routes					0.0E+00

NA = Not Available

TABLE 9.18

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

BAYOU D'INDE

Scenario Timeframe: Current/Future
Receptor Population: Resident (Subsistence)
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Shellfish	Shellfish	Bayou d'Inde	SVOCs					SVOCs					
			4-Nitrophenol	NA	NA	NA	NA	4-Nitrophenol		7.1E-03	NA	NA	7.1E-03
			bis(2-Ethylhexyl) phthalate	1E-04	NA	NA	1E-04	bis(2-Ethylhexyl) phthalate	Liver	8.0E-01	NA	NA	8.0E-01
			Di-n-butylphthalate	NA	NA	NA	NA	Di-n-butylphthalate	Whole Body	4.9E-02	NA	NA	4.9E-02
			Di-n-octylphthalate	NA	NA	NA	NA	Di-n-octylphthalate	Liver/Kidney	8.5E-03	NA	NA	8.5E-03
			Hexachlorobenzene	3E-05	NA	NA	3E-05	Hexachlorobenzene	Liver	4.9E-02	NA	NA	4.9E-02
			Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDD	3E-06	NA	NA	3E-06	4,4'-DDD	Liver	6.2E-02	NA	NA	6.2E-02
			4,4'-DDT	6E-06	NA	NA	6E-06	4,4'-DDT	Liver	8.0E-02	NA	NA	8.0E-02
			Aldrin	1E-04	NA	NA	1E-04	Aldrin	Liver	4.7E-01	NA	NA	4.7E-01
			Aroclor-1254	2E-04	NA	NA	2E-04	Aroclor-1254	Eye/Skin/Nails	1.0E+01	NA	NA	1.0E+01
			BHC, beta-	4E-05	NA	NA	4E-05	BHC, beta-		NA	NA	NA	NA
			Endosulfan sulfate	NA	NA	NA	NA	Endosulfan sulfate		NA	NA	NA	NA
			Endrin	NA	NA	NA	NA	Endrin	Liver/Whole Body	9.6E-02	NA	NA	9.6E-02
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	2E-03	NA	NA	2E-03	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	1E-04	NA	NA	1E-04	Arsenic	Skin	5.5E-01	NA	NA	5.5E-01
			Barium	NA	NA	NA	NA	Barium	Kidney	2.0E+00	NA	NA	2.0E+00
			Cadmium	NA	NA	NA	NA	Cadmium	Kidney	1.1E-01	NA	NA	1.1E-01
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	6.6E-01	NA	NA	6.6E-01
			Copper	NA	NA	NA	NA	Copper	GI Tract	5.8E-01	NA	NA	5.8E-01
			Iron	NA	NA	NA	NA	Iron		6.9E-01	NA	NA	6.9E-01
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	Manganese	CNS	1.2E+01	NA	NA	1.2E+01
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
			Methyl Mercury	NA	NA	NA	NA	Methyl Mercury	CNS	4.9E-01	NA	NA	4.9E-01
			Nickel	NA	NA	NA	NA	Nickel	Whole Body	3.3E-02	NA	NA	3.3E-02
			Selenium	NA	NA	NA	NA	Selenium	Hair/Nails	1.7E-01	NA	NA	1.7E-01
			Silver	NA	NA	NA	NA	Silver	Skin	2.0E-02	NA	NA	2.0E-02
			Zinc	NA	NA	NA	NA	Zinc	Blood	1.1E-01	NA	NA	1.1E-01

TABLE 9.18

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

BAYOU D'INDE

Scenario Timeframe: Current/Future
Receptor Population: Resident (Subsistence)
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Fish	Fish	Entire Estuary (except Bayou Verdine)	Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDE	1E-06	NA	NA	1E-06	4,4'-DDE	Liver	1.6E-02	NA	NA	1.6E-02
			Aldrin	6E-05	NA	NA	6E-05	Aldrin	Liver	2.8E-01	NA	NA	2.8E-01
			Aroclor-1254	3E-05	NA	NA	3E-05	Aroclor-1254	Eye/Skin/Nails	1.6E+00	NA	NA	1.6E+00
			BHC, alpha-	2E-05	NA	NA	2E-05	BHC, alpha-		NA	NA	NA	NA
			BHC, beta-	8E-06	NA	NA	8E-06	BHC, beta-		NA	NA	NA	NA
			BHC, gamma- (Lindane)	3E-06	NA	NA	3E-06	BHC, gamma- (Lindane)	Liver/Kidney	1.7E-02	NA	NA	1.7E-02
			Chlordane, alpha-	1E-06	NA	NA	1E-06	Chlordane, alpha-	Liver	1.6E-02	NA	NA	1.6E-02
			Chlordane, gamma-	1E-06	NA	NA	1E-06	Chlordane, gamma-	Liver	1.4E-02	NA	NA	1.4E-02
			Dieldrin	5E-05	NA	NA	5E-05	Dieldrin	Liver	1.6E-01	NA	NA	1.6E-01
			Endrin aldehyde	NA	NA	NA	NA	Endrin aldehyde		NA	NA	NA	NA
			Heptachlor	1E-05	NA	NA	1E-05	Heptachlor	Liver	1.5E-02	NA	NA	1.5E-02
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	7E-05	NA	NA	7E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Antimony	NA	NA	NA	NA	Antimony	Whole Body/Blood	1.8E-01	NA	NA	1.8E-01
			Arsenic	9E-05	NA	NA	9E-05	Arsenic	Skin	4.9E-01	NA	NA	4.9E-01
			Barium	NA	NA	NA	NA	Barium	Kidney	7.3E-02	NA	NA	7.3E-02
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	8.7E-02	NA	NA	8.7E-02
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	Manganese	CNS	2.5E-01	NA	NA	2.5E-01
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
			Nickel	NA	NA	NA	NA	Nickel	Whole Body	3.4E-02	NA	NA	3.4E-02
			Selenium	NA	NA	NA	NA	Selenium	Hair/Nails	2.8E-01	NA	NA	2.8E-01
						Total Risk Across All Media and All Exposure Routes	3E-03					Total Hazard Index Across All Media and All Exposure Routes	3.3E+01

NA = Not Available

Total Kidney Hazard Index Across All Media:	2.2E+00
Total Liver Hazard Index Across All Media:	2.1E+00
Total Eye/Skin/Nails/Hair Hazard Index Across All Media:	1.3E+01
Total Body/Whole Blood Hazard Index Across All Media:	5.0E-01
Total GI Tract/ Hazard Index Across All Media:	1.3E+00
Total CNS Hazard Index Across All Media:	1.3E+01

TABLE 9.19

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Resident (Subsistence)
Receptor Age: Individual > 7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Shellfish	Shellfish	Upper Calcasieu	Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDT	3E-06	NA	NA	3E-06	4,4'-DDT	Liver	4.2E-02	NA	NA	4.2E-02
			Aroclor-1254	1E-04	NA	NA	1E-04	Aroclor-1254	Eye/Skin/Nails	7.8E+00	NA	NA	7.8E+00
			BHC, beta-	2E-05	NA	NA	2E-05	BHC, beta-		NA	NA	NA	NA
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	5E-04	NA	NA	5E-04	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	1E-04	NA	NA	1E-04	Arsenic	Skin	6.8E-01	NA	NA	6.8E-01
			Cadmium	NA	NA	NA	NA	Cadmium	Kidney	7.6E-02	NA	NA	7.6E-02
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	9.2E-02	NA	NA	9.2E-02
			Copper	NA	NA	NA	NA	Copper	GI Tract	4.6E-01	NA	NA	4.6E-01
			Iron	NA	NA	NA	NA	Iron		2.1E-01	NA	NA	2.1E-01
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
			Methyl Mercury	NA	NA	NA	NA	Methyl Mercury	CNS	4.8E-01	NA	NA	4.8E-01
			Selenium	NA	NA	NA	NA	Selenium	Hair/Nails	2.3E-01	NA	NA	2.3E-01
			Zinc	NA	NA	NA	NA	Zinc	Blood	9.9E-02	NA	NA	9.9E-02
Fish	Fish	Entire Estuary	Pesticides/PCBs					Pesticides/PCBs					
		(except Bayou Verdin	4,4'-DDE	1E-06	NA	NA	1E-06	4,4'-DDE	Liver	1.6E-02	NA	NA	1.6E-02
			Aldrin	6E-05	NA	NA	6E-05	Aldrin	Liver	2.8E-01	NA	NA	2.8E-01
			Aroclor-1254	3E-05	NA	NA	3E-05	Aroclor-1254	Eye/Skin/Nails	1.6E+00	NA	NA	1.6E+00
			BHC, alpha-	2E-05	NA	NA	2E-05	BHC, alpha-		NA	NA	NA	NA
			BHC, beta-	8E-06	NA	NA	8E-06	BHC, beta-		NA	NA	NA	NA
			BHC, gamma- (Lindane)	3E-06	NA	NA	3E-06	BHC, gamma- (Lindane)	Liver/Kidney	1.7E-02	NA	NA	1.7E-02
			Chlordane, alpha-	1E-06	NA	NA	1E-06	Chlordane, alpha-	Liver	1.6E-02	NA	NA	1.6E-02
			Chlordane, gamma-	1E-06	NA	NA	1E-06	Chlordane, gamma-	Liver	1.4E-02	NA	NA	1.4E-02
			Dieldrin	5E-05	NA	NA	5E-05	Dieldrin	Liver	1.6E-01	NA	NA	1.6E-01
			Endrin aldehyde	NA	NA	NA	NA	Endrin aldehyde		NA	NA	NA	NA
			Heptachlor	1E-05	NA	NA	1E-05	Heptachlor	Liver	1.5E-02	NA	NA	1.5E-02
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	7E-05	NA	NA	7E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Antimony	NA	NA	NA	NA	Antimony	Whole Body/Blood	1.8E-01	NA	NA	1.8E-01
			Arsenic	9E-05	NA	NA	9E-05	Arsenic	Skin	4.9E-01	NA	NA	4.9E-01
			Barium	NA	NA	NA	NA	Barium	Kidney	7.3E-02	NA	NA	7.3E-02
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	8.7E-02	NA	NA	8.7E-02
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	Manganese	CNS	2.5E-01	NA	NA	2.5E-01
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
			Nickel	NA	NA	NA	NA	Nickel	Whole Body	3.4E-02	NA	NA	3.4E-02
			Selenium	NA	NA	NA	NA	Selenium	Hair/Nails	2.8E-01	NA	NA	2.8E-01
			Total Risk Across All Media and All Exposure Routes				1E-03	Total Hazard Index Across All Media and All Exposure Routes					1.4E+01

NA = Not Available

Total Kidney Hazard Index Across All Media	1.7E-01
Total Liver Hazard Index Across All Media	5.6E-01
Total Eye/Skin/Nails/Hair Hazard Index Across All Media	1.1E+01
Total Whole Body/Blood Hazard Index Across All Media	3.1E-01
Total GI Tract Hazard Index Across All Media	6.4E-01
Total CNS Hazard Index Across All Media	7.3E-01

TABLE 9.20

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Resident (Subsistence)
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Shellfish	Shellfish	Lower Calcasieu	SVOCs					SVOCs					
			bis(2-Ethylhexyl) phthalate	1E-05	NA	NA	1E-05	bis(2-Ethylhexyl) phthalate	Liver	1.2E-01	NA	NA	1.2E-01
			PAHs					PAHs					
			Benzo(a)pyrene	4E-04	NA	NA	4E-04	Benzo(a)pyrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254	4E-05	NA	NA	4E-05	Aroclor-1254	Eye/Skin/Nails	2.5E+00	NA	NA	2.5E+00
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	3E-04	NA	NA	3E-04	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	1E-04	NA	NA	1E-04	Arsenic	Skin	7.3E-01	NA	NA	7.3E-01
			Cadmium	NA	NA	NA	NA	Cadmium	Kidney	2.5E-01	NA	NA	2.5E-01
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	1.8E-01	NA	NA	1.8E-01
			Copper	NA	NA	NA	NA	Copper	GI Tract	1.1E+00	NA	NA	1.1E+00
			Iron	NA	NA	NA	NA	Iron		2.8E-01	NA	NA	2.8E-01
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
			Methyl Mercury	NA	NA	NA	NA	Methyl Mercury	CNS	3.5E-01	NA	NA	3.5E-01
			Selenium	NA	NA	NA	NA	Selenium	Hair/Nails	2.4E-01	NA	NA	2.4E-01
			Silver	NA	NA	NA	NA	Silver	Skin	2.9E-02	NA	NA	2.9E-02
			Zinc	NA	NA	NA	NA	Zinc	Blood	9.2E-01	NA	NA	9.2E-01

TABLE 9.20

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Resident (Subsistence)
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Fish	Fish	Entire Estuary (except Bayou Verdine)	Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDE	1E-06	NA	NA	1E-06	4,4'-DDE	Liver	1.6E-02	NA	NA	1.6E-02
			Aldrin	6E-05	NA	NA	6E-05	Aldrin	Liver	2.8E-01	NA	NA	2.8E-01
			Aroclor-1254	3E-05	NA	NA	3E-05	Aroclor-1254	Eye/Skin/Nails	1.6E+00	NA	NA	1.6E+00
			BHC, alpha-	2E-05	NA	NA	2E-05	BHC, alpha-		NA	NA	NA	NA
			BHC, beta-	8E-06	NA	NA	8E-06	BHC, beta-		NA	NA	NA	NA
			BHC, gamma- (Lindane)	3E-06	NA	NA	3E-06	BHC, gamma- (Lindane)	Liver/Kidney	1.7E-02	NA	NA	1.7E-02
			Chlordane, alpha-	1E-06	NA	NA	1E-06	Chlordane, alpha-	Liver	1.6E-02	NA	NA	1.6E-02
			Chlordane, gamma-	1E-06	NA	NA	1E-06	Chlordane, gamma-	Liver	1.4E-02	NA	NA	1.4E-02
			Dieldrin	5E-05	NA	NA	5E-05	Dieldrin	Liver	1.6E-01	NA	NA	1.6E-01
			Endrin aldehyde	NA	NA	NA	NA	Endrin aldehyde		NA	NA	NA	NA
			Heptachlor	1E-05	NA	NA	1E-05	Heptachlor	Liver	1.5E-02	NA	NA	1.5E-02
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	7E-05	NA	NA	7E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Antimony	NA	NA	NA	NA	Antimony	Whole Body/Blood	1.8E-01	NA	NA	1.8E-01
			Arsenic	9E-05	NA	NA	9E-05	Arsenic	Skin	4.9E-01	NA	NA	4.9E-01
			Barium	NA	NA	NA	NA	Barium	Kidney	7.3E-02	NA	NA	7.3E-02
			Chromium (total)	NA	NA	NA	NA	Chromium (total)	GI Tract	8.7E-02	NA	NA	8.7E-02
			Lead	NA	NA	NA	NA	Lead		NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	Manganese	CNS	2.5E-01	NA	NA	2.5E-01
			Mercury	NA	NA	NA	NA	Mercury		NA	NA	NA	NA
			Nickel	NA	NA	NA	NA	Nickel	Whole Body	3.4E-02	NA	NA	3.4E-02
			Selenium	NA	NA	NA	NA	Selenium	Hair/Nails	2.8E-01	NA	NA	2.8E-01
			Total Risk Across All Media and All Exposure Routes				1E-03	Total Hazard Index Across All Media and All Exposure Routes					1.0E+01

NA = Not Available

Total Liver Hazard Index Across All Media:	6.4E-01
Total Eye/Skin/Nails/Hair Hazard Index Across All Media:	5.9E+00
Total Kidney Hazard Index Across All Media:	3.4E-01
Total GI Tract Hazard Index Across All Media:	1.4E+00
Total Whole Body/Blood Hazard Index Across All Media:	1.1E+00
Total CNS Hazard Index Across All Media:	6.0E-01

TABLE 9.21

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU VERDINE

Scenario Timeframe: Current/Future
Receptor Population: Resident (Subsistence)
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Fish	Fish	Bayou Verdine	Dioxins/Furans 2,3,7,8-TCDD Equivalents	5E-04	NA	NA	5E-04	Dioxins/Furans 2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
Shellfish	Shellfish	Bayou Verdine	Dioxins/Furans 2,3,7,8-TCDD Equivalents	8E-05	NA	NA	8E-05	Dioxins/Furans 2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Total Risk Across All Media and All Exposure Routes				6E-04	Total Hazard Index Across All Media and All Exposure Routes					0.0E+00

NA = Not Available

TABLE 10.1
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU D'INDE

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Bayou d'Inde	Dioxins/Furans 2,3,7,8-TCDD Equivalents	5E-06	NA	1E-06	6E-06	Dioxins/Furans 2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
							Total Risk Across All Media and All Exposure Routes 9E-06						Total Hazard Index Across All Media and All Exposure Routes 1.6E-02

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Liver Hazard Index Across All Media:	5.2E-04
Total Eye/Skin/Nail Hazard Index Across All Media:	7.1E-03
Total Kidney Hazard Index Across All Media:	2.3E-03
Total GI Tract Hazard Index Across All Media:	6.0E-03

TABLE 10.2
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Upper Calcasieu Above Lake Charles											
			Total Risk Across All Media and All Exposure Routes				2E-06		Total Hazard Index Across All Media and All Exposure Routes				4.5E-03

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.
Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.
However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Skin Hazard Index Across All Media:	3.3E-03
Total GI Tract Hazard Index Across All Media:	1.2E-03

No chemicals are shown in this table because no individual COPCs had a cancer risk > 1E-6 or a noncancer hazard quotient >1.

TABLE 10.3
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Swimmer
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Upper Calcasieu Above Lake Charles											
			Total Risk Across All Media and All Exposure Routes				2E-06		Total Hazard Index Across All Media and All Exposure Routes				5.6E-03

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Eye/Skin/Nail Hazard Index Across All Media:	4.1E-03
Total GI Tract Hazard Index Across All Media:	1.5E-03

No chemicals are shown in this table because no individual COPCs had a cancer risk > 1E-6 or a noncancer hazard quotient >1.

TABLE 10.4
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Upper Calcasieu Lake Charles	Metals Arsenic	8E-06	NA	2E-06	1E-05	Metals Arsenic	Skin	4.3E-02	NA	9.2E-03	5.3E-02
							Total Risk Index Across All Media and All Exposure Routes: 1E-05						Total Hazard Index Across All Media and All Exposure Routes: 5.9E-02

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Skin Hazard Index Across All Media: 5.8E-02

Total GI Tract Hazard Index Across All Media: 1.8E-03

TABLE 10.5
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Swimmer
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Upper Calcasieu Lake Charles	Metals Arsenic	1E-06	NA	2E-07	1E-06	Metals Arsenic	Skin	5.0E-03	NA	1.1E-03	6.1E-03
Surface Water	Surface Water	Upper Calcasieu Lake Charles	Metals Arsenic	2E-05	NA	7E-06	2E-05	Metals Arsenic	Skin	8.1E-02	NA	3.4E-02	1.2E-01
			Total Risk Index Across All Media and All Exposure Routes				2E-05		Total Hazard Index Across All Media and All Exposure Routes				1.2E-01

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Skin Hazard Index Across All Media:	1.2E-01
Total GI Tract Hazard Index Across All Media:	2.3E-03

TABLE 10.6
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Upper Calcasieu Clooney Island Loop											
Surface Water	Surface Water	Upper Calcasieu Clooney Island Loop											
			Total Risk Index Across All Media and All Exposure Routes				3E-06		Total Hazard Index Across All Media and All Exposure Routes				1.2E-02

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.
Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.
However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Skin Hazard Index Across All Media:	9.6E-03
Total GI Tract Hazard Index Across All Media:	2.9E-03
Total Whole Body/Blood Hazard Indez Across All Media:	

No chemicals are shown in this table because no individual COPCs had a cancer risk > 1E-6 or a noncancer hazard quotient >1.

TABLE 10.7
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Commercial Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Upper Calcasieu	PAHs					PAHs					
		Below Clooney	Benzo(a)pyrene	9E-07	NA	2E-06	3E-06	Benzo(a)pyrene		NA	NA	NA	NA
		Island Loop	Dibenzo(a,h)anthracene	5E-07	NA	9E-07	1E-06	Dibenzo(a,h)anthracene		NA	NA	NA	NA
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	8E-07	NA	4E-07	1E-06	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	1E-06	NA	5E-07	2E-06	Arsenic	Skin	7.8E-03	NA	3.3E-03	1.1E-02
Surface Water	Surface Water	Upper Calcasieu Below Clooney Island Loop	Metals					Metals					
			Arsenic	NA	NA	2E-06	2E-06	Arsenic	Skin	NA	NA	1.3E-02	1.3E-02
			Total Risk Index Across All Media and All Exposure Routes				1E-05		Total Hazard Index Across All Media and All Exposure Routes				8.7E-02

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Eye/Skin/Nail Hazard Index Across All Media:	2.8E-02
Total GI Tract Hazard Index Across All Media:	3.9E-03
Total Whole Body/Blood Hazard Index Across All Media:	5.6E-02

TABLE 10.8
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Upper Calcasieu Below Clooney Island Loop	Metals					Metals					
			Arsenic	2E-06	NA	4E-07	2E-06	Arsenic	Skin	1.0E-02	NA	2.1E-03	1.2E-02
			Total Risk Index Across All Media and All Exposure Routes				4E-06		Total Hazard Index Across All Media and All Exposure Routes				6.8E-02

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Eye/Skin/Nail Hazard Index Across All Media:	1.5E-02
Total GI Tract Hazard Index Across All Media:	1.0E-03
Total Whole Body/Blood Hazard Indez Across All Media:	5.2E-02

TABLE 10.9
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Commercial Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Lower Calcasieu Lake Prien	PAHs					PAHs					
			Benzo(a)pyrene	9E-07	NA	2E-06	2E-06	Benzo(a)pyrene		NA	NA	NA	NA
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	1E-06	NA	5E-07	2E-06	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	2E-06	NA	1E-06	3E-06	Arsenic	Skin	1.4E-02	NA	6.0E-03	2.0E-02
							Total Risk Across All Media and All Exposure Routes: 1E-05						Total Hazard Index Across All Media and All Exposure Routes: 3.2E-02

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Liver Hazard Index Across All Media: 5.4E-05

Total Eye/Skin/Nails Hazard Index Across All Media: 3.2E-02

TABLE 10.10
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Lower Calcasieu Lake Prien											
Surface Water	Surface Water	Lower Calcasieu Lake Prien											
						Total Risk Across All Media and All Exposure Routes	3E-06					Total Hazard Index Across All Media and All Exposure Routes	1.1E-02

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.
Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.
However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Liver Hazard Index Across All Media:	1.0E-05
Total Eye/Skin/Nails Hazard Index Across All Media:	1.1E-02

No chemicals are shown in this table because no individual COPCs had a cancer risk > 1E-6 or a noncancer hazard quotient >1.

TABLE 10.11
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Swimmer
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Lower Calcasieu Lake Prien	Metals Arsenic	9E-07	NA	2E-07	1E-06	Metals Arsenic	Skin	4.7E-03	NA	1.1E-03	5.8E-03
Surface Water	Surface Water	Lower Calcasieu Lake Prien	Metals Arsenic	2E-06	NA	7E-07	2E-06	Metals Arsenic	Skin	8.0E-03	NA	3.4E-03	1.1E-02
						Total Risk Across All Media and All Exposure Routes	5E-06					Total Hazard Index Across All Media and All Exposure Routes	1.8E-02

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Liver Hazard Index Across All Media:	1.3E-05
Total Eye/Skin/Nails Hazard Index Across All Media:	1.8E-02

TABLE 10.12
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Commercial Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Lower Calcasieu	PAHs					PAHs					
		Remainder of	Benzo(a)pyrene	2E-06	NA	3E-06	5E-06	Benzo(a)pyrene		NA	NA	NA	NA
		Lower Calcasieu	Dibenzo(a,h)anthracene	1E-06	NA	3E-06	4E-06	Dibenzo(a,h)anthracene		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	2E-06	NA	8E-07	3E-06	Arsenic	Skin	1.2E-02	NA	5.1E-03	1.7E-02
			Total Risk Across All Media and All Exposure Routes				1E-05		Total Hazard Index Across All Media and All Exposure Routes				3.0E-02

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Liver Hazard Index Across All Media:	6.6E-05
Total Eye/Skin/Nails Hazard Index Across All Media:	3.0E-02

TABLE 10.13
RISK SUMMARY
REASONABLE MAXIMUM EXPOSURE
CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Recreational Fisher
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Lower Calcasieu Remainder of Lower Calcasieu	PAHs Benzo(a)pyrene	5.1E-07	NA	5.0E-07	1.0E-06	PAHs Benzo(a)pyrene		NA	NA	NA	NA
			Total Risk Across All Media and All Exposure Routes				4E-06		Total Hazard Index Across All Media and All Exposure Routes				7.9E-03

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.
Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.
However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Liver Hazard Index Across All Media:	1.3E-05
Total Eye/Skin/Nails Hazard Index Across All Media:	7.9E-03

TABLE 10.14

RISK SUMMARY

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

BAYOU D'INDE

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Shellfish	Shellfish	Bayou d'Inde	SVOCs					SVOCs					
			bis(2-Ethylhexyl) phthalate	4E-05	NA	NA	4E-05	bis(2-Ethylhexyl) phthalate	Liver	3.0E-01	NA	NA	3.0E-01
			Hexachlorobenzene	1E-05	NA	NA	1E-05	Hexachlorobenzene	Liver	1.8E-02	NA	NA	1.8E-02
			Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDD	1E-06	NA	NA	1E-06	4,4'-DDD	Liver	2.3E-02	NA	NA	2.3E-02
			4,4'-DDT	2E-06	NA	NA	2E-06	4,4'-DDT	Liver	3.0E-02	NA	NA	3.0E-02
			Aldrin	4E-05	NA	NA	4E-05	Aldrin	Liver	1.8E-01	NA	NA	1.8E-01
			Aroclor-1254	6E-05	NA	NA	6E-05	Aroclor-1254	Eye/Skin/Nails	3.8E+00	NA	NA	3.8E+00
			BHC, beta-	2E-05	NA	NA	2E-05	BHC, beta-		NA	NA	NA	NA
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	8E-04	NA	NA	8E-04	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	4E-05	NA	NA	4E-05	Arsenic	Skin	2.0E-01	NA	NA	2.0E-01
			Manganese	NA	NA	NA	NA	Manganese	CNS	4.6E+00	NA	NA	4.6E+00
Fish	Fish	Entire Estuary (except Bayou Verdine)	Pesticides/PCBs					Pesticides/PCBs					
			Aldrin	2E-05	NA	NA	2E-05	Aldrin	Liver	1.1E-01	NA	NA	1.1E-01
			Aroclor-1254	1E-05	NA	NA	1E-05	Aroclor-1254	Eye/Skin/Nails	6.1E-01	NA	NA	6.1E-01
			BHC, alpha-	7E-06	NA	NA	7E-06	BHC, alpha-		NA	NA	NA	NA
			BHC, beta-	3E-06	NA	NA	3E-06	BHC, beta-		NA	NA	NA	NA
			BHC, gamma- (Lindane)	1E-06	NA	NA	1E-06	BHC, gamma- (Lindane)	Liver/Kidney	6.5E-03	NA	NA	6.5E-03
			Dieldrin	2E-05	NA	NA	2E-05	Dieldrin	Liver	5.9E-02	NA	NA	5.9E-02
			Heptachlor	5E-06	NA	NA	5E-06	Heptachlor	Liver	5.5E-03	NA	NA	5.5E-03
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	3E-05	NA	NA	3E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	4E-05	NA	NA	4E-05	Arsenic	Skin	1.8E-01	NA	NA	1.8E-01
			Total Risk Across All Media and All Exposure Routes				1E-03	Total Hazard Index Across All Media and All Exposure Routes					1.2E+01

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Kidney Hazard Index Across All Media:	8.1E-01
Total Liver Hazard Index Across All Media:	7.8E-01
Total Eye/Skin/Nails/Hair Hazard Index Across All Media:	4.9E+00
Total Body/Whole Blood Hazard Index Across All Media:	1.9E-01
Total GI Tract Hazard Index Across All Media:	4.9E-01
Total CNS Hazard Index Across All Media:	4.9E+00

TABLE 10.15

RISK SUMMARY

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Shellfish	Shellfish	Upper Calcasieu	Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDT	1E-06	NA	NA	1E-06	4,4'-DDT	Liver	1.6E-02	NA	NA	1.6E-02
			Aroclor-1254	5E-05	NA	NA	5E-05	Aroclor-1254	Eye/Skin/Nails	2.9E+00	NA	NA	2.9E+00
			BHC, beta-	6E-06	NA	NA	6E-06	BHC, beta-		NA	NA	NA	NA
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	2E-04	NA	NA	2E-04	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	5E-05	NA	NA	5E-05	Arsenic	Skin	2.5E-01	NA	NA	2.5E-01
Fish	Fish	Entire Estuary (except Bayou Verdine)	Pesticides/PCBs					Pesticides/PCBs					
			Aldrin	2E-05	NA	NA	2E-05	Aldrin	Liver	1.1E-01	NA	NA	1.1E-01
			Aroclor-1254	1E-05	NA	NA	1E-05	Aroclor-1254	Eye/Skin/Nails	6.1E-01	NA	NA	6.1E-01
			BHC, alpha-	7E-06	NA	NA	7E-06	BHC, alpha-		NA	NA	NA	NA
			BHC, beta-	3E-06	NA	NA	3E-06	BHC, beta-		NA	NA	NA	NA
			BHC, gamma- (Lindane)	1E-06	NA	NA	1E-06	BHC, gamma- (Lindane)	Liver/Kidney	6.5E-03	NA	NA	6.5E-03
			Dieldrin	2E-05	NA	NA	2E-05	Dieldrin	Liver	5.9E-02	NA	NA	5.9E-02
			Heptachlor	5E-06	NA	NA	5E-06	Heptachlor	Liver	5.5E-03	NA	NA	5.5E-03
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	3E-05	NA	NA	3E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	4E-05	NA	NA	4E-05	Arsenic	Skin	1.8E-01	NA	NA	1.8E-01
			Total Risk Across All Media and All Exposure Routes				4E-04		Total Hazard Index Across All Media and All Exposure Routes				5.1E+00

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Kidney Hazard Index Across All Media:	6.2E-02
Total Liver Hazard Index Across All Media:	2.1E-01
Total Eye/Skin/Nails/Hair Hazard Index Across All Media:	4.1E+00
Total Blood/Whole Body Hazard Index Across All Media:	1.2E-01
Total GI Tract Hazard Index Across All Media:	2.4E-01
Total CNS Hazard Index Across All Media:	2.7E-01

TABLE 10.16

RISK SUMMARY

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Shellfish	Shellfish	Lower Calcasieu	SVOCs					SVOCs					
			bis(2-Ethylhexyl) phthalate	5E-06	NA	NA	5E-06	bis(2-Ethylhexyl) phthalate	Liver	4.5E-02	NA	NA	4.5E-02
			PAHs					PAHs					
			Benzo(a)pyrene	2E-04	NA	NA	2E-04	Benzo(a)pyrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254	2E-05	NA	NA	2E-05	Aroclor-1254	Eye/Skin/Nails	9.2E-01	NA	NA	9.2E-01
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	9E-05	NA	NA	9E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	5E-05	NA	NA	5E-05	Arsenic	Skin	2.7E-01	NA	NA	2.7E-01
Fish	Fish	Entire Estuary (except Bayou Verdine)	Pesticides/PCBs					Pesticides/PCBs					
			Aldrin	2E-05	NA	NA	2E-05	Aldrin	Liver	1.1E-01	NA	NA	1.1E-01
			Aroclor-1254	1E-05	NA	NA	1E-05	Aroclor-1254	Eye/Skin/Nails	6.1E-01	NA	NA	6.1E-01
			BHC, alpha-	7E-06	NA	NA	7E-06	BHC, alpha-		NA	NA	NA	NA
			BHC, beta-	3E-06	NA	NA	3E-06	BHC, beta-		NA	NA	NA	NA
			BHC, gamma- (Lindane)	1E-06	NA	NA	1E-06	BHC, gamma- (Lindane)	Liver/Kidney	6.5E-03	NA	NA	6.5E-03
			Dieldrin	2E-05	NA	NA	2E-05	Dieldrin	Liver	5.9E-02	NA	NA	5.9E-02
			Heptachlor	5E-06	NA	NA	5E-06	Heptachlor	Liver	5.5E-03	NA	NA	5.5E-03
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	3E-05	NA	NA	3E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	4E-05	NA	NA	4E-05	Arsenic	Skin	1.8E-01	NA	NA	1.8E-01
			Total Risk Across All Media and All Exposure Routes				5E-04		Total Hazard Index Across All Media and All Exposure Routes				3.8E+00

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Liver Hazard Index Across All Media:	2.4E-01
Total Eye/Skin/Nails/Hair Hazard Index Across All Media:	2.2E+00
Total Kidney Hazard Index Across All Media:	1.3E-01
Total GI Tract Hazard Index Across All Media:	5.2E-01
Total Whole Body/Blood Hazard Index Across All Media:	4.2E-01
Total CNS Hazard Index Across All Media:	2.2E-01

TABLE 10.17

RISK SUMMARY

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU VERDINE

Scenario Timeframe: Current/Future
Receptor Population: Resident
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Fish	Fish	Bayou Verdine	Dioxins/Furans 2,3,7,8-TCDD Equivalents	1E-04	NA	NA	1E-04	Dioxins/Furans 2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
Shellfish	Shellfish	Bayou Verdine	Dioxins/Furans 2,3,7,8-TCDD Equivalents	2E-06	NA	NA	2E-06	Dioxins/Furans 2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Total Risk Across All Media and All Exposure Routes				1E-04	Total Hazard Index Across All Media and All Exposure Routes					0.0E+00

NA = Not Available

TABLE 10.18

RISK SUMMARY

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA

BAYOU D'INDE

Scenario Timeframe: Current/Future
Receptor Population: Resident (Subsistence)
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Shellfish	Shellfish	Bayou d'Inde	SVOCs					SVOCs					
			bis(2-Ethylhexyl) phthalate	1E-04	NA	NA	1E-04	bis(2-Ethylhexyl) phthalate	Liver	8.0E-01	NA	NA	8.0E-01
			Hexachlorobenzene	3E-05	NA	NA	3E-05	Hexachlorobenzene	Liver	4.9E-02	NA	NA	4.9E-02
			Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDD	3E-06	NA	NA	3E-06	4,4'-DDD	Liver	6.2E-02	NA	NA	6.2E-02
			4,4'-DDT	6E-06	NA	NA	6E-06	4,4'-DDT	Liver	8.0E-02	NA	NA	8.0E-02
			Aldrin	1E-04	NA	NA	1E-04	Aldrin	Liver	4.7E-01	NA	NA	4.7E-01
			Aroclor-1254	2E-04	NA	NA	2E-04	Aroclor-1254	Eye/Skin/Nails	1.0E+01	NA	NA	1.0E+01
			BHC, beta-	4E-05	NA	NA	4E-05	BHC, beta-		NA	NA	NA	NA
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	2E-03	NA	NA	2E-03	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	1E-04	NA	NA	1E-04	Arsenic	Skin	5.5E-01	NA	NA	5.5E-01
			Barium	NA	NA	NA	NA	Barium	Kidney	2.0E+00	NA	NA	2.0E+00
			Manganese	NA	NA	NA	NA	Manganese	CNS	1.2E+01	NA	NA	1.2E+01
Fish	Fish	Entire Estuary (Except Bayou Verdine)	Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDE	1E-06	NA	NA	1E-06	4,4'-DDE	Liver	1.6E-02	NA	NA	1.6E-02
			Aldrin	6E-05	NA	NA	6E-05	Aldrin	Liver	2.8E-01	NA	NA	2.8E-01
			Aroclor-1254	3E-05	NA	NA	3E-05	Aroclor-1254	Eye/Skin/Nails	1.6E+00	NA	NA	1.6E+00
			BHC, alpha-	2E-05	NA	NA	2E-05	BHC, alpha-		NA	NA	NA	NA
			BHC, beta-	8E-06	NA	NA	8E-06	BHC, beta-		NA	NA	NA	NA
			BHC, gamma- (Lindane)	3E-06	NA	NA	3E-06	BHC, gamma- (Lindane)	Liver/Kidney	1.7E-02	NA	NA	1.7E-02
			Chlordane, alpha-	1E-06	NA	NA	1E-06	Chlordane, alpha-	Liver	1.6E-02	NA	NA	1.6E-02
			Chlordane, gamma-	1E-06	NA	NA	1E-06	Chlordane, gamma-	Liver	1.4E-02	NA	NA	1.4E-02
			Dieldrin	5E-05	NA	NA	5E-05	Dieldrin	Liver	1.6E-01	NA	NA	1.6E-01
			Heptachlor	1E-05	NA	NA	1E-05	Heptachlor	Liver	1.5E-02	NA	NA	1.5E-02
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	7E-05	NA	NA	7E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	9E-05	NA	NA	9E-05	Arsenic	Skin	4.9E-01	NA	NA	4.9E-01
			Total Risk Across All Media and All Exposure Routes				3E-03		Total Hazard Index Across All Media and All Exposure Routes				3.3E+01

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Kidney Hazard Index Across All Media:	2.2E+00
Total Liver Hazard Index Across All Media:	2.1E+00
Total Eye/Skin/Nails/Hair Hazard Index Across All Media:	1.3E+01
Total Body/Whole Blood Hazard Index Across All Media:	5.0E-01
Total GI Tract/ Hazard Index Across All Media:	1.3E+00
Total CNS Hazard Index Across All Media:	1.3E+01

TABLE 10.19

RISK SUMMARY

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
UPPER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Resident (Subsistence)
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Shellfish	Shellfish	Upper Calcasieu	Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDT	3E-06	NA	NA	3E-06	4,4'-DDT	Liver	4.2E-02	NA	NA	4.2E-02
			Aroclor-1254	1E-04	NA	NA	1E-04	Aroclor-1254	Eye/Skin/Nails	7.8E+00	NA	NA	7.8E+00
			BHC, beta-	2E-05	NA	NA	2E-05	BHC, beta-		NA	NA	NA	NA
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	5E-04	NA	NA	5E-04	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	1E-04	NA	NA	1E-04	Arsenic	Skin	6.8E-01	NA	NA	6.8E-01
Fish	Fish	Entire Estuary (Except Bay	Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDE	1E-06	NA	NA	1E-06	4,4'-DDE	Liver	1.6E-02	NA	NA	1.6E-02
			Aldrin	6E-05	NA	NA	6E-05	Aldrin	Liver	2.8E-01	NA	NA	2.8E-01
			Aroclor-1254	3E-05	NA	NA	3E-05	Aroclor-1254	Eye/Skin/Nails	1.6E+00	NA	NA	1.6E+00
			BHC, alpha-	2E-05	NA	NA	2E-05	BHC, alpha-		NA	NA	NA	NA
			BHC, beta-	8E-06	NA	NA	8E-06	BHC, beta-		NA	NA	NA	NA
			BHC, gamma- (Lindane)	3E-06	NA	NA	3E-06	BHC, gamma- (Lindane)	Liver/Kidney	1.7E-02	NA	NA	1.7E-02
			Chlordane, alpha-	1E-06	NA	NA	1E-06	Chlordane, alpha-	Liver	1.6E-02	NA	NA	1.6E-02
			Chlordane, gamma-	1E-06	NA	NA	1E-06	Chlordane, gamma-	Liver	1.4E-02	NA	NA	1.4E-02
			Dieldrin	5E-05	NA	NA	5E-05	Dieldrin	Liver	1.6E-01	NA	NA	1.6E-01
			Heptachlor	1E-05	NA	NA	1E-05	Heptachlor	Liver	1.5E-02	NA	NA	1.5E-02
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	7E-05	NA	NA	7E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	9E-05	NA	NA	9E-05	Arsenic	Skin	4.9E-01	NA	NA	4.9E-01
			Total Risk Across All Media and All Exposure Routes				1E-03		Total Hazard Index Across All Media and All Exposure Routes				1.4E+01

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Kidney Hazard Index Across All Media:	1.7E-01
Total Liver Hazard Index Across All Media:	5.6E-01
Total Eye/Skin/Nails/Hair Hazard Index Across All Media:	1.1E+01
Total Whole Body/Blood Hazard Index Across All Media:	3.1E-01
Total GI Tract Hazard Index Across All Media:	6.4E-01
Total CNS Hazard Index Across All Media:	7.3E-01

TABLE 10.20

RISK SUMMARY

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
LOWER CALCASIEU

Scenario Timeframe: Current/Future
Receptor Population: Resident (Subsistence)
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Shellfish	Shellfish	Lower Calcasieu	SVOCs					SVOCs					
			bis(2-Ethylhexyl) phthalate	1E-05	NA	NA	1E-05	bis(2-Ethylhexyl) phthalate	Liver	1.2E-01	NA	NA	1.2E-01
			PAHs					PAHs					
			Benzo(a)pyrene	4E-04	NA	NA	4E-04	Benzo(a)pyrene		NA	NA	NA	NA
			Pesticides/PCBs					Pesticides/PCBs					
			Aroclor-1254	4E-05	NA	NA	4E-05	Aroclor-1254	Eye/Skin/Nails	2.5E+00	NA	NA	2.5E+00
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	3E-04	NA	NA	3E-04	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	1E-04	NA	NA	1E-04	Arsenic	Skin	7.3E-01	NA	NA	7.3E-01
			Copper	NA	NA	NA	NA	Copper	GI Tract	1.13E+00	NA	NA	1.1E+00
Fish	Fish	Entire Estuary (Except Bayou	Pesticides/PCBs					Pesticides/PCBs					
			4,4'-DDE	1E-06	NA	NA	1E-06	4,4'-DDE	Liver	1.6E-02	NA	NA	1.6E-02
			Aldrin	6E-05	NA	NA	6E-05	Aldrin	Liver	2.8E-01	NA	NA	2.8E-01
			Aroclor-1254	3E-05	NA	NA	3E-05	Aroclor-1254	Eye/Skin/Nails	1.6E+00	NA	NA	1.6E+00
			BHC, alpha-	2E-05	NA	NA	2E-05	BHC, alpha-		NA	NA	NA	NA
			BHC, beta-	8E-06	NA	NA	8E-06	BHC, beta-		NA	NA	NA	NA
			BHC, gamma- (Lindane)	3E-06	NA	NA	3E-06	BHC, gamma- (Lindane)	Liver/Kidney	1.7E-02	NA	NA	1.7E-02
			Chlordane, alpha-	1E-06	NA	NA	1E-06	Chlordane, alpha-	Liver	1.6E-02	NA	NA	1.6E-02
			Chlordane, gamma-	1E-06	NA	NA	1E-06	Chlordane, gamma-	Liver	1.4E-02	NA	NA	1.4E-02
			Dieldrin	5E-05	NA	NA	5E-05	Dieldrin	Liver	1.6E-01	NA	NA	1.6E-01
			Heptachlor	1E-05	NA	NA	1E-05	Heptachlor	Liver	1.5E-02	NA	NA	1.5E-02
			Dioxins/Furans					Dioxins/Furans					
			2,3,7,8-TCDD Equivalents	7E-05	NA	NA	7E-05	2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Metals					Metals					
			Arsenic	9E-05	NA	NA	9E-05	Arsenic	Skin	4.9E-01	NA	NA	4.9E-01
			Total Risk Across All Media and All Exposure Routes				1E-03		Total Hazard Index Across All Media and All Exposure Routes				1.0E+01

NA = Not Available

Tables 10.1 through 10.21 provide summaries of the COPCs that may trigger the need for cleanup.

Only those COPCs with a cancer risk > 1E-6 (one in a million) or a noncancer hazard quotient > 1 are shown.

However, the total risks and HIs are based on all COPCs (see Tables 9.1 through 9.21 for full list of COPCs, risks, and HIs).

Total Liver Hazard Index Across All Media:	6.4E-01
Total Eye/Skin/Nails/Hair Hazard Index Across All Media:	5.9E+00
Total Kidney Hazard Index Across All Media:	3.4E-01
Total GI Tract Hazard Index Across All Media:	1.4E+00
Total Whole Body/Blood Hazard Index Across All Media:	1.1E+00
Total CNS Hazard Index Across All Media:	6.0E-01

TABLE 10.21

RISK SUMMARY

REASONABLE MAXIMUM EXPOSURE

CALCASIEU ESTUARY - LAKE CHARLES, LA
BAYOU VERDINE

Scenario Timeframe: Current/Future
Receptor Population: Resident (Subsistence)
Receptor Age: Individual >7

Medium	Exposure Medium	Exposure Point	Chemical	Carcinogenic Risk				Chemical	Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total		Primary Target Organ/ Critical Effect	Ingestion	Inhalation	Dermal	Exposure Routes Total
Fish	Fish	Bayou Verdine	Dioxins/Furans 2,3,7,8-TCDD Equivalents	5E-04	NA	NA	5E-04	Dioxins/Furans 2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
Shellfish	Shellfish	Bayou Verdine	Dioxins/Furans 2,3,7,8-TCDD Equivalents	8E-05	NA	NA	8E-05	Dioxins/Furans 2,3,7,8-TCDD Equivalents		NA	NA	NA	NA
			Total Risk Across All Media and All Exposure Routes				6E-04	Total Hazard Index Across All Media and All Exposure Routes					0.0E+00

NA = Not Available

Appendix C

Calculation of Screening Level for COPC Selection

APPENDIX C
DEVELOPMENT OF SCREENING VALUES

C.1 INTRODUCTION

The original list of chemicals of potential concern (COPCs) includes all chemicals that were detected in any media (surface water, sediment, fish, and shellfish) in any area of concern (AOC) (Upper Calcasieu, Lower Calcasieu, Bayou d'Inde, and Bayou Verdine) within the Calcasieu Estuary. This list of COPCs was then reduced using site-specific screening values in the selection method described in Section 4.2 of the text. This appendix outlines the development of these screening values.

C.2 ASSUMPTIONS USED TO DEVELOP SCREENING VALUES

Screening values were estimated for each receptor / exposure scenario that was evaluated in the Calcasieu Estuary HHRA. See Standard Table 1 in Appendix B for the complete list of receptor / exposure scenarios. The set of screening values was developed using the reasonable maximum exposure (RME) assumptions identified in the Standard Tables 4.1 through 4.14 in Appendix B, and the chemical specific dermal absorption fractions and permeability coefficients listed in Table C.1. The exposure equations used to calculate the screening values are:

$$Noncancer\ Screening\ Value\ ?\ Target\ Hazard\ Index\ ?\ RfD\ ?\ \frac{1}{Intake}$$

$$Cancer\ Screening\ Value\ ?\ \frac{Target\ Risk}{CSF}\ ?\ \frac{1}{Intake}$$

The target cancer risk is equal to 10^{-6} and the target hazard index is equal to 0.1. Additionally, the reference doses (RfDs) and cancer slope factors (CSFs) are found in Standard Tables 5.1 and 6.1, respectively, in Appendix B. The equations for intake are shown in the Standard Tables 4.1 through 4.14 and were used to calculate intake values for each chemical in each receptor / exposure scenario.

C.3 SUMMARY OF SCREENING VALUES FOR THE SELECTION OF COPCS

Potential screening levels for each medium and receptor are presented in Tables C.2 through C.5, for sediment, surface water, fish, and shellfish, respectively. For each chemical in each medium, the lowest screening value from among the different receptors was selected as the toxicity-based screening level. The screening results show that for fish the most conservative screening value was always based on the subsistence fish / shellfish ingestion scenario, for sediment it was always the commercial fisher scenario, and for surface water it alternated between the commercial fisher and recreational swimmer scenarios.

Table C.6 summarizes the screening levels for each medium. Standard Tables 2.1 through 2.12 in Appendix B present the comparison of detected concentrations in each AOC to the screening levels.

Table C.7 lists chemicals that were never detected in each medium and compares the detection limits for those chemicals to screening levels.

Appendix C - Calculation of Screening Levels for COPC Selection
Calcasieu Estuary - Calcasieu Parish, Louisiana

TABLE

C.1 Physical/Chemical Parameters for Detected Chemicals
C.2 Screening Levels for Detected Chemicals in Sediment
C.3 Screening Levels for Detected Chemicals in Surface Water
C.4 Screening Levels for Detected Chemicals in Fish
C.5 Screening Levels for Detected Chemicals in Shellfish
C.6 Screening Levels for Detected Chemicals in All Media
C.7 Detection Limits for Chemicals Never Detected vs Screening Levels

TABLE C.1
CHEMICAL/PHYSICAL PARAMETERS FOR DETECTED CHEMICALS
Calcasieu Estuary - Lake Charles, LA

	Dermal Absorption (ABS)	Dermal Permeability Coefficient (PC) cm/hr	PC note
VOCs			
1,1,1-Trichloroethane	0.0E+00	1.7E-02	a
1,1,2,2-Tetrachloroethane	0.0E+00	9.0E-03	a
1,1,2-Trichloroethane	0.0E+00	8.4E-03	a
1,1-Dichloroethane	0.0E+00	8.9E-03	a
1,1-Dichloroethene	0.0E+00	1.6E-02	a
1,2,4-Trimethylbenzene	0.0E+00	1.7E-01	b
1,2-Dibromo-3-chloropropane (DBCP)	0.0E+00	4.8E-03	b
1,2-Dichloroethane	0.0E+00	5.3E-03	a
cis-1,2-Dichloroethene	0.0E+00	1.0E-02	a
trans-1,2-Dichloroethene	0.0E+00	1.0E-02	a
1,3,5-Trimethylbenzene	0.0E+00	9.4E-02	b
cis-1,3-Dichloropropene	0.0E+00		
2-Butanone	0.0E+00	1.1E-03	a
2-Hexanone	0.0E+00	4.6E-03	b
2-Phenylbutane	0.0E+00		
4-Bromofluorobenzene	0.0E+00		
4-Methyl-2-pentanone	0.0E+00	3.3E-03	a
Acetone	0.0E+00	5.7E-04	b
Benzene	0.0E+00	2.1E-02	a
Bromodichloromethane	0.0E+00	5.8E-03	a
Bromomethane	0.0E+00	3.5E-03	a
Carbon Disulfide	0.0E+00	2.4E-02	a
CFC-11	0.0E+00	1.7E-02	a
CFC-12	0.0E+00	1.2E-02	a
Chlorobenzene	0.0E+00	4.1E-02	a
Chloroethane	0.0E+00	8.0E-03	a
Chloroform	0.0E+00	8.9E-03	a
Chloromethane	0.0E+00	4.2E-03	a
Cyclohexane	0.0E+00		
Cymene	0.0E+00	2.4E-01	c
Dibromochloromethane	0.0E+00	3.9E-03	a
Dibromofluoromethane	0.0E+00		
Dichloromethane	0.0E+00	4.5E-03	a
Ethylbenzene	0.0E+00	7.4E-02	a
Isopropylbenzene	0.0E+00	1.1E-01	b
Methyl Acetate	0.0E+00	9.0E-04	b
Methyl tert-Butyl Ether (MTBE)	0.0E+00	2.6E-03	b
Methylcyclohexane	0.0E+00	5.1E-02	b
n-Butylbenzene	0.0E+00		
Styrene	0.0E+00	5.5E-02	a
Tetrachloroethene	0.0E+00	4.8E-02	a
Toluene	0.0E+00	4.5E-02	a
Tribromomethane	0.0E+00	2.6E-03	a
Trichloroethene	0.0E+00	1.6E-02	a
Vinyl Chloride	0.0E+00	7.3E-03	a
Xylene, m- & p-	0.0E+00	8.0E-02	a
Xylene, o-	0.0E+00	8.0E-02	a
Xylenes (total)	0.0E+00	8.0E-02	a
SVOCs			
1,2,4,5-Tetrachlorobenzene	1.0E-01		
1,2,4-Trichlorobenzene	1.0E-01	1.0E-01	a
1,3-Dichlorobenzene	1.0E-01	8.7E-02	a
1,3-Dinitrobenzene	1.0E-01		
1,4-Dichlorobenzene	1.0E-01	6.2E-02	a
2,4-Dimethylphenol	1.0E-01	1.5E-02	a
2,4-Dinitrotoluene	1.0E-01	3.8E-03	a

TABLE C.1
CHEMICAL/PHYSICAL PARAMETERS FOR DETECTED CHEMICALS
Calcasieu Estuary - Lake Charles, LA

	Dermal Absorption (ABS)	Dermal Permeability Coefficient (PC) cm/hr	PC note
2,6-Dichlorophenol	1.0E-01	1.7E-02	c
4-Bromophenyl-phenylether	1.0E-01	2.4E-01	b
4-Chloro-3-methylphenol	1.0E-01	4.1E-02	a
4-Methylphenol	1.0E-01	1.0E-02	a
4-Nitrophenol	1.0E-01	1.0E-01	a
Acetophenone	1.0E-01		
Benzaldehyde	1.0E-01		
Benzoic Acid	1.0E-01	7.3E-03	a
Benzyl Alcohol	1.0E-01		
bis(2-Chloroethyl)ether	1.0E-01	2.1E-03	a
bis(2-Ethylhexyl)phthalate	1.0E-01	3.3E-02	a
Butylbenzylphthalate	1.0E-01	7.1E-02	b
Caprolactam	1.0E-01		
Carbazole	1.0E-01		
Dibenzofuran	1.0E-01		
Diethylphthalate	1.0E-01	4.8E-03	a
Dimethylphthalate	1.0E-01	1.6E-03	a
Di-n-butylphthalate	1.0E-01	3.3E-02	a
Di-n-octylphthalate	1.0E-01	2.7E+01	b
Hexachlorobenzene	1.0E-01	2.1E-01	a
Hexachlorobutadiene	1.0E-01	1.2E-01	a
3,5,5-Trimethyl-2-Cyclohexene-1-One	1.0E-01	4.4E-03	a
Methylphenol, 3- & 4-	1.0E-01	1.0E-02	a
Nitrobenzene	1.0E-01	1.0E-01	a
Phenol	1.0E-01	5.5E-03	a
PAHs			
1,1'-Biphenyl	1.3E-01	1.8E-01	b
2-Methylnaphthalene	1.3E-01	1.5E-01	b
Acenaphthene	1.3E-01		
Acenaphthylene	1.3E-01		
Anthracene	1.3E-01	2.2E-01	b
Benzo(a)anthracene	1.3E-01	8.1E-01	a
Benzo(a)pyrene	1.3E-01	1.2E+00	a
Benzo(b)fluoranthene	1.3E-01	1.2E+00	a
Benzo(g,h,i)perylene	1.3E-01	1.8E+00	b
Benzo(k)fluoranthene	1.3E-01	6.0E-01	b
Chrysene	1.3E-01	8.1E-01	a
Dibenzo(a,h)anthracene	1.3E-01	2.7E+00	a
Fluoranthene	1.3E-01	3.6E-01	a
Fluorene	1.3E-01	2.5E-01	b
Indeno(1,2,3-cd)pyrene	1.3E-01	1.9E+00	a
Naphthalene	1.3E-01	6.9E-02	a
Phenanthrene	1.3E-01	2.7E-01	a
Pyrene	1.3E-01	3.2E-01	b
Pesticides/ PCBs			
4,4'-DDD	3.0E-02	2.8E-01	a
4,4'-DDE	3.0E-02	2.4E-01	a
4,4'-DDT	3.0E-02	4.3E-01	a
Aldrin	1.0E-01	1.6E-03	a
Aroclor-1016	1.4E-01	7.1E-01	a
Aroclor-1248	1.4E-01	7.1E-01	a
Aroclor-1254	1.4E-01	7.1E-01	a
Aroclor-1260	1.4E-01	7.1E-01	a
alpha-BHC	4.0E-02	1.9E-02	b
beta-BHC	4.0E-02	2.2E-02	b
delta-BHC	4.0E-02		
gamma-BHC (Lindane)	4.0E-02	1.4E-02	a

TABLE C.1
CHEMICAL/PHYSICAL PARAMETERS FOR DETECTED CHEMICALS
Calcasieu Estuary - Lake Charles, LA

	Dermal Absorption (ABS)	Dermal Permeability Coefficient (PC) cm/hr	PC note
Chlordane (total)	4.0E-02	5.2E-02	a
alpha-Chlordane	4.0E-02	4.6E-02	a
gamma-Chlordane	4.0E-02	4.6E-02	a
Decachlorobiphenyl	1.0E-01		
Dieldrin	1.0E-01	1.6E-02	a
Endosulfan I	1.0E-01		
Endosulfan II	1.0E-01		
Endosulfan Sulfate	1.0E-01	2.0E-03	c
Endrin	1.0E-01	1.6E-02	a
Endrin Aldehyde	1.0E-01	8.6E-02	c
Endrin Ketone	1.0E-01		
Heptachlor	1.0E-01	1.1E-02	a
Heptachlor Epoxide	1.0E-01		
1,1,1-Trichloro-2,2-Bis (P-Methoxphenyl)-Ethane	1.0E-01	2.0E-02	b
Tetrachloro-m-xylene	1.0E-01		
Herbicides			
2,2-Dichloropropionic Acid	1.0E-01	9.1E-04	b
2,4,5-T	1.0E-01	3.6E-02	b
2,4,5-TP (Silvex)	1.0E-01	2.5E-02	b
2,4-D	5.0E-02	5.1E-03	b
2,4-DB	1.0E-01	4.5E-03	b
Dichloroprop	1.0E-01		
Dinoseb	1.0E-01	2.8E-02	b
MCPA (2-Methyl-4-chlorophenoxyacetic acid)	1.0E-01	4.9E-03	b
Mecoprop	1.0E-01		
Dioxins/ Furans			
1,2,3,4,6,7,8-HpCDD			
1,2,3,4,6,7,8-HpCDF			
1,2,3,4,7,8,9-HpCDF			
1,2,3,4,7,8-HxCDD			
1,2,3,4,7,8-HxCDF			
1,2,3,6,7,8-HxCDD			
1,2,3,6,7,8-HxCDF			
1,2,3,7,8,9-HxCDD			
1,2,3,7,8,9-HxCDF			
1,2,3,7,8-PeCDD			
1,2,3,7,8-PeCDF			
2,3,4,6,7,8-HxCDF			
2,3,4,7,8-PeCDF			
2,3,7,8-TCDD	3.0E-02	1.4E+00	a
2,3,7,8-TCDF			
OCDD			
OCDF			
Metals			
Aluminum	0.0E+00	1.0E-03	a
Antimony	0.0E+00	1.0E-03	a
Arsenic	3.0E-02	1.0E-03	a
Barium	0.0E+00	1.0E-03	a
Beryllium	0.0E+00	1.0E-03	a
Cadmium	1.0E-03	1.0E-03	a
Calcium	0.0E+00	1.0E-03	a
Chromium (hexavalent)	0.0E+00	1.0E-03	a
Chromium (total)	0.0E+00	1.0E-03	a
Cobalt	0.0E+00	1.0E-03	a
Copper	0.0E+00	1.0E-03	a
Cyanide	1.0E-01	1.0E-03	a
Iron	0.0E+00	1.0E-03	a

TABLE C.1
CHEMICAL/PHYSICAL PARAMETERS FOR DETECTED CHEMICALS
Calcasieu Estuary - Lake Charles, LA

	Dermal Absorption (ABS)	Dermal Permeability Coefficient (PC) cm/hr	PC note
Lead	0.0E+00	1.0E-03	a
Magnesium	0.0E+00	1.0E-03	a
Manganese	0.0E+00	1.0E-03	a
Mercury	0.0E+00	1.0E-03	a
Methyl Mercury	1.0E-01	1.0E-03	a
Nickel	0.0E+00	1.0E-03	a
Potassium	0.0E+00	1.0E-03	a
Selenium	0.0E+00	1.0E-03	a
Silver	0.0E+00	1.0E-03	a
Sodium	0.0E+00	1.0E-03	a
Thallium	0.0E+00	1.0E-03	a
Vanadium	0.0E+00	1.0E-03	a
Zinc	0.0E+00	1.0E-03	a

a = from EPA 1992 Dermal Guidance (Table 5-7)
b = from http://risk.lsd.ornl.gov/cgi-bin/tox/
c = calculated using eqn. 5.8 from EPA 1992 Dermal Guidance

These calculations were performed July 2001, prior to the publication of the updated Dermal Guidance (EPA, 2001D). Because the 1992 parameters are more conservative than the 2001 parameters, these calculations are more conservative.

TABLE C.2
SCREENING LEVELS FOR DETECTED CHEMICALS IN SEDIMENT
Calcasieu Estuary - Lake Charles, LA

				Commercial Fisher		Recreational Fisher		Recreational Swimmer		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Dermal ABS**	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
VOCs										
1,1,1-Trichloroethane	3.5E-02		0.00	NA	**4.6E+03**	NA	1.7E+04	NA	1.4E+04	**4.6E+03**
1,1,2,2-Tetrachloroethane	6.0E-02	2.0E-01	0.00	**1.8E+01**	7.8E+03	5.8E+01	3.0E+04	4.6E+01	2.4E+04	**1.8E+01**
1,1,2-Trichloroethane	4.0E-03	5.7E-02	0.00	**6.4E+01**	5.2E+02	2.0E+02	2.0E+03	1.6E+02	1.6E+03	**6.4E+01**
1,1-Dichloroethane	1.0E-01		0.00	NA	**1.3E+04**	NA	4.9E+04	NA	3.9E+04	**1.3E+04**
1,1-Dichloroethene	9.0E-03	6.0E-01	0.00	**6.1E+00**	1.2E+03	1.9E+01	4.4E+03	1.5E+01	3.5E+03	**6.1E+00**
1,2,4-Trimethylbenzene	5.0E-02		0.00	NA	**6.5E+03**	NA	2.5E+04	NA	2.0E+04	**6.5E+03**
1,2-Dibromo-3-chloropropane (DBCP)		1.4E+00	0.00	**2.6E+00**	NA	8.2E+00	NA	6.6E+00	NA	**2.6E+00**
1,2-Dichloroethane	3.0E-02	9.1E-02	0.00	**4.0E+01**	3.9E+03	1.3E+02	1.5E+04	1.0E+02	1.2E+04	**4.0E+01**
1,2-Dichloroethene, cis-	1.0E-02		0.00	NA	**1.3E+03**	NA	4.9E+03	NA	3.9E+03	**1.3E+03**
1,2-Dichloroethene, trans-	2.0E-02		0.00	NA	**2.6E+03**	NA	9.9E+03	NA	7.9E+03	**2.6E+03**
1,3,5-Trimethylbenzene	5.0E-02		0.00	NA	**6.5E+03**	NA	2.5E+04	NA	2.0E+04	**6.5E+03**
1,3-Dichloropropene, cis-			0.00	NA	NA	NA	NA	NA	NA	
2-Butanone	6.0E-01		0.00	NA	**7.8E+04**	NA	3.0E+05	NA	2.4E+05	**7.8E+04**
2-Hexanone	4.0E-02		0.00	NA	**5.2E+03**	NA	2.0E+04	NA	1.6E+04	**5.2E+03**
2-Phenylbutane	4.0E-02		0.00	NA	**5.2E+03**	NA	2.0E+04	NA	1.6E+04	**5.2E+03**
4-Bromofluorobenzene			0.00	NA	NA	NA	NA	NA	NA	
4-Methyl-2-pentanone	8.0E-02		0.00	NA	**1.0E+04**	NA	3.9E+04	NA	3.2E+04	**1.0E+04**
Acetone	1.0E-01		0.00	NA	**1.3E+04**	NA	4.9E+04	NA	3.9E+04	**1.3E+04**
Benzene	3.0E-03	5.5E-02	0.00	**6.6E+01**	3.9E+02	2.1E+02	1.5E+03	1.7E+02	1.2E+03	**6.6E+01**
Bromodichloromethane	2.0E-02	6.2E-02	0.00	**5.9E+01**	2.6E+03	1.9E+02	9.9E+03	1.5E+02	7.9E+03	**5.9E+01**
Bromomethane	1.4E-03		0.00	NA	**1.8E+02**	NA	6.9E+02	NA	5.5E+02	**1.8E+02**
Carbon disulfide	1.0E-01		0.00	NA	**1.3E+04**	NA	4.9E+04	NA	3.9E+04	**1.3E+04**
CFC-11 (Trichlorofluoromethane)	3.0E-01		0.00	NA	**3.9E+04**	NA	1.5E+05	NA	1.2E+05	**3.9E+04**
CFC-12 (Dichlorofluoromethane)	2.0E-01		0.00	NA	**2.6E+04**	NA	9.9E+04	NA	7.9E+04	**2.6E+04**
Chlorobenzene	2.0E-02		0.00	NA	**2.6E+03**	NA	9.9E+03	NA	7.9E+03	**2.6E+03**
Chloroethane	4.0E-01	2.9E-03	0.00	**1.3E+03**	5.2E+04	4.0E+03	2.0E+05	3.2E+03	1.6E+05	**1.3E+03**
Chloroform	1.0E-02	6.1E-03	0.00	**6.0E+02**	1.3E+03	1.9E+03	4.9E+03	1.5E+03	3.9E+03	**6.0E+02**
Chloromethane		1.3E-02	0.00	**2.8E+02**	NA	8.8E+02	NA	7.1E+02	NA	**2.8E+02**
Cyclohexane			0.00	NA	NA	NA	NA	NA	NA	
Cymene			0.00	NA	NA	NA	NA	NA	NA	
Dibromochloromethane	2.0E-02	8.4E-02	0.00	**4.3E+01**	2.6E+03	1.4E+02	9.9E+03	1.1E+02	7.9E+03	**4.3E+01**
Dibromofluoromethane			0.00	NA	NA	NA	NA	NA	NA	
Dichloromethane	6.0E-02	7.5E-03	0.00	**4.9E+02**	7.8E+03	1.5E+03	3.0E+04	1.2E+03	2.4E+04	**4.9E+02**
Ethylbenzene	1.0E-01		0.00	NA	**1.3E+04**	NA	4.9E+04	NA	3.9E+04	**1.3E+04**
Isopropylbenzene (Cumene)	1.0E-01		0.00	NA	**1.3E+04**	NA	4.9E+04	NA	3.9E+04	**1.3E+04**
Methyl acetate	1.0E+00		0.00	NA	**1.3E+05**	NA	4.9E+05	NA	3.9E+05	**1.3E+05**

TABLE C.2
SCREENING LEVELS FOR DETECTED CHEMICALS IN SEDIMENT
Calcasieu Estuary - Lake Charles, LA

				Commercial Fisher		Recreational Fisher		Recreational Swimmer		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Dermal ABS**	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
Methyl tert-butyl ether	8.6E-01		0.00	NA	**1.1E+05**	NA	4.2E+05	NA	3.4E+05	**1.1E+05**
Methylcyclohexane			0.00	NA	NA	NA	NA	NA	NA	
n-Butylbenzene	1.0E-02		0.00	NA	**1.3E+03**	NA	4.9E+03	NA	3.9E+03	**1.3E+03**
Styrene	2.0E-01		0.00	NA	**2.6E+04**	NA	9.9E+04	NA	7.9E+04	**2.6E+04**
Tetrachloroethene	1.0E-02	5.2E-02	0.00	**7.0E+01**	1.3E+03	2.2E+02	4.9E+03	1.8E+02	3.9E+03	**7.0E+01**
Toluene	2.0E-01		0.00	NA	**2.6E+04**	NA	9.9E+04	NA	7.9E+04	**2.6E+04**
Tribromomethane (Bromoform)	2.0E-02	7.9E-03	0.00	**4.6E+02**	2.6E+03	1.5E+03	9.9E+03	1.2E+03	7.9E+03	**4.6E+02**
Trichloroethene	6.0E-03	1.1E-02	0.00	**3.3E+02**	7.8E+02	1.0E+03	3.0E+03	8.4E+02	2.4E+03	**3.3E+02**
Vinyl chloride	3.0E-03	1.4E+00	0.00	**2.6E+00**	3.9E+02	8.2E+00	1.5E+03	6.6E+00	1.2E+03	**2.6E+00**
Xylene, m- & p-	2.0E+00		0.00	NA	**2.6E+05**	NA	9.9E+05	NA	7.9E+05	**2.6E+05**
Xylene, o-	2.0E+00		0.00	NA	**2.6E+05**	NA	9.9E+05	NA	7.9E+05	**2.6E+05**
Xylenes (total)	2.0E+00		0.00	NA	**2.6E+05**	NA	9.9E+05	NA	7.9E+05	**2.6E+05**
SVOCs										
1,2,4,5-Tetrachlorobenzene	3.0E-04		0.10	NA	**1.6E+01**	NA	8.4E+01	NA	6.7E+01	**1.6E+01**
1,2,4-Trichlorobenzene	1.0E-02		0.10	NA	**5.4E+02**	NA	2.8E+03	NA	2.2E+03	**5.4E+02**
1,3-Dichlorobenzene	9.0E-04		0.10	NA	**4.9E+01**	NA	2.5E+02	NA	2.0E+02	**4.9E+01**
1,3-Dinitrobenzene	1.0E-04		0.10	NA	**5.4E+00**	NA	2.8E+01	NA	2.2E+01	**5.4E+00**
1,4-Dichlorobenzene	3.0E-02	2.4E-02	0.10	**6.3E+01**	1.6E+03	2.7E+02	8.4E+03	2.2E+02	6.7E+03	**6.3E+01**
2,4-Dimethylphenol	2.0E-02		0.10	NA	**1.1E+03**	NA	5.6E+03	NA	4.5E+03	**1.1E+03**
2,4-Dinitrotoluene	2.0E-03		0.10	NA	**1.1E+02**	NA	5.6E+02	NA	4.5E+02	**1.1E+02**
2,6-Dichlorophenol			0.10	NA	NA	NA	NA	NA	NA	
4-Bromophenyl phenylether			0.10	NA	NA	NA	NA	NA	NA	
4-Chloro-3-methylphenol			0.10	NA	NA	NA	NA	NA	NA	
4-Methylphenol	5.0E-03		0.10	NA	**2.7E+02**	NA	1.4E+03	NA	1.1E+03	**2.7E+02**
4-Nitrophenol	8.0E-03		0.10	NA	**4.3E+02**	NA	2.2E+03	NA	1.8E+03	**4.3E+02**
Acetophenone	1.0E-01		0.10	NA	**5.4E+03**	NA	2.8E+04	NA	2.2E+04	**5.4E+03**
Benzaldehyde	1.0E-01		0.10	NA	**5.4E+03**	NA	2.8E+04	NA	2.2E+04	**5.4E+03**
Benzoic acid	4.0E+00		0.10	NA	**2.2E+05**	NA	1.1E+06	NA	9.0E+05	**2.2E+05**
Benzyl alcohol	3.0E-01		0.10	NA	**1.6E+04**	NA	8.4E+04	NA	6.7E+04	**1.6E+04**
bis(2-Chloroethyl) ether		1.1E+00	0.10	**1.4E+00**	NA	6.0E+00	NA	4.8E+00	NA	**1.4E+00**
bis(2-Ethylhexyl) phthalate	2.0E-02	1.4E-02	0.10	**1.1E+02**	1.1E+03	4.7E+02	5.6E+03	3.7E+02	4.5E+03	**1.1E+02**
Butylbenzyl phthalate	2.0E-01		0.10	NA	**1.1E+04**	NA	5.6E+04	NA	4.5E+04	**1.1E+04**
Caprolactam	5.0E-01		0.10	NA	**2.7E+04**	NA	1.4E+05	NA	1.1E+05	**2.7E+04**
Carbazole		2.0E-02	0.10	**7.6E+01**	NA	3.3E+02	NA	2.6E+02	NA	**7.6E+01**
Dibenzofuran	4.0E-03		0.10	NA	**2.2E+02**	NA	1.1E+03	NA	9.0E+02	**2.2E+02**
Diethyl phthalate	8.0E-01		0.10	NA	**4.3E+04**	NA	2.2E+05	NA	1.8E+05	**4.3E+04**
Dimethyl phthalate			0.10	NA	NA	NA	NA	NA	NA	

TABLE C.2
SCREENING LEVELS FOR DETECTED CHEMICALS IN SEDIMENT
Calcasieu Estuary - Lake Charles, LA

				Commercial Fisher		Recreational Fisher		Recreational Swimmer		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Dermal ABS**	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
Di-n-butylphthalate	1.0E-01		0.10	NA	**5.4E+03**	NA	2.8E+04	NA	2.2E+04	**5.4E+03**
Di-n-octylphthalate	2.0E-02		0.10	NA	**1.1E+03**	NA	5.6E+03	NA	4.5E+03	**1.1E+03**
Hexachlorobenzene	8.0E-04	1.6E+00	0.10	**9.5E-01**	4.3E+01	4.1E+00	2.2E+02	3.3E+00	1.8E+02	**9.5E-01**
Hexachlorobutadiene	2.0E-04	7.8E-02	0.10	1.9E+01	**1.1E+01**	8.4E+01	5.6E+01	6.7E+01	4.5E+01	**1.1E+01**
Isophorone	2.0E-01	9.5E-04	0.10	**1.6E+03**	1.1E+04	6.9E+03	5.6E+04	5.5E+03	4.5E+04	**1.6E+03**
Methylphenol, 3- & 4-			0.10	NA	NA	NA	NA	NA	NA	
Nitrobenzene	5.0E-04		0.10	NA	**2.7E+01**	NA	1.4E+02	NA	1.1E+02	**2.7E+01**
Phenol	6.0E-01		0.10	NA	**3.3E+04**	NA	1.7E+05	NA	1.3E+05	**3.3E+04**
PAHs										
1,1'-Biphenyl	5.0E-02		0.13	NA	**2.3E+03**	NA	1.2E+04	NA	1.0E+04	**2.3E+03**
2-Methylnaphthalene	2.0E-02		0.13	NA	**9.2E+02**	NA	5.0E+03	NA	4.0E+03	**9.2E+02**
Acenaphthene	6.0E-02		0.13	NA	**2.8E+03**	NA	1.5E+04	NA	1.2E+04	**2.8E+03**
Acenaphthylene			0.13	NA	NA	NA	NA	NA	NA	
Anthracene	3.0E-01		0.13	NA	**1.4E+04**	NA	7.5E+04	NA	6.0E+04	**1.4E+04**
Benzo(a)anthracene		7.3E-01	0.13	**1.8E+00**	NA	8.0E+00	NA	6.4E+00	NA	**1.8E+00**
Benzo(a)pyrene		7.3E+00	0.13	**1.8E-01**	NA	8.0E-01	NA	6.4E-01	NA	**1.8E-01**
Benzo(b)fluoranthene		7.3E-01	0.13	**1.8E+00**	NA	8.0E+00	NA	6.4E+00	NA	**1.8E+00**
Benzo(g,h,i)perylene			0.13	NA	NA	NA	NA	NA	NA	
Benzo(k)fluoranthene		7.3E-02	0.13	**1.8E+01**	NA	8.0E+01	NA	6.4E+01	NA	**1.8E+01**
Chrysene		7.3E-03	0.13	**1.8E+02**	NA	8.0E+02	NA	6.4E+02	NA	**1.8E+02**
Dibenzo(a,h)anthracene		7.3E+00	0.13	**1.8E-01**	NA	8.0E-01	NA	6.4E-01	NA	**1.8E-01**
Fluoranthene	4.0E-02		0.13	NA	**1.8E+03**	NA	1.0E+04	NA	8.0E+03	**1.8E+03**
Fluorene	4.0E-02		0.13	NA	**1.8E+03**	NA	1.0E+04	NA	8.0E+03	**1.8E+03**
Indeno(1,2,3-cd)pyrene		7.3E-01	0.13	**1.8E+00**	NA	8.0E+00	NA	6.4E+00	NA	**1.8E+00**
Naphthalene	2.0E-02		0.13	NA	**9.2E+02**	NA	5.0E+03	NA	4.0E+03	**9.2E+02**
Phenanthrene			0.13	NA	NA	NA	NA	NA	NA	
Pyrene	3.0E-02		0.13	NA	**1.4E+03**	NA	7.5E+03	NA	6.0E+03	**1.4E+03**
Pesticides/PCBs										
4,4'-DDD	5.0E-04	2.4E-01	0.03	**1.1E+01**	4.6E+01	3.9E+01	2.0E+02	3.1E+01	1.6E+02	**1.1E+01**
4,4'-DDE	5.0E-04	3.4E-01	0.03	**7.6E+00**	4.6E+01	2.8E+01	2.0E+02	2.2E+01	1.6E+02	**7.6E+00**
4,4'-DDT	5.0E-04	3.4E-01	0.03	**7.6E+00**	4.6E+01	2.8E+01	2.0E+02	2.2E+01	1.6E+02	**7.6E+00**
Aldrin	3.0E-05	1.7E+01	0.10	**8.9E-02**	1.6E+00	3.9E-01	8.4E+00	3.1E-01	6.7E+00	**8.9E-02**
Aroclor-1016	7.0E-05	7.0E-02	0.14	1.8E+01	**3.1E+00**	8.0E+01	1.7E+01	6.4E+01	1.3E+01	**3.1E+00**
Aroclor-1248	2.0E-05	2.0E+00	0.14	**6.2E-01**	8.8E-01	2.8E+00	4.8E+00	2.2E+00	3.8E+00	**6.2E-01**
Aroclor-1254	2.0E-05	2.0E+00	0.14	**6.2E-01**	8.8E-01	2.8E+00	4.8E+00	2.2E+00	3.8E+00	**6.2E-01**
Aroclor-1260	2.0E-05	2.0E+00	0.14	**6.2E-01**	8.8E-01	2.8E+00	4.8E+00	2.2E+00	3.8E+00	**6.2E-01**
BHC, alpha-		6.3E+00	0.04	**3.7E-01**	NA	1.4E+00	NA	1.1E+00	NA	**3.7E-01**

TABLE C.2
SCREENING LEVELS FOR DETECTED CHEMICALS IN SEDIMENT
Calcasieu Estuary - Lake Charles, LA

				Commercial Fisher		Recreational Fisher		Recreational Swimmer		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Dermal ABS**	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
BHC, beta-		1.8E+00	0.04	**1.3E+00**	NA	4.9E+00	NA	3.9E+00	NA	**1.3E+00**
BHC, delta-			0.04	NA	NA	NA	NA	NA	NA	
BHC, gamma- (Lindane)	3.0E-04	1.3E+00	0.04	**1.8E+00**	2.5E+01	6.8E+00	1.1E+02	5.4E+00	9.1E+01	**1.8E+00**
Chlordane	5.0E-04	3.5E-01	0.04	**6.7E+00**	4.2E+01	2.5E+01	1.9E+02	2.0E+01	1.5E+02	**6.7E+00**
Chlordane, alpha-	5.0E-04	3.5E-01	0.04	**6.7E+00**	4.2E+01	2.5E+01	1.9E+02	2.0E+01	1.5E+02	**6.7E+00**
Chlordane, gamma-	5.0E-04	3.5E-01	0.04	**6.7E+00**	4.2E+01	2.5E+01	1.9E+02	2.0E+01	1.5E+02	**6.7E+00**
Decachlorobiphenyl			0.10	NA	NA	NA	NA	NA	NA	
Dieldrin	5.0E-05	1.6E+01	0.10	**9.5E-02**	2.7E+00	4.1E-01	1.4E+01	3.3E-01	1.1E+01	**9.5E-02**
Endosulfan I	6.0E-03		0.10	NA	**3.3E+02**	NA	1.7E+03	NA	1.3E+03	**3.3E+02**
Endosulfan II	6.0E-03		0.10	NA	**3.3E+02**	NA	1.7E+03	NA	1.3E+03	**3.3E+02**
Endosulfan sulfate			0.10	NA	NA	NA	NA	NA	NA	
Endrin	3.0E-04		0.10	NA	**1.6E+01**	NA	8.4E+01	NA	6.7E+01	**1.6E+01**
Endrin aldehyde			0.10	NA	NA	NA	NA	NA	NA	
Endrin ketone			0.10	NA	NA	NA	NA	NA	NA	
Heptachlor	5.0E-04	4.5E+00	0.10	**3.4E-01**	2.7E+01	1.5E+00	1.4E+02	1.2E+00	1.1E+02	**3.4E-01**
Heptachlor epoxide	1.3E-05	9.1E+00	0.10	**1.7E-01**	7.1E-01	7.2E-01	3.7E+00	5.8E-01	2.9E+00	**1.7E-01**
Methoxychlor	5.0E-03		0.10	NA	**2.7E+02**	NA	1.4E+03	NA	1.1E+03	**2.7E+02**
Tetrachloro-m-xylene			0.10	NA	NA	NA	NA	NA	NA	
Herbicides										
2,2-Dichloropropionic acid	3.0E-02		0.10	NA	**1.6E+03**	NA	8.4E+03	NA	6.7E+03	**1.6E+03**
2,4,5-T	1.0E-02		0.10	NA	**5.4E+02**	NA	2.8E+03	NA	2.2E+03	**5.4E+02**
2,4,5-TP (Silvex) (Propionic Acid)	8.0E-03		0.10	NA	**4.3E+02**	NA	2.2E+03	NA	1.8E+03	**4.3E+02**
2,4-D	1.0E-02		0.05	NA	**7.7E+02**	NA	3.6E+03	NA	2.9E+03	**7.7E+02**
2,4-DB	8.0E-03		0.10	NA	**4.3E+02**	NA	2.2E+03	NA	1.8E+03	**4.3E+02**
Dichloroprop			0.10	NA	NA	NA	NA	NA	NA	
Dinitrobutyl phenol	1.0E-03		0.10	NA	**5.4E+01**	NA	2.8E+02	NA	2.2E+02	**5.4E+01**
MCPA (2-Methyl-4-chlorophenoxyacetic acid)	5.0E-04		0.10	NA	**2.7E+01**	NA	1.4E+02	NA	1.1E+02	**2.7E+01**
Mecoprop			0.10	NA	NA	NA	NA	NA	NA	
Dioxins/Furans										
1,2,3,4,6,7,8-HpCDD				NA	NA	NA	NA	NA	NA	
1,2,3,4,6,7,8-HpCDF				NA	NA	NA	NA	NA	NA	
1,2,3,4,7,8,9-HpCDF				NA	NA	NA	NA	NA	NA	
1,2,3,4,7,8-HxCDD				NA	NA	NA	NA	NA	NA	
1,2,3,4,7,8-HxCDF				NA	NA	NA	NA	NA	NA	
1,2,3,6,7,8-HxCDD				NA	NA	NA	NA	NA	NA	
1,2,3,6,7,8-HxCDF				NA	NA	NA	NA	NA	NA	
1,2,3,7,8,9-HxCDD				NA	NA	NA	NA	NA	NA	

TABLE C.2
SCREENING LEVELS FOR DETECTED CHEMICALS IN SEDIMENT
Calcasieu Estuary - Lake Charles, LA

				Commercial Fisher		Recreational Fisher		Recreational Swimmer		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Dermal ABS**	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
1,2,3,7,8,9-HxCDF				NA	NA	NA	NA	NA	NA	
1,2,3,7,8-PeCDD				NA	NA	NA	NA	NA	NA	
1,2,3,7,8-PeCDF				NA	NA	NA	NA	NA	NA	
2,3,4,6,7,8-HxCDF				NA	NA	NA	NA	NA	NA	
2,3,4,7,8-PeCDF				NA	NA	NA	NA	NA	NA	
2,3,7,8-TCDD		1.5E+05	0.03	**1.7E-05**	NA	6.3E-05	NA	5.0E-05	NA	**1.7E-05**
2,3,7,8-TCDF				NA	NA	NA	NA	NA	NA	
OCDD				NA	NA	NA	NA	NA	NA	
OCDF				NA	NA	NA	NA	NA	NA	
Metals										
Aluminum	1.0E+00		0.00	NA	**1.3E+05**	NA	4.9E+05	NA	3.9E+05	**1.3E+05**
Antimony	4.0E-04		0.00	NA	**5.2E+01**	NA	2.0E+02	NA	1.6E+02	**5.2E+01**
Arsenic	3.0E-04	1.5E+00	0.03	**1.7E+00**	2.8E+01	6.3E+00	1.2E+02	5.0E+00	9.6E+01	**1.7E+00**
Barium	7.0E-02		0.00	NA	**9.1E+03**	NA	3.5E+04	NA	2.8E+04	**9.1E+03**
Beryllium	2.0E-03		0.00	NA	**2.6E+02**	NA	9.9E+02	NA	7.9E+02	**2.6E+02**
Cadmium	5.0E-04		0.00	NA	**6.4E+01**	NA	2.4E+02	NA	2.0E+02	**6.4E+01**
Calcium			0.00	NA	NA	NA	NA	NA	NA	
Chromium (hexavalent)	3.0E-03		0.00	NA	**3.9E+02**	NA	1.5E+03	NA	1.2E+03	**3.9E+02**
Chromium (total)	3.0E-03		0.00	NA	**3.9E+02**	NA	1.5E+03	NA	1.2E+03	**3.9E+02**
Cobalt	2.0E-02		0.00	NA	**2.6E+03**	NA	9.9E+03	NA	7.9E+03	**2.6E+03**
Copper	4.0E-02		0.00	NA	**5.2E+03**	NA	2.0E+04	NA	1.6E+04	**5.2E+03**
Cyanide	2.0E-02		0.10	NA	**1.1E+03**	NA	5.6E+03	NA	4.5E+03	**1.1E+03**
Iron	3.0E-01		0.00	NA	**3.9E+04**	NA	1.5E+05	NA	1.2E+05	**3.9E+04**
Lead			0.00	NA	NA	NA	NA	NA	NA	
Magnesium			0.00	NA	NA	NA	NA	NA	NA	
Manganese	2.0E-02		0.00	NA	**2.6E+03**	NA	9.9E+03	NA	7.9E+03	**2.6E+03**
Mercury			0.00	NA	NA	NA	NA	NA	NA	
Methyl Mercury	1.0E-04		0.10	NA	**5.4E+00**	NA	2.8E+01	NA	2.2E+01	**5.4E+00**
Nickel	2.0E-02		0.00	NA	**2.6E+03**	NA	9.9E+03	NA	7.9E+03	**2.6E+03**
Potassium			0.00	NA	NA	NA	NA	NA	NA	
Selenium	5.0E-03		0.00	NA	**6.5E+02**	NA	2.5E+03	NA	2.0E+03	**6.5E+02**
Silver	5.0E-03		0.00	NA	**6.5E+02**	NA	2.5E+03	NA	2.0E+03	**6.5E+02**
Sodium			0.00	NA	NA	NA	NA	NA	NA	
Thallium	7.0E-05		0.00	NA	**9.1E+00**	NA	3.5E+01	NA	2.8E+01	**9.1E+00**
Vanadium	7.0E-03		0.00	NA	9.13E+02	NA	3.45E+03	NA	2.76E+03	**9.1E+02**
Zinc	3.0E-01		0.00	NA	3.91E+04	NA	1.48E+05	NA	1.18E+05	**3.9E+04**

TABLE C.3
SCREENING LEVELS FOR DETECTED CHEMICALS IN SURFACE WATER
Calcasieu Estuary - Lake Charles, LA

				Commercial Fisher		Recreational Fisher		Recreational Swimmer		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Dermal ABS**	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
VOCs										
1,1,1-Trichloroethane	3.5E-02		0.02	NA	**7.8E-01**	NA	3.7E+00	NA	1.1E+00	**7.8E-01**
1,1,2,2-Tetrachloroethane	6.0E-02	2.0E-01	0.01	**5.9E-03**	2.5E+00	2.0E-02	1.0E+01	6.4E-03	3.3E+00	**5.9E-03**
1,1,2-Trichloroethane	4.0E-03	5.7E-02	0.01	**2.2E-02**	1.8E-01	7.3E-02	7.1E-01	2.4E-02	2.3E-01	**2.2E-02**
1,1-Dichloroethane	1.0E-01		0.01	NA	**4.2E+00**	NA	1.7E+01	NA	5.5E+00	**4.2E+00**
1,1-Dichloroethene	9.0E-03	6.0E-01	0.02	**1.1E-03**	2.1E-01	4.4E-03	1.0E+00	1.3E-03	3.0E-01	**1.1E-03**
1,2,4-Trimethylbenzene	5.0E-02		0.17	NA	**1.1E-01**	NA	6.7E-01	NA	1.8E-01	**1.1E-01**
1,2-Dibromo-3-chloropropane (DBCP)		1.4E+00	0.00	1.6E-03	NA	4.1E-03	NA	**1.4E-03**	NA	**1.4E-03**
1,2-Dichloroethane	3.0E-02	9.1E-02	0.01	2.2E-02	2.1E+00	6.0E-02	7.0E+00	**2.1E-02**	2.4E+00	**2.1E-02**
1,2-Dichloroethene, cis-	1.0E-02		0.01	NA	**3.8E-01**	NA	1.6E+00	NA	5.0E-01	**3.8E-01**
1,2-Dichloroethene, trans-	2.0E-02		0.01	NA	**7.6E-01**	NA	3.2E+00	NA	1.0E+00	**7.6E-01**
1,3,5-Trimethylbenzene	5.0E-02		0.09	NA	**2.0E-01**	NA	1.2E+00	NA	3.2E-01	**2.0E-01**
1,3-Dichloropropene, cis-				NA	NA	NA	NA	NA	NA	
2-Butanone	6.0E-01		0.00	NA	2.1E+02	NA	2.4E+02	NA	**1.1E+02**	**1.1E+02**
2-Hexanone	4.0E-02		0.00	NA	**3.3E+00**	NA	1.0E+01	NA	3.6E+00	**3.3E+00**
2-Phenylbutane	4.0E-02			NA	NA	NA	2.0E+01	NA	**1.1E+01**	**1.1E+01**
4-Bromofluorobenzene				NA	NA	NA	NA	NA	NA	
4-Methyl-2-pentanone	8.0E-02		0.00	NA	9.2E+00	NA	2.3E+01	NA	**8.8E+00**	**8.8E+00**
Acetone	1.0E-01		0.00	NA	6.6E+01	NA	4.4E+01	NA	**2.1E+01**	**2.1E+01**
Benzene	3.0E-03	5.5E-02	0.02	**9.2E-03**	5.4E-02	3.8E-02	2.7E-01	1.1E-02	8.0E-02	**9.2E-03**
Bromodichloromethane	2.0E-02	6.2E-02	0.01	2.9E-02	1.3E+00	8.3E-02	4.4E+00	**2.9E-02**	1.5E+00	**2.9E-02**
Bromomethane	1.4E-03		0.00	NA	1.5E-01	NA	4.0E-01	NA	**1.5E-01**	**1.5E-01**
Carbon disulfide	1.0E-01		0.02	NA	**1.6E+00**	NA	8.1E+00	NA	2.4E+00	**1.6E+00**
CFC-11 (Trichlorofluoromethane)	3.0E-01		0.02	NA	**6.7E+00**	NA	3.2E+01	NA	9.6E+00	**6.7E+00**
CFC-12 (Dichlorofluoromethane)	2.0E-01		0.01	NA	**6.3E+00**	NA	2.8E+01	NA	8.6E+00	**6.3E+00**
Chlorobenzene	2.0E-02		0.04	NA	**1.8E-01**	NA	1.0E+00	NA	2.9E-01	**1.8E-01**
Chloroethane	4.0E-01	2.9E-03	0.01	**4.6E-01**	1.9E+01	1.5E+00	7.3E+01	4.8E-01	2.4E+01	**4.6E-01**
Chloroform	1.0E-02	6.1E-03	0.01	**1.9E-01**	4.2E-01	6.5E-01	1.7E+00	2.1E-01	5.5E-01	**1.9E-01**
Chloromethane		1.3E-02	0.00	1.9E-01	NA	4.7E-01	NA	**1.7E-01**	NA	**1.7E-01**
Cyclohexane				NA	NA	NA	NA	NA	NA	
Cymene			0.24	NA	NA	NA	NA	NA	NA	
Dibromochloromethane	2.0E-02	8.4E-02	0.00	3.2E-02	1.9E+00	7.5E-02	5.4E+00	**2.8E-02**	2.0E+00	**2.8E-02**
Dibromofluoromethane				NA	NA	NA	NA	NA	NA	
Dichloromethane	6.0E-02	7.5E-03	0.00	3.1E-01	5.0E+00	7.8E-01	1.5E+01	**2.8E-01**	5.4E+00	**2.8E-01**
Ethylbenzene	1.0E-01		0.07	NA	**5.1E-01**	NA	3.0E+00	NA	8.1E-01	**5.1E-01**
Isopropylbenzene (Cumene)	1.0E-01		0.11	NA	**3.4E-01**	NA	2.0E+00	NA	5.5E-01	**3.4E-01**
Methyl acetate	1.0E+00		0.00	NA	4.2E+02	NA	4.1E+02	NA	**1.9E+02**	**1.9E+02**

TABLE C.3
SCREENING LEVELS FOR DETECTED CHEMICALS IN SURFACE WATER
Calcasieu Estuary - Lake Charles, LA

				Commercial Fisher		Recreational Fisher		Recreational Swimmer		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Dermal ABS**	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
Methyl tert-butyl ether	8.6E-01		0.00	NA	1.2E+02	NA	2.7E+02	NA	**1.1E+02**	**1.1E+02**
Methylcyclohexane			0.05	NA	NA	NA	NA	NA	NA	
n-Butylbenzene	1.0E-02			NA	NA	NA	4.9E+00	NA	**2.6E+00**	**2.6E+00**
Styrene	2.0E-01		0.06	NA	**1.4E+00**	NA	7.8E+00	NA	2.2E+00	**1.4E+00**
Tetrachloroethene	1.0E-02	5.2E-02	0.05	**4.2E-03**	7.9E-02	2.0E-02	4.4E-01	5.5E-03	1.2E-01	**4.2E-03**
Toluene	2.0E-01		0.05	NA	**1.7E+00**	NA	9.4E+00	NA	2.6E+00	**1.7E+00**
Tribromomethane (Bromoform)	2.0E-02	7.9E-03	0.00	5.2E-01	2.9E+00	9.4E-01	6.4E+00	**3.7E-01**	2.5E+00	**3.7E-01**
Trichloroethene	6.0E-03	1.1E-02	0.02	**6.0E-02**	1.4E-01	2.4E-01	6.7E-01	7.2E-02	2.0E-01	**6.0E-02**
Vinyl chloride	3.0E-03	1.4E+00	0.01	**1.0E-03**	1.6E-01	3.2E-03	5.8E-01	1.1E-03	1.9E-01	**1.0E-03**
Xylene, m- & p-	2.0E+00		0.08	NA	**9.4E+00**	NA	5.5E+01	NA	1.5E+01	**9.4E+00**
Xylene, o-	2.0E+00		0.08	NA	**9.4E+00**	NA	5.5E+01	NA	1.5E+01	**9.4E+00**
Xylenes (total)	2.0E+00		0.08	NA	**9.4E+00**	NA	5.5E+01	NA	1.5E+01	**9.4E+00**
SVOCs										
1,2,4,5-Tetrachlorobenzene	3.0E-04			NA	NA	NA	1.5E-01	NA	**7.9E-02**	**7.9E-02**
1,2,4-Trichlorobenzene	1.0E-02		0.10	NA	**3.8E-02**	NA	2.2E-01	NA	6.1E-02	**3.8E-02**
1,3-Dichlorobenzene	9.0E-04		0.09	NA	**3.9E-03**	NA	2.3E-02	NA	6.2E-03	**3.9E-03**
1,3-Dinitrobenzene	1.0E-04			NA	NA	NA	4.9E-02	NA	**2.6E-02**	**2.6E-02**
1,4-Dichlorobenzene	3.0E-02	2.4E-02	0.06	**7.1E-03**	1.8E-01	3.4E-02	1.0E+00	9.4E-03	2.9E-01	**7.1E-03**
2,4-Dimethylphenol	2.0E-02		0.02	NA	**5.0E-01**	NA	2.4E+00	NA	7.1E-01	**5.0E-01**
2,4-Dinitrotoluene	2.0E-03		0.00	NA	**2.0E-01**	NA	5.5E-01	NA	2.0E-01	**2.0E-01**
2,6-Dichlorophenol			0.02	NA	NA	NA	NA	NA	NA	
4-Bromophenyl phenylether			0.24	NA	NA	NA	NA	NA	NA	
4-Chloro-3-methylphenol			0.04	NA	NA	NA	NA	NA	NA	
4-Methylphenol	5.0E-03		0.01	NA	**1.9E-01**	NA	7.9E-01	NA	2.5E-01	**1.9E-01**
4-Nitrophenol	8.0E-03		0.10	NA	**3.0E-02**	NA	1.8E-01	NA	4.8E-02	**3.0E-02**
Acetophenone	1.0E-01			NA	NA	NA	4.9E+01	NA	**2.6E+01**	**2.6E+01**
Benzaldehyde	1.0E-01			NA	NA	NA	4.9E+01	NA	**2.6E+01**	**2.6E+01**
Benzoic acid	4.0E+00		0.01	NA	**2.1E+02**	NA	7.7E+02	NA	2.6E+02	**2.1E+02**
Benzyl alcohol	3.0E-01			NA	NA	NA	1.5E+02	NA	**7.9E+01**	**7.9E+01**
bis(2-Chloroethyl) ether		1.1E+00	0.00	4.6E-03	NA	7.2E-03	NA	**3.0E-03**	NA	**3.0E-03**
bis(2-Ethylhexyl) phthalate	2.0E-02	1.4E-02	0.03	**2.3E-02**	2.3E-01	1.0E-01	1.2E+00	2.9E-02	3.5E-01	**2.3E-02**
Butylbenzyl phthalate	2.0E-01		0.07	NA	**1.1E+00**	NA	6.1E+00	NA	1.7E+00	**1.1E+00**
Caprolactam	5.0E-01			NA	NA	NA	2.5E+02	NA	**1.3E+02**	**1.3E+02**
Carbazole		2.0E-02		NA	NA	5.8E-01	NA	**3.1E-01**	NA	**3.1E-01**
Dibenzofuran	4.0E-03			NA	NA	NA	2.0E+00	NA	**1.1E+00**	**1.1E+00**
Diethyl phthalate	8.0E-01		0.00	NA	**6.3E+01**	NA	2.0E+02	NA	6.9E+01	**6.3E+01**
Dimethyl phthalate			0.00	NA	NA	NA	NA	NA	NA	

TABLE C.3
SCREENING LEVELS FOR DETECTED CHEMICALS IN SURFACE WATER
Calcasieu Estuary - Lake Charles, LA

				Commercial Fisher		Recreational Fisher		Recreational Swimmer		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Dermal ABS**	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
Di-n-butylphthalate	1.0E-01		0.03	NA	**1.1E+00**	NA	6.2E+00	NA	1.8E+00	**1.1E+00**
Di-n-octylphthalate	2.0E-02		27.00	NA	**2.8E-04**	NA	1.7E-03	NA	4.6E-04	**2.8E-04**
Hexachlorobenzene	8.0E-04	1.6E+00	0.21	**3.1E-05**	1.4E-03	1.6E-04	8.7E-03	4.3E-05	2.3E-03	**3.1E-05**
Hexachlorobutadiene	2.0E-04	7.8E-02	0.12	1.1E-03	**6.3E-04**	5.6E-03	3.7E-03	1.5E-03	1.0E-03	**6.3E-04**
Isophorone	2.0E-01	9.5E-04	0.00	2.5E+00	1.7E+01	6.3E+00	5.1E+01	**2.3E+00**	1.8E+01	**2.3E+00**
Methylphenol, 3- & 4-			0.01	NA	NA	NA	NA	NA	NA	
Nitrobenzene	5.0E-04		0.10	NA	**1.9E-03**	NA	1.1E-02	NA	3.0E-03	**1.9E-03**
Phenol	6.0E-01		0.01	NA	**4.1E+01**	NA	1.4E+02	NA	4.7E+01	**4.1E+01**
PAHs										
1,1'-Biphenyl	5.0E-02		0.18	NA	**1.0E-01**	NA	6.3E-01	NA	1.7E-01	**1.0E-01**
2-Methylnaphthalene	2.0E-02		0.15	NA	**5.0E-02**	NA	3.0E-01	NA	8.1E-02	**5.0E-02**
Acenaphthene	6.0E-02			NA	NA	NA	3.0E+01	NA	**1.6E+01**	**1.6E+01**
Acenaphthylene				NA	NA	NA	NA	NA	NA	
Anthracene	3.0E-01		0.22	NA	**5.2E-01**	NA	3.1E+00	NA	8.4E-01	**5.2E-01**
Benzo(a)anthracene		7.3E-01	0.81	**1.8E-05**	NA	9.1E-05	NA	2.4E-05	NA	**1.8E-05**
Benzo(a)pyrene		7.3E+00	1.20	**1.2E-06**	NA	6.2E-06	NA	1.6E-06	NA	**1.2E-06**
Benzo(b)fluoranthene		7.3E-01	1.20	**1.2E-05**	NA	6.2E-05	NA	1.6E-05	NA	**1.2E-05**
Benzo(g,h,i)perylene			1.80	NA	NA	NA	NA	NA	NA	
Benzo(k)fluoranthene		7.3E-02	0.60	**2.4E-04**	NA	1.2E-03	NA	3.3E-04	NA	**2.4E-04**
Chrysene		7.3E-03	0.81	**1.8E-03**	NA	9.1E-03	NA	2.4E-03	NA	**1.8E-03**
Dibenzo(a,h)anthracene		7.3E+00	2.70	**5.4E-07**	NA	2.7E-06	NA	7.3E-07	NA	**5.4E-07**
Fluoranthene	4.0E-02		0.36	NA	**4.2E-02**	NA	2.6E-01	NA	6.8E-02	**4.2E-02**
Fluorene	4.0E-02		0.25	NA	**6.0E-02**	NA	3.7E-01	NA	9.8E-02	**6.0E-02**
Indeno(1,2,3-cd)pyrene		7.3E-01	1.90	**7.6E-06**	NA	3.9E-05	NA	1.0E-05	NA	**7.6E-06**
Naphthalene	2.0E-02		0.07	NA	**1.1E-01**	NA	6.3E-01	NA	1.7E-01	**1.1E-01**
Phenanthrene			0.27	NA	NA	NA	NA	NA	NA	
Pyrene	3.0E-02		0.32	NA	**3.5E-02**	NA	2.1E-01	NA	5.8E-02	**3.5E-02**
Pesticides/PCBs										
4,4'-DDD	5.0E-04	2.4E-01	0.28	**1.6E-04**	6.7E-04	7.9E-04	4.1E-03	2.1E-04	1.1E-03	**1.6E-04**
4,4'-DDE	5.0E-04	3.4E-01	0.24	**1.3E-04**	7.9E-04	6.5E-04	4.8E-03	1.8E-04	1.3E-03	**1.3E-04**
4,4'-DDT	5.0E-04	3.4E-01	0.43	**7.2E-05**	4.4E-04	3.7E-04	2.7E-03	9.8E-05	7.2E-04	**7.2E-05**
Aldrin	3.0E-05	1.7E+01	0.00	3.9E-04	7.1E-03	5.1E-04	1.1E-02	**2.2E-04**	4.7E-03	**2.2E-04**
Aroclor-1016	7.0E-05	7.0E-02	0.71	2.1E-04	**3.7E-05**	1.1E-03	2.3E-04	2.9E-04	6.1E-05	**3.7E-05**
Aroclor-1248	2.0E-05	2.0E+00	0.71	**7.5E-06**	1.1E-05	3.8E-05	6.5E-05	1.0E-05	1.7E-05	**7.5E-06**
Aroclor-1254	2.0E-05	2.0E+00	0.71	**7.5E-06**	1.1E-05	3.8E-05	6.5E-05	1.0E-05	1.7E-05	**7.5E-06**
Aroclor-1260	2.0E-05	2.0E+00	0.71	**7.5E-06**	1.1E-05	3.8E-05	6.5E-05	1.0E-05	1.7E-05	**7.5E-06**
BHC, alpha-		6.3E+00	0.02	**8.8E-05**	NA	3.6E-04	NA	1.1E-04	NA	**8.8E-05**

TABLE C.3
SCREENING LEVELS FOR DETECTED CHEMICALS IN SURFACE WATER
Calcasieu Estuary - Lake Charles, LA

				Commercial Fisher		Recreational Fisher		Recreational Swimmer		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Dermal ABS**	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
BHC, beta-		1.8E+00	0.02	**2.7E-04**	NA	1.1E-03	NA	3.3E-04	NA	**2.7E-04**
BHC, delta-				NA	NA	NA	NA	NA	NA	
BHC, gamma- (Lindane)	3.0E-04	1.3E+00	0.01	**5.8E-04**	8.1E-03	2.2E-03	3.7E-02	6.8E-04	1.1E-02	**5.8E-04**
Chlordane	5.0E-04	3.5E-01	0.05	**5.8E-04**	3.6E-03	2.7E-03	2.1E-02	7.6E-04	5.7E-03	**5.8E-04**
Chlordane, alpha-	5.0E-04	3.5E-01	0.05	**6.6E-04**	4.1E-03	3.1E-03	2.3E-02	8.6E-04	6.4E-03	**6.6E-04**
Chlordane, gamma-	5.0E-04	3.5E-01	0.05	**6.6E-04**	4.1E-03	3.1E-03	2.3E-02	8.6E-04	6.4E-03	**6.6E-04**
Decachlorobiphenyl				NA	NA	NA	NA	NA	NA	
Dieldrin	5.0E-05	1.6E+01	0.02	**4.1E-05**	1.2E-03	1.6E-04	5.6E-03	4.9E-05	1.7E-03	**4.1E-05**
Endosulfan I	6.0E-03			NA	NA	NA	3.0E+00	NA	**1.6E+00**	**1.6E+00**
Endosulfan II	6.0E-03			NA	NA	NA	3.0E+00	NA	**1.6E+00**	**1.6E+00**
Endosulfan sulfate			0.00	NA	NA	NA	NA	NA	NA	
Endrin	3.0E-04		0.02	NA	**7.1E-03**	NA	3.4E-02	NA	1.0E-02	**7.1E-03**
Endrin aldehyde			0.09	NA	NA	NA	NA	NA	NA	
Endrin ketone				NA	NA	NA	NA	NA	NA	
Heptachlor	5.0E-04	4.5E+00	0.01	**2.1E-04**	1.7E-02	7.7E-04	7.4E-02	2.4E-04	2.3E-02	**2.1E-04**
Heptachlor epoxide	1.3E-05	9.1E+00		NA	NA	1.3E-03	6.4E-03	**6.7E-04**	3.4E-03	**6.7E-04**
Methoxychlor	5.0E-03		0.02	NA	**9.4E-02**	NA	4.7E-01	NA	1.4E-01	**9.4E-02**
Tetrachloro-m-xylene				NA	NA	NA	NA	NA	NA	
Herbicides										
2,2-Dichloropropionic acid	3.0E-02		0.00	NA	1.2E+01	NA	1.2E+01	NA	**5.7E+00**	**5.7E+00**
2,4,5-T	1.0E-02		0.04	NA	**1.0E-01**	NA	5.7E-01	NA	1.6E-01	**1.0E-01**
2,4,5-TP (Silvex) (Propionic Acid)	8.0E-03		0.03	NA	**1.2E-01**	NA	6.3E-01	NA	1.8E-01	**1.2E-01**
2,4-D	1.0E-02		0.01	NA	**7.4E-01**	NA	2.4E+00	NA	8.3E-01	**7.4E-01**
2,4-DB	8.0E-03		0.00	NA	**6.7E-01**	NA	2.0E+00	NA	7.2E-01	**6.7E-01**
Dichloroprop				NA	NA	NA	NA	NA	NA	
Dinitrobutyl phenol	1.0E-03		0.03	NA	**1.3E-02**	NA	7.1E-02	NA	2.0E-02	**1.3E-02**
MCPA (2-Methyl-4-chlorophenoxyacetic acid)	5.0E-04		0.00	NA	**3.9E-02**	NA	1.2E-01	NA	4.3E-02	**3.9E-02**
Mecoprop				NA	NA	NA	NA	NA	NA	
Dioxins/Furans										
1,2,3,4,6,7,8-HpCDD				NA	NA	NA	NA	NA	NA	
1,2,3,4,6,7,8-HpCDF				NA	NA	NA	NA	NA	NA	
1,2,3,4,7,8,9-HpCDF				NA	NA	NA	NA	NA	NA	
1,2,3,4,7,8-HxCDD				NA	NA	NA	NA	NA	NA	
1,2,3,4,7,8-HxCDF				NA	NA	NA	NA	NA	NA	
1,2,3,6,7,8-HxCDD				NA	NA	NA	NA	NA	NA	
1,2,3,6,7,8-HxCDF				NA	NA	NA	NA	NA	NA	
1,2,3,7,8,9-HxCDD				NA	NA	NA	NA	NA	NA	

TABLE C.3
SCREENING LEVELS FOR DETECTED CHEMICALS IN SURFACE WATER
Calcasieu Estuary - Lake Charles, LA

				Commercial Fisher		Recreational Fisher		Recreational Swimmer		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Dermal ABS**	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
1,2,3,7,8,9-HxCDF				NA	NA	NA	NA	NA	NA	
1,2,3,7,8-PeCDD				NA	NA	NA	NA	NA	NA	
1,2,3,7,8-PeCDF				NA	NA	NA	NA	NA	NA	
2,3,4,6,7,8-HxCDF				NA	NA	NA	NA	NA	NA	
2,3,4,7,8-PeCDF				NA	NA	NA	NA	NA	NA	
2,3,7,8-TCDD		1.5E+05	1.40	**5.0E-11**	NA	2.6E-10	NA	6.9E-11	NA	**5.0E-11**
2,3,7,8-TCDF				NA	NA	NA	NA	NA	NA	
OCDD				NA	NA	NA	NA	NA	NA	
OCDF				NA	NA	NA	NA	NA	NA	
Metals										
Aluminum	1.0E+00		0.00	NA	3.8E+02	NA	4.1E+02	NA	**1.8E+02**	**1.8E+02**
Antimony	4.0E-04		0.00	NA	1.5E-01	NA	1.6E-01	NA	**7.4E-02**	**7.4E-02**
Arsenic	3.0E-04	1.5E+00	0.00	7.1E-03	1.1E-01	6.3E-03	1.2E-01	**2.9E-03**	5.5E-02	**2.9E-03**
Barium	7.0E-02		0.00	NA	2.6E+01	NA	2.8E+01	NA	**1.3E+01**	**1.3E+01**
Beryllium	2.0E-03		0.00	NA	7.6E-01	NA	8.1E-01	NA	**3.7E-01**	**3.7E-01**
Cadmium	5.0E-04		0.00	NA	1.9E-01	NA	2.0E-01	NA	**9.2E-02**	**9.2E-02**
Calcium			0.00	NA	NA	NA	NA	NA	NA	
Chromium (hexavalent)	3.0E-03		0.00	NA	1.1E+00	NA	1.2E+00	NA	**5.5E-01**	**5.5E-01**
Chromium (total)	3.0E-03		0.00	NA	1.1E+00	NA	1.2E+00	NA	**5.5E-01**	**5.5E-01**
Cobalt	2.0E-02		0.00	NA	7.6E+00	NA	8.1E+00	NA	**3.7E+00**	**3.7E+00**
Copper	4.0E-02		0.00	NA	1.5E+01	NA	1.6E+01	NA	**7.4E+00**	**7.4E+00**
Cyanide	2.0E-02		0.00	NA	7.6E+00	NA	8.1E+00	NA	**3.7E+00**	**3.7E+00**
Iron	3.0E-01		0.00	NA	1.1E+02	NA	1.2E+02	NA	**5.5E+01**	**5.5E+01**
Lead			0.00	NA	NA	NA	NA	NA	NA	
Magnesium			0.00	NA	NA	NA	NA	NA	NA	
Manganese	2.0E-02		0.00	NA	7.6E+00	NA	8.1E+00	NA	**3.7E+00**	**3.7E+00**
Mercury			0.00	NA	NA	NA	NA	NA	NA	
Methyl Mercury	1.0E-04		0.00	NA	3.8E-02	NA	4.1E-02	NA	**1.8E-02**	**1.8E-02**
Nickel	2.0E-02		0.00	NA	7.6E+00	NA	8.1E+00	NA	**3.7E+00**	**3.7E+00**
Potassium			0.00	NA	NA	NA	NA	NA	NA	
Selenium	5.0E-03		0.00	NA	1.9E+00	NA	2.0E+00	NA	**9.2E-01**	**9.2E-01**
Silver	5.0E-03		0.00	NA	1.9E+00	NA	2.0E+00	NA	**9.2E-01**	**9.2E-01**
Sodium			0.00	NA	NA	NA	NA	NA	NA	
Thallium	7.0E-05		0.00	NA	2.6E-02	NA	2.8E-02	NA	**1.3E-02**	**1.3E-02**
Vanadium	7.0E-03		0.00	NA	2.64E+00	NA	2.85E+00	NA	1.29E+00	**1.3E+00**
Zinc	3.0E-01		0.00	NA	1.13E+02	NA	1.22E+02	NA	5.54E+01	**5.5E+01**

TABLE C.4
SCREENING LEVELS FOR DETECTED CHEMICALS IN FISH
Calcasieu Estuary - Lake Charles, LA

			Resident		Resident - Subsistence		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
VOCs							
1,1,1-Trichloroethane	3.50E-02		NA	6.7E+00	NA	**2.5E+00**	**2.5E+00**
1,1,2,2-Tetrachloroethane	6.00E-02	2.00E-01	2.2E-02	1.1E+01	**8.3E-03**	4.2E+00	**8.3E-03**
1,1,2-Trichloroethane	4.00E-03	5.70E-02	7.8E-02	7.6E-01	**2.9E-02**	2.8E-01	**2.9E-02**
1,1-Dichloroethane	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
1,1-Dichloroethene	9.00E-03	6.00E-01	7.4E-03	1.7E+00	**2.8E-03**	6.4E-01	**2.8E-03**
1,2,4-Trimethylbenzene	5.00E-02		NA	9.5E+00	NA	**3.5E+00**	**3.5E+00**
1,2-Dibromo-3-chloropropane (DBCP)		1.40E+00	3.2E-03	NA	**1.2E-03**	NA	**1.2E-03**
1,2-Dichloroethane	3.00E-02	9.10E-02	4.9E-02	5.7E+00	**1.8E-02**	2.1E+00	**1.8E-02**
1,2-Dichloroethene, cis-	1.00E-02		NA	1.9E+00	NA	**7.1E-01**	**7.1E-01**
1,2-Dichloroethene, trans-	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
1,3,5-Trimethylbenzene	5.00E-02		NA	9.5E+00	NA	**3.5E+00**	**3.5E+00**
1,3-Dichloropropene, cis-			NA	NA	NA	NA	
2-Butanone	6.00E-01		NA	1.1E+02	NA	**4.2E+01**	**4.2E+01**
2-Hexanone	4.00E-02		NA	7.6E+00	NA	**2.8E+00**	**2.8E+00**
2-Phenylbutane	4.00E-02		NA	7.6E+00	NA	**2.8E+00**	**2.8E+00**
4-Bromofluorobenzene			NA	NA	NA	NA	
4-Methyl-2-pentanone	8.00E-02		NA	1.5E+01	NA	**5.7E+00**	**5.7E+00**
Acetone	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
Benzene	3.00E-03	5.50E-02	8.1E-02	5.7E-01	**3.0E-02**	2.1E-01	**3.0E-02**
Bromodichloromethane	2.00E-02	6.20E-02	7.2E-02	3.8E+00	**2.7E-02**	1.4E+00	**2.7E-02**
Bromomethane	1.40E-03		NA	2.7E-01	NA	**9.9E-02**	**9.9E-02**
Carbon disulfide	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
CFC-11 (Trichlorofluoromethane)	3.00E-01		NA	5.7E+01	NA	**2.1E+01**	**2.1E+01**
CFC-12 (Dichlorofluoromethane)	2.00E-01		NA	3.8E+01	NA	**1.4E+01**	**1.4E+01**
Chlorobenzene	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Chloroethane	4.00E-01	2.90E-03	1.5E+00	7.6E+01	**5.7E-01**	2.8E+01	**5.7E-01**
Chloroform	1.00E-02	6.10E-03	7.3E-01	1.9E+00	**2.7E-01**	7.1E-01	**2.7E-01**
Chloromethane		1.30E-02	3.4E-01	NA	**1.3E-01**	NA	**1.3E-01**
Cyclohexane			NA	NA	NA	NA	
Cymene			NA	NA	NA	NA	
Dibromochloromethane	2.00E-02	8.40E-02	5.3E-02	3.8E+00	**2.0E-02**	1.4E+00	**2.0E-02**
Dibromofluoromethane			NA	NA	NA	NA	
Dichloromethane	6.00E-02	7.50E-03	5.9E-01	1.1E+01	**2.2E-01**	4.2E+00	**2.2E-01**
Ethylbenzene	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
Isopropylbenzene (Cumene)	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
Methyl acetate	1.00E+00		NA	1.9E+02	NA	**7.1E+01**	**7.1E+01**

TABLE C.4
SCREENING LEVELS FOR DETECTED CHEMICALS IN FISH
Calcasieu Estuary - Lake Charles, LA

			Resident		Resident - Subsistence		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
Methyl tert-butyl ether	8.57E-01		NA	1.6E+02	NA	**6.1E+01**	**6.1E+01**
Methylcyclohexane			NA	NA	NA	NA	
n-Butylbenzene	1.00E-02		NA	1.9E+00	NA	**7.1E-01**	**7.1E-01**
Styrene	2.00E-01		NA	3.8E+01	NA	**1.4E+01**	**1.4E+01**
Tetrachloroethene	1.00E-02	5.20E-02	8.5E-02	1.9E+00	**3.2E-02**	7.1E-01	**3.2E-02**
Toluene	2.00E-01		NA	3.8E+01	NA	**1.4E+01**	**1.4E+01**
Tribromomethane (Bromoform)	2.00E-02	7.90E-03	5.6E-01	3.8E+00	**2.1E-01**	1.4E+00	**2.1E-01**
Trichloroethene	6.00E-03	1.10E-02	4.0E-01	1.1E+00	**1.5E-01**	4.2E-01	**1.5E-01**
Vinyl chloride	3.00E-03	1.40E+00	3.2E-03	5.7E-01	**1.2E-03**	2.1E-01	**1.2E-03**
Xylene, m- & p-	2.00E+00		NA	3.8E+02	NA	**1.4E+02**	**1.4E+02**
Xylene, o-	2.00E+00		NA	3.8E+02	NA	**1.4E+02**	**1.4E+02**
Xylenes (total)	2.00E+00		NA	3.8E+02	NA	**1.4E+02**	**1.4E+02**
SVOCs							
1,2,4,5-Tetrachlorobenzene	3.00E-04		NA	5.7E-02	NA	**2.1E-02**	**2.1E-02**
1,2,4-Trichlorobenzene	1.00E-02		NA	1.9E+00	NA	**7.1E-01**	**7.1E-01**
1,3-Dichlorobenzene	9.00E-04		NA	1.7E-01	NA	**6.4E-02**	**6.4E-02**
1,3-Dinitrobenzene	1.00E-04		NA	1.9E-02	NA	**7.1E-03**	**7.1E-03**
1,4-Dichlorobenzene	3.00E-02	2.40E-02	1.8E-01	5.7E+00	**6.9E-02**	2.1E+00	**6.9E-02**
2,4-Dimethylphenol	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
2,4-Dinitrotoluene	2.00E-03		NA	3.8E-01	NA	**1.4E-01**	**1.4E-01**
2,6-Dichlorophenol			NA	NA	NA	NA	
4-Bromophenyl phenylether			NA	NA	NA	NA	
4-Chloro-3-methylphenol			NA	NA	NA	NA	
4-Methylphenol	5.00E-03		NA	9.5E-01	NA	**3.5E-01**	**3.5E-01**
4-Nitrophenol	8.00E-03		NA	1.5E+00	NA	**5.7E-01**	**5.7E-01**
Acetophenone	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
Benzaldehyde	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
Benzoic acid	4.00E+00		NA	7.6E+02	NA	**2.8E+02**	**2.8E+02**
Benzyl alcohol	3.00E-01		NA	5.7E+01	NA	**2.1E+01**	**2.1E+01**
bis(2-Chloroethyl) ether		1.10E+00	4.0E-03	NA	**1.5E-03**	NA	**1.5E-03**
bis(2-Ethylhexyl) phthalate	2.00E-02	1.40E-02	3.2E-01	3.8E+00	**1.2E-01**	1.4E+00	**1.2E-01**
Butylbenzyl phthalate	2.00E-01		NA	3.8E+01	NA	**1.4E+01**	**1.4E+01**
Caprolactam	5.00E-01		NA	9.5E+01	NA	**3.5E+01**	**3.5E+01**
Carbazole		2.00E-02	2.2E-01	NA	**8.3E-02**	NA	**8.3E-02**
Dibenzofuran	4.00E-03		NA	7.6E-01	NA	**2.8E-01**	**2.8E-01**
Diethyl phthalate	8.00E-01		NA	1.5E+02	NA	**5.7E+01**	**5.7E+01**
Dimethyl phthalate			NA	NA	NA	NA	

TABLE C.4
SCREENING LEVELS FOR DETECTED CHEMICALS IN FISH
Calcasieu Estuary - Lake Charles, LA

			Resident		Resident - Subsistence		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
Di-n-butylphthalate	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
Di-n-octylphthalate	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Hexachlorobenzene	8.00E-04	1.60E+00	2.8E-03	1.5E-01	**1.0E-03**	5.7E-02	**1.0E-03**
Hexachlorobutadiene	2.00E-04	7.80E-02	5.7E-02	3.8E-02	2.1E-02	**1.4E-02**	**1.4E-02**
Isophorone	2.00E-01	9.50E-04	4.7E+00	3.8E+01	**1.7E+00**	1.4E+01	**1.7E+00**
Methylphenol, 3- & 4-			NA	NA	NA	NA	
Nitrobenzene	5.00E-04		NA	9.5E-02	NA	**3.5E-02**	**3.5E-02**
Phenol	6.00E-01		NA	1.1E+02	NA	**4.2E+01**	**4.2E+01**
PAHs							
1,1'-Biphenyl	5.00E-02		NA	9.5E+00	NA	**3.5E+00**	**3.5E+00**
2-Methylnaphthalene	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Acenaphthene	6.00E-02		NA	1.1E+01	NA	**4.2E+00**	**4.2E+00**
Acenaphthylene			NA	NA	NA	NA	
Anthracene	3.00E-01		NA	5.7E+01	NA	**2.1E+01**	**2.1E+01**
Benzo(a)anthracene		7.30E-01	6.1E-03	NA	**2.3E-03**	NA	**2.3E-03**
Benzo(a)pyrene		7.30E+00	6.1E-04	NA	**2.3E-04**	NA	**2.3E-04**
Benzo(b)fluoranthene		7.30E-01	6.1E-03	NA	**2.3E-03**	NA	**2.3E-03**
Benzo(g,h,i)perylene			NA	NA	NA	NA	
Benzo(k)fluoranthene		7.30E-02	6.1E-02	NA	**2.3E-02**	NA	**2.3E-02**
Chrysene		7.30E-03	6.1E-01	NA	**2.3E-01**	NA	**2.3E-01**
Dibenzo(a,h)anthracene		7.30E+00	6.1E-04	NA	**2.3E-04**	NA	**2.3E-04**
Fluoranthene	4.00E-02		NA	7.6E+00	NA	**2.8E+00**	**2.8E+00**
Fluorene	4.00E-02		NA	7.6E+00	NA	**2.8E+00**	**2.8E+00**
Indeno(1,2,3-cd)pyrene		7.30E-01	6.1E-03	NA	**2.3E-03**	NA	**2.3E-03**
Naphthalene	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Phenanthrene			NA	NA	NA	NA	
Pyrene	3.00E-02		NA	5.7E+00	NA	**2.1E+00**	**2.1E+00**
Pesticides/PCBs							
4,4'-DDD	5.00E-04	2.40E-01	1.8E-02	9.5E-02	**6.9E-03**	3.5E-02	**6.9E-03**
4,4'-DDE	5.00E-04	3.40E-01	1.3E-02	9.5E-02	**4.9E-03**	3.5E-02	**4.9E-03**
4,4'-DDT	5.00E-04	3.40E-01	1.3E-02	9.5E-02	**4.9E-03**	3.5E-02	**4.9E-03**
Aldrin	3.00E-05	1.70E+01	2.6E-04	5.7E-03	**9.7E-05**	2.1E-03	**9.7E-05**
Aroclor-1016	7.00E-05	7.00E-02	6.3E-02	1.3E-02	2.4E-02	**5.0E-03**	**5.0E-03**
Aroclor-1248	2.00E-05	2.00E+00	2.2E-03	3.8E-03	**8.3E-04**	1.4E-03	**8.3E-04**
Aroclor-1254	2.00E-05	2.00E+00	2.2E-03	3.8E-03	**8.3E-04**	1.4E-03	**8.3E-04**
Aroclor-1260	2.00E-05	2.00E+00	2.2E-03	3.8E-03	**8.3E-04**	1.4E-03	**8.3E-04**
BHC, alpha-		6.30E+00	7.0E-04	NA	**2.6E-04**	NA	**2.6E-04**

TABLE C.4
SCREENING LEVELS FOR DETECTED CHEMICALS IN FISH
Calcasieu Estuary - Lake Charles, LA

			Resident		Resident - Subsistence		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
BHC, beta-		1.80E+00	2.5E-03	NA	**9.2E-04**	NA	**9.2E-04**
BHC, delta-			NA	NA	NA	NA	
BHC, gamma- (Lindane)	3.00E-04	1.30E+00	3.4E-03	5.7E-02	**1.3E-03**	2.1E-02	**1.3E-03**
Chlordane	5.00E-04	3.50E-01	1.3E-02	9.5E-02	**4.7E-03**	3.5E-02	**4.7E-03**
Chlordane, alpha-	5.00E-04	3.50E-01	1.3E-02	9.5E-02	**4.7E-03**	3.5E-02	**4.7E-03**
Chlordane, gamma-	5.00E-04	3.50E-01	1.3E-02	9.5E-02	**4.7E-03**	3.5E-02	**4.7E-03**
Decachlorobiphenyl			NA	NA	NA	NA	
Dieldrin	5.00E-05	1.60E+01	2.8E-04	9.5E-03	**1.0E-04**	3.5E-03	**1.0E-04**
Endosulfan I	6.00E-03		NA	1.1E+00	NA	**4.2E-01**	**4.2E-01**
Endosulfan II	6.00E-03		NA	1.1E+00	NA	**4.2E-01**	**4.2E-01**
Endosulfan sulfate			NA	NA	NA	NA	
Endrin	3.00E-04		NA	5.7E-02	NA	**2.1E-02**	**2.1E-02**
Endrin aldehyde			NA	NA	NA	NA	
Endrin ketone			NA	NA	NA	NA	
Heptachlor	5.00E-04	4.50E+00	9.9E-04	9.5E-02	**3.7E-04**	3.5E-02	**3.7E-04**
Heptachlor epoxide	1.30E-05	9.10E+00	4.9E-04	2.5E-03	**1.8E-04**	9.2E-04	**1.8E-04**
Methoxychlor	5.00E-03		NA	9.5E-01	NA	**3.5E-01**	**3.5E-01**
Tetrachloro-m-xylene			NA	NA	NA	NA	
Herbicides							
2,2-Dichloropropionic acid	3.00E-02		NA	5.7E+00	NA	**2.1E+00**	**2.1E+00**
2,4,5-T	1.00E-02		NA	1.9E+00	NA	**7.1E-01**	**7.1E-01**
2,4,5-TP (Silvex) (Propionic Acid)	8.00E-03		NA	1.5E+00	NA	**5.7E-01**	**5.7E-01**
2,4-D	1.00E-02		NA	1.9E+00	NA	**7.1E-01**	**7.1E-01**
2,4-DB	8.00E-03		NA	1.5E+00	NA	**5.7E-01**	**5.7E-01**
Dichloroprop			NA	NA	NA	NA	
Dinitrobutyl phenol	1.00E-03		NA	1.9E-01	NA	**7.1E-02**	**7.1E-02**
MCPA (2-Methyl-4-chlorophenoxyacetic acid)	5.00E-04		NA	9.5E-02	NA	**3.5E-02**	**3.5E-02**
Mecoprop			NA	NA	NA	NA	
Dioxins/Furans							
1,2,3,4,6,7,8-HpCDD			NA	NA	NA	NA	
1,2,3,4,6,7,8-HpCDF			NA	NA	NA	NA	
1,2,3,4,7,8,9-HpCDF			NA	NA	NA	NA	
1,2,3,4,7,8-HxCDD			NA	NA	NA	NA	
1,2,3,4,7,8-HxCDF			NA	NA	NA	NA	
1,2,3,6,7,8-HxCDD			NA	NA	NA	NA	
1,2,3,6,7,8-HxCDF			NA	NA	NA	NA	
1,2,3,7,8,9-HxCDD			NA	NA	NA	NA	

TABLE C.4
SCREENING LEVELS FOR DETECTED CHEMICALS IN FISH
Calcasieu Estuary - Lake Charles, LA

			Resident		Resident - Subsistence		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
1,2,3,7,8,9-HxCDF			NA	NA	NA	NA	
1,2,3,7,8-PeCDD			NA	NA	NA	NA	
1,2,3,7,8-PeCDF			NA	NA	NA	NA	
2,3,4,6,7,8-HxCDF			NA	NA	NA	NA	
2,3,4,7,8-PeCDF			NA	NA	NA	NA	
2,3,7,8-TCDD		1.50E+05	3.0E-08	NA	**1.1E-08**	NA	**1.1E-08**
2,3,7,8-TCDF			NA	NA	NA	NA	
OCDD			NA	NA	NA	NA	
OCDF			NA	NA	NA	NA	
Metals							
Aluminum	1.00E+00		NA	1.9E+02	NA	**7.1E+01**	**7.1E+01**
Antimony	4.00E-04		NA	7.6E-02	NA	**2.8E-02**	**2.8E-02**
Arsenic	3.00E-04	1.50E+00	3.0E-03	5.7E-02	**1.1E-03**	2.1E-02	**1.1E-03**
Barium	7.00E-02		NA	1.3E+01	NA	**5.0E+00**	**5.0E+00**
Beryllium	2.00E-03		NA	3.8E-01	NA	**1.4E-01**	**1.4E-01**
Cadmium	5.00E-04		NA	9.5E-02	NA	**3.5E-02**	**3.5E-02**
Calcium			NA	NA	NA	NA	
Chromium (hexavalent)	3.00E-03		NA	5.7E-01	NA	**2.1E-01**	**2.1E-01**
Chromium (total)	3.00E-03		NA	5.7E-01	NA	**2.1E-01**	**2.1E-01**
Cobalt	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Copper	4.00E-02		NA	7.6E+00	NA	**2.8E+00**	**2.8E+00**
Cyanide	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Iron	3.00E-01		NA	5.7E+01	NA	**2.1E+01**	**2.1E+01**
Lead			NA	NA	NA	NA	
Magnesium			NA	NA	NA	NA	
Manganese	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Mercury			NA	NA	NA	NA	
Methyl Mercury	1.00E-04		NA	1.9E-02	NA	**7.1E-03**	**7.1E-03**
Nickel	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Potassium			NA	NA	NA	NA	
Selenium	5.00E-03		NA	9.5E-01	NA	**3.5E-01**	**3.5E-01**
Silver	5.00E-03		NA	9.5E-01	NA	**3.5E-01**	**3.5E-01**
Sodium			NA	NA	NA	NA	
Thallium	7.00E-05		NA	1.3E-02	NA	**5.0E-03**	**5.0E-03**
Vanadium	7.00E-03		NA	1.33E+00	NA	**4.96E-01**	**5.0E-01**
Zinc	3.00E-01		NA	5.70E+01	NA	**2.12E+01**	**2.1E+01**

TABLE C.5
SCREENING LEVELS FOR DETECTED CHEMICALS IN SHELLFISH
Calcasieu Estuary - Lake Charles, LA

			Resident		Resident - Subsistence		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
VOCs							
1,1,1-Trichloroethane	3.50E-02		NA	6.7E+00	NA	**2.5E+00**	**2.5E+00**
1,1,2,2-Tetrachloroethane	6.00E-02	2.00E-01	2.2E-02	1.1E+01	**8.3E-03**	4.2E+00	**8.3E-03**
1,1,2-Trichloroethane	4.00E-03	5.70E-02	7.8E-02	7.6E-01	**2.9E-02**	2.8E-01	**2.9E-02**
1,1-Dichloroethane	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
1,1-Dichloroethene	9.00E-03	6.00E-01	7.4E-03	1.7E+00	**2.8E-03**	6.4E-01	**2.8E-03**
1,2,4-Trimethylbenzene	5.00E-02		NA	9.5E+00	NA	**3.5E+00**	**3.5E+00**
1,2-Dibromo-3-chloropropane (DBCP)		1.40E+00	3.2E-03	NA	**1.2E-03**	NA	**1.2E-03**
1,2-Dichloroethane	3.00E-02	9.10E-02	4.9E-02	5.7E+00	**1.8E-02**	2.1E+00	**1.8E-02**
1,2-Dichloroethene, cis-	1.00E-02		NA	1.9E+00	NA	**7.1E-01**	**7.1E-01**
1,2-Dichloroethene, trans-	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
1,3,5-Trimethylbenzene	5.00E-02		NA	9.5E+00	NA	**3.5E+00**	**3.5E+00**
1,3-Dichloropropene, cis-			NA	NA	NA	NA	
2-Butanone	6.00E-01		NA	1.1E+02	NA	**4.2E+01**	**4.2E+01**
2-Hexanone	4.00E-02		NA	7.6E+00	NA	**2.8E+00**	**2.8E+00**
2-Phenylbutane	4.00E-02		NA	7.6E+00	NA	**2.8E+00**	**2.8E+00**
4-Bromofluorobenzene			NA	NA	NA	NA	
4-Methyl-2-pentanone	8.00E-02		NA	1.5E+01	NA	**5.7E+00**	**5.7E+00**
Acetone	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
Benzene	3.00E-03	5.50E-02	8.1E-02	5.7E-01	**3.0E-02**	2.1E-01	**3.0E-02**
Bromodichloromethane	2.00E-02	6.20E-02	7.2E-02	3.8E+00	**2.7E-02**	1.4E+00	**2.7E-02**
Bromomethane	1.40E-03		NA	2.7E-01	NA	**9.9E-02**	**9.9E-02**
Carbon disulfide	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
CFC-11 (Trichlorofluoromethane)	3.00E-01		NA	5.7E+01	NA	**2.1E+01**	**2.1E+01**
CFC-12 (Dichlorofluoromethane)	2.00E-01		NA	3.8E+01	NA	**1.4E+01**	**1.4E+01**
Chlorobenzene	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Chloroethane	4.00E-01	2.90E-03	1.5E+00	7.6E+01	**5.7E-01**	2.8E+01	**5.7E-01**
Chloroform	1.00E-02	6.10E-03	7.3E-01	1.9E+00	**2.7E-01**	7.1E-01	**2.7E-01**
Chloromethane		1.30E-02	3.4E-01	NA	**1.3E-01**	NA	**1.3E-01**
Cyclohexane			NA	NA	NA	NA	
Cymene			NA	NA	NA	NA	
Dibromochloromethane	2.00E-02	8.40E-02	5.3E-02	3.8E+00	**2.0E-02**	1.4E+00	**2.0E-02**
Dibromofluoromethane			NA	NA	NA	NA	
Dichloromethane	6.00E-02	7.50E-03	5.9E-01	1.1E+01	**2.2E-01**	4.2E+00	**2.2E-01**
Ethylbenzene	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
Isopropylbenzene (Cumene)	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
Methyl acetate	1.00E+00		NA	1.9E+02	NA	**7.1E+01**	**7.1E+01**

TABLE C.5
SCREENING LEVELS FOR DETECTED CHEMICALS IN SHELLFISH
Calcasieu Estuary - Lake Charles, LA

			Resident		Resident - Subsistence		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
Methyl tert-butyl ether	8.57E-01		NA	1.6E+02	NA	**6.1E+01**	**6.1E+01**
Methylcyclohexane			NA	NA	NA	NA	
n-Butylbenzene	1.00E-02		NA	1.9E+00	NA	**7.1E-01**	**7.1E-01**
Styrene	2.00E-01		NA	3.8E+01	NA	**1.4E+01**	**1.4E+01**
Tetrachloroethene	1.00E-02	5.20E-02	8.5E-02	1.9E+00	**3.2E-02**	7.1E-01	**3.2E-02**
Toluene	2.00E-01		NA	3.8E+01	NA	**1.4E+01**	**1.4E+01**
Tribromomethane (Bromoform)	2.00E-02	7.90E-03	5.6E-01	3.8E+00	**2.1E-01**	1.4E+00	**2.1E-01**
Trichloroethene	6.00E-03	1.10E-02	4.0E-01	1.1E+00	**1.5E-01**	4.2E-01	**1.5E-01**
Vinyl chloride	3.00E-03	1.40E+00	3.2E-03	5.7E-01	**1.2E-03**	2.1E-01	**1.2E-03**
Xylene, m- & p-	2.00E+00		NA	3.8E+02	NA	**1.4E+02**	**1.4E+02**
Xylene, o-	2.00E+00		NA	3.8E+02	NA	**1.4E+02**	**1.4E+02**
Xylenes (total)	2.00E+00		NA	3.8E+02	NA	**1.4E+02**	**1.4E+02**
SVOCs							
1,2,4,5-Tetrachlorobenzene	3.00E-04		NA	5.7E-02	NA	**2.1E-02**	**2.1E-02**
1,2,4-Trichlorobenzene	1.00E-02		NA	1.9E+00	NA	**7.1E-01**	**7.1E-01**
1,3-Dichlorobenzene	9.00E-04		NA	1.7E-01	NA	**6.4E-02**	**6.4E-02**
1,3-Dinitrobenzene	1.00E-04		NA	1.9E-02	NA	**7.1E-03**	**7.1E-03**
1,4-Dichlorobenzene	3.00E-02	2.40E-02	1.8E-01	5.7E+00	**6.9E-02**	2.1E+00	**6.9E-02**
2,4-Dimethylphenol	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
2,4-Dinitrotoluene	2.00E-03		NA	3.8E-01	NA	**1.4E-01**	**1.4E-01**
2,6-Dichlorophenol			NA	NA	NA	NA	
4-Bromophenyl phenylether			NA	NA	NA	NA	
4-Chloro-3-methylphenol			NA	NA	NA	NA	
4-Methylphenol	5.00E-03		NA	9.5E-01	NA	**3.5E-01**	**3.5E-01**
4-Nitrophenol	8.00E-03		NA	1.5E+00	NA	**5.7E-01**	**5.7E-01**
Acetophenone	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
Benzaldehyde	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
Benzoic acid	4.00E+00		NA	7.6E+02	NA	**2.8E+02**	**2.8E+02**
Benzyl alcohol	3.00E-01		NA	5.7E+01	NA	**2.1E+01**	**2.1E+01**
bis(2-Chloroethyl) ether		1.10E+00	4.0E-03	NA	**1.5E-03**	NA	**1.5E-03**
bis(2-Ethylhexyl) phthalate	2.00E-02	1.40E-02	3.2E-01	3.8E+00	**1.2E-01**	1.4E+00	**1.2E-01**
Butylbenzyl phthalate	2.00E-01		NA	3.8E+01	NA	**1.4E+01**	**1.4E+01**
Caprolactam	5.00E-01		NA	9.5E+01	NA	**3.5E+01**	**3.5E+01**
Carbazole		2.00E-02	2.2E-01	NA	**8.3E-02**	NA	**8.3E-02**
Dibenzofuran	4.00E-03		NA	7.6E-01	NA	**2.8E-01**	**2.8E-01**
Diethyl phthalate	8.00E-01		NA	1.5E+02	NA	**5.7E+01**	**5.7E+01**
Dimethyl phthalate			NA	NA	NA	NA	

TABLE C.5
SCREENING LEVELS FOR DETECTED CHEMICALS IN SHELLFISH
Calcasieu Estuary - Lake Charles, LA

			Resident		Resident - Subsistence		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
Di-n-butylphthalate	1.00E-01		NA	1.9E+01	NA	**7.1E+00**	**7.1E+00**
Di-n-octylphthalate	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Hexachlorobenzene	8.00E-04	1.60E+00	2.8E-03	1.5E-01	**1.0E-03**	5.7E-02	**1.0E-03**
Hexachlorobutadiene	2.00E-04	7.80E-02	5.7E-02	3.8E-02	2.1E-02	**1.4E-02**	**1.4E-02**
Isophorone	2.00E-01	9.50E-04	4.7E+00	3.8E+01	**1.7E+00**	1.4E+01	**1.7E+00**
Methylphenol, 3- & 4-			NA	NA	NA	NA	
Nitrobenzene	5.00E-04		NA	9.5E-02	NA	**3.5E-02**	**3.5E-02**
Phenol	6.00E-01		NA	1.1E+02	NA	**4.2E+01**	**4.2E+01**
PAHs							
1,1'-Biphenyl	5.00E-02		NA	9.5E+00	NA	**3.5E+00**	**3.5E+00**
2-Methylnaphthalene	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Acenaphthene	6.00E-02		NA	1.1E+01	NA	**4.2E+00**	**4.2E+00**
Acenaphthylene			NA	NA	NA	NA	
Anthracene	3.00E-01		NA	5.7E+01	NA	**2.1E+01**	**2.1E+01**
Benzo(a)anthracene		7.30E-01	6.1E-03	NA	**2.3E-03**	NA	**2.3E-03**
Benzo(a)pyrene		7.30E+00	6.1E-04	NA	**2.3E-04**	NA	**2.3E-04**
Benzo(b)fluoranthene		7.30E-01	6.1E-03	NA	**2.3E-03**	NA	**2.3E-03**
Benzo(g,h,i)perylene			NA	NA	NA	NA	
Benzo(k)fluoranthene		7.30E-02	6.1E-02	NA	**2.3E-02**	NA	**2.3E-02**
Chrysene		7.30E-03	6.1E-01	NA	**2.3E-01**	NA	**2.3E-01**
Dibenzo(a,h)anthracene		7.30E+00	6.1E-04	NA	**2.3E-04**	NA	**2.3E-04**
Fluoranthene	4.00E-02		NA	7.6E+00	NA	**2.8E+00**	**2.8E+00**
Fluorene	4.00E-02		NA	7.6E+00	NA	**2.8E+00**	**2.8E+00**
Indeno(1,2,3-cd)pyrene		7.30E-01	6.1E-03	NA	**2.3E-03**	NA	**2.3E-03**
Naphthalene	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Phenanthrene			NA	NA	NA	NA	
Pyrene	3.00E-02		NA	5.7E+00	NA	**2.1E+00**	**2.1E+00**
Pesticides/PCBs							
4,4'-DDD	5.00E-04	2.40E-01	1.8E-02	9.5E-02	**6.9E-03**	3.5E-02	**6.9E-03**
4,4'-DDE	5.00E-04	3.40E-01	1.3E-02	9.5E-02	**4.9E-03**	3.5E-02	**4.9E-03**
4,4'-DDT	5.00E-04	3.40E-01	1.3E-02	9.5E-02	**4.9E-03**	3.5E-02	**4.9E-03**
Aldrin	3.00E-05	1.70E+01	2.6E-04	5.7E-03	**9.7E-05**	2.1E-03	**9.7E-05**
Aroclor-1016	7.00E-05	7.00E-02	6.3E-02	1.3E-02	2.4E-02	**5.0E-03**	**5.0E-03**
Aroclor-1248	2.00E-05	2.00E+00	2.2E-03	3.8E-03	**8.3E-04**	1.4E-03	**8.3E-04**
Aroclor-1254	2.00E-05	2.00E+00	2.2E-03	3.8E-03	**8.3E-04**	1.4E-03	**8.3E-04**
Aroclor-1260	2.00E-05	2.00E+00	2.2E-03	3.8E-03	**8.3E-04**	1.4E-03	**8.3E-04**
BHC, alpha-		6.30E+00	7.0E-04	NA	**2.6E-04**	NA	**2.6E-04**

TABLE C.5
SCREENING LEVELS FOR DETECTED CHEMICALS IN SHELLFISH
Calcasieu Estuary - Lake Charles, LA

			Resident		Resident - Subsistence		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
BHC, beta-		1.80E+00	2.5E-03	NA	**9.2E-04**	NA	**9.2E-04**
BHC, delta-			NA	NA	NA	NA	
BHC, gamma- (Lindane)	3.00E-04	1.30E+00	3.4E-03	5.7E-02	**1.3E-03**	2.1E-02	**1.3E-03**
Chlordane	5.00E-04	3.50E-01	1.3E-02	9.5E-02	**4.7E-03**	3.5E-02	**4.7E-03**
Chlordane, alpha-	5.00E-04	3.50E-01	1.3E-02	9.5E-02	**4.7E-03**	3.5E-02	**4.7E-03**
Chlordane, gamma-	5.00E-04	3.50E-01	1.3E-02	9.5E-02	**4.7E-03**	3.5E-02	**4.7E-03**
Decachlorobiphenyl			NA	NA	NA	NA	
Dieldrin	5.00E-05	1.60E+01	2.8E-04	9.5E-03	**1.0E-04**	3.5E-03	**1.0E-04**
Endosulfan I	6.00E-03		NA	1.1E+00	NA	**4.2E-01**	**4.2E-01**
Endosulfan II	6.00E-03		NA	1.1E+00	NA	**4.2E-01**	**4.2E-01**
Endosulfan sulfate			NA	NA	NA	NA	
Endrin	3.00E-04		NA	5.7E-02	NA	**2.1E-02**	**2.1E-02**
Endrin aldehyde			NA	NA	NA	NA	
Endrin ketone			NA	NA	NA	NA	
Heptachlor	5.00E-04	4.50E+00	9.9E-04	9.5E-02	**3.7E-04**	3.5E-02	**3.7E-04**
Heptachlor epoxide	1.30E-05	9.10E+00	4.9E-04	2.5E-03	**1.8E-04**	9.2E-04	**1.8E-04**
Methoxychlor	5.00E-03		NA	9.5E-01	NA	**3.5E-01**	**3.5E-01**
Tetrachloro-m-xylene			NA	NA	NA	NA	
Herbicides							
2,2-Dichloropropionic acid	3.00E-02		NA	5.7E+00	NA	**2.1E+00**	**2.1E+00**
2,4,5-T	1.00E-02		NA	1.9E+00	NA	**7.1E-01**	**7.1E-01**
2,4,5-TP (Silvex) (Propionic Acid)	8.00E-03		NA	1.5E+00	NA	**5.7E-01**	**5.7E-01**
2,4-D	1.00E-02		NA	1.9E+00	NA	**7.1E-01**	**7.1E-01**
2,4-DB	8.00E-03		NA	1.5E+00	NA	**5.7E-01**	**5.7E-01**
Dichloroprop			NA	NA	NA	NA	
Dinitrobutyl phenol	1.00E-03		NA	1.9E-01	NA	**7.1E-02**	**7.1E-02**
MCPA (2-Methyl-4-chlorophenoxyacetic acid)	5.00E-04		NA	9.5E-02	NA	**3.5E-02**	**3.5E-02**
Mecoprop			NA	NA	NA	NA	
Dioxins/Furans							
1,2,3,4,6,7,8-HpCDD			NA	NA	NA	NA	
1,2,3,4,6,7,8-HpCDF			NA	NA	NA	NA	
1,2,3,4,7,8,9-HpCDF			NA	NA	NA	NA	
1,2,3,4,7,8-HxCDD			NA	NA	NA	NA	
1,2,3,4,7,8-HxCDF			NA	NA	NA	NA	
1,2,3,6,7,8-HxCDD			NA	NA	NA	NA	
1,2,3,6,7,8-HxCDF			NA	NA	NA	NA	
1,2,3,7,8,9-HxCDD			NA	NA	NA	NA	

TABLE C.5
SCREENING LEVELS FOR DETECTED CHEMICALS IN SHELLFISH
Calcasieu Estuary - Lake Charles, LA

			Resident		Resident - Subsistence		
Analyte	**Noncancer RfD Oral** (mg/kg/d)	**Cancer SF Oral** $(mg/kg/d)^{-1}$	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Cancer Screening Levels** (mg/kg)	**Noncancer Screening Levels** (mg/kg)	**Screening Levels** (mg/kg)
1,2,3,7,8,9-HxCDF			NA	NA	NA	NA	
1,2,3,7,8-PeCDD			NA	NA	NA	NA	
1,2,3,7,8-PeCDF			NA	NA	NA	NA	
2,3,4,6,7,8-HxCDF			NA	NA	NA	NA	
2,3,4,7,8-PeCDF			NA	NA	NA	NA	
2,3,7,8-TCDD		1.50E+05	3.0E-08	NA	**1.1E-08**	NA	**1.1E-08**
2,3,7,8-TCDF			NA	NA	NA	NA	
OCDD			NA	NA	NA	NA	
OCDF			NA	NA	NA	NA	
Metals							
Aluminum	1.00E+00		NA	1.9E+02	NA	**7.1E+01**	**7.1E+01**
Antimony	4.00E-04		NA	7.6E-02	NA	**2.8E-02**	**2.8E-02**
Arsenic	3.00E-04	1.50E+00	3.0E-03	5.7E-02	**1.1E-03**	2.1E-02	**1.1E-03**
Barium	7.00E-02		NA	1.3E+01	NA	**5.0E+00**	**5.0E+00**
Beryllium	2.00E-03		NA	3.8E-01	NA	**1.4E-01**	**1.4E-01**
Cadmium	5.00E-04		NA	9.5E-02	NA	**3.5E-02**	**3.5E-02**
Calcium			NA	NA	NA	NA	
Chromium (hexavalent)	3.00E-03		NA	5.7E-01	NA	**2.1E-01**	**2.1E-01**
Chromium (total)	3.00E-03		NA	5.7E-01	NA	**2.1E-01**	**2.1E-01**
Cobalt	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Copper	4.00E-02		NA	7.6E+00	NA	**2.8E+00**	**2.8E+00**
Cyanide	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Iron	3.00E-01		NA	5.7E+01	NA	**2.1E+01**	**2.1E+01**
Lead			NA	NA	NA	NA	
Magnesium			NA	NA	NA	NA	
Manganese	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Mercury			NA	NA	NA	NA	
Methyl Mercury	1.00E-04		NA	1.9E-02	NA	**7.1E-03**	**7.1E-03**
Nickel	2.00E-02		NA	3.8E+00	NA	**1.4E+00**	**1.4E+00**
Potassium			NA	NA	NA	NA	
Selenium	5.00E-03		NA	9.5E-01	NA	**3.5E-01**	**3.5E-01**
Silver	5.00E-03		NA	9.5E-01	NA	**3.5E-01**	**3.5E-01**
Sodium			NA	NA	NA	NA	
Thallium	7.00E-05		NA	1.3E-02	NA	**5.0E-03**	**5.0E-03**
Vanadium	7.00E-03		NA	1.33E+00	NA	**4.96E-01**	**5.0E-01**
Zinc	3.00E-01		NA	5.70E+01	NA	**2.12E+01**	**2.1E+01**

TABLE C.6
SCREENING LEVELS FOR DETECTED CHEMICALS IN ALL MEDIA
Calcasieu Estuary - Lake Charles, LA

Analyte	Sediment Screening Levels (mg/kg sediment)	Surface Water Screening Levels (mg/L water)	Fish Screening Levels (mg/kg fish tissue)	Shellfish Screening Levels (mg/kg shellfish tissue)
VOCs				
1,1,1-Trichloroethane	4.6E+03	7.8E-01	2.5E+00	2.5E+00
1,1,2,2-Tetrachloroethane	1.8E+01	5.9E-03	8.3E-03	8.3E-03
1,1,2-Trichloroethane	6.4E+01	2.2E-02	2.9E-02	2.9E-02
1,1-Dichloroethane	1.3E+04	4.2E+00	7.1E+00	7.1E+00
1,1-Dichloroethene	6.1E+00	1.1E-03	2.8E-03	2.8E-03
1,2,4-Trimethylbenzene	6.5E+03	1.1E-01	3.5E+00	3.5E+00
1,2-Dibromo-3-chloropropane (DBCP)	2.6E+00	1.4E-03	1.2E-03	1.2E-03
1,2-Dichloroethane	4.0E+01	2.1E-02	1.8E-02	1.8E-02
1,2-Dichloroethene, cis-	1.3E+03	3.8E-01	7.1E-01	7.1E-01
1,2-Dichloroethene, trans-	2.6E+03	7.6E-01	1.4E+00	1.4E+00
1,3,5-Trimethylbenzene	6.5E+03	2.0E-01	3.5E+00	3.5E+00
1,3-Dichloropropene, cis-				
2-Butanone	7.8E+04	1.1E+02	4.2E+01	4.2E+01
2-Hexanone	5.2E+03	3.3E+00	2.8E+00	2.8E+00
2-Phenylbutane	5.2E+03	1.1E+01	2.8E+00	2.8E+00
4-Bromofluorobenzene				
4-Methyl-2-pentanone	1.0E+04	8.8E+00	5.7E+00	5.7E+00
Acetone	1.3E+04	2.1E+01	7.1E+00	7.1E+00
Benzene	6.6E+01	9.2E-03	3.0E-02	3.0E-02
Bromodichloromethane	5.9E+01	2.9E-02	2.7E-02	2.7E-02
Bromomethane	1.8E+02	1.5E-01	9.9E-02	9.9E-02
Carbon disulfide	1.3E+04	1.6E+00	7.1E+00	7.1E+00
CFC-11 (Trichlorofluoromethane)	3.9E+04	6.7E+00	2.1E+01	2.1E+01
CFC-12 (Dichlorofluoromethane)	2.6E+04	6.3E+00	1.4E+01	1.4E+01
Chlorobenzene	2.6E+03	1.8E-01	1.4E+00	1.4E+00
Chloroethane	1.3E+03	4.6E-01	5.7E-01	5.7E-01
Chloroform	6.0E+02	1.9E-01	2.7E-01	2.7E-01
Chloromethane	2.8E+02	1.7E-01	1.3E-01	1.3E-01
Cyclohexane				
Cymene				
Dibromochloromethane	4.3E+01	2.8E-02	2.0E-02	2.0E-02
Dibromofluoromethane				
Dichloromethane	4.9E+02	2.8E-01	2.2E-01	2.2E-01
Ethylbenzene	1.3E+04	5.1E-01	7.1E+00	7.1E+00
Isopropylbenzene (Cumene)	1.3E+04	3.4E-01	7.1E+00	7.1E+00
Methyl acetate	1.3E+05	1.9E+02	7.1E+01	7.1E+01
Methyl tert-butyl ether				
Methylcyclohexane				
n-Butylbenzene	1.3E+03	2.6E+00	7.1E-01	7.1E-01
Styrene	2.6E+04	1.4E+00	1.4E+01	1.4E+01
Tetrachloroethene	7.0E+01	4.2E-03	3.2E-02	3.2E-02
Toluene	2.6E+04	1.7E+00	1.4E+01	1.4E+01
Tribromomethane (Bromoform)	4.6E+02	3.7E-01	2.1E-01	2.1E-01
Trichloroethene	3.3E+02	6.0E-02	1.5E-01	1.5E-01
Vinyl chloride	2.6E+00	1.0E-03	1.2E-03	1.2E-03
Xylene, m- & p-	2.6E+05	9.4E+00	1.4E+02	1.4E+02
Xylene, o-	2.6E+05	9.4E+00	1.4E+02	1.4E+02
Xylenes (total)	2.6E+05	9.4E+00	1.4E+02	1.4E+02
SVOCs				
1,2,4,5-Tetrachlorobenzene	1.6E+01	7.9E-02	2.1E-02	2.1E-02
1,2,4-Trichlorobenzene	5.4E+02	3.8E-02	7.1E-01	7.1E-01
1,3-Dichlorobenzene	4.9E+01	3.9E-03	6.4E-02	6.4E-02
1,3-Dinitrobenzene	5.4E+00	2.6E-02	7.1E-03	7.1E-03
1,4-Dichlorobenzene	6.3E+01	7.1E-03	6.9E-02	6.9E-02

TABLE C.6
SCREENING LEVELS FOR DETECTED CHEMICALS IN ALL MEDIA
Calcasieu Estuary - Lake Charles, LA

Analyte	Sediment Screening Levels (mg/kg sediment)	Surface Water Screening Levels (mg/L water)	Fish Screening Levels (mg/kg fish tissue)	Shellfish Screening Levels (mg/kg shellfish tissue)
2,4-Dimethylphenol	1.1E+03	5.0E-01	1.4E+00	1.4E+00
2,4-Dinitrotoluene	1.1E+02	2.0E-01	1.4E-01	1.4E-01
2,6-Dichlorophenol				
4-Bromophenyl phenylether				
4-Chloro-3-methylphenol				
4-Methylphenol	2.7E+02	1.9E-01	3.5E-01	3.5E-01
4-Nitrophenol	4.3E+02	3.0E-02	5.7E-01	5.7E-01
Acetophenone	5.4E+03	2.6E+01	7.1E+00	7.1E+00
Benzaldehyde	5.4E+03	2.6E+01	7.1E+00	7.1E+00
Benzoic acid	2.2E+05	2.1E+02	2.8E+02	2.8E+02
Benzyl alcohol	1.6E+04	7.9E+01	2.1E+01	2.1E+01
bis(2-Chloroethyl) ether	1.4E+00	3.0E-03	1.5E-03	1.5E-03
bis(2-Ethylhexyl) phthalate	1.1E+02	2.3E-02	1.2E-01	1.2E-01
Butylbenzyl phthalate	1.1E+04	1.1E+00	1.4E+01	1.4E+01
Caprolactam	2.7E+04	1.3E+02	3.5E+01	3.5E+01
Carbazole	7.6E+01	3.1E-01	8.3E-02	8.3E-02
Dibenzofuran	2.2E+02	1.1E+00	2.8E-01	2.8E-01
Diethyl phthalate	4.3E+04	6.3E+01	5.7E+01	5.7E+01
Dimethyl phthalate				
Di-n-butylphthalate	5.4E+03	1.1E+00	7.1E+00	7.1E+00
Di-n-octylphthalate	1.1E+03	2.8E-04	1.4E+00	1.4E+00
Hexachlorobenzene	9.5E-01	3.1E-05	1.0E-03	1.0E-03
Hexachlorobutadiene	1.1E+01	6.3E-04	1.4E-02	1.4E-02
Isophorone	1.6E+03	2.3E+00	1.7E+00	1.7E+00
Methylphenol, 3- & 4-				
Nitrobenzene	2.7E+01	1.9E-03	3.5E-02	3.5E-02
Phenol	3.3E+04	4.1E+01	4.2E+01	4.2E+01
PAHs				
1,1'-Biphenyl	2.3E+03	1.0E-01	3.5E+00	3.5E+00
2-Methylnaphthalene	9.2E+02	5.0E-02	1.4E+00	1.4E+00
Acenaphthene	2.8E+03	1.6E+01	4.2E+00	4.2E+00
Acenaphthylene				
Anthracene	1.4E+04	5.2E-01	2.1E+01	2.1E+01
Benzo(a)anthracene	1.8E+00	1.8E-05	2.3E-03	2.3E-03
Benzo(a)pyrene	1.8E-01	1.2E-06	2.3E-04	2.3E-04
Benzo(b)fluoranthene	1.8E+00	1.2E-05	2.3E-03	2.3E-03
Benzo(g,h,i)perylene				
Benzo(k)fluoranthene	1.8E+01	2.4E-04	2.3E-02	2.3E-02
Chrysene	1.8E+02	1.8E-03	2.3E-01	2.3E-01
Dibenzo(a,h)anthracene	1.8E-01	5.4E-07	2.3E-04	2.3E-04
Fluoranthene	1.8E+03	4.2E-02	2.8E+00	2.8E+00
Fluorene	1.8E+03	6.0E-02	2.8E+00	2.8E+00
Indeno(1,2,3-cd)pyrene	1.8E+00	7.6E-06	2.3E-03	2.3E-03
Naphthalene	9.2E+02	1.1E-01	1.4E+00	1.4E+00
Phenanthrene				
Pyrene	1.4E+03	3.5E-02	2.1E+00	2.1E+00
Pesticides/PCBs				
4,4'-DDD	1.1E+01	1.6E-04	6.9E-03	6.9E-03
4,4'-DDE	7.6E+00	1.3E-04	4.9E-03	4.9E-03
4,4'-DDT	7.6E+00	7.2E-05	4.9E-03	4.9E-03
Aldrin	8.9E-02	2.2E-04	9.7E-05	9.7E-05
Aroclor-1016	3.1E+00	3.7E-05	5.0E-03	5.0E-03
Aroclor-1248	6.2E-01	7.5E-06	8.3E-04	8.3E-04
Aroclor-1254	6.2E-01	7.5E-06	8.3E-04	8.3E-04
Aroclor-1260	6.2E-01	7.5E-06	8.3E-04	8.3E-04

TABLE C.6
SCREENING LEVELS FOR DETECTED CHEMICALS IN ALL MEDIA
Calcasieu Estuary - Lake Charles, LA

Analyte	Sediment Screening Levels (mg/kg sediment)	Surface Water Screening Levels (mg/L water)	Fish Screening Levels (mg/kg fish tissue)	Shellfish Screening Levels (mg/kg shellfish tissue)
BHC, alpha-	3.7E-01	8.8E-05	2.6E-04	2.6E-04
BHC, beta-	1.3E+00	2.7E-04	9.2E-04	9.2E-04
BHC, delta-				
BHC, gamma- (Lindane)	1.8E+00	5.8E-04	1.3E-03	1.3E-03
Chlordane	6.7E+00	5.8E-04	4.7E-03	4.7E-03
Chlordane, alpha-	6.7E+00	6.6E-04	4.7E-03	4.7E-03
Chlordane, gamma-	6.7E+00	6.6E-04	4.7E-03	4.7E-03
Decachlorobiphenyl				
Dieldrin	9.5E-02	4.1E-05	1.0E-04	1.0E-04
Endosulfan I	3.3E+02	1.6E+00	4.2E-01	4.2E-01
Endosulfan II	3.3E+02	1.6E+00	4.2E-01	4.2E-01
Endosulfan sulfate				
Endrin	1.6E+01	7.1E-03	2.1E-02	2.1E-02
Endrin aldehyde				
Endrin ketone				
Heptachlor	3.4E-01	2.1E-04	3.7E-04	3.7E-04
Heptachlor epoxide	1.7E-01	6.7E-04	1.8E-04	1.8E-04
Methoxychlor	2.7E+02	9.4E-02	3.5E-01	3.5E-01
Tetrachloro-m-xylene				
Herbicides				
2,2-Dichloropropionic acid	1.6E+03	5.7E+00	2.1E+00	2.1E+00
2,4,5-T	5.4E+02	1.0E-01	7.1E-01	7.1E-01
2,4,5-TP (Silvex) (Propionic Acid)	4.3E+02	1.2E-01	5.7E-01	5.7E-01
2,4-D	7.7E+02	7.4E-01	7.1E-01	7.1E-01
2,4-DB	4.3E+02	6.7E-01	5.7E-01	5.7E-01
Dichloroprop				
Dinitrobutyl phenol	5.4E+01	1.3E-02	7.1E-02	7.1E-02
MCPA (2-Methyl-4-chlorophenoxyacetic acid)	2.7E+01	3.9E-02	3.5E-02	3.5E-02
Mecoprop				
Dioxins/Furans				
1,2,3,4,6,7,8-HpCDD				
1,2,3,4,6,7,8-HpCDF				
1,2,3,4,7,8,9-HpCDF				
1,2,3,4,7,8-HxCDD				
1,2,3,4,7,8-HxCDF				
1,2,3,6,7,8-HxCDD				
1,2,3,6,7,8-HxCDF				
1,2,3,7,8,9-HxCDD				
1,2,3,7,8,9-HxCDF				
1,2,3,7,8-PeCDD				
1,2,3,7,8-PeCDF				
2,3,4,6,7,8-HxCDF				
2,3,4,7,8-PeCDF				
2,3,7,8-TCDD	1.7E-05	5.0E-11	1.1E-08	1.1E-08
2,3,7,8-TCDF				
OCDD				
OCDF				
Metals				
Aluminum	1.3E+05	1.8E+02	7.1E+01	7.1E+01
Antimony	5.2E+01	7.4E-02	2.8E-02	2.8E-02
Arsenic	1.7E+00	2.9E-03	1.1E-03	1.1E-03
Barium	9.1E+03	1.3E+01	5.0E+00	5.0E+00
Beryllium	2.6E+02	3.7E-01	1.4E-01	1.4E-01
Cadmium	6.4E+01	9.2E-02	3.5E-02	3.5E-02
Calcium				

TABLE C.6
SCREENING LEVELS FOR DETECTED CHEMICALS IN ALL MEDIA
Calcasieu Estuary - Lake Charles, LA

Analyte	Sediment Screening Levels (mg/kg sediment)	Surface Water Screening Levels (mg/L water)	Fish Screening Levels (mg/kg fish tissue)	Shellfish Screening Levels (mg/kg shellfish tissue)
Chromium (hexavalent)	3.9E+02	5.5E-01	2.1E-01	2.1E-01
Chromium (total)	3.9E+02	5.5E-01	2.1E-01	2.1E-01
Cobalt	2.6E+03	3.7E+00	1.4E+00	1.4E+00
Copper	5.2E+03	7.4E+00	2.8E+00	2.8E+00
Cyanide	1.1E+03	3.7E+00	1.4E+00	1.4E+00
Iron	3.9E+04	5.5E+01	2.1E+01	2.1E+01
Lead				
Magnesium				
Manganese	2.6E+03	3.7E+00	1.4E+00	1.4E+00
Mercury				
Methyl Mercury	5.4E+00	1.8E-02	7.1E-03	7.1E-03
Nickel	2.6E+03	3.7E+00	1.4E+00	1.4E+00
Potassium				
Selenium	6.5E+02	9.2E-01	3.5E-01	3.5E-01
Silver	6.5E+02	9.2E-01	3.5E-01	3.5E-01
Sodium				
Thallium	9.1E+00	1.3E-02	5.0E-03	5.0E-03
Vanadium	9.1E+02	1.3E+00	5.0E-01	5.0E-01
Zinc	3.9E+04	5.5E+01	2.1E+01	2.1E+01

Table C.7
Chemicals Never Detected - Comparison of Maximum Detection Limits to Site-Specific Screening Levels
Calcasieu Estuary - Calcasieu Parish, Louisiana

Matrix	cas_rn	chemical_name	Minimum Detection Limit (DL)	Maximum Detection Limit (DL)	DL units	Screening Level	SL units	Ratio of Minimum DL to Screening Level	Ratio of Maximum DL to Screening Level
Sediment	71-55-6	1,1,1-Trichloroethane	1.2	26000	ug/kg	4.56E+06	ug/kg	<0.01	<0.01
Sediment	79-34-5	1,1,2,2-Tetrachloroethane	0.55	27000	ug/kg	1.83E+04	ug/kg	<0.01	1.48
Sediment	79-00-5	1,1,2-Trichloroethane	0.5	6300	ug/kg	6.40E+04	ug/kg	<0.01	0.10
Sediment	75-34-3	1,1-Dichloroethane	0.345	6300	ug/kg	1.30E+07	ug/kg	<0.01	<0.01
Sediment	75-35-4	1,1-Dichloroethylene	1.5	26000	ug/kg	6.08E+03	ug/kg	<0.01	4.27
Sediment	95-94-3	1,2,4,5-Tetrachlorobenzene	390	4400	ug/kg	1.63E+04	ug/kg	0.02	0.27
Sediment	95-63-6	1,2,4-Trimethylbenzene	0.98	4.9	ug/kg	6.52E+06	ug/kg	<0.01	<0.01
Sediment	96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	2.3	53000	ug/kg	2.61E+03	ug/kg	<0.01	20.33
Sediment	107-06-2	1,2-Dichloroethane	0.55	6300	ug/kg	4.00E+04	ug/kg	<0.01	0.16
Sediment	108-67-8	1,3,5-Trimethylbenzene	1.4	6.8	ug/kg	6.52E+06	ug/kg	<0.01	<0.01
Sediment	94-75-7	2,4-D	16	1600	ug/kg	7.67E+05	ug/kg	<0.01	<0.01
Sediment	87-65-0	2,6-Dichlorophenol	390	4400	ug/kg	NA	NA	NA	NA
Sediment	135-98-8	2-Phenylbutane	1.4	6.8	ug/kg	5.21E+06	ug/kg	<0.01	<0.01
Sediment	12674-11-2	Aroclor-1016	3.8	3600	ug/kg	3.08E+03	ug/kg	<0.01	1.17
Sediment	12672-29-6	Aroclor-1248	3.8	3600	ug/kg	6.17E+02	ug/kg	<0.01	5.84
Sediment	65-85-0	Benzoic Acid	330	28300	ug/kg	2.17E+08	ug/kg	<0.01	<0.01
Sediment	100-51-6	Benzyl Alcohol	275	14150	ug/kg	1.63E+07	ug/kg	<0.01	<0.01
Sediment	111-44-4	bis(2-Chloroethyl)ether	34	280000	ug/kg	1.38E+03	ug/kg	0.02	202.52
Sediment	75-27-4	Bromodichloromethane	0.55	26000	ug/kg	5.89E+04	ug/kg	<0.01	0.44
Sediment	75-71-8	CFC-12	1.4	210	ug/kg	2.61E+07	ug/kg	<0.01	<0.01
Sediment	57-74-9	Chlordane	1.55	210	ug/kg	6.68E+03	ug/kg	<0.01	0.03
Sediment	124-48-1	Chlorodibromomethane	0.89	26000	ug/kg	4.35E+04	ug/kg	<0.01	0.60
Sediment	75-00-3	Chloroethane	1.1	53000	ug/kg	1.26E+06	ug/kg	<0.01	0.04
Sediment	18540-29-9	Chromium (Hexavalent Compounds)	0.54	14	mg/kg	3.91E+02	mg/kg	<0.01	0.04
Sediment	156-59-2	cis-1,2-Dichloroethene	0.27	3200	ug/kg	1.30E+06	ug/kg	<0.01	<0.01
Sediment	10061-01-5	cis-1,3-Dichloropropene	2.9	26000	ug/kg	NA	NA	NA	NA
Sediment	99-87-6	Cymene	1.1	5.6	ug/kg	NA	NA	NA	NA
Sediment	99-65-0	M-Dinitrobenzene	390	4400	ug/kg	5.43E+03	ug/kg	0.07	0.81
Sediment	136777-61-2	m-Xylene & p-Xylene	2.2	11	ug/kg	2.61E+08	ug/kg	<0.01	<0.01
Sediment	104-51-8	n-Butylbenzene	1.2	6	ug/kg	NA	ug/kg	NA	NA
Sediment	98-95-3	Nitrobenzene	51	280000	ug/kg	2.72E+04	ug/kg	<0.01	10.31
Sediment	95-47-6	o-Xylene	0.86	4.3	ug/kg	2.61E+08	ug/kg	<0.01	<0.01

Table C.7
Chemicals Never Detected - Comparison of Maximum Detection Limits to Site-Specific Screening Levels
Calcasieu Estuary - Calcasieu Parish, Louisiana

Matrix	cas_rn	chemical_name	Minimum Detection Limit (DL)	Maximum Detection Limit (DL)	DL units	Screening Level	SL units	Ratio of Minimum DL to Screening Level	Ratio of Maximum DL to Screening Level
Sediment	156-60-5	trans-1,2-Dichloroethene	0.285	3200	ug/kg	2.61E+06	ug/kg	<0.01	<0.01
Sediment	75-01-4	Vinyl Chloride	1.7	53000	ug/kg	2.61E+03	ug/kg	<0.01	20.33
Tissue	71-55-6	1,1,1-Trichloroethane	2	190	ug/kg	2.48E+03	ug/kg	<0.01	0.08
Tissue	79-34-5	1,1,2,2-Tetrachloroethane	2	190	ug/kg	8.26E+00	ug/kg	0.24	23.00
Tissue	79-00-5	1,1,2-Trichloroethane	2	190	ug/kg	2.90E+01	ug/kg	0.07	6.56
Tissue	75-34-3	1,1-Dichloroethane	2	190	ug/kg	7.08E+03	ug/kg	<0.01	0.03
Tissue	75-35-4	1,1-Dichloroethylene	2	190	ug/kg	2.75E+00	ug/kg	0.73	69.01
Tissue	107-06-2	1,2-Dichloroethane	2	190	ug/kg	1.82E+01	ug/kg	0.11	10.47
Tissue	12674-11-2	Aroclor-1016	2.5	830	ug/kg	4.96E+00	ug/kg	0.50	167.49
Tissue	12672-29-6	Aroclor-1248	2.5	830	ug/kg	8.26E-01	ug/kg	3.03	1004.94
Tissue	65-85-0	Benzoic Acid	640	49000	ug/kg	2.83E+05	ug/kg	<0.01	0.17
Tissue	100-51-6	Benzyl Alcohol	250	20000	ug/kg	2.12E+04	ug/kg	0.01	0.94
Tissue	111-44-4	bis(2-Chloroethyl)ether	40	20000	ug/kg	1.50E+00	ug/kg	26.64	13318.53
Tissue	75-27-4	Bromodichloromethane	2	190	ug/kg	2.66E+01	ug/kg	0.08	7.13
Tissue	124-48-1	Chlorodibromomethane	2	190	ug/kg	1.97E+01	ug/kg	0.10	9.66
Tissue	75-00-3	Chloroethane	2	190	ug/kg	5.70E+02	ug/kg	<0.01	0.33
Tissue	156-59-2	cis-1,2-Dichloroethene	2	190	ug/kg	7.08E+02	ug/kg	<0.01	0.27
Tissue	10061-01-5	cis-1,3-Dichloropropene	2	190	ug/kg	NA	NA	NA	NA
Tissue	136777-61-2	m-Xylene & p-Xylene	3	380	ug/kg	1.42E+05	ug/kg	<0.01	<0.01
Tissue	98-95-3	Nitrobenzene	40	20000	ug/kg	3.54E+01	ug/kg	1.13	565.03
Tissue	95-47-6	o-Xylene	2	190	ug/kg	1.42E+05	ug/kg	<0.01	<0.01
Tissue	156-60-5	trans-1,2-Dichloroethene	2	190	ug/kg	1.42E+03	ug/kg	<0.01	0.13
Tissue	75-01-4	Vinyl Chloride	2	190	ug/kg	1.18E+00	ug/kg	1.70	161.03
Surface Water	71-55-6	1,1,1-Trichloroethane	1	10	ug/L	7.78E+02	ug/L	<0.01	0.01
Surface Water	79-34-5	1,1,2,2-Tetrachloroethane	1	10	ug/L	5.88E+00	ug/L	0.17	1.70
Surface Water	79-00-5	1,1,2-Trichloroethane	1	10	ug/L	2.21E+01	ug/L	0.05	0.45
Surface Water	75-34-3	1,1-Dichloroethane	1	10	ug/L	4.25E+03	ug/L	<0.01	<0.01
Surface Water	75-35-4	1,1-Dichloroethylene	0.87	10	ug/L	1.10E+00	ug/L	0.79	9.07
Surface Water	95-94-3	1,2,4,5-Tetrachlorobenzene	10	10	ug/L	7.89E+01	ug/L	0.13	0.13
Surface Water	95-63-6	1,2,4-Trimethylbenzene	1.4	1.4	ug/L	1.11E+02	ug/L	0.01	0.01
Surface Water	96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	0.92	10	ug/L	1.44E+00	ug/L	0.64	6.92
Surface Water	107-06-2	1,2-Dichloroethane	1	10	ug/L	2.10E+01	ug/L	0.05	0.48
Surface Water	108-67-8	1,3,5-Trimethylbenzene	1.4	1.4	ug/L	2.01E+02	ug/L	<0.01	<0.01

Table C.7
Chemicals Never Detected - Comparison of Maximum Detection Limits to Site-Specific Screening Levels
Calcasieu Estuary - Calcasieu Parish, Louisiana

Matrix	cas_rn	chemical_name	Minimum Detection Limit (DL)	Maximum Detection Limit (DL)	DL units	Screening Level	SL units	Ratio of Minimum DL to Screening Level	Ratio of Maximum DL to Screening Level
Surface Water	94-75-7	2,4-D	0.18	8	ug/L	7.41E+02	ug/L	<0.01	0.01
Surface Water	87-65-0	2,6-Dichlorophenol	10	10	ug/L	NA	NA	NA	NA
Surface Water	135-98-8	2-Phenylbutane	1.3	1.3	ug/L	1.05E+04	ug/L	<0.01	<0.01
Surface Water	12674-11-2	Aroclor-1016	0.02	1	ug/L	3.73E-02	ug/L	0.54	26.84
Surface Water	12672-29-6	Aroclor-1248	0.02	1	ug/L	7.45E-03	ug/L	2.68	134.22
Surface Water	65-85-0	Benzoic Acid	5	10	ug/L	2.07E+05	ug/L	<0.01	<0.01
Surface Water	100-51-6	Benzyl Alcohol	2	10	ug/L	7.89E+04	ug/L	<0.01	<0.01
Surface Water	111-44-4	bis(2-Chloroethyl)ether	1.8	13	ug/L	2.95E+00	ug/L	0.61	4.41
Surface Water	75-27-4	Bromodichloromethane	1	10	ug/L	2.86E+01	ug/L	0.03	0.35
Surface Water	75-71-8	CFC-12	1.6	10	ug/L	6.30E+03	ug/L	<0.01	<0.01
Surface Water	57-74-9	Chlordane	0	0.5	ug/L	5.81E-01	ug/L	<0.01	0.86
Surface Water	124-48-1	Chlorodibromomethane	1	10	ug/L	2.75E+01	ug/L	0.04	0.36
Surface Water	75-00-3	Chloroethane	1	10	ug/L	4.56E+02	ug/L	<0.01	0.02
Surface Water	156-59-2	cis-1,2-Dichloroethene	0.5	10	ug/L	3.78E+02	ug/L	<0.01	0.03
Surface Water	10061-01-5	cis-1,3-Dichloropropene	1	10	ug/L	NA	NA	NA	NA
Surface Water	99-87-6	Cymene	1.5	1.5	ug/L	NA	NA	NA	NA
Surface Water	99-65-0	M-Dinitrobenzene	10	10	ug/L	2.63E+01	ug/L	0.38	0.38
Surface Water	136777-61-2	m-Xylene & p-Xylene	2.5	10	ug/L	9.45E+03	ug/L	<0.01	<0.01
Surface Water	104-51-8	n-Butylbenzene	1.4	1.4	ug/L	NA	ug/L	NA	NA
Surface Water	98-95-3	Nitrobenzene	2	13	ug/L	1.89E+00	ug/L	1.06	6.88
Surface Water	95-47-6	o-Xylene	1.3	10	ug/L	9.45E+03	ug/L	<0.01	<0.01
Surface Water	156-60-5	trans-1,2-Dichloroethene	0.5	10	ug/L	7.56E+02	ug/L	<0.01	0.01
Surface Water	75-01-4	Vinyl Chloride	1	10	ug/L	1.04E+00	ug/L	0.97	9.66

Note: a ratio greater than one indicates that the detection limit is higher than the screening level. Chemical could be present at a concentration of concern that was too low to be measured by the laboratory.

Appendix D

Summary of Reference Area Data

List of Standard Tables Included in Appendix D - Reference Area Data
Calcasieu Estuary - Calcasieu Parish, Louisiana

2 Occurrence, Distribution and Selection of Chemicals of Potential Concern

2.1 REF Sediment - Reference Area
2.2 REF Surface Water - Reference Area
2.3 REF Fish - Reference Area
2.4 REF Shellfish - Reference Area

3 Medium-Specific Exposure Point Concentration Summary

3.1 REF Sediment - Reference Area
3.2 REF Surface Water - Reference Area
3.3 REF Fish - Reference Area
3.4 REF Shellfish - Reference Area

TABLE 2.1 REF
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
REFERENCE AREA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Screening Toxicity Value (1)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (2)
Reference Area		SVOCs												
	117-81-7	bis(2-Ethylhexyl) phthalate	5.5E-02	1.1E-01	mg/kg	SNST012()	5 / 20	6.7E-02 - 3.8E-01	1.1E-01	1.1E+02	NA	NA	N	BSL
	84-66-2	Diethyl phthalate	7.3E-01	7.3E-01	mg/kg	SNST011()	1 / 20	6.7E-02 - 3.8E-01	7.3E-01	4.3E+04	NA	NA	N	BSL
		PAHs												
	56-55-3	Benzo(a)anthracene	3.7E-02	3.7E-02	mg/kg	SNST011(_J)	1 / 9	1.7E-02 - 3.8E-01	3.7E-02	8.0E-01	NA	NA	N	BSL
	50-32-8	Benzo(a)pyrene	4.3E-02	4.3E-02	mg/kg	SNST011(_J)	1 / 9	1.7E-02 - 3.8E-01	4.3E-02	1.8E-01	NA	NA	Y	ASL
	205-99-2	Benzo(b)fluoranthene	4.2E-02	4.2E-02	mg/kg	SNST011(_J)	1 / 9	1.7E-02 - 3.8E-01	4.2E-02	1.8E+00	NA	NA	N	BSL
	191-24-2	Benzo(g,h,i)perylene	3.6E-02	3.6E-02	mg/kg	SNST011(_J)	1 / 9	1.7E-02 - 3.8E-01	3.6E-02		NA	NA	Y	NTX
	218-01-9	Chrysene	3.7E-02	4.6E-02	mg/kg	SNST011(_J)	2 / 10	1.7E-02 - 3.8E-01	4.6E-02	1.8E+02	NA	NA	N	BSL
	206-44-0	Fluoranthene	5.9E-02	5.9E-02	mg/kg	SNST011(_J)	1 / 9	1.7E-02 - 3.8E-01	5.9E-02	1.8E+03	NA	NA	N	BSL
	129-00-0	Pyrene	2.5E-02	8.0E-02	mg/kg	SNST011(_J)	3 / 11	1.7E-02 - 3.8E-01	8.0E-02	1.4E+03	NA	NA	N	BSL
		Pesticides/PCBs												
	11097-69-1	Aroclor-1254	1.0E-01	1.0E+00	mg/kg	SNST011()	4 / 20	1.7E-02 - 4.0E-02	1.0E+00	6.2E-01	NA	NA	Y	ASL
	319-84-6	BHC, alpha-	7.9E-05	7.9E-05	mg/kg	ECOSN002(LJ)	1 / 20	1.4E-03 - 4.0E-02	7.9E-05	3.7E-01	NA	NA	N	BSL
		Herbicides												
	94-75-7	2,4-D	2.8E-02	4.7E-02	mg/kg	ECOSN003(J)	3 / 4	1.7E-01 - 1.7E-01	4.7E-02	7.7E+02	NA	NA	N	BSL
		Dioxins/Furans												
	35822-46-9	1,2,3,4,6,7,8-HpCDD	2.3E-05	9.8E-05	mg/kg	ECOSN002()	7 / 7	NA - NA	Dioxins and furans are multiplied by 2,3,7,8-TCDD toxic equivalency factors (TEFs) in order					
	67562-39-4	1,2,3,4,6,7,8-HpCDF	1.6E-06	8.1E-06	mg/kg	SNST011()	3 / 7	9.9E-08 - 1.5E-06	to compare a total TCDD equivalent concentration to the screening toxicity value.					
	39227-28-6	1,2,3,4,7,8-HxCDD	1.5E-06	1.6E-06	mg/kg	SNST011(J)	2 / 7	5.2E-07 - 1.5E-06	The maximum TCDD equivalent concentration of 5.5 E-06 mg/kg does not exceed the					
	70648-26-9	1,2,3,4,7,8-HxCDF	2.8E-06	3.0E-06	mg/kg	SNST011(J)	2 / 7	1.8E-07 - 5.9E-07	screening toxicity value of 1.8E-5 mg/kg.					
	57653-85-7	1,2,3,6,7,8-HxCDD	2.8E-06	3.3E-06	mg/kg	SNST011(J)	2 / 7	9.6E-07 - 1.8E-06						
	57117-44-9	1,2,3,6,7,8-HxCDF	1.4E-06	1.4E-06	mg/kg	SNST011(J)	1 / 7	4.9E-08 - 8.7E-07						
	19408-74-3	1,2,3,7,8,9-HxCDD	4.0E-06	6.3E-06	mg/kg	ECOSN002(J)	4 / 7	1.5E-06 - 4.0E-06						
	57117-41-6	1,2,3,7,8-PeCDF	1.6E-06	1.8E-06	mg/kg	SNST011(J)	3 / 7	3.4E-07 - 8.7E-07						
	60851-34-5	2,3,4,6,7,8-HxCDF	1.1E-06	1.1E-06	mg/kg	SNST011(J)	1 / 7	4.4E-08 - 9.9E-07						
	57117-31-4	2,3,4,7,8-PeCDF	1.6E-06	3.2E-06	mg/kg	SNST011(J)	3 / 7	2.1E-07 - 6.3E-07						
	1746-01-6	2,3,7,8-TCDD	1.5E-06	1.5E-06	mg/kg	ECOSN001(J)	1 / 7	2.2E-07 - 8.2E-07						
	51207-31-9	2,3,7,8-TCDF	1.1E-06	5.9E-06	mg/kg	SNST006()	7 / 7	NA - NA						
	3268-87-9	OCDD	2.8E-04	2.5E-03	mg/kg	SNST011()	7 / 7	NA - NA						
	39001-02-0	OCDF	1.5E-06	2.6E-05	mg/kg	SNST011()	3 / 7	2.1E-07 - 3.2E-06						
		Metals												
	7429-90-5	Aluminum	5.4E+03	7.6E+03	mg/kg	ECOSN002()	4 / 4	NA - NA	7.6E+03	1.3E+05	NA	NA	N	BSL
	7440-38-2	Arsenic	4.8E+00	9.5E+00	mg/kg	ECOSN002()	4 / 4	NA - NA	9.5E+00	1.7E+00	NA	NA	Y	ASL

TABLE 2.1 REF
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
REFERENCE AREA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Screening Toxicity Value (1)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (2)
	7440-39-3	Barium	2.9E+01	4.0E+01	mg/kg	ECOSN001(L)	4 / 4	NA - NA	4.0E+01	9.1E+03	NA	NA	N	BSL
	7440-43-9	Cadmium	4.7E-02	2.4E-01	mg/kg	SNST013()	16 / 20	1.0E-01 - 1.2E-01	2.4E-01	6.4E+01	NA	NA	N	BSL
	7440-70-2	Calcium	1.7E+03	2.1E+03	mg/kg	ECOSN002(L)	4 / 4	NA - NA	2.1E+03		NA	NA	N	NUT
	7440-47-3	Chromium (total)	7.9E+00	1.1E+01	mg/kg	ECOSN002()	4 / 4	NA - NA	1.1E+01	3.9E+02	NA	NA	N	BSL
	7440-48-4	Cobalt	3.7E+00	4.9E+00	mg/kg	ECOSN003(L)	4 / 4	NA - NA	4.9E+00	2.6E+03	NA	NA	N	BSL
	7440-50-8	Copper	4.9E+00	1.8E+01	mg/kg	SNST011()	20 / 20	NA - NA	1.8E+01	5.2E+03	NA	NA	N	BSL
	7439-89-6	Iron	8.6E+03	1.1E+04	mg/kg	ECOSN003()	4 / 4	NA - NA	1.1E+04	3.9E+04	NA	NA	N	BSL
	7439-92-1	Lead	8.6E+00	2.9E+01	mg/kg	SNST011()	20 / 20	NA - NA	2.9E+01		NA	NA	Y	NTX
	7439-95-4	Magnesium	3.4E+03	4.4E+03	mg/kg	ECOSN002()	4 / 4	NA - NA	4.4E+03		NA	NA	N	NUT
	7439-96-5	Manganese	6.3E+01	1.3E+02	mg/kg	ECOSN003()	4 / 4	NA - NA	1.3E+02	2.6E+03	NA	NA	N	BSL
	7439-97-6	Mercury	2.0E-02	9.3E-02	mg/kg	SNST011()	16 / 20	9.0E-02 - 1.1E-01	9.3E-02		NA	NA	Y	NTX
	22967-92-6	Methyl Mercury	9.9E-04	1.9E-03	mg/kg	SNST015()	4 / 16	6.5E-04 - 1.0E-03	1.9E-03	5.4E+00	NA	NA	N	BSL
	7440-02-0	Nickel	7.8E+00	2.2E+01	mg/kg	SNST008()	20 / 20	NA - NA	2.2E+01	2.6E+03	NA	NA	N	BSL
	7440-09-7	Potassium	1.9E+03	2.7E+03	mg/kg	ECOSN002(J^)	4 / 4	NA - NA	2.7E+03		NA	NA	N	NUT
	7440-22-4	Silver	8.0E-02	5.1E-01	mg/kg	SNST011()	16 / 20	4.1E-01 - 5.0E-01	5.1E-01	6.5E+02	NA	NA	N	BSL
	7440-23-5	Sodium	4.4E+03	5.6E+03	mg/kg	ECOSN002(_J)	4 / 4	NA - NA	5.6E+03		NA	NA	N	NUT
	7440-62-2	Vanadium	1.3E+01	1.9E+01	mg/kg	ECOSN002(L)	4 / 4	NA - NA	1.9E+01	9.1E+02	NA	NA	N	BSL
	7440-66-6	Zinc	3.5E+01	8.6E+01	mg/kg	SNST011()	20 / 20	NA - NA	8.6E+01	3.9E+04	NA	NA	N	BSL

(1) Screening Toxicity Value are the Site specific screening values. See Appendix C.

(2) Rationale Codes

Selection Reason: Above Screening Levels (ASL)
No Toxicity Information (NTX)

Deletion Reason: Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
J^ = Estimated value with potentially high bias
L = Estimated value.

TABLE 2.2 REF
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
REFERENCE AREA

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Screening Toxicity Value (1)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (2)
Reference Area		Pesticides/PCBs												
	319-85-7	BHC, beta-	3.5E-06	3.5E-06	mg/L	ECOSN001(LJ)	1 / 2	5.3E-05 - 5.3E-05	3.5E-06	2.7E-04	NA	NA	N	BSL
	319-86-8	BHC, delta-	3.3E-06	3.3E-06	mg/L	ECOSN001(LJ)	1 / 2	5.3E-05 - 5.3E-05	3.3E-06		NA	NA	Y	NTX
		Metals												
	7429-90-5	Aluminum	8.4E-01	9.8E-01	mg/L	ECOSN001(G_J)	2 / 2	NA - NA	9.8E-01	1.8E+02	NA	NA	N	BSL
	7440-38-2	Arsenic	3.3E-03	5.4E-03	mg/L	ECOSN001(L)	2 / 2	NA - NA	5.4E-03	2.9E-03	NA	NA	Y	ASL
	7440-39-3	Barium	6.1E-02	6.4E-02	mg/L	ECOSN001(LJv)	2 / 2	NA - NA	6.4E-02	1.3E+01	NA	NA	N	BSL
	7440-70-2	Calcium	7.8E+01	8.1E+01	mg/L	ECOSN001(Jv)	2 / 2	NA - NA	8.1E+01		NA	NA	N	NUT
	7440-50-8	Copper	5.9E-03	9.0E-03	mg/L	ECOSN001(L)	2 / 2	NA - NA	9.0E-03	7.4E+00	NA	NA	N	BSL
	7439-89-6	Iron	8.3E-02	1.1E-01	mg/L	ECOSN001()	2 / 2	NA - NA	1.1E-01	5.5E+01	NA	NA	N	BSL
	7439-92-1	Lead	5.7E-04	1.4E-02	mg/L	ECOSN001(J)	2 / 2	NA - NA	1.4E-02		NA	NA	Y	NTX
	7439-95-4	Magnesium	2.5E+02	2.6E+02	mg/L	ECOSN001(Jv)	2 / 2	NA - NA	2.6E+02		NA	NA	N	NUT
	7439-96-5	Manganese	5.9E-02	6.2E-02	mg/L	ECOSN001(Jv)	2 / 2	NA - NA	6.2E-02	3.7E+00	NA	NA	N	BSL
	7440-02-0	Nickel	2.9E-03	4.9E-03	mg/L	ECOSN001(G)	2 / 2	NA - NA	4.9E-03	3.7E+00	NA	NA	N	BSL
	7440-09-7	Potassium	1.6E+02	1.6E+02	mg/L	ECOSN001()	2 / 2	NA - NA	1.6E+02		NA	NA	N	NUT
	7782-49-2	Selenium	4.2E-03	4.2E-03	mg/L	ECOSN001(BG)	1 / 2	3.7E-03 - 3.7E-03	4.2E-03	9.2E-01	NA	NA	N	BSL
	7440-23-5	Sodium	1.8E+02	1.9E+03	mg/L	ECOSN001(Jv_J)	2 / 2	NA - NA	1.9E+03		NA	NA	N	NUT
	7440-28-0	Thallium	7.0E-03	9.5E-03	mg/L	ECOSN001(L)	2 / 2	NA - NA	9.5E-03	1.3E-02	NA	NA	N	BSL
	7440-62-2	Vanadium	1.5E-03	2.2E-03	mg/L	ECOSN001(L)	2 / 2	NA - NA	2.2E-03	1.3E+00	NA	NA	N	BSL
	7440-66-6	Zinc	1.4E-02	1.4E-02	mg/L	ECOSN001(L)	2 / 2	NA - NA	1.4E-02	5.5E+01	NA	NA	N	BSL

(1) Screening Toxicity Values are the Site specific screening values. See Appendix C.

(2) Rationale Codes

Selection Reason: No Toxicity Information (NTX)
Above Screening Level (ASL)

Deletion Reason: Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
Jv = Estimated value with potentially low bias.
L = Estimated value.
B = Result value is above instrument detection limit but below contract required detection limit (CRDL).
G = Elevated reporting limit due to matrix interference.

TABLE 2.3 REF
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
REFERENCE AREA

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Screening Toxicity Value (1)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (2)
Reference Area		SVOCs												
	100-52-7	Benzaldehyde	2.0E-02	3.7E+00	mg/kg	SNST008(E_DJ)	7 / 20	4.0E-02 - 2.0E-01	3.7E+00	7.1E+00	NA	NA	N	BSL
	117-81-7	bis(2-Ethylhexyl) phthalate	4.1E-02	5.2E+02	mg/kg	SNST008(DB)	5 / 26	4.0E-02 - 3.3E+02	5.2E+02	1.2E-01	NA	NA	Y	ASL
	105-60-2	Caprolactam	2.3E-02	4.6E-02	mg/kg	SNST008()	2 / 19	4.0E-02 - 2.0E-01	4.6E-02	3.5E+01	NA	NA	N	BSL
	84-66-2	Diethyl phthalate	1.1E-02	4.1E-02	mg/kg	SNST008(_J)	11 / 26	4.0E-02 - 4.0E+00	4.1E-02	5.7E+01	NA	NA	N	BSL
	84-74-2	Di-n-butylphthalate	3.2E-01	1.0E+00	mg/kg	SNST008(B)	2 / 26	4.0E-02 - 2.0E+00	1.0E+00	7.1E+00	NA	NA	N	BSL
	108-95-2	Phenol	3.0E-01	3.0E-01	mg/kg	SNST008(_J)	1 / 25	4.0E-02 - 2.0E+00	3.0E-01	4.2E+01	NA	NA	N	IFD
		PAHs												
	91-57-6	2-Methylnaphthalene	1.1E-02	1.3E-02	mg/kg	SNST006(J)	2 / 25	4.0E-02 - 2.0E+00	1.3E-02	1.4E+00	NA	NA	N	BSL
	91-20-3	Naphthalene	1.6E-02	3.2E-02	mg/kg	SNST008(J)	3 / 25	4.0E-02 - 2.0E+00	3.2E-02	1.4E+00	NA	NA	N	BSL
	85-01-8	Phenanthrene	2.5E-02	2.6E-02	mg/kg	SNST008(J_J), SNST008(J_J)	3 / 26	4.0E-02 - 2.0E+00	2.6E-02		NA	NA	Y	NTX
		Pesticides/PCBs												
	72-54-8	4,4'-DDD	1.2E-03	2.2E-03	mg/kg	ECOSN001(J)	2 / 26	6.0E-03 - 1.0E-02	2.2E-03	6.9E-03	NA	NA	N	BSL
	72-55-9	4,4'-DDE	2.5E-03	3.9E-03	mg/kg	ECOSN001(JCOL)	5 / 26	6.0E-03 - 1.0E-02	3.9E-03	4.9E-03	NA	NA	Y	ASL
	50-29-3	4,4'-DDT	1.6E-03	1.6E-03	mg/kg	ECOSN001(J)	1 / 26	6.0E-03 - 1.0E-02	1.6E-03	4.9E-03	NA	NA	N	IFD
	309-00-2	Aldrin	3.2E-03	3.3E-03	mg/kg	ECOSN001(JCOL)	2 / 26	6.0E-03 - 1.0E-02	3.3E-03	9.7E-05	NA	NA	Y	ASL
	11097-69-1	Aroclor-1254	3.1E-02	6.0E-02	mg/kg	SNST011(_J)	2 / 26	1.0E-02 - 1.0E-01	6.0E-02	8.3E-04	NA	NA	Y	ASL
	319-84-6	BHC, alpha-	7.2E-04	7.2E-04	mg/kg	ECOSN001(JCOL)	1 / 26	6.0E-03 - 1.0E-02	7.2E-04	2.6E-04	NA	NA	N	IFD
	319-85-7	BHC, beta-	2.0E-03	2.0E-03	mg/kg	ECOSN001(J)	1 / 25	1.3E-03 - 1.0E-02	2.0E-03	9.2E-04	NA	NA	N	IFD
	58-89-9	BHC, gamma- (Lindane)	1.1E-03	1.1E-03	mg/kg	ECOSN002(JCOL_J)	1 / 26	6.0E-03 - 1.0E-02	1.1E-03	1.3E-03	NA	NA	N	IFD
	5103-71-9	Chlordane, alpha-	9.5E-04	2.0E-03	mg/kg	ECOSN001(J_J)	3 / 26	6.0E-03 - 1.0E-02	2.0E-03	4.7E-03	NA	NA	Y	ASL
	5103-74-2	Chlordane, gamma-	2.1E-03	2.1E-03	mg/kg	ECOSN001(JCOL)	1 / 26	6.0E-03 - 1.0E-02	2.1E-03	4.7E-03	NA	NA	N	IFD
	60-57-1	Dieldrin	1.2E-03	3.8E-03	mg/kg	ECOSN001(J_J)	5 / 26	6.0E-03 - 1.0E-02	3.8E-03	1.0E-04	NA	NA	Y	ASL
	959-98-8	Endosulfan I	6.7E-04	6.7E-04	mg/kg	ECOSN001(JCOL)	1 / 26	6.0E-03 - 1.0E-02	6.7E-04	4.2E-01	NA	NA	N	IFD
	33213-65-9	Endosulfan II	1.7E-03	2.6E-03	mg/kg	ECOSN001(J_J)	3 / 26	6.0E-03 - 1.0E-02	2.6E-03	4.2E-01	NA	NA	N	BSL
	72-20-8	Endrin	1.2E-03	1.2E-03	mg/kg	ECOSN001(JCOL)	1 / 26	6.0E-03 - 1.0E-02	1.2E-03	2.1E-02	NA	NA	N	IFD
	7421-93-4	Endrin aldehyde	1.5E-03	2.3E-03	mg/kg	ECOSN001(JCOL)	4 / 26	6.0E-03 - 1.0E-02	2.3E-03		NA	NA	Y	NTX
	53494-70-5	Endrin ketone	1.2E-03	1.2E-03	mg/kg	ECOSN001(J)	1 / 26	6.0E-03 - 1.0E-02	1.2E-03		NA	NA	N	IFD
	76-44-8	Heptachlor	2.6E-03	2.6E-03	mg/kg	ECOSN001(JCOL)	1 / 26	6.0E-03 - 1.0E-02	2.6E-03	3.7E-04	NA	NA	N	IFD
	1024-57-3	Heptachlor epoxide	6.3E-04	3.9E-03	mg/kg	ECOSN001(J)	3 / 26	1.0E-02 - 2.2E-02	3.9E-03	1.8E-04	NA	NA	Y	ASL
	72-43-5	Methoxychlor	1.2E-03	1.2E-03	mg/kg	ECOSN001(J)	1 / 26	1.0E-02 - 1.1E-02	1.2E-03	3.5E-01	NA	NA	N	IFD
		Metals												
	7429-90-5	Aluminum	3.9E+00	7.0E+00	mg/kg	ECOSN001(B)	3 / 6	1.0E+01 - 1.0E+01	7.0E+00	7.1E+01	NA	NA	N	BSL
	7440-36-0	Antimony	3.7E-01	4.0E-01	mg/kg	ECOSN002(B)	2 / 26	2.0E-02 - 1.0E+00	4.0E-01	2.8E-02	NA	NA	Y	ASL
	7440-38-2	Arsenic	1.4E-01	2.2E+00	mg/kg	SNST008()	24 / 26	4.5E-01 - 7.2E-01	2.2E+00	1.1E-03	NA	NA	Y	ASL
	7440-39-3	Barium	2.5E-01	5.7E-01	mg/kg	ECOSN001(B)	6 / 6	NA - NA	5.7E-01	5.0E+00	NA	NA	N	BSL
	7440-43-9	Cadmium	1.0E-02	2.0E-02	mg/kg	SNST006(B), SNST006(B)	6 / 26	1.0E-02 - 5.0E-01	2.0E-02	3.5E-02	NA	NA	Y	ASL

TABLE 2.3 REF
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
REFERENCE AREA

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Screening Toxicity Value (1)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (2)
	7440-70-2	Calcium	5.6E+02	2.1E+03	mg/kg	ECOSN001(_J)	6 / 6	NA - NA	2.1E+03		NA	NA	N	NUT
	7440-50-8	Copper	2.8E-01	9.4E-01	mg/kg	SNST008(_J)	26 / 26	NA - NA	9.4E-01	2.8E+00	NA	NA	N	BSL
	7439-89-6	Iron	3.4E+00	1.9E+01	mg/kg	ECOSN001(_J)	8 / 26	1.7E+00 - 7.9E+00	1.9E+01	2.1E+01	NA	NA	N	BSL
	7439-92-1	Lead	4.0E-02	3.6E-01	mg/kg	SNST006(_J)	18 / 26	2.0E-02 - 8.0E-01	3.6E-01		NA	NA	Y	NTX
	7439-95-4	Magnesium	2.9E+02	3.6E+02	mg/kg	ECOSN001()	6 / 6	NA - NA	3.6E+02		NA	NA	N	NUT
	7439-96-5	Manganese	4.7E-01	1.1E+00	mg/kg	ECOSN002()	6 / 6	NA - NA	1.1E+00	1.4E+00	NA	NA	N	BSL
	7439-97-6	Mercury	2.3E-02	1.4E-01	mg/kg	SNST011()	26 / 26	NA - NA	1.4E-01	7.1E-03	NA	NA	Y	ASL
	7440-02-0	Nickel	2.6E-01	2.6E-01	mg/kg	SNST008()	1 / 26	3.0E-02 - 4.0E+00	2.6E-01	1.4E+00	NA	NA	N	IFD
	7440-09-7	Potassium	3.6E+03	4.7E+03	mg/kg	ECOSN001()	6 / 6	NA - NA	4.7E+03		NA	NA	N	NUT
	7782-49-2	Selenium	4.2E-01	1.4E+00	mg/kg	ECOSN001()	26 / 26	NA - NA	1.4E+00	3.5E-01	NA	NA	Y	ASL
	7440-22-4	Silver	2.0E-02	2.0E-02	mg/kg	SNST008(B_J)	1 / 26	1.0E-02 - 1.0E+00	2.0E-02	3.5E-01	NA	NA	N	IFD
	7440-66-6	Zinc	3.3E+00	7.0E+00	mg/kg	SNST006()	26 / 26	NA - NA	7.0E+00	2.1E+01	NA	NA	N	BSL

(1) Screening Toxicity Values are the Site specific screening values. See Appendix C.

(2) Rationale Codes

Selection Reason: Above Screening Levels (ASL)
No Toxicity Information (NTX)

Deletion Reason: Infrequent Detection (IFD)
Essential Nutrient (NUT)
Below Screening Level (BSL)

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
E = Coumpound concentration exceeds the calibration range.
B = Result value is above instrument detection limit but below contract required detection limit (CRDL).
D = Result represents diluted sample analysis.
COL = 40% difference between primary column and confirmation column results. The lower of the 2 results

TABLE 2.4 REF
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
REFERENCE AREA

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish

Exposure Point	CAS Number	Chemical	Minimum Concentration	Maximum Concentration	Units	Location of Maximum Concentration (Qualifier)	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Screening Toxicity Value (1)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for Contaminant Deletion or Selection (2)
Reference Area		SVOCs												
	106-44-5	4-Methylphenol	3.7E-02	3.7E-02	mg/kg	SNSTC03(J)	1 / 17	4.0E-02 - 4.0E-01	3.7E-02	3.5E-01	NA	NA	N	BSL
	100-52-7	Benzaldehyde	3.7E-02	4.9E-01	mg/kg	SNSTC02()	15 / 17	4.0E-02 - 4.0E-02	4.9E-01	7.1E+00	NA	NA	N	BSL
	117-81-7	bis(2-Ethylhexyl) phthalate	4.2E-01	4.2E-01	mg/kg	SNST006(B_J)	1 / 17	4.0E-02 - 2.0E+00	4.2E-01	1.2E-01	NA	NA	Y	ASL
	85-68-7	Butylbenzyl phthalate	4.4E+00	4.4E+00	mg/kg	SNST006(E_J)	1 / 17	4.0E-02 - 2.0E+00	4.4E+00	1.4E+01	NA	NA	N	BSL
	84-66-2	Diethyl phthalate	1.2E-02	1.2E-02	mg/kg	SNST006(J)	1 / 18	4.0E-02 - 4.0E+00	1.2E-02	5.7E+01	NA	NA	N	BSL
	108-95-2	Phenol	3.4E-02	6.1E-02	mg/kg	SNSTC01(J)	3 / 18	4.0E-02 - 2.0E+00	6.1E-02	4.3E+01	NA	NA	N	BSL
		PAHs												
	91-20-3	Naphthalene	1.2E-02	1.2E-02	mg/kg	SNST006(J)	1 / 18	4.0E-02 - 2.0E+00	1.2E-02	1.4E+00	NA	NA	N	BSL
		Dioxins/Furans												
	57117-41-6	1,2,3,7,8-PeCDF	9.2E-08	9.2E-08	mg/kg	SNST006(J)	1 / 6	1.3E-07 - 1.1E-06	Dioxins and furans are multiplied by 2,3,7,8-TCDD toxic equivalency factors (TEFs) in order					
	57117-31-4	2,3,4,7,8-PeCDF	1.0E-07	1.0E-07	mg/kg	SNST006(J)	1 / 6	1.3E-07 - 1.0E-06	to compare a total TCDD equivalent concentration to the screening toxicity value.					
	51207-31-9	2,3,7,8-TCDF	2.2E-07	2.2E-06	mg/kg	SNSTC03()	4 / 6	2.4E-07 - 3.0E-07	The maximum TCDD equivalent concentration of 1.3E-06 mg/kg exceeds the					
	3268-87-9	OCDD	1.7E-06	1.2E-05	mg/kg	SNST011()	5 / 6	2.4E-06 - 2.4E-06	screening toxicity value of 1.1E-8 mg/kg.					
	39001-02-0	OCDF	5.0E-06	5.0E-06	mg/kg	SNST008()	1 / 6	4.0E-07 - 7.3E-07						
		Metals												
	7429-90-5	Aluminum	2.9E+01	2.9E+01	mg/kg	ECOSN001(_J)	1 / 1	NA - NA	2.9E+01	7.1E+01	NA	NA	N	BSL
	7440-36-0	Antimony	2.0E-02	7.0E-02	mg/kg	SNSTC03(B_J)	3 / 18	2.0E-02 - 1.0E+00	7.0E-02	2.8E-02	NA	NA	Y	ASL
	7440-38-2	Arsenic	3.5E-01	9.7E-01	mg/kg	SNST008(_J)	17 / 18	4.9E-01 - 4.9E-01	9.7E-01	1.1E-03	NA	NA	Y	ASL
	7440-39-3	Barium	1.0E+02	1.0E+02	mg/kg	ECOSN001()	1 / 1	NA - NA	1.0E+02	5.0E+00	NA	NA	Y	ASL
	7440-43-9	Cadmium	1.0E-02	5.0E-02	mg/kg	SNSTC03(B_J), SNSTC02(_J)	8 / 18	1.0E-02 - 5.0E-01	5.0E-02	3.5E-02	NA	NA	Y	ASL
	7440-70-2	Calcium	4.8E+04	4.8E+04	mg/kg	ECOSN001(_J)	1 / 1	NA - NA	4.8E+04		NA	NA	N	NUT
	7440-47-3	Chromium (total)	1.0E-01	6.1E-01	mg/kg	SNST008(_J)	17 / 18	1.0E+00 - 1.0E+00	6.1E-01	2.1E-01	NA	NA	Y	ASL
	7440-50-8	Copper	5.8E+00	1.4E+01	mg/kg	SNST008(_J)	18 / 18	NA - NA	1.4E+01	2.8E+00	NA	NA	Y	ASL
	7439-89-6	Iron	3.7E+00	6.8E+01	mg/kg	SNST011(_J)	18 / 18	NA - NA	6.8E+01	2.1E+01	NA	NA	Y	ASL
	7439-92-1	Lead	5.0E-02	1.8E+00	mg/kg	SNST006(_J)	17 / 18	2.0E-02 - 2.0E-02	1.8E+00		NA	NA	Y	NTX
	7439-95-4	Magnesium	2.3E+03	2.3E+03	mg/kg	ECOSN001()	1 / 1	NA - NA	2.3E+03		NA	NA	N	NUT
	7439-96-5	Manganese	1.7E+02	1.7E+02	mg/kg	ECOSN001()	1 / 1	NA - NA	1.7E+02	1.4E+00	NA	NA	Y	ASL
	7439-97-6	Mercury	7.0E-03	6.1E-02	mg/kg	SNSTC03()	17 / 18	2.0E-03 - 2.0E-03	6.1E-02	7.1E-03	NA	NA	Y	ASL
	22967-92-6	Methyl Mercury	5.0E-03	1.1E-02	mg/kg	SNST008()	8 / 8	NA - NA	1.1E-02	7.1E-03	NA	NA	Y	ASL
	7440-02-0	Nickel	6.0E-02	1.2E-01	mg/kg	SNSTC01(_J)	7 / 18	1.1E-01 - 4.0E+00	1.2E-01	1.4E+00	NA	NA	Y	ASL
	7440-09-7	Potassium	1.9E+03	1.9E+03	mg/kg	ECOSN001()	1 / 1	NA - NA	1.9E+03		NA	NA	N	NUT
	7782-49-2	Selenium	2.2E-01	7.7E-01	mg/kg	SNSTC01(_J)	18 / 18	NA - NA	7.7E-01	3.5E-01	NA	NA	Y	ASL
	7440-22-4	Silver	1.0E-02	1.3E-01	mg/kg	SNSTC02(_J)	16 / 18	4.0E-02 - 1.0E+00	1.3E-01	3.5E-01	NA	NA	Y	ASL
	7440-23-5	Sodium	4.7E+03	4.7E+03	mg/kg	ECOSN001()	1 / 1	NA - NA	4.7E+03		NA	NA	N	NUT
	7440-66-6	Zinc	7.8E+00	2.9E+01	mg/kg	SNSTC03(_J)	18 / 18	NA - NA	2.9E+01	2.1E+01	NA	NA	Y	ASL

TABLE 2.4 REF
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
CALCASIEU ESTUARY - LAKE CHARLES, LA
REFERENCE AREA

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish

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

(1) Screening Toxicity Values are the Site specific screening values. See Appendix C.

(2) Rationale Codes

Selection Reason: Above Screening Levels (ASL)
No Toxicity Information (NTX)

Deletion Reason: Below Screening Level (BSL)
Essential Nutrient (NUT)

Definitions: NA = Not Available
COPC = Chemical of Potential Concern
ARAR -TBC = Applicable or Relevant and Appropriate Requirement -To Be Considered
J = Estimated value.
E = Coumpound concentration exceeds the calibration range.
B = Result value is above instrument detection limit but below contract required detection limit (CRDL).

TABLE 3.1 REF
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
REFERENCE AREA

Scenario Timeframe:	Current/Future
Medium:	Sediment
Exposure Medium:	Sediment
Exposure Point:	Reference Area

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
PAHs								
Benzo(a)pyrene	mg/kg	7.1E-02	(2)	4.3E-02	4.3E-02	mg/kg	Max	(1)
Benzo(g,h,i)perylene	mg/kg	7.1E-02	(2)	3.6E-02	3.6E-02	mg/kg	Max	(1)
Pesticides/PCBs								
Aroclor-1254	mg/kg	7.9E-02	1.2E-01	1.0E+00	1.2E-01	mg/kg	95% UCL-T	(1)
Dioxins/Furans								
2,3,7,8-TCDD Equivalents	mg/kg	3.1E-06	(2)	5.5E-06	5.5E-06	mg/kg	Max	(1)
Metals								
Arsenic	mg/kg	7.4E+00	(2)	9.5E+00	9.5E+00	mg/kg	Max	(1)
Lead	mg/kg	1.9E+01	2.3E+01	2.9E+01	2.3E+01	mg/kg	95% UCL-T	(1)
Mercury	mg/kg	6.2E-02	7.9E-02	9.3E-02	7.9E-02	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.
(2) UCL was not calculated because less than 10 sample results were available for this chemical.

TABLE 3.2 REF
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
REFERENCE AREA

Scenario Timeframe:	Current/Future
Medium:	Surface Water
Exposure Medium:	Surface Water
Exposure Point:	Reference Area

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
Pesticides/PCBs								
BHC, delta-	mg/L	3.3E-06	(2)	3.3E-06	3.3E-06	mg/L	Max	(1)
Metals								
Arsenic	mg/L	4.4E-03	(2)	5.4E-03	5.4E-03	mg/L	Max	(1)
Lead	mg/L	1.4E-02	(2)	1.4E-02	1.4E-02	mg/L	Max	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).

(1) Concentrations were assumed to be log-normally distributed. See text.

(2) UCL was not calculated because less than 10 sample results were available for this chemical.

TABLE 3.3 REF
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
REFERENCE AREA

Scenario Timeframe:	Current/Future
Medium:	Fish
Exposure Medium:	Fish
Exposure Point:	Reference Area

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
SVOCs								
bis(2-Ethylhexyl) phthalate	mg/kg	4.3E+01	1.2E+03	5.2E+02	5.2E+02	mg/kg	Max	(1)
PAHs								
Phenanthrene	mg/kg	2.2E-01	4.9E-01	2.6E-02	2.6E-02	mg/kg	Max	(1)
Pesticides/PCBs								
4,4'-DDE	mg/kg	4.6E-03	5.0E-03	3.9E-03	3.9E-03	mg/kg	Max	(1)
Aldrin	mg/kg	4.6E-03	5.0E-03	3.3E-03	3.3E-03	mg/kg	Max	(1)
Aroclor-1254	mg/kg	1.7E-02	2.8E-02	6.0E-02	2.8E-02	mg/kg	95% UCL-T	(1)
Chlordane, alpha-	mg/kg	4.5E-03	5.2E-03	2.0E-03	2.0E-03	mg/kg	Max	(1)
Dieldrin	mg/kg	4.5E-03	5.2E-03	3.8E-03	3.8E-03	mg/kg	Max	(1)
Endrin aldehyde	mg/kg	4.5E-03	5.2E-03	2.3E-03	2.3E-03	mg/kg	Max	(1)
Heptachlor epoxide	mg/kg	5.1E-03	7.1E-03	3.9E-03	3.9E-03	mg/kg	Max	(1)
Metals								
Antimony	mg/kg	1.0E-01	2.1E-01	4.0E-01	2.1E-01	mg/kg	95% UCL-T	(1)
Arsenic	mg/kg	8.3E-01	1.3E+00	2.2E+00	1.3E+00	mg/kg	95% UCL-T	(1)
Cadmium	mg/kg	5.6E-02	1.3E-01	2.0E-02	2.0E-02	mg/kg	Max	(1)
Lead	mg/kg	1.8E-01	4.1E-01	3.6E-01	3.6E-01	mg/kg	Max	(1)
Mercury	mg/kg	7.0E-02	8.6E-02	1.4E-01	8.6E-02	mg/kg	95% UCL-T	(1)
Selenium	mg/kg	6.8E-01	7.8E-01	1.4E+00	7.8E-01	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.
Note: Total concentration of arsenic in fish is presented in this table. It is assumed that only 30% of the concentration shown is in the inorganic form.

TABLE 3.4 REF
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
CALCASIEU ESTUARY - LAKE CHARLES, LA
REFERENCE AREA

Scenario Timeframe:	Current/Future
Medium:	Shellfish
Exposure Medium:	Shellfish
Exposure Point:	Reference Area

Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL	Maximum Detected Concentration	Exposure Point Concentration			
					Value	Units	Statistic	Rationale
SVOCs								
bis(2-Ethylhexyl) phthalate	mg/kg	1.2E-01	2.3E-01	4.2E-01	2.3E-01	mg/kg	95% UCL-T	(1)
Dioxins/Furans								
2,3,7,8-TCDD Equivalents	mg/kg	6.1E-07	(2)	1.3E-06	1.3E-06	mg/kg	Max	(1)
Metals								
Antimony	mg/kg	4.7E-02	6.3E-02	7.0E-02	6.3E-02	mg/kg	95% UCL-T	(1)
Arsenic	mg/kg	5.7E-01	6.7E-01	9.7E-01	6.7E-01	mg/kg	95% UCL-T	(1)
Barium	mg/kg	1.0E+02	(2)	1.0E+02	1.0E+02	mg/kg	Max	(1)
Cadmium	mg/kg	3.4E-02	6.2E-02	5.0E-02	5.0E-02	mg/kg	Max	(1)
Chromium (total)	mg/kg	3.2E-01	4.6E-01	6.1E-01	4.6E-01	mg/kg	95% UCL-T	(1)
Copper	mg/kg	9.9E+00	1.1E+01	1.4E+01	1.1E+01	mg/kg	95% UCL-T	(1)
Iron	mg/kg	2.6E+01	5.1E+01	6.8E+01	5.1E+01	mg/kg	95% UCL-T	(1)
Lead	mg/kg	7.5E-01	4.3E+00	1.8E+00	1.8E+00	mg/kg	Max	(1)
Manganese	mg/kg	1.7E+02	(2)	1.7E+02	1.7E+02	mg/kg	Max	(1)
Mercury	mg/kg	2.3E-02	5.3E-02	6.1E-02	5.3E-02	mg/kg	95% UCL-T	(1)
Methyl Mercury	mg/kg	7.5E-03	(2)	1.1E-02	1.1E-02	mg/kg	Max	(1)
Nickel	mg/kg	2.0E-01	2.2E-01	1.2E-01	1.2E-01	mg/kg	Max	(1)
Selenium	mg/kg	5.2E-01	6.5E-01	7.7E-01	6.5E-01	mg/kg	95% UCL-T	(1)
Silver	mg/kg	8.3E-02	1.5E-01	1.3E-01	1.3E-01	mg/kg	Max	(1)
Zinc	mg/kg	1.5E+01	1.9E+01	2.9E+01	1.9E+01	mg/kg	95% UCL-T	(1)

Statistics: Maximum Detected Value (Max); 95% UCL of Lognormal Data (95% UCL-T).
(1) Concentrations were assumed to be log-normally distributed. See text.
(2) UCL was not calculated because less than 10 sample results were available for this chemical.
Note: Total concentration of arsenic in shellfish is presented in this table. It is assumed that only 30% of the concentration shown is in the inorganic form.