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December 1990

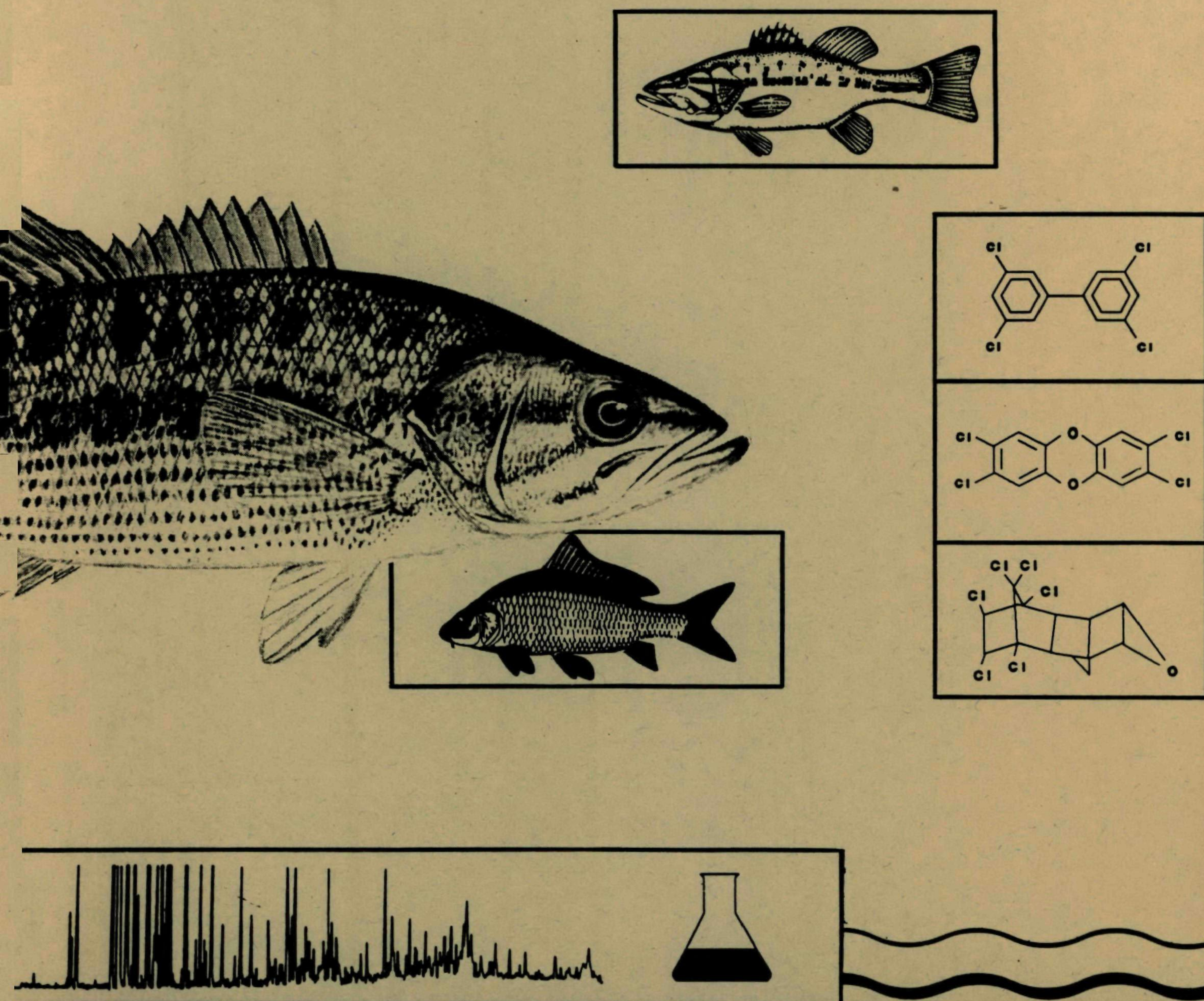
Water

EPA

BIOACCUMULATION OF SELECTED POLLUTANTS IN FISH

A National Study

Volume II



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BIOACCUMULATION OF SELECTED POLLUTANTS IN FISH - A NATIONAL STUDY

Volume II

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APPENDIX C

PROFILES OF BIOACCUMULATION STUDY CHEMICALS

Dioxins/Furans

Dioxin: 2,3,7,8 Tetrachloro-dibenzo-p-dioxin
1,2,3,7,8 Pentachlorodibenzo-dioxin
Hexachlorodibenzodioxins
Furans

Other Xenobiotics

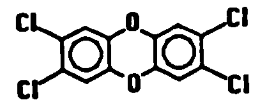
Biphenyl
Chlordane
Chlorpyrifos
p,p ' -DDE
Dicofol
Dieldrin
Diphenyl Disulfide
Endrin
Heptachlor
Heptachlor
Heptachlor Epoxide
Hexachlorobenzene
α -Hexachlorocyclohexane
Isopropalin

Other Xenobiotics (cont.)

Lindane
Mercury
Methoxychlor
Mirex
Nitrofen
Nonachlor
Octachlorostyrene
Oxychlordane
Pentachloroanisole
Pentachlorobenzene
Pentachloronitrobenzene
Pentachlorophenol
Perthane
Polychlorinated Biphenyls (PCBs)
1,2,3,4 and 1,2,3,5 Tetrachlorobenzene
1,2,4,5 Tetrachlorobenzene
1,2,3 Trichlorobenzene
1,2,4 Trichlorobenzene
1,3,5 Trichlorobenzene
Trifluralin

DIOXIN: 2,3,7,8 TCDD

CAS No.: 1746-01-6
CAS Preferred Nomenclature:
Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-



$C_{12}H_4Cl_4O_2$, TCDD

Empirical Formula: $C_{12}H_4Cl_4O_2$

Synonyms and Common Names:
- 2,3,7,8 Tetrachlorodibenzo-p-dioxin
- TCDD or TDD

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish) for a 10^{-6} cancer risk (ATSDR, 1987):
  0.000014 ng/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):
  None established at present

- EPA Drinking Water Health Advisories (U.S. EPA, 1988)
  child (10 kg):
  1-day exposure = 1 ng/L
  10-day exposure = 0.1 ng/L
  longer-term exposure = 0.01 ng/L
  adult (70 kg):
  longer-term exposure = 0.04 ng/L

- Food and Drug Administration Health Advisory for Fish* (U.S. EPA, 1987c):
  <25 parts per trillion (ppt), no serious health concerns

  25-50 ppt, restrict consumption to twice per month

  >50 ppt, consumption not recommended

  *Guidance developed for fish caught in the Great Lakes for use in interstate commerce only

- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present

- Center for Disease Control Level of Concern in Soil for residential areas (U.S. EPA, 1987c):
  1 ppb

Use Restrictions and Bans:

- EPA has required manufacturers to reduce concentrations of TCDD in chemical products; most chemicals now have less than 0.02 μ g/g (ATSDR, 1987). Some compounds such as 2,4,5 T are no longer produced in the U.S.

SOURCES OF DIOXIN

Dioxin Formation:

- TCDD is one of 75 types of dioxin formed as unwanted impurities during the manufacture of other organic compounds including herbicides containing 2,4,5 trichlorophenoxy acids (2,4,5-T), 2,4,5 trichlorophenol used in the defoliant Agent Orange, hexachlorophene formerly used as a germacide, pentachlorophenol and PCBs. Other dioxins which have been studied include 1,2,3,7,8 PeCDD and two of the HxCDDs (1,2,3,6,7,8 and 1,2,3,7,8,9 HxCDD). TCDD is the most toxic and most studied of all the isomers.
- Dioxin can be generated as a by-product of paper and pulp mill bleaching processes which use chlorine. It can then be released to aquatic systems in various wastewater streams and sludges generated by these industries (U.S. EPA, 1988; NCASI, 1987).

Uses of Dioxin:

- No commercial production or importation of dioxin in the U.S., but small quantities are produced for research purposes (NTIS, 1980 and ATSDR, 1987).

Other Sources:

- Examples of levels of dioxin found in other organic compounds are listed below (ATSDR), 1987):
  - Until 1960, 2,4,5 T had up to 100 μ g/g g/g TCDD, now <0.1 μ g/g
  - Agent Orange had 0.02 to 54 μ g/g
  - Hexachlorophene had 0.2 to 0.5 ng/g
  - Pentachlorophenol has <0.1 μ g/g of other dioxin isomers but no TCDD
  - Polychlorinated Biphenyls (PCBs) also contain TCDD. Oil containing PCBs was formerly used in electrical transformers. Utilities are gradually replacing these old transformers.

- Incineration of municipal and industrial wastes at too low a temperature (< 800°C) can produce dioxin. (Verschueren, 1983; ATSDR, 1987; U.S. EPA, 1987b).
- Derivatives of pentachlorophenol and other woodtreating wastes (NCASI, 1987; U.S. EPA, 1987b).
- Currently, EPA is investigating possible correlations between dioxin and nearby petroleum refineries which use chlorine or chlorinated solvents in the catalytic reforming process.
- Other sources of dioxin include fires and/or spills involving chlorinated benzenes and PCBs, particularly fires involving transformers or capacitors, burning of wood in presence of chlorine, and automobile exhaust from leaded gasoline (ATSDR, 1987).

FATE OF DIOXIN IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, dioxin is only slightly soluble in water (Aq. sol. = 0.000317) and strongly sorbs to soil (K_{ow} = 10,500,000). It has a high potential for bioaccumulation (BCF = 5,000), although experimental data have shown much higher values (e.g., over 9,000).

Persistence:

- Because dioxin strongly sorbs to sediment, it persists in soils and aquatic systems. Photolysis can occur, aided by photosensitizers in surface water (half-life 1 to 1.5 years) or in the top few inches of soil (half-life 1 to 3 years) (U.S. EPA, 1985b and Freeman, et al., 1986). Hydrolysis is not thought to be important (Callahan, et al., 1979). Biotransformation of dioxin in soils is slow (ATSDR, 1987).

HEALTH EFFECTS

Carcinogenicity:

- Oral exposure causes increased incidence of tumors in liver, tongue, hard palate and lungs in rats (Kociba et al., 1978a,b) and in thyroid and adrenal glands in mice (NTP, 1982a,b). EPA classification is B2, a probable human carcinogen (IRIS, 1989). IARC classification 2b (IARC, 1982).
- In combination with herbicides such as trichlorophenols, dioxin is classified by the EPA as B1, limited evidence of human carcinogenicity (IRIS, 1989).

Mutagenic Activity:

- Mutagenicity tests have produced inconclusive results. Bacterial tests were negative as were most tests using rats and mice except when bone marrow cells were used (Green et al., 1977; Meyne et al., 1985). Early tests using yeast cells showed positive results (IARC, 1982).

Reproductive Effects:

- Adverse reproductive effects are caused in a variety of animals:
  - fetotoxic in monkeys (U.S. EPA, 1985b)
  - embryotoxic and teratogenic in mice, rabbits, ferrets and rats (IARC, 1977; U.S. EPA, 1985b)
  - reduced fertility and spontaneous abortions in monkeys (ATSDR, 1987)
  - birth defects in mice (e.g., cleft palates and kidney abnormalities) (U.S. EPA, 1985b)

Other Toxicological Effects:

- Major observed toxic effect on humans is chloracne (U.S. EPA, 1985b).
- Human exposure through herbicides and other TCDD-contaminated chemicals can also cause altered liver function, porphyria, neurotoxicity, and hyperpigmentation (U.S. EPA, 1985b).
- Toxic effects to acutely exposed animals include extreme weight loss, liver and thymus damage, immunotoxicity and hepatotoxicity (IARC, 1977; U.S. EPA, 1985a).

Toxicological Effects Indices:

- Cancer potency factor (CPF): 1.56×10^{5} $(mg/kg/day)^{-1}$. (U.S. EPA, 1986a).
- Reference Dose (RfD): 1×10^{-6} μg/kg/day (ATSDR, 1987).
- Oral LD_{50}: 0.6 μg/kg in guinea pigs ; 5,500 μg/kg in hamsters (U.S. EPA 1985b).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight (g/mole):	321.97	Windholz, 1983
Physical State @ 20°C:	solid, colorless needles with no odor	Windholz, 1983
Melting Point (°C):	305	Schroy et al., 1985
Boiling Point (°C):	412.2	Schroy et al., 1985
Density (g/mL):	1.827 (est.)	Schroy et al., 1985
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	1.93×10^{-5} (22°C) 3.17×10^{-4} (25°C)	Marple et al., 1986 Schroy et al., 1985
Vapor Pressure, P (mm Hg):	1.4×10^{-9} (25°C)	Schroy et al., 1985
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	2.1×10^{-6}	Schroy et al., 1985
Log (Octanol-Water Partition Coefficient), log K_{ow}:	6.15-7.28	U.S. EPA, 1985a
Soil Adsorption Coefficient, K_{oc}(ml/g):	6.0-7.39	U.S. EPA, 1985a
Fish Bioconcentration Factor, BCF:	best estimate, 5000* 7900-9300, fathead minnows	U.S. EPA, 1986a U.S. EPA, 1985b

* Value used for estimating aquatic effects

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Callahan, M.A., M.W. Slimak, N.W. Gabel, I.P. May, C.F. Fowler, J.R. Freed, P. Jennings, R.L. Durfee, F.C. Whitmore, B. Maestri, W.R. Mabey, B.R. Holt, and C. Gould. 1979. Water-Related Environmental Fate of 129 Priority Pollutants. Office of Water Planning and Standards, U.S. Environmental Protection Agency. EPA-440/4-79-029a.

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Kociba, R.J., D.G. Keyes, J.E. Beyer, and R.M. Carreon. 1978b. Toxicologic Studies of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) in Rats. Toxicol. Occup. Med. (De Toxicol. Environ. Sci.), 4:281-287. (Cited in U.S. EPA 1985a.)

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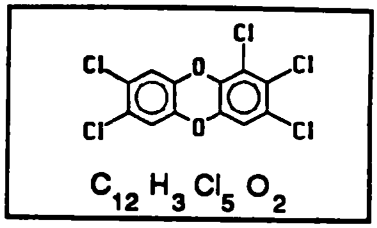
1,2,3,7,8 PeCDD (PENTACHLORODIBENZODIOXIN)

CAS No.: 40321-76-4
CAS Preferred Nomenclature:
Dibenzo-[b,e](1,4,)dioxin,
1,2,3,7,8-pentachloro-



Empirical formula: $C_{12}H_3Cl_5O_2$

Synonyms and Common Names:
- 1,2,3,7,8 Pentachlorodibenzodioxin
- PeCDD

REGULATORY STATUS

- None established at present.

SOURCES OF PeCDD

Formation of PeCDD:

- PeCDD is not intentionally produced for any commercial purposes in the U.S. It is an unwanted byproduct of the manufacture of other organic compounds, as is 2,3,7,8 TCDD. PeCDD can also be formed during the incineration of municipal and industrial wastes at low temperatures ($<800^{o}C$) (U.S. EPA, 1984; ATSDR, 1987).
- See "Dioxin:2,3,7,8 TCDD" and "Hexachlorodibenzodioxins" for more information on other dioxins.

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, PeCDD is only slightly soluble in water and strongly sorbs to soil ($K_{ow} \cong 7x10^6$). It also has a strong potential for bioaccumulation, although experimental data on specific BCF values were not found.

Persistence:

- Photolysis of PeCDD can occur. In hexane,the half-life of PeCDD exposed to sunlight was reported to be 5.4 hours (U.S. EPA, 1984).

PeCDD OBSERVED IN THE ENVIRONMENT

- PeCDD has been detected in fish tissues (at unspecified concentrations), but not in drinking water (U.S. EPA, 1984).

HEALTH EFFECTS

Toxicological Effects:

- No chronic exposure studies have been conducted with PeCDD. This includes a lack of studies on the potential carcinogenicity, teratogenicity or mutagenicity of the compound.
- Other forms of dioxin are extremely toxic and carcinogenic in animals. The acute LD50 value of PeCDD suggests that it is biologically less active than TCDD (2,3,7,8 TCDD), but there are insufficient data to quantitatively estimate the health risk from PeCDD exposure (U.S. EPA, 1984; ATSDR, 1987). See "Dioxin: 2,3,7,8 TCDD", for more information.

Toxicological Effects Indices:

- Oral LD_{50} values: guinea pigs, 0.009 μmol/kg; mice, 0.94 μmol/kg. U.S. EPA, 1984.

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	356.5	U.S. EPA, 1984
Melting Point (^{o}C):	240-241	U.S. EPA, 1984
Water Solubility, S ($\mu g/L$):	0.04 (est.)	U.S. EPA, 1984
K_{ow} (Octanol-Water Partition Coefficient):	$7x10^{6}$ (est.)	U.S. EPA, 1984
Soil Adsorption Coefficient, K_{oc} (ml/g):	$5x10^{6}$	U.S. EPA, 1984

<u>**REFERENCES**</u>

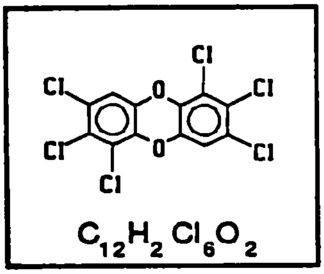
ATSDR. Agency for Toxic Substances and Disease Registry. 1987. Draft Toxicological Profile for 2,3,7,8-TCDD (Dioxin). U.S. Public Health Service.

U.S. EPA. 1984. Health Assessment Document for Polychlorinated Dibenzo-pDioxins. Office of Health and Environmental Assessment, Washington, D.C. EPA/600/8-84/014A.

HEXACHLORODIBENZODIOXINS

<u>**1,2,3,6,7,8-HxCDD:**</u>

CAS No.: 57653-85-7
CAS Preferred Nomenclature:
Dibenzo-[b,e](1,4,) dioxin,
1,2,3,6,7,8-hexachloro-

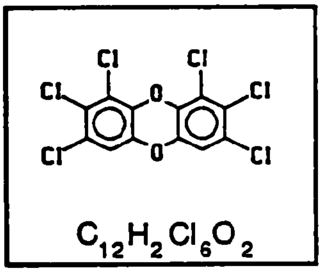


Empirical formula: $C_{12}H_2Cl_6O_2$

Synonyms and Common Names:
- 1,2,3,6,7,8 Hexachlorodibenzodioxin
- HxCDD
- HxDD

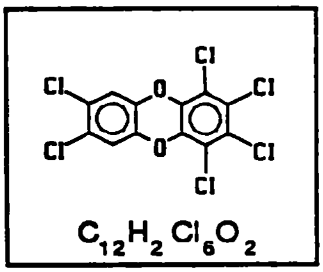
<u>**1,2,3,7,8,9-HxCDD:**</u>

CAS No.: 19408-74-3
CAS Preferred Nomenclature:
Dibenzo-[b,e](1,4,)dioxin,
1,2,3,7,8,9 hexachloro-



Empirical formula: $C_{12}H_2Cl_6O_2$

Synonyms and Common Names:
- 1,2,3,7,8,9 Hexachlorodibenzodioxin
- HxCDD
- HxDD



<u>**1,2,3,4,7,8-HxCDD:**</u>

CAS No.: 39227-28-6
CAS Preferred Nomenclature:
Dibenzo-[b,e](1,4)dioxin,
1,2,3,4,7,8-hexachloro-

Empirical formula: $C_{12}H_2Cl_6O_2$

Synonyms and Common Names:
- 1,2,3,4,7,8 Hexachlorodibenzodioxin
- HxCDD
- HxDD

REGULATORY STATUS

- None established at present

SOURCES OF HxCDD

Total HxCDD Produced:

- The HxCDDs are not intentionally produced for any commercial purposes in the U.S.
- The HxCDDs, as well as other forms of dioxin, are produced as unwantedcontaminants of organic compounds, particularly chlorophenols such as pentachlorophenol (U.S. EPA, 1984; ATSDR, 1987).
- See "Dioxin:2,3,7,8 TCDD" and "1,2,3,7,8 PeCDD" for more information on other dioxins.

FATE IN ENVIRONMENT

Partitioning:

- Based on their physical/chemical properties, the HxCDDs are only slightly soluble in water and strongly sorb to soil ($K_{ow} = 4.2x10^7$). They also have strong potential for bioaccumulation (BCF for 1,2,3,7,8,9 - HxCDD = 5,800).

Persistence:

- Photolysis of the HxCDDs can occur. In n-hexadecane, the half-life of 1,2,3,6,7,8-HxCDD exposed to a sunlamp was 6.8 hours. Two other HxCDDs, 1,2,3,6,7,9- and 1,2,4,6,7,9-HxCDD (in hexane) had half-lives, respec-tively, of 17 and 47 hours, when exposed to sunlight (U.S. EPA, 1984).

HxCDDs OBSERVED IN THE ENVIRONMENT

- HxCDDs (unspecified isomers) have been detected in fish, gelatin and human milk but not in drinking water. Concentrations were not given (U.S. EPA, 1984).

HEALTH EFFECTS

Carcinogenicity:

- The HxCDDs are rated as probable (B2) human carcinogens by the U.S. EPA because a 2:1 mixture of 1,2,3,7,8,9 and 1,2,3,6,7,8 HxCDD caused liver tumors in rats and mice (U.S. EPA, 1984).

Other Toxicological Effects:

- Potency of HxCDD estimated to be 1/20th of TCDD, the most toxic form of dioxin (U.S. EPA, 1984). See "Dioxin:2,3,7,8 TCDD" for more health effects information.
- No studies have been conducted on the teratogenicity or mutagenicity of the HxCDDs.

Toxicological Effects Indices:

- Cancer Potency Factor: 6.2×10^3 $(mg/kg/day)^{-1}$ (U.S. EPA, 1984; PHRED, 1988).
- 1,2,3,6,7,8 HxCDD oral LD_{50} values: guinea pigs, 0.178 to 0.255 μ mol/kg; mice, 3.19 μmol/kg.
- 1,2,3,7,8,9 HxCDD oral LD_{50} values: guinea pigs, 0.153 to 0.255 μ mol/kg; mice, 3.67 μmol/kg.

1,2,3,6,7,8 HxCDD PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	390.9	U.S. EPA, 1984
Melting Point (^oC):	285-286	U.S. EPA, 1984
Water Solubility S(mg/L):	$8x10^{-6}$ (est.)	U.S. EPA, 1984
Log (Octanol-Water Partician Coefficient), log K_{OW}:	7.6	U.S. EPA, 1984
Soil Adsorption Coefficient, K_{OC} (ml/g):	$3x10^{7}$ (est.)	U.S. EPA, 1984

1,2,3,7,8,9 HxCDD PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	390.9	PHRED, 1988
Melting Point (^oC):	243-244	U.S. EPA, 1984
Water Solubility, S (mg/L):	$6x10^{-4}$	PHRED, 1988
Log (Octanol-Water Partition Coefficient), log K_{OW}:	7.6	PHRED, 1988
Soil Adsorption Coefficient, K_{OC} (ml/g):	$3x10^{7}$	PHRED, 1988
Fish Bioconcentration Factor BCF:	5800	PHRED, 1988

1,2,3,4,7,8 HxCDD PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	390.9	U.S. EPA, 1984

REFERENCES

ATSDR. Agency for Toxic Substances and Disease Registry. 1987. Draft Toxico-logical Profile for 2,3,7,8 TCDD (Dioxin). U.S. Public Health Service.

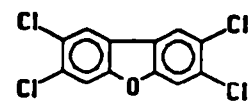
PHRED. Public Health Risk Evaluation Database. 1988. Office of Emergency and Remedial Response, U.S. EPA, Washington. D.C.

U.S. EPA. 1984. Health Assessment Document for Polychlorinated Dibenzo-p-Dioxins. Office of Health and Environmental Assessment, Washington, D.C. EPA/600/8-84/014A.

FURANS
(POLYCHLORINATED DIBENZOFURANS, PCDFs)

CAS Preferred Nomenclature:
2,3,7,8-Tetrachloro-dibenzofuran,
2,3,7,8 TCDF

Empirical Formula: $C_{12}H_4Cl_4O$



- The polychlorinated dibenzofurans (PCDFs) are a group of 135 halogenated tricyclic aromatic hydrocarbons with many structural, distribution, and toxicity similarities to the dioxins (polychlorinated dibenzodioxins, PCDDs). A partial list of the furans is shown in Table 1. Very little is known about the individual furans because they typically occur as mixtures of different forms. For this reason, the sources, environmental fates and health effects of the PCDFs will be discussed as a group, with mention of individual furans when appropriate.

REGULATORY STATUS

- No criteria or standards established at present.

SOURCES OF PCDFs

PCDF Production and Use:

- PCDFs are not intentionally produced for any commercial purposes.
- PCDF-contamination of products or processes has not caused the banning or restriction of use in the U.S.

Other Sources:

- Just like the PCDDs, PCDFs are unwanted trace impurities of PCBs, chlorinated phenols such as hexachlorobenzene or pentachlorophenol, and phenoxy herbicides such as 2,4,5 T. The production of many of these compounds has been restricted or banned (e.g., PCBs), but products containing them may still be in use (e.g., electrical transformers). Example concentrations are listed below:

- Phenoxy herbicides had 0.008-0.15 mg/kg PCDFs (Rappe et al., 1978, 1979; Ahling et al., 1977).
- Pentachlorophenol has contained 59.8-790 mg/kg PCDFs (Rappe et al., 1979).
- Hexachlorobenzene was found to contain 0.35 to 58.3 mg/kg PCDFs (Villanueva et al., 1974).
- PCDF contaminants in polychlorinated biphenyls (PCBs) have been measured at levels of 0.8 to 13.6 mg/kg (CNRC, 1978). 2,3,7,8 TCDF and 2,3,4,7,8 PeCDF are generally found at < 1 ppm in most PCBs (U.S. EPA, 1986).

- Incineration of municipal and industrial wastes at too low a temperature (< 800 °C) can produce PCDFs which can be released to the environment either in flue gas or adsorbed to fly ash (U.S. EPA, 1986).

FATE OF PCDFs IN ENVIRONMENT

Partitioning:

- As shown in Table 1, 2,3,7,8 TCDF is the only PCDF for which a number of physical and chemical properties have been determined. Based on these properties, and its structural similarity to the dioxin 2,3,7,8, TCDD, 2,3,7,8 TCDF is likely to be only slightly soluble in water and strongly sorb to soil ($K_{ow} \cong$ 660,700). It also has a high potential for bioaccumulation based on an estimated BCF of 602,600 (Hansch and Leo, 1981).

Persistence:

- Because 2,3,7,8 TCDF strongly sorbs to sediments, it persists in soils and aquatic systems. Some photodegradation can occur with tetra- and penta-CDFs losing chlorine atoms and forming tri-CDFs. For example, irradiation (254 nm) of 1 μg/L 2,3,7,8 TCDF in n-hexane for four hours yielded 2,3,8 and 2,3,7 TrCDF (Mazer and Hileman, 1982).
- Very little is known about the biodegradation of PCDFs, but they are probably like the dioxins and relatively resistant to biodegradation (U.S. EPA, 1986).

HEALTH EFFECTS

PCDF Effects on Animals:

- Toxicological studies of PCDFs demonstrate that the effects of this group of compounds are remarkably similar to the PCDDs (U.S. EPA, 1986) (see "Dioxin: 2,3,7,8 TCDD", "1,2,3,7,8 PeCDD" or "HxCDDs" for more information on dioxins).
- At present only short-term, high dose, acute exposure animal tests have been conducted with PCDFs. The most studied form has been 2,3,7,8 TCDF which

causes adverse health effects very similar to those caused by 2,3,7,8 TCDD. These effects include weight loss, liver, thymus and immune system damage, and skin changes (U.S. EPA, 1986).

- Two of three monkeys died after six months of exposure to 5 g/kg 2,3,7,8 TCDF in their food (U.S. EPA, 1986).

PCDF Effects on Humans:

- Human exposure to PCDFs occurred in two major incidents when PCBs (containing a mixture of PCDFs) accidently contaminated rice oil in Japan and China. The resulting symptoms (attributed to 2,3,4,7,8 PeCDF exposure) consisted of liver disturbances, skin lesions, excessive skin pigmentation, temporary blindness, numbness of feet and hands, and weakness (Kuratsune et al., 1972; Kuratsune, 1975, 1980; Urabe and Asahi, 1985; Lu and Wu, 1985; Hsu et al., 1985).

- Studies of potential carcinogenesis in humans are still ongoing. No tests have been conducted with animals (U.S. EPA, 1986).

Reproductive Effects:

- 2,3,4,7,8 PeCDF, 1,2,3,7,8 PeCDF and 1,2,3,4,7,8 HxCDF can cause kidney damage and cleft palate in mice fetuses (U.S. EPA, 1986).

Mutagenic Activity:

- The four PCDFs (2,8 DCDF, 3,6 DCDF, 2,3,7,8 TCDF and OCDF) tested for mutagenicity in bacteria had negative results (U.S. EPA, 1986).

Toxicological Effects Indices:

- Reference Dose (RfD), 2,3,7,8 TCDF: 2×10^{-5} μg/kg/day (U.S. EPA, 1986).

- Reference Dose (RfD), 2,3,4,7,8 PeCDF: 3×10^{-6} μg/kg/day (U.S. EPA, 1986).

- Oral LD_{50} values for 2,3,7,8 TCDF: guinea pigs, 5-10 μg/kg; mice and rats, > 6000 μg/kg; rhesus monkey, 1000 μg/kg (U.S. EPA, 1986).

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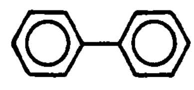
BIPHENYL

CAS No.: 92-52-4
CAS Preferred Nomenclature:
1,1-Biphenyl

Empirical Formula: $C_{12}H_{10}$



$C_{12}H_{10}$

Synonyms and Common Names:
- Bibenzene
- Diphenyl
- 1,1-Biphenyl
- Phenylbenzene

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish):
  None established at present
- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):
  None established at present
- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present
- EPA Drinking Water Health Advisories:
  None established at present
- EPA Tolerance Level for Citrus Fruit (40 CFR 180.141):
  110 ppm
- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restrictions and Bans:

- None found.

SOURCES OF BIPHENYL

Total Biphenyl Produced:

- Commercial production of biphenyl began in 1926 (Verschueren, 1983). In 1976, approximately 88 million pounds of biphenyl were produced (Kirk-Othmer, 1982). However, in 1984, production decreased to approximately 35 million pounds (USITC, 1985). In 1986, four companies were producing biphenyl: Bethlehem Steel Corporation, Dow Chemical, Monsanto Company, and Sybron Corporation.

Uses of Biphenyl:

- Biphenyl is used as a textile dye carrier, heat exchange medium, hydraulic fluid component, and as a plasticizer (Kirk-Othmer, 1982). It is also used during packaging, storage, and transport as a citrus wrapper fungicide to control mycelial growth and spore formation of blue, green, and stem rot molds. Biphenyl is used primarily on grapefruit, lemons, and oranges (Farm Chemicals Handbook, 1985; Thomson, 1985; Worthing, 1979).

- Biphenyl is the basic structural unit for the production of polychlorinated biphenyls (PCBs) (Waid, 1986) and is a breakdown product of PCBs.

Other Sources:

- Biphenyl is also a by-product of benzene production. About 1 kg is generated for every 100 kg of benzene (Verschueren, 1983).

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, biphenyl is soluble in water (Aq. Sol. = 7.5 mg/l), highly volatile (H estimated as 0.027 atm • m^3/mol), and strongly sorbed to organic matter (K_{ow} = 12,300). Biphenyl has a moderate potential for bioaccumulation (BCF ≅500).

Persistence:

- Biphenyl is biodegradable. Acclimation can significantly increase the biotransformation rate. For example, in fresh sewage no degradation occurred after 24 hours, whereas, in acclimated sewage, 87 percent was degraded after 24 hours (Verschueren, 1983). In river water at 20°C, 50 percent of initial biphenyl concentrations from 1 to 100 µg/L were degraded after 1.5 to 3 days. This corresponds to a degradation rate of 0.46/day to 0.92/day (Bailey, et al., 1983).

- The volatilization half-life in deep water was found to be 7.52 hours (Bailey et al., 1983).

HEALTH EFFECTS

Carcinogenicity:

- Papilloma and squamous cell tumors of the forestomach were observed in rats (Clayton and Clayton, 1981-1982).

- The carcinogenic potential of this compound has not been evaluated by IARC or the U.S. EPA.

Mutagenic Activity:

- Biphenyl produced chromosome damage (sister chromatid exchange) in hamster fibroblast cells (Sax, 1984).

Reproductive Effects:

- No effect was observed in rats fed biphenyl during fetal development (Shepard, 1980).

Other Toxicological Effects:

- Repeated exposure to dust may result in irritation of human skin and the respiratory tract.
- Chronic (long-term, low dose) exposure may affect the central nervous system causing symptoms such as fatigue, headache, tremors, insomnia, sensory impairment, and mood changes (Sittig, 1985).
- Brain damage and nerve degeneration were reported in workers exposed to biphenyl (Gosselin, 1984).

Toxicological Effects Indices:

- Reference Dose (RfD): 5×10^{-2} mg/kg/day (PHRED, 1988).
- TWA-TLV (time-weighted average, threshold limit value) for occupational exposure: 0.2 ppm (1.5 mg/m^3) (ACGIH, 1986).
- Oral LD_{50}: rat, 328 g/kg; rabbit, 2.41 g/kg (Gosselin, 1984).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	154.2	Verschueren, 1983
Physical State @ 20°C:	solid, light tan flakes	
Melting Point (°C):	69-71	Hartley & Kidd, 1983
Boiling Point (°C):	254-255	Hartley & Kidd, 1983
Specific Gravity:	1.18 @ 4°C	Verschueren, 1983
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	7.5 (25°C)	Verschueren, 1983
Vapor Pressure, P (mm Hg):	1 (70°C)	Hartley & Kidd, 1983
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	0.027 (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	4.09	Leo, 1983
Soil Adsorption Coefficient, K_{oc} (ml/g):	4.4×10^3 (calc.)	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	590 (calc.) 437 (exptl.)*	Lyman et al., 1982 Verschueren, 1983

* Value used for estimating aquatic effects

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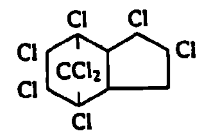
CHLORDANE

CAS No.: 57-74-9 (combined form)
5103-74-2 (trans- form)
5103-71-9 (cis- form)



$C_{10}H_6Cl_8$

CAS Preferred Nomenclature:
4,7-Methano-1H-indene
1,2,4,5,6,7,8,8-octachloro-
2,3,3a,4,7,7a-hexahydro

Empirical Formula: $C_{10}H_6Cl_8$, occurs in cis and trans forms

Synonyms and Common Names:

- Chlor Kil
- Corodan
- Kypchlor
- Octa-Klor
- Oktaterr
- Synklor
- Toxichlor
- Chlorindan
- Dowchlor
- Niran
- Topiclor
- Ortho-Klor
- Octachlorodi-hydrodicyclopentadiene
- Velsicol 1068

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish) for a 10^{-6} cancer risk (U.S. EPA, 1986b):
  0.48 ng/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms)(IRIS, 1989):

	Freshwater	Saltwater
Chronic, μg/L	4.3×10^{-3}	4.0×10^{-3}
Acute, μg/L	2.4	9.0×10^{-2}

- EPA Drinking Water Health Advisories (IRIS, 1989)
  child (10 kg):
  1-day exposure = 60 μg/L
  10-day exposure = 60 μg/L
  longer-term exposure = 0.5 μg/L
  adult (70 kg):
  longer-term exposure = 2 μg/L

- EPA Tolerance Levels for Raw Agricultural Commodities (51 FR 46668):
  All tolerances revoked, 12/24/86

- EPA Drinking Water Standard (50FR 4696):
  Proposed Maximum Contaminant Level = 0.002 mg/L
  Proposed Maximum Contaminant Level Goal = 0 mg/L

- Food and Drug Administration Action Level for Fish (55 FR 14361):
  0.3 ppm*,
  Action Level for Other Food*
  0.1 to 0.1 to 0.3 ppm*

- FDA Action Levels are for use in interstate commerce.

Use Restrictions and Bans:

- All uses except subsurface ground insertion for termite control cancelled in 1987. All other uses except the dipping of roots or tops of nonfood plants were cancelled in 1978, although some uses were phased out gradually through 1983 (43 FR 12372). Limited sales, distribution and use of existing stocks of chlordane products allowed, with the requirement that all applications must be done by a licensed applicator (1987, 52 FR 42145).

SOURCES OF CHLORDANE

Total Chlordane Produced:

- In 1971, 25 million lbs. were produced by Velsicol Chemical Co. (Ouellette and King, 1977). In 1974, production had decreased to 22 million lbs. (U.S. EPA, 1980). Most uses phased out between 1978 and 1980. Velsicol Corp. is still the only U.S. producer (U.S. EPA, 1986b).
- Oxychlordane, although not found in technical-grade chlordane, is a major metabolic product of chlordane. It has comparable toxic effects (see Oxychlordane profile) (Barnett and Dorough, 1974).

Uses of Chlordane:

- Chlordane is a chlorinated hydrocarbon originally registered as a pesticide in 1948. Prior to cancellation in 1980, it was used for control of ants, cutworms, grasshoppers, and other insects for corn, grapes, strawberries and other crops (Hartley and Kidd, 1987).
- Until, 1987, chlordane was used as a dip for nonfood roots and tips of plants.
- Currently, the only authorized use is for subsurface termite fumigation (52 FR 42145, 11/30/87).

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* For a combination of cis- and trans-chlordane, cis- and trans-nonachlor, heptachlor, heptachlor epoxide, oxychlordane, chlordene, and α -, β - and γ - chlordene.

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, chlordane is moderately volatile ($H = 9.6x10^{-5}$ atm • m^3/mole), sorbs moderately to soil ($K_{ow} = 2,100$), and has a high potential for bioaccumulation (BCF = 14,000).

Persistence:

- The cis- form of chlordane can hydrolyze under alkaline conditions ($K_b = 4.3x10^3$ mol/hr). The trans- form did not hydrolyze at pH 3, 7 or 11 during the 5-day duration of the experiments (Ellington et al., 1987). Chlordane can undergo photolysis in the presence of photosensitizers. One degradation product is photo-cis-chlordane (more toxic to some animals and can be bioaccumulated (IRIS, 1989)). Little information is available on the biotransformation of chlordane in aquatic systems. The half-life is estimated to be about 1 year (Hartley and Kidd, 1987).

HEALTH EFFECTS

Carcinogenicity:

- Chlordane administered orally has been shown to cause liver carcinomas in mice and rats of both sexes (IRIS, 1989; Williams et al., 1984). The EPA classification is B2, a probable human carcinogen (IARC Class 2-b) (IARC, 1979; IRIS, 1989).

Mutagenic Activity:

- Tests with chlordane in cultured mammalian cells has shown it to be mutagenic. Results have been negative, however, in mouse and bacterial tests. Chlordane has induced gene conversions in yeast. (U.S. EPA, 1984; IRIS, 1989).

Reproductive Effects:

- Orally-administered chlordane was not fetotoxic or teratogenic to rat offspring. It did cause decreased fertility in both sexes for rats and in female mice. The viability of mice and rat offspring was also decreased (U.S. EPA, 1984).

Other Toxicological Effects:

- Acute (short-term, high dose) poisoning effects are due to chlordane neurotoxicity and can result in hyperexcitability, convulsions, depression, muscle tremors, coma and possible death (U.S. EPA, 1984). Chronic (long-term, low-dose) exposure can result in liver toxicity and blood disorders such as anemia (U.S. EPA, 1984). Chronic chlordane exposure causes liver disease in rats, mice, and dogs (IRIS, 1989; TDB, 1985-1986).

Toxicological Effects Indices:

- Cancer potency factor (CPF) = 1.3 $(mg/kg/day)^{-1}$ (IRIS, 1989)

Cancer Risk Level	Concentration in Drinking Water (IRIS, 1989)
1 in 10,000	3 μg/L
1 in 100,000	0.3 μg/L
1 in 1,000,000	0.03 μg/L

- Reference Dose (RfD) for non-carcinogenic effects: $6x10^{-5}$ mg/kg/day (IRIS, 1989)
- TWA-TLV (Time-weighted average, threshold limit value for occupational exposures): 0.5 mg/m^3 for skin exposure (ACGIH, 1986).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	409.8	Windholz, 1983
Physical State @ 20°C:	pure-solid; technical grade-amber viscous liquid	
Melting Point (°C):	103.0-105.0 (cis) 107.0-108.8 (trans-)	Windholz, 1983 Windholz, 1983
Boiling Point (°C):	175	Windholz, 1983
Specific Gravity:	1.56-1.57	Windholz, 1983
Water Solubility, S (mg/L):	0.056-1.85	U.S. EPA, 1986b
Vapor pressure, P (mm Hg):	$1x10^{-5}$ (25°C)	Callahan et al., 1979
Henry's Law Constant H @ 25°C (atm • m^3/mol):	$9.6x10^{-5}$	U.S. EPA, 1986b
Hydrolysis Rates:	trans-: no degradation in 5 days cis-: $K_b = 4.3x10^{-3}$/ mol/hr	Ellington et al., 1987
Octanol-Water Partition Coefficient, log K_{ow}:	3.32	U.S. EPA, 1986b
Org. Carbon Adsorption Coefficient, K_{oc} (ml/g):	$1.4x10^5$	U.S. EPA, 1986b
Fish Bioconcentration Factor, BCF:	$1.4x10^4$*	U.S. EPA, 1986b U.S. EPA, 1980

* Value used for estimating aquatic effects

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CHLORDANE, HEPTACHLOR, OXYCHLORDANE AND RELATED COMPOUNDS OBSERVATIONS AND EFFECTS ON PISCIVOROUS WILDLIFE

There are several components in technical grade chlordane. Active ingredients include chlordane, cis-chlordane, trans-chlordane, trans-nonachlor, and heptachlor (Stickel et al. 1979). The metabolic products of chlordane are oxychlordane, chlordane isomers, glucuronides and heptachlor (Newell et al. 1987).

Technical grade heptachlor contains heptachlor, trans-chlordane and cis-chlordane (Stickel et al. 1979). Heptachlor metabolizes to heptachlor epoxide (U.S. EPA 1980, as cited in Newell).

Stickel et al. (1979) investigated the lethal levels of chlordane and the metabolites oxychlordane and heptachlor epoxide in several bird species. The lethal level of heptachlor epoxide in the brains of heptachlor fed birds was 8 ppm wet weight. In oxychlordane fed birds, the lethal level of oxychlordane was 5 ppm wet weight. However, chlordane compounds exhibit an additive effect. For birds that were fed chlordane, Stickel et al. (1979) found that the lethal levels of heptachlor epoxide and oxychlordane in the brain were only about 28 percent of the concentrations listed above.

Chlordane components and metabolites have been detected in several fish-eating bird species. Two hundred twenty eggs were randomly collected from black-crowned night-herons in the intermountaln western United States between 1978 and 1980. Oxychlordane was detected in 35 percent of the eggs. Over 27 percent had heptachlor epoxide residues. Cis-chlordane was detected in 16 percent. Trans-nonachlor was found in 25 percent, and cis-nonachlor was present in 6 percent of the eggs (Henny et al. 1984).

Ohlendorf et al. (1981) collected individuals of various species of herons nationwide and analyzed them for organochlorines. Most of the birds were found either dead or moribund. The highest concentration of heptachlor epoxide (1.9 ppm), oxychlordane (0.87 ppm), and trans-nonachlor (1.1 ppm in the brain), were found in a great blue heron that apparently died from dieldrin.

Residues of these contaminants were also detected in a high percentage of dead or dying ospreys collected from the eastern United States from 1975 to 1985 (Wiemeyer et al. 1987). Cis-chlordane was detected in 52 percent of the ospreys. Trans-nonachlor was detected in 45 percent. Concentrations of oxychlordane and cis-nonachlor were found in thirty-five percent of the birds, while 13 percent had detectable levels of heptachlor epoxide.

The State of New York proposed piscivorous wildlife dietary criteria for chlordane (0.5 ppm), and for heptachlor epoxide (0.2 ppm) (Newell et al. 1987). These general criteria were established based on existing studies with factors of uncertainty taken into account.

The effects of chlordane, oxychlordane, and heptachlor epoxide on piscivorous wildlife are summarized in the following table:

Effects of Chlordane* Concentrations on Piscivorous Wildlife

	Animal	Concentration	Effect	Source
Chlordane				
	Piscivorous Wildlife	0.5 ppm (diet)	Estimated NOEL	Newell et al., 1987
		0.37 ppm (diet)	cancer risk of 10^{-2}	Newell et al., 1987
Heptachlor Epoxide				
	Birds	8 ppm (brain)	death	Stickel et al., 1979
	Piscivorous Wildlife	0.2 ppm (diet)	Estimated NOEL	Newell et al., 1987
		0.21 ppm (diet)	cancer risk of 10^{-2}	Newell et al., 1987
Oxychlordane				
	Birds	5 ppm (brain)	death	Stickel et al., 1979

*Chlordane, heptachlor epoxide, and oxychlordane

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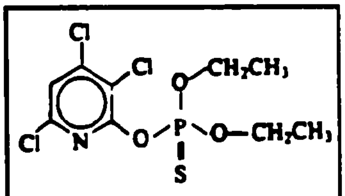
CHLORPYRIFOS

CAS No.: 2921-88-2
CAS Preferred Nomenclature:
Phosphorothioic acid, 0,0-diethyl o-(3,5,6-trichloro-2-pyridinyl) ester



Empirical Formula: $C_9H_{11}Cl_3NO_3PS$

Synonyms and Common Names:
- Dursban
- Lorsban
- Brodan
- Eradex
- Pyrinex

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish):
  None established at present

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms) (U.S. EPA, 1986):

	Freshwater	Saltwater
Acute, μ g/L	0.083	0.041
Chronic, μ g/L	0.041	0.0056

- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present

- EPA Drinking Water Health Advisories:
  None established at present

- EPA Tolerance Levels (40 CFR 185.1000):
  mint oil = 10 ppm
  citrus oil = 25 ppm
  other listed commodities = 0.05 to 5 ppm

- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restrictions and Bans:

- Current labelling states that it is not to be applied directly to water bodies (U.S. EPA, 1986).
- Meat or dairy animals are not allowed to graze in treated orchards.
- Treated seeds are not to be used for human consumption, as a feed for livestock or poultry, or for grains to be used in making oils.

SOURCES OF CHLORPYRIFOS

Total Chlorpyrifos Produced:

- In 1982 about 3,500 tons were used as an insecticide (Green et al., 1987).
- Developed during the 1960s by Dow Chemical (Midland, Michigan) to replace the more persistent organochlorine pesticides (e.g. DDT)(SRI, 1986; U.S. EPA, 1986).

Uses of Chlorpyrifos:

- Chlorpyrifos is an organophosphate insecticide developed in the 1960s to replace the environmentally persistent organochlorine pesticides (e.g., DDT).
- It has been used for a broad range of insecticidal applications, including mosquitoes, flies, household pests and aquatic larvae.
- Primarily, it is used to control soil and foliar insect pests on cotton, peanuts and sorghum (Worthing, 1983; U.S. EPA, 1986).
- Chlorpyrifos is also used to control root-infesting and boring insects on a variety of fruits (e.g., citrus crops, apples, bananas, peaches, grapes, nectarines), nuts (e.g., almonds, walnuts), vegetables (e.g., beans, broccoli, brussel sprouts, cauliflower, soybeans, cabbage, peas) and field crop (e.g., alfalfa and corn)(U.S. EPA, 1984).
- As a household insecticide it has been used to control ants, cockroaches, fleas, and mosquitos (Worthing, 1983).
- Chlorpyrifos is registered for use in controlling subsurface termites in California (U.S. EPA, 1983).
- It is also used to control ticks on cattle and sheep (Thomson, 1985).

Other Sources: None identified.

FATE IN ENVIRONMENT

Partitioning:

- Based upon its physical/chemical properties, chlorpyrifos has a low volatility ($H = 6.7 \times 10^{-6}$ atm • m^3/mol), and a moderate potential for bioaccumulation (BCF=470). Chlorpyrifos is predicted to have an intermediate volatilization rate from surface soil ($P/SK_{OC} = 6.9 \times 10^{-10}$ mm Hg • L/mg corresponding to an estimated volatilization half-life of 23 days) (Lyman et al., 1982).

- Chlorpyrifos is hydrophobic (i.e., has an affinity for organic soils), rapidly sorbs to suspended organics and sediments in aquatic systems (K_{OW} = 128,800), and remains stable for long periods of time (U.S. EPA, 1986).

- McCall (1986) reported intermediate soil/water partition coefficients (K_s) of 50, 66, and 100 for chlorpyrifos adsorbed to a loam soil (organic carbon 0.68 percent), a sandy loam soil (organic carbon 1.1 percent), and a silt loam soil (organic carbon 2.0 percent), respectively. In soil column studies, using 30 cm columns, approximately 5 percent of the chlorpyrifos applied leached below the top 5 cm of loam soil, but less than 1 percent leached below the top 5 cm of sandy loam and silt loam soils leached with 20 in. of water at a rate of 1 ml/hr.

- Murphy and Lutenske (1986) reported a high steady state BCF of 1.4×10^3 for chlorpyrifos in rainbow trout.

Persistence:

- The hydrolysis half-life for chlorpyrifos in buffered, distilled water at 25°C was found to be 22.8, 35.3 and 62.7 days at pH 8.1, 6.9 and 4.7, respectively; the rate was enhanced 16-fold in canal and pond water at 25°C (Verschueren, 1983). McCall (1986) reported relatively long to intermediate hydrolysis half-lives (25°C) for chlorpyrifos of 72.8 days at pH 5, 72.1 days at pH 7, and 15.8 days at pH 9. Hydrolysis products are 3,5,6-trichloro-2-pyridinol and O-ethyl O-(3,5,6-trichloro-2-pyridyl) phosphorothioate. Macalady and Wolfe (1985) observed hydrolysis half-lives ranging from 12-68 days in pond and river water.

- Photolysis of chlorpyrifos can occur as evidenced by the following experimental data. Fontaine and Teeter (1987) reported a relatively short half-life of 2.6 days for chlorpyrifos in air exposed to artificial light with a comparable but less intense irradiation spectrum to that of sunlight. Yackovich and Miller (1984) reported relatively short 50 percent dissipation times of 3-to 6 days for chlorpyrifos on loam soil irradiated with >290 nm artificial light compared to a 50 percent dissipation time of 12 days on loam soil incubated in the dark.

- Bidlack (1979) reported intermediate to relatively long 50 percent dissipation times of 11 to 141 days (averaging 63 days) for chlorpyrifos incubated in 7 different soils under aerobic conditions. McCall (1985) reported a 50 percent dissipation time of 7 to 10 days for chlorpyrifos incubated in a sandy loam soil under aerobic conditions. Bidlack (1979) reported 50 percent dissipation times of 15 and 58 days for chlorpyrifos incubated under anaerobic conditions in a loam soil and in a clay soil, respectively.

HEALTH EFFECTS

Carcinogenicity:

- Studies with rats, mice and dogs demonstrated no carcinogenicity (U.S. EPA, 1983).

Mutagenic Activity:

- Bacterial mutagenicity tests were negative (U.S. EPA, 1983).

Reproductive Effects:

- No teratogenic or fetotoxic effects in mice or rats (IRIS, 1989).

Other Toxicological Effects:

- Chlorpyrifos, in a manner similar to other organophosphate pesticides, interferes with the nerve-muscle relationship by inhibiting the enzyme cholinesterase. Without cholinesterase, the neurotransmitter acetylcholine accumulates at nerve-muscle junctions and interferes with muscle coordination (Green et al., 1986; U.S. EPA, 1986).
- Acute (high-dose, short-term) poisoning can produce a variety of symptoms including weakness, blurred vision, nausea, diarrhea, wheezing, tremors, psychosis, convulsions, paralysis, coma, and death (Klaassen et al., 1986; U.S. EPA, 1983, 1986).
- It is rapidly detoxified in rats and dogs (Worthing, 1983).

Toxicological Effects Indices:

- Reference Dose (RfD): 3×10^{-3} mg/kg/day (IRIS, 1989).
- TWA-TLV (time-weighted average, threshold limit value) for occupational skin exposure: 0.2 mg/m^3 (ACGIH, 1986).
- Oral LD_{50}: rats, 82-245 mg/kg (U.S. EPA, 1983).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	351	U.S. EPA, 1983
Physical State @ 20°C:	solid, white granules	Farm Chemicals Handbook, 1987
Melting Point (°C):	42-43.5	Hartley & Kidd, 1983
Boiling Point (°C):	N/A	
Specific Gravity:	1.398 @ 43.5°C (liquid)	Verschueren, 1983
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	2 (25°C)	Hartley & Kidd, 1983
Vapor Pressure, P (mm Hg):	1.87×10^{-5} (25°C)	McCall, 1983
Henry's Law Constant, H @ 25°C (atm • m /mol):	6.7×10^{-6}	McCall, 1983
Log (Octanol-Water Partition Coefficient), log K_{ow}:	5.11	Leo, 1983
Soil Adsorption Coefficient, K_{oc}(ml/g):	13,600	Kenaga, 1980
Fish Bioconcentration Factor, BCF:	470 450 (exptl.)*	McCall, 1983; Kenaga, 1980

* Value used for estimating aquatic effects

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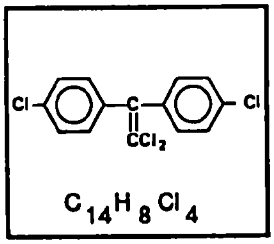
p,p′-DDE

CAS No.: 72-55-9
CAS Preferred Nomenclature:
Benzene,1,1′-(dichloroethenylidene)
Tbis (4-chloro-



Empirical Formula: $C_{14}H_8Cl_4$

Synonyms and Common Names:

- 4,4′-DDE
- p,p′-Dichlorodiphenyl dichloroethylene
- 1,1-Dichloro-2,2-bis (p-chlorophenyl) - ethylene

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish) for a 10^{-6} combined (DDT and DDE) cancer risk (U.S. EPA, 1980):
  0.024 ng/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms) DDT, TDE and DDE combined (U.S. EPA, 1980):

	Freshwater	Saltwater
Acute, μg/L	1.1	1.3×10^{-1}
Chronic, μg/L	1.0×10^{-3}	1.0×10^{-3}

- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present

- EPA Drinking Water Health Advisories:
  None established at present

- Food and Drug Administration Action Level for Fish, combined (DDT, TDE and DDE) (55 FR 14361):
  5 ppm

- Food and Drug Administration Action Levels for Other Foods:
  0.05 to 3 ppm

- FDA Action Levels are for use in interstate commerce

Use Restrictions and Bans: Not produced commercially.

SOURCES OF DDE

Total DDE Produced:

- DDE is a metabolic breakdown product of the insecticide DDT. DDT was first synthesized in 1874 and was used as an insecticide starting in 1939. By 1961, 1,200 formulations were available for use on 334 crops. Peak production was 180 million pounds in 1963 (McEwen and Stephenson, 1979).

HEALTH EFFECTS

Carcinogenicity:

- Liver tumors (hepatocellular carcinomas) observed in mice, but not in rats. IARC Classification - 2b. (IARC, 1973; Sax, 1984; HSDB, 1988).
- The U.S. EPA has classified DDE as a probable human carcinogen (B2) and is presently reviewing experimental data in order to determine a cancer potency factor (PHRED, 1988).

Mutagenic Activity:

- Not mutagenic in bacterial assays, but weakly mutagenic in mouse lymphocytes and cytogenetic analysis in rats (Sax, 1984; HSDB, 1988).

Reproductive Effects:

- No data located on teratogenicity of DDE, but did not adversely affect lactation or neonatal growth at maternal daily doses of 10 mg/kg (HSDB, 1988).

Other Toxicological Effects:

- Causes liver damage in rats (Sax, 1984).

Toxicological Effects Indices:

- Cancer Potency Factor (CPF): 3.4×10^{-1} $(mg/kg/day)^{-1}$ (IRIS, 1989).
- Oral LD_{50}: rat, 880-1240 mg/kg (Sax, 1984).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	318.0	
Physical State @ 20°C:	solid	
Melting Point (°C):	88-90	Callahan et al., 1979
Boiling Point (°C):	N/A	
Specific Gravity:	N/A	
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	0.04 (20°C)	Callahan et al., 1979
Vapor Pressure, P (mm Hg):	6.5×10^{-6} (20°C)	Callahan et al., 1979
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	6.8×10^{-5}	PHRED, 1988
Log (Octanol-Water Partition Coefficient), log K_{ow}:	7.00	PHRED, 1983; Mabey et al., 1982
Soil Adsorption Coefficient, K_{oc}(ml/g):	4.4×10^{6}	PHRED, 1988; Mabey et al., 1982
Fish Bioconcentration Factor, BCF:	1.8×10^{5} (exptl.) 53,600 (calc)*	Verschueren, 1983; PHRED, 1988; Lyman et al., 1982

* Value used in estimating aquatic effects

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DDE
OBSERVATIONS AND EFFECTS ON PISCIVOROUS WILDLIFE

The use of the insecticide DDT was severely restricted in the United States in 1972. However, the long-lived DDT and its metabolite, DDE, are still present in the tissue and eggs of many fish eating birds.

The concentration of DDE residue in avian eggs is negatively correlated with reproductive success. A study of black-crowned night-herons from 1978-80, determined that residues greater than 1.0 ppm reduced eggshell thickness, and levels greater than 8.0 ppm reduce the percentage of successful nests and clutch size, and increase the percentage of cracked eggs (Henny et al. 1984). Almost 11 percent of eggs collected from nightherons in San Francisco Bay in 1982 had concentrations of DDE above 8.0 pmm (Ohlendorf et al. 1988).

For the sensitive brown pelican, a concentration greater than 0.5 ppm in eggs was estimated to cause eggshell thinning (Blus 1972, Blus et al. 1971). From this data, the EPA in 1976 estimated a NOEL for the eggs of the brown pelican at 2.0 ppm, with a corresponding dietary NOEL of 0.2 ppm (Newell et al. 1987). More recently, the State of New York has also proposed a fish flesh criterion of 0.2 ppm DDE to protect all piscivorous wildlife (Newell et al. 1987).

DDE residues in eggs at concentrations high enough to affect reproductive success were observed in herring gull eggs from the Great Lakes between 1974 and 1978 (mean of 21 ppm for a Lake Ontario colony in 1974) (Weseloh et al. 1979). In Maine, differences in DDE concentrations observed between the common eider, herring gull and black-backed gull were attributed to differences in feeding habits (Szaro et al. 1979). The highest concentrations (mean of 8.66 ppm) were detected in the eggs of black-backed gulls which are piscivorous and have also been observed to eat carrion of marine mammals. The common eider, with the lowest concentrations (mean of 0.23 ppm), feeds primarily on marine invertebrates.

DDE has also been detected in high concentrations (2.9 ppm) in eggs from the American crocodile in the Florida Everglades (Hall et al. 1979).

In birds, the lethal effect of DDE in the brain is estimated to be about 250 ppm (as cited in Ohlendorf et al. 1981). Although DDE is often present in the brains of piscivorous birds, it is seldom found at levels considered lethal.

Dead or moribund bald eagles were collected nationwide from 1971 to 1974 and analyzed for organochlorine residues. Of the 101 specimens analyzed, DDE was detected in 97 percent of the brains. However, only one death could possibly be attributed to DDE (230 ppm) (Barbehenn and Reichel 1981).

In 1969 and 1973 in southern Ontario, ring-billed gulls found dead of no apparent disease were analyzed for organochlorines. Most had DDE residues in the brain, although a lethal level was detected in only one specimen (Stickel et al. 1984).

Of twelve adult black-crowned night-herons found dead in 1980 and 1981 in Nevada, all had DDE residues in the brain. Only one dead immature heron collected did not have a detectable DDE residue in the brain (Henny et al. 1984).

The effects of DDE on piscivorous wildlife are summarized in the following table:

Effects of DDE Concentrations on Piscivorous Wildlife

Animal	Concentration	Effect	Source
Birds	250 ppm(brain)	death	Ohlendorf 1981
Brown Pelican	> 0.5 ppm(egg)	eggshell thinning	Blus 1972; Blus et al. 1971
Brown Pelican	> 2.0 ppm(egg)	eggshell	U.S. EPA 1976
Brown Pelican	> 0.2 ppm(diet)	eggshell thinning	U.S. EPA 1976
Black-crowned Night-heron	1.0 ppm (egg)	eggshell thinning	Henny et al. 1984
	8.0 ppm (egg)	reduced clutch size	
		reduced percentage of successful nests	
		increased percentage of cracked eggs	Henny et al. 1984
Piscivorous Wildlife	0.2 ppm (diet)	estimated NOEL	Newell et al. 1987
	0.226 ppm (diet)	cancer risk of 10^{-2}	Newell et al. 1987

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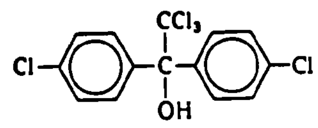
DICOFOL

CAS No.: 115-32-2

CAS Preferred Nomenclature:

Benzenemethanol, 4-chloro-.alpha.
-(4-chlorophenyl)-.alpha.-
(trichloromethyl)-

Empirical Formula: C14H9Cl5O



$C_{14}H_9Cl_5O$

Synonyms and Common Names:

- Kelthane	- Carbax
- Mitigan	- CPCA
- Acarin	- Decofol

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish):
  None established at present
- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):
  None established at present
- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present
- EPA Drinking Water Health Advisories:
  None established at present
- EPA Tolerance Levels for Food (21 CFR 193.80; 40 CFR 185.410):
  dried tea = 45 ppm
  hops = 30 ppm
  cottonseed = 0.1 ppm
  other foods = 5-10 ppm
- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restrictions and Bans:

- Effective December 31, 1988, all uses to be cancelled unless registered formulas contain less than 0.1% DDT and related contaminants (51 FR 19508).

SOURCES OF DICOFOL

Total Dicofol Produced:

- Dicofol is a pesticide structurally similar to DDT which was introduced in 1957. Technical-grade dicofol is a brown viscous oil.
- Recent use in the U.S. is 2 to 3 million pounds per year (Holder, 1986). Dicofol is produced by Rohm and Haas, Inc. and Makhteshim-Agan, Inc. (51 FR 19509).

Uses of Dicofol:

- Used primarily (60%) to control mites on cotton and citrus. Other major uses include the control of mites on apples (10%) and on ornamental plants and turf (10%) (51 FR 19515).
- Another 20% is used for the control of mites on a variety of other agricultural products including:
  - pears, apricots and cherries (51 FR 19515; Farm Chemicals Handbook, 1985)
  - seed crop soil treatment
  - vegetables (e.g., beans and corn)
  - shade trees (U.S. EPA, 1986).

Other Sources: None found.

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, dicofol is predicted to be essentially non-volatile in water (H = 3.5×10^{-9} atm • m^3/mol) and from soil surfaces (P/SK_{OC} = 4.8×10^{-14} mm Hg • L/mg). It is very strongly sorbed to soil and sediment (K_{OW} ≅ 1,148,000), and has a high potential for bioaccumulation (BCF = 5.5×10^4) (Lyman et al., 1982).
- Fisher (1975) reported that dicofol and its aerobic soil breakdown products were relatively immobile in a column experiment using sandy loam soil. Approximately 93 percent of radioactivity applied as ^{14}C-dicofol and >99 percent of the total radioactivity accounted for remained in the upper 2 inches of a sandy loam soil column after 30 days of aerobic aging followed by 44 days of leaching with 0.5 in/day.

- Tillman (1986) reported a maximum non-steady state, whole body BCF of 1.0×10^4 and an estimated steady-state whole body BCF > 2.5×10^4 for bluegill sunfish exposed to 0.006 ppm dicofol for 28 days.

Persistence:

- Dicofol can hydrolyze with the rate increasing as pH increases. For example, Warren (1986) reported hydrolysis half-lives for dicofol at (25°C) of 85 days at pH 5, 64 hours at pH 7, and 26 minutes at pH 9. The half-life for dicofol hydrolysis in distilled water at pH 8.2 was found to be 1 hour; in filtered river water at pH 7.5, roughly 90% conversion of dicofol to 4,4'-dichlorobenzophenone occurred in 24 hours, though dicofol recovery was poor (Walsh and Hites, 1979).

- The photolysis half-life for dicofol was found to be 144 hours in one study using thin films (TDB, 1985). However, studies using water and soil solutions reported longer half-lives. For example, Carpenter (1986a) reported a relatively long photodegradative half-life of >37 days for dicofol in water exposed to artificial light with wavelengths > 290 nm. Carpenter (1986b) reported an intermediate photodegradative half-life between 21 and 30 days for dicofol adsorbed to a silt loam soil when exposed to these same conditions. Dicofol appears to be poorly metabolized by microbes in aerobic soil systems (Walsh and Hites, 1979). It has been found to undergo degradation in anaerobic sewage sludge, however (Verschueren, 1983).

HEALTH EFFECTS

Carcinogenicity:

- Technical-grade dicofol (containing an undetermined level of DDT) induced hepatocellular (liver) carcinomas in male mice. Results were negative in female mice as well as in rats (NCI, 1978).

- Dicofol is classified by the U.S. EPA as a possible human carcinogen (Class C) with only limited animal evidence supporting the classification (Holder, 1986).

- Because it is structurally related to DDT and there is a large data base supporting the carcinogenicity of DDT, it has been suggested that difocol be classified somewhere between C and B2 (as a probable human carcinogen). Further study is necessary to determine the correct classification (Holder, 1986).

Mutagenic Activity:

- Additional studies need to be done to determine whether dicofol causes mutagenic effects (Holder, 1986).

- Negative results were reported for induction of chromosomal aberrations in Chinese hamster lung cells and for bacterial tests (IARC, 1983).
- Positive results were noted in a micronucleus test with rat bone marrow cells (IARC, 1983).

Reproductive Effects:

- In a multi-generation mouse study there were no effects on reproduction or fetal development (IARC, 1983).
- With rats, dicofol influenced only early (pre-implantation) embryo development (IARC, 1983).

Other Toxicological Effects:

- Although no symptoms of toxicity were demonstrated in dogs fed 300 ppm for one year, two of the four test animals died before completion of the experiment (Clayton and Clayton, 1981).
- Report of possible suppression of adrenal function (Clayton and Clayton, 1981).

Toxicological Effects Indices:

- Estimated cancer potency factor (CPF): = 0.44 $(mg/kg/day)^{-1}$ (Holder, 1986).
- The U.S. EPA Carcinogen Assessment Group recommends the use of a CPF of 0.34 $(mg/kg/day)^{-1}$ for any combination of dicofol, DDT, DDE and DDD (Holder, 1986).
- Occupational exposure to DDT should be limited to 1 mg/m^3 (ACGIH, 1986).
- Oral LD_{50}: rats, between 575 and 1,000 mg/kg (McEwen and Stephenson, 1979; Worthing, 1983; Matsumura, 1985).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular weight:	370.5	Sax, 1984
Physical State @ 20°C:	Colorless solid; technical grade, brown viscous oil	Kirk-Othmer, 1984; Matsumura, 1985
Melting Point (°C):	78.5-79.5	Hartley & Kidd, 1983
Boiling Point (°C):	180 @ 0.098mm Hg	Hartley & Kidd, 1983
Specific Gravity:	technical grade, 1.45 @ 25°C	Hartley & Kidd, 1983
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	0.8 (20°C)	Verschueren, 1983
Vapor Pressure, P (mm Hg):	5.8×10^{-9} (calc.)	Lyman et al., 1982
Henry's Law Constant, H @ 25°C (atm • m3/mol):	3.5×10^{-9} (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	6.06 (calc.)	Lyman et al., 1982
Soil Adsorption Coefficient, K_{oc} (ml/g):	1.5x105 (calc.)	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	5.5×10^4 (calc.)* 1.0×10^4 to $>2.5 \times 10^4$ (est.)	Lyman et al., 1982 Tillman (1986)

* Value used for estimating aquatic effects

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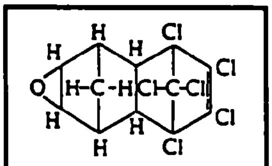
DIELDRIN

CAS No.: 60-57-1
CAS Preferred Nomenclature:
2, 7:3,6-Dimethanonaphth(2,3b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7,7a-octahydro-, (1α , 2 β , 2 α, 3β , 6β , 6aα , 7β , 7α)-



Empirical Formula: $C_{12}H_8Cl_6O$

Synonyms and Common Names:
- Dieldrex
- HEOD
- Illoxol
- Octalox

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish) for a 10^{-6} cancer risk (50 FR 79318):
  0.076 mg/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms) (U.S. EPA, 1980):

	Freshwater	Saltwater
Acute, μg/L	2.5	0.71
Chronic, μg/L	0.0019	0.0019

- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present

- EPA Drinking Water Health Advisories (U.S. EPA, 1988; ATSDR, 1987):
  child (10 kg):
  1-day, 10-day, longer-term exposures = 0.5 μg/L
  adult (7kg):
  longer-term exposure = 2 μg/L

- Food and Drug Administration Action Level for Fish, total aldrin and dieldrin (55 FR 14361):
  0.3 ppm

- Food and Drug Administration Action Levels for Other Foods (55 FR 14361):
  0.02 - 0.3 ppm

- FDA Action Levels are for use in interstate commerce

Use Restrictions and Bans:

- Suspension of uses on food products in 1974 (ATSDR, 1987).
- All uses banned in 1985 except for subsurface termite control, dipping of nonfood roots and tops, and moth proofing in a closed system by manufacturing processes (U.S. EPA, 1985). These uses have been voluntarily cancelled by industry (ATSDR, 1987).

SOURCES OF DIELDRIN

Total Dieldrin Produced:

- In 1970 about 670,000 lbs were used. Dieldrin is no longer produced in the U.S. Until 1985, products containing dieldrin were imported from Europe. None have been imported since then.

Uses of Dieldrin:

- Dieldrin is an organochlorine pesticide that was widely-used from 1950 to 1974 for controlling soil-dwelling insects, especially termites, on cotton, corn and citrus crops.
- Uses prior to 1974 included the following (Worthing, 1983):
  - Control of locusts
  - Control of tropical disease carriers (e.g., mosquitos)
  - Wood preservative
  - Termite control for electrical cables and buildings
  - Moth proofing woolen clothes and carpets.

Other Sources:

- Breakdown product (by oxidation) of the pesticide aldrin (Verschueren, 1983)

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, dieldrin has a low volatility ($H = 2x10^{-7}$ atm • m^3/mol), sorbs readily to soil organic matter (K_{ow} = 20,890), and has a high potential for bioaccumulation (BCF = 4,670).

Persistence:

- Dieldrin can undergo hydrolysis under neutral pH conditions ($K_n = 7.5x10^{-6}$/ mole/hr) but the half life is long (10.5 years) (Ellington' et al., 1986). Direct photolysis of dieldrin can also occur; the half life is about 2 months (Callahan, et al., 1979).
- Dieldrin can be biotransformed very slowly by soil microbes to an epoxide which is more toxic to some insects than the parent compound. Further degradation results in the ketone-aldrin, an aldehyde and alcohols (Morrill et al., 1982). Under aerobic conditions, dieldrin can be degraded to 6,7-trans-dihydroxydihydroaldrin (Kirk-Othmer, 1978).

HEALTH EFFECTS

Carcinogenicity:

- Dieldrin has caused liver carcinoma in feeding studies (oral administration) with five strains of male and female mice (50 FR 10080). The EPA has classified dieldrin as a B2, probable human carcinogen, IARC classification 2b. (IARC, 1982; PHRED, 1988):

Mutagenic Activity:

- Mutagenic in human lung cells in culture. Interferes with metabolic cooperation in cultured cells (i.e., it promotes mutagenic activity). Negative in mouse dominant lethal test, Salmonella, yeast and Drosophila (fruit flies). Inconclusive data on chromosome damage to mouse bone marrow cells (IARC, 1982).

Reproductive Effects:

- In hamsters, high doses of dieldrin exposure resulted in fetal deaths, congenital defects and retarded growth (Proctor and Hughes, 1978).
- Decreased fertility in rats and mice; increased postnatal mortality in rats (ATSDR, 1987).

Other Toxicological Effects:

- Identified as a neurotoxin (Clayton and Clayton, 1981). The acute affects can include: headache, dizziness, hyperexcitability, tremors, convulsions, depression and death (ATSDR, 1987).
- Chronic effects: damage to liver in rats, dogs, and hamsters, also evidence of suppressed immune systems (Gosselin et al., 1984).

- Low levels decreased learning capabilities in monkeys (50 FR 10080).

Toxicological Effects Indices:

- Cancer potency factor (CPF): 16 $(mg/kg/day)^{-1}$ (U.S. EPA, 1987a).
- Reference Dose (RfD): $5x10^{-5}$ mg/kg/day (U.S. EPA, 1987b).
- TLV-TWA (time-weighted average, threshold limit value) for occupational skin exposure: 0.25 mg/m^3 (ACGIH, 1986).
- LD_{50} in humans, approximately 5 mg/kg (ATSDR, 1987).
- Oral LD_{50}: rats, 46 mg/kg (Sax, 1984).
- Tolerance levels for agricultural commodities: 0 to 0.1 ppm (ATSDR, 1987).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	380.9	Windholz, 1983
Physical State @ 20°C:	solid; buff to light tan flakes; mild odor	Worthing, 1983
Melting Point (°C):	175-176	Callahan et al., 1979
Boiling Point (°C):	N/A	
Specific Gravity:	1.75	Verschueren, 1983
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	0.186 (20°C)	Callahan et al., 1979
Vapor Pressure, P (mm Hg):	3.1×10^{-6}	Callahan et al., 1979
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	2×10^{-7} (20°C)	U.S. EPA, 1986b
Hydrolysis, K_n, 1/mole/hr	7.5×10^{-6}	Ellington et al., 1986
Log (Octanol-Water Partition Coefficient), log K_{ow}:	4.32	Leo, 1983
Soil Adsorption Coefficient, K_{oc}(ml/g):	1700	Mabey et al., 1982
Fish Bioconcentration Factor, BCF:	4670*	U.S. EPA, 1980

* Value used for estimating aquatic effects

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DIELDRIN
OBSERVATIONS AND EFFECTS ON PISCIVOROUS WILDLIFE

The concentration of dieldrin in the brain determined to cause death in several bird species appears to be quite low. The average level that put the animal at risk of death is between 5 and 9 ppm (Ohlendorf et al. 1981 and Stickel et al. 1972). A concentration of 6.8 ppm was determined to be the average level lethal to birds from several laboratory studies (Heinz and Johnson 1981). However, levels as low as 1 ppm in the brain may trigger irreversible starvation in sensitive individuals (Heinz and Johnson 1981). During starvation, mobilization of low concentrations of dieldrin from body fats to the brain may cause death, after concentrating to a lethal level (Newell et al. 1987).

Dieldrin is commonly found in the brain, tissues, and eggs of fisheating birds that also have residues of organochlorines such as DDE and PCBs. Dieldrin was the apparent cause of death for several ring-billed gulls in southern Ontario in 1969 and 1973. Stickel et al. (1984) analyzed 54 gulls that had died of no apparent disease. Of these birds, eight specimens had dieldrin levels in the brain greater than 5 ppm. The cause of death in many of the other gulls was most likely PCB contamination (Stickel et al. 1984).

From 1971 to 1971, 101 dead or dying bald eagles were collected and analyzed for organochlorines. Based on the data provided, four eagles had died from lethal concentrations of dieldrin (concentrations near 5 ppm in the brain) (Barbehenn and Reichel 1981).

In a nationwide survey of 72 species of heron found dead or moribund between 1966 and 1973, 10 specimens had greater than 5 ppm in the brain and had possibly died of dieldrin poisoning. Eight others had concentrations of dieldrin greater than 2.0 ppm in the brain (Ohlendorf et al. 1981).

Based on a number of studies in the literature, the State of New York proposed a dietary fish flesh criterion of 0.12 ppm to protect piscivorous wildlife (Newell et al. 1987).

The effects of dieldrin on piscivorous wildlife are summarized in the following table:

Effects of Dieldrin Concentrations on Piscivorous Wildlife

Animal	Concentration	Effect	Source
Birds	5 ppm (brain)	death	Stickel et al., 1972
Birds	6.8 ppm	death	Heinz and Johnson, 1987
Birds (sensitive individuals)	1.0 ppm (brain)	irreversible starvation	Heinz and Johnson, 1987
Piscivorous Wildlife	0.12 ppm (diet)	estimated NOEL	Newell et al. 1987,
	0.022 ppm (diet)	cancer risk of 10^{-2}	Newell et al., 1987

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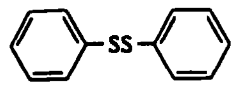
DIPHENYL DISULFIDE

CAS No.: 882-33-7
CAS Preferred Nomenclature:
Disulfide, diphenyl



$C_{12}H_{10}S_2$

Empirical Formula: $C_{12}H_{10}S_2$

Synonyms and Common Names:
- Phenyl disulfide

REGULATORY STATUS

- No use restrictions or regulatory standards.

SOURCES OF DIPHENYL DISULFIDE

Total Diphenyl Disulfide Produced:

- Manufactured by Parish Chemical Co., less than 23,000 pounds of diphenyl disulfide were produced in 1982 (Perwak et al., 1983; SRI, 1986).

Uses of Diphenyl Disulfide:

- Diphenyl disulfide is used primarily as a flavoring agent in non-alcoholic beverages, ice cream, candy, gelatin and pudding (Perwak et al., 1983).
- Small amounts are used in the pharmaceutical industry and as a vulcanizing agent in the manufacture of rubber (Perwak et al., 1983).

FATE IN ENVIRONMENT

Partitioning:

- Based on measured properties and structure-activity relationships, diphenyl disulfide can volatilize at a low rate ($H = 7.6\times10^{-6}$ atm•m^3/mole) and has a moderately strong tendency to sorb to soil ($K_{ow} \cong 25,700$).

Persistence:

- Little information is available on transformation processes in the environment. Hydrolysis and biodegradation are not expected to occur at environmentally significant rates (Perwak et al., 1983).

HEALTH EFFECTS

Carcinogenicity:

- The U.S. EPA has not evaluated the potential carcinogenicity of diphenyl disulfide.

Other Toxicological Effects:

- There are no reports of adverse health effects caused by diphenyl disulfide in either animals or humans.

Toxicological Effects Indices:

- Intraperitoneal LD_{50}: mice, 100 mg/kg (Tatken and Lewis, 1983).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	218.3	Weast, 1986
Physical State @ 20°C:	solid	
Melting Point (°C):	61-62	Weast, 1986
Boiling Point (°C):	310	Weast, 1986
Specific Gravity:	1.353	Weast, 1986
Acid Dissociation Constant, pKa:	N/A	
Water Solubility, S (mg/L):	5.1	Lyman, *et al.*, 1982
Vapor Presure, P (mm Hg):	$1.4x10^{-4}$	Lyman, *et al.*, 1982
Henry's Law Constant, H @ 25 °C ($atm \cdot m^3/mol$):	$7.6x10^{-6}$	Lyman, *et al.*, 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	4.41	Leo, 1983
Soil Absorption Coefficient, Koc(ml/g):	7900	Lyman, *et al.*, 1982
Fish Bioconcentration Factor, BCF:	1200 (calc.)*	Lyman, *et al.*, 1982

* Value used for estimating aquatic effects

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Stanford Research Institute (SRI). 1986. Directory of Chemical Producers. Stanford Research Institute, Menlo Park, CA.

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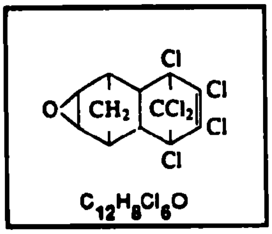
ENDRIN

CAS No.: 72-20-8

CAS Preferred Nomenclature:

2,7,3,6-Dimethanonaphth(2,3b)oxirene, 3,4,5,6,9,9-hexachloro-1a, 2,2a,3,6,6a,7,7a-octahydro-



Empirical Formula: $C_{12}H_8Cl_6O$

Synonyms and Common Names:

- Endrex
- Endriocol
- Hexadrin
- Insecticide 269
- Mendrin
- Oktanex

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of water and fish) (PHRED, 1988):
  1 μg/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms) (U.S. EPA, 1980):

	Freshwater	Saltwater
Acute, μg/L	0.18	0.0023
Chronic, μg/L	0.037	0.0023

- EPA Drinking Water Standard Maximum Contaminant Level: (40 CFR 141.12):
  0.0002 mg/L

- EPA Drinking Water Health Advisories (U.S. EPA, 1989):
  child (10 kg):
  1-day exposure = 20 μg/L
  10-day exposure = 20 μg/L
  longer-term exposure = 3 μg/L
  adult (70 kg):
  longer-term exposure = 10 μg/L
  lifetime exposure = 2 μg/L

- Food and Drug Administration Action Level for Fish (FDA, 1986 and 52 FR 18025):
  0.3 ppm
  Action Level for Other Foods:
  0.02 to 0.3 ppm

- FDA Action Levels are for use in interstate commerce

Use Restrictions and Bans:

- Endrin is an organochlorine compound originally registered as a pesticide in 1951. It was used to control a wide variety of pests until its long-term persistence in soils and high levels of mammalian toxicity were recognized.
- In 1964, the high level of endrin persistence in soils led to cancellation of its use on tobacco (Sittig, 1980; U.S. EPA, 1980).
- By 1979, specified uses on cotton, small grains, apple orchards, sugarcane, and ornamentals were also restricted (44 FR 43632).
- In 1984, the sole remaining producer of endrin voluntarily requested cancellation of registration of all endrin products. This action effectively ended its use in the U.S. (U.S. EPA, 1984).

SOURCES OF ENDRIN

Total Endrin Produced:

- Endrin was first used in the U.S. in 1951. By 1971, approximately 1 million pounds of endrin were produced by Velsicol (Ouellette and King, 1977).
- Endrin production had decreased to 400,000 pounds by 1978 (U.S. EPA, 1978).

Uses of Endrin:

- Endrin is a broad spectrum pesticide and has been used to control many pests, including termites, mice and army worms.
- Prior to 1979, the main domestic use of endrin was for the control of cotton bollworms (an insect larva) which attack cotton crops in the southeastern and Mississippi delta states (U.S. EPA, 1980).
- Registered uses of endrin included foliar treatment for citrus, potatoes, barley, oats, rye, wheat, cotton, apple orchards, sugarcane, various flowers and bark treatment for ash and hackberry trees (U.S. EPA, 1986).
- Endrin has also been used to control pest populations of birds and rodents (U.S. EPA, 1980).

Other Sources:

- Isodrin may be metabolically converted to endrin (Matsumura, 1985).
- Endrin is also found in the pesticide dieldrin in small quantities (Verschueren, 1983).

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, endrin is strongly sorbed to organic matter (K_{ow} = 219,000) and volatilizes slowly from water (H = 4x10-7 atm • m^3/mol). It volatilizes from soils even slower with an estimated half-life of 34 days (p/SK_{oc} = 4.7×10^{-10} mm Hg • L/mg). Bioaccumulation is an important fate process; bioconcentration factors are moderately high to very high, ranging from 6.8×10^2 to 1.3×10^4 in microcosm experiments (Callahan et al., 1979 and Lyman et al., 1982).

Persistence:

- Endrin is very resistant to hydrolysis (half-life over 4 years). Photolysis of endrin in hexane has been documented. No data concerning the photolysis rate of endrin in the aqueous environment was found. A half-life of about 7 days was observed when endrin was applied to a sandy loam soil and exposed to sunlight (Shell Chemical Co., 1975).
- Endrin can undergo biotransformation. Guenzi (1974) reported a biodegradation loss rate of 4-5% per year over 14 years.

HEALTH EFFECTS

Carcinogenicity:

- No evidence of endrin carcinogenicity has been reported (U.S. EPA, 1980). Treon et al. (1955) reported that the incidence of cancers in rats fed endrin for 2 years was no greater than in control rats.
- A National Cancer Institute bioassay determined no carcinogenic effects in rats or mice (NCI, 1979).
- The U.S. EPA has classified endrin as a Class D carcinogen (inadequate evidence of carcinogenicity in animals).

Mutagenic Activity:

- Conflicting results have been reported for endrin mutagenicity. Dikshith and Datta (1972) reported chromosomal aberrations and cellular degeneration in rat testes. However, negative results for endrin have been recorded with the mouse dominant lethal test (TDB, 1984).

Reproductive Effects:

- Pregnant rats and mice fed endrin showed reduced fetal survival rates (Nodu et al., 1972). Endrin-exposed mouse fetuses had a higher incidence of club feet.
- Endrin produced embryocidal and teratogenic effects in pregnant hamsters. Single doses of endrin (5 mg/kg) resulted in increased fetal death, congenital abnormalities (i.e., eye deformities, cleft palate and fused ribs) and growth retardation. Lower doses (1.5 to 5 mg/kg) did not cause similar effects (Ottolenghi et al., 1974; Chernoff et al., 1979).

Other Toxicological Effects:

- Regardless of the method of exposure, endrin, like the related compounds aldrin and dieldrin, is highly toxic to humans (Matsumura, 1985). In one animal study endrin was shown to be five times as toxic as dieldrin (U.S. EPA, 1980).
- Primarily, the central nervous system is affected with acute (short-term, high dose) poisoning by endrin. A range of symptoms can be caused, including dizziness, nausea, confusion, hyperexcitability, generalized tremors or twitching, and convulsions. Death from respiratory failure may also occur (U.S. EPA, 1980; Sax, 1984).
- In rats and dogs chronic (long-term, low dose) exposure to endrin has led to poor survival rates and degenerative changes in the liver, kidneys and brain (U.S. EPA, 1980).
- Chronic human exposure to endrin (e.g., in the production of the pesticide) was not shown to cause adverse health effects (Jager, 1970).

Toxicological Effects Indices:

- Reference Dose (RfD): $3x10^{-4}$ mg/kg/day (U.S. EPA, 1989).
- TWA-TLV (time-weighted average, threshold limit value) for occupational skin exposure: 0.1 mg/m^3 (ACGIH, 1986).
- Oral LD_{50}: rats, 3-43 mg/kg; rabbits, 7-10 mg/kg; monkeys, 3 mg/kg (U.S. EPA, 1980; Sax, 1984; Matsumura, 1985).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight	380.9	Windholz, 1983
Physical State @ 20°C:	white crystalline solid; technical grade, light tan powder	Matsumura, 1985
Melting Point (°C):	Decomposition above 200°C	U.S. EPA, 1980
Boiling Point (°C):	N/A	
Specific Gravity	1.7 @ 20°C	U.S. EPA, 1980
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	0.25 (25°C)	Callahan et al., 1979
Vapor Pressure, P (mm Hg):	$2x10^{-7}$ (25°C)	Callahan et al., 1979
Henry's Law Constant, H @ 25°C (atm • m^3/mole):	$4x10^{-7}$	Mabey et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	3.54	Leo, 1983
Soil Adsorption Coefficient, K_{oc} (ml/g):	$1.7x10^3$	PHRED, 1988
Fish Bioconcentration Factor, BCF:	$6.8x10^2$ to $1.3x10^4$ (exptl.)	Verschueren et al., 1983; Callahan et al., 1979
	1480	PHRED, 1988
	3970*	U.S. EPA, 1980

*Value used in estimating aquatic effects

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ENDRIN
OBSERVATION AND EFFECTS ON PISCIVOROUS WILDLIFE

Endrin is lethal to birds at very low concentrations. In the brain, concentrations of only 0.8 ppm or more result in death. Levels between 0.6 ppm and 0.8 ppm are hazardous and result in either survival or death (Stickel et al. 1979).

During 1975 and 1976, twelve of fifteen dead white pelicans collected from refuges in northern California had lethal levels of endrin in the brain (0.74 to 2.7 ppm). Stickel et al. (1979) blamed these deaths on the presence of endrin in the agricultural return flows entering the refuges.

White pelicans were also found dead with high levels of endrin near the Teton Dam disaster of 1976. On the Gulf Coast of Louisiana, both white and brown pel icans were found dead with endrin present in the brain (Stickel et al. 1979).

Ohlendorf je al. (1981) recorded lethal levels of endrin in the brain of one heron from Minnesota in 1972, and one from Wisconsin in 1978. Bald eagles with lethal levels of endrin were found in Iowa in 1977 and in Minnesota in 1976 (Stickel et al. 1979).

The endrin concentration in eggs appears to affect hatching success. For the brown pelican, Blus et al. (1979) estimated that concentrations of greater than 0.5 ppm in the eggs caused reproductive impairment (as cited in Newell et al. 1987). Pelican eggs from Louisiana during 1972 to 1974 commonly contained 0.5 ppm endrin (Stickel et al. 1979).

Based on data from several laboratory studies, the State of New York proposed a dietary fish flesh criterion of 0.025 ppm endrin to protect piscivorous wildlife (Newell et al. 1987).

The effects of endrin on piscivorous wildlife are summarized in the following table:

Effects of Endrin Concentrations on Piscivorous Wildlife

Animal	Concentration	Effect	Source
Bird	0.6 - 0.8 ppm (brain)	hazardous	Stickel et al., 1979
Bird	0.8 ppm (brain)	death	Stickel et al., 1979
Brown Pelican	0.5 ppm (egg)	reproductive impairment	Blus et al., 1979
Piscivorous Wildlife	0.025 ppm (diet)	estimated NOEL	Newell et al., 1987

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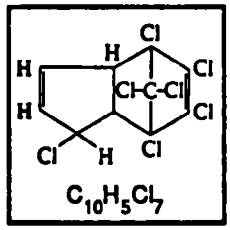
HEPTACHLOR

CAS No.: 76-44-8
CAS Preferred Nomenclature:
4,7-Methano-1H-indene
1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-



Empirical Formula: $C_{10}H_5Cl_7$

Synonyms and Common Names:

- Velsicol 104
- Rhodiachlor
- Heptox
- E3314
- Heptagran
- Heptalube
- Drinox H-34
- Gold Crest H-60

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish) for a 10^{-6} cancer risk (IRIS, 1989):
  0.00029 μg/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms)(IRIS, 1988):

	Freshwater	Saltwater
Acute, μg/L	5.2×10^{-1}	5.3×10^{-2}
Chronic, μg/L	3.8×10^{-3}	3.6×10^{-3}

- EPA Drinking Water Standard (50 FR 46936; IRIS, 1989):
  Proposed Maximum Contaminant Level = 0.0004 mg/L
  Proposed Maximum Contaminant Level Goal = 0 mg/L

- EPA Drinking Water Health Advisories (IRIS, 1989):
  child (10 kg):
  1-day and 10-day exposures = 10 μg/L
  longer-term exposure = 5 μg/L
  adult (70 kg):
  longer-term exposure = 17.5 μg/L

- Food and Drug Administration Action Level for Fish (heptachlor + heptachlor epoxide)(55 FR 14362):
  0.03 ppm

- FDA Action Levels for Other Foods (55 FR 14362):
  0.01 to 0.02 ppm

- FDA Action Levels are for use in interstate commerce

Use Restrictions and Bans:

- All uses except subsurface ground insertion for termite control and dipping of roots or tops of nonfood plants banned by 1983 (43 FR 12372).

SOURCES OF HEPTACHLOR

Total Heptachlor Produced:

- In 1971, 6 million lbs. were produced by Velsicol Chemical Co. (Ouellette and King, 1977).
- By 1983, most uses had been cancelled (Rafats and MacLean, 1986).
- Heptachlor is no longer sold in the U.S. as of 8/87, but remaining stock can be used in some states by commercial exterminators for termite control (ATSDR, 1987).

Uses of Heptachlor:

- Production of heptachlor as a registered insecticide began in 1952. It was widely used to control fire ants in southern states (Rafats and MacLean, 1986) and to control soil insects on corn and other crops (U.S. EPA, 1980).
- Use of registered products (e.g., soil treatment for pineapples and sugarcane) allowed only by certified applicators (U.S. EPA, 1986b). No uses are allowed in Minnesota, Massachusetts, and New York (ATSDR, 1987).

Other Sources:

- Contaminant of the pesticide chlordane (Callahan, et al., 1979).

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, heptachlor is moderately volatile (H = 1.48×10^{-3} atm • m^3/mol), strongly sorbed to sediment (K_{ow} = 186,000), and has a high potential for bioaccumulation (BCF = 1.57×10^4).

Persistence:

- Heptachlor can persist in aquatic systems once it sorbs onto sediment.
- Heptachlor in the water column can undergo hydrolysis, photolysis and can be oxidized to heptachlor epoxide. Heptachlor is hydrolyzed to 1-hydroxychlordene;

the half-life is one to three days (Callahan et al., 1979). Specific near-surface rate constants for photolysis were not found, although photoisomerization is thought to occur (Verschueren, 1983).

- Heptachlor can be biotransformed to heptachlor epoxide or chlordane, but at a slower rate in aquatic systems than abiotic hydrolysis (Callahan et al., 1979).

HEALTH EFFECTS

Carcinogenicity:

- Exposure to heptachlor induced liver tumors in two strains of mice, but tests using rats did not result in any tumors(IRIS, 1989). The EPA classification is B2, a probable human carcinogen, based on tumors in mice and the fact that related chemicals cause liver cancers (U.S. EPA, 1986b).

Mutagenic Activity:

- Mutagenic effects were not observed in tests using bacteria, *Drosophila* or mammalian liver cells. Increased chromosomal aberrations were found in tests using mouse bone marrow cells. (IARC, 1979; U.S. EPA, 1980; IRIS, 1987).

Reproductive Effects:

- Exposure to heptachlor has been associated with stillbirths in humans.
- In animals, observed effects include decreased fertility and decreased survival of newborns in rats and liver damage in dogs (U.S. EPA, 1980).

Other Toxicological Effects:

- Acute (short-term, low dose) exposure of humans can cause blood disorders, including anemia and leukemia, and central nervous system damage (e.g., hyperexcitability, depression, and convulsions) (U.S. EPA, 1980, 1986b; IARC, 1979).
- Hepatotoxicity, renal and adrenotoxicity, and blood disorders have been reported from chronic, (long-term, low dose) exposure to heptachlor in animals.

Toxicological Effects Indices:

- Cancer Potency Factor (CPF): 4.5 $(mg/kg/day)^{-1}$ (IRIS, 1989).
- Reference Dose (RfD): 5×10^{-4} mg/kg/day (U.S. EPA, 1987a; IRIS, 1989).
- TWA-TLV (time-weighted average, threshold limit value), for occupational skin exposure: 0.5 mg/m^3 (ACGIH, 1986).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	373.3	Windholz, 1983
Physical State @ 20°C:	solid	
Melting Point (°C):	95-96 (pure) 46-74 (technical grade)	Hartley and Kidd, 1987
Boiling Point (°C):	135-145°C at 1-1.5 mm Hg	U.S. EPA, 1986c
Specific Gravity:	1.57-1.59 at 9°C	U.S. EPA, 1986c
	1.65-1.67 at 25°C	U.S. EPA, 1986c
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	0.056-0.18 at 25°C	Callahan et al., 1979
Vapor pressure, P (mm Hg):	$3x10^{-4}$ at 25°C	Verschueren, 1983
Hydrolysis, K_n 1/hr:	0.03 at 30°C	Callahan et al., 1979
Henry's Law Constant H @ 25°C (atm • m^3/mol):	$1.48x10^{-3}$	Mills et al., 1985
Log (Octanol-Water Partition Coefficient), log K_{ow}:	5.27	Leo, 1983
	4.4	Mabey et al., 1982
Soil Adsorption Coefficient, K_{oc} (ml/g):	$1.2x10^{-4}$	Mabey et al., 1982
Fish Bioconcentration Factor, BCF:	$1.1x10^3$ to $2.1x10^4$	Verschueren, 1983
	11,200*	U.S. EPA, 1980

*Value used for estimating aquatic effects

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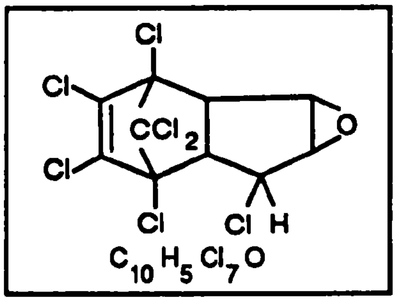
HEPTACHLOR EPOXIDE

CAS No.: 1024-57-3

CAS Preferred Nomenclature:

2,5-Methano-2H-indeno(1-2-b)oxirene, 2,3,4,5,6,7,8-heptachloro-1a,1b,5,5a,6,6a-hexahydro-



Empirical Formula: $C_{10}H_5Cl_7O$

Synonyms and Common Names:

- 1,4,5,6,7,8,8-Heptachloro-2,3-epoxy-2,3,3a,4,7,7a-hexahydro-4,7-methanoindene,
- Epoxy heptachlor
- Velsicol 53-CS-17

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish) for a 10^{-6} cancer risk (IRIS, 1989):
  0.00029 µg/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms)(IRIS, 1989):

	Freshwater	Saltwater
Acute, µg/L	5.2×10^{-1}	5.3×10^{-2}
Chronic, µg/L	3.8×10^{-3}	3.6×10^{-3}

- EPA Drinking Water Standard (50 FR 46936):
  Proposed Maximum Contaminant Level = 0.0002 mg/L
  Proposed Maximum Contaminant Level Goal = 0 mg/L

- EPA Drinking Water Health Advisories (IRIS, 1989):
  child: (10kg)
  long-term exposure = 0.13 µg/L
  adult: (10kg)
  long-term exposure = 0.5 µg/L

- Food and Drug Administration Action Level for Fish (heptachlor + heptachlor epoxide)(55 FR 14362):
  0.03 ppm

- Action Levels for Other Foods:
  0.01 to 0.02 ppm

- FDA Action Levels are for use in interstate commerce

Use Restrictions and Bans:

- Restrictions on heptachlor, the parent compound, were instituted in 1978. Heptachlor is no longer sold in the U.S. as of 8/87 but remaining stock can be used in some states by commercial exterminators for termite control. No uses are allowed in Minnesota, Massachusetts, and New York (ATSDR, 1987).

SOURCES OF HEPTACHLOR EPOXIDE

- Not produced as a separate chemical.
- Heptachlor epoxide is a metabolic breakdown product of heptachlor which can be produced in microorganisms, plants and animals (including humans).
- It is a contaminant of heptachlor and chlordane.
- Most uses of heptachlor have been banned. However, heptachlor epoxide can still be found in the environment.

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, heptachlor epoxide is somewhat volatile ($H = 4.4 \times 10^{-4}$ atm • m^3/mol), sorbs to organic matter to a moderate extent ($K_{ow} = 500$), and can be bioaccumulated (BCF values range from 850 to 4,500 based on experimental data).

Persistence:

- Heptachlor epoxide is resistant to biotransformation. Its estimated half-life in soils is several years (U.S. EPA, 1987a).
- Heptachlor epoxide is not susceptible to hydrolysis, oxidation or photolysis. (Mabey et al., 1982 and Eichelberger and Lichtenberg, 1971).

HEALTH EFFECTS

Carcinogenicity:

- Exposure to heptachlor epoxide caused an increased incidence of liver carcinomas in rats and mice and hepatomas in female rats (IRIS, 1989). It is classified as a probable human carcinogen (B2) by the U.S. EPA (1986).

- Some increased lung and bladder cancers occurred in pesticide manufacturing plant workers, but it is difficult to associate occurrences with quantitative doses of a specific chemical. (ATSDR, 1987).

Mutagenic Activity:

- No evidence of mutagenic activity was observed using mouse dominant lethal test, Ames test, or tests with fruit flies. (IRIS, 1989).

Reproductive Effects:

- When animals were fed heptachlor epoxide there was decreased fertility and decreased fetal survival noted in rat and mice studies extending for 2 to 3 generations. (Cerey and Ruttkay-Nedecka, 1971; Ruttkay-Nedecka, et al., 1972; Green, 1970).
- Higher heptachlor epoxide levels were found in one group of women with premature delivery (Wasserman, et al., 1982) and in stillborn infants (Curley, et al., 1969). Data are not considered adequate to define a direct relationship between exposure and reproductive effects. (ATSDR, 1987).

Other Toxicological Effects:

- Acute (short-term, high dose) exposure in humans can cause central nervous system effects (e.g., irritability, dizziness, muscle tremors, and convulsions) (U.S. EPA, 1986).
- In animals, liver, kidney and blood disorders can occur. The oral LD_{50} values for heptachlor epoxide range from 46.5 to 60 mg/kg. (U.S. EPA, 1980; IARC, 1979; IRIS, 1988).

Toxicological Effects Indices:

- Cancer Potency Factor (CPF): 9.1 $(mg/kg/day)^{-1}$ (IRIS, 1989)
- Reference Dose (RfD): 1.3×10^{-5} mg/kg/day (IRIS, 1989)

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	389.3	Windholz, 1983
Physical State @ 20°C:	solid	
Melting Point (°C):	157-160	Callahan et al., 1979
Boiling Point (°C):	N/A	
Density/Specific Gravity:	N/A	
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	0.350 (25°C)	Mabey et al., 1982
Vapor pressure, P (mm Hg):	$3x10^{-4}$ (25°C) (value for heptachlor)	Mabey et al., 1982
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	$4.4x10^{-4}$	Mabey et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{OW}:	2.70	Mabey et al., 1982
Soil Adsorption Coefficient, K_{OC} (ml/g):	$2.2x10^2$	Mabey et al., 1982
Fish Bioconcentration Factor, BCF (for fish):	$1.44x10^4$ (calc.)	Lyman et al., 1982
	2900 pinfish 4500 minnow 1700 mussel 850 oyster	Zaroogian et al., 1985
	11,280*	U.S. EPA, 1980

* Value used for estimating aquatic effects

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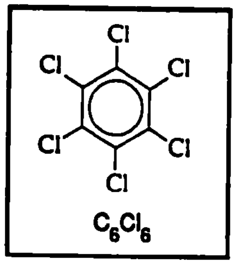
HEXACHLOROBENZENE

CAS No.: 118-74-1
CAS Preferred Nomenclature:
Benzene, hexachloro-



Empirical Formula: C_6Cl_6

Synonyms and Common Names:
- HCB
- No Bunt
- Perchlorobenzene
- Amadin
- Co-op Hexa

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish) for a 10^{-6} cancer risk (U.S. EPA, 1987):
  0.74 ng/L
- EPA Ambient Water Quality Criteria (for protection of aquatic organisms)
  None established at present
- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present
- EPA Drinking Water Health Advisories (U.S. EPA, 1987):
  child (10 kg):
  1-day, 10-day and long-term exposure = 0.05 mg/L
  adult (70 kg):
  long-term exposure = 0.2 mg/L
- Food and Drug Administration Action Level for Fish:
  None established at present
- Food and Drug Administration Action Level for Meat and Poultry (Morris and Cabral, 1986):
  0.5 ppm
- FDA Action Levels are for use in interstate commerce

Use Restrictions and Bans:

- In 1984 registration of hexachlorobenzene as a pesticide was voluntarily cancelled (Morris and Cabral, 1986).

SOURCES OF HEXACHLOROBENZENE

Total Hexachlorobenzene Produced:

- Production in the U.S. of HCB as a pesticide was about 3.2 million lbs in 1975 (Blackwood and Sipes, 1979). Commerical production in the U.S. was discontinued in 1976 (U.S. EPA, 1984). Since 1981 no HCB has been imported (Menzie, 1986).
- HCB is formed, however, as a by-product of the production of other chlorinated compounds. Major sources include carbon tetrachloride, tetrachloroethene, and trichloroethene. HCB is also an impurity in some pesticides (e.g., pentachloronitrobenzene, chlorothalonil, dacthal, picloran) and in pentachlorophenol.

Uses of Hexachlorobenzene:

- Primary agricultural use prior to 1985 was as a fungicide to protect seeds of grain crops, particularly wheat (Devine, 1982; Pelletier, 1985)
- In the early 1970's, small amounts of HCB were used for a variety of industrial purposes:
  - fungicide in paper products (Verschueren, 1983)
  - pyrotechnic materials (Quinlivan et al., 1975)
  - synthetic rubber production for tires (Mumma and Lawless, 1975)
  - reported use as fluxing agent in aluminum production (Quinlivan et al., 1975)
  - reported use in graphite electrode production (Mumma and Lawless, 1975).

Other Sources:

- HCB can be formed during incineration of municipal waste and chlorination treatment of industrial process water and wastewater.
- HCB is a breakdown product of the biotransformation of lindane (Morris and Cabral, 1986).
- Emissions to air and water from landfills containing pesticides and industrial wastes (Brooks and Hunt, 1984).

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, hexachlorobenzene can volatilize but not readily ($H = 6.8 \times 10^{-4}$ atm • m^3/mol). An experimentally-determined volatilization half-life was 41 hours in one meter deep water (Korte and Greim, 1981). HCB sorbs strongly to soils or sediments containing organic matter (K_{ow} 457,000). HCB can bioaccumulate, although the potential differs substantially among aquatic species (BCF = 7,800 to 22,000).

Persistence:

- Hexachlorobenzene is widespread and persistent in aquatic systems. Recent experiments by Mill and Haag (1986) confirmed that photolysis is slow with a half-life of about 90 days. Earlier experiments had suggested that natural organics (e.g. humic acids) might increase photolysis, but Mill and Haag found no such effect. Because of its chemical structure, HCB does not undergo hydrolysis at temperatures normally found in the environment. Experiments to determine biotransformation rates of HCB found negligible degradation (Tabak, et al., 1981 and Callahan, et al., 1979).

HEALTH EFFECTS

Carcinogenicity:

- Hexachlorobenzene causes liver tumors in rats, mice and hamsters (IARC, 1979; U.S. EPA, 1984). Tumors have also been induced in kidneys of rats and in adrenal and thyroid glands of hamsters (U.S. EPA, 1984). EPA classification B2: Probable human carcinogen (IARC Class 2b) (PHRED, 1988).

Mutagenic Activity:

- Hexachlorobenzene was not mutagenic in bacterial or mammalian cell assays, but was mutagenic in yeast (U.S. EPA, 1984). The Ames test was also negative (Morris and Cabral, 1986).

Reproductive Effects:

- HCB is teratogenic in mice and rats (IARC, 1979) and fetotoxic in rats and quail.
- An increase in mortality of breast-fed babies whose mothers have been chronically exposed to HCB has also been reported (IARC, 1979).

Other Toxicological Effects:

- Chronic (long-term, low dose) human exposure to HCB can cause porphyria with the following symptoms: skin lesions, excessive pigmentation, excessive hair production or hair loss, light sensitivity and neurologic damage (U.S. EPA, 1984 and 1987). Effects on animals include liver and kidney lesions in rats; immunosuppression in mice, rats and dogs; neurologic damage in mice; and changes in ovaries of female mice (U.S. EPA, 1987; Morris and Cabral, 1984). One test using rats showed no effects on the first generation at dosages of 0.32-40 ppm, but the second generation had liver and parathyroid gland problems. Oral LD_{50} values range from 1,700 mg/kg in cats to 10,000 mg/kg in rats (U.S. EPA, 1987).

Toxicological Effects Indices:

- Cancer potency factor (CPF): 1.7 $(mg/kg/day)^{-1}$ (U.S. EPA, 1986; PHRED, 1988).

- Reference Dose (RfD): 0.0008 mg/kg/day (IRIS, 1989).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	284.8	Windholz, 1983
Physical State @ 20°C:	solid	
Melting Point (°C):	231	Windholz, 1983
Boiling Point (°C):	323-326	Windholz, 1983
Specific Gravity:	2.044 (23°C)	Windholz, 1983
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/P):	$6x10^{-3}$ (25°C) 0.11 (24°C)	Callahan et al., 1979 Verschueren, 1983
Vapor Pressure, P (mm Hg):	$1.089x10^{-5}$ (20°C)	Callahan et al., 1979
Henry's Law Constant H @ 25°C (atm • m^3/mol):	$6.8x10^{-4}$(calc)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	5.66	Leo, 1983
Soil Adsorption Coefficient, K_{oc} (ml/g):	3900(calc)	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	7800 rainbow trout 22,000 fathead minnow 8,690*	U.S. EPA, 1987 U.S. EPA, 1987 U.S. EPA, 1980

* Value used for estimating aquatic effects

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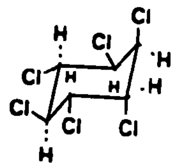
α-HEXACHLOROCYCLOHEXANE (alpha-BHC)

CAS No.: 319-84-6
CAS Preferred Nomenclature:
Cyclohexane, 1,2,3,4,5,6-hexachloro- (1.alpha., 2.alpha., 3.beta., 4.beta., 5.beta., 6.beta.)-



Empirical Formula: $C_6H_6Cl_6$

Synonyms and Common Names:

α-Hexachlorocyclohexane	α-Benzenehexachloride
α-BHC	α-Hexachloran
128Ma-HCH	α-Lindane

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish) for a 10^{-6} cancer risk (IRIS, 1989):
  3.1×10^{-2} μg/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms)(IRIS, 1989):

	Freshwater	Saltwater
Acute, μg/L	100	0.34
Chronic, μg/L	--	--

  Above are LECs (Lowest Effect Concentration)

- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present

- EPA Drinking Water Health Advisories:
  child (10 kg):
  1-day, 10-day and long-term exposures = 50 μg/L
  adult (70 kg):
  long-term exposure = 20 μg/L

- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restrictions and Bans:

- In 1977, EPA cancelled inclusion of α-hexachlorocyclohexane in technical grade lindane (EPA, 1985).
- Uses of all but γ - hexachlorocyclohexane (lindane) were cancelled by 1978 (41 FR 46031; 43 FR 31432).

SOURCES OF α-HEXACHLOROCYCLOHEXANE

Total Hexachlorocyclohexane Produced:

- α-Hexachlorocyclohexane is no longer produced in the United States.

Uses of -Hexachlorocyclohexane:

- Hexachlorocyclohexane occurs in eight forms. Technical grade lindane is an off-white to brown powder that, prior to 1977, contained α-hexachlorocyclohexane.
- Technical-grade lindane was used to control cockroaches, flies, aphids, grain weevils, and beetles (Kirk-Othmer, 1982).

Other Sources:

- May be selective degradation product of other hexachlorocyclohexane isomers. (Matsumura, 1985).

FATE IN ENVIRONMENT

Partitioning:

- Based on the physical/chemical properties of α-hexachlorocyclohexane, sorption to sediment is moderate(K_{OW} = 8,000), and the potential for bioaccumulation is low (BCF = 130). Based on its similarity to the γ isomer, volatilization is estimated to be low.
- Experiments by Tsukano (1973) reported Freundlich isotherms for the hexachlorocyclohexane isomers on two soils with organic carbon contents of 1.9 percent and 5.2 percent. The values were $1/n = 0.71$ to 0.83 and $K = 30$ to 120 for the second soil.

Persistence:

- Hydrolysis, photolysis and oxidation are not thought to be important fate determining processes in the environment. One experiment showed no change due to hydrolysis at a pH of 7.3 to 8 after 2 years (Callahan et al., 1979). No other studies under acidic or more alkaline conditions were found.

- Biotransformation has been observed in laboratory experiments conducted using soil/water mixtures under anaerobic conditions. (Tsukano, 1973).

HEALTH EFFECTS

Carcinogenicity:

- Inadequate data exists to determine whether α-hexachlorocyclohexane is a human carcinogen. Exposure to α-hexachlorocyclohexane caused increased incidences of liver tumors in mice and rats. α-Hexachlorocyclohexane is classified by the EPA as a probable (B-2) human carcinogen. IARC (1979) states that hexachlorocyclohexane cannot be classified (class d) because of limited data.

Mutagenic Activity:

- α-Hexachlorocyclohexane (tested individually and mixed with β-hexachlorocyclohexane) was determined to be non-mutagenic in bacteria, yeast, and Drosophila (IARC, 1979).

Reproductive Effects: No data found.

Other Toxicological Effects: None found.

Toxicological Effects Indices:

- Cancer potency factor (CPF): 6.3 $(mg/kg/day)^{-1}$ (IRIS, 1989).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	291	Callahan et al., 1979
Physical State @ 20°C:	solid	
Melting Point (°C):	157-158	Gunther, 1971
Boiling Point (°C):	N/A	
Specific Gravity:	N/A	
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	1.63	Brooks, 1974
Vapor Pressure, P (mm Hg):	2.5×10^{-5}	Callahan et al., 1979
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	N/A	
Log (Octanol-Water Partition Coefficient), log K_{ow}:	3.90	Mabey et al., 1982
Soil Adsorption Coefficient, K_{oc}(ml/g):	3800	Mabey et al., 1982
Fish Bioconcentration Factor, BCF:	130*	OWRS, U.S. EPA, 1980

* Value used for estimating aquatic effects

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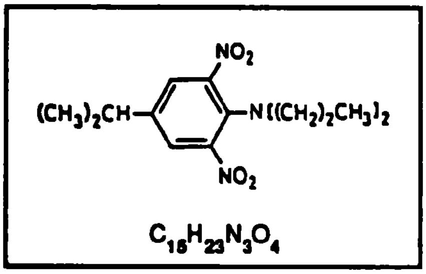
ISOPROPALIN

CAS No.: 33820-53-0
CAS Preferred Nomenclature:
Benzenamine, 4-(1-methylethyl)-2,6-dinitro-N,N-dipropyl-

Empirical Formula: $C_{15}H_{23}N_3O_4$

Synonyms and Common Names:
- Paarlan
- 2,6-Dinitro-N,N-dipropylcumidene
- El-179



REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish):
  None established at present
- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):
  None established at present
- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present
- EPA Drinking Water Health Advisories:
  None established at present
- EPA Tolerance Levels for peppers and tomatoes (40 CFR 180.313):
  0.05 ppm
  (Proposed to be revoked in May 1990)
- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restrictions and Bans:

- Isopropalin may be used only as a pre-emergent herbicide on tobacco fields that are not rotated with food or feed crops.

SOURCES OF ISOPROPALIN

Total Isopropalin Produced:

- Isopropalin is produced by Eli Lilly and Co. No production data are available (SRI, 1986).

- One report states that other dinitroaniline herbicides are used more widely than isopropalin. This would make isopropalin production in the U.S. less than 4,000 tons per year (Green et al., 1987).

Uses of Isopropalin

- Isopropalin is a dinitroaniline compound used as an herbicide to control grasses and broadleaf weeds in the vegetable crops of peppers and tomatoes (Ouellette and King, 1977; Worthing, 1983; Farm Chemicals Handbook, 1985).
- The only currently registered use for isopropalin is as a preemergent spray for controlling weeds in tobacco crops (Worthing, 1983; IRIS, 1989).

Other Sources: None found.

FATE IN ENVIRONMENT

Partitioning:

- Based upon it's physical/chemical properties, isopropalin is predicted to volatilize relatively rapidly from water ($H = 1.5 \times 10^{-4}$ atm • m^3/mol) and at a slower rate from surface soil ($P/SK_{OC} = 4.4 \times 10^{-9}$ mm Hg•L/mg corresponding to an estimated volatilization half-life of 3.6 days).
- It adsorbs relatively strongly to soils and sediments (estimated $K_{OC} = 8.5 \times 10^4$), and has a high potential for bioaccumulation (estimated $BCF = 2.5 \times 10^4$) (Lyman et al., 1982).
- Isopropalin has a low potential for leaching from soils. Holzer and Sieck (1972) reported that isopropalin and its associated breakdown products which formed during 30 days of aerobic incubation were relatively immobile in a sandy loam soil. Approximately 99% of the radio-labeled compound initially applied as ^{14}C-isopropalin remained in the top 2 inches of a 12 inch sandy loam column after 45 days of elution with 0.5 inches water/day.
- Sleight (1972) reported maximum isopropalin concentrations of 25-40 mg/kg in the edible tissues of bluegill sunfish during 42 days of exposure to 0.025 mg/L. The tissue to water concentration ratios correspond to non-steady state BCF values of 1.0×10^3 to 1.6×10^3.

Persistence:

- Saunders and Smith (1983) reported that at 24°C, isopropalin did not undergo any detectable hydrolysis over a 42 day period at pH values of 5, 7, and 9.

- Saunders and Smith (1983) reported a short photodegradative half-life of 1.5 hours for isopropalin in a pH 7 buffered aqueous solution exposed to artificial light with a similar irradiation spectrum to that of sunlight.

- Biodegradation of isopropalin in soil occurs. The specific processes include dealkylation, reduction of nitro groups to amino groups. Twelve different breakdown products, representing at most 4% of the parent compound, were identified (Golab and Althaus, 1975). Golab (1983) reported relatively long 50% dissipation times of approximately 6 months for 2 ppm isopropalin incubated at 23°C in a sandy loam, a loam, and a clay loam soil under aerobic conditions. Golab and Sassic (1983) reported that the degradation of isopropalin in a loam soil was more rapid under anaerobic conditions (45% dissipated within 60 days) than under aerobic conditions.

ISOPROPALIN OBSERVED IN THE ENVIRONMENT

- No data available.

HEALTH EFFECTS

Carcinogenicity:

- The carcinogenic potential of isopropalin has not been evaluated by the U.S. EPA (IRIS, 1989). No experimental data have been found for carcinogenicity tests with isopropalin.

Mutagenic Activity: No data found.

Reproductive Effects:

- The U.S. EPA states that better studies on the reproductive effects of ispropalin need to be conducted. In one rat study with isopropalin the only effects noted were reduced weights and reduced food consumption in exposed mothers (IRIS, 1989).

Other Toxicological Effects:

- Acute human toxicity due to short-term high dose exposure to isopropalin is considered to be insignificant (Sittig, 1985).

- Isopropalin at high doses (>2000 mg/kg) caused eye and skin irritation in rabbits (Worthing, 1983).

- No fatalities were observed in chickens, dogs, mallard ducks or rabbits fed isopropalin at 2000 mg/kg or quail fed a dosage of 1000 mg/kg (Worthing, 1983).

- Subchronic (90-day feeding) exposure of rats caused a reduction in the number of red blood cells and alterations in organ weights at the highest dose (288 mg/kg/day).
- The U.S. EPA does not require that chronic (long-term, low dose) exposure tests be conducted because of isopropalin's use on tobacco. The U.S. EPA recognizes that the use of tobacco products is detrimental to the consumer and that the use of tobacco is voluntary. It may be possible then to avoid exposure to isopropalin residues (IRIS, 1989).

<u>**Toxicological Effects Indices:**</u>

- Reference Dose (RfD): 1.5×10^{-2} mg/kg/day (IRIS, 1989).
- Oral LD_{50} rats and mice: >5000 mg/kg (Dreisbach, 1980; Sittig, 1985; Worthing, 1983).
- LC_{50} (96 hour): fathead minnow, >0.1 mg/L; goldfish, >0.15 mg/L.

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	309.4	Worthing, 1893
Physical State @ 20°C:	red-orange liquid	Worthing, 1983
Melting Point (°C):	N/A	
Boiling Point (°C):	390 (calc.)	Lyman et al., 1982
Specific Gravity:	N/A	
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	0.08 (25°C)	Herbicide Handbook, 1983
Vapor Pressure, P (mm Hg):	$3x10^{-5}$(25.6°C)	Herbicide Handbook, 1983
Henry's Law Constant, H @ 25°C (atm • m^3/mole)	$1.5x10^{-4}$ (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	5.74 (calc.)	Lyman et al., 1982
Soil Adsorption Coefficient, K_{oc} (ml/g):	$8.5x10^4$ (calc.)	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	$2.5x10^4$ (calc.)*	Lyman et al., 1982

* Value used for estimating aquatic effect

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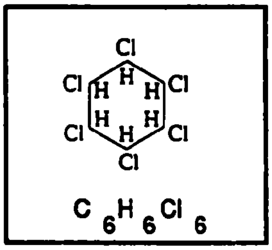
LINDANE
(γ – HEXACHLOROCYCLOHEXANE)



CAS No.: 58-89-9
CAS Preferred Nomenclature:
Cyclohexane, 1,2,3,4,5,6-hexachloro-,

Empirical Formula: $C_6H_6Cl_6$

Synonyms and Common Names:

- γ-Benzene hexachloride	-γ-Hexachlorocyclohexane
- γ-BHC	-Gammexane
- γ-HCH	-Jacutin
- γ-Hexachlorobenzene	-Lindex

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish) (IRIS, 1989):
  6.25×10^{-2} μg/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms)(IRIS, 1989):

	Freshwater	Saltwater
Acute, μg/L	2.0	1.6×10^{-1}
Chronic, μg/L	8.0×10^{-2}	--

- EPA Drinking Water Health Advisories (PHRED, 1988)
  child (10 kg):
  1-day and 10-day exposure = 1200 μg/L
  longer-term exposure = 33 μg/L
  adult (70 kg):
  longer-term exposure = 0.12 μg/L
  lifetime exposure = 0.2 μg/L

- Food and Drug Administration Action Level for Fish:
  None established at present

- EPA Drinking Water Standard (IRIS, 1989):
  Current Maximum Contaminant Level = 0.004 mg/L
  Proposed Maximum Contaminant Level = 0.0002 mg/L
  Proposed Maximum Contaminant Level Goal = 0.0002 mg/L

- Food and Drug Administraiton Action Level for Other Foods (55 FR 14362)
  0.1 to 0.5 ppm

- FDA Action Levels are for use in interstate commerce

Use Restrictions and Bans:

- In 1977, EPA banned inclusion of α-and β-hexachlorocyclohexane in technical grade lindane.
- Use in smoke fumigation devices for indoor domestic purposes banned in 1985 (48 FR 48512, 50 FR 5424).
- Use of lindane in dog dips for the control of pests (other than mites) permitted only for veterinary use (U.S. EPA, 1985).
- Application permitted only under direct supervision of a certified applicator. Protective clothing required (U.S. EPA, 1985).

SOURCES OF LINDANE

Total Lindane Produced:

- First synthesized in 1825, lindane's insecticidal properties were discovered in 1942 (Hayes, 1982).
- In 1971, 1 million lbs. were produced by Occidental Petroleum Corporation (Ouellette and King, 1977).
- Technical lindane (a mixture of several isomers of hexachlorocyclohexane) is no longer produced in the United States, but is imported from France, Germany, Spain, Japan, and China (U.S. EPA, 1985). It is an off-white to brown powder with a persistent, musty odor (Hayes, 1982).

Uses of Lindane:

- Lindane is registered for use as an insecticide/acaracide on a variety of fruit and vegetable crops, ornamentals, tobacco, forestry, domestic outdoor and indoor uses by homeowners, commercial warehouses or feed storage areas, farm animal premises, and wooden structures (U.S. EPA, 1985).

- Lindane is primarily used on phytophagous and soil-inhabiting insects, public health pests, and animal ectoparasites (Farm Chemicals Handbook, 1987).
- In 1982, approximately 48%, 20%, and 19% of the lindane use in the U.S. was for seed treatment, livestock and hardwood lumber, respectively.

Other Sources: Component of other hexachlorocyclohexanes.

FATE OF LINDANE IN THE ENVIRONMENT

Partitioning:

- Based upon it's physical/chemical properties, lindane is predicted to volatilize relatively slowly from water ($H = 4.9 \times 10^{-7}$ atm• m^3/mol), volatilize at an intermediate rate from soil surfaces ($P/SK_{oc} = 3.3 \times 10^{-10}$ mm Hg • L/mg, corresponding to an estimated volatilization half-life of 18 days), and have intermediate adsorption to soils and sediments ($K_{oc} = 3.8 \times 10^3$) (Lyman et al., 1982).
- Kay and Elrick (1967) reported intermediate soil/water partition coefficients (K_p) of 23, 20, and 17 for lindane adsorbed to a sandy loam (organic carbon content (oc) of 3.2%), loam (oc = 3.6%), and loamy sand (oc = 2.9%) soil, respectively. The corresponding K_{oc} values are 720, 560, and 590, respectively. Foschi, et al., 1970 reported that lindane is moderately susceptible to leaching from a low organic soil. After elution with 35 inches of water, 80%, 19%, and 1% of the total lindane recovered from a 60 cm sandy clay loam (oc = 1.5%) column were recovered in the 0 to 5 cm, 5 to 20 cm, and 20 to 40 cm segments, respectively. No lindane was detected in the 40 to 60 cm segment or in the leachate.
- Forbis (1986) reported maximum BCFs of 780 (edible tissue) and 1,400 (whole body) for bluegill sunfish exposed to 0.54 ppb lindane over a 28 day period.

Persistence:

- Based upon the hydrolysis rate constants measured by Ellington et al. (1986), lindane has an intermediate hydrolysis half-life of 14 days at pH 9, and relatively long hydrolysis half-lives of 210 days at pH 7 and 240 days at pH 5.
- ADL (1986) reported a relatively long photodegradative half-life of 48 days for lindane in water.
- Biotransformation is favored in biologically rich, anaerobic environments. Half-lives range from several days to over a year (Callahan et al., 1979). Under some conditions, lindane degrades to γ-pentachlorocyclohexane (Kirk-Othmer, 1978).

HEALTH EFFECTS

Carcinogenicity:

- Evidence to determine whether γ-hexachlorocyclohexane is a human carcinogen is limited. The technical grade of lindane (containing approximately 65% α-hexachlorocyclohexane) has been shown to cause liver cancer in four strains of mice. Experiments performed on rats were negative (Ito et al., 1975, Fitzhugh et al., 1950).
- The carcinogenicity data for lindane is presently under review by the U.S. EPA (IRIS, 1989).
- However, on the basis of mouse carcinogenicity the EPA has previously rated lindane as a B-2 carcinogen (IRIS, 1989).

Mutagenic Activity:

- Predominantly negative results have been obtained in mutagenicity testing of lindane. Tsoneva-Maneva et al. (1971) reported lindane induced alterations in mitotic activity of Chinese hamster cells. Chromosomal breaks and gaps in Chinese hamster cells have also been attributed to lindane exposure (Ishidata and Odashima, 1971). Mutagenic effects were not observed in tests using bacteria (Buselmaier et al., 1972; Schubert, 1969).

Reproductive Effects:

- Lindane has been shown to cause disturbed estrous cycles, decreases in fetal survival, and reduced numbers of live births in rats, delayed sexual maturation in female rats (Shtenberg and Mametkulien, 1976), and increases in stillbirths in dogs (Litterst and Miller, 1975).

Other Toxicological Effects:

- Acute lindane poisoning affects the nervous system causing restlessness, tremors, unsteady gait, heavy breathing, and convulsions. Violent convulsions are rapid in onset and generally followed by death or recovery within 24 hours. The probable human oral lethal dose is 50-500 mg/kg (Klaassen et al., 1986).
- Rats fed diets containing lindane developed mild toxicity-related changes primarily in the kidneys and also in the liver.

Toxicological Effects Indices:

- Cancer Potency Factor (CPF): 1.33 $(mg/kg/d)^{-1}$ (PHRED, 1988)
- Technical Grade CPF: 1.8 $(mg/kg/d)^{-1}$ (IRIS, 1989)
- Reference Dose (RfD): $3x10^{-4}$ mg/kg/d (IRIS, 1989)
- TWA-TLV (time-weighted average-threshold limit value) for occupational skin exposure: 0.5 mg/m^3 (ACGIH, 1986)

PHYSICAL/CHEMICAL PROPERTIES FOR LINDANE

	Value	Reference
Molecular Weight (g/mole):	290.85	Windholtz, 1983
Physical State @ 20°C:	colorless solid	IRIS, 1989
Melting Point (°C):	112.9	Callahan et al., 1979
Boiling Point (°C):	323.4	IRIS, 1989; Weast, 1979
Specific Gravity:	1.87	Verschueren, 1983
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	7.52 0.4 @ 25°C	Callahan et al., 1979
Vapor Pressure, P (mm Hg):	9.4×10^{-6} @ 20°C	IRIS, 1989; Windholz, 1983
Hydrolysis, k_n (hr^{-1}), K_b (1/Mhr)	$1.20.2 \times 10^{-4}$ 198	Ellington et al., 1987
Henry's Law Constant, H @ 25°C (atm m^3/mol):	4.9×10^{-7}	Mills et al., 1985
Log (Octanol-Water Partition Coefficient), log K_{ow}:	3.72	IRIS, 1989
Soil Adsorption Coefficient, K_{oc}(ml/g):	3.8×10^3	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	780 edible tissue, 1400 whole body for bluegill sunfish 130*	Forbis, 1986

* Value used for estimating aquatic effects

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MERCURY

CAS No.: 7439-97-6
CAS Preferred Nomenclature: Mercury

Formula: Hg, can occur in elemental and inorganic and organic (methyl) forms

Synonyms and Common Names: Quicksilver

80
Hg

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish) (45 FR 79318) (IRIS, 1989):
  0.153 μg/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms)(IRIS, 1989):

	Freshwater	Saltwater
Acute, μg/L	2.4	2.1
Chronic, μg/L	1.2×10^{-2}	2.5×10^{-2}

- EPA Drinking Water Standard (for inorganic mercury) (40 CFR 141.11):
  Current Maximum Contaminant Level = 0.002 mg/L
  Proposed Maximum Contaminant Level = 0.002 mg/L
  Proposed Maximum Contaminant Level Goal = 0.002 mg/L

- EPA Drinking Water Health Advisories (for inorganic mercury) (IRIS,1989)
  adult (70 kg):
  long-term and lifetime exposure = 2 μg/L

- Food and Drug Administration Action Level for Fish (40 FR 45663):
  1 ppm

- FDA Action Levels are for use in interstate commerce

Use Restrictions and Bans:

- All uses as a bactericide or fungicide banned after 8/78 except the following (41 FR 16497, 41 FR 26743, 41 FR 36068):
  - treatment of textiles for outdoor use
  - control of brown mold on new lumber
  - in-can preservative in water-based paints
  - for exterior use

SOURCES OF MERCURY

Natural Sources:

- Mercury occurs in nature (about $3x10^{-6}$% of earth's crust) mostly in combination with sulfur to form more than 25 different minerals. Commercially, the most important mineral is cinnabar (HgS), from which elemental mercury (Hg) is extracted (USDI, 1985). Mercury can occur as elemental Hg, as well as inorganic and organic (organomercurial) forms. It forms complexes with organic ligands, chlorides and sulfur compounds.
- Degassing contributes an estimated 25,000 to 150,000 tons per year to the atmosphere, compared to about 5,000 tons per year from fossil fuel burning (Klaassen et al., 1986).

Total Mercury Produced:

- 1.6 million pounds (USDI, 1986).

Industrial Uses of Mercury:

- Electrical applications including the production of mercury cell batteries, mercury vapor lamps, thermostats, cathode tubes and switches.
- Catalyst in the production of urethane polymers for use in plastics.
- Cathode in the electrolytic production of chlorine and caustic soda (U.S. EPA, 1987).

Uses of Mercury In Homes and Businesses:

- Batteries for many small electronic devices such as calculators, hearing aids and cameras
- Thermometers and barometers

- Amalgamated with silver and tin to form tooth fillings.

Uses as Fungicide/Bactericide (Limited see Regulatory Status):

- A fungicide in some exterior water-based paints
- Formerly as a fungicide in paper products and for the protection of seed grain from mildew
- As preservative in laboratories.

FATE IN ENVIRONMENT

Partitioning:

- The fate of mercury depends on its speciation, pH, redox conditions and presence of complexing ions including organic ligands, chloride and sulfhydryl groups (-SH). Mercury exists in the 0 (metallic), 1+ (murcurous) and 2+ (mercine) forms. The +1 species can hydrolyze to form $Hg(OH)_2$. The 2+ species can hydrolyze to form the species $Hg(OH)^+$, $Hg(OH)_2$, and $Hg(OH)_3$ (Rubin, 1976). The relative amounts of each species are dependent on pH.
- Examples of Hg complexes include $Hg(OH)_2$ under alkaline conditions and $HgCl_2$ under acidic conditions. In alkaline sediments under moderately reducing conditions, dimethyl mercury can form which is insoluble and highly volatile. At neutral and lower pH values, monomethyl mercury can form. Under strongly reducing conditions (e.g., in the presence of hydrogen sulfide (H_2S)), mercury can precipitate as HgS which is insoluble (Nriagu, 1979).

Persistence:

- Mercury is readily sorbed to soil organic matter, clays and hydrous metal oxides with the exception of some organic chloride-Hg complexes, e.g. CH_3HgCl. Methylmercuric chloride has a K_{ow} value of about 2.0 (Medeiros, 1980). Mercury is also bioaccumulated. BCF values for inorganic mercury range from 1,800 to 5,000. BCF values for organic mercury are higher (10,000 to 82,000). Most of the mercury in fish is present in the methyl form.
- Mercury is biologically methylated and in limited amounts may be lost from soils by volatilization (Lyman et al., 1987).

HEALTH EFFECTS

Carcinogenicity:

- Mercury has not been shown to cause cancer in humans.

- Rats have developed local tumors at the point of injection of metallic mercury (U.S. EPA, 1984).
- The EPA designates mercury as a Group D chemical, not classified (U.S. EPA, 1984).

Mutagenic Activity:

- Methyl mercury was shown to be a weak mutagen in experiments with fruit flies (U.S. EPA, 1981). Mercuric salts were not mutagenic in tests using nonmammalian cells, but results using mammalian cells were inconclusive.

Reproductive Effects:

- Both inorganic and organic forms of mercury are toxic to developing fetuses. The fetal nervous system is particularly sensitive, with mercury disrupting and delaying nerve cell development. Fetuses chronically exposed (low doses over long time periods) to organic mercury are born mentally retarded and exhibit cerebral palsy-like symptoms (Marsh, 1987).

Other Toxicological Effects:

- Mercury toxicity in humans produces a number of different symptoms depending on whether the exposure is of a short-term, high dose (acute) type or long-term, low dose (chronic) type. Elemental mercury vapor produces an acute pneumonitis. Inorganic mercury salts can cause acute gastrointestinal distress and renal failure. (The lethal dose of mercuric chloride in humans is 1 to 4 g.) Both of these forms, as well as the organic mercurials, produce neurologic effects after chronic exposure to mercury. Eye and skin irritation can also occur (Sittig, 1985).
- Symptoms such as numbness of the extremities, tremors, spasms, personality and behavior changes, difficulty in walking, deafness, blindness and death have been associated with the long-term ingestion of mercurycontaminated fish. (U.S. EPA, 1981).

Toxicological Effects Indices:

- RfD (Reference Dose): 0.002 mg/kg/day for inorganic mercury compounds and 0.0003 mg/kg/day for alkyl (organic forms) or mixed alkyl-inorganic mercury (U.S. EPA, 1986).
- TWA-TLV (Time-weighted average, threshold limit value for occupational exposures): 0.01 mg/m^3 alkyl mercury for skin exposure and 0.05 mg/m^3 for vapor exposure (ACGIH, 1986).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	200.6	Windholz, 1983
Physical State @ 20^{o}:	liquid	
Melting Point (^{o}C):	-38.87	Windholz, 1983
Boiling Point (^{o}C):	356.72	Windholz, 1983
Specific Gravity:	13.534 ($25^{o}C$)	Windholz, 1983
Acid Dissociation Constant, pK_a	N/A	
Water Solubility (mg/L):	0.056 ($25^{o}C$)	Windholz, 1983
Vapor Pressure, (mm Hg):	$2x10^{-3}$ ($25^{o}C$)	Windholz, 1983 Lindquist et al., 1984
Henry's Law Constant @ $25^{o}C$ (atm • m^3/mol):	Hg^0 $6.97x10^{-3}$ $(CH_3)_2Hg$ = $7.45x10^3$ $Hg(OH)_2$ = $7.2x10^{-8}$	Lindquist et al., 1984
Hydrolysis Rates:	1+ and 2+ forms hydrolyze, specific rate constants not found	Rubin, 1976
Log (Octanol-Water Partition Coefficient), log K_{ow}:	CH_3HgCl = 0.3 = 0.4	Medeiros et al.,1980 Halbach, 1985
Partition Coefficient, K_p (ml/g): (Inorganic Hg)	1,000-$1x10^6$ 1/kg	Gherini and Rajashenkar, 1975
Fish Bioconcentration Factor, BCF:	1800-4994 (inorganic) 10,000-81,670* (organic) 5,500	U.S. EPA, 1985 U.S. EPA, 1985 Olson et al., 1975 U.S. EPA, 1980

* Value used for estimating aquatic effect

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MERCURY

OBSERVATIONS AND EFFECTS ON PISCIVOROUS WILDLIFE

Mercury is toxic to mink at diet concentrations of 1 to 2 ppm (Wren 1989). This finding is consistent with the lethal dose reported by the State of Wisconsin (WDHSS 1988).

The effects of mercury in piscivorous wildlife are summarized in the following table:

Effects of Mercury Concentrations on Piscivorous Wildlife

Animal	Concentration	Effect	Source
Mink	1.0 mg/kg (diet)	Death	WDHSS, 1988
Mink	1-2 ppm (diet)	Death	Wren, 1989
River Otter	>2.0 mg/kg (diet)	Death	WDHSS, 1988

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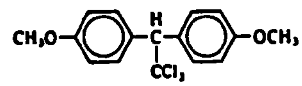
METHOXYCHLOR

CAS No.: 72-43-5
CAS Preferred Nomenclature:
Benzene,1,1'-(2,2,2-trichloroethylidene) bis (4-methoxy)-



$C_{16}H_{15}Cl_3O_2$

Empirical Formula: $C_{16}H_{15}Cl_{3}O_{2}$

Synonyms and Common Names:
- Methoxy-DDT
- DMDT
- Maralate
- p,p'-Dimethoxydiphenyl
- trichloroethane
- Marlate
- Dianisyl trichloroethane
- Dimethoxy-DT
- Metox

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of water and fish)(U.S. EPA, 1987):
  100 μg/L

- EPA Drinking Water Health Advisories (U.S. EPA, 1987; PHRED, 1988):
  child (10 kg):
  1 day exposure = 6.0 mg/L
  10 day exposure = 2.0 mg/L
  long-term exposure = 0.5 mg/L
  adult (70 kg):
  long-term exposure = 2.0 mg/L
  lifetime exposure = 0.4 mg/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):

	Freshwater	Saltwater
Acute, μg/L	--	--
Chronic, μg/L	0.03	0.03

- EPA Tolerance Levels for Food (40 CFR 180.120):
  1-14 ppm

- EPA Drinking Water Standards (50 FR 46936; IRIS, 1989):
  Current Maximum Contaminant Level = 0.1 mg/L
  Proposed Maximum Contaminant Level = 0.4 mg/L
  Proposed Maximum Contaminant Level Goal = 0.4 mg/L

- Food and Drug Administration Action Level for Fish
  None established at present

Use Restrictions and Bans:

- None found.

SOURCES OF METHOXYCHLOR

Total Methoxychlor Produced:

- Methoxychlor is an organochlorine pesticide with a similar chemical structure to DDT. It was first introduced in 1945.
- In 1971, 9.9 million pounds were produced by the companies Chemical Formulations, DuPont, and Prentiss (Ouellette and King, 1977).
- By 1982, very little methoxychlor was being produced. Current data are unavailable, but the volume produced by the two listed producers, Drexel Chemical Company and Kincaid Enterprises, is also likely to be small (SRI, 1986; Green et al., 1987).

Uses of Methoxychlor:

- Like DDT, methoxychlor is effective against a wide range of insects that affect fruits, vegetables, forage crops and livestock (Hayes, 1982; McEwen and Stephenson, 1979).
- Hundreds of products containing methoxychlor are registered for insect control in foliar treatment, dormant application, seed or soil treatment and post-harvest application of many crops (U.S. EPA, 1986).
- Methoxychlor is used primarily to control houseflies, blackflies and mosquitos in areas of human habitation including hotels, bakeries, meat processing plants, flour mills and dairy barns (Worthing, 1983; U.S. EPA, 1986; McEwen and Stephenson, 1979).
- Mosquito control uses also include methoxychlor treatment of stagnant ponds, streams and other aquatic recreation areas (U.S. EPA, 1986).
- Methoxychlor is also used in mothproofing (U.S. EPA, 1986).

Other Sources: None found.

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, methoxychlor is estimated to be volatile ($H = 1.5 \times 10^{-5}$ atm • m^3/mole), strongly sorbed to soil ($K_{ow} \cong$ 47,900), and has a high potential for bioaccumulation (BCF = 8,300), although some empirical data show a more moderate potential for bioaccumulation.

Persistence:

- Methoxychlor is considered to be moderately biodegradable (Wolfe et al., 1977).
- Methoxychlor is estimated to have a half-life for direct photolysis in water (in the central U.S.) of 4.5 months, and also undergoes indirect photolysis (Wolfe et al., 1977); photolysis half-lives of 2-5 hours have been observed in river water (TDB, 1985). The rate of hydrolysis has been found to be independent of pH under environmental conditions, with a half-life of about 1 year at 27°C (Wolfe et al., 1977).

HEALTH EFFECTS

Carcinogenicity:

- The evidence for methoxychlor carcinogenicity is inconclusive, according to the U.S. EPA Carcinogen Assessment Group's review of a National Cancer Institute Bioassay (HSDB, 1988). The EPA has not yet classified its carcinogenic potential (PHRED, 1988).
- No cancers were observed in four experiments with rats fed 1,000 mg/kg or in one mouse feeding experiment (IARC, 1979).

Mutagenic Activity:

- Methoxychlor was found not to be mutagenic in bacterial and yeast cell assays as well as in a mouse dominant lethal test (IARC, 1979).
- It was weakly positive in a mammalian cell transformation assay (HSDB, 1988).

Reproductive Effects:

- Adverse reproductive effects have been reported. In studies with rats a dietary level of 1% methoxychlor has produced testicular atrophy, inhibition of spermatogenesis and arrested folliculogenesis (IARC, 1979; HSDB, 1988).
- Methoxychlor is also reported to be fetotoxic in rats, causing wavy ribs, but only at doses (100-400 mg/kg) causing maternal toxicity. There is no evidence of any teratogenesis at lower doses (IARC, 1979; Hayes, 1982; HSDB, 1988).

Other Toxicological Effects:

- In man, acute, short-term, high doses, up to 2 mg/kg/day, have not been shown to cause any adverse effects.
- Animals exposed to high doses of methoxychlor have exhibited a variety of symptoms. Dogs fed 2,000 or 4,000 mg/kg for two years developed nervousness, tremors and convulsions. Rats had similar central nervous system effects as well as severely retarded growth (Hayes, 1982; HSDB, 1988). Kidney injury and uterine and mammary enlargement were observed in pigs, while monkeys had liver and intestinal damage (IARC, 1979; HSDB, 1988).

Toxicological Effects Indices:

- Adjusted Reference Dose for drinking water: 1.7 mg/L (50 FR 46936).
- TWA-TLV (time-weighted average, threshold limit value) for occupational exposure: 10 mg/m^3 (ACGIH, 1986).
- Oral LD50: rat, 5-7 mg/kg; mouse, 1.8 mg/kg (IARC, 1979; HSDB, 1988).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	345.7	Windholz, 1983
Physical State @ 20°C:	colorless crystals, solid	Hayes, 1982
Melting Point (°C):	89	Worthing, 1983
Boiling Point (°C):	416 (calc.)	Lyman et al., 1982
Specific Gravity:	1.41 (25°C)	Hartley & Kidd, 1983
Acid Dissociation Constant, pKa:	N/A	
Water Solubility, S (mg/L):	$1x10^{-1}$	PHRED, 1988
Vapor Pressure, P (mm Hg):	$1.3x10^{-6}$(20°C) (calc.)	Lyman et al., 1982
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	$1.5x10^{-5}$ (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{OW}:	4.68	PHRED, 1988
Soil Adsorption Coefficient, K_{OC} (ml/g):	$8x10^4$	PHRED, 1988
Fish Bioconcentration Factor, BCF:	$1.9x10^2$-$1.6x10^3$ (exptl.)	Kenaga, 1980
	8300*	PHRED, 1988

* Value used for estimating aquatic effects

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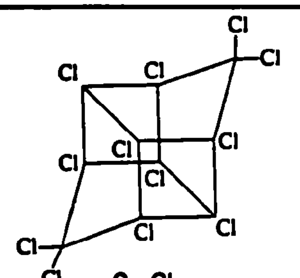
MIREX



CAS No.: 2385-85-5
CAS Preferred Nomenclature:
1,3,4-Metheno-1H-cyclobuta(cd) pentalene,1,1a,2,2,3,3a,4,5,5,5a,5b,6-dodecachloro-octahydro-

Empirical Formula: $C_{10}Cl_{12}$

Synonyms and Common Names:
- Dechlorane
- Hexachlorocyclo-
- pentadiene dime
- Paramex
- Dodecachlorooctahydro-1,3,4-metheno-2H-cyclobutal (cd) pentalene
- Perchloropentacyclodecane
- Perchlorodi-homocubane
- Ferriamicide

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish):
  None established at present

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms)(IRIS, 1989):

	Freshwater	Saltwater
Acute, μg/L	--	--
Chronic, μg/L	0.001	0.001

- EPA Drinking Water Standards Maxium Contaminant Level:
  None established at present

- EPA Drinking Water Health Advisories:
  None established at present

- Food and Drug Administration Action Level for Fish (43 FR 14736):
  0.10 ppm

- FDA Action Levels are for use in interstate commerce

Use Restrictions and Bans:

- All registered uses were cancelled as of 1977 (41 FR 56703).

- All existing stock were not to be sold, distributed or used after June 30, 1978 (NAS, 1978).

SOURCES OF MIREX

Total Mirex Produced:

- 3.3 million lbs. was produced by Hooker Chemicals and Plastics Co. between 1959 and 1975 (Suta, 1977). Twenty-five percent was used as a pesticide and the remainder as a fire retardant. Commercial production stopped in 1978.

Uses of Mirex:

- Mirex was used primarily for the control of the imported fire ant in eight southeastern states from 1962 to 1975. Approximately 250,000 kg were used to treat 14 million acres (NAS, 1978; Kutz et al., 1985). Mirex was also used in Hawaii to control the pineapple mealy-bug (Suta, 1977).
- Mirex was also used as a fire retardant in plastics, rubber, paint, paper and electrical products (Kutz et al., 1985; Windholz, 1983).

Other Sources: None identified.

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, mirex is predicted to have a relatively low volatility from water ($H = 2.2 \times 10^{-5}$ atm • m^3/mol at 25°C), low volatility from surface soil ($P/S\ K_{oc} = 1.3 \times 10^{-12}$ mm Hg • L/mg corresponding to an estimated volatilization half-life of >30 years), a strong adsorption to soils and sediments ($K_{ow} = 199{,}500$ and $K_{oc} = 2.4 \times 10^7$) and a high potential for bioaccumulation ($BCF = 2.6 \times 10^3 - 4.1 \times 10^4$) (Lyman et al., 1982).

Persistence:

- Mirex is thermally and chemically very stable and resistant to biodegradation (Bell et al., 1978). There is some evidence that mirex can be biotransformed into chlordecane (Kepone) in soil (Klaassen et al., 1986). However, mirex applied at 1 lb/acre to a Mississippi soil was reported to have a 50% dissipation time of >2.5 years (State of Mississippi, 1982 as cited by U.S. EPA, 1982). Mirex appears to be persistent in the aquatic environment as evidenced by no reported significant decreases in the concentration of mirex in a water/sediment system over a 130 day period (State of Mississippi, 1982 as cited by U.S. EPA, 1982).

- Photolysis of mirex in water can occur, but at a slow rate (Verschueren, 1983). The rate determined experimentally using river water in sunlight was 0.0042/day (Smith et al., 1978).

HEALTH EFFECTS

Carcinogenicity:

- Hepatomas and liver-cell carcinomas were observed in mice and rats fed mirex in their diet. Mirex has been classified as a probable human carcinogen, (2b) by IARC (1979). The carcinogenic data for mirex are presently under review by the U.S. EPA (IRIS, 1989).
- The results of one animal cancer study (Ulland et al., 1977) have been analyzed using a dose-response model not typically used by the EPA. This one-hit model was used to derive a possible carcinogenic potency factor of 0.354 $(mg/kg/day)^{-1}$ (U.S. EPA, 1982).

Mutagenic Activity:

- Negative in dominant lethal assay in mice (IARC, 1979). Not generally active in short-term tests (WHO, 1984).

Reproductive Effects:

- Some studies have reported that mirex is fetotoxic (25 mg/kg) and teratogenic (causing cleft palate, heart defects, cataracts) to rats (6 mg/kg/day). Also, fewer and less viable offspring were born to mice fed 1.8 mg/kg for 3 months (WHO,1984; Klaassen et al., 1986). Voles also had decreased pup survival when exposed to mirex in the diet (IRIS, 1988). Further studies must be done to confirm these results (IRIS, 1988).

Other Toxicological Effects:

- Acute hepatotoxicity (liver toxicity) was noted in rats after oral administration of mirex (IARC, 1979). Liver hypertrophy observed in rats fed 1 mg/kg for 14 days (WHO, 1984).
- Chickens exposed to mirex had depressed levels of certain types of antibodies (IgG and IgM) (Klaassen et al., 1986).

Toxicological Effects Indices:

- Cancer Potency Factor (CPF): 1.8 $(mg/kg/day)^{-1}$ (HEAST, 1989).
- Reference Dose (RfD): 2×10^{-6} mg/kg/day (IRIS, 1989).
- Oral LD_{50}: rat, 740 mg/kg (IARC, 1979).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	545.6	Windholz, 1983
Physical State @ 20°C:	solid, snow-white crystals	Verschueren, 1983
Melting Point (°C):	485 (decomp.)	Windholz, 1983
Boiling Point (°C):	N/A	
Density/Specific Gravity:	N/A	
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	0.2 (24°C)	PHRED, 1988; Verschueren, 1983
Vapor Pressure, P (mm Hg):	$6x10^{-6}$ (25°C)	TDB, 1985
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	$2.2x10^{-5}$	Lyman et al, 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	5.3	Lyman et al., 1982
Soil Adsorption Coefficient, K_{oc} (ml/g):	$2.4x10^{7}$	PHRED, 1988
Fish Bioconcentration Factor, BCF:	$2.6x10^{3}$-$4.1x10^{4}$* (exptl.)	Verschueren, 1983
	18,100	PHRED, 1988

* Value used for estimating aquatic effects

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MIREX
OBSERVATIONS AND EFFECTS ON PISCIVOROUS WILDLIFE

The U. S. Environmental Protection Agency banned the use of mirex in 1978, in part because of its detrimental effects on fish and wildlife (Eisler 1985). Eisler's review provides a good summary of mirex hazards to non-target species and concentrations found in wildlife.

High concentrations of mirex in eggs were blamed for the low reproductive success of Lake Ontario herring gulls in the early 1970s (Gilman et al. 1978, 1977). In 1975, the reproductive success of herring hulls in Lake Ontario colonies was only one tenth that of colonies on the other four Great Lakes (Gilman 1978, 1977). The mean concentration of mirex in eggs from one Lake Ontario colony was 7.4 ppm in 1974 (Weseloh et al. 1979).

Lake Ontario was the only Great Lake contaminated with mirex (Kaiser 1978, NAS 1978), and both Gilman et al. (1977, 1978) and Norstrom et al. (1980) suggested that a high percentage of the mirex in the eggs originated from Lake Ontario fish.

Differences in feeding habits have been related to differences in mirex concentrations in eggs of three bird species in Maine: the common eider, herring gull and black-backed gull (Szaro et al. 1979). Eggs of the black-backed gull had levels of DOE and PCBs greater than those in the eggs of the herring gull, which, in turn, were higher than in the eggs of the common eider. Mirex was detected only in the eggs of the black-backed gull (up to 0.26 ppm) (Szaro et al. 1979). Szaro et al. (1979) attributed the higher levels of contaminants in the blacked-back gull to its predatory and scavenging feeding habits.

Based on a study of herring gulls and predation on alewives, Norstrom et al. (1978) estimated a bioaccumulation factor of 50 for mirex in gull eggs.

Mirex residues have been detected in the brains and tissues of various piscivorous birds collected nationwide, such as bald eagles (Barbehenn and Reichel 1981) and herons (Ohlendorf et al. 1981). However, in both studies, mirex concentrations were recorded at nonhazardous levels.

Mirex has also been detected in eggs of the American crocodile (up to 0.02 ppm) (Hall et al. 1979).

The State of New York proposed a fish flesh criterion for mirex at 0.33 ppm to protect piscivorous wildlife. This criterion was based on studies of rats (Gaines and Kimbrough 1969), prairie voles and old field mice (Hyde 1972), and mallards (Newell et al. 1987; Schafer et al. 1983).

The effects of mirex on piscivorous wildlife are summarized in the following table:

Effects of Mirex Concentrations on Piscivorous Wildlife

Animal	Concentration	Effect	Source
Piscivorous Wildlife	0.33 ppm (diet)	estimated NOEL	Newell et al. 1987
	0.373 ppm (diet)	cancer risk of 10^{-2}	Newell et al. 1987

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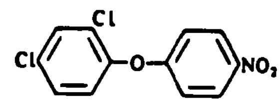
NITROFEN

CAS No.: 1836-75-5
CAS Preferred Nomenclature:
Benzene, 2,4-dichloro-2-(4-nitrophenoxy)-


$C_{12}H_7Cl_2NO_2$

Empirical Formula: $C_{12}H_7Cl_2NO_2$

Synonyms and Common Names:
- NIP
- Nitrophen
- F-W-925
- TOK E-25
- Nitrochlor
- 2,4-Dichlorophenyl-.para.-nitrophenyl ether

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish):
  None established at present
- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):
  None established at present
- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present
- EPA Drinking Water Health Advisories:
  None established at present
- EPA Tolerance Levels (50 FR 37850)
  All tolerances revoked 9/18/85
- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restrictions and Bans:

- All uses of nitrofen, a selective herbicide, were cancelled voluntarily by 1984 (40 FR 2151).

SOURCES OF NITROFEN

Total Nitrofen Produced:

- Nitrofen is no longer produced or sold in the United States (Ouellette and King, 1977).

Uses of Nitrofen:

- Prior to 1984, nitrofen was used as a selective herbicide to control weeds in various crops, including vegetables, cereal, grains, sugar beets, rice and some ornamental plants (Worthing, 1983).

Other Sources: None identified.

NITROFEN OBSERVED IN THE ENVIRONMENT

- No data available.

FATE IN ENVIRONMENT

Partitioning:

- Based on estimates of physical/chemical properties, nitrofen strongly sorbs to soil (K_{ow} ≅339,00) and has a high potential for bioaccumulation (BCF estimated as 1.6x104). Nitrofen volatilizes at a low rate (H = 3.1x10-6 atm • m^3/mole).

Persistence:

- Nitrofen can biodegrade under both aerobic and anaerobic conditions. In one experiment, a 70% loss of nitrofen present in soil at a concentration of 10 ppm (incubated at 30°C) occurred after 10 days which represents a decay rate of 0.12/day. Nitrofen applied in a flooded paddy field (anaerobic conditions) had a half-life of 16 days (TDB, 1986). Under these conditions, the nitro group (NO_2) is reduced to NH_2 (Grover, 1988).
- Nitrofen solutions and aqueous suspensions can undergo rapid photolysis (TDB, 1986).

HEALTH EFFECTS

Carcinogenicity:

- The U.S. EPA has not classified the potential carcinogenicity of nitrofen. However, IARC (1983) considers that the available information is sufficient evidence to identify nitrofen as carcinogenic in experimental animals.
- Mice fed nitrofen displayed a significant increase in the incidence of liver carcinomas (IARC, 1983).
- Nitrofen administered in high doses to rats also resulted in various types of tumors at different anatomical sites (IARC, 1983).

Mutagenic Activity:

- Nitrofen was found to be mutagenic in Salmonella typhimurium. Negative results were obtained when nitrofen was tested in Bacillus subtilis and rat and mouse bone cells (IARC, 1983).

Reproductive Effects:

- In rats, nitrofen increased the incidence of stillbirths and reduced the survival rate of newborns (IARC, 1983). Poor survival was due to heart, diaphragm and kidney malformations, as well as lung immaturity (IARC, 1983; Klaassen et al., 1986).
- Nitrofen produced similar birth defects in mouse fetuses (IARC, 1983).

Other Toxicological Effects:

- Increased liver weight, neurological symptoms, and respiratory distress generally occur after rats are exposed to nitrofen (IARC, 1983).

Toxicological Effects Indices:

- Oral LD_{50}: rats, 410-3580 mg/kg (IARC, 1983).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	284.1	Windholz, 1983
Physical State @ 20°C:	colorless crystals	Hartley and Kidd, 1983
Melting Point (°C):	70-71	Hartley and Kidd, 1983
Boiling Point (°C):	180-190 @ 0.25 mm Hg	Hartley and Kidd, 1983
Specific Gravity:	1.3 (liquid @ 90°C)	Hartley and Kidd, 1983
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L)	0.7-1.2 (22$C)	Worthing, 1983
Vapor Pressure, P (mm Hg)	$8x10^{-6}$ (40$C)	Worthing, 1983
Henry's Law Constant, H @ 25°C (atm • m^3/mole)	$3.1x10^{-6}$ (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	5.53 (calc.)	Lyman et al., 1982
Soil Adsorption Coefficient, K_{oc}(ml/g):	$5.9x10^4$ (calc.)	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	$1.6x10^4$ (calc.)*	Lyman et al., 1982

* Value used for estimating aquatic effects

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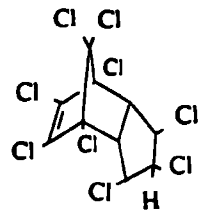
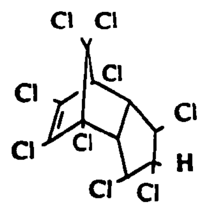
Windholz, M., ed. 1983. The Merck Index: An Encyclopedia of Chemicals, Drugs, and Biologicals. 10th ed. Merck Co., Inc., Rahway, N.J.

Worthing, C.R., ed. 1983. The Pesticide Manual: A World Compendium. 7th ed. British Crop Protection Council, Croydon, England.

NONACHLOR
(cis- and trans- isomers)



cis-nonachlor



trans-nonachlor

CAS No.: cis - 5103-73-1
trans - 39765-80-5
combined - 3734-49-4

CAS Preferred Nomenclature: (combined)
4,7-Methano-1H-indene,
1,2,3,4,5,6,7,8,8-nonachloro-2,3,3a,4,7,7a-hexahydro-

Empirical Formula: $C_{10}H_5Cl_9$

Synonyms and Common Names: None

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish):
  None established at present
- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):
  None established at present
- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present
- EPA Drinking Water Health Advisories:
  None established at present
- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restrictions and Bans:

- None for nonachlor. However, trans-nonachlor is a minor (7-10%) constituent of technical grade chlordane, a chlorinated hydrocarbon pesticide (McEwen and Stephenson, 1979; Takamiya, 1987). Chlordane has been banned for all uses except for subsurface termites (see profile for Chlordane for additional information).

SOURCES OF NONACHLOR

Total Nonachlor Produced:

- Nonachlor is not intentionally produced for any commercial purposes.

Uses of Nonachlor:

- As an impurity in technical chlordane, nonachlor is distributed in the environment when chlordane is used to control soil-inhabiting insects (e.g., termites).

Other Sources:

- An impurity in the technical grade of the pesticide heptachlor (Nash and Harris, 1973).

FATE IN ENVIRONMENT

Partitioning:

- Based on its estimated physical/chemical properties, nonachlor is non-volatile ($H = 2x10^{-7}$ atm • m^3/mole), strongly sorbed to soil (K_{ow} = 457,000), and has a high potential for bioaccumulation (BCF = $2.2x10^4$).

Persistence:

- Data on the persistence of cis- and trans-nonachlor are sparse, although their structural similarity to cis- and trans-chlordane (one chlorine atom replaces one hydrogen atom) suggests that they would behave similarly. Nonachlor present as an impurity in heptachlor was found in soil test plots 16 years after the application of 112 kg/ha and 224 kg/ha of technical heptachlor at concentrations of 2.3 and 5.2 ppm respectively. Plots of the same type soil treated with technical chlordane, which contains roughly 7% nonachlor, also showed traces of nonachlor (<0.03 ppm) after 16 years (Nash and Harris, 1973). Assuming nonachlor behaves like chlordane, hydrolysis is not expected to be an important process although sensitized photolysis may occur. Biodegradation is expected to be very slow, although it may be important for ultimate degradation (Callahan et al., 1979).
- The immediate metabolic product of trans-nonachlor is trans-chlordane (Tashiro and Matsumura, 1978).

HEALTH EFFECTS

Carcinogenicity:

- No data found for nonachlor.
- Chlordane is a probable human carcinogen because it causes liver tumors in mice and rats (see Chlordane).

Mutagenic Activity:

- No data found.

Reproductive Effects:

- No data found.

Other Toxicological Effects:

- Trans-nonachlor is reported to induce drug-metabolizing enzymes in the liver. Whether this is potentially related to any adverse health effects is not known (Campbell et al., 1983).
- Chlordane causes nerve, liver, kidney and lung damage (see profile for Chlordane).

Toxicological Effects Indices:

- LC_{50}: mosquito larvae = 3.5×10^{-2} ppm (Tashiro and Matsumura, 1977).
- No health effects indices are available for nonachlor. The indices for chlordane are:

  - Cancer Potency Factor (CPF): 1.3 $(mg/kg/day)^{-1}$ (IRIS, 1989)

Cancer Risk Level	Concentration in Drinking Water (IRIS, 1988)
1 in 10,000	3 μg/L
1 in 100,000	0.3 μg/L
1 in 1,000,000	0.03 μg/L

  - Reference Dose (RfD): 6×10^{-5} (mg/kg/day) (IRIS, 1989)
  - TWA-TLV (time-weighted average, threshold limit value) for occupational skin exposure: 0.5 mg/m^3 (ACGIH, 1986; IRIS, 1988).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	444.2	
Physical State @ 20°C:	solid	
Melting Point (°C):	148 (calc.)	Lyman et al., 1982
Boiling Point (°C):	471 (calc.)	Lyman et al., 1982
Specific Gravity:	N/A	
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	0.06 (calc.)	Lyman et al., 1982
Vapor Pressure, P (mm Hg):	2×10^{-8} (calc.)	Lyman et al., 1982
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	2×10^{-7} (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	5.66 (calc.)	Lyman et al., 1982
Soil Adsorption Coefficient, K_{oc} (ml/g):	7.3x104 (calc.)	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	2.2×10^4 (calc.)*	Lyman et al., 1982

* Value used for estimating aquatic effects

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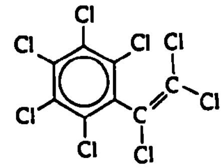
OCTACHLOROSTYRENE

CAS No.: 29082-74-4
CAS Preferred Nomenclature:
Benzene, pentachloro (trichloroethenyl)-

Empirical Formula: C_8Cl_8

Molecular Weight: 379.7



C_8Cl_8

REGULATORY STATUS

- No use restrictions or regulatory standards.

SOURCES OF OCTACHLOROSTYRENE

Formation of Octachlorostyrene:

- There is no intentional commercial production of octachlorostyrene. Octachlorostyrene is associated with wastes from the electrolytic production of chlorine prior to 1970 when graphite anodes and coal tar pitch binder were used. It is hypothesized that the chlorination of this binder material was a major source of octachlorostyrene as well as other chlorinated styrenes (Kaminsky and Hites, 1984). After 1970, metal anodes were used.
- It is reported that octachlorostyrene is also formed when graphite anodes are used during the electrolytic production of magnesium from magnesium chloride (Tarkpea et al., 1985).

FATE IN ENVIRONMENT

Partitioning:

- Based on estimated physical/chemical properties using structure-activity relationships, (Lyman, et al, 1982) octachlorostyrene is highly volatile (estimated H = 0.15 atm•m^3/mol) and strongly sorbs to organic matter ($K_{ow} \cong$ 87,100,000). It has a high potential for bioaccumulation (BCF = $4.2x10^6$).

Persistence:

- Octachlorostyrene is persistent in sediments (Kaminsky and Hites, 1984). Processes which can transform octachlorostyrene include hydrolysis, biodegradation, and photolysis, but at low rates. The estimated half-lives cited were > 1,000 days for hydrolysis and > 100 days for biodegradation (Wise and Wrich, 1984). Information was found showing that octachlorostyrene can undergo photolysis in water/solvent mixtures exposed to wavelengths between 230 and 290 mm. The rate was slower at wavelengths greater than 290 mm. (Hustert et al, 1984).

HEALTH EFFECTS

Carcinogenicity:

- The potential carcinogenicity of octachlorostyrene has not been evaluated.

Mutagenic Activity:

- Results were negative in bacterial mutagenicity tests (Tarkpea et al., 1985; Kaminskyu and Hites, 1984).

Effects on Humans and Animals:

- No reports of adverse health effects in humans or animals.

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	379.7	
Physical State @ 20°C:	Solid	
Water Solubility, (mg/L):	$2x10^{-4}$(calc)	Lyman, et al., 1982
Henry's Law Constant, H@25°C ($atm \cdot m^3$/mole):	0.15(calc)	Lyman, et al., 1982
Log (Octanol - Water Partition Coefficient), log Kow:	7.94 (calc)	Lyman, et al., 1982
Soil Adsorption Coefficient, K_{oc}(ml/g):	$4.4x10^{6}$(calc)	Lyman, et al., 1982
Fish Bioconcentration Factor, BCF:	33,000(calc)*	Lyman, et al., 1982

* Value used for estimating aquatic effects

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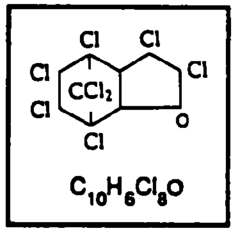
Wise, P.L. and M. Wrick. 1984. Memo, Candidates for the Emerging Chemical Identification and Management Project: Polychlorinated Systems. September 4, 1984.

OXYCHLORDANE

CAS No.: 27304-13-8
CAS Preferred Nomenclature:
2,5-methano-2 H-indeno
(1,2b)oxirene, 2,3,4,5,6,6a,7,7-octachloro-
1a,1b,5,5a,6,6 hexahydro-



Empirical Formula: $C_{10}H_6Cl_8O$

Synonyms and Common Names:
- Octachlor epoxide
- Oxychlordan
- 1,2-dichlorochlordene epoxide

REGULATORY STATUS

- No use restrictions or regulatory standards.

SOURCES OF OXYCHLORDANE

Uses of Oxychlordane:

- Oxychlordane is not used in any commercial products and is not found in technical-grade chlordane.

Other Sources

- Oxychlordane is a major metabolic breakdown product of the pesticide chlordane (Taguchi and Yakushuji, 1988). It is one of many compounds formed as a result of a series of oxidative enzyme reactions with chlordane (Barnett and Dorough, 1974; Tashiro and Matsumura, 1977).

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, oxychlordane is estimated to have low volatility ($H = 3x10^{-7}$ atm • m^3/mole), a moderate tendency to sorb to soil (K_{ow} $\cong$400), and a low potential for bioaccumulation (BCF = 19).

Persistence:

- Based on its structural similarity to the pesticides chlordane, dieldrin and aldrin, oxychlordane is not expected to be susceptible to hydrolysis, but to be affected by indirect photolysis. Biodegradation is also expected to be slow (Callahan et al., 1979). It is likely to be highly persistent (Kirk-Othmer, 1978).
- Four months after application of high purity chlordane to alfalfa, oxychlordane comprised 16% of the residues measured in the crop (WHO, 1984).
- Oxychlordane is considered to be more persistent than its parent compound, chlordane (WHO, 1984).

OXYCHLORDANE OBSERVED IN THE ENVIRONMENT

Sample Type	Concentration	Reference
Market Basket Foods (found in less than 1% of samples taken in 1963-1969)	1-5 μg/kg	WHO, 1984
Human Breast Milk (1976 study of 1463 women)	75.4-116 μg/L	WHO, 1984
Human Fat	0.03-0.4 mg/kg	WHO, 1984
Fat of dogs, rats, pigs, cattle	(Concentrations not given)	WHO, 1984
Tokyo Bay gobyfish	3 μg/kg	Worthing, 1983
Bats (Maryland and Virginia)	0.11-to 6.33 μg	WHO, 1984

HEALTH EFFECTS

Carcinogenicity:

- It has been suggested that chlordane metabolites (e.g., oxychlordane) may be carcinogenic in humans because chlordane causes liver cancer in mice (WHO, 1984). The EPA has not evaluated the carcinogenic potential of oxychlordane.

Other Toxicological Effects:

- Oxychlordane is considered to be more toxic than its parent compound, chlordane (see Chlordane profile) (WHO, 1984).

- No other information was found on the human health effects, mutagenicity or reproductive effects of oxychlordane.

Toxicological Effects Indices:

- Acute oral LD_{50}: rat, 19.1 mg/kg (Mastri et al., 1969, in WHO, 1984).
- Temporary reference dose proposed by the FAO/WHO for the sum of the alpha- and gamma- forms of chlordane plus oxychlordane: 0.0 to 0.001 mg/kg (WHO, 1984).
- A 1972 Joint Meeting on Pesticide Residues established food residue tolerance levels of 0.02 to 0.5 mg/kg for a sum of alpha-, gamma-, and oxychlordane (WHO, 1984).

PHYSICAL CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	354.9	
Physical State @ 20°C:	solid	
Melting Point (°C):	134 (calc.)	Lyman et al., 1982
Boiling Point (°C):	317 (calc.)	Lyman et al., 1982
Specific Gravity:	N/A	
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	200 (calc.)	Lyman et al., 1982
Vapor Pressure, P (mm Hg):	1×10^{-4} (calc.)	Lyman et al., 1982
Henry's Law Constant H @ 25°C (atm • m^3/mol):	3×10^{-7} (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	2.60 (calc.)	Lyman et al., 1982
Soil Adsorption Coefficient, K_{oc}(ml/g):	300 (calc.)	Lyuman et al., 1982
Fish Bioconcentration Factor, BCF:	19 (calc.)*	Lyman et al., 1982

* Value used for estimating aquatic effects

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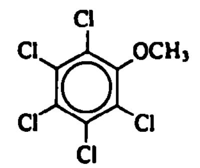
PENTACHLOROANISOLE

CAS No.: 1825-21-4
CAS Preferred Nomenclature:
Benzene, Pentachloromethoxy-

Empirical Formula: $C_7H_3Cl_5O$



$C_7H_3Cl_5O$

Synonyms and Common Names:
- PCA
- 2,3,4,5,6 Pentachloroanisole
- Pentachlorophenyl methyl ether
- Methyl pentachlorophenate

REGULATORY STATUS

Standards and Criteria:

- No standards or criteria for pentachloroanisole were found. See pentachlorophenol profile for standards applicable to parent compound.

Use Restrictions and Bans:

- Uses of pentachlorophenol were restricted in 1984 primarily to wood preservation, excluding logs for homes and interiors of buildings. (See pentachlorophenol profile).

SOURCES OF PENTACHLOROANISOLE

Production:

- Not produced as a separate chemical.

Other Sources:

- Pentachloroanisole is a metabolic product of pentachlorophenol. It can be formed by microorganisms in the soil environment (Kaufman, 1978; Cserjesi and Johnson, 1972) and in aquatic sediments (Pierce and Victor, 1978).

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, pentachloroanisole is volatile ($H = 8x10^{-3}$ atm • m^3/mol), strongly sorbs to organic matter (K_{OW} = 457,000), and has a high potential for bioaccumulation (BCF = 10,000). It is also retained longer by fish than pentachlorophenol ($t_{1/2}$ = 6 to 24 days for pentachloroanisole versus a $t_{1/2}$ = 0.25 to 1 day for pentachlorophenol, Lech, et al., 1978).

Persistence:

- Environmental fate data for pentachloroanisole are scarce. Rate constants for hydrolysis, photolysis, or acid-base dissociation were not found. Based on its chemical structure, it would not be expected to hydrolyze (Lyman et al., 1982) but may undergo photolysis (Sadtler, 1979). Conversion back to pentachlorophenol in soils can occur under both aerobic and anaerobic conditions, but is faster under anaerobic conditions (42% in 24 days vs. 6% under aerobic conditions, Kaufman, 1978).

PENTACHLOROANISOLE OBSERVED IN THE ENVIRONMENT

- In lake contaminated with fuel oil containing pentachlorophenol in Mississippi (Pierce and Victor, 1978)

Water (mg/L)	0.03-1.94
Sediment (mg/g)	14-80
Fish Tissue (ng/g wet weight)	30-250

HEALTH EFFECTS

Carcinogenicity:

- No data found. The EPA has not evaluated the carcinogenic potential for pentachloroanisole. The data for pentachlorophenol carcinogenicity are currently under review (IRIS, 1989).

Mutagenic Activity: No data found.

Reproductive Effects:

- Female rats fed pentachloroanisole at a dose of 41 mg/kg/day gained less weight during pregnancy. Male offspring had lower birth weights and were smaller in length. Female offspring exhibited no such effects. (Welsh, et al., 1987).

Toxicological Effects Indices:

- Oral LD_{50}: rats 500 mg/kg (Sax, 1984).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	280.4	Windholz, 1983
Physical State @ 20°C:	solid	
Melting Point (°C):	104 (calc.)	Lyman et al., 1982
Boiling Point (°C):	258 (calc.)	Lyman et al., 1982
Specific Gravity:	N/A	
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	0.2 (calc.)	Lyman et al., 1982
Vapor Pressure, P (mm Hg):	$5x10^{-3}$ (calc.)	Lyman et al., 1982
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	$8x10^{-3}$ (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	5.66 (calc.)	Callahan et al., 1982
Soil Adsorption Coefficient, K_{oc}(ml/g):	$4.2x10^4$ (calc.)	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	$1.0x10^4$ (calc.)*	Lyman et al., 1982

* Value used for estimating aquatic effects

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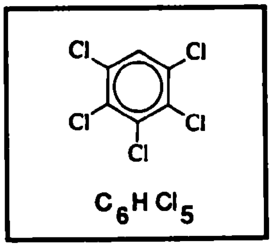
PENTACHLOROBENZENE

CAS No.: 608-93-5



CAS Preferred Nomenclature:
Benzene, pentachloro-

Empirical Formula: C_6HCl_5

Synonyms and Common Names:
- QCB
- 1,2,3,4,5 Pentachlorobenzene

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish) (IRIS, 1989):
  85 µg/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms) (IRIS, 1989):

	Freshwater	Saltwater
Acute, µg/L	250	160
Chronic, µg/L	50	129

Above are LECs (Lowest Effect Concentration)

- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present

- EPA Drinking Water Health Advisories:
  None established at present

- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restrictions and Bans: None found.

SOURCES OF PENTACHLOROBENZENE

Total Pentachlorobenzene Produced: No data found.

Major Uses: No data found.

Other Sources:

- Pentachlorobenzene is an impurity (approximately 0.17%) in the soil fungicide pentachloronitrobenzene (Verschueren, 1983; Klaassen et al., 1986).

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, pentachlorobenezene is highly volatile ($H = 3.8 \times 10^{-3}$ atm • m^3/mol), strongly sorbed to soil ($K_{OW} \cong 155,000$), and has a high potential for bioaccumulation. Experimentally determined values for BCF ranged from 1.3×10^5 to 2×10^5 (Oliver and Niimi, 1983).

- The steady-state bioconcentration factor found for bluegills was 3,400 (C1S database).

Persistence:

- Little information specific to pentachlorobenzene was found in the literature. Much of its behavior is inferred from that of hexa- and tetrachlorobenzenes. Neither hydrolysis nor chemical oxidation of pentachlorobenzene is expected to be environmentally significant based on the behavior of these related compounds. Although chlorobenzenes of 3 or fewer chlorines can be biodegraded, hexa- and pentachlorobenzene are considered resistant to biodegradation (Bailey, 1983).

- Pentachlorobenzene has been found to undergo photolytic degradation in acetonitrile/water mixtures at wavelengths >285 nm (Choudhry and Hutzinger, 1984). After 24 hours, 41.2% of an initial pentachlorobenzene concentration of approximately 1mM underwent non-sensitized degradation while 53.8% disappeared in four hours when acetone at 0.55 M was present as a sensitizer. Roughly 3.4% of the pentachlorobenzene that underwent sensitized photolysis was converted to PCBs; lesser amounts were converted by direct photolysis.

PENTACHLOROBENZENE OBSERVED IN THE ENVIRONMENT

- No data available.

HEALTH EFFECTS

Carcinogenicity:

- Not yet evaluated by U.S. EPA for carcinogenicity (IRIS, 1989).
- U.S. EPA (1980) reports one study that alludes to carcinogenicity of pentachlorobenzene in mice but not in rats and dogs. No details are available.

Mutagenic Activity: No data available.

Reproductive Effects:

- Weanling rat pups of mothers receiving 18 mg/kg/day developed tremors (IRIS, 1989).
- Pregnant rats given 50, 100 or 200 mg/kg orally during days 6-15 of gestation produced sternal defects suggestive of retarded development (U.S. EPA, 1980).

Other Toxicological Effects:

- Liver and kidney toxicity observed in rats fed pentachlorobenzene at doses as low as 8.3 mg/kg/day (IRIS, 1989).

Toxicological Effects Indices:

- Reference Dose (RfD): $8x10^{-4}$ mg/kg/day (IRIS, 1989).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	250.3	Windholz, 1983
Physical State @ 20°C:	solid	
Melting Point (°C):	86	Weast, 1986
Boiling Point (°C):	277	Weast, 1986
Specific Gravity:	1.8342 (16.5°C)	Weast, 1986
Acid Dissociation Constant, pKa:	N/A	
Water Solubility, S (mg/L):	0.24(22°C)	Verschueren, 1983
Vapor Pressure, P (mm Hg):	2.8×10^{-3}(25°C) (calc.)	Lyman et al., 1982
Henry's Law Constant, H@ 25°C (atm • m^3/mol):	3.8×10^{-3} (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	5.19	U.S. EPA, 1986
Soil Adsorption Coefficient, K_{oc} (ml/g):	5.8×10^{4} (calc.)	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	1.3×10^{5}-2.0×10^{5} (exptl.)	Oliver & Niimi, 1983
	2125*	U.S.EPA, 1986

* Value used for estimating aquatic effects

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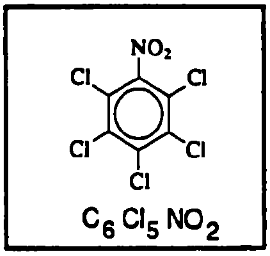
Worthing, C.R., ed. 1983. The Pesticide Manual: A world compendium. 7th ed. British Crop Protection Council, Croydon, England.

PENTACHLORONITROBENZENE

CAS No.: 82-68-8
CAS Preferred Nomenclature:
Benzene, pentachloronitro-



Empirical Formula: $C_6Cl_5NO_2$

Synonyms and Common Names:

- Brassicol
- Quintozene
- TFungiclor
- Terraclo
- PCNB
- Folosan

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish):
  None established at present
- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):
  No specific criteria or LELs have been developed for PCNB (IRIS, 1989)
- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present
- EPA Drinking Water Health Advisories:
  None established at present
- EPA Tolerance Levels (40 CFR 180.291):
  0.1 ppm for cottonseed
  0.2 ppm for collards, kale, and mustard greens
- Food and Drug Administration Action Levels for Fish:
  None established at present

Use Restrictions and Bans:

- Use of pentachloronitrobenzene itself has not been restricted, however, the allowable level of the contaminant hexachlorobenzene has been set at 0.1 percent (U.S. EPA, 1986b).

SOURCES OF PENTACHLORONITROBENZENE

Total Pentachloronitrobenzene Produced:

- In 1971, approximately 3 million lbs. were produced by Olin Co. (Ouellette and King, 1977).

Uses of Pentachloronitrobenzene:

- Pentachloronitrobenzene has been used primarily as a soil fungicide and as a seed dressing agent (e.g., peanuts). Other uses have been to control stem and root rot for flowers and vegetables (e.g., cabbage), and molds on flowers, cotton and turf (Farm Chemicals Handbook, 1985).

Other Sources: None found.

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, pentachloronitrobenzene is somewhat volatile ($H = 1 \times 10^{-4}$ atm • m^3/mol), is strongly sorbed to soil organic matter (K_{ow} = 282,000), and has a low potential for bioaccumulation (BCF values derived experimentally range from 6.3 to 79) (Verschueren, 1983).

Persistence:

- Pentachloronitrobenzene can undergo hydrolysis ($K_n = 2.8 \times 10^{-5}$/hr) (Ellington, et al., 1986) and aqueous photoreduction (A.D. Little, 1974). The estimated half-life is 2.8 years at a pH of 7, so hydrolysis is unlikely to be environmentally significant in most cases. Biotransformation in soils can also occur, particularly under anaerobic conditions (Verschueren, 1983).

PENTACHLORONITROBENZENE OBSERVED IN THE ENVIRONMENT

- No data found.

HEALTH EFFECTS

Carcinogenicity:

- Dietary exposure of mice to pentachloronitrobenzene (1206 ppm for 18 months) induced liver tumors (IARC, 1973). Similar studies in rats (2500 ppm for 25 months) showed no increased incidence of tumors (IARC, 1973). Pentachloronitrobenzene is classified as category 3 by IARC and Class C by EPA, indicating that there is limited evidence of carcinogenicity in animals, and that additional studies are needed to characterize the effect of this chemical (IARC, 1973; PHRED, 1988).

Mutagenic Activity: No data found.

Reproductive Effects:

- Cleft palates were observed in the offspring of mice exposed orally to 500 mg/kg of pentachloronitrobenzene (Courtney, 1983; Klaassen, et al., 1986).
- No effects were observed in rats given 1653 ppm pentachloronitrobenzene (Jordan and Borzelleca, 1973).

Other Toxicological Effects:

- Dogs fed pentachloronitrobenzene for 2 years at levels between 180 ppm and 1080 ppm developed various levels of liver damage, abnormal bile production and secondary kidney degeneration (RTECS, 1984; IRIS, 1989).

Toxicological Effects Indices:

- Reference Dose (RfD): 3×10^{-3} mg/kg/day (IRIS, 1989).
- Oral LD_{50}: rats, 1200-1650 mg/kg (Klassen et al., 1986).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	295.34	Verschueren, 1983
Physical State @ 20°C:	solid	
Melting Point (°C):	146	Verschueren, 1983
Boiling Point (°C):	328 (with slight decomp.)	Windholz, 1983
Specific Gravity:	1.718	Windholz, 1983
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	4.4×10^{-1} 7.11×10^{-2}	Hartley & Kidd, 1983 U.S. EPA, 1986; Jaber et al., 1984
Vapor Pressure, P (mm Hg):	1.13×10^{-4} (25°C)	Jaber et al., 1984
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	1.0×10^{-4}	Lyman et al., 1982
Hydrolysis, K_N 1/hr:	2.8×10^{-5}	Ellington et al., 1986
Log (Octanol-Water Partition Coefficient), log K_{ow}:	5.45	Jaber et al., 1984
Soil Adsorption Coefficient, K_{oc} (ml/g):	1.4×10^{4}	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	6.3 to 79* (exptl.)	Verschueren, 1983

* Value used for estimating aquatic effects

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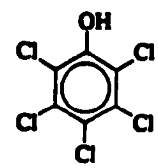
PENTACHLOROPHENOL

CAS No.: 87-86-5
CAS Preferred Nomenclature: Phenol, pentachloro-

Empirical Formula: C_6HCl_5O

Synonyms and Common Names:

- PCP
- Permatox
- Penchlorol
- Fungilen
- Preventol P
- Permacide
- Chem-Tol
- Santobrite
- Penwar
- Termi-Trol
- Penta
- Chlorophen
- Permite
- Dowicide 7
- Liroprem
- Priltox
- Durotox
- Lauxtol
- SantophenR
- Weedone



C_6HCl_5O

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (IRIS, 1989):
  for human consumption of fish and water = 1.01 mg/L to control undesirable taste and odor = 30 μg/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms)(IRIS, 1989):

	Freshwater	Saltwater
Chronic, μg/L	22	13
Acute, μg/L	13	7.9

- EPA Drinking Water Standards (IRIS, 1989):
  Proposed Maximum Contaminant

- EPA Drinking Water Health Advisories (52 FR 175; IRIS, 1989):
  child (10 kg):
  1-day exposure = 1.0 mg/L
  10-day and long-term exposure = 0.3 mg/L
  adult (70 kg):
  long-term exposure = 1.05 mg/L
  lifetime exposure = 0.22 mg/L

- Food and Drug Administration Action Level for Fish:
  None established at present

- EPA Drinking Water Standards
(IRIS, 1989):
Proposed Maximum Contaminant
Level = 0.22 mg/L
Proposed Maximum Contaminant
Level Goal = 0.22 mg/L

Use Restrictions and Bans:

- In 1984, most uses as an herbicide, antimicrobial agent (e.g., in cooling towers), defoliant, disinfectant, and in marine anti-fouling paint were discontinued (49 FR 48367).
- Continued uses allowed: wood preservative if not on logs for homes or interior of buildings, in oil field flood waters and in pulp and paper mill solutions (49 FR 48367).

SOURCES OF PENTACHLOROPHENOL

Total Pentachlorophenol Produced:

- Pentachlorophenol was developed as a wood preservative in 1936.
- 4 million pounds were produced in 1971 (Ouellette and King, 1977). By 1974 production had increased to 54 million pounds of which 44 million pounds were used in wood preservation. In 1984, uses were curtailed. By 1986 only 1 company, Vulcan Materials, was producing pentachlorophenol (SRI, 1986).
- In aquatic systems a major metabolic product of pentachlorophenol is pentachloroanisole ($C_7H_3Cl_5O$).

Uses of Pentachlorophenol:

- Major use (90%) is as a wood preservative to control termites and fungal rot for utility poles, fence posts, railroad ties and exterior lumber (Klaassen et al., 1986).
- Other uses (9%) include production of sodium pentachlorophenate (Na-PCP). This was used in marine anti-fouling paint; in cooling tower water to control microorganism growth; and to prevent fungal rot in carpets, canvas and other textiles (Cirelli, 1978).
- PCP has also been used as a microbial agent in oil field flooding waters and drilling muds and in the paper and pulp industry (Cirelli, 1978).
- PCP and Na-PCP together were formerly the second most used pesticide in the U.S. (Cirelli, 1978), for example, as a pre-harvest defoliant for cotton and pre-emergence herbicide (Agrochemicals Handbook, 1978).

Other Sources:

- PCP is a breakdown product of the biotransformation of hexachlorobenzene and pentachlorobenzene (Koss and Koransky, 1978).

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, pentachlorophenol can volatilize ($H = 2.75 \times 10^{-6}$ atm • m^3/mol), although this is not a dominant fate process. For example, K_V in a shallow stream is calculated to be 0.024/day, compared to the photolysis rate of 1.1/day (Mills et al., 1985). PCP sorbs strongly to soil organic matter (K_{OW} = 132,000) and can bioaccumulate (BCF ≅ 1,000).

Persistence:

- PCP exists predominantly (over 90%) as an anion in waters having a pH of 5.7 or higher (pK_a = 4.7). Hydrolysis and volatilization are thus not generally environmentally significant. Photolysis is rapid (K_{po} = 1.224/hr), with half-lives of 0.2 and 4.8 hours at depths of 10 cm and 300 cm, respectively, in a clear body of water at the latitude of Cleveland on a midsummer day (Callahan et al., 1979).
- PCP can be degraded by a variety of microorganisms; one PCP-degrading strain (Flavobacterium) was found to degrade PCP in natural waters at initial concentrations of 10 ppb to 100 ppb, usually within 48 hours (Alexander and Aleem, 1961). First-order biotransformation rate constants in water range from 0.05 to 0.5/day (Mills et al., 1985). However, pentachlorophenol in soils degrades more slowly. In four laboratory experiments, k_b ranged from 4.2×10^{-4} to 5.2×10^{-6}/day (Tabak et al., 1981; Baker and Mayfield, 1980).

HEALTH EFFECTS

Carcinogenicity:

- There was no evidence of the carcinogenicity of pure PCP in mice and rats fed doses of up to 30 mg/kg/day for two years (U.S. EPA, 1984). However, technical-grade PCP may be carcinogenic because of its contamination with the highly carcinogenic dioxins and furans (IRIS, 1989).
- The EPA has assigned pentachlorophenol to Group D; not classified as to human carcinogenicity. The research data are currently under review (IRIS, 1989).

Mutagenic Activity:

- Tests have yielded conflicting results. There were no observed mutagenic effects in Drosophila melanogaster (fruit flies) (IARC, 1979) or Salmonella bacteria (Ames test). Some mutations were observed in mice and Saccaromyces cerevisiae (yeast) (Scow et al., 1980).

Reproductive Effects:

- PCP has caused fetal posioning in rats (Scow et al., 1980). The basic response was reproductive failure with those surviving having subcutaneous fluid retention and swelling, kidney damage, and skeletal defects of the skull, ribs, and vertebrae. The incidence increased at higher doses (IARC, 1979).

Other Toxicological Effects:

- Acute (short-term, high dose) and chronic (long-term, low dose) effects both can include (U.S. EPA, 1984):
  - skin irritation
  - profuse sweating
  - kidney damage
  - labored breathing
  - heart failure
  - fever
  - tachycardia (rapid heart beat)
  - vision damage
  - weakness
  - convulsions.
- Chronic human exposure to PCP has been associated with aplastic anemia (Roberts, 1981). Exposure to PCP aggravates pre-existing kidney and liver diseases (Clayton and Clayton, 1982).
- Fatalities due to PCP exposure have occurred (Klaassen et al., 1986).

Toxicological Effects Indices:

- Reference Dose (RfD): 0.03 mg/kg/day (IRIS, 1989).
- TWA-TLV (Time-weighted average, threshold limit value) for occupational skin exposure: 0.5 mg/m^3 (ACGIH, 1986).
- For a 70 kg (150 lbs) person, a lethal oral dose is 50-500 mg/kg (IRIS, 1989).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	266.3	Windholz, 1983
Physical State @ 20°C:	solid	
Melting Point (°C):	190-191	Windholz, 1983
Boiling Point (°C):	309-310	Windholz, 1983
Specific Gravity:	1.978 (22/4°C)	Windholz, 1983
Acid Dissociation Constant, pK_a:	4.74	Callahan et al., 1979
Water Solubility, S (mg/L):	14 (20°C)	Callahan et al., 1979
Vapor Pressure, P (mm Hg):	1.1×10^{-4} (20°C)	Callahan et al., 1979
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	2.75×10^{-6}	Mabey et al., 1982
Hydrolysis: K_a, L/mole/hr; K_n, 1/hr; K_b, L/mole/hr:	4.6×10^{-6}, 2.4×10^{-4}, 0.138	Park et al., 1980
Log (Octanol-Water Partition Coefficient), log K_{ow}:	5.12	Leo, 1982
Soil Adsorption Coefficient, K_{oc} (ml/g):	5.3×10^4	Mabey et al., 1982
Fish Bioconcentration Factor, BCF:	770 (calc.) 900 - 1,000	Lyman et al., 1982 Callahan et al., 1979

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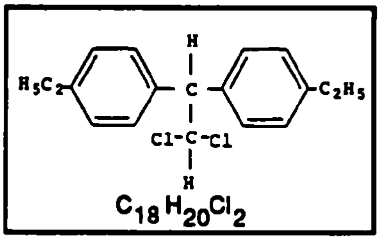
PERTHANE

CAS No.: 72-56-0
CAS Preferred Nomenclature:
Benzene,1,1-(2,2-dichloroethylidene) bis (4-ethyl)-

Empirical Formula: $C_{18}H_{20}Cl_2$



Synonyms and Common Names:
- Ethylan
- 1,1-Dichloro-2,2-bis(p-ethylphenyl)
- ethane

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish):
  None established at present

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):
  None established at present

- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present

- EPA Drinking Water Health Advisories:
  None established at present

- EPA Tolerance Levels for raw agricultural commodities (40 CFR 180.139):
  in meat and milk = 0 ppm
  in other commodities = 15 ppm

- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restriction and Bans:

- In 1980, all registered uses were cancelled (45 FR 41694).

SOURCES OF PERTHANE

Total Perthane Produced:

- Perthane was produced by Rohm and Haas, Inc. from 1950 until it was discontinued in 1980 (Farm Chemicals Handbook).

Uses of Perthane:

- Prior to 1980, perthane was used in a minor capacity as an insecticide on a variety of crops and in certain household settings. Its structural similarity to DDT made it particularly effective in controlling pests on pears, and leafhoppers and larvae on various vegetables (i.e., peppers, tomatoes, broccoli, brussel sprouts, cauliflower, kohlrabi, lettuce, spinach and potatoes) (Ouellette and King, 1977; McEwen and Stephenson, 1979; Hayes, 1982; U.S. EPA, 1986).
- Perthane was registered as an insecticide for use on the foliage of grapes, apples and cherries.
- In homes and dog kennels, perthane was used in controlling animal pests (U.S. EPA, 1986).
- Perthane has also been used in mothproofing blankets, upholstery and other textile products (Hayes, 1982; U.S. EPA, 1986).

Other Sources: · None identified.

FATE IN ENVIRONMENT

Partitioning:

- Based on its estimated physical/chemical properties, perthane is moderately volatile ($H = 6.1 \times 10^{-5}$ atm • m^3/mol, very strongly sorbed to soil ($K_{ow} \cong 13,800,000$), and has a high potential for bioaccumulation ($BCF = 6.6 \times 10^5$).

Persistence:

- Although perthane is structurally similar to DDT, it is not as persistent and can undergo both biodegradation and photolysis (Ware, 1975; McEwen and Stephenson, 1979; TDB, 1985).

HEALTH EFFECTS

Carcinogenicity:

- In one study with mice, females, but not males, developed liver tumors as a result of two years of exposure to perthane in their diet (3000 ppm) (Reuber, 1980).
- The U.S. EPA has not yet classified perthane as to its potential carcinogenicity.

Mutagenic Activity: No data found.

Reproductive Effects: No data found.

Other Toxicological Effects:

- There is no information available on any adverse human health effects caused by acute (short-term, high dose) exposure to perthane. In a few experimental cases, perthane was used as a therapeutic agent in the treatment of prostate and breast cancers. Several of the exposed persons developed diarrhea, vomiting and nausea. There was no evidence of liver, kidney or nerve damage. However, there were no demonstrable benefits from the treatments (Hayes, 1982).
- Rats fed perthane for two years at doses between 500 and 5,000 ppm demonstrated no adverse health effects. There were some minor liver changes (Hayes, 1982).
- Perthane was lethal to dogs that received doses of 5,000 ppm for 22 weeks. Lower levels either had no effects (100 ppm) or caused some adrenal degeneration (1,000 ppm) (Hayes, 1982).

Toxicological Effects Indices:

- Oral LD_{50}: rats, 6600 to 8170 mg/kg; mice, 9340 mg/kg (McEwen and Stephenson, 1979; Hayes, 1982; RTECS, 1984).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	307.3	Hayes, 1982
Physical State @ 20°C:	Crystalline solid; technical grade, waxy solid	Hayes, 1982
Melting Point (°C):	56-57	Windholz, 1983
Boiling Point (°C):	N/A	
Specific Gravity:	N/A	
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	0.1	Hollifield, 1979
Vapor Pressure, P (mm Hg):	1.5×10^{-5} (calc.)	Lyman et al., 1982
Henry's Law Constant, H @ 25 °C (atm • m^3/mol):	6.1×10^{-5} (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	7.14 (calc.)	Lyman et al., 1982
Soil Adsorption Coefficient, K_{oc} (ml/g):	1.1×10^{6} (calc.)	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	6.6×10^{5} (calc.)*	Lyman et al., 1982

* Value used for estimating aquatic effects

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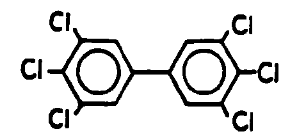
POLYCHLORINATED BIPHENYLS

CAS No.: 1336-36-3 (undifferentiated)
Specific CAS numbers have also been assigned to PCBs with various levels of chlorination and for individual Aroclors. Some of the other CAS numbers include:

Total Monochlorobiphenyl	27323-18-8
Total Dichlorobiphenyl	25512-42-9
Total Trichlorobiphenyl	25323-68-6
Total Tetrachlorobiphenyl	26914-33-0
Total Pentachlorobiphenyl	25429-29-2
Total Hexachlorobiphenyl	26601-64-4
Total Octachlorobiphenyl	31472-83-0
Total Nonachlorobiphenyl	53742-07-7
Total Decachlorobiphenyl	2051-24-3



$C_{12}H_4Cl_6$, Hexachlorobiphenyl
Major Component of Aroclor 1260

CAS Preferred Nomenclature:
1,1'-Biphenyl, chloro-derivatives

Empirical Formula: $C_{12}H_{10-x}Cl_x$, where x is 1 to 10

Synonyms and Common Names:
- Chlorinated biphenyls
- Chlorinated diphenyls
- PCBs
- Aroclors*

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish) (IRIS, 1989):
  0.045 ng/L

- EPA Drinking Water Health Advisories for Aroclor 1016 (U.S. EPA, 1987):
  child (10 Kg):
  long-term exposure = 1 g/L
  adult (70 Kg):
  long-term exposure = 4 g/L

*Aroclors are mixtures of PCBs which have been designated using a 4-digit numbering system. The first 2 digits indicate the parent molecule (12 represents biphenyl). The next two digits indicate the percent chlorine. Up to 8 Cl atoms can be present.

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms)(U.S. EPA, 1976):

	Freshwater	Saltwater
Acute, μg/L	2.0	10.0
Chronic, μg/L	0.014	0.03

- EPA Drinking Water Standards (40 CFR Part 141):
  Proposed Maximum Contaminant Level = 0.0005 mg/L
  Proposed Maximum Contaminant Level Goal = 0 mg/L

- Food and Drug Administration Tolerance Level for Fish and Shellfish (21 CFR 109.30):
  2 ppm

Use Restrictions and Bans:

- In May 1979, EPA banned the use of PCBs except in totally-enclosed systems (40 CFR 76). In August, 1982 these regulations were revised to restrict uses of PCBs in electrical equipment. PCB transformers and electromagnets posing a risk to food were banned after October 1, 1985. In limited access areas, PCB transformers and large capacitors could be used until the equipment is worn out. Small PCB capacitors can continue to be used.

SOURCES OF PCBs

Total PCB Production:

- PCB production in the U.S. began in 1929 and stopped in 1977 (Ghirelli et al., 1983). Production peaked in 1970 at 85 million pounds (Matthews and Dedrick, 1984). Annual production between 1971 and 1977 averaged about 40 million pounds (ATSDR, 1987).

Uses of PCBs:

- PCBs are a family of chemicals. Commerical products can be mixtures of up to 209 different compounds. After 1974, PCBs were used primarily as a dielectric fluid in capacitors and transformers.
- Prior to 1974, PCBs were used in other products as well:
  - plasticizer in plastic and rubber products
  - lubricant in hydraulic and vacuum fluids
  - ink carrier and solvent in manufacturing process for carbonless paper
  - sealer for gaskets and furnaces (Versar 1976 and 1980; Ghirelli et al, 1983; ATSDR, 1987).

Other Sources:

- Trace quantities of PCBs can be produced during manufacture of chlorinated hydrocarbon compounds in the presence of catalysts or at high temperatures (e.g. 1,1,1-trichloroethene, tetrachloroethene, carbon tetrachloride) (Versar, 1983).

FATE IN ENVIRONMENT

Partitioning:

- PCBs differ in their behavior depending on the number of chlorine atoms present. A higher number of chlorines (e.g., Aroclor 1260) makes the compound less soluble in water, and more refractory (i.e., doesn't degrade). PCBs, in general, are relatively insoluble, sorb strongly to organic matter (K_{OW} = 750,000), and can volatilize (half-lives are 10 to 12 hours) (Callahan et al., 1979). In lakes volatilization is considered to be an important loss process (Swackhamer and Armstrong, 1986). PCBs have a high potential for bioaccumulation (BCF values range from 26,000 to 660,000 (Leifer et al, 1983).

Persistence:

- PCBs can undergo photolysis, although specific rate constants in water were not found (Leifler et al., 1983; Callahan, et al., 1979). PCBs do not hydrolyze at a significant rate (Mabey et al., 1982). Biotransformation of PCBs with three or less chlorines (e.g., Aroclor 1221 and 1232) can occur, while other PCBs are essentially refractory (Brown et al., 1987, Leifler et al., 1983). Highly chlorinated PCBs can degrade by dechlorination reactions under anaerobic conditions to less chlorinated PCBs. These can then biodegrade (Brown et al., 1987).

HEALTH EFFECTS

Carcinogenicity:

- PCBs administered orally have been shown to cause liver tumors in rats and mice (Norback and Weltman, 1985; U.S. EPA 1985 and 1987). They are classified as probable human carcinogens: IARC class 2b; U.S. EPA class B2 (IARC, 1982; IRIS, 1988).
- Because PCBs can be contaminated with other compounds (e.g.,chlorinated dibenzofurans, dioxin), it is difficult to assess the cause of observed cancers in human exposure incidents.

Mutagenic Activity:

- PCBs have not been shown to be mutagenic in either in-vitro or in-vivo experimental tests (ATSDR, 1987).
- Negative results were obtained from the Ames bacterial test, the rat dominant lethal tests and fruit fly chromosomal tests (U.S. EPA, 1984).

Reproductive Effects:

- PCBs are fetotoxic in rats, monkeys, minks and rabbits (U.S. EPA, 1984).
- PCBs have not been found to be teratogenic in rats, mice or monkeys (ATSDR, 1987).

Other Toxicological Effects:

- The major toxic effect in animals is liver damage (IARC, 1978).
- Other effects in animals include stomach, thyroid, and kidney damage, porphyria and immunosuppressive effects (ATSDR, 1987).
- Accidental and occupational exposures of humans (to relatively high levels of PCBs) have resulted in chloracne and liver damage (Matthews and Dedrick, 1984; U.S. EPA, 1984; ATSDR, 1987).

Toxicological Effects Indices:

- Cancer potency factor (CPF), total PCBs: 7.7 $(mg/kg/day)^{-1}$ (ATSDR, 1987)
- Reference Dose (RfD), Aroclor 1016: 0.0001 mg/kg/day (ATSDR, 1987)
- TWA-TLV (time-weighted average, threshold limit value), for occupational exposures:

  Aroclor 1254 = 0.5 mg/m^3 (ACGIH, 1986)
  Aroclor 1242 = 1 mg/m^3 (ACGIH, 1986)

- Oral LD_{50}: mink, 750 mg/kg (Aroclor 1221); rats, 1010 mg/kg (Aroclor 1254).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	200.7-375.7	Hutzinger et al., 1974
Physical State @ 20°C:	liquid	
Melting Point (°C):	N/A	
Boiling Point (°C):	275-420	Mackay et al., 1983
Density, (g/cm^3 at 25°C)	1.15-1.58 at 25°C	Callahan et al., 1979
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	0.0027 (Aroclor 1260) 0.59 (Aroclor 1221	Monsanto, 1974
Vapor pressure, P (mm Hg):	$7.7x1011^{-5}$ (Arochlor 1254) $6.7x10^{-3}$ (Aroclor 1221)	Callahan et al., 1979
Hydrolysis:	not environmentally significant	Mabey et al., 1982
Henry's Law Constant K_H @ 25°C (atm • m^3/mol):	$5.28x10^{-4}$ (Aroclor 1242) $4.6x10^{-3}$ (Aroclor 1260)	ATSDR, 1987
Log (Octanol-Water Partition Coefficient), log K_{ow}:	4.7 (Aroclor 1221) 6.8 (Aroclor 1260)	Hansch and Leo, 1985
Soil Adsorption Coefficient, K_{oc} (ml/g):	$5.3x10^5$	Mabey et al., 1982
Fish Bioconcentration Factor, BCF:	26,000-660,000 31,200*	Leifer et al., 1983 U.S. EPA, 1980

* Value used for estimating aquatic effects

*Aroclors are mixtures of PCBs which have been designated using a 4-digit numbering system. The first 2 digits indicate the parent molecule (12 represents biphenyl). The next two digits indicate the percent chlorine. Up to 8 Cl atoms can be present.

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PCBs

OBSERVATIONS AND EFFECTS ON PISCIVOROUS WILDLIFE

During the last two decades, polychlorinated biphenyls (PCBs) were commonly detected in the tissues and eggs of fish-eating birds. Szaro et al. (1979) found PCBs in all eggs that were collected from successful colonies of the herring gull and great black-backed gull in Maine. PCBs were also detected in 50 percent of black-crowned night heron eggs from the intermountain western states (Kenny et al. 1984). PCB residues were detected in 83 percent of the ospreys found dead or moribund in the eastern states (iniemeyer et al. 1987), and in 90 percent of various heron species collected nationwide (66 percent found dead or moribund) (Ohlendorf et al. 1981).

PCB residues were apparently the cause of death of many ring-billed gulls in southern Ontario in 1969 and 1973. Of the specimens sampled that died of no apparent disease, 61 percent had residues of PCBs in the brain exceeding the lethal level of 310 ppm, and 30 percent had PCBs concentrations greater than 200 ppm in the brain (Stickel et al. 1984). DDE and dieldrin were also present in most specimens. DDE residues were at a lethal level (250 ppm) in one specimen and dieldrin residues were at a lethal level (5 ppm) in more than 14 percent of the dead birds.

High reproductive failure of Lake Ontario herring gulls in the early 1970s prompted an investigation of the organochlorine concentration in the gull eggs. PCB concentrations of up to 180 ppm were detected. This level is one order of magnitude greater than the concentration found in eggs from successful herring colonies on Lakes Erie, Huron and Superior. Reproductive success of the Lake Ontario herring gull colonies improved in latter years, parallelling a decline in PCB and other organochlorines concentrations in gull eggs (Weseloh et al. 1979). However, Gilman et al. (1978, 1977) suggest that high levels of mirex, not PCBs, in the eggs were to blame for the reproductive failure.

In 1981 and 1982 duck hunters from New York and New Jersey were cautioned about eating wild waterfowl. The waterfowl from the Hudson and Niagra River areas contained greater than 5 ppm PCBs (fresh weight) which was in excess of FDA tolerances for poultry (Eisler 1986).

Fish-eating mammals are also affected by PCBs. Mink are very sensitive to PCBs, and are the most sensitive of the wildlife species tested (Eisler 1986). A concentration as low as 0.64 ppm wet weight in food can cause reproductive failure in mink (Plantonow and Karstud 1973). Ringer (1983) determinedd that a concentration of 0.67 ppm in the mink diet causes reproductive failure. In the field, residues of PCBs indicative reproductive failure have been observed in mink from western Maryland and northern Oregon (Henny et al. 1981, O'Shea et al. 1981).

River otters form the Columbia River in Oregon were found with high levels of PCBs. Henny et al. (1981) suggest these elevated PCB levels may be contributing to the declining harvest of the Columbia River otter.

Based on Plantonow and Karstud's 1973 mink study, the International Joint Commission (a United States-Canada Treaty Organization), set an objective for PCB in fish at 0.1 ppm to protect piscivorous wildlife (Newell et al. 1987). The State of New York propoosed a slightly less conservative fish flesh criterion of 0.13 ppm from the sam data to protect piscivorous wildlife (Newell et al. 1987).

The effects of PCBs on piscivorous wildlife are summarized in the following table:

Effects of PCB Concentrations on Piscivorous Wildlife

Animal	Concentration	Effect	Source
Birds	310 ppm (brain)	death	Stickel, 1984
Mink	0.64 mg/kg (diet)	reproduction impaired	Plantonow and Karstud, 1973
Mink	0.67 mg/kg (diet) or 0.225 ppm/day (diet)	reproduction impaired	Ringer, 1983
	0.1 mg/kg/day (diet)	NOEL	Ringer, 1983
Piscivorous Wildlife	0.13 ppm (diet)	estimated NOEL	Newell et al., 1987
	0.11 ppm (diet)	cancer risk of 10^{-2}	Newell et al., 1987

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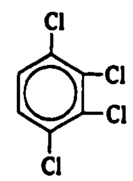
1,2,3,4 AND 1,2,3,5 TETRACHLOROBENZENE

1,2,3,4-TETRACHLOROBENZENE:

CAS No.: 634-66-2
CAS Preferred Nomenclature:
Benzene, 1,2,3,4-tetrachloro-



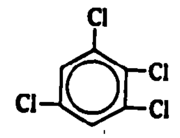
1,2,3,4-tetrachlorobenzene

Empirical Formula: $C_6H_2CL_4$

Synonyms and Common Names:
- 1,2,3,4 TCB

1,2,3,5-TETRACHLOROBENZENE:

CAS No.: 634-90-2
CAS Preferred Nomenclature:
Benzene, 1,2,3,5-tetrachloro-



1,2,3,5-tetrachlorobenzene

Empirical Formula: $C_6H_2CL_4$

Synonyms and Common Names:
- 1,2,3,5 TCB

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish):
  None established at present
- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):
  None established at present
- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present
- EPA Drinking Water Health Advisories:
  None established at present
- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restrictions and Bans: None found.

SOURCES OF 1,2,3,4 AND 1,2,3,5 TETRACHLOROBENZENE

Total 1,2,3,4 and 1,2,3,5 TCB Produced:

- No current producers for either tetrachlorobenzene were identified (SRI, 1986).

Uses of 1,2,3,4 and 1,2,3,5 TCB:

- 1,2,3,4 TCB has been used as a component of dielectric fluids (Verschueren, 1983).
- No information was found on the uses of 1,2,3,5 TCB.

Other Sources: None identified.

FATE IN ENVIRONMENT

Partitioning:

- Based on their properties, both 1,2,3,4 and 1,2,3,5 TCB are moderately volatile (estimated H = 1,300 to 1,400 atm • m^3/mole), strongly sorb to soil (K_{ow} = 43,000 to 83,000), and have a high potential for bioaccumulation. (BCF values from experimental data ranged from 1,800 to 72,000.)

Persistence:

- Little information is available on the photolysis and hydrolysis of either 1,2,3,4 or 1,2,3,5 TCB, but based on the similarity of their structure to 1,2,4,5 TCB, neither process is expected to be environmentally significant.
- Because of the high degree of chlorination of 1,2,3,4 and 1,2,3,5 TCB, biodegradation is not expected to occur readily (Perwak et al., 1983). However, in a solution of 200 mg/L of 1,2,3,4 TCB, Pseudomonas bacteria were able to produce 33% ring degradation after 120 hours at 30°C (Verschueren, 1983). It is likely that 1,2,3,5 TCB would behave similarly.

HEALTH EFFECTS

Carcinogenicity:

- No data found. The U.S. EPA has not classified the potential carcinogenicity of either 1,2,3,4 or 1,2,3,5 TCB.

Mutagenic Activity:

- No adequate data available (U.S. EPA, 1980).

Reproductive Effects:

- In rats 1,2,3,4 TCB reduced embryonic growth at the level which also caused maternal poisoning effects (1000 mg/kg) (TDB, 1985).
- No data were found for 1,2,3,5 TCB.

Other Toxicological Effects:

- Liver damage was produced in rats fed high doses of 1,2,3,4 TCB (1,000 to 6,600 mg/kg/day) (TDB, 1985).
- Rats fed 1,2,3,5 TCB (75 mg/kg) for 2 months developed enlarged adrenal glands. No specific health effects were noted as a result of this condition (U.S. EPA, 1980).

Toxicological Effects Indices: None found.

PHYSICAL/CHEMICAL PROPERTIES

1,2,3,4 TETRACHLOROBENZENE:	Value	Reference
Molecular Weight:	215.9	Verschueren, 1983
Physical State @ 20°C:	solid needles	Verschueren, 1983
Melting Point (°C):	47.5	Weast, 1986
Boiling Point (°C):	254	Weast, 1986
Specific Gravity:	1.70	Kirk-Othmer, 1982
Acid Dissociation Constant, pK_a:		N/A
Water Solubility, S (mg/L):	5.92 3.5 (22°C)	Banerjee, 1984 Verschueren, 1983
Vapor Pressure, P (mm Hg):	0.027 (25°C)	Kirk-Othmer, 1982
Henry's Law Constant, H @ 25°C (atm • m^3/mole):	1.3×10^{-3} (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	4.64	Leo, 1983
Soil Adsorption Coefficient, K_{oc} (ml/g):	1.2×10^{4} (calc.)	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	2100 (calc.) 1,125* to 12,000 (exptl.)	Lyman et al., 1982; U.S. EPA, 1980

* Value used for estimating aquatic values

1,2,3,5 TETRACHLOROBENZENE:	Value	Reference
Molecular Weight:	215.9	Verschueren, 1983
Physical State @ 20°C:	solid	
Melting Point (°C):	54.5	Weast, 1986
Boiling Point (°C):	246	Weast, 1986
Specific Gravity:	N/A	
Acid Dissociation Constant, pK_a:		N/A
Water Solubility, S (mg/L):	5.10 2.4 (22°C)	Banerjee, 1984 Verschueren, 1983
Vapor Pressure, P (mm Hg):	1 @ 58.2°C	Weast, 1986
Henry's Law Constant, H @ 25°C (atm • m^3/mole):	1.4×10^{-3} (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	4.92	Leo, 1983
Soil Adsorption Coefficient, K_{oc} (ml/g):	2.0×10^4 (calc.)	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	4,000 (calc.) 1,800 to 72,000 (exptl.)	Lyman et al., 1982 U.S. EPA, 1980; Verschueren, 1983

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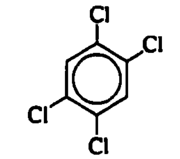
1,2,4,5 TETRACHLOROBENZENE

CAS No.: 95-94-3

CAS Preferred Nomenclature:
Benzene, 1,2,4,5-tetrachloro-



1,2,4,5-tetrachlorobenzene

Empirical Formula: $C_6H_2Cl_4$

Synonyms and Common Names:
- 1,2,4,5 TCB
- 5-Tetrachlorobenzene
- s-Tetrachlorobenzene

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish)(45 FR 79318):
  48 μg/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms)(IRIS, 1989):

	Freshwater	Saltwater
Acute, μg/L	250	160
Chronic, μg/L	50	129

  Above are LECs (Lowest Effect Concentration).

- Food and Drug Administration Action Level for Fish:
  None established at present

- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present

- EPA Drinking Water Health Advisories:
  None established at present

Use Restrictions and Bans: None found.

SOURCES OF 1,2,4,5 TETRACHLOROBENZENE

Total 1,2,4,5 Tetrachlorobenzene Produced:

- In 1977, Dow Chemical produced between 10 million and 50 million pounds of 1,2,4,5 TCB (Perwak et al., 1983).

Uses of 1,2,4,5 Tetrachlorobenzene:

- 1,2,4,5 TCB is a chlorophenoxy compound used as a precursor for the production of the herbicide, 2,4,5 T(2,4,5 trichlorophenoxyacetic acid). 2,4,5 T was a major component of Agent Orange, the defoliant used in Vietnam (Klaassen et al., 1986).
- 1,2,4,5 TCB has also been used as a precursor for the production of other organic chemicals and in the dye industry (Perwak et al., 1983).
- It has also been utilized in the moisture-proofing of electrical insulation (Perwak et al., 1983).

Other Sources: None identified.

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, 1,2,4,5 TCB is highly volatile (H = 0.027 atm • m^3/mole), strongly sorbs to soil (K_{OW} ≅47,000), and has a high potential for bioaccumulation. BCF values from experimental data ranged between 5,300 and 13,000.

Persistence:

- Photolysis is not excepted to be significant for 1,2,4,5 TCB since little absorption occurs in the solar region (> 290 mm) for the chemical (Perwak et al., 1983).
- Biodegradation is not expected to occur readily because of the high degree of chlorination, although Pseudomonas bacteria are able to produce 30% ring disruption of a 200 mg/L solution at 30°C after 120 hours (Perwak et al., 1983; Verschueren, 1983). In one study under anaerobic conditions, chlorobenzenes persisted for seven years (TDB, 1985).
- Hydrolysis of 1,2,4,5 TCB is not expected to be environmentally significant (Perwak et al., 1983).

1,2,4,5 TETRACHLOROBENZENE OBSERVED IN THE ENVIRONMENT

- No data available.

HEALTH EFFECTS

Carcinogenicity:

- The U.S. EPA has not yet evaluated the potential carcinogenicity of 1,2,4,5 TCB (IRIS, 1989).

Mutagenic Activity:

- No adequate data available (U.S. EPA, 1980).

Reproductive Effects: No data found.

Other Toxicological Effects:

- No reported effects on humans.
- Rats fed 1,2,4,5 TCB for 13 weeks developed kidney damage at relatively moderate doses (0.34 mg/kg/day). Liver damage was also reported to occur at higher doses (3.4 to 32 mg/kg/day). A higher dose (200 mg/kg/day) caused a significant increase in deaths (IRIS, 1989).
- Dogs fed 1,2,4,5 TCB (5 mg/kg/day) for 2 years showed no adverse health effects (IRIS, 1988).

Toxicological Effects Indices:

- Reference Dose (RfD): $3x10^{-4}$ mg/kg/day (IRIS, 1989).
- Oral LD_{50}: rats, 1500 mg/kg; mice, 1035 mg/kg (Tatken and Lewis, 1984).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	215.9	Windholz, 1983
Physical State @ 20°C:	solid	
Melting Point (°C):	139.5	Kirk-Othmer, 1984
Boiling Point (°C):	248	Kirk-Othmer, 1984
Specific Gravity:	1.833	Kirk-Othmer,1984
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	6.0 0.3 (22°C)	PHRED, 1988 Verschueren, 1983
Vapor Pressure, P (mm Hg):	0.045 (25°C)	Kirk-Othmer, 1984
Henry's Law Constant, H @ 25°C (atm • m^3/mole):	0.027 (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{ow}:	4.67	PHRED, 1988
Soil Adsorption Coefficient, K_{oc} (ml/g):	1.6×10^3	PHRED, 1988
Fish Bioconcentration Factor, BCF:	5300 to 13000 (exptl.) 1125*	Oliver and Niimi, 1983 PHRED, 1988; U.S. EPA, 1980

* Value used for estimating aquatic effects

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Oliver, B.G. and A.J. Niimi. 1983 Bioconcentration of Chlorobenzene from Water by Rainbow Trout: Correlations with Partition Coefficients and Environmental Residues. Environ. Sci. Technol. 17:287-291.

Perwak J., E. Cole, S. Coons, N. Green, W. Lyman, M. Miller, J.H. Ong, and K. Scow. 1983. Evaluation of Waterborne Exposure Pathways to Paragraph 4(c) Pollutants. U.S. EPA Draft Report. EPA Contract 68-01-5949.

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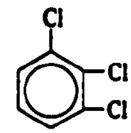
1,2,3 TRICHLOROBENZENE

CAS No.: 87-61-6
CAS Preferred Nomenclature:
Benzene,1,2,3-trichloro-



1,2,3-trichlorobenzene

Empirical Formula: $C_6H_3Cl_3$

Synonyms and Common Names:
- 1,2,6-trichlorobenzene
- vic-trichlorobenzene

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish):
  None established at present
- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):
  None established at present
- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present
- EPA Drinking Water Health Advisories:
  None established at present
- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restrictions and Bans: None found.

SOURCES OF 1,2,3 TRICHLOROBENZENE

Total 1,2,3 Trichlorobenzene Produced:

- In 1977, Dow Chemical Company in Midland, Michigan produced between 1 and 10 million pounds of 1,2,3-trichlorobenzene (Perwak et al., 1983). In 1986, Standard Chlorine Chemical (Delaware City, Delaware) was the only producer, but production figures are not available (SRI, 1986).

Uses of 1,2,3 Trichlorobenzene:

- 1,2,3 trichlorobenzene is not commonly used directly, but instead is used as an intermediate in chemical synthesis (Sax, 1986).
- 1,2,3 trichlorobenzene is used as a solvent for high melting products, as a coolant in electrical installations and glass tempering, for polyester dying, termite preparations, synthetic transformer oil, lubricants, heat transfer medium, and insecticides (Sax, 1986).

Other Sources: None found.

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, 1,2,3 trichlorobenzene sorbs moderately strong to sediment (K_{ow} = 12,900). Volatilization can occur from water at a moderate rate (H = 9.3×10^{-4} atm • m^3/mol). The potential for bioaccumulation is high based on experimental data. (BCF ranged between 1,200 and 2,600.)

Persistence:

- Direct photolysis of 1,2,3 trichlorobenzene is not likely to occur in natural waters (Perwak et al., 1983).
- Hydrolysis is not an environmentally significant process (Ellington et al., 1986).
- Biotransformation of 1,2,3 trichlorobenzene may occur but at an unknown rate. No degradation occurred beneath the water table (anaerobic conditions) (TDB, 1986). Perwak et al. (1983) reported that 10% of 1,2,3 trichlorobenzene degraded after 12 weeks in a soil containing high organic matter and up to 8% volatilized while only 2% degraded in a soil with low organic material content (up to 40% volatilized). Degradation by Psuedomonas bacteria is more rapid; at 30°C, 87% ring disruption occurred within 120 hours in a concentration of 200 mg/L 1,2,3 trichlorobenzene (Verschueren, 1983).

HEALTH EFFECTS

Carcinogenicity:

- No data found. The EPA has not classified the potential carcinogenicity of 1,2,3 trichlorobenzene.

Mutagenic Activity: No data found.

Reproductive Effects: No data found.

Other Toxicological Effects:

- Trichlorobenzenes can cause liver damage in humans and animals (Gosselin, 1984; HSDB, 1988).
- 1,2,3 trichlorobenzene is irritating to human eyes and mucous membranes of the respiratory tract (Sax, 1986; HSDB, 1988).
- 1,2,3 trichlorobenzene is considered moderately toxic to humans with acute or chronic ingestion or inhalation (Sax, 1986).
- At high doses technical grade trichlorobenzene (30% 1,2,3 TCB and 70% 1,2,4 TCB) is moderately irritating to rabbit skin (HSDB, 1988).

Toxicological Effects Indices:

- None found for human exposure.
- Chronic Hazard Level for rats: 0.01 mg/kg/day/5.5 month (loss of hair) (Sax, 1986).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	181.45	Kirk-Othmer, 1982
Physical State @ 20°C:	solid, white crystals	Sax, 1986
Melting Point (°C):	53.5	Kirk-Othmer, 1982
Boiling Point (°C):	218.5	Kirk-Othmer, 1982
Specific Gravity:	1.69	Windholz, 1983
Acid Dissociation Constant, pK_a:	N/A	
Water Solubility, S (mg/L):	12 @ 22°C	Verschueren, 1983
Vapor Pressure, P (mm Hg):	0.07 @ 25°C	U.S. EPA, 1980
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	9.3×10^{-4} (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{OW}:	4.11	Leo, 1983
Soil Adsorption Coefficient, K_{OC}(ml/g):	4600 (calc.)	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	1200-2600* (exptl.)	Oliver and Niimi, 1983

* Value used for estimating aquatic effects

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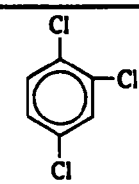
1,2,4 TRICHLOROBENZENE

CAS No.: 120-82-1
CAS Preferred Nomenclature:
Benzene, 1,2,4,-trichloro-

Empirical Formula: $C_6H_3Cl_3$

Synonyms and Common Names:
- Hostetex L-PEC
- Unsym-Trichlorobenzene
- 1,2,4 Trichlorobenzol


1,2,4-trichlorobenzene

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish) (U.S. EPA, 1989):
  15.4 mg/L

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):
  None established at present

- EPA Drinking Water Standard Maximum Contaminant Level:
  (U.S. EPA, 1989)
  Propose MCLG 9ng/1

- EPA Drinking Water Health Advisories:
  None established at present

- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restrictions and Bans: None found.

SOURCES OF 1,2,4 TRICHLOROBENZENE

Total 1,2,4 Trichlorobenzene Produced:

- In 1979, 16 million pounds of 1,2,4 trichlorobenzene were produced (Perwak et al., 1983).

Uses of 1,2,4 Trichlorobenzene:

- 1,2,4 trichlorobenzene is used as a solvent in chemical manufacturing, in dyes and intermediate production, and in transformer dielectric fluid. In addition, it is used as a degreaser, lubricant, and termiticide (Verschueren, 1983; Sax, 1986).

Other Sources: None found.

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, 1,2,4 trichlorobenzene strongly sorbs to organics ($K_{ow} \cong 19,900$) and can volatilize ($H = 2.3 \times 10^{-3}$ atm • m^3/mol). In addition, the potential for bioaccumulation is high (BCF estimated as 2,800).

Persistence:

- 1,2,4 trichlorobenzene is not expected to undergo hydrolysis at an environmentally significant rate (Mabey et al., 1982).
- The biotransformation rate of 1,2,4 trichlorobenzene is reportedly very slow. After 135 hours, no degradation of 0.1 mg/L 1,2,4 trichlorobenzene exposed to normal sewage occurred. However, 56% was degraded by adapted sewage (Verschueren, 1983). Psuedomonas bacteria transformed 1,2,4trichlorobenzene at a faster rate, with concentrations of 200 mg/L (at 30°C) undergoing 92% ring disruption after 120 hours (Verschueren, 1983).

HEALTH EFFECTS

Carcinogenicity:

- McNamara et al. (1981) reported no increased incidence of tumors in a 6-month feeding study. A 2-year skin painting study with 1,2,4 trichlorobenzene demonstrated no increase in tumors in mice (Toxline, 194). These studies, however, are not considered adequate for carcinogenicity assessment.
- No tumor development was observed in mice inhaling 600 ppm 1,2,4 trichlorobenzene daily for 6 months (U.S. EPA, 1980).
- The EPA has not classified the carcinogenic potential of 1,2,4 trichlorobenzene.

Mutagenic Activity:

- 1,2,4 trichlorobenzene was found to be non-mutagenic in the bacteria Salmonella typhimurium (McNamara et al., 1981).

Reproductive Effects:

- While no increases in teratogenicity or embryo lethality were observed in rats fed 360 mg/kg/day on days 9-13 of gestation, retarded embryonic development occurred (Kitchin and Ebron, 1983).

Other Toxicological Effects:

- Chronic (long-term, low dose) exposure to 1,2,4 trichlorobenzene has resulted in liver, kidney, brain and lung damage in animals (Sittig, 1985; HSDB, 1988).
- In humans, exposure to 1,2,4 trichlorobenzene has been reported as causing central nervous system stimulation, headache, dermatitis and skin, eye, and throat irritation (Sax, 1986; HSDB, 1988).
- At high doses technical grade trichlorobenzene (30% 1,2,3 TCB and 70% 1,2,4 TCB is moderately irritating to rabbit skin (HSDB, 1988).

Toxicological Effects Indices:

- Reference Dose (RfD): $2x10^{-2}$ mg/kg/day (PHRED, 1988).
- TLV-C (threshold limit value-ceiling -- not to be exceeded during occupational exposure): 40 mg/m^3 (ACGIH, 1986).
- Oral LD50: rat, 756 mg/kg (U.S. EPA, 1980; HSDB, 1988).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	181.45	Kirk-Othmer, 1984
Physical State @ 20°C:	clear liquid	
Melting Point (°C):	17.15	Kirk-Othmer, 1984
Boiling Point (°C):	213.8	Kirk-Othmer, 1984
Specific Gravity:	1.45 (20/4°C)	Weast, 1986
Acid Dissociation Constant, pKa:	N/A	
Water Solubility, S (mg/L):	30 @ 25°C	Sax, 1986
Vapor Pressure, P (mm Hg):	0.29 @ 25°C	U.S. EPA, 1980
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	2.3×10^{-3}	Mabey et al., 1982
Log (Octanol-Water Partition Coefficient), log Kow:	4.3	PHRED, 1988
Soil Adsorption Coefficient, K_{oc}(ml/g):	9.2×10^{3}	PHRED, 1988
Fish Bioconcentration Factor, BCF:	2800* (calc.)	PHRED, 1988; ICF, 1985

* Value used for estimating aquatic effects

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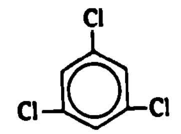
1,3,5 TRICHLOROBENZENE

CAS No.: 108-70-3
CAS Preferred Nomenclature:
Benzene, 1,3,5-trichloro-



1,3,5-trichlorobenzene

Empirical Formula: $C_6H_3Cl_3$

Synonyms and Common Names:
- sym-Trichlorobenzene

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish):
  None established at present
- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):
  None established at present
- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present
- EPA Drinking Water Health Advisories:
  None established at present
- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restrictions and Bans: None found.

SOURCES OF 1,3,5 TRICHLOROBENZENE

Total 1,3,5 Trichlorobenzene Produced:

- In 1986, 1,3,5 trichlorobenzene was produced by Southland Corporation. No production data are available (SRI, 1986).

Uses of 1,3,5 Trichlorobenzene:

- 1,3,5 trichlorobenzene is commonly used as an intermediate in chemical synthesis of other organic compounds (Sax, 1984).

- 1,3,5 trichlorobenzene is also used as a solvent for dyes in textile manufacture (Kirk-Othmer, 1982).

Other Sources: None found.

FATE IN ENVIRONMENT

Partitioning:

- Based on its physical/chemical properties, 1,3,5 trichlorobenzene is moderately volatile (H estimated to be 6.0×10^{-3} atm • m^3/mole), moderately sorbed to soil ($K_{ow} \cong 30{,}000$), and has a high potential for bioaccumulation. (BCF from experimental data range from 1,800 to 4,100.)

Persistence:

- Hydrolysis and aqueous photolysis are expected to be unimportant under environmental conditions based on the structural similarity with 1,2,3 and 1,2,4 trichlorobenzene.
- Using fresh sewage, 1,3,5 trichlorobenzene at an initial concentration of 1.0 mg/L was not degraded after 135 hours, compared with 47 percent degraded using acclimated sewage. Biodegradation by Pseudomonas bacteria was found to be more rapid, with 78 percent of an initial 200 mg/L sample degraded (ring disruption) after 120 hours at 30°C (Verschueren, 1983).

1,3,5-TRICHLOROBENZENE OBSERVED IN THE ENVIRONMENT

- No data available.

HEALTH EFFECTS

Carcinogenicity:

- No data found. The U.S. EPA has not classified the potential carcinogenicity of 1,3,5 trichlorobenzene.

Mutagenic Activity: No data found.

Reproductive Effects:

- No teratogenic effects were observed in rats when mothers were fed 1,3,5-trichlorobenzene at doses between 75 and 600 mg/kg. There were some mild changes in bone development (at unspecified doses) (U.S. EPA, 1985).

Other Toxicological Effects:

- 1,3,5 trichlorobenzene has been found to be moderately irritating to human skin, eyes and other mucous membranes (Sax, 1984).
- Rats that inhaled 1,3,5 trichlorobenzene on a schedule simulating possible occupational exposures (6 hours/day, 5 days/week, for 13 weeks) developed some reversible changes to lung tissues (U.S. EPA, 1985).
- It has been reported that trichlorobenzenes cause liver damage to humans and animals, but it is not known which one (1,3,5-, 1,2,3- or 1,2,4-trichlorobenzene) is the toxic component (Gosselin, 1984).

Toxicological Effects Indices: None found.

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	181.45	Kirk-Othmer, 1982
Physical State @ 20°C:	solid	
Melting Point (°C):	63.4	Windholz, 1983
Boiling Point (°C):	208.5	Kirk-Othmer, 1982
Specific Gravity:	N/A	
Acid Dissociation Constant, pKa:	N/A	
Water Solubility, S (mg/L):	5.88 @ 20°C	Verschueren, 1983
Vapor Pressure, P (mm Hg):	0.15 (25°C)	U.S. EPA, 1980
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	6.0×10^{-3} (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log Kow:	4.49	Leo, 1983
Soil Adsorption Coefficient, Koc(ml/g):	9100 (calc.)	Lyman et al., 1982
Fish Bioconcentration Factor, BCF:	1400 (calc.)	Lyman et al., 1982
	1800-4100* (exptl.)	Oliver & Niimi, 1983

* Value used for estimating aquatic effects

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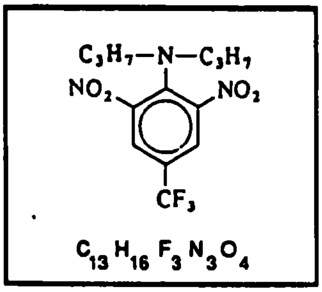
TRIFLURALIN

CAS No.: 1582-09-8

CAS Preferred Nomenclature:
Benzenamine, 2,6-dinitro-N,N-dipropyl-4-(trifluoromethyl)-



Empirical Formula: $C_{13}H_{16}F_3N_3O_4$

Synonyms and Common Names:

- Treflan
- Trefanocide
- Elancolan
- Ipersan
- Triflurex
- Crisalin
- Trim
- Ipifluor

REGULATORY STATUS

Standards and Criteria:

- EPA Water Quality Criteria (for human consumption of fish):
  None established at present

- EPA Ambient Water Quality Criteria (for protection of aquatic organisms):
  None established at present

- EPA Drinking Water Standard Maximum Contaminant Level:
  None established at present

- EPA Drinking Water Health Advisories (IRIS, 1989):
  child (10 kg):
  1-day, 10-day, long-term exposures = 30 μg/L
  adult (70 kg):
  long-term exposure = 30 μg/L
  lifetime exposure = 2 μg/L

- EPA Tolerance Levels in foods for human consumption (40 CFR 180.207):
  0.05 to 2 ppm

- Food and Drug Administration Action Level for Fish:
  None established at present

Use Restrictions and Bans:

- As of August 1982, all technical formulations were to be formulated to contain less than 0.5 ppm of N-nitrosamine contaminants (47 FR 33777).

SOURCES OF TRIFLURALIN

Total Trifluralin Produced:

- The herbicidal properties of the dinitroanilines, particularly trifluralin, were first reported in 1960 (Farm Chemicals Handbook, 1985). In 1982, 25,000 tons of trifluralin were produced, of which 18,000 tons were used in the U.S. (Green et al., 1987). In 1986, only the Eli Lilly Co. produced trifluralin (SRI, 1986).

Uses of Trifluralin:

- Trifluralin is used as an herbicide to control annual grasses and broadleaf weeds in a wide variety of agricultural crops and in some domestic and industrial situations (Worthing, 1983; U.S. EPA, 1987a).
- The primary uses of trifluralin are on cotton and soybeans. In 1987 the uses were divided as follows: 65% on soybeans, 19% on cotton, 8% on sunflowers, 4% on wheat and 6% for all other purposes (U.S. EPA, 1987a).
- Trifluralin is registered for use on forty broadleaf crops (McEwen and Stephenson, 1979). It is also used to control weeds in orchards and in vegetable crops (47 FR 33777).
- Non-agricultural uses are the control of grasses (e.g., barnyard grass, chickweed, crabgrass) in rights-of-way, for outdoor domestic sites and industrial sites (McEwen and Stephenson, 1979; Thomson, 1983; Farm Chemicals Handbook, 1985; U.S. EPA, 1987a).

Other Sources: None identified.

FATE IN ENVIRONMENT

Partitioning:

- Based upon it's physical/chemical properties, trifluralin is predicted to volatilize relatively slowly from both water ($H = 1.9 \times 10^{-6}$ atm • m^3/mol) and soil surfaces ($P/SK_{oc} = 3.3 \times 10^{-10}$ mm Hg • L/mg corresponding to an estimated volatilization half-life of 48 days), adsorb relatively strongly to soils and sediments (K_{oc} = 218,800), and have a high potential for bioaccumulation (BCF = 1.8×10^3 to 6.0×10^3) (Lyman et al., 1982).
- Trifluralin appears to have a very low potential for leaching. Gray et al., 1982 reported that after elution with 60 cm of water, > 90% of the applied trifluralin and > 99% of the trifluralin accounted for remained in the upper 5 cm of soil columns packed with a sandy loam (oc = 0.8%), a silt loam (oc = 2.8%), or a clay loam (oc

= 1.3%) soil. Helling and Turner (1968) reported that trifluralin was essentially immobile (R_f = 0.0) on soil thin-layer chromatography plates using 14 different soils.

- Bionomics (1973) reported trifluralin tissue concentrations of 5.5 to 12 mg/kg in bluegill sunfish exposed to an average of 7.9 μg/L over 35 days. The tissue to water concentration ratios correspond to non-steady state bioconcentration factors of 7.0 x 10^2 to 1.5 x 10^3.

Persistence:

- Mosier and Saunders (1978) reported that trifluralin at 30°C did not undergo any detectable hydrolysis at pH, 3, 6, or 9 over a 32 day period.

- Trifluralin is susceptible to photolytic degradation (McEwen and Stephenson, 1979; TDB, 1985). A study by Zepp and Baughman reported a half-life of approximately 1 hour for trifluralin in water exposed to sunlight (TDB, 1985).

- Trifluralin is also biodegradable; a Pseudomonas bacteria has been found that decomposes it in aqueovs media (Lyman et al., 1982.) The rate of biodegradation is uncertain. Parr and Smith (1973) reported that the rate of trifluralin degradation in a silt loam soil was much greater under anaerobic conditions (< 1% remaining after 20 days incubation) than under aerobic conditions (approximately 85% remaining after 20 days incubation).

- In soil half-lives of 3 to more than 27 weeks have been reported (Verschueren, 1983). The associated dissipation rates ranged from 0.033/day to 0.0037/day. Other determinations of trifluralin half-lives are:

  - 21 to 35 days in irrigated soils
  - 126 to greater than 190 days in a sandy loam soil
  - 50 days in sandy loam soil in a greenhouse (Worthing, 1983).

- Research by Golab et al., 1979 showed that trifluralin can undergo dealkylation and cyclazation reactions to form 28 different breakdown products.

HEALTH EFFECTS

Carcinogenicity:

- The U.S. EPA has classified trifluralin as a possible human carcinogen (group C) on the basis that there is only limited evidence from animal experiments that it causes cancer (U.S. EPA, 1987a, b).

- In a feeding experiment with rats, trifluralin caused kidney tumors, but only at very high doses (6500 ppm) and at a rate only slightly greater than that seen in control animals (Tatken and Lewis, 1983; U.S. EPA, 1987a).

- Studies with mice and hamsters showed that technical-grade trifluralin caused liver and lung tumors. However, it was not certain whether these were caused by the trifluralin alone or by the nitrosamine contaminant (84-88 ppm dipropylnitrosamine) (47 FR 33777; Gosselin et al., 1984; U.S. EPA, 1987a).
- Similar chemicals (e.g., ethalfluralin) have been demonstrated to cause tumors in rats (U.S. EPA, 1987a).

Mutagenic Activity:

- Trifluralin is not considered to be mutagenic. The dominant lethal test with mice was negative as were tests with yeast cells and sister chromatid (chromosome) exchange in hamster cells (U.S. EPA, 1987a).

Reproductive Effects:

- Trifluralin has not been shown to impair the reproductive ability of rats, rabbits, or dogs (U.S. EPA, 1987a, b). The only adverse effect demonstrated was reduced birth weights in rats exposed to high doses. (IRIS, 1989).

Other Toxicological Effects:

- Trifluralin is not acutely toxic to humans but may cause eye or skin irritation in exposed humans (Dreisbach, 1980; U.S. EPA, 1987a).
- Long-term, low dose (chronic) exposure to trifluralin caused kidney damage in rats (at 200 ppm) (U.S. EPA, 1987a).

Toxicological Effects Indices:

- Reference Dose (RfD): 7.5×10^{-3} mg/kg/day (IRIS, 1989).
- Cancer Potency Factor (CPF): 7.7×10^{-3} $(mg/kg/day)^{-1}$ (IRIS, 1989).
- Oral LD_{50}: mice, 500 mg/kg; rats, 10,000 mg/kg; dogs, chickens, rabbits, 2 mg/kg (U.S. EPA, 1987b).

PHYSICAL/CHEMICAL PROPERTIES

	Value	Reference
Molecular Weight:	335.3	Worthing, 1983
Physical State @ 20°C:	yellow-orange crystalline solid	Worthing, 1983; U.S. EPA, 1987b
Melting Point (°C):	48.5-49	Worthing, 1983
Boiling Point (°C):	139-140 @ 4.2 mm Hg	Windholz, 1983
Specific Gravity:	N/A	
Acid Dissociation Constant, pK_a:		N/A
Water Solubility, S (mg/L):	0.3	U.S. EPA, 1987b; Herbicide Handbook, 1983
	4.0 @ 27°C	Worthing, 1983; Verschueren, 1983
Vapor Pressure, P (mm Hg):	1.1×10^{-4} (25°C)	U.S. EPA, 1987a
Henry's Law Constant, H @ 25°C (atm • m^3/mol):	1.9×10^{-6} (calc.)	Lyman et al., 1982
Log (Octanol-Water Partition Coefficient), log K_{OW}:	5.34	Leo, 1983
Soil Adsorption Coefficient, K_{OC} (ml/g):	1.37×10^4	PHRED, 1988
Fish Bioconcentration Factor, BCF:	1800-6000*	Worthing, 1983

* Value used for estimating aquatic effects

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APPENDIX D

APPENDIX D-1

Key to Site Description Matrix

Site Description Matrix *

*Also included in Volume I, Appendix B-3

Key to Table D-1
Matrix of Episodes and Site Descriptions

COLUMN HEADING			DESCRIPTION
1.	EPA REGION		The U.S. Environmental Protection Agency Region which includes the sample location.
2.	EPISODE		The EPA Episode Number which is specific to each sampling location.
3.	LATITUDE		The latitude of the sample site in degrees, minutes and seconds.
4.	LONGITUDE		The longitude of the sample site in degrees, minutes and seconds.
5.	STATE		The state where the sample was collected.
6.	WATERBODY		Name of the water body where the sample was collected.
7.	LOCATION		The nearest town, road or county to the sample location.
8.	NSQ		Sample site from the USGS NASQAN monitoring network.
9.	B		Background site as selected for study.
POINT SOURCES: Point sources include the following six categories:			
10.	PPC		Site near paper and pulp mill using chlorine for bleaching (includes mills using the sulfite process).
11.	PPNC		Site near paper and pulp mill not using chlorine for bleaching.
12.	REFINERY		Site near refinery using the catalytic reforming process.
13.	NPL SITE	X	Site near an EPA National Priority List Site (Superfund site).
		L	Site near State Superfund site or known dump site.
14.	OTHER INDUSTRY		Site near industrial facility other than a paper mill, refinery, or wood preserver.
15.	POTW		Site near discharge of a Publicly Owned Treatment Works (POTW).
16.	WP		Site near wood preserver.
NONPOINT: Nonpoint sources include the following two categories:			
17.	URBAN		Site near urban runoff.
18.	AGRICULTURE		Site near agricultural area.

TABLE D-1
Matrix of Episodes and Site Descriptions

EPA Reg	Episode #	Latitude	Longitude	State	Waterbody	Location	NSQ	B	POINT SOURCES PPC	PPNC	WP	Rfny	NPL Site	Other Ind	POTW	NONPOINT Urban	Agri	Additional Site Description (Facilities in the vicinity of the sampling site)
I	2376	41:22.00N	072:52.40W	CT	Quinipiac River	North Haven							X	X	X			Industry: chemical & pesticides, electronics, plastics, metals, Superfund site (solvents)
I	2375	41:36 47N	071:58 26W	CT	Quinnebaug River	Jewett City							X	X	X			Ind.. organic chem & pest , textiles; Superfund site (Furans)
I	2369	42.37:25N	071.23.10W	MA	Merrimack River	Tyngs Island							X	X	X			Ind . chem & pest , industrial WWTP, P&P mill on Nashua R (trib), Superfund site (solvents)
I	3151	42 35 22N	072.21 08W	MA	Millers River	Erving			X									Erving Paper Mills; wooded area, Ag . croplands and grazing fields
I	3150	42·35.46N	072.03 27W	MA	Otter River	Baldwinville			X								X	Erving Paper Mills; wooded area, Ag croplands and grazing fields
I	2356	44.06.10N	070.13:58W	ME	Androscoggin R.	Lewiston			X					X	X	X		International Paper, Boise Cascade, James River, Ind . textiles
I	2721	44 15:20N	070·10 50W	ME	Androscoggin R	Turner Falls			X									International Paper Co in Jay
I	2725	44 30.09N	070.15.00W	ME	Androscoggin R.	Riley Dam			X									Boise Cascade in Rumford, rural,wooded area
I	3026	44.10 20N	070.20 25W	ME	Androscoggin R	Auburn			X	X				X		X		Ind.: textiles; downstream of paper mills
I	3028	45.04.48N	067:19 25W	ME	Bearce Lake	Barring		X										
I	2358	44·36.30N	067.55 30W	ME	Narraguagus R.	Cherryfield	X										X	Two blueberry processing plants, blueberry fields (pesticides)
I	3022	44 32.30N	070.07.15W	ME	North Pond	Chesterville		X										No industry; wooded and swampy area
I	2355	44 49:20N	068 42 30W	ME	Penobscot R	Eddington			X						X	X		James River Corporation on Old Town
I	2722	43 34.35N	070.33.45W	ME	Saco River	Union Falls		X							X			Same as 3027; POTW on upstream trib yet is Background site
I	3027	43 34.25N	070 33 55W	ME	Saco River	Union Falls		X							X			Same as 2722; POTW on upstream trib yet is Background site
I	3023	44 54 30N	069 55.50W	ME	Sandy Pond	North Anson		X										
I	3024	44.54 00N	069.15 15W	ME	Sebasticook E Br	Newport								X	X			Industrial WWTP
I	3025	44 49 40N	069.24 00W	ME	Sebasticook W Br	West Palmyra								X	X		X	Industrial WWTP
I	3152	44 24 42N	071.11 29W	NH	Androscoggin R	Berlin			X									James River Corporation
II	3426	40.35 45N	074 12 20W	NJ	Arthur Kill	Carteret								X				GAF Corp (chem manufacturing)
II	3429	39 34.30N	075 31 00W	NJ	Delaware River	Salem						X	X	X		X	X	Superfund site (several sites, metals & org chemicals)
II	3430	39.18 00N	074 37 30W	NJ	Great Egg Harbor			X							X		X	Background even though has agricultural area and POTW nearby
II	2651	39 36 00N	074 35 00W	NJ	Mullica River	Green Bank		X										Wooded area
II	3427	40 39.15N	074 09 16W	NJ	Newark Bay	Elizabeth							X	X		X		Landfill
II	2653	40 54 30N	074 12 00W	NJ	Passaic River	Paterson				X			X	X	X	X		Marcal Paper and P&P mill on trib , Ind metals, chem & pest , Superfund site (solvents)
II	3428	40 43 15N	074 07 15W	NJ	Passaic River	Newark								X		X		80 Lister Ave chem manufacturing
II	3433	40 32 24N	074 03 40W	NJ	Raritan Bay							X	X	X	X			P&P mill effluent into bay, Exxon Co , Ind chem , Superfund site (several sites, metals & org chem)
II	3434	40 27 00N	074 03 00W	NJ	Sandy Hook							X		X	X	X		Exxon Co
II	2654	39 57 30N	074 12 30W	NJ	Toms River								X	X	X		X	Ind chemical, Superfund site (chlorobenzene, Hg)
II	3304	43 59 30N	076 04 30W	NY	Black River Delta	Dexter				X				X	X		X	Five paper mills (PPNC), Air Brake Co , hydro-power, dairy fields
II	3296	42.51 45N	078 52 00W	NY	Buffalo Harbor	Buffalo								X		X		Ind chemical, steel, petrochemical, landfills
II	3298	42 52.00N	078.52.30W	NY	Buffalo River	Buffalo								X		X		Allied Chemical (manufacturer of HCB), landfills
II	3301	43 51.45N	078 43.00W	NY	Eighteen Mile Creek	Olcott								X			X	Ind : Harrison Radiator, chem (HCB), Ag · orchards and croplands
II	2326	42.13:00N	078.01.00W	NY	Genessee River	Belmont		X					X		X			Sampled below Belmont Dam. Superfund site is approximately 10 miles upstream (heavy metals, hydrocarbons)
II	3309	42.13 30N	078 02.00W	NY	Genessee River	Belmont		X							X			Same as 2326

TABLE D-1 (Cont.)

EPA Reg	Episode #	Latitude	Longitude	State	Waterbody	Location	NSQ	B	POINT SOURCES PPC	PPNC	WP	Rfny	NPL Site	Other Ind	POTW	NONPOINT Urban	Agri	Additional Site Description (Facilities in the vicinity of the sampling site)
II	3306	44.57·30N	074.49.00W	NY	Grass River	Massena								X				Sampled below ALCOA'S outfall (PCB concern), GM & Reynolds (2 miles below mouth of river)
II	3319	40 40.00N	073.20.00W	NY	Great South Bay	Babylon		X							X		X	Same as 3320
II	3320	40 45 45N	073:19.00W	NY	Great South Bay	Babylon		X							X		X	Same as 3319
II	2709	41 16 30N	073.57 00W	NY	Hudson River	Peekskill							X	X	X			Same as 3409, Ind . chem ; P&P mill 150 river miles upstream, Superfund site (PCB)
II	3259	43 08 00N	073.36 30W	NY	Hudson River	Fort Miller			X					X				Fort Miller Pulp and Paper (Finch, Pyruyn & Co.)
II	3409	41 30 00N	073.57 30W	NY	Hudson River	Peekskill							X	X	X			Same as 2709; Ind : chem.; P&P mill 150 river miles upstream, Superfund site (PCB)
II	3321	40 38 40N	073.50 40W	NY	Jamaica Bay	New York								X	X	X		Same as 3322, ind chem ; airport, landfill
II	3322	40 37 45N	073.47.00W	NY	Jamaica Bay	New York								X	X	X		Same as 3321, Ind chem , airport; landfill
II	3260	43 51 30N	073 22.00W	NY	Lake Champlain	Ticonderoga			X									International Paper Co
II	2328	43.20.25N	078.43 14W	NY	Lake Ontario	Olcott								X			X	Ag : apple orchards and croplands
II	2329	43 14 05N	077.32.03W	NY	Lake Ontario	Rochester								X			X	Ind . chem (Kodak), Site at the mouth of Genesee River
II	3323	40 48 00N	073 45·00W	NY	Little Neck Bay	Long Is Sound								X	X	X	X	Same as 3324
II	3324	40 47 00N	073:45 00W	NY	Little Neck Bay	Long Is Sound								X	X	X	X	Same as 3323
II	3325	40 49 00N	073.40 00W	NY	Manhassett Bay	Long Is Sound								X	X	X	X	Same as 3326
II	3326	40 50 10N	073.40 15W	NY	Manhassett Bay	Long Is Sound								X	X	X	X	Same as 3325
II	3300	43 15 30N	079 03 45W	NY	Niagara R Delta	Porter								X	X	X	X	Ind . chem , Olin, Dupont, Oxidental (HCB); Ag.: orchards, landfill
II	3297	43 03 00N	078 58 55W	NY	Niagara River	Niagara Falls								X	X	X		Ind · chem ; Olin, Dupont, Oxidental Chem (HCB), (companies downstream of site)
II	3299	43 02 00N	078 53.45W	NY	Niagara River	N. Tonawanda								X	X	X		Ind chemical
II	3302	43 02 30N	079.11 00W	NY	Niagara River	Lewiston								X	X	X	X	Ind . chem , Olin, Dupont, Oxidental (HCB), Ag.: orchards
II	3303	44.12 30N	075.00 00W	NY	Oswegatchie River	Newton Falls			X									Newton Falls Paper Mill (defunct since October 1984)
II	3412	43 28 00N	076 31 00W	NY	Oswego Harbor	Oswego								X				Ind Chemical
II	3305	44 58 30N	074.44 00W	NY	Raquette River	Massena				X				X	X			Potsdam Paper and Norfolk Paper (PPNC), ALCOA, GM, Reynolds (upstream of mouth)
II	2322	44 59 00N	073 20 00W	NY	Richelieu River	Rouses Pt	X								X			
II	3308	45 00 00N	073 21 00W	NY	Richelieu River	Rouses Pt	X								X			
II	3411	43 11 18N	077 37 30W	NY	Rochester Embay	Rochester								X				Ind chemical
II	3307	44 42 30N	075 28 30W	NY	St Lawrence River	Ogdensburg								X				Ponderosa Fibers (out of business more than 4 years), Dow chemical in Canada
II	3327	40 38 20N	074 02 15W	NY	Upper Bay	New York								X	X	X		Sampled at 69th Street Pier
II	3432	17 59 40N	066 46 25W	PR	Guayanilla Bay									X	X			
II	3431	18 26 40N	066 06 30W	PR	San Juan Harbor	San Juan						X		X	X			Caribbean Gulf Refining Corp , landfill
III	2210	38 52 20N	077 02 15W	DC	E Potomac River	DC								X	X	X	X	
III	3147	38 52 30N	077 02.30W	DC	Potomic River Park	N of Wilson Br.								X	X	X	X	
III	3099	38.35 00N	075 12 00W	DE	Indian River	Rosedale Beach											X	Estuary
III	3098	39.48 08N	075 34 44W	DE	Red Clay Creek	Ashland							X	X			X	Ind.: metal plating, mining; illegal dump (landfill), Ag · mushroom farming
III	3097	39.35 40N	075:37.50W	DE	Red Lion Creek	Tybouts Corner							X					Chemical spill (HCB concern); Superfund site (HCB)
III	3149	39.43 58N	075 45.37W	DE	White Clay Creek	Thompson								X				
III	3100	39 15 36N	076 31:30W	MD	Baltimore Harbor	Baltimore								X	X	X		
III	3317	39·28 00N	079·01:00W	MD	Potomac R N. Br.	Westernport			X						X			Westvaco (indirect); rural

TABLE D-1 (Cont.)

EPA Reg	Episode #	Latitude	Longitude	State	Waterbody	Location	NSQ	B	POINT SOURCES PPC	PPNC	WP	Rfny	NPL Site	Other Ind	POTW	NONPOINT Urban	Agri	Additional Site Description (Facilities in the vicinity of the sampling site)
III	2231	39:39 31N	076 10:28W	MD	Susquehanna River	Conowingo								X	X			Same as 3103
III	3103	39.38.00N	076 10 00W	MD	Susquehanna River	Conowingo								X	X			Same as 2231
III	3316	41 25 20N	078.44:10W	PA	Clarion River	Ridgeway			X									Pentech Papers in Johnsonburg, rural, acid mine drainage
III	3161	39 56.30N	074.14 35W	PA	Cobb Creek	Philadelphia							X	X		X		Old PCP plant (defunct for more than 5 years), landfill
III	3420	39 53 42N	076.49.09W	PA	Codorus Creek	Spring Grove			X									P.H Gladtfelder in Spring Grove
III	3094	40 02.24N	074 59 20W	PA	Delaware River	Torresdale								X	X	X		
III	3095	39 53 00N	075 11.46W	PA	Delaware River	Schuylkill Jnct						X		X	X	X		Coastal Eagle Point Oil Co in NJ, Inorganic chem
III	3096	39.50.12N	075 20 00W	PA	Delaware River	Eddystone						X		X	X	X	X	Mobil Oil in NJ, Ind chem; multiple sources; Ag. croplands (trucking of vegetables)
III	3318	40.23 20N	078 24 20W	PA	Frankstown Branch	Kladder Station			X									Appleton Paper on the Juniata River (Holter Creek)
III	3419	42 09 25N	080.02.57W	PA	Lake Erie	Erie			X					X	X	X		Hammermill Paper (indirect), railyard, food processing plant
III	3310	40 39.40N	075 14 35W	PA	Lehigh River	Easton								X	X	X		Steel industry
III	3101	40 03.40N	075 28 23W	PA	Little Valley Creek	Paoli								X			X	Paoli Railyard (historic PCB problems)
III	2215	40 17:30N	079 52 33W	PA	Monongahela River	Clairton								X	X	X		Ind.. inorganic chem. and pest
III	2212	39.58 00N	075 11.20W	PA	Schuylkill River	Philadelphia	X					X	X	X	X	X		Same as 3104, two refineries; Ind. org chem & pest; P&P mill, Superfund site (PCP)
III	3104	39 58 22N	075 11.33W	PA	Schuylkill River	Philadelphia	X					X	X	X	X	X		Same as 2212, two refineries; Ind · org chem & pest, P&P mill, Superfund site (PCP)
III	3415	41 18 50N	075 48 00W	PA	Susquehanna N Br	Ransom							X					Superfund site (heavy metals)
III	2211	40 03 00N	076 30 00W	PA	Susquehanna River	Columbia			X					X	X			Gladtfelder (bleachkraft) 20 miles upstream on tributary
III	3414	41 18.50N	075 48.45W	PA	Susquehanna River	Pittston							X					Superfund site (heavy metals), acid mine drainage
III	3315	40 21.00N	076 23 00W	PA	Union Canal	Lebanon								X				Pesticide concern
III	2216	41 33 22N	077 41.28W	PA	Young Womens Cr	Renovo		X										
III	3422	36 33 10N	076 54 57W	VA	Blackwater River	Riverdale			X									Union Camp Corporation in Franklin
III	3421	37 47 15N	080 00 06W	VA	Jackson River	Covington			X									Westvaco Corporation
III	2225	37 35 00N	079 25.00W	VA	James River	Glasgow								X	X		X	Light agriculture, rural
III	2228	37 40 15N	078 05 10W	VA	James River	Cartersville	X		X	X					X		X	Westvaco (PPC), Virginia Fibers and Nekoosa Edwards (PPNC)
III	2227	36 46 13N	077 09 59W	VA	Nottoway River	Sebrell								X	X			Union Camp is 20 miles downstream of sampling site
III	2220	37 46 03N	077 19 57W	VA	Pamunkey River	Hanover	X							X	X			Upstream from the Cheasepeake Corporation
III	3423	37 31 55N	076 48 40W	VA	Pamunkey River	West Point			X									Cheasepeake Corporation (upstream of site)
III	3424	37 32 01N	076 50 38W	VA	Pamunkey River	West Point			X									Cheasepeake Corporation (downstream of site)
III	3193	37 01 45N	078 55 40W	VA	Roanoke River	Brookneal											X	Rural
III	3258	36 49 48N	076 17 30W	VA	S Br Elizabeth R	Norfolk								X		X		
III	2500	38 27.00N	081 49 00W	WV	Kanawha River	Nitro								X	X	X	X	Ind pesticides, trichlorophenol, and organic chemicals (Dow and Monsanto), rural
III	3314	38 31 30N	081 54 37W	WV	Kanawha River	Winfield								X	X	X	X	Ind pesticides (Monsanto), rural
III	3311	39 40.00N	080:51 52W	WV	Ohio River	Nw Martinsvle								X	X	X		
III	3312	40 09:10N	080.42 25W	WV	Ohio River	Wheeling						X		X	X	X		Quaker State Oil Refining, steel industries, urban runoff
III	3313	39 31 10N	077.52.30W	WV	Opequon Creek	Bedington								X		X	X	Ag orchards, rural
IV	2304	31:32.48N	089 30 45W	AL	Alabama River	Clairborne			X						X			Alabama River Pulp Company
IV	2309	32.24:41N	086.24 30W	AL	Alabama River	Montgomery	X							X	X	X	X	Ind. organic chem. & pest, Fence-post company; Ag croplands

TABLE D-1 (Cont.)

EPA Reg	Episode #	Latitude	Longitude	State	Waterbody	Location	NSQ	B	POINT SOURCES PPC	PPNC	WP	Rfny	NPL Site	Other Ind	POTW	NONPOINT Urban	Agri	Additional Site Description (Facilities in the vicinity of the sampling site)
IV	3360	32.07.55N	085:03.43W	AL	Chattahoochee	Cottonton				X								Alabama Kraft in AL (goes into GA water but on AL side)
IV	3170	31·29 40N	085:22 06W	AL	Choctawhatchee R.	Henry Co.											X	
IV	2302	31 04 01N	087:02.40W	AL	Conecuh River	E. Brewton			X									Container Corporation
IV	3172	34·12 07N	085:26 45W	AL	Coosa River	State line								X				
IV	3328	33.17.24N	086:21 42W	AL	Coosa River	Coosa Pines			X								X	Kimberly Clark; wooded area, Ag croplands and grazing fields
IV	3137	31 01 02N	085:13·24W	AL	Cowarts Creek	Houston Co											X	
IV	3169	33.50 15N	086 31 46W	AL	Inland Lake	Blount Co		X										
IV	3168	30 52.30N	087:57.48W	AL	Mobile River	near Cold Cr								X	X	X	X	Several chem & pest plants, Hydro-power
IV	3331	30.50.00N	086:50 00W	FL	11 Mile Creek	Perdido Bay			X								X	Champion International Corp. in Cantonment; rural; swampland; Ag croplands
IV	3332	30 38 52N	081 29 28W	FL	Amelia River	Fernandina Bch			X									ITT Rayonier, Inc.
IV	2151	30.23.04N	085.33 24W	FL	Econfina Creek	Panama City	X											
IV	3329	30 01 00N	083:46 00W	FL	Fenholloway River	Perry			X								X	Buckeye Cellulose; rural; swampland, Ag : grazing fields
IV	3334	29 50 31N	085.17.59W	FL	Gulf Co Canal	St. Joe			X						X	X		St. Joe Paper (indirect)
IV	3174	27.12.18N	080 47 28W	FL	Lake Okeechobee	Okeechobee								X				
IV	2148	27.38 54N	080 24 10W	FL	Main Canal	Vero Beach	X									X		Collected below salinity structure
IV	3333	30 07.38N	085.39.25W	FL	St. Andrew Bay	Panama City			X						X			Southwest Forest Ind., Inc (indirect) (Stone Container Corp)
IV	2142	29 38 48N	081 37.32W	FL	St. Johns River	Palatka			X						X		X	Georgia Pacific Corporation
IV	3173	30 00 00N	081 40 00W	FL	St. Johns River	Green Cv Spr										X		Wood treatment plant
IV	2152	30 21:30N	082 04 54W	FL	St. Mary's River	Macelenny	X								X			
IV	3330	30 28 00N	083 15 00W	FL	Withlacooche River	Blue Spring				X								
IV	3337	31:39.10N	081.49.00W	GA	Altamaha River	Jesup			X								X	ITT Rayonier, Inc.: swampland, Ag.: croplands
IV	3177	34 26 00N	083 40 30W	GA	Chattahoochee R	Gainesville		X						X	X		X	Town of Schoville: heavy metals, wood products, Ag : chicken farms and orchards
IV	3375	33 39 24N	084 40.25W	GA	Chattahoochee R.	Austell				X					X			Box Board on Hwy 92
IV	3376	33 28 37N	084·54 04W	GA	Chattahoochee R	Whitesburg				X								
IV	3377	33 16 45N	085 06 00W	GA	Chattahoochee R	Franklin				X								
IV	3378	31 08.00N	085 04 00W	GA	Chattahoochee R	Donaldsonville				X					X			Great Southern Pacific Paper Company
IV	3178	34 55.00N	083 10.00W	GA	Chattooga River	Clayton		X										
IV	3179	34.27.00N	083 57 30W	GA	Chestatee River	above L Lanier		X							X		X	Mining: gold, sand, and gravel, Ag · orchards, dairy farms & chicken houses
IV	2294	32 01 20N	083 56 30W	GA	Flint River	L Blackshear			X									Procter & Gamble (Buckeye Cellulose)
IV	3176	30 52 00N	084.36 00W	GA	Lake Seminole					X				X			X	Great Southern Pacific Paper Company
IV	3336	30 43·37N	081:32.00W	GA	North River (mouth)	St. Marys			X									Gilman Paper Company
IV	2290	33 22.25N	081.56.35W	GA	Savannah River	Augusta			X					X		X		Federal Paperboard in Pond, Georgia Pacific, Ind pest
IV	3175	32 10.30N	081:08:50W	GA	Savannah River	Savannah			X			X		X	X	X		Fort Howard Paper (PPC), Union Camp and Stone Container Corp (PPNC); Nuclear power
IV	3338	33 22.00N	081:56 00W	GA	Savannah River	Augusta				X				X	X	X		Ponderosa Fibers (indirect)
IV	3180	31.18 00N	084 45.00W	GA	Spring Creek	Early County											X	
IV	3335	31·08 15N	081.31.35W	GA	Turtle R. (mouth)	S Brunswick R			X									Brunswick Paper & Pulp on the Turtle R , marshland, wooded area, Ag grazing fields

TABLE D-1 (Cont.)

EPA Reg	Episode #	Latitude	Longitude	State	Waterbody	Location	NSQ	B	POINT SOURCES PPC	PPNC	WP	Rfny	NPL Site	Other Ind	POTW	NONPOINT Urban	Agri	Additional Site Description (Facilities in the vicinity of the sampling site)
IV	3183	38 24·22N	082:35:52W	KY	Big Sandy	Cattletsburg						X		X	X			Ashland Oil Inc.; Ind.: chem,. iron and steel; coal mining, timber
IV	3339	36.55.41N	089:05 52W	KY	Mississippi River	Wickliffe			X								X	Westvaco Corporation, Ag.: croplands
IV	3182	36 55 27N	086:52:47W	KY	Mud River	Russellville								X	X		X	Ind : metal plating; rendering plant; Ag : croplands
IV	2056	38 00.30N	085:56·30W	KY	Ohio River	West Point							X	X	X	X	X	Same as 3181, Ind.: chem. & pest , refinery; Ag.: crops; Superfund site (PCB's; solvents; dioxins & furans)
IV	2341	38 46 29N	084:57.52W	KY	Ohio River	Markland			X						X	X	X	Williamette Industries; multiple sources; rural
IV	3181	38.00.30N	085:56:30W	KY	Ohio River	Westpoint							X	X	X	X	X	Same as 2056; Ind.: chem. & pest., refinery; Ag.: crops; Superfund site (PCB's; solvents; dioxins & furans)
IV	3446	38 24 22N	082.35.52W	KY	Sandy River	Catlettsburg						X	X	X				Ashland Oil refinery; coal mining
IV	3185	30 25 00N	089.04.00W	MS	Bernard Bayou	Gulfport							X	X		X		Ind.: chem ; wood treatment; (gas recovery) refinery; rural, Superfund site (solvents)
IV	2126	32.20 51N	090:51.48W	MS	Big Black River	Bovina	X								X		X	Ag : soybeans and cotton
IV	3445	30.19:32N	088.31:00W	MS	Chevron Effluent	Pascagoula			X			X		X		X		Chevron refinery; International Paper, shipyard; fertilizer company
IV	3341	30 25:20N	088:31:10W	MS	Escatawpa River	Moss Point			X									International Paper Company
IV	3340	31.13.28N	089 02.50W	MS	Leaf River	New Augusta			X									Leaf River Forest Products
IV	3435	31 25 00N	091:30.00W	MS	Mississippi River	Natchez			X									International Paper Company
IV	2133	32 29.14N	090 49:02W	MS	Yazoo River	Redwood				X				X			X	Same as 3184, Ind.: paper; fertilizer plant
IV	3184	32·28·00N	090 49.00W	MS	Yazoo River	Redwood				X							X	Same as 2133, Ind : paper; fertilizer plant
IV	3344	34.23:50N	078.10.30W	NC	Cape Fear River	Riegelwood			X						X		X	Federal Paper Board; rural; swampland; wooded area, Ag . croplands
IV	2139	35.40 02N	093:04.23W	NC	Cattaloochee Creek	Cattaloochee		X										Champion Paper (PPC-indirect source); wooded area
IV	3165	34.43 50N	079 39 24W	NC	Deep River	Ramseur Dam								X		X	X	
IV	3345	35.15 06N	082 40·45W	NC	French Broad River	Pisgah Forest			X						X		X	Ecusta (sulfite mill using chlorine), rural, wooded area, Ag : croplands
IV	3164	35.56 45N	079.19.20W	NC	Haw River	Saxapahaw								X	X		X	Ind : textiles; rural, Ag.: croplands
IV	3342	34.36:30N	078.59.00W	NC	Lumber River	Lumberton			X									Alpha Cellulose (sulfite mill using chlorine)
IV	3167	35 50.35N	078.50.20W	NC	Medlins Pond	Morrisville							X	X				Koppers Company (wood treat.), Superfund site - wood treat (PCP)
IV	3166	35 08 00N	083:38 15W	NC	Nanthalia River	Macon Co.		X										
IV	2138	35.15.29N	077.35.09W	NC	Neuse River	Kinston			X									Weyerhaeuser Company
IV	3395	35 11:56N	077 06 45W	NC	Neuse River	New Bern			X									Weyerhaeuser Company
IV	3343	35 32 05N	082.54 40W	NC	Pigeon River	Clyde			X						X		X	Champion International in Canton, rural, wooded area, Ag : croplands
IV	3346	35 51.55N	076.45.40W	NC	Roanoke River	Plymouth			X								X	Weyerhaeuser Company on Welch Creek; rural; wooded area; Ag : croplands
IV	3385	35.59 25N	081 31·32W	NC	Yadkin River	Patterson				X				X				Sealed Air Corporation (makes absorbant paper for meat trays)
IV	3347	34·42:30N	080:51:50W	SC	Catawba River	Catawba			X								X	Bowater Carolina; rural; wooded area, Ag : croplands
IV	3186	32 45·50N	079 53 10W	SC	Charleston Harbor	Charleston			X	X				X		X		Westvaco Paper and Pulp; Amoco chemical plant
IV	3348	33 21:24N	079 18 34W	SC	Sampit River	Georgetown			X									International Paper Company; rural, wooded area, Ag . croplands
IV	3187	32 29 46N	080 31 33W	SC	St Helena Sound			X									X	
IV	3349	33.51:08N	080:37.32W	SC	Wateree River	Eastover			X								X	Union Camp Corporation; rural; wooded area, Ag : croplands
IV	2301	35.29·45N	087 49 58W	TN	Buffalo River	Flatwoods		X									X	
IV	3189	35.55.37N	084·58·18W	TN	Ft Loudon Res									X		X		Ind.: aluminum
IV	2298	35:16:31N	088.58.36W	TN	Hatchie River	Bolivar	X											
IV	3350	35:19:08N	084.48.13W	TN	Hiwasee River	Calhoun			X								X	Bowater South Paper Company; rural; wooded area; Ag ; croplands
IV	2297	36:00:56N	083 49 54W	TN	Holston River	Knoxville			X					X	X			Industry: metals

TABLE D-1 (Cont.)

EPA Reg	Episode #	Latitude	Longitude	State	Waterbody	Location	NSQ	B	POINT SOURCES PPC	PPNC	WP	Rfny	NPL Site	Other Ind	POTW	NONPOINT Urban	Agri	Additional Site Description (Facilities in the vicinity of the sampling site)
IV	3403	36:33:02N	082.35:00W	TN	Holston R., S Fork	Kingsport			X									Mead Corporation (Chlorine Dioxide process)
IV	3444	35.05:15N	090.05.30W	TN	Mississippi River	Nonconnah Cr.						X		X	X	X		Mapco, Exxon, Union refineries; cement factory; soybean processing
IV	3188	35 03 54N	085 20.28W	TN	Nickajack Reservoir									X	X	X		Ind., chem., coke, rendering; railyards; landfill
IV	3404	36.01.20N	083 12·00W	TN	Pigeon River	Newport			X								X	Champion International in North Carolina
IV	3351	35:56 24N	083·10.52W	TN	Pigeon River	Newport			X								X	Champion International in North Carolina
IV	3190	35.50.15N	084 04·13W	TN	Tennessee River	Knoxville								X		X		
IV	3401	35.03.54N	086:16:39W	TN	Tennessee River	Hardin Co.				X								Tennesee River Pulp and Paper in Counce, TN
V	2379	37.37.31N	089.25:42W	IL	Big Muddy River	Grand Tower		X							X		X	
V	2383	41 35 47N	088.04:07W	IL	Des Plaines River	Lockport						X		X	X	X		Ind ; organic chem. & pest.; Refineries (downstream); steel; incinerator
V	3113	41.52 13N	088.18 31W	IL	Fox River	Geneva								X	X	X	X	
V	2380	41:19 40N	088.45:10W	IL	Illinois River	Marseilles						X		X	X	X	X	Ind.; chem. & pest.; Union oil, Texaco, Mobil; Ammunition plant
V	3114	39.43.00N	091:31.04W	IL	Mississippi River	Quincy				X					X		X	Celotex Corporation (deinking)
V	3115	38 32:30N	090·15:00W	IL	Monsanto Effluent	East St Louis								X	X			Six chemical/pharmaceutical plants (paradichlorobenzene)
V	3117	42.21:10N	087 49 40W	IL	Lake Michigan	Waukegan							X	X		X		Open lake sample; Superfund site (PCB) at Waukegan Harbor
V	2059	41:37.10N	087.29:15W	IN	Indiana Harbor Can	East Chicago						X	X	X	X	X		Same as 2059; Amoco Oil; Ind : primarily steel; wastewater; Superfund site (PCB)
V	3356	41·37.10N	087:29 15W	IN	Indiana Harbor Can	East Chicago						X	X	X	X	X		Same as 3356; Amoco Oil; Ind.: primarily steel; wastewater; Superfund site (PCB)
V	2060	38 07 50N	087.56.20W	IN	Wabash River	New Harmony								X	X		X	Ind : chem. & pest.; coal mining; (site at the mouth of the Wabash R)
V	2057	38.30.45N	087.17.30W	IN	White River	Petersburg								X	X	X	X	Hydro-power; coal mining
V	3119	42:33 00N	085.54:00W	MI	Allegan Lake	Allegan				X			X					Historical PCB contaminaton from paper deinking; Superfund site (PCB)
V	3118	45.50.00N	087 05 00W	MI	Escanaba River	Escanaba			X									Mead Corporation (historical PCB contamination)
V	1994	43.03 00N	083 48·45W	MI	Flint River	Flushing								X	X	X		Automobile manufacturing (heavy metals and oils)
V	3120	42 39.00N	082:10.00W	MI	Kalamazoo River	Saugatuck								X				Historical PCB contamination site is downstream of Kalamazoo
V	3122	45:47 00N	087.59.00W	MI	Menominee River	Quinnesec			X									Champion International Corporation
V	1998	43.15.O5N	086.14 55W	MI	Muskegon Lake	Muskegon			X				X	X	X		X	Scott Paper (indirect); Power & chem plant, Ag · orch.; same as 3148, Superfund site (PCB)
V	3148	43.15.05N	086.14.55W	MI	Muskegon Lake	Muskegon			X				X	X	X		X	Scott Paper (indirect); Power & chem. plant; Ag . orch ; same as 1998, Superfund site (PCB)
V	2432	43.19 57N	086·08 42W	MI	Muskegon River	Bridgton	X								X			Far upstream of bleachkraft (Scott Paper Company)
V	2410	42.16.45N	083:07.20W	MI	Rouge River	River Rouge								X	X	X		Ind . heavy steel, chem.; automobile (PCB's in effluent)
V	2431	46:29 45N	084.22.25W	MI	St Marys River	Sault St Marie	X			X				X	X			St Mary's Paper; Algoma Steel, dredging
V	2430	46:34.30N	085.15.10W	MI	Tahquamenon R	Paradise	X											
V	2435	47:55 23N	089.08.42W	MI	Washington Creek	Isle Royale		X										Canadian Bleach Kraft P&P mill about 30 miles upwind in Thunder Bay, Ont
V	2387	44·16 08N	093.21 05W	MN	Cannon Lake	Fairbault		X							X		X	
V	3112	45:58:17N	094·22.05W	MN	Mississippi River	Little Falls				X								Hennepin Paper
V	3125	44:33.34N	092.25.47W	MN	Mississippi River	Red Wing						X		X	X	X	X	Ashland Oil/Koch Refining; urban runoff, historical PCB contamination
V	2385	48:36·29N	093·24 13W	MN	Rainy River	Intern'l Falls			X						X	X		Boise Cascade on both sides of the river
V	3001	48·35 29N	092.53:34W	MN	Rainy River	Intern'l Falls		X							X			Site is above the dam. Boise Cascade outfall is below dam
V	2416	41.29:50N	081.42 10W	OH	Cuyahoga River	Cleveland								X	X	X		Ind. chem ; oil,
V	2394	39:33.44N	084:18.19W	OH	Great Miami River	Franklin				X				X	X			Appleton Papers and Miami Papers (deinking); Ind . metals and others
V	2439	39:15:53N	084.40:30W	OH	Great Miami River	Nw. Baltimore	X			X			X		X		X	Sorg P&P mill (deinking); Proctor and Gamble, Ag runoff, Superfund site

TABLE D-1 (Cont.)

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V	2618	39.24 40N	084:33:14W	OH	Hamilton Canal	Hamilton				X			X				X	Canal off G Miami R ; Appleton Paper; Aviation plant; steel; hydro-power; Superfund site
V	3132	39.17 36N	083.55 48W	OH	Scioto River	Chillicothe			X				X	X				Mead Corporation on Paint Creek; Ind . inorg chem & pest , Superfund site
V	3135	44.49 39N	091 30.38W	WI	Chippewa River	Eau Claire				X								Pope and Talbot (deinking)
V	3136	45 24 05N	091.13.18W	WI	Flambeau River	E Ladysmith				X								Pope and Talbot (deinking)
V	3137	45:55.00N	090 26·41W	WI	Flambeau River	Park Falls				X					X		X	Flambeau Paper, Ag croplands and grazing fields
V	2429	44 27.39N	088.03:30W	WI	Fox River	DePere Dam			X					X	X	X		Fort Howard, James River, Green Bay Pkg , Nicolet Paper, Champion
V	3138	44 16.10N	088.22 18W	WI	Fox River	Appleton				X					X			Kerwin Paper Company (deinking), Gladtfelder, WI Tissue, Kimberly Clark
V	3140	44 13 24N	088 27 34W	WI	Fox River	Lk ButteD Morts				X								Gladtfelder, WI Tissue Mills, Kerwin Paper (historical PCB contamination)
V	3143	44·00 43N	088·31 00W	WI	Fox River	Oshkosh				X								Ponderosa (deinking)
V	3144	43.32·17N	089:27 36W	WI	Fox River, upper	Portage								X	X		X	Historical PCB contamination
V	2422	46·30.21N	090:52.30W	WI	Lake Superior	Ashland			X									James River-Dixie Northern (deinking), rural
V	3134	44.01 58N	088.08·45W	WI	Manitowoc River	Chilton								X	X		X	Incinerator, H2O softener plant, Ag : croplands
V	3141	40 03 26N	087 53.54W	WI	Milwaukee River	Milwaukee								X	X	X		Ind : metals (historical PCB contamination); 300-400 Industrial discharges
V	2427	45 03 16N	087.44 50W	WI	Peshtigo R Harbor	Peshtigo			X						X			Badger Paper Mills, (indirect)
V	3142	43 43.51N	087 47 04W	WI	Sheboygan River	Kohler							X	X				Superfund site (historical PCB contamination)
V	3110	44 58.00N	092 46.00W	WI	St Croix River	Hudson					X							Anderson Windows; wood treatment plant
V	2397	45 37 27N	089 25 14W	WI	Wisc R/Boom Lake	Rhinelander		X										Upstream of paper mills
V	2608	44·16 00N	089 53 00W	WI	Wisconsin River	U Pentenwell Fl			X					X	X		X	Nekoosa, Fort Edwards, Consolidated Kraft, Vulcan mat (rubber & plastic), same as 3106
V	3106	44 16 00N	089.53 00W	WI	Wisconsin River	U Pentenwell Fl			X					X	X		X	Nekoosa, Fort Edwards, Consolidated Kraft, Vulcan mat (rubber & plastic), same as 2608
V	3107	45.01 20N	089 39 09W	WI	Wisconsin River	Brokaw			X									Wausau Paper (sulfite mill)
V	3108	45.10 31N	089.40 00W	WI	Wisconsin River	Merrill				X								Ward Paper (deinking)
V	3109	44 56 57N	089 37.45W	WI	Wisconsin River	Wausau					X			X				Wood treatment plant site is between paper mills
V	3145	45 26 17N	088 43.56W	WI	Wisconsin River	Mohawskin				X								Rhinelander Paper Company
V	3146	44 52 57N	089.38 17W	WI	Wisconsin River	Rothschild			X								X	Weyerhaeuser, half dozen small mills, Ag croplands
VI	2023	35 20.56N	094 17.54W	AR	Arkansas River	Van Buren	X							X	X			
VI	3060	34.26 41N	092 06.38W	AR	Arkansas River	Little Rock								X	X		X	
VI	3062	34.10.09N	091.43 56W	AR	Arkansas River	Pine Bluff			X						X		X	International Paper Company, wooded area, Ag croplands
VI	3061	33 11 18N	092 41 53W	AR	Bayou DeLoutre	El Dorado						X		X		X		Lion Oil Company
VI	3078	34 50.39N	092 07.20W	AR	Bayou Meto	Jacksonville							X					Superfund site (dioxins), rural, wooded area
VI	3443	34 09 00N	091 31 00W	AR	Bayou Meto	Reydell								X	X		X	Downstream about 30 miles of the Jacksonville site (3078)
VI	2015	33 33 27N	091 14 15W	AR	Mississippi River	Arkansas City	X		X								X	Potlatch Corporation, Ag croplands
VI	2018	35 59 43N	092 12 45W	AR	N Sylamore Creek	Fifty Six		X										Same as 3073
VI	3073	35 56 33N	092 07.05W	AR	N Sylamore Creek	Fifty Six		X										Same as 2018
VI	2016	33 33 07N	094 02.28W	AR	Red River	Index	X		X						X		X	Nekoosa Edwards Paper Company
VI	3452	34 15 00N	094.06 00W	AR	Red River	Index			X					X			X	Nekoosa Paper; lime and gravel mines, Ag crop and grazing lands
VI	3077	33 57.17N	094.21:49W	AR	Rolling Fork River	De Queen					X						X	Wood treatment plant on Bear Creek
VI	2017	33.14 32N	093.59:58W	AR	Sulphur River	Texarkana	X		X									International Paper Company in Texas
VI	3088	30.53 00N	093.25·00W	LA	Anacoco Bayou	Deridder			X								X	Boise Southern Co (Boise Cascade), rural, Ag . cropland
VI	3083	32 40 00N	091 43.00W	LA	Bayou Bonne Idee	Oak Ridge											X	HCB use in agriculture

TABLE D-1 (Cont.)

EPA Reg	Episode #	Latitude	Longitude	State	Waterbody	Location	NSQ	B	POINT SOURCES PPC	PPNC	WP	Rfny	NPL Site	Other Ind	POTW	NONPOINT Urban	Agri	Additional Site Description (Facilities in the vicinity of the sampling site)
VI	3086	30:12.00N	093:17:00W	LA	Bayou D'Inde	Sulfur						X					X	Citgo Petroleum Corporation, Ind.: chem
VI	3442	30:02.36N	090:22:27W	LA	Bayou Labarche	Norco						X		X				Shell and Norco Refineries; Shell chemical plant
VI	3353	32 31 00N	091.54:00W	LA	Bayou LaFourche	Bastrop			X						X		X	International Paper Company; rural
VI	3063	30 06 00N	093.20.00W	LA	Calcasieu River	Moss Lake						X		X	X	X		Conoco, Inc.; Ind : chem.
VI	3092	32:05.00N	092.47:00W	LA	Dugdemona River	Hodge				X							X	
VI	3352	32:33 00N	091·51:00W	LA	Lake Irwin	Start											X	Above Bayou LaFourche This dammed water feeds Wham Brake.
VI	3064	30 02.00N	090.02.00W	LA	Lake Pontchartrian	New Orleans								X	X	X		
VI	3082	32.49 00N	091.11:00W	LA	Lake Providence												X	HCB use in agriculture
VI	2532	30 45:30N	091:23·45W	LA	Mississippi River	St Francisville			X									Crown Zellerbach
VI	3065	30 27 00N	091:13.00W	LA	Mississippi River	Baton Rouge			X			X		X		X		Georgia Pacific Corporation, Crown Zellerbach; two refineries
VI	3066	30 06 00N	091:01.00W	LA	Mississippi River	Union								X			X	Ind : multiple sources; Ag : cropland and grazing
VI	3418	30.39 00N	091:17.00W	LA	Mississippi River	Zachary			X									Georgia Pacific and James Madison Paper; rural; wooded area
VI	3416	33.00 00N	092:04.00W	LA	Ouachita River	Sterlington			X									Georgia Pacific and International Paper; rural; wooded area
VI	3080	32:27 00N	092·07:00W	LA	Ouachita River	Monroe			X						X	X	X	Georgia Pacific in Arkansas; Ag · crop and grazing lands
VI	2544	30.30.23N	090.21:42W	LA	Tangipahoe River	Robert	X								X			
VI	3087	32 35 00N	091:56 00W	LA	Wham Brake	Swartz			X									Same as 3452, International Paper Co. (discharges to B. LaFourche)
VI	3425	32·33.00N	091:55.00W	LA	Wham Brake	Swartz			X									Same as 3087, International Paper Co. (discharges to B. LaFourche)
VI	3074	35.46 38N	105.39.27W	NM	Rio Mora	Terrero		X										
VI	3105	35 13 42N	098 31.35W	OK	Fort Cobb Reservoir	Fort Cobb											X	Ag : croplands, golf course near the site
VI	3090	36 04 00N	095.16.00W	OK	Fort Gibson Res	Pyrer Creek				X								Robell Tissue Mills
VI	3079	36 52 00N	096.56:00W	OK	Kaw Reservoir									X				Vulcan Plant in Wichita, Kansas (chemical processing plant)
VI	2027	34 38 18N	094.36 45W	OK	Kiamichi River	Big Cedar		X									X	Heavily wooded area; Ag : cattle
VI	3076	33·57 00N	094 35 00W	OK	Little River	Goodwater												Wood treatment: Thompson Lumber, Hoffman Preserver, Nixon Bros Preserver
VI	3091	33 56·00N	095 07 00W	OK	Red River					X								Weyerhaeuser Company
VI	2026	34 14 03N	096.58.32W	OK	Washita River	Durwood	X					X			X			Kerr McGee Refining Corporation, Total Petroleum, Inc.
VI	3089	35 41 00N	095·14 00W	OK	Webbers Falls	Muskogee				X					X			Fort Howard Paper Company
VI	3084	26 11 42N	097.36.06W	TX	Arroyo Colorado	Harlingen											X	HCB use
VI	3085	28 58 59N	095.23 41W	TX	Brazos River	Freeport								X				At Dow Chemical outfall
VI	3068	29 40·48N	094 58.50W	TX	Houston Ship Chnl	Morgan Point			X			X		X	X	X		Champion International and Simpson Paper; four refineries, Ag , croplands
VI	3069	27.50 30N	097.30 20W	TX	Inner Harbor	Corpus Christi						X		X	X	X		Four refineries
VI	3081	31:25.58N	094 33 56W	TX	Lake Sam Rayburn	Lufkin			X						X			Champion International Corporation on the Angelina River
VI	2280	28 57.35N	096 41.13W	TX	Lavaca River	Edna	X										X	
VI	3075	28·09.00N	096·52 00W	TX	Mesquite Bay			X										
VI	3093	31 08 00N	094 48 39W	TX	Neches River	Diboll				X					X			Temple-Eastex, Inc in Diboll and Borden Chemical (resin)
VI	3070	29 59 30N	093 54 00W	TX	Neches River (tidal)	Port Arthur			X			X		X				Temple-Eastex, Inc in Silsbee, TX, two refineries, Ind.: chem & pest
VI	3072	31:05:00N	105.36 00W	TX	Rio Grande River	El Paso						X		X		X		Chevron USA, Inc , El Paso Refining Company
VI	3071	29:14.15N	098.21.43W	TX	San Antonio River	San Antonio						X		X	X	X	X	Howell Hydrocarbons
VI	2283	30.54.41N	098.02.12W	TX	So Fork Rocky Cr.	Briggs		X										Background site
VII	3035	42.03 54N	091 47:48W	IA	Cedar River	Palo								X		X	X	About 50 miles downstream of Waterloo
VII	3037	41.40 57N	093 40 08W	IA	Des Moines River	Des Moines		X						X	X	X		Upstream about 10 miles from a POTW
VII	3038	41 33.02N	093.31 29W	IA	Des Moines River	Des Moines								X	X	X		Below POTW (pretreatment plant)
VII	3034	41.34:53N	090.23.23W	IA	Mississippi River	Le Claire								X		X	X	Upstream of lock and dam at Davenport (above dam)

TABLE D-1 (Cont.)

EPA Reg	Episode #	Latitude	Longitude	State	Waterbody	Location	NSQ	B	POINT SOURCES PPC	PPNC	WP	Rfny	NPL Site	Other Ind	POTW	NONPOINT Urban	Agri	Additional Sites Description (Facilities in the vicinity of the sampling site)
VII	2191	41.15 32N	095 55.20W	IA	Missouri River	Council Bluffs	X							X	X	X		Ind: chem and pest; metals, hydro-power, same as 3042-opposite sides of river
VII	2190	40 36 07N	095.38 44W	IA	Nishnabotna River	Hamburg	X								X		X	Same as 3036
VII	3036	40 36 07N	095.38 44W	IA	Nishnabotna River	Hamburg	X								X		X	Same as 2190
VII	2194	37 32.34N	097 16 29W	KS	Arkansas River	Derby								X	X	X		Same as 3039. Below Wichita
VII	3039	37 32 35N	097 16 29W	KS	Arkansas River	Derby								X	X	X		Same as 2194. Below Wichita
VII	2201	36 02 30N	090 07 30W	MO	Little River Ditch 81	Hornersville								X	X		X	Same as 3040. Rice growing region
VII	3040	36 02 30N	090.07 30W	MO	Little River Ditch 81	Hornersville								X	X		X	Same as 2201 Rice growing region, heavy pesticide use
VII	3047	39 42.36N	091·21 06W	MO	Mississippi River	Hannibal								X	X	X	X	Fish collected near downtown area
VII	3048	38 52.33N	090 10.26W	MO	Mississippi River	West Alton								X	X	X		Ind: chem.; heavy metals; heavy shipping traffic
VII	3049	37 17 46N	089 30 56W	MO	Mississippi River	Cape Giradeau								X	X	X	X	Collected at POTW outfall Proctor & Gamble paper products, Ag croplands
VII	3045	39 07 52N	094 27.58W	MO	Missouri River	Kansas City								X		X		
VII	2199	39·11.14N	093.53 45W	MO	Missouri River	Lexington								X	X	X	X	Same as 3046
VII	3044	39 44 32N	094.51.36W	MO	Missouri River	St Joseph								X				
VII	3046	39 11:14N	093.53 45W	MO	Missouri River	Lexington								X	X	X	X	Same as 2199
VII	3050	37.59.15N	093 48.45W	MO	Osage River	Roscoe	X										X	Ag: croplands
VII	3042	41 15.32N	095 55:20W	NE	Missouri River	Omaha	X							X	X	X		Ind: chem and pest., metals, hydro power, same as 2191 - opposite sides of river
VII	3043	41 08 18N	095 52 40W	NE	Missouri River	Bellevue								X		X		
VII	3041	41 45 42N	103.25 02W	NE	North Platte River	Mcgrew	X								X		X	
VII	2205	40 59 48N	096 01 18W	NE	Platte River	Louisville	X								X		X	
VIII	3197	38 33 00N	106 01 00W	CO	Arkansas River	Salida					X							Defunct wood treatment plant
VIII	3198	39 48·10N	104 57 30W	CO	South Platte River	Denver								X	X	X		
VIII	3200	40 10 30N	104.59 00W	CO	St Vrian River	Longmont		X										
VIII	3236	46 10 00N	112.46 26W	MT	Clark Fork River	Warm Springs								X				
VIII	3237	47 01 05N	114 21 20W	MT	Clark Fork River	Huson			X									Stone Container Corporation
VIII	3235	45 45 35N	111 05 04W	MT	East Gallatin River	Bozeman								X				
VIII	3234	47 56 14N	114 11 04W	MT	Goose Bay	Lakeside								X				
VIII	2122	45 47 48N	108 28 12W	MT	Yellowstone River	Billings	X								X			
VIII	2105	47 35 25N	103 15 05W	ND	Little Missouri R	Watford City	X											
VIII	2100	49 00 30N	097 12 40W	ND	Red River	Pembina								X	X		X	Sugar beet processing plant, croplands, Same as 3111
VIII	3111	49 00 30N	097.12 40W	ND	Red River	Pembina								X	X		X	Sugar beet processing plant, croplands, Same as 2100
VIII	2109	42 49 42N	096 33 45W	SD	Big Sioux River	Akron								X	X	X	X	Same as 3199
VIII	3199	42 49 45N	096 33 15W	SD	Big Sioux River	Akron	X							X	X	X	X	Same as 2109
VIII	2110	44 00 49N	103 49 48W	SD	Castle Creek	Hill City		X										
VIII	3195	40·45.10N	111 55.15W	UT	Jordan River	Salt Lake City							X	X		X	X	Ind pesticides, Superfund site (chlorobenzenes)
VIII	3196	41.20.40N	105 35 45W	WY	Laramie River	Laramie					X							Railroad tie treating plant (defunct)
VIII	2098	42.34·27N	106 41:31W	WY	North Platte River	Alcova	X											
IX	3266	33 05.00N	113 02 00W	AZ	Gila River	Gila Bend								X	X	X	X	Cotton growing region (Near Phoenix)
IX	3282	33 12 00N	115.37.00W	CA	Alamo River	Calipatria											X	HCB use in agriculture
IX	3288	36 41.00N	121 44 00W	CA	Blanco Drain	Salinas								X			X	Multiple sources
IX	3285	33 46 00N	118 08 00W	CA	Colorado Lagoon	Long Beach								X		X		Multiple sources

TABLE D-1 (Cont.)

EPA Reg	Episode #	Latitude	Longitude	State	Waterbody	Location	NSQ	B	POINT SOURCES PPC	PPNC	WP	Rfny	NPL Site	Other Ind	POTW	NONPOINT Urba	Agri	Additional Site Description (Facilities in the vicinity of the sampling site)
IX	3273	41.45.00N	124·11:00W	CA	Elk Creek	Crescent City												McNamara & Peepe (historical PCP site)
IX	3286	33 40.00N	118·18 00W	CA	Harbor Park Lake	Harbor City								X		X		Multiple sources
IX	3271	40 34.00N	123·11 00W	CA	Hayfork Creek	Hayfork												Sierra Pacific (historical PCP site)
IX	3272	37 55 00N	122·21:00W	CA	Lauritzen Canal	Richmond							X					United Heckathorn· pesticide packaging plant in 60's (PCB's, DDT, Pb)
IX	3275	40 54 00N	124 00 00W	CA	Mad River	Arcata								X				Mollala-Arcata
IX	3276	40 52.00N	124.00 00W	CA	Mad River Slough	Arcata								X				Sierra Pacific
IX	3289	36 48 00N	121 46 00W	CA	Moss Landing Dm	Moss Landing								X				Multiple sources
IX	3451	34 01 00N	118 41.00W	CA	Mouth of Malibu Cr	Malibu									X			POTW: Tapia Creek, grazing land (horses)
IX	3354	37 57 00N	121 18.00W	CA	New Mormon Slgh	Stockton					X		X	X		X	X	McCormick and Baxter (wood preservers); Superfund site (solvents)
IX	3283	33 06 00N	115 40 00W	CA	New River	Westmoreland								X				Multiple sources (HCB use)
IX	3355	37.56 00N	121.19 00W	CA	Old Mormon Slough	Stockton					X		X	X		X	X	McCormick & Baxter (wood preservers), Ag.. croplands & orch ,
																		Superfund site (solvents)
IX	3290	39 58 00N	121 20 00W	CA	Port of Stockton	Stockton					X		X	X				McCormick & Baxter (wood preservers), Superfund site (solvents)
IX	3274	41 55.00N	124.07.00W	CA	Rowdy Creek	Smith River												Arcata Lumber Company (historical PCP site)
IX	3357	38 02 00N	121 44 00W	CA	Sacramento Delta	Antioch			X					X			X	Gaylord Container Corp.; Ind . chem.; refinery; power plant, Ag
																		orchards and croplands
IX	3267	40 27 00N	122 11 00W	CA	Sacramento River	Anderson			X									Simpson Paper Company; wooded area
IX	3270	40 09 00N	122 11 00W	CA	Sacramento River	Red Bluff				X							X	Diamond International (recycled paper); Ag . croplands and grazing
IX	3287	33 46 00N	118 06 00W	CA	San Gabriel River	Long Beach				X								Simpson Paper Company, Pacific Coast Paper
IX	2748	34 24 00N	119 30 00W	CA	Santa Clara River	Santa Paula	X											Same as 3281
IX	3281	34 20.00N	119 04 00W	CA	Santa Clara River	Santa Paula	X											Same as 2748
IX	3264	33 54 27N	118.31.28W	CA	Santa Monica Bay	Los Angeles						X		X	X	X		El Segundo Refinery; Hyperion POTW outfall, multiple sources
IX	3450	33 55·00N	118 28:00W	CA	Short Bank (Pac O)	Los Angeles									X			POTW Hyperion outfall
IX	3269	37 43 00N	121 09 00W	CA	Stanislaus River	Ripon								X				Multiple sources
IX	3278	39 24 00N	123 06 00W	CA	Upper Eel River	Potter Valley												Louisiana Pacific (historical PCP site)
IX	2037	19 46 15N	155 05 33W	HI	Honolii Stream	Hilo		X									X	Ag . sugar cane growing (pesticides)
IX	3261	21 18 00N	157 59 00W	HI	Pearl Harbor	Middle Loch							X					Combustion sources, Superfund site (solvents)
IX	3262	22 04 30N	159 22:30W	HI	Wailua Paelekaa St	Kauai												Agent Orange test site (not a designated superfund site)
IX	2776	35 40 00N	114 40 00W	NV	Colorado River	Blw Hoover Dm	X											
X	3238	60 58 30N	149 27.35W	AK	Bird Creek	Bird		X										
X	3241	61 13 20N	149 51.21W	AK	Ship Creek	Anchorage							X	X		X		Salvage yard with runoff of PCB, Superfund site, landfill
X	3246	57 03 00N	133 14.00W	AK	Silver Bay	Sitka			X									Alaska Pulp Company
X	2070	61 32 42N	151 30 45W	AK	Susitna River	Susitna	X											
X	3244	58 41 00N	134 03 00W	AK	Vanderbilt Creek	Juneau								X		X		
X	3245	55 23 45N	131 44 20W	AK	Ward Cove	Ketchikan			X									Louisiana Pacific Corp (sulfite mill), Ketchikan Pulp and Paper
X	3252	43 48 29N	117 00 15W	ID	Boise River	Parma								X		X	X	
X	3250	47.38.05N	116 43 15W	ID	Coeur d'Alene Lake	Coeur d'Alene								X			X	Ind · silver mining
X	3249	47 33·07N	116 22.06W	ID	Coeur d'Alene River	Coeur d'Alene								X			X	Mining
X	3158	42 37 25N	114 31.58W	ID	Rock Creek	Twin Falls											X	
X	2478	43 00 08N	115 12 06W	ID	Snake River	Kings Hill	X										X	
X	3256	46 25·15N	117.02 04W	ID	Snake River	Lewiston			X								X	Potlatch Corporation
X	3248	47 19.08N	116 33.35W	ID	St Joe River	St Marie		X										
X	3203	45 37.19N	122 45 20W	OR	Columbia River	Portland								X		X		

TABLE D-1 (Cont.)

EPA Reg	Episode #	Latitude	Longitude	State	Waterbody	Location	NSQ	B	POINT SOURCES PPC	PPNC	WP	Rfny	NPL Site	Other Ind	POTW	NONPOINT Urban	Agri	Additional Site Description (Facilities in the vicinity of be sampling site)
X	3216	45:51.53N	122:47:39W	OR	Columbia River	St. Helens			X					X	X	X	X	Boise Cascade (indirect)
X	3218	46:09 21N	123.24:00W	OR	Columbia River	Wauna			X								X	James River Corporation in Clatskanie
X	3219	45:39.10N	120 56:00W	OR	Columbia River	Dalles								X	X		X	Hydro-power (PCB's generated); food processing plant; Ag . orch & croplands
X	3201	45:36 06N	122.43.57W	OR	Columbia Slough	Portland			X					X		X		Five paper mills using Cl bleach, two paper mills not using Cl bleach, shipyard
X	3208	44.03 30N	116.57.00W	OR	Malheur River	Ontario											X	
X	3212	43:46 59N	117.03 09W	OR	Owyhee River	Owyhee											X	
X	3205	45 26:33N	123.14.07W	OR	Tualatin River	Cherry Grove		X										
X	3215	45·23:40N	122:45.30W	OR	Tualatin River	Cook Park								X	X		X	Minor industries; Ag.: croplands
X	3206	45:34.53N	122 44.39W	OR	Willamette River	Portland								X	X	X	X	Ind : chem.; smelters; shipyards; timber
X	3217	44.23:16N	123·14:03W	OR	Willamette River	Hallsey			X								X	Hallsey Pulp Company (Pope and Talbot); Ag.: croplands
X	3213	45 17 17N	122.58.03W	OR	Willamette River	Newburgh Pool			X						X		X	Deinking plant; other pulp mills upstream; Ag.. croplands
X	3437	45:17.38N	122 46 08W	OR	Willamette River	Wilsonville											X	
X	3226	47 23 30N	122:37.38W	WA	Burley Lagoon	Purdy							X					Below transformer and scrap metal salvage yard, below Superfund site (PCB)
X	3438	46 15 36N	123 57 57W	WA	Columbia R (lower)	Estuary								X				
X	3220	22 59 27N	046.07.50W	WA	Columbia River	Longview			X								X	Weyerhaeuser and Longview Fiber Company; Ag croplands & grazing fields
X	3221	46.06 00N	118 55 00W	WA	Columbia River	Tri Cities			X								X	Boise Cascade; Ag.. croplands & grazing fields
X	3222	45 34 08N	122.24 42W	WA	Columbia River	Camas			X									Crown Zellerbach (James River Corporation)
X	3439	46.15 06N	123·33.32W	WA	Columbia River	Woody Island			X					X		X		Boise Cascade and Weyerhaeuser, Longview Fiber downstream
X	3440	46 00 33N	122 51:04W	WA	Columbia River	Kalama			X					X		X		Boise Cascade and Weyerhaeuser, Longview Fiber downstream
X	3441	45:58.05N	122 49.19W	WA	Columbia River	Deer Island			X					X		X		Boise Cascade and Weyerhaeuser, Longview Fiber downstream
X	3163	47.16 12N	122.25:50W	WA	Commencement Bay	Tacoma			X			X	X	X	X	X	X	Simpson Tacoma Kraft, US Oil and Refining, heavily industrialized, Superfund site (Commencement Bay)
X	3191	46·58 00N	123.53 00W	WA	Grays Harbor	Hoquiam				X								ITT Rayonier, Inc. (sulfite mill, nonchlorine)
X	3192	46:57.13N	123 51:15W	WA	Grays Harbor	Cosmopolis			X									Weyerhaeuser Company (sulfite mill, chlorine)
X	3162	47:17.05N	122:24:28W	WA	Hylebos Waterway	Tacoma			X				X	X		X		Champion Paper Company; heavily industrialized; Superfund site
X	3227	47:14 20N	123.02.40W	WA	Oakland Bay	Shelton								X			X	Simpson Pulp Mill (wood overlay products)
X	3295	48.08.00N	123 24·45W	WA	Port Angeles Harbor	Port Angeles			X					X				ITT Rayonier, Inc.
X	3294	48 06.30N	122.45.30W	WA	Port Townsend	Port Townsend				X								
X	2247	47.12.52N	122:20 25W	WA	Puyallup River	Puyallup	X								X		X	Simpson Paper Company (downstream)
X	2246	47:49 52N	122 02·50W	WA	Snohomish	Monroe	X								X		X	Light agriculture, timber
X	3223	48 01 52N	122.13 00W	WA	Steamboat Slough	Everett			X				X					Weyerhaeuser Company and Scott Paper Company; Superfund site (solvents)
X	3224	48 45 01N	122.29 02W	WA	Whatcom Waterway	Bellingham			X									Georgia Pacific (sulfite process)
X	3230	47:11:10N	120.02:30W	WA	Yakima River	Cle Elum		X										
X	3231	46.22.42N	119:25.29W	WA	Yakima River	Richland								X		X	X	

APPENDIX D-2

Dioxins/Furans: Episode Numbers Used in Statistical Tests (By Category)

TABLE D-2
Dioxins/Furans: Episode Numbers Used in Statistical Tests (By Category)

NASQAN (NSQ)

Episode	State
2015	AR
2016	AR
2017	AR
2023	AR
2026	OK
2070	AK
2098	WY
2105	ND
2122	MT
2126	MS
2148	FL
2151	FL
2152	FL
2191	IA
2205	NE
2220	VA
2228	VA
2246	WA
2247	WA
2280	TX
2298	TN
2309	AL
2322	NY
2358	ME
2430	MI
2431	MI
2432	MI
2437	MN
2439	OH
2478	ID
2544	LA
2776	NV
3036	IA
3041	NE
3042	NE
3050	MO
3104	PA
3199	SD
3281	CA
3308	NY
Total	**40**

AGRICULTURE (AG)

Episode	State
2280	TX
2358	ME
2478	ID
3050	MO
3082	LA
3083	LA
3084	TX
3099	DE
3105	OK
3158	ID
3170	AL
3171	AL
3180	GA
3193	VA
3208	OR
3212	OR
3282	CA
3352	LA
3437	OR
Total	**19**

SUPERFUND (NPL)

Episode	State
3078	AR
3097	DE
3226	WA
3261	HI
3272	CA
3414	PA
3415	PA
Total	**7**

POTW

Episode	State
2122	MT
2152	FL
2205	NE
2322	NY
2432	MI
2544	LA
3036	IA
3041	NE
3308	NY
3450	CA
3451	CA
Total	**11**

BACKGROUND (B)

Episode	State
2027	OK
2037	HI
2110	SD
2139	NC
2216	PA
2283	TX
2301	TN
2379	IL
2387	MN
2397	WI
2435	MI
2651	NJ
3001	MN
3022	ME
3023	ME
3027	ME

TABLE D-2 (Cont.)

3028	ME
3037	IA
3073	AR
3074	NM
3075	TX
3166	NC
3169	AL
3178	GA
3179	GA
3187	SC
3200	CO
3205	OR
3230	WA
3238	AK
3248	ID
3309	NY
3320	NY
3430	NJ
Total	**34**

PULP & PAPER (Chlorine) (PPC)

Episode	State
2015	AR
2016	AR
2017	AR
2138	NC
2142	FL
2228	VA
2294	GA
2302	AL
2304	AL
2355	ME
2385	MN
2422	WI
2427	WI
2532	LA
2721	ME
2725	ME
3062	AR
3080	LA
3081	TX
3088	LA
3107	WI
3118	MI
3122	MI
3146	WI
3150	MA
3151	MA
3152	NH
3192	WA
3217	OR
3218	OR
3220	WA
3221	WA
3222	WA
3224	WA
3237	MT
3245	AK
3246	AK
3256	ID
3260	NY
3267	CA
3303	NY
3316	PA
3317	MD
3318	PA
3328	AL
3329	FL
3331	FL
3332	FL
3333	FL
3335	GA
3336	GA
3337	GA
3339	KY
3340	MS
3341	MS
3342	NC
3343	NC
3344	NC
3345	NC
3346	NC
3347	SC
3348	SC
3349	SC
3350	TN
3351	TN
3353	LA
3395	NC
3403	TN
3404	TN
3416	LA
3418	LA
3420	PA
3421	VA
3422	VA
3423	VA
3424	VA
3425	LA
3435	MS
3452	AR
Total	**79**

INDUSTRY/URBAN (IND/URB)

Episode	State
1994	MI
2023	AR
2026	OK
2057	IN
2060	IN
2191	IA
2210	DC

TABLE D-2 (Cont.)

2215	PA	3086	LA	3244	AK
2220	VA	3094	PA	3249	ID
2225	VA	3095	PA	3250	ID
2227	VA	3096	PA	3252	ID
2309	AL	3100	MD	3258	VA
2328	NY	3101	PA	3264	CA
2329	NY	3103	MD	3269	CA
2380	IL	3111	ND	3275	CA
2383	IL	3113	IL	3276	CA
2410	MI	3115	IL	3283	CA
2416	OH	3120	MI	3285	CA
2500	WV	3125	MN	3286	CA
3024	ME	3134	WI	3289	CA
3025	ME	3141	WI	3296	NY
3026	ME	3144	WI	3297	NY
3034	IA	3147	DC	3298	NY
3035	IA	3149	DE	3299	NY
3038	IA	3164	NC	3300	NY
3039	KS	3165	NC	3301	NY
3040	MO	3168	AL	3302	NY
3042	NE	3172	AL	3306	NY
3043	NE	3174	FL	3307	NY
3044	MO	3182	KY	3310	PA
3045	MO	3183	KY	3311	WV
3046	MO	3186	SC	3312	WV
3047	MO	3188	TN	3313	WV
3048	MO	3189	TN	3314	WV
3049	MO	3190	TN	3315	PA
3060	AR	3198	CO	3321	NY
3061	AR	3199	SD	3322	NY
3063	LA	3203	OR	3324	NY
3064	LA	3206	OR	3326	NY
3066	LA	3219	OR	3327	NY
3069	TX	3227	WA	3411	NY
3071	TX	3231	WA	3412	NY
3072	TX	3234	MT	3426	NJ
3079	OK	3235	MT	3428	NJ
3085	TX	3236	MT	3431	PR

TABLE D-2 (Cont.)

3432	PR
3434	NJ
3438	WA
3442	LA
3443	AR
3444	TN
3446	KY
Total	**128**

PULP & PAPER (No Chlorine) (PPNC)

Episode	State
3089	OK
3090	OK
3091	OK
3092	LA
3093	TX
3108	WI
3112	MN
3114	IL
3135	WI
3136	WI
3137	WI
3138	WI
3140	WI
3143	WI
3145	WI
3184	MS
3191	WA
3270	CA
3287	CA
3294	WA
3330	FL
3360	AL
3375	GA
3376	GA
3377	GA
3378	GA
3401	TN
Total	**27**

WOOD PRESERVERS (WP)

Episode	State
3076	OK
3077	AR
3110	WI
3167	NC
3173	FL
3196	WY
3197	CO
3271	CA
3273	CA
3274	CA
3278	CA
Total	**11**

REFINERY/OTHER INDUSTRY (R/I)

Episode	State
2026	OK
2380	IL
2383	IL
3061	AR
3063	LA
3069	TX
3071	TX
3072	TX
3086	LA
3095	PA
3096	PA
3125	MN
3183	KY
3264	CA
3312	WV
3431	PR
3434	NJ
3442	LA
3444	TN
3446	KY
Total	**20**

APPENDIX D-3

Xenobiotics: Episode Numbers Used in Statistical Tests (By Category)

TABLE D-3
Other Xenobiotics: Episode Numbers Used in Statistical Tests (By Category)

NASQAN (NSQ)

Episode	State
2015	AR
2016	AR
2017	AR
2023	AR
2026	OK
2070	AK
2098	WY
2105	ND
2122	MT
2126	MS
2148	FL
2151	FL
2152	FL
2191	IA
2205	NE
2220	VA
2228	VA
2246	WA
2247	WA
2280	TX
2298	TN
2309	AL
2322	NY
2358	ME
2430	MI
2431	MI
2432	MI
2437	MN
2439	OH
2478	ID
2544	LA
2776	NV
3036	IA
3041	NE
3042	NE
3050	MO
3104	PA
3199	SD
3281	CA
3308	NY
Total	**40**

AGRICULTURE (AG)

Episode	State
2280	TX
2358	ME
2478	ID
3050	MO
3082	LA
3083	LA
3084	TX
3099	DE
3105	OK
3158	ID
3170	AL
3171	AL
3180	GA
3193	VA
3208	OR
3212	OR
3352	LA
3437	OR
Total	**18**

SUPERFUND (NPL)

Episode	State
3078	AR
3097	DE
3226	WA
3261	HI
3272	CA
3414	PA
3415	PA
Total	**7**

POTW

Episode	State
2122	MT
2152	FL
2322	NY
2432	MI
2544	LA
3308	NY
3450	CA
3451	CA
Total	**8**

BACKGROUND (B)

Episode	State
2110	SD
2139	NC
2216	PA
2283	TX
2397	WI
2435	MI
2651	NJ
3022	ME
3023	ME
3028	ME
3073	AR
3074	NM
3075	TX
3166	NC
3169	AL
3178	GA
3200	CO
3205	OR
3230	WA
3238	AK

TABLE D-3 (Cont.)

3248	ID
Total	**21**

PULP & PAPER (Chlorine) (PPC)

Episode	State
2017	AR
2138	NC
2294	GA
2302	AL
2422	WI
2532	LA
2721	ME
2725	ME
3107	WI
3118	MI
3122	MI
3151	MA
3152	NH
3192	WA
3222	WA
3224	WA
3237	MT
3245	AK
3246	AK
3260	NY
3267	CA
3303	NY
3316	PA
3318	PA
3332	FL
3335	GA
3336	GA
3340	MS
3341	MS
3342	NC
3348	SC
3395	NC
3403	TN
3416	LA
3418	LA
3420	PA
3421	VA
3422	VA
3423	VA
3424	VA
3425	LA
3435	MS
Total	**42**

INDUSTRY/URBAN (IND/URB)

Episode	State
3043	NE
3044	MO
3045	MO
3079	OK
3085	TX
3101	PA
3120	MI
3149	DE
3172	AL
3174	FL
3189	TN
3190	TN
3203	OR
3234	MT
3235	MT
3236	MT
3244	AK
3258	VA
3269	CA
3275	CA
3276	CA
3283	CA
3285	CA
3286	CA
3289	CA
3296	NY
3298	NY
3306	NY
3307	NY
3315	PA
3411	NY
3412	NY
3426	NJ
3428	NJ
3438	WA
Total	**35**

PULP & PAPER (No Chlorine) (PPNC)

Episode	State
3090	OK
3091	OK
3108	WI
3112	MN
3135	WI
3136	WI
3140	WI
3143	WI
3145	WI
3191	WA
3287	CA
3294	WA
3330	FL
3360	AL
3376	GA
3377	GA
3401	TN
Total	**17**

TABLE D-3 (Cont.)

WOOD PRESERVERS (WP)

Episode	State
3076	OK
3077	AR
3110	WI
3167	NC
3173	FL
3196	WY
3197	CO
3271	CA
3273	CA
3274	CA
3278	CA
Total	**11**

REFINERY/OTHER INDUSTRY (R/I)

Episode	State
3061	AR
3063	LA
3072	TX
3095	PA
3446	KY
Total	**5**

APPENDIX D-4

Dioxin/Furan Data by Episode Number

Key for Dioxin/Furan Data Table (Units = pg/g)

	Compound Name	CAS Number
2,3,7,8 TCDD	Tetrachlorinated dibenzodioxins	1746-01-6
1,2,3,7,8 PeCDD	Pentachlorinated dibenzodioxins	40321-76-4
1,2,3,4,7,8 HxCDD	Hexachlorinated dibenzodioxins	39227-28-6
1,2,3,6,7,8 HxCDD		57653-85-7
1,2,3,7,8,9 HxCDD		19408-74-3
1,2,3,4,6,7,8 HpCDD	Heptachlorinated dibenzodioxins	37871-00-4
2,3,7,8 TCDF	Tetrachlorinated dibenzofurans	51207-31-9
1,2,3,7,8 PeCDF	Pentachlorinated dibenzofurans	57117-41-6
2,3,4,7,8 PeCDF		57117-31-4
1,2,3,4,7,8 HxCDF	Hexachlorinated dibenzofurans	70648-26-9
1,2,3,6,7,8 HxCDF		57117-44-9
1,2,3,7,8,9 HxCDF		72918-21-9
2,3,4,6,7,8 HxCDF		60851-34-5
1,2,3,4,6,7,8 HpCDF	Heptachlorinated dibenzofurans	67562-39-4
1,2,3,4,7,8,9 HpCDF		55673-89-7

<u>Concentration Information</u>

ND = Not Detected
NA = Not Analyzed
QR = Below 40 percent recovery
DPE = Diphenyl Ether interference, a "Y" in the column indicates that there was interference with the analyses for 2,3,4,7,8 PeCDF; 1,2,3,4,6,7 HxCDF; 1,2,3,4,7,8 HxCDF; and 2,3,4,6,7,8 HxCDF
= Asterisk on 1,2,3,4,7,8 HxCDFindicates coelution with 1,2,3,4,6,7 HxCDF on GC column (DB5 30M)x

<u>Sample Information</u>

Sample Type
- F = Field Sample
- L = Lab Duplicate
- M = Molluscs/Crustaceans
- O = Other

Fish Tissue Type
- PF = Predator Fillet
- BF = Bottom Fillet
- WB = Whole Body
- WP = Whole Predator

<u>Episode and SCC Information</u>

Episode Number: Refer to Site Matrix Table

D-1 for Waterbody Name and Location

SCC = Sample Control Center Numbers

<u>First Letter Designation</u>:

- S = Confirmation Sample*
- D = Environmental Sample
- Q = Duplicate Sample*

<u>Second Letter Designation</u>:

- A = Region 1
- B = Region 2
- C = Region 3
- D = Region 4
- E = Region 5
- F = Region 6
- G = Region 7
- H = Region 8
- Y = Region 9
- J = Region 10

*The number of samples shown on the summary tables in Volume I do not included the duplicate and confirmation samples.

Dioxins/Furans Concentration Ranges

DIOXIN / FURAN CONCENTRATIONS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
1994	DE017702	F	WB Carp	34.03	ND	QR 5	QR 61	QR 16	QR 45	14.09	8.19	29.32	QR 19	QR 6	QR ND	QR 8	QR 17	QR ND	50.51	Y
1994	DE017703	F	PF Walleye	ND	ND	QR ND	QR ND	QR ND	QR ND	0.80	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	0.08	
1994	QD110586	L	WB Carp	29.26	ND	4.01	58.90	13.47	QR ND	12.63	7.74	24.30	17.04	ND	ND	4.89	QR 17	QR ND	52.89	Y
1998	13285	F	WB Carp	ND	ND	ND	1.91	ND	4.44	ND	0.76	1.93	ND	ND	ND	ND	ND	ND	0.35	Y
1998	13421___	F	PF Pike	0.68	ND	ND	ND	ND	ND	2.28	ND	ND	ND	ND	ND	ND	ND	ND	0.91	Y
2015	DF001001	F	WB Carp	4.73	ND	ND	4.48	ND	QR 15	4.17	ND	2.11	QR 2	QR 1	QR ND	QR ND	QR 2	QR ND	6.65	Y
2015	DF001002	F	PW Crappie	1.43	ND	ND	ND	ND	QR ND	2.38	ND	ND	ND	ND	ND	ND	QR ND	QR ND	1.67	
2016	DF001101	F	WB Sucker	4.17	ND	ND	2.95	ND	4.04	16.61	ND	1.11	2.19	ND	ND	2.05	3.09	ND	7.18	Y
2016	DF001102	F	BF Sucker	1.69	ND	ND	2.05	ND	5.10	5.23	ND	ND	0.63	ND	ND	0.81	ND	ND	2.61	Y
2017	DF001201	F	WB Carp	0.66	ND	1.72	3.32	0.74	QR 14	1.47	0.33	ND	ND	ND	ND	ND	QR ND	QR ND	1.40	Y
2017	DF001202	F	BF Carp	ND	ND	ND	1.05	ND	QR 6	0.31	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.14	
2018	DF001301	F	WB Sucker	ND	ND	QR ND	QR ND	QR ND	QR ND	0.74	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	0.07	
2023	DF001402	F	PF Spotted Bass	ND	ND	ND	ND	ND	QR 2	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2023	DF001403	F	WB Carp	ND	ND	0.76	ND	ND	3.08	0.30	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.14	
2026	DF001702	F	WB Carp	1.17	ND	ND	1.35	ND	QR 5	0.55	ND	ND	ND	ND	ND	ND	QR ND	QR ND	1.36	
2026	DF001703	F	PF White Crappie	ND	ND	ND	ND	ND	5.48	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05	
2027	DF001802	F	PF Lm Bass	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2027	DF001803	F	WB Carp	0.46	ND	ND	3.57	ND	QR ND	0.81	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.90	
2037	DY000501	F	WB not available	ND	ND	ND	ND	ND	ND	0.29	ND	ND	ND	ND	ND	ND	1.13	ND	0.04	Y
2037	DY000502	F	PW not available	ND	ND	ND	ND	ND	QR 4	ND	0.92	1.33	1.24	1.35	ND	ND	QR ND	QR ND	0.97	
2056	DE000501	F	WB Carp	4.23	ND	QR ND	QR 15	QR ND	QR 45	2.39	1.36	3.26	ND	1.51	ND	ND	QR 6	QR ND	6.32	Y
2057	DE000601	F	WB Carp	ND	1.09	ND	ND	ND	8.16	2.66	ND	0.91	ND	ND	ND	ND	1.29	ND	1.36	Y
2059	DE000801	F	WB Carp	6.63	QR 13	QR 2	QR 16	QR ND	QR 22	4.55	ND	15.41	QR 3	QR 1	QR ND	QR 1	QR 4	QR ND	14.79	Y
2060	DE000901	F	WB Carp	1.76	ND	QR ND	QR 2	QR ND	QR 8	2.20	0.51	ND	0.84	ND	ND	0.48	QR 2	QR ND	2.14	Y
2070	DJ000901	F	WP Rainbow Trout	ND	ND	ND	ND	ND	ND	0.50	ND	ND	ND	ND	ND	ND	ND	ND	0.05	
2070	DJ000902	F	WB Longnose Sucker	ND	ND	ND	ND	ND	QR 3	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2070	QD072186	L	WP Rainbow Trout	ND	ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
2098	DH001501	F	WB not available	ND	ND	ND	ND	ND	QR ND	0.61	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.06	
2098	DH001504	F	PF not available	ND	ND	ND	ND	ND	1.01	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.01	
2100	DH001702	F	PF Sauger	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Y
2100	DH001703	F	WB Catfish	1.65	ND	ND	7.34	ND	QR ND	0.21	ND	ND	ND	ND	ND	ND	QR ND	QR ND	2.40	Y
2100	QD111086	L	WB Catfish	1.98	ND	ND	ND	ND	QR ND	ND	ND	1.47	ND	ND	ND	ND	QR ND	QR ND	2.72	
2105	DH002201	F	PF Sauger	ND	ND	ND	ND	ND	1.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
2105	DH002204	F	WB Carp	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2105	QD063086	L	WB Carp	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2109	DH002601	F	WB not available	0.97	ND	ND	ND	ND	QR 14	0.46	ND	ND	QR ND	QR ND	QR ND	QR ND	QR 3	QR ND	1.02	Y
2109	DH002602	F	BF not available	ND	ND	ND	ND	ND	QR 4	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2110	DH002710	F	WP Brown Trout	ND	ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
2122	DH003901	F	PF Rainbow Trout	ND	ND	ND	ND	ND	1.89	ND	ND	ND	0.35	ND	ND	ND	ND	ND	0.05	
2122	DH003904	F	WB White Sucker	ND	ND	ND	ND	ND	4.32	1.09	ND	ND	ND	ND	ND	ND	ND	ND	0.15	
2126	DD000302	F	WB Carp	ND	ND	ND	5.48	1.61	QR 23	0.37	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.75	

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Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
				DIOXIN / FURAN CONCENTRATIONS, pg/g																
2126	DD000303	F	PF White Crappie	ND	ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
2126	QD062686	L	WB Carp	2.16	ND	1.84	4.77	1.41	QR 23	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	2.96	
2133	DD001002	F	BF Blue Catfish	ND	ND	ND	1.97	ND	QR 6	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.20	
2138	DD001501	F	WB Redhorse Sucker	2.01	1.79	ND	4.61	1.14	15.91	13.45	1.33	3.69	11.3	ND	ND	5.45	4.77	ND	8.62	Y
2138	DD001504	F	PF Lm Bass	0.86	0.62	ND	4.13	0.56	6.72	0.82	0.27	0.52	1.7	ND	ND	0.60	1.00	ND	2.30	Y
2139	DD001601	F	WB Carp	ND	ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
2139	DD001604	F	PF Rainbow Trout	2.26	ND	ND	ND	ND	2.21	0.90	ND	0.70	ND	ND	ND	ND	ND	ND	2.72	Y
2139	QD071486	L	PF Rainbow Trout	1.87	ND	ND	ND	ND	1.67	0.75	0.47	0.70	ND	ND	ND	ND	0.48	ND	2.34	
2142	DD001902	F	WB Catfish	ND	0.66	ND	ND	ND	6.74	0.26	ND	0.86	ND	ND	ND	ND	1.13	ND	0.86	Y
2142	DD001903	F	PF Lm Bass	ND	ND	ND	ND	ND	ND	0.10	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
2148	DD002501	F	WB Saltwater Catfish	ND	ND	ND	ND	ND	QR 3	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2148	DD002504	F	PF Saltwater Catfish	ND	ND	ND	ND	ND	1.60	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02	
2151	DD002801	F	PF Lm Bass	ND	ND	ND	ND	ND	2.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02	
2151	DD002803	F	WB Spotted Sucker	ND	ND	ND	ND	ND	2.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02	
2152	DD002902	F	PF Lm Bass	ND	ND	ND	ND	ND	2.62	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.03	
2152	DD002903	F	WB Lake Chubsucker	ND	ND	ND	ND	ND	2.55	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.03	
2190	DG005101	F	WB Carp	ND	ND	ND	ND	ND	5.98	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.06	
2190	DG005104	F	PF Bluegill	ND	ND	ND	ND	ND	1.80	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02	
2191	DG005205	F	WB Carp	ND	ND	QR ND	QR 7	QR ND	QR 23	1.33	0.61	ND	QR ND	QR ND	QR ND	QR ND	QR 4	QR ND	0.16	Y
2191	DG005206	F	BF Carp	ND	ND	ND	ND	ND	QR 9	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	Y
2191	QD092486	L	BF Carp	ND	ND	ND	1.59	ND	QR 8	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.16	Y
2194	DG005501	F	WB Carp	ND	ND	ND	4.48	ND	QR ND	1.16	ND	0.74	ND	ND	ND	ND	QR ND	QR ND	0.93	
2194	DG005504	F	BF Channel Catfish	ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
2199	DG006001	F	WB Carp	2.44	ND	ND	1.11	ND	4.02	ND	ND	0.22	0.37	ND	ND	ND	ND	ND	2.74	Y
2199	DG006004	F	PF Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2201	DG006201	F	WB Carp	ND	ND	QR ND	QR 12	QR ND	QR 56	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2201	DG006204	F	BF Bowfin	ND	ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2205	DG006601	F	WB Carp	ND	ND	ND	ND	ND	QR ND	0.38	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.04	
2205	DG006602	F	BF Carp	ND	ND	ND	ND	ND	ND	0.41	ND	ND	ND	ND	ND	ND	0.96	ND	0.05	Y
2210	DC005401	F	WB Catfish	5.61	ND	QR ND	QR ND	QR ND	QR 5	0.85	QR ND	QR ND	1.25	ND	ND	ND	QR ND	QR ND	5.82	Y
2211	DC005503	F	WB Redhorse Sucker	0.59	ND	ND	0.20	ND	1.29	7.77	ND	1.40	1.90	ND	ND	1.56	1.29	ND	2.46	Y
2212	DC005602	F	PF Sm Bass	ND	ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	Y
2212	DC005605	F	WB White Sucker	2.01	ND	ND	ND	ND	4.32	13.97	0.88	2.86	1.11	ND	ND	ND	ND	ND	5.04	Y
2215	DC005902	F	WB Carp	ND	ND	ND	4.64	ND	12.92	0.80	0.37	1.73	ND	ND	ND	ND	1.44	ND	1.57	Y
2216	DC006002	F	PF Brown Trout	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2216	DC006003	F	WB White Sucker	ND	ND	ND	ND	ND	QR ND	0.29	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.03	
2220	DC006401	F	PF Redbreast Sunfish	ND	ND	ND	ND	ND	QR 6	ND	ND	ND	0.82	ND	ND	ND	QR ND	QR ND	0.08	
2220	DC006405	F	WB Catfish	ND	ND	ND	2.22	ND	6.12	0.42	ND	0.38	ND	ND	ND	ND	ND	ND	0.52	Y
2225	DC006902	F	PF Sm Bass	ND	ND	ND	ND	ND	0.36	0.38	ND	ND	ND	ND	ND	ND	ND	ND	0.04	
2225	DC006903	F	WB Shorthead Redhorse	6.76	2.93	1.70	3.25	0.42	6.67	44.75	1.96	3.88	5.6	ND	ND	8.37	6.03	ND	16.80	Y
2225	QD101387	L	WB Shorthead Redhorse	5.86	2.58	1.10	2.86	ND	6.92	38.76	1.54	3.16	3.80	ND	ND	4.11	4.49	ND	13.98	Y

Episode	SCC	Type		Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
					DIOXIN / FURAN CONCENTRATIONS, pg/g																
2227	DC007102	F	PF	Lm Bass	ND	ND	ND	ND	ND	ND	0.39	ND	ND	ND	ND	ND	ND	ND	ND	0.04	
2227	DC007104	F	WB	Channel Catfish	ND	0.76	ND	2.77	0.87	8.05	0.24	ND	0.54	ND	ND	ND	ND	0.61	ND	1.12	Y
2228	DC007201	F	PF	Longear Sunfish	ND	ND	ND	ND	ND	QR 2	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2228	DC007204	F	WB	Redhorse Sucker	ND	ND	ND	ND	ND	ND	3.81	ND	ND	0.83	ND	ND	0.51	ND	ND	0.52	Y
2228	QD070286	L	WB	Redhorse Sucker	ND	ND	ND	1.36	ND	QR 3	4.21	ND	0.71	1.67	ND	ND	ND	QR ND	QR ND	1.08	Y
2231	DC007503	F	WB	Gizzard Shad	ND	ND	ND	ND	ND	QR 4	8.5	ND	1.6	2.6	ND	ND	1.0	QR 2	QR ND	2.01	Y
2246	DJ002301	F	BF	Bridgelip Sucker	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2246	DJ002302	F	WB	Bridgelip Sucker	ND	ND	ND	ND	ND	QR 5	ND	0.20	ND	1.00	ND	ND	0.52	QR ND	QR ND	0.16	Y
2247	DJ002403	F	PF	Bridgelip Sucker	ND	ND	ND	1.30	ND	QR 1	1.22	ND	ND	ND	ND	ND	0.58	QR 1	QR ND	0.31	Y
2247	DJ002404	F	WP	Mountain Whitefish	0.37	ND	ND	1.64	ND	QR 2	0.99	ND	0.50	ND	ND	ND	0.57	QR 1	QR ND	0.94	Y
2280	DF005201	F	WB	Carp	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2280	DF005204	F	BF	Channel Catfish	ND	ND	ND	0.44	ND	2.17	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07	
2280	QD062386	L	BF	Channel Catfish	ND	ND	ND	ND	ND	2.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02	
2283	DF005501	F	WB	Gray Redhorse	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2283	DF005502	F	WP	Longear Sunfish	ND	QR ND	ND	ND	ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
2290	DD003403	F	WB	Spotted Sucker	4.5	14.3	7.5	100.9	6.7	141.2	22.0	17.2	15.3	11.6	6.2	ND	9.6	12.5	0.5	38.15	Y
2294	DD003801	F	PF	Lm Bass	2.6	0.9	ND	1.2	0.2	2.3	2.1	ND	ND	0.7	ND	ND	0.4	0.5	ND	3.54	Y
2294	DD003804	F	WB	Carp	1.69	0.75	0.55	ND	0.29	4.58	5.29	ND	0.52	0.70	ND	ND	0.24	0.53	ND	3.08	Y
2297	DD004102	F	WB	Carp	ND	0.35	ND	0.47	ND	1.67	1.51	ND	ND	ND	ND	ND	ND	ND	ND	0.39	Y
2297	DD004103	F	PF	Lm Bass	ND	ND	ND	ND	ND	ND	0.45	ND	ND	ND	ND	ND	ND	0.30	ND	0.05	Y
2298	DD004201	F	WB	Channel Catfish	ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
2298	DD004203	F	WP	Lm Bass	ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
2301	DD004504	F	WP	Rock Bass	ND	ND	ND	ND	ND	QR ND	0.86	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.09	
2301	QD071786	L	WP	Rock Bass	ND	ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2302	DD004601	F	WB	Quillback Carpsucker	0.55	0.47	ND	ND	0.21	2.60	0.45	ND	ND	0.50	ND	ND	ND	0.73	ND	0.93	Y
2304	DD004801	F	WB	Carp	28.66	9.40	11.62	25.98	5.38	90.77	49.48	ND	7.22	4.20	2.52	ND	1.82	5.54	ND	48.03	Y
2304	DD004804	F	PF	Lm Bass	16.08	1.26	0.31	1.77	0.32	2.20	34.50	0.97	0.64	0.20	ND	ND	ND	0.37	ND	20.81	Y
2309	DD005301	F	WB	Carp	ND	ND	QR ND	QR 8	QR ND	QR 26	11.67	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	1.17	Y
2309	DD005304	F	PF	Lm Bass	ND	ND	ND	ND	ND	QR 2	3.2	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.32	Y
2322	DB001301	F	WB	White Sucker	ND	ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
2322	DB001304	F	PF	Lm Bass	ND	ND	QR ND	QR ND	QR ND	QR ND	0.41	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.04	
2322	QD082686	L	PF	not available	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2326	DB001701	F	WB	White Sucker	ND	ND	ND	ND	ND	8.16	ND	ND	0.56	ND	ND	ND	ND	ND	ND	0.36	Y
2326	DB001704	F	PF	Rock Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2328	DB001904	F	PF	Chinook Salmon	12.89	ND	ND	ND	ND	ND	4.29	ND	4.61	8.14	ND	ND	1.36	5.46	ND	16.63	Y
2329	DB002004	F	PF	Brown Trout	12.49	ND	ND	ND	ND	QR ND	5.76	ND	ND	4.15	ND	ND	ND	QR 2	QR ND	13.48	Y
2341	DD006002	F	PF	Lm Bass	2.14	ND	ND	0.39	ND	0.72	4.38	0.59	0.91	0.60	ND	ND	0.34	0.63	ND	3.21	Y
2341	DD006003	F	WB	Carpsucker	4.42	ND	ND	1.96	ND	3.72	6.56	3.11	5.21	3.40	0.82	ND	0.67	1.55	ND	8.57	Y
2355	DA001603	F	WB	White Sucker	7.97	1.16	0.55	4.31	0.40	7.38	40.59	1.46	1.13	0.74	ND	ND	0.90	2.29	ND	14.03	Y
2356	DA001702	F	PF	Lm Bass	3.57	ND	ND	ND	ND	QR ND	2.32	ND	ND	ND	ND	ND	ND	QR ND	QR ND	3.80	
2356	DA001703	F	WB	White Sucker	23.38	ND	ND	4.76	ND	1.11	43.82	ND	2.19	ND	ND	ND	ND	ND	ND	29.34	Y

DIOXIN / FURAN CONCENTRATIONS, pg/g

Episode	SCC	Type		Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
2358	DA001901	F	WP	ns	ND	ND	ND	4.57	ND	QR 24	0.60	ND	ND	3.01	ND	ND	ND	QR ND	QR ND	0.82	
2369	DA003202	F	PF	Lm Bass	ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
2369	DA003203	F	WB	White Sucker	1.01	QR ND	QR ND	QR 1	QR ND	QR ND	9.50	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	1.96	Y
2369	QD030387	L	WB	White Sucker	ND	ND	QR ND	QR 1	QR ND	QR 3	8.51	ND	ND	QR 1	QR ND	QR ND	QR ND	QR 2	QR ND	0.85	
2375	DA003802	F	PF	Pickerel	ND	ND	ND	ND	ND	1.77	0.64	ND	ND	ND	ND	ND	ND	ND	ND	0.08	Y
2375	DA003803	F	WB	White Sucker	1.26	0.80	0.43	1.77	0.24	3.87	12.70	0.67	1.19	0.88	ND	ND	ND	1.02	ND	3.94	Y
2376	DA003903	F	WB	White Sucker	ND	ND	ND	ND	ND	ND	9.12	ND	2.03	3.61	ND	ND	ND	ND	ND	2.29	Y
2376	QD111886	L	WB	White Sucker	ND	ND	QR ND	QR ND	QR ND	QR ND	8.16	ND	1.67	ND	ND	ND	ND	QR ND	QR ND	1.65	Y
2379	DE005404	F	PF	Lm Bass	ND	ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
2380	DE005501	F	WB	Carp	11.29	ND	1.85	ND	ND	QR 29	5.51	1.74	6.43	9.07	ND	ND	3.89	QR 13	QR ND	16.62	Y
2383	DE005801	F	WB	Carp	17.83	ND	3.26	27.84	ND	QR 37	6.81	4.47	15.19	ND	ND	ND	7.80	QR 16	QR ND	30.22	Y
2385	DE006002	F	WB	White Sucker	32.69	0.87	ND	0.62	ND	2.03	75.29	0.71	2.00	2.30	ND	ND	ND	1.10	ND	42.01	Y
2385	QD101987	L	WB	White Sucker	31.72	0.83	ND	0.83	ND	1.85	74.70	0.68	1.95	1.90	ND	ND	ND	0.86	ND	40.91	Y
2387	DE006201	F	WB	Carp	ND	ND	ND	ND	ND	3.39	1.36	ND	0.24	ND	ND	ND	ND	0.30	ND	0.29	Y
2394	DE006901	F	WB	Carp	4.2	5.9	3.7	11.8	2.8	27.1	8.0	1.6	5.6	1.3	2.7	ND	0.9	1.7	ND	13.44	
2397	DE007201	F	WB	Sucker	ND	ND	ND	ND	ND	1.34	0.89	ND	ND	ND	ND	ND	ND	ND	ND	0.10	
2397	DE007204	F	PF	Walleye	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2410	DE008501	F	WB	Carp	23.72	ND	QR ND	QR 25	QR ND	QR ND	14.15	9.13	29.78	34.26	5.68	ND	6.42	QR ND	QR ND	45.12	Y
2410	DE008504	F	PF	Sm Bass	0.44	QR ND	QR ND	QR ND	QR ND	QR ND	1.00	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	0.54	Y
2416	DE009101	F	WB	Carp	3.74	ND	1.40	9.47	ND	QR 8	4.07	1.87	10.11	1.85	1.03	ND	ND	QR ND	QR ND	10.67	Y
2422	DE009702	F	WB	Carp	3.92	1.19	0.39	3.54	0.30	10.67	8.80	0.63	1.47	1.40	0.99	ND	1.01	2.84	ND	7.06	Y
2427	DE010202	F	WB	Carp	8.54	12.13	4.45	19.32	2.67	31.31	34.95	9.08	20.14	5.60	4.84	ND	2.59	4.23	ND	32.93	Y
2427	DE010203	F	PF	Walleye	0.33	ND	ND	ND	ND	0.35	5.76	ND	ND	0.40	ND	ND	ND	0.23	ND	0.95	Y
2427	QD102887	L	PF	Walleye	0.42	ND	ND	ND	ND	0.38	5.93	0.18	ND	0.50	ND	ND	ND	ND	ND	1.08	Y
2429	DE010402	F	WB	Carp	5.56	ND	QR ND	QR 14	QR ND	QR 25	5.66	ND	0.51	QR ND	QR ND	QR ND	QR ND	QR 11	QR ND	6.38	Y
2429	DE010403	F	PF	Walleye	ND	ND	ND	ND	ND	ND	2.49	ND	ND	ND	ND	ND	ND	ND	ND	0.25	Y
2429	QD010687	L	PF	Walleye	0.48	ND	ND	ND	ND	0.88	2.59	ND	ND	ND	ND	ND	ND	ND	ND	0.75	
2430	DE010602	F	PF	Northern Pike	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2430	DE010603	F	WB	Redhorse Sucker	ND	ND	QR ND	QR ND	QR ND	QR ND	0.80	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.08	
2431	DE010702	F	PF	Brown Trout	ND	0.47	ND	ND	ND	ND	3.60	0.41	0.56	ND	ND	ND	ND	ND	ND	0.90	Y
2431	DE010703	F	WB	Sucker	1.70	ND	ND	0.51	ND	1.42	0.93	ND	ND	ND	ND	ND	ND	0.40	ND	1.86	Y
2432	DE010710	F	WB	Redhorse Sucker	ND	ND	ND	ND	ND	ND	0.6	ND	ND	ND	ND	ND	ND	ND	ND	0.06	
2432	DE010713	F	PF	Walleye	0.8	ND	ND	ND	ND	ND	2.0	ND	ND	ND	ND	ND	ND	ND	ND	1.00	
2435	DE011001	F	WB	Longnose Sucker	ND	ND	ND	ND	ND	ND	4.4	ND	1.3	ND	ND	ND	ND	ND	ND	1.09	Y
2435	DE011004	F	PF	Brook Trout	ND	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02	
2437	DE011202	F	PF	Walleye	ND	ND	ND	ND	ND	1.4	0.4	ND	ND	ND	ND	ND	ND	ND	ND	0.05	
2437	DE011203	F	WB	Carp	ND	ND	ND	ND	ND	QR 4	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	Y
2439	DE011401	F	WB	Carp	2.23	ND	1.66	9.42	2.83	QR 21	2.32	ND	3.27	4.53	0.58	ND	ND	QR 6	QR ND	6.00	Y
2439	DE011402	F	WP	Sm Bass	1.75	ND	ND	1.58	ND	3.42	2.97	ND	1.36	2.01	ND	ND	1.82	2.85	ND	3.33	Y
2478	DJ003901	F	FB	Sucker	ND	ND	ND	ND	ND	4.66	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05	
2478	DJ003902	F	WB	Sucker	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	

Episode	SCC	Type		Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
					DIOXIN / FURAN CONCENTRATIONS, pg/g																
2500	DC010201	F	PF	Bass	10.40	ND	QR ND	QR ND	QR ND	QR 1	1.07	ND	ND	ND	ND	ND	ND	QR ND	QR ND	10.51	Y
2500	DC010203	F	WB	Black Buffalo	ND	ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2532	DF019302	F	PF	Lm Bass	0.82	ND	ND	0.56	ND	2.14	ND	ND	ND	0.40	ND	ND	ND	ND	ND	0.94	Y
2532	DF019303	F	WB	Carp	6.00	2.64	2.95	6.57	0.91	20.34	9.81	4.07	6.41	4.91	3.18	ND	1.45	3.99	ND	13.95	Y
2544	DF019202	F	WB	Blacktail Redhorse	ND	ND	ND	ND	ND	0.35	0.90	ND	ND	ND	ND	ND	ND	0.18	ND	0.10	
2608	DE014501	F	PF	Walleye	7.07	ND	ND	ND	ND	0.43	7.72	ND	0.15	ND	ND	ND	ND	0.20	ND	7.92	
2608	DE014504	F	WB	Carp	67.18	2.37	1.80	6.11	0.86	18.10	35.27	2.66	3.65	2.98	ND	ND	1.18	2.33	ND	75.35	
2618	DE015401	F	WB	Carp	3.96	3.87	2.73	12.95	1.48	22.49	9.18	1.70	5.05	1.14	1.61	ND	ND	1.51	ND	11.65	
2618	DE015402	F	BF	Carp	1.64	1.44	ND	4.76	ND	8.50	2.79	ND	1.81	0.33	0.62	ND	ND	0.51	ND	4.21	
2618	DE015403	F	WB	Quillback	2.10	1.82	ND	3.11	ND	9.37	8.33	0.84	2.25	ND	ND	ND	ND	0.89	ND	5.42	
2618	QD102088	L	WB	Quillback	1.73	1.72	0.54	3.13	ND	9.46	8.43	0.86	2.37	ND	ND	ND	ND	0.95	ND	5.13	
2651	DB008401	F	WB	White Sucker	0.85	ND	ND	ND	ND	QR ND	2.19	ND	ND	ND	ND	ND	ND	QR ND	QR ND	1.07	
2653	DB008503	F	WB	Carp	2.82	1.08	0.78	2.04	ND	7.17	1.16	0.43	2.36	1.40	ND	ND	1.27	1.70	ND	5.32	Y
2654	DB008601	F	WB	Carp	ND	ND	ND	ND	ND	ND	0.36	ND	ND	ND	ND	ND	ND	ND	ND	0.04	Y
2709	DB005101	F	WB	Catfish	ND	ND	QR ND	QR ND	QR ND	QR 5	3.41	ND	4.03	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	2.36	Y
2721	DA006502	F	WB	Sucker	40.96	2.45	ND	8.43	0.71	4.49	207.49	4.87	6.15	1.51	ND	ND	ND	2.05	ND	67.38	Y
2722	DA006601	F	WB	Sucker	ND	ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
2725	DA006301	F	WB	Sucker	16.08	2.02	ND	9.54	0.89	4.72	106.82	5.11	6.19	1.58	0.50	ND	0.33	2.48	ND	32.48	Y
2748	DY006505	F	WB	Sucker	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2748	DY006506	F	BF	not available	ND	ND	ND	ND	ND	QR 2	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
2776	DY007101	F	WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2776	DY007103	F	PF	Trout	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3001	DE019501	F	PF	Walleye	ND	ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
3001	DE019502	F	WB	White Sucker	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
3022	DA008401	F	WB	White Sucker	0.37	0.54	0.21	ND	ND	0.72	6.21	0.62	1.36	ND	ND	ND	ND	0.15	ND	2.00	Y
3022	DA008402	F	PF	Chain Pickerel	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
3023	DA008501	F	PF	Sm Bass	ND	ND	ND	ND	ND	0.23	0.30	ND	ND	ND	ND	ND	ND	ND	ND	0.03	
3024	DA008601	F	PF	Lm Bass	ND	ND	ND	ND	ND	QR ND	0.90	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.09	
3025	DA008701	F	WB	White Sucker	1.57	1.33	ND	10.76	ND	QR 20	0.85	ND	ND	ND	ND	ND	5.27	QR 8	QR ND	3.92	Y
3025	DA008702	F	PF	Chain Pickerel	ND	ND	ND	ND	ND	0.98	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3026	DA009001	F	WB	Catfish	23.11	2.27	ND	8.96	0.83	2.39	8.25	ND	6.24	0.76	ND	ND	0.29	0.94	ND	29.31	Y
3026	DA009002	F	PF	Lm Bass	2.88	0.21	ND	ND	ND	0.28	6.05	ND	0.20	ND	ND	ND	ND	ND	ND	3.69	
3027	DA009301	F	WB	Sucker	ND	ND	ND	ND	ND	QR ND	1.93	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	0.19	Y
3028	DA008801	F	PF	Chain Pickerel	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
3028	QD031787	L	PF	Chain Pickerel	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3034	DG025701	F	WB	Carp	1.17	0.66	0.65	1.69	0.49	6.40	10.60	1.08	1.28	0.42	ND	ND	0.73	3.11	ND	3.75	Y
3034	DG025702	F	PF	Lm Bass	ND	ND	ND	ND	ND	ND	0.30	ND	ND	ND	ND	ND	ND	ND	ND	0.03	
3035	DG025801	F	WB	Carp	1.76	2.29	1.11	2.33	ND	4.41	1.94	0.39	1.16	1.60	ND	ND	1.00	1.07	ND	4.36	Y
3035	DG025802	F	PF	Sm Bass	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
3036	DG025901	F	PF	Freshwater Drum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Y
3036	DG025902	F	WB	Carp	ND	0.39	ND	0.69	0.22	2.66	0.38	ND	ND	ND	ND	ND	ND	ND	ND	0.35	Y

DIOXIN / FURAN CONCENTRATIONS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
3036	QD120287	L	PF Freshwater Drum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Y
3037	DG026001	F	WB Carp	0.39	0.38	ND	0.57	ND	1.25	1.10	ND	ND	0.40	ND	ND	ND	0.34	ND	0.80	Y
3037	DG026002	F	PF Black Crappie	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3038	DG026101	F	WB Carp	2.90	1.68	1.00	3.21	0.72	11.09	1.78	0.50	1.13	1.30	0.62	ND	0.97	1.70	ND	5.42	Y
3038	DG026102	F	BF Channel Catfish	0.63	ND	ND	1.22	0.32	1.81	ND	ND	0.27	ND	ND	ND	ND	0.39	ND	0.94	Y
3039	DG026201	F	WB Carp	1.54	1.95	0.84	3.86	0.86	14.05	1.46	0.52	1.36	0.51	0.76	ND	0.29	1.25	ND	4.23	
3039	DG026202	F	BF Channel Catfish	ND	ND	ND	0.88	ND	2.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11	
3040	DG026301	F	WB Carp	3.02	4.67	6.71	8.78	3.13	55.10	0.71	ND	0.66	0.91	0.52	ND	0.76	1.36	ND	8.40	Y
3040	DG026302	F	PF White Crappie	ND	ND	ND	ND	ND	0.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3041	DG026401	F	BF Channel Catfish	ND	0.72	ND	0.93	0.17	1.46	ND	ND	ND	0.13	ND	ND	ND	0.31	ND	0.50	Y
3041	DG026402	F	WB Carp	ND	ND	0.21	0.38	ND	1.71	0.26	ND	ND	ND	ND	ND	ND	0.18	ND	0.10	Y
3041	QD031588	L	BF Channel Catfish	0.44	0.62	0.47	0.85	0.18	1.52	0.21	ND	0.36	0.29	ND	ND	0.26	0.33	ND	1.17	Y
3042	DG026501	F	WB Carp	ND	1.62	0.63	4.20	0.95	QR 10	1.07	0.35	0.70	0.45	0.37	ND	ND	QR 1	QR ND	1.94	Y
3042	DG026502	F	PF Northern Pike	ND	ND	ND	ND	ND	0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3043	DG026601	F	BF Flathead Catfish	0.47	ND	ND	1.32	ND	QR 3	0.45	ND	ND	0.38	ND	ND	0.25	QR ND	QR ND	0.71	Y
3043	DG026602	F	BF Flathead Catfish	0.31	0.21	ND	0.39	ND	1.07	0.15	ND	ND	0.40	ND	ND	ND	0.68	ND	0.53	Y
3043	QD111987	L	BF Flathead Catfish	0.27	ND	ND	0.24	ND	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.30	Y
3044	DG026701	F	WB Carp	0.82	1.09	0.68	ND	0.34	7.76	0.89	0.29	0.47	1.30	ND	ND	ND	1.18	ND	2.02	Y
3044	DG026702	F	BF Flathead Catfish	0.23	ND	ND	0.58	ND	2.03	ND	ND	0.18	ND	ND	ND	ND	0.34	ND	0.40	Y
3045	DG026801	F	WB Carp	2.40	ND	QR ND	QR 4	QR ND	QR 15	ND	0.27	ND	QR 1	QR ND	QR ND	QR 0	QR ND	QR ND	2.41	Y
3045	DG026802	F	BF Flathead Catfish	ND	0.42	ND	1.26	ND	2.73	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.36	Y
3046	DG026901	F	WB Bigmouth Buffalo	0.66	ND	ND	0.39	ND	2.44	0.85	ND	ND	ND	ND	ND	ND	ND	ND	0.81	
3047	DG027001	F	WB Carp	1.29	1.46	1.14	2.92	ND	10.76	3.10	0.64	0.92	0.85	ND	ND	0.37	1.02	ND	3.47	Y
3047	DG027002	F	PF Sm Bass	ND	ND	ND	ND	ND	0.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3048	DG027101	F	WB Carp	2.69	3.96	2.26	12.37	ND	QR 29	4.66	ND	2.46	1.65	ND	ND	ND	QR ND	QR ND	7.99	Y
3048	DG027102	F	PF White Bass	ND	ND	ND	ND	ND	QR ND	0.51	ND	ND	ND	ND	ND	ND	QR ND	QR ND	0.05	
3049	DG027201	F	WB Carp	7.49	2.80	1.79	5.55	1.09	25.93	2.44	ND	2.20	2.65	ND	ND	1.86	3.34	ND	11.82	
3049	DG027202	F	PF Crappie	ND	ND	ND	ND	ND	ND	0.16	ND	ND	ND	ND	ND	ND	ND	ND	0.02	
3049	QD111087	L	PF Crappie	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3050	DG027301	F	WB Bigmouth Buffalo	0.92	ND	0.40	0.54	ND	2.69	3.15	0.29	ND	ND	ND	ND	1.44	1.71	ND	1.53	
3060	DF009101	F	WB Flathead Catfish	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND	
3060	DF009102	F	WB Sm Buffalo	1.21	ND	ND	ND	ND	QR ND	4.20	ND	0.48	ND	ND	ND	ND	QR ND	QR ND	1.87	Y
3061	DF019105	F	PF Bass	0.62	1.13	ND	1.98	1.29	5.22	ND	ND	ND	0.27	ND	ND	ND	0.23	ND	1.59	Y
3061	DF019106	F	WB Sucker	ND	3.68	ND	7.94	ND	QR 15	ND	0.27	ND	ND	ND	ND	0.42	QR 1	QR ND	2.69	
3062	DF024024	F	WB Blue Catfish	33.86	1.21	ND	1.28	ND	3.84	32.07	0.64	3.57	1.06	ND	ND	ND	ND	ND	39.76	Y
3062	DF024324	F	BF Grass Carp	8.85	ND	ND	ND	ND	2.51	69.82	ND	0.78	ND	ND	ND	ND	ND	ND	16.25	
3062	QD024324	L	BF Grass Carp	9.14	ND	ND	ND	ND	2.71	69.29	0.30	0.57	ND	ND	ND	ND	ND	ND	16.40	
3062	QD071587	L	WB Blue Catfish	32.36	1.17	ND	1.50	ND	3.72	33.8	0.61	ND	1.14	ND	ND	ND	0.40	ND	36.66	
3062	SF024324	F	BF Grass Carp	8.99	ND	ND	ND	ND	1.96	71.92	ND	0.50	ND	ND	ND	ND	ND	ND	16.24	
3063	DF023301	F	WB Sea Catfish	1.50	1.57	ND	1.65	0.46	3.70	1.20	1.09	5.73	3.52	0.31	ND	ND	4.09	ND	6.00	Y
3063	DF023302	F	PF Spotted Seatrout	ND	ND	ND	ND	ND	ND	1.51	2.52	ND	2.00	0.32	ND	ND	2.41	ND	0.53	Y

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
				DIOXIN / FURAN CONCENTRATIONS, pg/g																
3064	DF023305	M	Shellfish	ND	ND	ND	0.26	ND	3.45	0.47	ND	ND	ND	ND	ND	ND	0.35	ND	0.11	
3064	DF023306	F PF	Spotted Seatrout	ND	ND	ND	ND	ND	1.46	ND	ND	ND	ND	ND	ND	ND	0.18	ND	0.02	Y
3065	DF023419	F BF	Bigmouth Buffalo	1.83	0.53	ND	0.86	0.30	2.50	0.18	ND	0.66	ND	ND	ND	ND	0.27	ND	2.59	
3065	DF023420	F WB	Flathead Catfish	1.78	0.68	0.29	0.57	ND	2.03	5.09	0.69	1.06	0.53	ND	ND	0.22	0.33	ND	3.38	Y
3065	QD022588	L WB	Flathead Catfish	1.79	0.67	0.44	0.50	ND	1.97	4.93	0.72	0.99	0.62	ND	ND	ND	0.36	ND	3.33	Y
3066	DF023503	F WB	Catfish	4.62	ND	0.71	2.43	0.77	11.11	4.58	1.31	3.09	2.05	0.73	ND	0.74	1.35	ND	7.56	Y
3066	DF023504	F PF	Freshwater Drum	ND	ND	ND	ND	ND	0.85	0.28	ND	ND	ND	ND	ND	ND	ND	ND	0.04	
3068	DF024001	M	Oysters	6.70	ND	ND	ND	ND	0.89	14.13	ND	ND	ND	ND	ND	ND	ND	ND	8.12	
3068	DF024002	F PF	Atl. Croaker	ND	ND	ND	0.49	ND	ND	1.38	ND	ND	ND	ND	ND	ND	ND	ND	0.19	
3069	DF024007	F WB	Sea Catfish	0.72	0.81	ND	0.82	ND	1.80	ND	ND	1.07	ND	ND	ND	ND	0.21	ND	1.76	Y
3069	DF024008	F PF	Trout	ND	ND	ND	ND	ND	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3070	DF024009	F WB	Croaker	ND	ND	ND	0.59	0.33	2.46	0.71	ND	ND	ND	ND	ND	ND	0.17	ND	0.19	Y
3070	DF024010	F PF	Sheepshead	0.69	ND	0.19	ND	ND	1.44	0.31	ND	ND	ND	ND	ND	ND	0.55	ND	0.76	
3071	DF024014	F WB	Carp	1.07	0.69	ND	2.09	ND	4.95	3.11	ND	1.56	0.42	0.51	ND	0.25	0.55	ND	2.89	Y
3072	DF024017	F WB	Carp	ND	ND	ND	ND	ND	0.54	0.52	ND	ND	ND	ND	ND	ND	ND	ND	0.06	
3072	DF024018	F PF	White Bass	ND	ND	ND	ND	ND	0.25	0.26	ND	ND	ND	ND	ND	ND	ND	ND	0.03	
3072	QD040788	L PF	White Bass	ND	ND	ND	ND	ND	0.25	0.30	ND	ND	ND	ND	ND	ND	ND	ND	0.03	
3073	DF019221	F WB	White Sucker	0.30	ND	ND	0.45	ND	0.94	1.46	ND	0.14	ND	ND	ND	ND	0.20	ND	0.57	Y
3073	DF019222	F PF	Sm Bass	ND	ND	ND	ND	ND	0.19	0.33	ND	ND	ND	ND	ND	ND	ND	ND	0.03	
3073	QD121587	L WB	White Sucker	0.30	0.25	0.24	0.46	ND	1.11	1.27	ND	ND	ND	ND	ND	ND	ND	ND	0.63	Y
3074	DF026017	F PF	Brown Trout	ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	ND	
3075	DF024102	F BF	Sea Catfish	ND	ND	ND	ND	ND	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3076	DF028502	F WB	Channel Catfish	0.39	0.63	0.63	1.47	ND	2.01	0.24	ND	0.44	ND	ND	ND	0.61	0.58	ND	1.25	Y
3076	DF028503	F PF	Spotted Bass	ND	ND	ND	ND	ND	0.35	ND	ND	ND	ND	ND	ND	ND	0.18	ND	0.01	Y
3077	DF019113	F BF	Flathead Catfish	ND	ND	ND	ND	ND	0.47	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3077	DF019114	F WB	Redhorse Sucker	ND	ND	ND	ND	ND	0.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	Y
3077	QD121087	L BF	Flathead Catfish	ND	ND	ND	ND	ND	0.89	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3078	DF009118	F WB	Carp	17.91	3.35	2.43	5.13	1.51	27.86	8.87	ND	1.05	ND	ND	ND	ND	0.23	ND	22.18	
3078	DF023815	F WB	Sm Buffalo	203.64	12.62	1.50	2.46	0.49	6.07	21.23	1.51	0.70	0.41	ND	ND	ND	ND	ND	213.05	Y
3078	DF023816	F PF	Black Crappie	23.10	ND	ND	ND	ND	2.14	12.41	ND	ND	ND	ND	ND	ND	ND	ND	24.36	Y
3078	SF009118	F WB	Carp	15.41	3.07	2.00	3.08	0.73	25.96	7.23	0.44	0.91	ND	ND	ND	ND	ND	ND	18.06	
3079	DF019205	F PF	White Bass	ND	ND	ND	ND	ND	0.37	1.08	ND	0.20	ND	ND	ND	ND	ND	ND	0.21	Y
3079	DF019206	F WB	Carp	0.34	ND	ND	0.52	ND	1.46	0.61	0.14	0.32	0.30	ND	ND	0.18	0.27	ND	0.69	Y
3080	DF023317	F WB	Carp	3.62	2.64	1.92	4.88	1.87	23.95	4.89	ND	0.47	0.38	ND	ND	0.38	0.59	ND	6.85	Y
3080	DF023318	F PF	Lm Bass	1.03	ND	ND	0.25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.05	
3080	QD040987	L WB	Carp	3.35	3.31	2.18	6.58	2.14	29.65	6.95	0.32	0.75	0.54	ND	ND	0.49	1.22	ND	7.59	Y
3081	DF024105	F PF	White Bass	0.94	ND	ND	0.47	ND	1.56	0.80	ND	ND	ND	ND	ND	ND	ND	ND	1.08	
3081	DF024106	F WB	Catfish	2.45	ND	1.44	2.20	0.88	7.86	ND	ND	0.26	ND	ND	ND	ND	0.23	ND	3.11	
3082	DF023401	F WB	Carp	ND	1.02	ND	2.52	0.40	12.89	3.83	0.88	ND	0.40	ND	ND	ND	1.16	ND	1.41	Y
3082	DF023402	F PF	Lm Bass	ND	ND	ND	ND	ND	1.44	0.97	ND	ND	ND	ND	ND	ND	ND	ND	0.11	Y
3082	QD120787	L PF	Lm Bass	ND	ND	ND	ND	ND	0.37	0.99	ND	ND	ND	ND	ND	ND	0.18	ND	0.10	Y

DIOXIN / FURAN CONCENTRATIONS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
3083	DF023405	F WB	Black Bullhead	ND	0.80	0.49	0.91	0.40	10.74	0.32	ND	0.15	ND	ND	ND	ND	ND	ND	0.79	Y
3083	DF023406	F PF	Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3084	DF024109	F WB	Channel Catfish	1.28	0.96	ND	ND	ND	1.83	0.51	ND	1.01	ND	ND	ND	ND	ND	ND	2.33	
3084	QD072188	L WB	Channel Catfish	1.07	0.86	ND	0.94	0.31	1.59	0.53	0.33	0.92	0.18	ND	ND	ND	0.21	ND	2.19	
3085	DF024113	F WB	Sea Catfish	2.58	6.82	3.73	10.50	2.18	9.41	4.62	7.59	45.51	11.92	16.21	0.96	5.29	8.20	1.26	34.85	Y
3085	DF024114	F PF	Black Drum	0.66	ND	ND	1.77	ND	1.06	14.77	20.30	11.25	6.65	8.19	ND	1.08	1.45	0.19	10.57	
3085	SF024113	F WB	Sea Catfish	2.73	8.01	4.38	11.85	2.51	11.05	5.15	8.75	56.85	13.74	20.67	1.41	7.01	8.95	1.49	15.01	
3086	DF023409	F WB	Catfish	ND	2.99	0.82	2.47	ND	3.72	4.04	2.60	33.25	19.98	ND	ND	2.48	25.66	ND	21.52	Y
3086	DF023411	F PF	Black Drum	ND	ND	ND	ND	ND	ND	0.32	0.25	ND	ND	ND	ND	ND	ND	ND	0.04	
3087	DF023413	F WB	Carp	117.89	7.24	ND	5.88	2.11	12.33	261.34	8.80	17.24	0.40	1.49	ND	0.54	ND	ND	157.87	
3087	DF023414	F PF	White Crappie	13.11	0.79	ND	ND	ND	ND	81.40	1.65	2.46	ND	ND	ND	ND	ND	ND	22.98	
3087	DF023415	F WP	Bluegill	66.70	1.93	ND	1.92	ND	ND	71.94	2.09	1.59	ND	ND	ND	ND	ND	ND	75.95	
3087	DF023416	F WP	Lm Bass	20.22	ND	ND	ND	ND	2.82	8.74	ND	2.09	ND	ND	ND	ND	ND	ND	22.17	
3087	QD023414	L PF	White Crappie	16.79	1.21	ND	0.50	ND	0.94	110.71	2.28	3.21	ND	ND	ND	ND	ND	ND	30.24	
3087	QD072387	L WB	Carp	114.34	7.28	1.94	6.38	ND	12.33	253.01	8.74	18.36	ND	1.60	ND	0.53	0.75	ND	154.07	
3087	SF023414	F PF	White Crappie	14.30	1.00	ND	ND	ND	0.46	107.66	1.67	1.92	ND	ND	ND	ND	ND	ND	25.93	
3087	SF023415	F WP	Bluegill	73.98	1.91	ND	1.24	ND	1.24	68.81	1.73	1.40	ND	ND	ND	ND	ND	ND	82.18	
3088	DF023417	F WB	Channel Catfish	13.69	ND	ND	1.25	0.57	4.92	7.65	ND	ND	ND	ND	ND	ND	ND	ND	14.69	
3088	DF023418	F PF	Bluegill	1.4	ND	ND	ND	ND	0.5	2.2	ND	ND	ND	ND	ND	ND	ND	ND	1.63	
3089	DF019209	F PF	White Crappie	ND	ND	ND	ND	ND	ND	0.40	ND	ND	ND	ND	ND	ND	ND	ND	0.04	
3089	DF019210	F WB	Carp	ND	ND	ND	0.4	ND	1.4	1.4	ND	0.3	ND	ND	ND	ND	0.2	ND	0.35	Y
3090	DF019213	F PF	White Crappie	ND	ND	ND	ND	ND	ND	0.71	ND	ND	ND	ND	ND	ND	ND	ND	0.07	
3090	DF019214	F WB	Channel Catfish	ND	0.36	ND	0.55	ND	2.04	0.39	0.19	0.75	ND	ND	ND	ND	ND	ND	0.68	Y
3091	DF019217	F WB	River Carpsucker	ND	ND	ND	ND	ND	0.49	ND	ND	ND	ND	ND	ND	ND	0.72	ND	0.01	Y
3091	DF019218	F PF	White Crappie	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3092	DF023501	F WB	Carp	2.11	6.99	9.94	14.18	5.59	106.84	0.41	ND	ND	ND	ND	ND	ND	2.31	ND	9.71	Y
3092	DF023502	F PF	Warmouth	ND	ND	ND	ND	ND	0.87	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3093	DF024011	F PF	Lm Bass	ND	ND	ND	ND	ND	1.41	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3093	DF024118	F WB	Sm Buffalo	0.41	0.70	0.49	1.90	0.51	6.97	ND	ND	ND	1.49	ND	ND	ND	ND	ND	1.27	Y
3093	QD080387	L WB	Sm Buffalo	ND	0.68	0.63	1.45	0.53	7.69	0.55	ND	0.18	ND	ND	ND	ND	ND	ND	0.82	Y
3094	DC017201	F BF	Channel Catfish	1.71	2.16	ND	2.16	ND	5.33	0.60	ND	4.84	0.24	0.63	ND	ND	0.53	ND	5.63	
3094	QD092988	L BF	Channel Catfish	1.69	2.08	ND	2.50	0.33	6.00	0.51	ND	3.58	0.24	0.48	ND	0.23	0.47	ND	5.01	
3095	DC038801	F BF	Brown Bullhead	1.24	1.23	ND	1.67	ND	3.10	2.31	1.35	4.29	0.49	0.75	ND	0.30	0.26	ND	4.65	
3095	DC038802	F WB	Channel Catfish	ND	ND	ND	4.72	0.91	5.70	0.86	0.77	9.89	2.26	ND	ND	ND	ND	ND	5.92	Y
3096	DC035001	F BF	Brown Bullhead	0.53	ND	ND	0.43	ND	0.76	0.97	ND	0.92	ND	ND	ND	ND	ND	ND	1.14	
3096	DC035002	F WB	Channel Catfish	4.62	5.33	ND	5.32	ND	4.39	0.71	0.67	14.01	2.60	ND	ND	1.49	ND	ND	15.38	Y
3096	QD052488	L WB	Channel Catfish	4.53	4.84	1.10	4.95	1.01	4.08	0.77	0.66	11.85	2.42	1.51	ND	1.24	ND	ND	14.25	Y
3097	DC038701	F BF	Brown Bullhead	0.81	ND	ND	ND	ND	QR ND	1.42	ND	2.91	ND	ND	ND	ND	QR ND	QR ND	2.41	Y
3097	DC038702	F WB	Carp	1.42	2.27	ND	3.23	0.88	ND	4.62	2.96	7.53	2.92	2.63	ND	0.53	1.71	ND	7.97	Y
3098	DC038601	F WB	White Sucker	24.89	27.23	ND	7.00	6.80	27.39	5.03	ND	0.92	ND	ND	ND	ND	2.66	ND	41.15	Y
3098	DC038602	F PF	American Eel	3.32	12.46	ND	8.43	3.21	6.20	ND	ND	ND	ND	ND	ND	0.88	1.45	ND	10.88	Y

DIOXIN / FURAN CONCENTRATIONS, pg/g

Episode	SCC		Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
3098	QD032587	L	WB	White Sucker	24.02	25.09	ND	7.14	5.90	QR 26	5.18	ND	0.99	ND	ND	ND	1.39	QR 3	QR ND	39.02	Y
3100	DC019701	F	PF	White Perch	ND	0.50	ND	0.56	ND	1.31	3.70	0.69	2.43	0.19	ND	ND	ND	ND	ND	1.96	
3100	DC019702	F	WP	Winter Flounder	ND	ND	ND	ND	ND	1.26	2.91	ND	1.12	ND	ND	ND	ND	0.19	ND	0.87	
3101	DC019901	F	PF	Brown Trout	ND	ND	ND	ND	ND	ND	5.49	1.85	5.92	ND	ND	ND	ND	ND	ND	3.60	
3103	DC036201	F	WB	Channel Catfish	ND	QR 2	0.84	2.84	0.67	3.87	ND	0.29	3.06	1.46	0.31	ND	1.09	0.92	ND	2.31	Y
3103	DC036202	F	WB	Carp	0.96	ND	0.67	0.99	ND	3.76	5.72	0.76	1.90	0.50	ND	ND	0.31	0.42	ND	2.81	Y
3104	DC020001	F	PF	Lm Bass	ND	ND	ND	ND	ND	0.87	0.39	ND	ND	ND	ND	ND	ND	ND	ND	0.05	
3104	DC020002	F	WB	Carp	1.68	ND	1.01	2.19	0.42	5.11	2.66	1.69	4.11	0.71	1.00	ND	0.38	0.61	ND	4.71	
3105	DF025001	F	WB	Carp	0.73	0.30	ND	ND	ND	1.70	1.23	ND	0.33	0.30	ND	ND	ND	0.37	ND	1.22	Y
3105	DF025002	F	PF	Lm Bass	ND	ND	ND	ND	ND	0.53	ND	ND	ND	ND	ND	ND	ND	0.53	ND	0.01	Y
3106	DE026801	F	PF	Walleye	7.02	ND	ND	0.25	ND	1.32	8.22	ND	ND	ND	ND	ND	ND	0.19	ND	7.88	Y
3106	DE026802	F	PF	White Bass	17.52	0.54	ND	ND	ND	1.43	26.57	0.96	ND	ND	ND	ND	ND	0.42	ND	20.51	Y
3107	DE026901	F	WB	Carp	ND	0.99	ND	3.41	ND	7.49	2.66	0.35	1.55	ND	ND	0.41	2.77	3.46	ND	2.32	Y
3108	DE027001	F	PF	Walleye	ND	ND	ND	ND	ND	ND	0.36	ND	ND	ND	ND	ND	ND	ND	ND	0.04	Y
3108	DE027002	F	WB	Carp	2.68	2.09	ND	14.39	1.05	42.22	2.73	1.34	5.44	7.32	ND	ND	5.61	13.16	0.39	10.18	Y
3109	DE025001	F	WB	Carp	0.50	0.42	ND	0.74	ND	1.21	ND	ND	ND	1.01	ND	ND	0.60	0.94	ND	0.97	Y
3109	DE025002	F	PF	Sm Bass	0.35	ND	ND	ND	ND	ND	1.01	ND	ND	ND	ND	ND	ND	ND	ND	0.45	
3110	DE022501	F	BF	Flathead Catfish	ND	0.38	0.34	1.35	0.15	2.64	8.84	0.74	1.41	1.44	ND	ND	0.36	0.49	ND	2.21	Y
3110	DE022502	F	BF	Carp	2.72	5.68	2.34	8.14	0.90	10.35	16.96	4.35	14.85	1.65	2.38	ND	0.80	0.95	ND	16.63	
3111	DH015801	F	PF	Walleye	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3111	DH015802	F	WB	Silver Redhorse	ND	ND	ND	1.48	ND	ND	1.42	ND	ND	ND	ND	ND	ND	ND	ND	0.29	Y
3112	DE022401	F	WB	Carp	2.98	1.38	1.12	2.79	1.25	5.99	5.50	ND	ND	ND	ND	0.44	ND	1.32	ND	4.85	Y
3112	DE022402	F	PF	Walleye	ND	ND	ND	ND	ND	0.26	1.01	ND	ND	ND	ND	ND	ND	ND	ND	0.10	Y
3113	DE021101	F	BF	Channel Catfish	ND	0.77	ND	2.25	ND	2.89	0.94	ND	1.39	ND	ND	ND	ND	ND	ND	1.43	
3113	DE021102	F	BF	Carp	1.49	1.73	ND	5.77	ND	14.78	3.60	2.03	3.04	2.30	2.52	ND	0.29	2.00	ND	5.59	
3114	DE021201	F	BF	Carp	0.72	ND	ND	1.18	ND	4.61	4.64	0.55	0.71	ND	ND	ND	ND	ND	ND	1.73	
3115	DE021301	F	WB	Carp	7.00	1.84	ND	7.18	0.84	39.51	4.11	0.66	2.41	0.82	ND	ND	ND	3.12	ND	10.88	
3115	DE021302	F	PF	Catfish	6.24	0.91	ND	3.82	0.70	11.94	0.87	ND	1.65	ND	ND	ND	ND	ND	ND	8.18	
3117	DE021501	F	PF	Lake Trout	3.74	8.76	ND	5.97	ND	0.98	43.70	12.69	25.28	2.44	4.14	ND	1.26	ND	ND	27.16	
3117	DE021502	F	PF	Brown Trout	ND	2.35	ND	1.41	ND	2.00	9.55	ND	2.49	ND	ND	ND	ND	ND	ND	3.54	
3118	DE021601	F	PF	Walleye	1.37	ND	ND	ND	ND	ND	5.55	ND	0.66	ND	ND	ND	0.38	ND	ND	2.29	Y
3118	DE021602	F	WB	Carp	11.61	2.22	0.69	2.87	ND	4.42	14.64	1.60	4.33	ND	0.65	ND	ND	0.50	ND	16.90	
3118	DE021603	F	WB	Carp	3.85	1.01	0.53	1.30	ND	3.51	7.53	0.89	2.14	1.17	0.44	ND	ND	0.77	ND	6.61	Y
3118	SE021602	F	WB	Carp	9.39	2.22	0.70	2.37	ND	3.32	12.46	1.35	3.86	0.29	0.40	ND	ND	0.35	ND	12.40	
3119	DE021701	F	WB	Carp	ND	0.59	ND	1.63	ND	3.64	0.89	ND	ND	ND	ND	ND	0.20	ND	ND	0.60	Y
3119	DE021702	F	PF	Lm Bass	2.30	ND	ND	ND	ND	ND	2.35	ND	ND	ND	ND	ND	ND	ND	ND	2.53	Y
3120	DE021801	F	WB	Carp	3.07	ND	0.40	2.41	ND	0.54	3.34	0.38	1.22	0.29	ND	ND	0.24	0.41	ND	4.38	Y
3120	DE021802	F	PF	Bass	0.73	ND	ND	ND	ND	ND	2.08	ND	ND	ND	ND	ND	ND	ND	ND	0.94	Y
3122	DE022001	F	WB	Carp	21.01	6.22	0.96	10.13	0.40	14.86	16.91	ND	14.30	4.06	1.49	ND	1.97	1.71	ND	35.03	Y
3122	DE022003	F	WB	Redhorse Sucker	1.36	ND	ND	ND	ND	QR ND	8.80	ND	0.20	ND	ND	ND	ND	QR ND	QR ND	2.34	Y
3122	DE022004	F	PF	Sm Bass	1.37	ND	ND	ND	ND	QR 0	3.95	ND	ND	ND	ND	ND	ND	QR ND	QR ND	1.76	

DIOXIN / FURAN CONCENTRATIONS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
3125	DE022301	F WB	Carp	2.15	1.43	1.04	2.53	ND	8.19	23.36	2.30	3.61	1.49	1.18	ND	ND	0.82	ND	7.84	Y
3125	DE022302	F PF	White Bass	0.41	ND	ND	ND	ND	2.03	7.87	ND	ND	ND	ND	ND	ND	ND	ND	1.22	
3125	QD120888	L PF	White Bass	0.29	ND	ND	ND	ND	1.30	7.36	ND	0.46	ND	ND	ND	ND	ND	ND	1.27	
3132	DE023201	F WB	Carp	8.58	2.19	0.64	5.41	0.92	QR 7	5.63	ND	6.09	2.12	ND	ND	1.35	1.01	ND	14.34	Y
3132	DE023202	F WB	Channel Catfish	14.75	2.48	ND	12.20	2.68	4.91	6.13	ND	3.27	2.50	ND	ND	2.61	2.52	ND	20.31	Y
3134	DE023401	F PF	Crappie	0.16	ND	ND	ND	ND	ND	0.90	ND	ND	ND	ND	ND	ND	ND	ND	0.25	
3134	DE023403	F WB	Carp	ND	0.53	ND	0.48	ND	1.83	6.71	1.61	7.16	0.76	ND	ND	ND	ND	ND	4.74	
3134	DE023405	F WB	Carp	1.99	1.14	ND	1.16	ND	3.20	1.75	0.76	10.68	0.40	ND	ND	ND	ND	ND	8.30	
3134	DE023406	F WB	Sucker	0.59	ND	ND	ND	ND	0.58	32.60	1.29	4.37	ND	ND	ND	ND	ND	ND	6.11	
3135	DE023501	F WB	Carp	1.22	ND	ND	1.25	ND	3.67	3.99	ND	ND	ND	ND	ND	ND	0.64	ND	1.79	
3136	DE023602	F PF	Walleye	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3137	DE023701	F WB	Redhorse Sucker	ND	ND	ND	ND	ND	0.78	10.63	ND	ND	ND	ND	ND	ND	ND	ND	1.07	
3137	DE023702	F PF	Walleye	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3138	DE023801	F WB	Carp	4.99	QR 2	QR ND	QR ND	QR ND	QR ND	4.30	QR 1	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	5.42	
3138	DE023802	F PF	Sm Bass	ND	ND	ND	0.31	ND	1.25	1.80	ND	0.40	ND	ND	ND	ND	ND	ND	0.42	
3140	DE024002	F WB	Carp	1.50	ND	ND	1.77	ND	4.87	1.28	ND	1.08	ND	ND	ND	ND	ND	ND	2.39	
3141	DE024102	F WB	Carp	20.31	22.39	ND	18.52	5.03	43.71	2.91	2.59	20.21	3.16	5.79	ND	1.69	5.26	ND	45.94	
3141	DE024103	F PF	Northern Pike	1.70	QR 1	ND	0.87	ND	2.12	QR 9	0.74	1.94	ND	ND	ND	ND	0.16	ND	2.82	
3141	SE024102	F WB	Carp	16.79	17.14	3.98	17.26	3.54	37.99	2.48	2.07	15.68	3.02	3.81	ND	1.65	4.31	ND	28.50	
3143	DE024401	F	Rotten (catf)	ND	ND	ND	ND	ND	3.11	1.82	ND	ND	ND	ND	ND	ND	ND	ND	0.21	
3143	DE024402	F PF	White Bass	ND	ND	ND	ND	ND	0.62	2.66	0.45	0.26	ND	ND	ND	ND	ND	ND	0.42	Y
3143	DE024403	F WB	Carp	0.91	2.58	0.73	4.74	0.96	20.56	12.10	2.74	2.54	1.20	ND	ND	1.07	4.19	ND	5.93	Y
3144	DE024901	F WB	Carp	1.25	0.51	ND	ND	ND	2.43	2.05	0.38	1.90	ND	ND	ND	ND	ND	ND	2.70	
3145	DE026601	F WB	N. Redhorse	0.86	ND	ND	0.96	ND	1.22	15.11	0.22	0.47	ND	ND	ND	ND	ND	ND	2.73	
3145	QD071988	L WB	N. Redhorse	0.78	0.33	ND	0.70	ND	1.48	14.76	ND	0.35	ND	ND	ND	ND	ND	ND	2.68	
3146	DE026701	F WB	Carp	4.56	2.78	1.87	13.68	ND	47.38	10.22	1.12	2.76	1.17	1.76	ND	0.62	3.55	ND	10.83	Y
3146	DE026702	F PF	Walleye	0.24	ND	ND	ND	ND	0.88	0.93	ND	ND	ND	ND	ND	ND	ND	ND	0.34	
3146	QD060288	L WB	Carp	5.02	3.44	ND	17.34	2.30	49.70	11.10	1.44	2.50	1.32	2.65	ND	0.78	3.79	ND	12.15	Y
3146	SE026701	F WB	Carp	4.31	2.92	2.53	14.27	1.89	47.34	9.02	1.10	2.67	1.14	2.25	ND	0.50	3.11	ND	7.89	
3147	DC035201	F WB	Carp	2.49	0.52	ND	0.70	ND	2.96	8.73	1.34	2.05	0.90	ND	ND	0.32	ND	ND	4.94	
3148	DE027101	F WB	Carp	3.46	2.42	1.17	2.89	0.62	5.59	8.54	2.46	4.27	1.70	ND	ND	0.75	1.45	ND	8.57	Y
3148	DE027103	F PF	Walleye	ND	ND	ND	ND	ND	0.57	3.54	ND	0.43	ND	ND	ND	ND	ND	ND	0.57	Y
3149	DC038501	F WB	White Sucker	ND	ND	QR ND	QR ND	QR ND	ND	1.40	ND	ND	QR ND	QR ND	QR ND	QR ND	ND	ND	0.14	Y
3150	DA008901	F WB	White Sucker	13.51	12.01	2.01	9.25	3.92	16.10	21.84	3.51	ND	6.51	ND	0.51	2.57	4.03	0.49	24.56	Y
3151	DA009101	F WB	White Sucker	7.87	2.89	ND	1.85	1.19	3.13	43.19	0.90	1.87	1.31	ND	ND	ND	1.27	ND	15.09	Y
3151	DA009102	F PF	Sm Bass	0.89	ND	ND	ND	ND	ND	1.67	ND	0.22	ND	ND	ND	ND	0.22	ND	1.17	
3151	QD072887	L WB	White Sucker	8.20	2.95	ND	2.15	0.59	3.25	43.55	0.98	2.01	1.09	ND	ND	1.02	ND	ND	15.60	
3152	DA009201	F WB	White Sucker	7.82	0.40	ND	3.20	ND	0.50	81.2	4.09	4.35	1.30	ND	ND	ND	ND	ND	18.97	Y
3161	DC019801	F BF	Black Bullhead	ND	0.73	0.78	1.50	0.25	2.14	0.81	0.40	1.13	ND	ND	ND	ND	ND	ND	1.31	
3161	DC019802	F WB	White Sucker	1.52	2.68	2.11	3.13	0.38	8.54	11.05	1.40	3.45	2.56	0.91	ND	2.44	3.55	ND	7.03	
3162	DJ022121	F WB	Big Skate	2.86	4.61	ND	6.59	ND	5.41	59.62	22.62	19.21	8.03	4.90	ND	ND	ND	ND	23.87	

DIOXIN / FURAN CONCENTRATIONS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
3162	DJ022122	F WB	Ratfish	5.04	ND	ND	2.17	ND	ND	145.88	9.81	18.12	1.64	ND	ND	ND	ND	ND	29.56	
3162	DJ022123	M	Dungeness Crab	ND	ND	ND	ND	ND	2.25	26.47	10.81	3.23	3.09	2.12	ND	ND	ND	ND	5.35	
3162	DJ022403	F PF	Quillback Rockfish	ND	ND	ND	ND	ND	ND	1.09	ND	ND	ND	ND	ND	ND	ND	ND	0.11	
3162	DJ024001	F WP	Starry Flounder	2.43	4.72	ND	9.58	0.66	3.48	9.80	5.88	13.58	5.36	2.22	ND	ND	0.93	ND	14.68	Y
3162	DJ025103	O	Hepatopancreas,Crab	6.61	10.17	3.46	26.28	5.10	37.12	334.80	99.62	45.72	37.49	27.93	ND	3.35	10.86	ND	83.86	
3162	QD041889	L	Hepatopancreas	10.79	15.90	4.89	34.02	6.67	48.32	403.90	120.30	56.37	45.33	30.86	ND	3.71	13.91	ND	106.50	
3163	DJ022402	M	Dungeness Crab	5.44	6.43	ND	27.72	ND	15.99	67.41	3.70	4.11	2.28	2.16	ND	ND	3.71	ND	21.05	
3163	DJ022404	M	Dungeness Crab	ND	0.94	ND	2.22	ND	1.79	49.18	19.65	6.40	5.80	ND	ND	ND	ND	ND	10.39	
3163	DJ024002	F WP	Starry Flounder	1.51	1.21	ND	2.30	ND	1.11	3.00	ND	1.09	0.19	ND	ND	ND	0.35	ND	3.22	
3163	DJ025102	O	Hepatopancreas,Crab	5.67	6.10	ND	17.82	2.67	15.31	206.62	68.35	34.48	19.73	13.12	ND	ND	4.52	ND	55.57	
3164	DD015701	F PF	Lm Bass	ND	QR ND	ND	1.93	0.22	1.69	0.31	QR ND	QR ND	0.40	ND	ND	0.33	0.31	ND	0.34	Y
3164	DD015702	F WB	Carp	5.66	9.94	ND	24.87	3.53	50.79	4.61	1.59	4.14	2.41	2.09	ND	ND	3.99	ND	17.08	Y
3165	DD015703	F PF	Lm Bass	ND	ND	ND	2.92	ND	4.41	0.43	ND	0.33	2.22	ND	ND	1.68	1.66	ND	0.95	Y
3165	DD015704	F WB	Redhorse Sucker	1.53	5.07	3.52	12.40	ND	14.19	4.37	0.84	3.04	6.65	ND	ND	5.40	6.36	ND	9.07	Y
3165	QD031788	L PF	Lm Bass	0.48	ND	ND	3.09	ND	4.47	ND	ND	0.30	1.91	ND	ND	1.12	1.45	ND	1.30	Y
3166	DD015705	F PF	Walleye	ND	ND	ND	ND	ND	0.86	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	Y
3166	DD015706	F WB	White Sucker	ND	ND	ND	0.40	ND	1.24	1.88	ND	0.23	ND	ND	ND	ND	ND	ND	0.36	Y
3167	DD015707	F PF	Lm Bass	2.22	3.59	ND	6.40	ND	10.52	ND	ND	ND	3.74	1.21	ND	3.92	10.12	ND	5.75	Y
3167	DD015708	F WP	Bluegill	7.3	11.5	14.3	37.3	8.5	111.9	ND	1.3	ND	13.8	7.0	ND	19.3	58.3	0.5	24.84	Y
3167	QD040588	L PF	Lm Bass	2.83	4.44	1.88	7.28	ND	14.49	ND	ND	ND	3.61	ND	ND	4.67	10.68	ND	7.05	Y
3167	SD015708	F WP	Bluegill	6.72	11.01	11.80	44.20	7.87	110.12	0.34	1.03	0.79	1.50	5.24	ND	0.87	9.43	0.94	15.20	
3168	DD015711	F WB	Carp	8.84	2.60	3.64	10.96	1.35	QR 39	14.62	1.19	2.10	0.52	ND	ND	ND	QR ND	QR ND	14.36	
3168	DD015712	F PF	Lm Bass	2.30	ND	ND	ND	ND	0.45	4.90	ND	ND	ND	ND	ND	ND	ND	ND	2.79	
3168	SD015711	F WB	Carp	7.88	2.56	3.85	9.51	ND	34.26	13.94	0.85	1.92	0.33	ND	ND	ND	ND	ND	11.40	
3169	DD015713	F WB	Black Redhorse	ND	ND	QR ND	QR ND	QR ND	QR ND	2.30	ND	ND	QR ND	QR ND	QR ND	QR ND	QR ND	QR ND	0.23	
3170	DD015715	F WB	Spotted Sucker	ND	ND	0.39	0.89	0.28	4.55	0.84	ND	ND	ND	ND	ND	ND	0.36	ND	0.29	
3171	DD015717	F WB	Spotted Sucker	ND	ND	ND	ND	ND	0.59	0.49	ND	ND	ND	ND	ND	ND	ND	ND	0.05	
3172	DD015719	F WB	Carp	1.40	QR 1	1.63	3.09	0.86	11.64	9.69	0.92	ND	0.22	0.30	ND	ND	0.23	ND	3.14	
3172	DD015720	F PF	Lm Bass	0.15	ND	ND	ND	ND	0.70	1.37	ND	ND	ND	ND	ND	ND	ND	ND	0.29	
3173	DD015721	F PF	Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3173	DD015722	F WB	Channel Catfish	1.39	0.86	ND	1.69	0.32	2.30	1.61	0.41	1.43	ND	ND	ND	ND	0.25	ND	2.94	
3173	QD070689	L PF	Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3174	DD015723	F PF	Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3174	DD015724	F WB	Channel Catfish	ND	ND	ND	ND	ND	0.36	0.28	ND	ND	ND	ND	ND	ND	ND	ND	0.03	
3175	DD015801	F WB	Channel Catfish	3.31	3.82	0.97	5.50	1.25	6.72	ND	ND	0.65	1.88	ND	ND	0.79	2.73	ND	6.68	Y
3175	DD015802	F PF	Lm Bass	ND	ND	ND	0.31	ND	0.62	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.04	
3176	DD015803	F WB	Spotted Sucker	ND	ND	ND	2.03	ND	1.63	1.54	ND	ND	ND	ND	ND	ND	ND	ND	0.37	Y
3176	DD015804	F PF	Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3177	DD015805	F WB	Carp	ND	ND	0.70	1.74	ND	7.14	1.24	ND	0.34	ND	ND	ND	0.92	1.31	ND	0.71	Y
3177	DD015806	F PF	Lm Bass	ND	ND	ND	ND	ND	0.75	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3178	DD015807	F WB	North Hogsucker	ND	ND	ND	ND	ND	0.74	ND	ND	ND	ND	ND	ND	ND	0.27	ND	0.01	

DIOXIN / FURAN CONCENTRATIONS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
3178	DD015808	F PF	Redeye Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3179	DD015809	F WB	Golden Redhorse	0.31	0.57	ND	1.36	ND	3.23	1.77	ND	ND	1.18	ND	ND	1.25	1.25	ND	1.20	Y
3179	DD015810	F PF	Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3180	DD015812	F PF	Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3181	DD015813	F PF	Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3181	DD015814	F WB	Carp	4.38	2.69	2.84	13.37	2.15	54.47	3.23	ND	4.49	4.17	1.94	ND	2.29	4.51	ND	11.56	Y
3182	DD015815	F PF	Rock Bass	ND	ND	ND	0.51	ND	0.92	8.63	ND	ND	ND	ND	ND	ND	ND	ND	0.92	
3182	DD015816	F WB	Carp	ND	ND	ND	ND	ND	3.23	23.53	1.02	7.02	ND	ND	ND	ND	ND	ND	5.95	Y
3183	DD015817	F WB	Carp	4.38	0.93	ND	ND	ND	7.76	3.05	1.36	3.83	2.47	0.95	ND	0.57	1.40	ND	7.62	Y
3183	DD015818	F PF	Sauger	0.67	ND	ND	ND	ND	0.59	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.68	
3184	DD015819	F WB	Carp	3.13	5.13	5.98	11.09	2.98	53.19	ND	ND	ND	1.79	ND	ND	0.81	1.53	ND	8.51	Y
3184	DD015820	F PF	White Crappie	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3185	DD015821	F WB	Channel Catfish	4.14	12.27	7.94	50.77	9.49	105.15	0.32	ND	ND	16.45	2.96	ND	11.85	29.41	ND	21.60	Y
3185	DD015822	F PF	Lm Bass	1.50	1.81	0.81	8.74	0.99	22.15	0.26	0.33	0.29	0.72	0.68	ND	ND	1.98	ND	4.03	
3185	SD015821	F WB	Channel Catfish	3.97	12.09	9.37	51.84	8.96	106.52	0.28	0.49	4.76	2.70	2.67	ND	1.14	7.76	0.69	13.56	
3186	DD015823	F PF	Spot	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3186	DD015824	F WP	Southern Flounder	0.18	ND	ND	0.50	ND	1.47	0.23	ND	ND	ND	ND	ND	ND	ND	ND	0.27	
3187	DD015902	F WP	Summer Flounder	ND	ND	ND	0.67	0.34	3.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.13	
3188	DD015903	F WB	Carp	ND	2.83	2.08	5.48	0.77	11.49	4.13	1.18	2.79	1.50	1.12	ND	0.80	1.27	ND	4.58	Y
3188	DD015904	F PF	Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3189	DD015905	F WB	Carp	ND	0.76	QR .6	QR .9	QR ND	QR 4	1.24	ND	0.54	QR .8	QR ND	QR ND	QR .6	0.78	ND	0.78	Y
3189	DD015906	F PF	Lm Bass	0.84	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.84	
3190	DD015907	F WB	Carp	0.60	1.02	1.13	2.56	0.48	10.75	3.58	ND	0.80	ND	ND	ND	0.90	1.66	ND	2.50	Y
3190	DD015908	F PF	Lm Bass	5.35	ND	ND	ND	ND	ND	0.73	ND	ND	ND	ND	ND	ND	ND	ND	5.42	
3191	DJ024003	F WP	Starry Flounder	ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3191	DJ024005	M	Soft Shell Clams	ND	ND	ND	ND	ND	1.70	1.90	ND	ND	ND	ND	ND	ND	0.29	ND	0.21	
3192	DJ024007	F WP	Starry Flounder	0.45	ND	ND	ND	ND	0.69	9.06	ND	0.23	ND	ND	ND	ND	0.56	ND	1.48	Y
3192	DJ024009	M	Soft Shell Clams	ND	ND	ND	ND	ND	2.35	12.97	ND	ND	ND	ND	ND	ND	0.49	ND	1.33	
3192	QD020789	L	Soft Shell Clams	ND	ND	ND	ND	ND	2.10	13.18	ND	ND	ND	ND	ND	ND	0.38	ND	1.34	
3193	DC039001	F PF	Sm Bass	0.52	ND	ND	0.48	ND	2.28	15.86	ND	0.80	ND	ND	ND	ND	ND	ND	2.58	
3193	QD039001	L PF	Sm Bass	ND	ND	ND	ND	ND	2.82	19.28	ND	1.02	ND	ND	ND	ND	ND	ND	2.47	
3195	DH020104	F WB	Carp	ND	ND	ND	ND	ND	1.79	ND	ND	ND	ND	ND	ND	ND	0.25	ND	0.02	
3195	DH020105	F WB	Chub	2.33	0.98	ND	0.76	ND	2.24	7.71	ND	0.73	ND	ND	ND	ND	0.24	ND	4.06	
3196	DH020108	F WB	Sucker	ND	0.28	0.16	0.58	ND	2.26	0.18	ND	ND	0.96	ND	ND	0.67	0.95	ND	0.43	Y
3197	DH020110	F WB	Sucker	ND	ND	ND	ND	ND	0.44	0.75	ND	ND	ND	ND	ND	ND	ND	ND	0.08	
3198	DH020111	F WB	Sucker	1.53	0.74	ND	0.63	ND	1.69	9.36	0.38	0.66	ND	ND	ND	ND	ND	ND	3.26	Y
3199	DH020101	F WB	Carp	0.25	0.46	ND	0.58	0.25	2.21	0.43	ND	ND	ND	ND	ND	ND	0.32	ND	0.63	
3199	DH020103	F WB	Carp	ND	ND	ND	ND	ND	0.74	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3200	DH020112	F WB	Sucker	0.56	ND	ND	ND	ND	0.74	3.64	ND	0.34	ND	ND	ND	ND	ND	ND	1.10	Y
3201	DJ024012	F WB	Carp	7.66	7.83	2.93	24.79	3.36	91.72	1.82	1.65	4.81	2.23	3.62	ND	0.80	8.88	ND	19.02	
3203	DJ024018	F WB	Carp	2.86	3.33	ND	8.68	1.09	13.27	4.10	0.57	2.19	2.88	0.91	ND	1.85	2.88	ND	7.76	Y

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
				DIOXIN / FURAN CONCENTRATIONS, pg/g																
3205	DJ024024	M	Crayfish (whole)	ND	ND	ND	ND	ND	0.49	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3206	DJ022301	M	Crayfish	2.61	3.75	ND	10.05	1.42	34.42	48.14	54.32	19.02	18.85	10.15	0.23	0.87	6.44	1.76	26.11	
3206	DJ024102	F PF	Lm Bass	0.74	ND	ND	0.82	ND	0.43	1.09	ND	0.34	ND	ND	ND	ND	0.24	ND	1.11	
3206	DJ024103	F WB	Sucker	2.25	3.31	1.10	4.06	0.61	16.57	3.35	0.91	2.27	3.02	ND	ND	1.16	2.66	ND	6.61	Y
3208	DJ024109	F WB	Sucker	ND	ND	ND	ND	ND	0.56	1.69	ND	ND	ND	ND	ND	ND	ND	ND	0.17	
3212	DJ024121	F WB	Carp	0.70	ND	ND	ND	ND	0.77	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.71	
3212	QD050388	L WB	Carp	0.87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.87	
3216	DJ023707	F PF	Squawfish	1.28	0.95	ND	0.80	ND	0.90	9.03	0.51	0.59	ND	ND	ND	ND	ND	ND	3.07	Y
3216	DJ023708	F WB	Sucker	2.57	0.68	ND	0.90	0.18	5.86	11.38	0.28	0.44	ND	ND	ND	ND	0.76	ND	4.46	
3216	QD091688	L WB	Sucker	2.01	0.55	ND	0.77	0.19	4.66	10.27	ND	0.43	ND	ND	ND	ND	0.65	ND	3.68	
3217	DJ023709	F PF	Whitefish	4.58	1.56	0.35	1.79	ND	2.47	16.12	ND	0.45	0.60	ND	ND	0.36	0.40	ND	7.54	Y
3217	DJ023710	F WB	Sucker	0.76	0.27	ND	ND	ND	0.54	2.43	ND	ND	0.40	ND	ND	0.25	ND	ND	1.21	Y
3218	DJ023711	F PF	Squawfish	1.73	0.78	ND	0.77	ND	2.00	21.63	0.29	0.36	ND	ND	ND	ND	ND	ND	4.57	Y
3218	DJ023712	F WB	Sucker	2.78	ND	ND	0.66	ND	ND	16.39	ND	ND	0.60	ND	ND	ND	0.28	ND	4.55	Y
3219	DJ023713	F WB	White Sturgeon	2.14	ND	ND	ND	ND	0.52	61.58	0.64	0.33	ND	ND	ND	ND	ND	ND	8.50	
3219	DJ023714	F PF	White Sturgeon	0.36	ND	ND	ND	ND	0.37	8.02	ND	ND	ND	ND	ND	ND	ND	ND	1.17	
3220	DJ023902	F PF	Squawfish	1.48	0.49	ND	0.56	ND	1.16	20.12	0.21	ND	ND	ND	ND	ND	ND	ND	3.82	Y
3220	DJ023903	F WB	Bridgelip Sucker	5.23	0.68	ND	ND	ND	2.20	28.34	0.30	0.67	ND	ND	ND	ND	ND	ND	8.78	Y
3220	QD012288	L PF	Squawfish	1.75	ND	ND	ND	ND	ND	20.73	ND	0.26	ND	ND	ND	ND	ND	ND	3.95	Y
3221	DJ022405	F WB	Carp	56.02	1.67	ND	1.34	ND	ND	320.69	3.52	7.32	ND	ND	ND	ND	ND	ND	92.89	
3221	DJ023904	F BF	Channel Catfish	7.92	0.34	ND	0.37	ND	2.70	4.97	ND	1.09	ND	ND	ND	ND	ND	ND	9.20	Y
3221	DJ023905	F WB	Sucker	5.12	0.23	ND	ND	ND	0.33	41.78	ND	0.55	0.20	ND	ND	ND	ND	ND	9.71	Y
3222	DJ023906	F PF	Squawfish	1.14	ND	ND	0.20	ND	ND	11.95	ND	0.21	ND	ND	ND	ND	ND	ND	2.46	Y
3222	DJ023907	F WB	Sucker	2.28	0.32	ND	0.45	ND	1.65	15.95	ND	0.25	ND	ND	ND	ND	0.24	ND	4.22	
3223	DJ023717	F WP	Starry Flounder	1.57	ND	ND	0.42	ND	2.37	11.58	ND	ND	ND	ND	ND	ND	0.26	ND	2.80	Y
3224	DJ023715	M	Soft Shell Clams	ND	ND	ND	1.48	ND	34.14	0.49	ND	ND	0.25	ND	ND	ND	3.06	ND	0.59	
3226	DJ023721	M	Pacific Oysters	ND	ND	ND	ND	ND	ND	1.29	ND	ND	ND	ND	ND	ND	ND	ND	0.13	
3227	DJ023723	M	Pacific Oysters	ND	ND	ND	ND	0.41	7.49	1.74	ND	ND	ND	ND	ND	ND	2.14	ND	0.31	
3231	DJ023911	F WB	Carp	0.79	1.20	ND	2.93	ND	6.88	9.14	0.65	ND	0.42	ND	ND	0.47	0.91	ND	2.80	Y
3234	DH020301	F WP	Squawfish	ND	ND	ND	ND	ND	0.91	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3235	DH020303	F WB	White Sucker	0.33	0.50	ND	0.94	ND	2.77	1.02	ND	0.34	ND	ND	ND	ND	0.20	ND	0.98	
3236	DH020305	F WB	Largescale Sucker	0.53	0.72	0.75	1.00	ND	2.80	1.73	ND	0.64	ND	ND	ND	ND	0.23	ND	1.59	
3236	DH020306	F PF	Brown Trout	ND	0.91	ND	ND	ND	ND	1.42	ND	ND	ND	ND	ND	ND	ND	ND	0.60	
3237	DH020307	F PF	Rainbow Trout	ND	ND	ND	ND	ND	ND	1.67	ND	ND	ND	ND	ND	ND	ND	ND	0.17	
3237	DH020308	F WB	Largescale Sucker	ND	ND	ND	ND	ND	ND	2.98	ND	ND	ND	ND	ND	ND	ND	ND	0.30	
3238	DJ023918	F WP	Dolly Varden	ND	ND	ND	ND	ND	0.79	0.37	ND	ND	ND	ND	ND	ND	ND	ND	0.04	
3238	QD080888	L WP	Dolly Varden	ND	ND	ND	ND	ND	0.77	0.37	ND	ND	ND	ND	ND	ND	ND	ND	0.04	
3241	DJ023924	F WP	Dolly Varden	0.53	ND	ND	0.57	ND	0.58	3.13	ND	ND	ND	ND	ND	ND	ND	ND	0.91	
3244	DJ023622	F WB	Coast Sculpin	ND	ND	ND	ND	ND	1.62	0.45	ND	ND	ND	ND	ND	ND	ND	ND	0.06	
3245	DJ023623	F WP	Spotted Ratfish	ND	ND	ND	ND	ND	0.44	0.22	ND	ND	ND	ND	ND	ND	ND	ND	0.03	
3245	DJ023624	F WP	Flathead Sole	ND	0.24	ND	ND	ND	1.59	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.14	Y

DIOXIN / FURAN CONCENTRATIONS, pg/g

Episode	SCC	Type		Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
3246	DJ022108	F	PF	Red Striped Rockfish	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3246	DJ022109	F	WP	Flathead Sole	ND	ND	ND	ND	ND	0.34	0.35	ND	ND	ND	ND	ND	ND	ND	ND	0.04	
3248	DJ022502	F	WB	Composite Bottom	ND	ND	ND	ND	ND	2.18	0.86	ND	ND	ND	ND	ND	ND	0.23	ND	0.11	Y
3249	DJ022504	F	WB	Sucker	ND	ND	ND	ND	ND	0.86	0.75	ND	ND	ND	ND	ND	ND	ND	ND	0.08	Y
3250	DJ022506	F	WB	Sucker	ND	ND	ND	0.40	ND	2.25	1.95	ND	0.44	ND	ND	ND	ND	0.30	ND	0.48	Y
3252	DJ022510	F	WB	Sucker	0.58	ND	ND	ND	ND	0.96	2.31	ND	ND	ND	ND	ND	ND	ND	ND	0.82	
3252	QD082288	L	WB	Sucker	0.48	ND	ND	0.44	ND	0.97	2.19	ND	0.23	ND	ND	ND	ND	ND	ND	0.87	
3256	DJ022517	F	PF	Sm Bass	0.74	ND	ND	ND	ND	0.28	2.75	ND	ND	ND	ND	ND	ND	ND	ND	1.02	
3256	DJ022518	F	WB	Sucker	0.46	ND	ND	ND	ND	0.73	2.62	ND	ND	ND	ND	ND	ND	0.23	ND	0.73	Y
3258	DC038901	F	PF	Spot	1.52	ND	ND	ND	ND	ND	5.05	1.76	3.96	ND	ND	ND	ND	ND	ND	4.09	
3258	DC038902	F	WB	Croaker	ND	ND	ND	0.87	ND	2.80	ND	0.64	ND	0.25	ND	ND	0.33	0.40	ND	0.21	Y
3259	DB000466	F	WB	Goldfish	1.20	QR 1	ND	4.07	0.46	5.87	0.93	ND	2.72	0.59	0.51	ND	ND	0.42	ND	3.28	
3259	DB069101	F	WB	Sucker	1.89	ND	0.51	1.37	ND	2.40	24.73	0.96	5.53	ND	ND	ND	ND	0.23	ND	7.39	
3260	DB000493	F	WB	Carp	0.96	ND	ND	ND	ND	2.91	6.65	0.42	0.52	ND	ND	ND	ND	ND	ND	1.94	
3261	DY026002	F	WB	Striped Mullet	0.76	ND	0.48	1.15	0.31	4.17	3.48	0.71	1.54	0.70	ND	ND	0.94	1.54	ND	2.33	Y
3262	DY026004	F	WB	Tilapia Tilapia	0.33	ND	ND	0.81	ND	15.08	ND	ND	ND	ND	ND	ND	ND	3.48	ND	0.60	
3264	DY022602	F	WB	Hornyhead Turbot	4.08	3.99	ND	4.93	ND	3.25	3.49	ND	2.36	ND	ND	ND	ND	0.35	ND	8.13	
3266	DY022702	F	WB	Channel Catfish	0.47	ND	ND	ND	ND	1.22	0.61	ND	0.76	ND	ND	ND	ND	ND	ND	0.92	
3267	DY022101	F	PF	Rainbow Trout	11.74	ND	ND	ND	ND	ND	106.94	0.35	0.54	ND	ND	ND	ND	ND	ND	22.72	Y
3267	DY022102	F	WB	Sacramento Sucker	6.35	ND	ND	ND	ND	0.64	61.40	ND	ND	ND	ND	ND	ND	ND	ND	12.50	
3267	QD020288	L	PF	Rainbow Trout	11.26	ND	ND	ND	ND	1.69	99.67	ND	0.60	ND	ND	ND	ND	ND	ND	21.54	Y
3269	DY022106	F	WB	Channel Catfish	ND	0.91	ND	1.33	ND	4.08	0.36	ND	0.73	ND	ND	ND	ND	ND	ND	1.03	
3270	DY022107	F	PF	Squawfish	6.84	0.83	ND	0.63	ND	ND	35.81	ND	0.54	ND	ND	ND	ND	ND	ND	11.17	
3270	DY022108	F	WB	Sucker	6.45	ND	ND	ND	ND	0.62	55.75	ND	ND	ND	ND	ND	ND	ND	ND	12.03	
3270	SY022108	F	WB	Sucker	5.60	ND	ND	ND	ND	0.47	44.52	ND	0.30	ND	ND	ND	ND	ND	ND	10.08	
3271	DY022110	F	WB	Sucker	0.21	ND	ND	0.42	ND	1.22	0.27	ND	ND	ND	ND	ND	ND	ND	ND	0.29	
3272	DY022111	F	PF	Leopard Shark	ND	ND	ND	0.47	ND	1.70	0.52	ND	ND	ND	ND	ND	ND	ND	ND	0.12	
3272	DY022112	F	WB	White Surfperch	1.27	2.98	ND	2.46	0.36	4.84	17.98	1.82	3.90	ND	0.42	ND	ND	ND	ND	6.97	
3273	DY022113	F	WB	Sculpin	0.63	ND	ND	0.71	ND	1.47	0.64	0.47	0.49	0.76	ND	ND	0.70	0.67	ND	1.20	Y
3273	DY022114	F	WB	Surf Smelt	ND	ND	ND	ND	ND	0.54	1.06	ND	ND	ND	ND	ND	ND	ND	ND	0.11	
3274	DY022116	F	WB	Sculpin	ND	ND	ND	ND	ND	0.73	0.39	ND	ND	ND	ND	ND	ND	ND	ND	0.05	
3275	DY022118	F	WB	Sucker	ND	ND	ND	ND	ND	0.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3276	DY022119	F	WB	Walleye	0.68	0.43	ND	0.78	0.16	2.42	1.54	ND	0.22	ND	ND	ND	ND	0.28	ND	1.28	
3276	DY022120	F	PF	Brown Rockfish	ND	ND	ND	0.31	ND	3.12	0.61	ND	0.16	ND.	ND	ND	ND	0.17	ND	0.20	Y
3278	DY022124	F	WB	Sacramento Sucker	ND	ND	ND	ND	ND	0.74	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3281	DY022205	F	WB	Sucker	ND	ND	ND	ND	ND	0.72	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3282	DY022207	F	WB	Carp	ND	ND	ND	ND	ND	ND	1.57	ND	0.53	ND	ND	ND	ND	ND	ND	0.42	
3283	DY022209	F	WB	Carp	0.93	0.78	ND	0.48	ND	1.32	3.96	0.50	0.95	0.22	ND	ND	ND	0.26	ND	2.30	
3285	DY022212	F	WP	Stingray	1.91	1.65	0.81	3.15	0.96	8.69	12.90	2.67	7.30	0.66	ND	ND	0.39	0.46	ND	8.50	
3285	DY022213	F	WB	Diamond Turbot	ND	2.40	ND	2.34	0.63	5.05	0.79	ND	1.85	ND	0.63	ND	ND	ND	ND	2.61	Y
3286	DY022215	F	WB	Carp	1.59	1.48	0.90	3.26	0.38	5.33	1.81	0.53	1.35	ND	0.56	ND	ND	0.53	ND	3.78	Y

				DIOXIN / FURAN CONCENTRATIONS, pg/g																
Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
3287	DY022216	F	WB Tilapia Zilli	0.54	ND	ND	ND	ND	7.30	3.61	ND	ND	ND	ND	ND	ND	1.35	ND	0.99	Y
3288	DY022218	F	WB Sucker	ND	ND	ND	ND	ND	0.56	1.95	ND	0.30	ND	ND	ND	ND	ND	ND	0.35	
3288	QD060188	L	WB Sucker	ND	ND	ND	ND	ND	0.43	2.01	ND	0.35	ND	ND	ND	ND	ND	ND	0.38	
3289	DY022219	F	WP Bocaccio	ND	ND	ND	ND	ND	2.74	0.76	ND	ND	ND	ND	ND	ND	ND	ND	0.10	
3289	DY022220	F	WB Sculpin	ND	ND	ND	ND	ND	0.68	0.84	ND	ND	ND	ND	ND	ND	ND	ND	0.09	
3290	DY022221	F	PF Redear Sunfish	ND	ND	ND	ND	ND	1.44	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3290	DY022222	F	WB Blackfish	2.39	6.38	2.60	7.92	1.29	15.80	22.07	1.97	4.75	3.90	1.29	ND	1.81	3.29	ND	12.33	Y
3294	DJ022111	F	WP True Cod	ND	ND	ND	ND	ND	ND	0.94	ND	ND	ND	ND	ND	ND	ND	ND	0.09	
3294	DJ022113	M	Mussel	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3295	DJ022114	F	WP Atlantic Salmon	ND	ND	ND	0.25	ND	1.81	1.44	ND	ND	ND	ND	ND	ND	ND	ND	0.19	Y
3296	DB040101	F	WB White Sucker	ND	ND	ND	ND	ND	0.42	2.90	ND	0.58	ND	ND	ND	ND	ND	ND	0.58	
3297	DB041501	F	WB Carp	6.40	1.97	ND	1.63	0.24	2.13	8.82	6.39	22.67	37.92	13.84	ND	ND	11.76	0.47	25.43	
3297	DB041504	F	PF Sm Bass	ND	ND	ND	ND	ND	0.59	ND	ND	1.85	1.34	0.35	ND	ND	ND	ND	1.10	
3297	SB041501	F	WB Carp	5.42	1.86	0.55	1.44	ND	1.62	7.14	5.83	20.80	36.53	10.77	ND	0.85	10.22	ND	10.30	
3298	DB041601	F	WB Carp	3.49	4.34	0.88	5.51	1.21	17.01	2.62	1.04	3.89	1.07	1.83	ND	0.83	3.02	ND	9.25	
3298	DB041604	F	PF Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3298	QD112988	L	PF Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3299	DB040601	F	WB White Sucker	1.35	1.61	0.36	0.83	ND	0.88	4.65	5.50	42.58	30.77	8.31	ND	1.42	6.38	0.48	28.43	
3299	DB040604	F	PF Lm Bass	1.24	0.49	ND	ND	ND	0.66	1.32	0.85	5.48	3.08	ND	ND	ND	0.58	ND	4.72	
3300	DB040201	F	WB White Sucker	9.83	1.13	ND	ND	ND	0.58	7.33	1.20	4.94	1.46	ND	ND	ND	0.32	ND	13.81	
3300	DB040204	F	PF Sm Bass	2.40	ND	ND	ND	ND	ND	0.70	ND	ND	ND	ND	ND	ND	ND	ND	2.47	
3300	SB040201	F	WB White Sucker	8.27	0.99	ND	ND	ND	0.42	7.18	1.02	4.80	1.32	ND	ND	ND	ND	ND	10.08	
3301	DB041101	F	WB Carp	33.70	6.92	2.43	12.17	1.57	17.82	7.30	6.38	27.29	15.44	12.72	ND	1.37	9.26	ND	56.69	
3301	DB041104	F	PF Northern Pike	0.74	ND	ND	ND	ND	ND	1.67	ND	ND	ND	ND	ND	ND	ND	ND	0.91	
3301	QD092088	L	WB Carp	35.07	6.91	ND	13.07	1.89	18.99	7.92	6.16	26.30	15.98	13.95	ND	1.54	9.56	ND	57.70	
3301	SB041101	F	WB Carp	32.01	6.17	2.12	11.83	ND	16.97	7.37	5.60	26.09	16.73	10.07	ND	1.57	8.46	ND	39.87	
3302	DB041901	F	WB White Sucker	8.76	0.96	ND	ND	ND	0.68	6.53	0.92	4.36	0.78	ND	ND	ND	0.56	ND	12.21	
3302	DB041904	F	PF Lm Bass	0.98	ND	ND	ND	ND	0.39	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.98	
3303	DB042301	F	WB White Sucker	1.15	0.25	ND	0.63	ND	4.11	9.10	ND	0.48	ND	ND	ND	ND	0.99	ND	2.54	
3304	DB041001	F	PF Northern Pike	0.70	ND	ND	ND	ND	ND	0.91	ND	ND	ND	ND	ND	ND	ND	ND	0.79	
3304	DB041004	F	WB White Sucker	1.70	0.93	ND	0.87	ND	1.67	22.64	0.93	1.88	ND	ND	ND	ND	ND	ND	5.52	
3305	DB042001	F	WB Channel Catfish	12.82	3.22	ND	2.07	ND	1.57	3.00	0.57	8.86	1.15	0.65	ND	ND	ND	ND	19.59	
3305	DB042004	F	PF Sm Bass	ND	ND	ND	ND	ND	ND	2.43	ND	ND	ND	ND	ND	ND	ND	ND	0.24	
3306	DB041801	F	WB White Sucker	1.01	ND	ND	ND	ND	0.84	12.34	0.65	2.20	ND	ND	ND	ND	ND	ND	3.38	
3307	DB042101	F	WB White Sucker	1.38	ND	ND	ND	ND	0.81	8.67	ND	0.71	ND	ND	ND	ND	ND	ND	2.61	
3307	QD100588	L	WB White Sucker	1.30	ND	ND	ND	ND	ND	9.73	0.31	0.75	ND	ND	ND	ND	ND	ND	2.66	
3308	DB040001	F	PF Northern Pike	ND	ND	ND	ND	ND	ND	0.63	ND	ND	ND	ND	ND	ND	ND	ND	0.06	
3308	QD030689	L	PF Northern Pike	ND	ND	ND	ND	ND	ND	0.68	ND	ND	ND	ND	ND	ND	ND	ND	0.07	
3309	DB041301	F	WB White Sucker	0.24	ND	ND	0.42	ND	4.78	1.41	ND	ND	ND	ND	ND	ND	1.88	ND	0.49	
3310	DC032701	F	WB Bullhead	1.20	1.38	0.61	2.71	0.39	3.60	2.16	1.39	4.21	ND	1.00	ND	ND	ND	ND	4.79	
3310	DC032702	F	PF Walleye	ND	ND	ND	ND	ND	0.42	0.69	ND	ND	ND	ND	ND	ND	ND	ND	0.07	

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	DPE TEC
				DIOXIN / FURAN CONCENTRATIONS, pg/g															
3311	DC032801	F	WB Redhorse Sucker	ND	ND	ND	ND	ND	0.53	6.42	0.64	0.61	ND	ND	ND	ND	ND	ND	0.98
3311	DC032802	F	PF Sm Bass	ND	ND	ND	ND	ND	ND	1.05	ND	ND	ND	ND	ND	ND	ND	ND	0.10
3312	DC033101	F	WB Redhorse Sucker	ND	0.36	ND	0.41	ND	1.72	8.30	0.51	0.83	ND	ND	ND	ND	ND	ND	1.51
3312	DC033102	F	PF Sm Bass	ND	ND	ND	ND	ND	0.42	2.18	ND	ND	ND	ND	ND	ND	ND	ND	0.22
3313	DC033201	F	WB Redhorse Sucker	3.65	0.41	ND	0.37	ND	1.45	13.51	0.23	0.71	ND	ND	ND	ND	ND	ND	5.62
3313	DC033202	F	PF Sm Bass	0.55	ND	ND	ND	ND	0.48	0.52	ND	ND	ND	ND	ND	ND	ND	ND	0.61
3314	DC033301	F	WB Channel Catfish	56.34	1.02	ND	1.95	0.27	4.37	8.20	1.76	5.70	1.00	0.59	ND	0.27	0.79	0.50	61.07
3314	DC033302	F	PF White Bass	7.20	ND	ND	ND	ND	0.37	5.84	0.40	0.89	0.22	ND	ND	ND	ND	ND	8.27
3314	SC033301	F	WB Channel Catfish	47.10	0.91	0.34	1.16	ND	3.48	6.97	1.35	5.14	0.93	ND	ND	ND	ND	ND	48.97
3314	SC033302	F	PF White Bass	6.22	ND	ND	ND	ND	ND	5.24	0.33	0.58	ND	ND	ND	ND	ND	ND	6.84
3315	DC033401	F	WB Carp	ND	0.59	0.42	0.62	0.25	4.87	1.52	0.38	0.63	ND	ND	ND	ND	ND	ND	0.96
3316	DC033501	F	WB White Sucker	5.79	0.57	ND	0.37	ND	1.52	30.48	1.48	2.13	0.48	0.35	ND	ND	ND	ND	10.40
3316	DC033502	F	PF Brown Trout	3.55	ND	ND	ND	ND	0.45	3.89	ND	0.78	0.28	ND	ND	ND	ND	ND	4.36
3317	DC033601	F	WB White Sucker	58.21	0.32	ND	0.25	ND	0.37	171.06	0.39	0.63	ND	ND	ND	ND	ND	ND	75.84
3317	DC033602	F	WP Pumpkinseed	35.50	ND	ND	ND	ND	0.43	88.06	ND	0.28	ND	ND	ND	ND	ND	ND	44.45
3317	SC033601	F	WB White Sucker	46.57	ND	ND	ND	ND	ND	144.02	0.35	0.56	ND	ND	ND	ND	ND	ND	61.07
3317	SC033602	F	WP Pumpkinseed	29.85	ND	ND	ND	ND	0.23	73.02	0.20	0.18	ND	ND	ND	ND	ND	ND	37.19
3318	DC033701	F	WB White Sucker	1.71	ND	ND	0.18	ND	0.69	30.70	0.31	0.46	ND	ND	ND	ND	ND	ND	5.05
3318	DC033702	F	PF Rock Bass	0.41	ND	ND	ND	ND	0.38	4.52	ND	ND	ND	ND	ND	ND	ND	ND	0.87
3319	DB041401	F	WP Winter Flounder	ND	ND	ND	ND	ND	0.61	13.73	1.74	0.64	ND	ND	ND	ND	ND	ND	1.79
3319	QD063088	L	WP Winter Flounder	1.2	ND	ND	0.4	ND	0.8	13.3	1.9	0.7	ND	ND	ND	ND	ND	ND	3.02
3320	DB041412	F	WP Bluefish	0.75	ND	QR ND	QR ND	QR ND	QR ND	1.93	1.06	0.93	ND	ND	ND	ND	QR ND	QR ND	1.46
3321	DB040401	F	WP Winter Flounder	2.39	0.37	ND	0.34	ND	0.65	9.09	0.87	1.15	ND	ND	ND	ND	ND	ND	4.14
3322	DB040412	F	WP Bluefish	1.16	ND	ND	ND	ND	ND	0.67	0.42	0.75	ND	ND	ND	ND	ND	ND	1.62
3323	DB041206	F	WP Winter Flounder	0.69	ND	ND	ND	ND	ND	4.18	ND	ND	ND	ND	ND	ND	ND	ND	1.11
3324	DB041252	F	WP Bluefish	1.74	ND	ND	ND	ND	0.72	1.65	0.48	0.88	ND	ND	ND	ND	ND	ND	2.38
3325	DB041218	F	WP Bluefish	0.71	ND	ND	ND	ND	1.31	1.27	0.42	0.72	ND	ND	ND	ND	ND	ND	1.23
3325	QD082988	L	WP Bluefish	0.52	ND	ND	ND	ND	0.60	1.40	0.42	0.66	ND	ND	ND	ND	ND	ND	1.02
3326	DB041208	F	WP Bluefish	1.07	ND	ND	ND	ND	0.60	1.47	0.46	0.70	ND	ND	ND	ND	ND	ND	1.60
3327	DB040301	F	WP Bluefish	2.92	ND	ND	ND	ND	0.53	2.72	0.72	2.46	ND	ND	ND	ND	ND	ND	4.46
3327	DB040315	F	WP Bluefish				0.40		0.48		0.84		ND	ND	ND	ND		ND	5.31
3328	DD029111	F	WB Carp	30.04	0.88	0.54	1.11	ND	3.64	13.24	0.82	4.45	ND	ND	ND	ND	ND	ND	34.27
3328	DD029112	F	PF Lm Bass	8.78	ND	ND	ND	ND	0.82	22.04	ND	0.30	ND	ND	ND	ND	ND	ND	11.14
3328	SD029111	F	WB Carp	23.83	0.72	ND	0.75	ND	2.96	10.89	ND	4.05	0.36	ND	ND	ND	ND	ND	25.72
3328	SD029112	F	PF Lm Bass	7.24	ND	ND	ND	ND	0.47	21.59	ND	0.32	ND	ND	ND	ND	ND	ND	9.43
3329	DD016003	F	WB Bowfin	13.19	0.65	ND	0.71	ND	ND	40.76	1.32	2.21	0.87	1.55	ND	0.32	1.20	ND	19.12
3329	SD016003	F	WB Bowfin	11.46	0.54	ND	0.50	ND	0.61	39.89	1.20	2.04	1.02	1.39	ND	ND	1.08	ND	16.09
3330	DD029109	F	PF Suwannee Bass	ND	ND	ND	ND	ND	1.72	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02
3330	DD029110	F	WB Spotted Sucker	1.21	1.79	ND	1.12	0.22	1.35	1.41	ND	0.30	ND	ND	ND	ND	ND	ND	2.54
3330	DD029423	F	PF Black Crappie	ND	ND	ND	ND	ND	0.43	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3331	DD016001	F	WB Brown Bullhead	5.96	ND	ND	0.27	ND	1.37	1.18	ND	ND	ND	ND	ND	ND	ND	ND	6.12

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
				DIOXIN / FURAN CONCENTRATIONS, pg/g																
3331	DD016002	F	PF Lm Bass	4.37	ND	ND	ND	ND	1.09	0.58	ND	ND	ND	ND	ND	ND	ND	ND	4.44	
3331	DD016007	F	WB Carp	24.04	1.17	ND	ND	0.37	13.42	7.84	0.40	ND	ND	ND	ND	1.10	2.75	ND	25.74	Y
3331	DD016008	F	BF White Catfish	8.94	0.55	ND	0.76	0.18	1.68	1.48	ND	0.27	ND	ND	ND	ND	ND	ND	9.61	
3331	SD016008	F	BF White Catfish	8.10	0.61	ND	0.68	ND	0.96	1.57	ND	0.21	ND	ND	ND	ND	ND	ND	8.61	
3332	DD016009	F	WP Spotted Drum	0.63	1.12	0.23	0.90	0.29	1.40	2.95	0.30	0.50	ND	ND	ND	ND	ND	ND	1.91	
3332	DD016010	F	PF Caranx Hippos	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3333	DD016011	F	PF Bluefish	0.77	0.70	ND	ND	ND	0.69	2.50	ND	0.34	ND	ND	ND	ND	ND	ND	1.55	
3333	DD016012	F	WB Sea Catfish	3.13	0.54	0.24	1.06	0.25	1.06	1.62	ND	0.43	ND	ND	ND	ND	ND	ND	3.94	
3333	DD029108	F	PF Weakfish	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3333	QD121588	L	PF Bluefish	0.98	0.78	ND	0.81	ND	0.72	2.50	ND	0.40	ND	ND	ND	ND	ND	ND	1.91	
3334	DD016013	F	WB Sea Catfish	3.50	4.04	1.24	8.02	1.55	5.05	0.71	ND	ND	ND	ND	ND	ND	ND	ND	6.72	
3334	DD016014	F	BF Striped Mullet	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3335	DD016015	F	WP Spot	24.01	2.41	ND	2.53	0.71	2.72	40.03	4.52	5.15	1.41	1.09	ND	0.97	0.39	ND	32.72	
3335	DD016016	F	PF Spotted Bass	ND	ND	ND	ND	ND	0.45	1.00	0.65	ND	ND	ND	ND	ND	ND	ND	0.14	
3335	DD029101	F	WP Red Drum	0.82	ND	ND	ND	0.29	1.12	4.99	3.20	ND	0.26	ND	ND	0.23	ND	ND	1.57	
3335	DD029102	F	WB Southern Flounder	0.71	0.39	ND	ND	ND	2.42	0.84	ND	ND	ND	ND	ND	ND	QR ND	QR ND	1.01	
3335	DD029103	F	WP Sheepshead	40.25	2.57	ND	1.52	ND	3.76	9.21	1.40	6.06	0.71	0.49	ND	0.71	ND	ND	45.94	
3335	QD081588	L	WP Southern Flounder	0.70	0.36	ND	0.75	0.32	2.47	0.92	ND	ND	ND	ND	ND	ND	ND	ND	1.10	
3335	SD016015	F	WP Spot	20.11	2.08	ND	1.66	0.59	2.25	39.06	3.61	4.90	1.43	0.77	ND	ND	0.30	ND	26.02	
3336	DD016004	F	WP Black Drum	ND	ND	ND	0.43	0.23	1.66	0.90	ND	ND	ND	ND	ND	ND	0.21	ND	0.17	
3336	DD016005	F	PF Striped Mullet	2.70	ND	ND	ND	ND	1.07	11.62	ND	ND	ND	ND	ND	ND	ND	ND	3.87	
3336	DD016006	F	WP Sheepshead	3.53	1.32	ND	ND	0.24	1.00	4.88	ND	ND	ND	ND	ND	ND	ND	ND	4.71	
3336	DD016017	F	WP Red Drum	ND	ND	ND	ND	ND	0.29	0.75	ND	ND	ND	ND	ND	ND	ND	ND	0.08	
3336	DD016018	F	PF Spotted Seatrout	ND	ND	ND	ND	ND	0.72	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3336	QD092288	L	PF Spotted Seatrout	ND	ND	ND	ND	ND	0.58	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3337	DD016019	F	WB Spotted Sucker	4.62	1.93	1.18	2.53	0.86	5.34	8.09	ND	0.50	ND	ND	ND	ND	0.36	ND	7.16	Y
3337	DD016020	F	PF Lm Bass	0.88	ND	ND	ND	ND	0.90	0.34	ND	ND	ND	ND	ND	ND	ND	ND	0.92	
3337	QD051388	L	WB Spotted Sucker	4.88	2.23	1.61	3.36	0.99	5.41	8.89	ND	0.75	ND	ND	ND	ND	0.27	ND	7.91	Y
3338	DD016021	F	PF Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3338	DD016022	F	WB Spotted Sucker	1.72	1.85	ND	7.08	0.40	11.03	5.87	ND	1.04	ND	ND	ND	ND	0.89	ND	4.62	
3338	DD029107	F	PF Chain Pickerel	0.83	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.83	
3339	DD016023	F	WB Carp	4.75	1.84	1.40	3.15	0.68	20.03	6.46	ND	2.18	1.28	0.86	ND	0.23	0.74	ND	8.37	
3339	DD016024	F	PF White Bass	1.42	0.28	ND	0.25	ND	1.79	2.91	0.40	0.74	ND	ND	ND	ND	ND	ND	2.28	
3339	QD016023	L	WB Carp	4.48	1.74	1.60	3.04	ND	17.57	6.79	0.86	2.15	1.13	0.75	ND	ND	0.78	ND	7.98	
3340	DD029113	F	PF Lm Bass	3.77	ND	ND	ND	ND	ND	0.31	ND	ND	ND	ND	ND	ND	ND	ND	3.80	
3340	DD029114	F	WB Channel Catfish	98.88	3.52	1.42	3.70	0.98	5.38	10.19	0.21	1.93	ND	ND	ND	0.19	0.39	ND	103.32	
3340	SD029114	F	WB Channel Catfish	82.72	3.33	ND	3.12	0.67	4.94	10.28	ND	1.83	ND	ND	ND	ND	ND	ND	85.75	
3341	DD016103	F	PF Lm Bass	7.75	ND	ND	ND	ND	ND	14.90	0.23	0.31	ND	ND	ND	ND	ND	ND	9.41	
3341	DD016104	F	WB Catfish	34.40	4.00	2.28	9.54	3.75	23.44	18.06	ND	3.25	ND	ND	ND	ND	ND	ND	41.62	
3341	QD092788	L	PF Lm Bass	6.10	ND	ND	ND	ND	ND	10.92	ND	0.26	ND	ND	ND	ND	ND	ND	7.32	
3341	SD016103	F	PF Lm Bass	6.68	ND	ND	ND	ND	ND	12.81	ND	ND	ND	ND	ND	ND	ND	ND	7.96	

DIOXIN / FURAN CONCENTRATIONS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
3341	SD016104	F	WB Catfish	31.20	3.44	1.83	9.51	3.07	18.72	15.82	ND	2.80	ND	ND	ND	ND	ND	ND	35.38	
3342	DD016105	F	WB Spotted Sucker	2.70	0.94	0.91	3.13	0.37	5.05	24.54	0.72	1.16	0.30	ND	ND	ND	0.48	ND	6.77	Y
3342	DD016106	F	PF Bluegill	ND	ND	ND	ND	ND	0.44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3343	DD016107	F	WB White Sucker	75.70	2.64	ND	ND	0.51	4.43	143.88	7.20	8.23	1.40	1.34	ND	0.61	0.85	ND	96.32	Y
3343	DD016108	F	PF Redbreast Sunfish	12.01	ND	ND	0.33	ND	1.01	5.94	ND	ND	ND	ND	ND	ND	ND	ND	12.65	
3344	DD016109	F	WB Carp	22.30	2.32	1.76	6.80	1.51	33.06	3.34	0.49	ND	2.07	ND	ND	1.89	2.92	ND	25.58	Y
3344	DD016110	F	PF Lm Bass	0.93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.93	Y
3344	SD016109	F	WB Carp	20.94	2.60	1.68	7.26	1.23	35.39	2.84	0.59	2.28	0.63	0.83	ND	0.27	1.35	ND	23.27	
3345	DD016111	F	WB Redhorse Sucker	5.50	6.71	ND	7.08	2.69	17.20	93.71	ND	0.68	0.36	ND	ND	ND	0.48	ND	19.76	Y
3345	DD016112	F	PF Lm Bass	1.44	1.00	ND	1.14	ND	2.45	1.39	ND	ND	ND	ND	ND	ND	ND	ND	2.22	Y
3345	SD016111	F	WB Redhorse Sucker	5.78	7.69	2.44	8.34	3.44	22.01	105.13	ND	1.00	ND	ND	ND	ND	ND	ND	20.83	
3346	DD016113	F	WB Creek Chubsucker	143.32	1.34	ND	ND	ND	1.74	194.74	1.25	9.18	ND	ND	ND	ND	ND	ND	168.13	Y
3346	DD016114	F	PF Lm Bass	18.24	ND	ND	ND	ND	0.28	20.10	ND	0.48	ND	ND	ND	ND	ND	ND	20.49	
3346	QD042088	L	WB Creek Chubsucker	157.50	1.53	ND	ND	ND	1.18	207.38	1.31	10.32	ND	ND	ND	ND	ND	ND	184.24	Y
3346	SD016113	F	WB Creek Chubsucker	156.34	1.44	0.25	0.67	0.17	2.00	194.16	1.48	12.08	ND	ND	ND	ND	ND	ND	177.88	
3346	SD016114	F	PF Lm Bass	20.88	0.20	ND	ND	ND	0.37	23.20	0.21	0.64	ND	ND	ND	ND	ND	ND	23.39	
3347	DD016115	F	WB Carp	15.31	2.29	2.39	ND	0.95	32.23	4.11	0.33	ND	0.39	ND	ND	0.29	1.48	ND	17.62	
3347	DD016116	F	PF Lm Bass	3.17	0.32	ND	0.34	ND	0.95	2.12	ND	ND	ND	ND	ND	ND	0.13	ND	3.59	
3347	SD016115	F	WB Carp	12.58	1.80	1.80	4.82	0.65	27.62	3.42	0.28	1.51	0.37	0.60	ND	ND	1.31	ND	14.33	
3348	DD016117	F	PF White Perch	18.20	1.65	ND	0.22	ND	1.85	48.49	1.97	1.99	ND	ND	ND	ND	ND	ND	25.01	
3348	DD016118	F	WB Blue Catfish	104.13	12.48	1.11	2.25	0.71	4.59	26.15	4.17	16.58	ND	ND	ND	ND	ND	ND	121.94	
3348	QD072888	L	WB Blue Catfish	107.02	12.19	1.16	2.25	0.81	4.57	27.48	4.47	16.76	0.42	ND	ND	ND	ND	ND	124.98	
3348	SD016117	F	PF White Perch	15.73	1.33	ND	ND	ND	1.18	48.32	1.43	1.60	ND	ND	ND	ND	ND	ND	21.53	
3348	SD016118	F	WB Blue Catfish	87.26	10.81	0.93	1.59	ND	3.81	21.03	3.53	13.10	ND	ND	ND	ND	ND	ND	96.54	
3349	DD016119	F	WB Carp	9.10	1.51	0.97	3.02	0.95	16.84	10.43	0.53	2.03	ND	ND	ND	ND	ND	ND	12.60	
3349	DD016120	F	PF Lm Bass	1.17	ND	ND	ND	ND	0.81	0.56	ND	ND	ND	ND	ND	ND	ND	ND	1.23	
3350	DD016121	F	WB Carp	3.97	4.58	1.35	6.82	1.08	14.12	4.32	0.93	2.05	2.09	0.84	ND	1.39	1.79	ND	9.28	Y
3350	DD016122	F	PF Lm Bass	0.48	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.48	
3350	QD052688	L	WB Carp	3.83	4.40	1.47	6.13	0.91	13.42	3.65	0.97	1.93	1.85	0.60	ND	1.41	1.55	ND	8.80	Y
3351	DD016123	F	PF Rock Bass	0.17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17	
3351	DD016124	F	WB Carp	22.07	2.49	1.91	5.33	0.52	13.53	16.09	1.66	3.47	1.73	1.15	ND	3.03	2.83	ND	28.27	Y
3351	QD021888	L	WB Carp	21.04	1.95	2.48	4.44	ND	13.36	16.89	1.64	3.65	1.10	0.94	ND	3.48	3.53	ND	27.02	Y
3352	DF023723	F	PF Crappie	ND	ND	ND	ND	ND	1.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3352	DF023724	F	WB Carp	1.31	2.55	5.39	6.52	1.88	37.95	0.96	ND	ND	ND	ND	ND	ND	ND	ND	4.44	
3352	QD091388	L	WB Carp	1.23	2.41	4.45	5.77	1.68	32.45	0.86	ND	ND	ND	ND	ND	ND	ND	ND	4.04	
3353	DF024121	F	BF Blue Catfish	5.53	0.92	ND	1.82	0.54	5.21	2.87	ND	0.33	ND	ND	ND	ND	ND	ND	6.73	
3353	DF024122	F	WB Sm Buffalo	5.17	1.68	1.06	1.62	0.53	5.08	19.91	0.33	0.49	ND	ND	ND	ND	ND	ND	8.63	
3353	QD024121	L	BF Blue Catfish	4.83	0.75	ND	1.47	0.47	4.74	2.74	ND	ND	ND	ND	ND	ND	ND	ND	5.72	
3354	DY022301	F	WB Carp	1.07	3.08	2.62	7.54	1.68	25.82	3.44	1.24	2.37	1.85	1.85	ND	ND	3.46	ND	6.05	Y
3354	DY022302	F	PF Lm Bass	ND	0.49	ND	0.43	ND	1.47	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.30	
3355	DY022303	F	WB Carp	13.38	53.95	37.56	89.08	24.76	249.06	1.03	3.08	17.07	19.67	13.14	ND	6.78	25.42	2.57	71.02	Y

Episode	SCC		Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	TEC	DPE
					DIOXIN / FURAN CONCENTRATIONS, pg/g																
3355	DY022304	F	PF	Lm Bass	ND	ND	ND	0.89	ND	1.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.10	Y
3355	SY022303	F	WB	Carp	15.0	58.9	40.0	113.5	24.9	283.1	1.2	3.5	19.6	16.5	14.3	ND	2.8	23.7	5.7	54.7	
3356	DE030201	F	WB	Carp	6.55	9.35	3.00	7.77	1.73	12.44	5.33	3.35	24.81	2.37	3.30	ND	1.29	2.43	ND	26.43	
3356	SE030201	F	WB	Carp	5.50	8.95	2.28	6.69	1.20	11.91	5.27	2.63	21.67	2.31	2.33	ND	0.99	2.01	ND	13.41	
3357	DY022223	F	PF	Squawfish	0.80	0.34	ND	0.44	ND	ND	3.71	ND	0.23	ND	ND	ND	ND	ND	ND	1.50	
3357	DY022224	F	WB	Sacramento Sucker	3.47	0.90	ND	1.40	ND	2.68	35.79	0.24	1.25	ND	ND	ND	ND	ND	ND	8.30	
3360	DD029117	F	WB	Carp	1.09	0.52	ND	1.37	ND	4.73	2.49	ND	0.50	ND	ND	ND	ND	ND	ND	2.03	
3360	DD029118	F	PF	Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3360	QD022389	L	WB	Carp	ND	0.68	ND	2.28	ND	6.74	2.91	ND	0.59	ND	ND	ND	ND	ND	ND	1.22	
3375	DD016305	F	WB	Carp	5.18	5.43	2.88	20.42	2.68	93.06	6.97	2.08	5.93	1.97	3.37	ND	1.01	7.58	0.65	15.91	
3375	DD016306	F	PF	Lm Bass	0.83	ND	ND	0.59	ND	0.85	1.69	ND	0.42	ND	ND	ND	ND	ND	ND	1.28	
3375	QD101188	L	WB	Carp	5.34	5.78	3.21	22.47	2.73	102.97	7.59	2.35	6.68	2.24	4.18	ND	1.23	7.96	0.83	17.17	
3376	DD016307	F	WB	Carp	7.15	10.55	7.53	41.95	5.84	138.06	5.56	2.46	7.16	4.59	5.51	ND	2.03	15.53	0.91	24.97	
3376	DD016308	F	PF	Lm Bass	ND	ND	ND	ND	ND	1.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	
3376	QD050389	L	PF	Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3377	DD016309	F	WB	Carp	7.15	12.38	8.29	47.29	7.77	171.02	8.01	3.09	10.21	4.20	6.17	ND	2.48	16.35	0.97	28.90	
3377	DD016310	F	PF	Lm Bass	ND	ND	ND	ND	ND	ND	0.43	ND	ND	ND	ND	ND	ND	ND	ND	0.04	
3377	SD016309	F	WB	Carp	7.64	12.28	9.93	50.11	10.50	161.29	6.99	2.77	8.64	4.52	5.73	ND	3.72	26.74	ND	18.77	
3378	DD016311	F	WB	Spotted Sucker	0.43	ND	ND	ND	ND	1.91	9.05	ND	0.46	ND	ND	ND	ND	ND	ND	1.58	
3378	DD016312	F	PF	Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3378	DD029115	F	WB	Greyfin Sucker	0.36	0.49	0.30	0.78	ND	2.31	7.13	ND	0.56	ND	ND	ND	ND	ND	ND	1.73	
3378	DD029116	F	BF	Channel Catfish	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
3385	DD016401	F	WB	Redhorse Sucker	1.38	ND	ND	0.55	ND	1.60	3.92	ND	0.19	ND	ND	ND	ND	ND	ND	1.94	
3395	DD016421	F	WB	Redhorse Sucker	49.19	3.04	ND	2.11	0.43	4.81	273.81	4.21	5.15	ND	0.31	ND	ND	ND	ND	81.21	
3395	DD016422	F	PF	Lm Bass	5.48	ND	ND	ND	ND	0.71	10.96	ND	ND	ND	ND	ND	ND	ND	ND	6.58	
3395	SD016421	F	WB	Redhorse Sucker	45.04	2.56	ND	1.56	ND	4.13	245.75	3.38	4.65	ND	ND	ND	ND	0.32	ND	71.77	
3401	DD016509	F	WB	Carp	3.35	1.09	0.74	2.06	0.43	11.70	12.00	1.05	2.04	ND	ND	ND	ND	0.34	ND	6.61	
3401	DD016510	F	PF	Lm Bass	ND	ND	ND	10.67	ND	ND	1.00	ND	ND	ND	ND	ND	ND	ND	ND	1.17	
3403	DD016513	F	WB	River Carpsucker	6.59	6.61	1.38	3.07	0.70	7.59	19.71	1.82	4.47	0.59	0.37	ND	0.51	1.84	0.50	14.95	
3403	DD016514	F	PF	Lm Bass	1.00	ND	ND	ND	ND	ND	2.51	ND	ND	ND	ND	ND	ND	ND	ND	1.25	
3404	DD016515	F	WB	Carp	12.20	4.78	1.11	5.60	1.05	9.51	6.29	0.76	1.97	ND	ND	ND	ND	0.57	ND	17.12	
3404	DD016516	F	PF	Lm Bass	0.67	ND	ND	ND	ND	0.87	1.10	ND	ND	ND	ND	ND	ND	ND	ND	0.79	
3404	SD016515	F	WB	Carp	9.70	4.06	1.14	4.89	0.85	7.70	6.66	0.58	1.76	ND	ND	ND	ND	0.34	ND	12.91	
3409	DB040701	F	WB	Carp	2.32	4.75	3.55	13.63	2.54	34.76	9.19	1.95	11.86	1.65	3.19	ND	0.99	3.15	ND	14.58	
3409	DB040706	F	PF	Lm Bass	ND	ND	ND	ND	ND	0.34	1.01	ND	ND	ND	ND	ND	ND	ND	ND	0.10	
3411	DB040501	F	WB	Redhorse Sucker	1.10	0.70	ND	1.12	ND	1.38	4.83	ND	0.98	0.24	ND	ND	ND	0.31	ND	2.58	
3412	DB040901	F	PF	Sm Bass	1.30	ND	ND	ND	ND	ND	1.16	ND	ND	ND	ND	ND	ND	ND	ND	1.42	
3412	DB040907	F	WB	Carp	28.30	6.94	1.25	6.50	0.86	8.76	2.83	1.89	20.91	8.50	5.88	ND	0.85	3.36	ND	45.11	
3412	SB040907	F	WB	Carp	24.40	5.52	1.21	4.54	0.65	7.67	2.57	1.70	16.80	8.82	4.35	ND	ND	2.62	ND	29.67	
3414	DC036203	F	PF	Sm Bass	ND	ND	ND	ND	ND	ND	ND	ND	0.26	ND	ND	ND	ND	ND	ND	0.13	
3414	DC036204	F	BF	Channel Catfish	0.65	ND	ND	1.10	ND	2.48	0.56	ND	2.73	ND	ND	ND	ND	ND	ND	2.21	

DIOXIN / FURAN CONCENTRATIONS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	DPE TEC
3415	DC036205	F PF	Sm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3415	DC036206	F BF	Channel Catfish	1.85	1.00	0.42	1.28	ND	2.71	1.43	0.47	3.30	ND	ND	ND	ND	ND	ND	4.36
3416	DF025210	F PF	Channel Catfish	3.14	ND	ND	ND	ND	2.19	1.68	ND	ND	ND	ND	ND	ND	ND	ND	3.33
3416	DF025211	F BF	Carp	6.46	ND	ND	ND	ND	2.61	2.97	ND	ND	ND	ND	ND	ND	ND	ND	6.78
3416	DF025212	F PF	Lm Bass	ND	ND	ND	ND	ND	ND	2.16	ND	ND	ND	ND	ND	ND	ND	ND	0.22
3418	DF025007	F PF	Blue Catfish	1.40	ND	ND	ND	ND	ND	0.65	ND	ND	ND	ND	ND	ND	ND	ND	1.47
3419	DC036207	F WB	White Sucker	ND	ND	ND	ND	ND	ND	6.85	ND	ND	ND	ND	ND	ND	ND	ND	0.69
3419	DC036208	F PF	Freshwater Drum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3420	DC036209	F PF	Greenfish	23.86	0.79	ND	1.07	ND	4.11	19.22	0.68	0.34	ND	ND	ND	ND	0.24	ND	26.53
3420	DC036210	F WB	Carp	40.32	1.64	ND	2.67	0.51	5.86	12.57	0.69	3.03	ND	ND	ND	ND	ND	ND	44.32
3421	DC036211	F PF	White Perch	5.95	ND	ND	ND	ND	ND	10.86	ND	ND	ND	ND	ND	ND	ND	ND	7.04
3421	DC036212	F WB	Carp	54.09	1.77	ND	4.43	0.76	2.40	60.25	3.05	ND	0.40	ND	ND	ND	ND	ND	61.74
3421	SC036212	F WB	Carp	43.96	1.78	0.40	3.43	0.45	2.10	50.75	2.48	5.34	0.46	ND	ND	ND	ND	ND	50.88
3422	DC036213	F PF	Lm Bass	1.45	ND	ND	ND	ND	ND	0.67	ND	ND	ND	ND	ND	ND	ND	ND	1.52
3422	DC036214	F WB	Yellow Bullhead	1.84	ND	ND	ND	ND	1.62	0.68	ND	ND	ND	ND	ND	ND	ND	ND	1.92
3423	DC036215	F PF	White Perch	0.83	ND	ND	ND	ND	1.84	4.68	ND	ND	ND	ND	ND	ND	ND	ND	1.32
3423	DC036216	F WB	White Catfish	2.46	2.71	ND	2.91	0.89	5.75	3.32	0.67	2.09	ND	ND	ND	ND	ND	ND	5.66
3424	DC036217	F PF	Shortnose Gar	1.07	ND	ND	0.99	ND	1.36	2.33	ND	ND	ND	ND	ND	ND	ND	ND	1.42
3424	DC036218	F WB	White Catfish	1.94	1.05	ND	ND	0.52	3.60	3.60	ND	0.74	ND	ND	ND	ND	ND	ND	3.28
3425	DF025005	F WB	Carp	160.36	9.43	2.08	6.98	2.89	21.60	82.46	4.15	10.45	ND	1.54	ND	ND	0.47	ND	180.32
3425	DF025012	F BF	Channel Catfish	52.90	3.08	ND	1.29	0.58	4.05	4.92	ND	2.34	ND	ND	ND	ND	ND	ND	56.33
3425	QD031389	L BF	Channel Catfish	43.41	2.43	ND	ND	0.55	3.14	4.23	ND	1.72	ND	ND	ND	ND	ND	ND	45.99
3426	DB069102	F PF	Bluefish	0.85	ND	ND	ND	ND	ND	1.90	ND	0.42	ND	ND	ND	ND	ND	ND	1.25
3427	DB069103	F PF	Bluefish	1.26	ND	ND	ND	ND	ND	2.23	0.41	0.63	ND	ND	ND	ND	ND	ND	1.82
3428	DB069104	F PF	Bluefish	ND	ND	ND	ND	ND	ND	1.80	ND	0.98	ND	ND	ND	ND	ND	ND	0.67
3429	DB069105	F PF	Weakfish	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3430	DB069106	F WB	White Catfish	0.75	ND	ND	0.68	ND	0.89	1.14	0.73	1.39	ND	ND	ND	ND	ND	ND	1.67
3431	DB069109	F WB	Red Snapper	ND	1.19	ND	ND	ND	ND	1.43	0.71	1.71	ND	ND	ND	ND	ND	ND	1.63
3432	DB069111	F BF	Red Snapper	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3433	DB069112	F WP	Flounder	4.45	0.94	ND	0.92	ND	0.79	1.37	ND	1.90	ND	ND	ND	ND	ND	ND	6.11
3433	QD021689	L WP	Flounder	4.37	ND	ND	1.19	ND	0.63	1.47	ND	2.21	ND	ND	ND	ND	ND	ND	5.75
3434	DB040801	F WP	Flounder	6.29	0.97	ND	1.70	ND	0.69	1.26	ND	3.12	ND	ND	ND	ND	ND	ND	8.64
3435	DD016601	F PF	White Bass	ND	ND	ND	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	0.23
3435	DD016602	F WB	Bigmouth Buffalo	3.08	2.52	ND	3.22	0.64	8.68	8.29	1.66	1.70	0.73	ND	ND	ND	0.89	ND	6.66
3437	DJ022302	M	Crayfish	ND	ND	ND	ND	ND	3.33	1.77	ND	ND	ND	ND	ND	ND	ND	ND	0.21
3438	DJ022303	M	Dungeness Crab	0.97	ND	ND	1.22	ND	ND	16.45	ND	0.43	ND	ND	ND	ND	ND	ND	2.95
3439	DJ022304	F WB	White Sturgeon	ND	ND	ND	ND	ND	0.72	22.05	ND	ND	ND	ND	ND	ND	ND	ND	2.21
3439	QD062289	L WB	White Sturgeon	0.88	ND	ND	ND	ND	0.84	20.94	0.52	ND	ND	ND	ND	ND	ND	ND	3.01
3440	DJ022305	F WB	White Sturgeon	1.06	ND	ND	ND	ND	ND	17.75	ND	ND	ND	ND	ND	ND	ND	ND	2.84
3441	DJ022306	F WB	White Sturgeon	ND	ND	ND	ND	ND	0.62	22.15	ND	ND	ND	ND	ND	ND	ND	ND	2.22
3442	DF024301	F PF	Channel Catfish	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF	DPE TEC
				DIOXIN / FURAN CONCENTRATIONS, pg/g															
3442	QD081089	L	PF Channel Catfish	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3444	DD016603	F	WB Carp	3.51	9.00	8.29	22.88	4.00	131.65	1.51	1.14	2.28	2.55	5.63	ND	1.26	13.76	ND	15.27
3444	DD016604	F	PF Channel Catfish	3.77	3.54	1.16	7.68	1.45	10.03	ND	ND	1.02	ND	ND	ND	0.36	1.20	ND	7.23
3444	DD029512	F	PF Lm Bass	ND	ND	ND	ND	ND	QR ND	ND	ND	ND	ND	ND	ND	ND	QR ND	QR ND	ND
3444	QD091289	L	WB Carp	4.01	9.80	8.72	25.53	5.04	150.84	1.45	1.26	2.67	2.76	5.88	ND	1.91	13.43	ND	17.08
3445	DD029513	F	WB Flounder	ND	ND	ND	ND	ND	2.63	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.03
3445	DD029514	F	WB Hardhead Catfish	0.91	2.40	ND	5.57	2.02	5.90	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.93
3446	DD016605	F	PF Striped Bass	21.55	ND	ND	ND	ND	ND	3.62	ND	1.78	ND	ND	ND	ND	ND	ND	22.80
3446	DD016606	F	WB Carpsucker	1.90	ND	ND	ND	ND	ND	0.68	ND	ND	ND	ND	ND	ND	ND	ND	1.97
3446	DD029511	F	WB Carp	3.22	ND	ND	1.03	ND	3.84	1.42	ND	1.76	0.86	ND	ND	ND	ND	ND	4.47
3446	QD092089	L	WB Carp	2.26	ND	ND	1.45	ND	4.61	1.38	ND	1.92	0.92	ND	ND	ND	ND	ND	3.64
3450	DY022308	F	PF White Croaker	1.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.02
3450	DY022309	F	PF White Croaker	2.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.24
3451	DY022310	F	PF White Croaker	1.93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.93
3451	DY022314	F	PF White Croaker	1.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.22
3452	DF025218	F	WB Sm Buffalo	9.01	ND	ND	ND	ND	ND	17.37	ND	ND	ND	ND	ND	ND	ND	ND	10.75
3452	DF025219	F	PF Blue Catfish	40.73	1.06	ND	ND	ND	ND	10.98	ND	ND	ND	ND	ND	ND	ND	ND	42.36
3452	DF025220	F	PF Flathead Catfish	2.26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.26
3452	QD103189	L	WB Sm Buffalo	9.03	ND	ND	ND	ND	ND	16.85	ND	ND	ND	ND	ND	ND	ND	ND	10.72

Dioxins/Furans
Detection Limits

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
1994	DE017702	F WB	Carp	NA	30.99	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.07	NA	NA	8.18
1994	DE017703	F PF	Walleye	2.16	2.15	3.02	3.02	3.02	4.19	NA	0.98	0.98	1.50	1.50	1.50	1.50	2.94	2.94
1994	QD110586	L WB	Carp	NA	112.58	NA	NA	NA	99.13	NA	NA	NA	NA	10.18	1.78	NA	NA	5.14
1998	13285	F WB	Carp	3.94	5.18	1.00	NA	1.00	NA	6.02	NA	NA	2.91	0.38	0.38	1.55	3.48	0.77
1998	13421___	F PF	Pike	NA	1.43	1.65	2.89	1.65	3.06	NA	1.23	1.05	0.90	0.90	0.90	0.90	1.82	1.82
2015	DF001001	F WB	Carp	NA	6.04	4.70	NA	3.13	NA	NA	2.45	NA	NA	NA	0.74	1.87	NA	1.57
2015	DF001002	F PW	Crappie	NA	1.70	1.28	1.28	1.28	2.24	NA	0.61	1.23	0.60	0.60	0.60	0.90	1.26	1.26
2016	DF001101	F WB	Sucker	NA	2.75	0.97	NA	2.93	NA	NA	1.29	NA	NA	1.11	0.24	NA	NA	0.39
2016	DF001102	F BF	Sucker	NA	2.37	1.70	NA	1.27	NA	NA	0.70	1.64	NA	0.47	0.47	NA	3.44	0.87
2017	DF001201	F WB	Carp	NA	4.90	NA	NA	NA	NA	NA	NA	1.82	1.23	0.61	0.41	0.41	1.21	0.80
2017	DF001202	F BF	Carp	1.13	1.24	2.20	NA	1.10	NA	NA	0.37	0.37	0.51	0.51	0.51	0.51	1.25	1.25
2018	DF001301	F WB	Sucker	1.99	3.09	3.37	3.37	3.37	6.04	NA	0.93	0.93	1.65	1.65	1.65	1.65	4.23	4.23
2023	DF001402	F PF	Spotted Bass	0.60	0.52	1.17	0.78	0.78	NA	1.34	0.25	0.25	0.36	0.36	0.36	0.36	NA	NA
2023	DF001403	F WB	Carp	0.67	0.72	NA	1.62	1.08	NA	NA	0.31	0.77	0.46	0.46	0.46	0.46	NA	NA
2026	DF001702	F WB	Carp	NA	1.52	1.35	NA	1.35	NA	NA	0.48	0.48	0.69	0.69	0.69	0.69	1.34	1.34
2026	DF001703	F PF	White Crappie	1.94	2.52	3.37	3.37	3.37	NA	0.60	1.21	1.21	1.63	1.63	1.63	1.63	4.74	3.16
2027	DF001802	F PF	Lm Bass	0.74	0.75	0.90	0.90	0.90	5.31	0.23	0.33	0.33	0.41	0.41	0.41	0.41	NA	NA
2027	DF001803	F WB	Carp	NA	2.07	1.73	NA	1.15	41.78	NA	0.56	0.74	1.05	0.52	0.52	0.52	NA	NA
2037	DY000501	F WB	not available	1.15	1.94	1.50	2.25	1.50	6.96	NA	0.93	0.62	0.78	0.78	0.78	0.78	NA	1.12
2037	DY000502	F PW	not available	2.35	5.33	3.31	5.80	2.48	NA	0.89	NA	NA	NA	NA	0.77	2.72	6.57	1.64
2056	DE000501	F WB	Carp	NA	6.33	1.69	NA	3.95	NA	NA	NA	NA	10.11	NA	0.79	3.72	NA	2.91
2057	DE000601	F WB	Carp	3.28	NA	0.78	7.10	0.78	NA	NA	0.77	NA	0.28	0.28	0.28	0.28	NA	0.80
2059	DE000801	F WB	Carp	NA	NA	NA	NA	1.25	NA	NA	7.27	NA	NA	NA	0.58	NA	NA	2.22
2060	DE000901	F WB	Carp	NA	3.50	2.09	NA	2.09	NA	NA	NA	3.40	NA	1.82	1.04	NA	NA	3.35
2070	DJ000901	F WP	Rainbow Trout	2.15	6.64	13.32	13.32	13.32	19.59	NA	2.58	2.58	4.51	4.51	4.51	4.51	6.82	6.82
2070	DJ000902	F WB	Longnose Sucker	0.50	1.33	3.61	3.61	3.61	NA	0.30	0.58	0.58	1.41	1.41	1.41	1.41	2.13	2.13
2070	QD072186	L WP	Rainbow Trout	0.50	1.16	2.23	2.23	2.23	6.12	1.75	0.87	0.87	0.94	0.94	0.94	0.94	4.00	4.00
2098	DH001501	F WB	not available	0.88	1.17	1.50	1.50	1.50	4.00	NA	0.51	0.51	0.66	0.66	0.66	0.66	NA	NA
2098	DH001504	F PF	not available	0.36	0.65	1.47	0.73	0.73	NA	0.41	0.30	0.30	0.34	0.34	0.34	0.34	NA	NA
2100	DH001702	F PF	Sauger	1.69	1.35	1.72	2.58	1.72	5.68	0.74	0.42	0.42	0.69	0.69	0.69	0.69	1.66	1.66
2100	DH001703	F WB	Catfish	NA	8.80	2.29	NA	2.29	8.87	NA	0.50	2.83	1.60	0.96	0.96	0.96	2.79	2.79
2100	QD111086	L WB	Catfish	NA	8.12	2.94	23.55	2.94	6.35	0.50	1.02	NA	1.18	1.18	0.89	0.89	2.79	2.79
2105	DH002201	F PF	Sauger	0.44	1.14	0.73	0.73	0.73	NA	0.40	0.63	0.63	0.79	0.79	0.79	0.79	1.27	1.27
2105	DH002204	F WB	Carp	0.58	1.75	1.45	1.45	1.45	5.16	0.48	0.90	0.90	1.46	1.46	1.46	1.46	4.13	4.13
2105	QD063086	L WB	Carp	0.40	1.29	0.79	0.79	0.79	3.58	0.20	0.37	0.37	0.67	0.67	0.67	0.67	2.87	2.87
2109	DH002601	F WB	not available	NA	7.28	2.00	12.01	2.00	NA	NA	0.58	0.58	0.85	0.85	0.85	0.85	NA	2.52
2109	DH002602	F BF	not available	0.42	1.23	1.02	1.02	1.02	NA	0.91	0.49	0.49	0.86	0.43	0.43	0.43	1.20	1.20
2110	DH002710	F WP	Brown Trout	0.27	0.97	1.96	1.96	1.96	4.91	0.20	0.36	0.36	0.96	0.96	0.96	0.96	NA	NA
2122	DH003901	F PF	Rainbow Trout	0.39	0.92	0.84	0.84	0.84	NA	1.18	0.47	0.47	NA	0.59	0.59	0.59	2.40	1.20
2122	DH003904	F WB	White Sucker	0.81	1.74	0.78	0.78	0.78	NA	NA	0.88	1.17	1.19	1.19	1.19	1.19	1.51	3.77
2126	DD000302	F WB	Carp	6.49	9.79	6.14	NA	NA	NA	NA	0.44	0.73	0.39	0.59	0.39	0.39	NA	NA
2126	DD000303	F PF	White Crappie	0.93	0.77	1.30	1.30	1.30	3.66	0.20	0.32	0.32	0.54	0.54	0.54	0.54	NA	NA
2126	QD062686	F WB	Carp	NA	7.44	NA	NA	NA	NA	0.85	0.64	0.81	0.47	0.47	0.47	0.47	NA	NA
2133	DD001002	F BF	Blue Catfish	1.45	5.42	1.57	NA	1.57	NA	0.35	0.59	0.59	0.80	0.80	0.80	0.80	1.52	1.52

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
2138	DD001501	F	WB Redhorse Sucker	NA	NA	3.52	NA	NA	NA	NA	NA	NA	NA	3.06	2.77	NA	NA	2.62
2138	DD001504	F	PF Lm Bass	NA	NA	2.44	NA	NA	NA	NA	NA	NA	NA	2.82	2.75	NA	NA	2.59
2139	DD001601	F	WB Carp	1.02	2.75	2.69	2.69	2.69	6.49	0.59	0.77	0.77	1.31	1.31	1.31	1.31	3.24	3.24
2139	DD001604	F	PF Rainbow Trout	NA	1.50	1.04	1.74	1.04	NA	NA	1.11	NA	0.58	0.58	0.39	0.58	1.26	0.63
2139	QD071486	F	PF Rainbow Trout	NA	1.11	0.89	1.78	0.89	NA	NA	NA	NA	0.45	0.45	0.45	0.45	NA	0.91
2142	DD001902	F	WB Catfish	1.60	NA	2.47	2.85	1.38	NA	NA	0.99	NA	2.84	2.85	2.78	1.96	NA	2.62
2142	DD001903	F	PF Lm Bass	1.02	0.92	2.46	1.84	1.37	1.26	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
2148	DD002501	F	WB Saltwater Catfish	1.85	1.61	1.27	1.27	1.27	NA	0.90	0.81	0.81	1.20	1.20	1.20	1.20	3.48	3.48
2148	DD002504	F	PF Saltwater Catfish	0.36	0.99	0.77	0.77	0.77	NA	0.26	0.43	0.43	0.65	0.65	0.65	0.65	1.31	1.31
2151	DD002801	F	PF Lm Bass	0.29	1.13	0.54	0.54	0.54	NA	0.25	0.41	0.41	0.82	0.82	0.82	0.82	0.99	0.99
2151	DD002803	F	WB Spotted Sucker	0.33	1.03	0.73	0.73	0.73	NA	0.55	0.48	0.48	0.68	0.68	0.68	0.68	1.23	1.23
2152	DD002902	F	PF Lm Bass	0.70	1.17	1.55	3.10	1.55	NA	0.47	0.75	0.75	1.78	0.71	0.71	0.71	NA	NA
2152	DD002903	F	WB Lake Chubsucker	0.51	1.53	0.75	0.75	0.75	NA	0.58	0.51	0.51	0.74	0.74	0.74	0.74	2.05	1.36
2190	DG005101	F	WB Carp	1.12	1.87	1.83	3.20	1.83	NA	0.90	0.79	0.53	0.66	0.88	0.44	0.44	NA	NA
2190	DG005104	F	PF Bluegill	0.82	0.67	1.20	1.20	1.20	NA	0.20	0.46	0.46	1.32	0.53	0.53	0.53	NA	NA
2191	DG005205	F	WB Carp	1.59	4.28	2.20	NA	2.20	NA	NA	NA	2.65	1.13	1.13	1.13	1.13	NA	2.89
2191	DG005206	F	BF Carp	1.06	2.37	1.68	5.06	1.68	NA	1.23	0.56	0.56	0.65	0.65	0.65	0.65	2.37	2.37
2191	QD092486	L	BF Carp	1.00	0.84	1.12	NA	1.12	NA	1.20	0.49	0.74	0.44	0.44	0.44	0.44	1.35	1.35
2194	DG005501	F	WB Carp	2.46	0.56	0.33	NA	0.33	1.60	NA	0.20	NA	0.20	0.20	0.20	0.20	0.43	0.43
2194	DG005504	F	BF Channel Catfish	0.40	1.65	1.04	3.14	0.69	4.62	0.20	0.27	0.27	0.41	0.41	0.41	0.41	1.30	1.30
2199	DG006001	F	WB Carp	NA	3.11	0.88	NA	0.88	NA	1.20	0.20	NA	NA	0.39	0.39	0.39	0.75	0.50
2199	DG006004	F	PF Lm Bass	1.14	1.13	0.78	1.17	1.17	4.70	0.45	0.25	0.25	0.37	0.37	0.37	0.37	0.76	0.76
2201	DG006201	F	WB Carp	6.01	13.63	18.77	NA	11.55	NA	1.44	1.08	1.08	1.83	1.83	1.83	1.83	5.33	5.33
2201	DG006204	F	BF Bowfin	1.28	1.53	2.38	2.38	2.38	9.92	0.29	0.67	0.67	0.79	0.79	0.79	0.79	2.52	2.52
2205	DG006601	F	WB Carp	1.12	1.74	1.94	1.94	1.94	7.29	NA	0.61	0.61	1.21	1.21	1.21	1.21	2.11	2.11
2205	DG006602	F	BF Carp	0.66	1.12	0.78	0.78	0.78	5.54	NA	0.31	0.31	0.50	0.50	0.50	0.50	NA	0.87
2210	DC005401	F	WB Catfish	NA	10.44	4.78	7.97	4.78	NA	NA	1.50	2.26	1.38	1.38	1.38	1.38	4.40	4.40
2211	DC005503	F	WB Redhorse Sucker	NA	1.21	2.47	NA	1.38	NA	NA	0.96	NA	NA	2.85	2.78	NA	NA	2.62
2212	DC005602	F	PF Sm Bass	1.80	2.74	2.26	2.26	2.26	3.82	0.86	1.21	1.51	1.00	1.00	1.00	1.00	2.81	2.81
2212	DC005605	F	WB White Sucker	NA	1.62	0.20	1.66	0.20	NA	NA	NA	NA	NA	NA	0.20	0.22	0.52	0.19
2215	DC005902	F	WB Carp	2.75	4.19	3.93	NA	3.93	NA	NA	NA	NA	2.37	0.79	0.79	1.58	NA	2.70
2216	DC006002	F	PF Brown Trout	0.34	0.70	0.72	0.72	0.72	4.45	0.20	0.35	0.35	0.42	0.42	0.42	0.42	0.80	0.80
2216	DC006003	F	WB White Sucker	0.37	0.63	0.71	1.06	0.71	2.72	NA	0.30	0.30	0.39	0.39	0.39	0.39	0.98	0.98
2220	DC006401	F	PF Redbreast Sunfish	0.70	1.51	1.35	3.39	1.35	NA	0.48	0.87	0.87	NA	0.67	0.67	0.67	NA	NA
2220	DC006405	F	WB Catfish	1.10	2.62	1.46	NA	0.97	NA	NA	0.52	NA	1.75	0.50	0.50	0.50	NA	NA
2225	DC006902	F	PF Sm Bass	1.31	0.96	2.47	1.85	1.38	NA	NA	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
2225	DC006903	F	WB Shorthead Redhorse	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.83	2.76	NA	NA	2.60
2225	QD101387	L	WB Shorthead Redhorse	NA	NA	NA	NA	1.44	NA	NA	NA	NA	NA	2.84	2.77	NA	NA	2.61
2227	DC007102	F	PF Lm Bass	0.97	0.90	2.42	1.81	1.35	1.96	NA	0.76	0.83	2.78	2.79	2.72	1.92	1.42	2.56
2227	DC007104	F	WB Channel Catfish	1.65	NA	2.46	NA	NA	NA	NA	0.77	NA	2.82	2.83	2.76	1.95	NA	2.60
2228	DC007201	F	PF Longear Sunfish	0.62	0.97	1.51	1.51	1.51	NA	0.47	0.75	0.75	1.17	0.78	0.78	0.78	NA	NA
2228	DC007204	F	WB Redhorse Sucker	2.81	2.62	1.23	4.30	1.23	11.91	NA	1.51	2.65	NA	0.68	0.68	NA	NA	NA
2228	QD070286	L	WB Redhorse Sucker	3.40	3.11	1.47	NA	1.47	NA	NA	1.41	NA	NA	0.68	0.68	0.68	NA	NA
2231	DC007503	F	WB Gizzard Shad	2.70	5.30	1.20	6.20	1.90	NA	NA	3.00	NA	NA	0.60	0.60	NA	NA	1.30

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
2246	DJ002301	F	BF Bridgelip Sucker	0.41	0.92	1.00	1.00	1.00	9.77	0.36	0.40	0.40	0.46	0.46	0.46	0.46	1.11	1.11
2246	DJ002302	F	WB Bridgelip Sucker	2.20	5.07	1.35	8.78	1.35	NA	5.06	NA	2.03	NA	0.50	0.50	NA	4.57	1.82
2247	DJ002403	F	PF Bridgelip Sucker	0.98	0.94	0.86	NA	0.86	NA	NA	0.32	1.62	2.59	0.47	0.47	NA	NA	0.93
2247	DJ002404	F	WP Mountain Whitefish	NA	3.59	1.18	NA	1.18	NA	NA	0.30	NA	0.44	0.44	0.44	NA	NA	0.93
2280	DF005201	F	WB Carp	0.49	1.88	1.25	1.25	1.25	5.70	0.38	0.34	0.34	0.76	0.51	0.51	0.51	NA	NA
2280	DF005204	F	BF Channel Catfish	0.93	1.08	0.67	NA	0.67	NA	NA	0.39	0.58	0.37	0.37	0.37	0.37	0.87	0.58
2280	QD062386	L	Dup Of DF005204	0.40	0.96	1.32	0.53	0.53	NA	NA	0.29	0.44	0.28	0.28	0.28	0.28	0.46	0.46
2283	DF005501	F	WB Gray Redhorse	0.20	0.62	1.10	1.10	1.10	3.10	0.42	0.25	0.25	0.52	0.52	0.52	0.52	2.75	2.75
2283	DF005502	F	WP Longear Sunfish	0.30	1.40	1.13	1.13	1.13	7.36	0.41	0.52	0.52	0.78	0.52	0.52	0.52	3.11	3.11
2290	DD003403	F	WB Spotted Sucker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.73	NA	NA	NA
2294	DD003801	F	PF Lm Bass	NA	NA	2.46	NA	NA	NA	NA	0.77	0.93	NA	2.83	2.76	NA	NA	2.61
2294	DD003804	F	WB Carp	NA	NA	NA	3.17	NA	NA	NA	1.16	NA	NA	2.85	2.78	NA	NA	2.62
2297	DD004102	F	WB Carp	1.25	NA	2.45	NA	1.37	NA	NA	0.77	1.16	2.82	2.83	2.76	1.95	1.44	2.60
2297	DD004103	F	PF Lm Bass	1.08	0.92	2.47	1.84	1.38	1.28	NA	0.78	0.85	2.83	2.85	2.77	1.96	NA	2.62
2298	DD004201	F	WB Channel Catfish	0.41	2.29	1.60	5.60	1.60	15.47	0.42	1.03	1.03	0.96	0.96	0.96	0.96	3.81	3.81
2298	DD004203	F	WP Lm Bass	0.07	0.26	0.20	0.20	0.20	1.28	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.36	0.36
2301	DD004504	F	WP Rock Bass	0.96	2.74	2.47	3.71	2.47	19.27	NA	0.82	0.82	1.30	1.30	1.30	1.30	6.61	2.64
2301	QD071786	L	WP Rock Bass	1.49	2.99	2.87	2.87	2.87	12.94	3.23	0.76	0.76	1.13	1.13	1.13	1.13	8.89	5.92
2302	DD004601	F	WB Quillback Carpsucker	NA	NA	2.45	2.09	NA	NA	NA	0.77	0.84	NA	2.83	2.76	1.95	NA	2.60
2304	DD004801	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	4.27	NA	NA	NA	2.79	NA	NA	2.63
2304	DD004804	F	PF Lm Bass	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.84	2.77	1.96	NA	2.61
2309	DD005301	F	WB Carp	2.39	4.74	5.82	NA	1.94	NA	NA	0.44	1.79	0.92	0.92	0.92	0.92	6.06	2.42
2309	DD005304	F	PF Lm Bass	1.20	0.30	1.00	2.10	1.00	NA	NA	0.30	0.30	0.50	0.50	0.50	0.50	1.40	1.40
2322	DB001301	F	WB White Sucker	0.20	0.75	0.83	0.83	0.83	1.54	3.99	0.30	0.30	0.45	0.45	0.45	0.45	1.52	1.52
2322	DB001304	F	PF Lm Bass	0.36	1.75	1.39	1.39	1.39	2.66	NA	0.32	0.32	0.56	0.56	0.56	0.56	2.10	2.10
2322	QD082686	L	PF not available	0.68	1.23	1.96	1.30	1.30	4.86	0.73	0.36	0.36	0.61	0.61	0.61	0.61	2.30	1.53
2326	DB001701	F	WB White Sucker	0.42	4.05	1.46	5.36	1.46	NA	2.81	1.13	NA	0.53	0.53	0.53	0.53	2.05	1.02
2326	DB001704	F	PF Rock Bass	1.17	1.85	1.25	3.49	1.25	10.70	1.95	0.59	0.59	0.72	0.72	0.72	0.72	1.40	1.40
2328	DB001904	F	PF Chinook Salmon	NA	5.85	1.36	1.36	1.36	3.60	NA	0.87	NA	NA	0.67	0.67	NA	NA	1.37
2329	DB002004	F	PF Brown Trout	NA	3.87	1.89	1.89	1.89	3.09	NA	1.02	0.61	NA	1.01	1.01	3.03	NA	2.75
2341	DD006002	F	PF Lm Bass	NA	1.12	2.47	NA	1.38	NA	NA	NA	NA	NA	2.85	2.78	NA	NA	2.62
2341	DD006003	F	WB Carpsucker	NA	2.02	2.46	NA	1.37	NA	NA	NA	NA	NA	NA	2.76	NA	NA	2.61
2355	DA001603	F	WB White Sucker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.85	2.76	NA	NA	2.60
2356	DA001702	F	PF Lm Bass	NA	0.86	0.86	1.30	0.86	2.23	NA	0.21	0.21	0.35	0.35	0.35	0.35	1.13	1.13
2356	DA001703	F	WB White Sucker	NA	6.24	1.62	NA	1.62	NA	NA	3.73	NA	0.54	0.54	0.54	0.54	1.82	1.82
2358	DA001901	F	WP ns	3.57	7.07	6.62	NA	6.62	NA	NA	1.78	1.78	NA	2.64	2.64	2.64	36.36	9.09
2369	DA003202	F	PF Lm Bass	1.84	2.35	4.02	4.02	4.02	3.93	0.52	1.04	1.04	1.98	1.98	1.98	1.98	2.75	2.75
2369	DA003203	F	WB White Sucker	NA	2.01	1.46	NA	1.09	3.69	NA	0.47	0.62	0.93	0.93	0.93	1.86	3.64	3.64
2369	QD030387	F	WB White Sucker	1.73	0.94	0.70	NA	0.70	NA	NA	0.36	0.36	NA	0.61	0.61	0.61	NA	1.57
2375	DA003802	F	PF Pickerel	0.51	0.60	0.69	1.38	0.69	NA	NA	0.30	0.30	0.35	0.35	0.35	0.35	0.72	0.72
2375	DA003803	F	WB White Sucker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.83	2.76	1.95	NA	2.61
2376	DA003903	F	WB White Sucker	3.02	4.44	1.70	2.84	1.70	8.44	NA	0.58	NA	NA	0.90	0.90	2.40	2.74	1.37
2376	QD111886	L	WB White Sucker	2.85	5.40	2.41	2.41	2.41	6.05	NA	1.04	NA	8.62	1.72	1.72	1.72	3.59	3.59
2379	DE005404	F	PF Lm Bass	1.39	2.18	2.40	2.40	2.40	4.28	0.57	0.69	0.69	1.17	1.17	1.17	1.17	3.00	3.00

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
2380	DE005501	F	WB Carp	NA	19.70	NA	38.31	10.10	NA	NA	NA	NA	NA	5.17	0.79	NA	NA	2.67
2383	DE005801	F	WB Carp	NA	33.59	NA	NA	13.12	NA	NA	NA	NA	29.79	11.67	0.99	NA	NA	2.74
2385	DE006002	F	WB White Sucker	NA	NA	2.49	NA	1.38	NA	NA	NA	NA	NA	2.85	2.78	2.11	NA	2.62
2385	QD101987	F	WB White Sucker	NA	NA	2.46	NA	1.38	NA	NA	NA	NA	NA	2.84	2.77	1.96	NA	2.61
2387	DE006201	F	WB Carp	1.04	0.92	2.47	1.85	1.38	NA	NA	0.78	NA	2.84	2.85	2.78	1.96	NA	2.62
2394	DE006901	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
2397	DE007201	F	WB Sucker	1.09	0.87	0.73	1.46	1.10	NA	NA	0.22	0.22	0.47	0.31	0.31	0.31	0.71	0.71
2397	DE007204	F	PF Walleye	0.33	0.69	0.80	0.80	0.80	0.73	0.20	0.25	0.25	0.32	0.32	0.32	0.32	0.74	0.74
2410	DE008501	F	WB Carp	NA	55.12	17.50	NA	9.10	106.38	NA	NA	NA	NA	NA	1.33	NA	42.82	4.50
2410	DE008504	F	PF Sm Bass	NA	0.95	0.64	0.64	0.64	4.15	NA	0.31	0.42	0.29	0.29	0.29	0.29	1.13	1.13
2416	DE009101	F	WB Carp	NA	17.66	NA	NA	6.65	NA	NA	NA	NA	NA	NA	2.18	2.45	4.61	2.30
2422	DE009702	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
2427	DE010202	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.76	NA	NA	2.60
2427	DE010203	F	PF Walleye	NA	0.97	2.40	1.79	1.34	NA	NA	0.75	1.06	NA	2.77	2.70	1.90	NA	2.54
2427	QD102887	L	PF Walleye	NA	0.92	2.46	1.84	1.37	NA	NA	NA	1.09	NA	2.84	2.77	1.96	1.46	2.61
2429	DE010402	F	WB Carp	NA	13.65	17.25	NA	5.07	NA	NA	4.54	NA	35.95	1.84	1.84	1.84	NA	6.69
2429	DE010403	F	PF Walleye	1.19	1.16	0.63	0.63	0.63	2.84	NA	0.31	0.74	0.66	0.39	0.26	0.26	0.64	0.64
2429	QD010687	L	PF Walleye	NA	1.25	0.68	1.03	0.68	NA	NA	0.55	0.78	0.30	0.30	0.30	0.30	0.61	0.61
2430	DE010602	F	PF Northern Pike	0.99	0.92	2.46	1.84	1.37	1.34	0.53	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
2430	DE010603	F	WB Redhorse Sucker	0.49	1.19	1.88	1.88	1.88	3.28	NA	0.39	0.39	0.74	0.74	0.74	0.74	2.37	2.37
2431	DE010702	F	PF Brown Trout	1.70	NA	2.46	1.84	1.37	1.49	NA	NA	NA	2.83	2.84	2.77	1.95	1.44	2.61
2431	DE010703	F	WB Sucker	NA	1.79	2.46	NA	1.37	NA	NA	0.77	1.06	2.83	2.84	2.77	1.96	NA	2.61
2432	DE010710	F	WB Redhorse Sucker	0.58	1.75	1.45	1.45	1.45	5.16	NA	0.90	0.90	1.46	1.46	1.46	1.46	4.13	4.13
2432	DE010713	F	PF Walleye	NA	1.75	1.45	1.45	1.45	5.16	NA	0.90	0.90	1.46	1.46	1.46	1.46	4.13	4.13
2435	DE011001	F	WB Longnose Sucker	0.58	1.75	1.45	1.45	1.45	5.16	NA	0.90	NA	1.46	1.46	1.46	1.46	4.13	4.13
2435	DE011004	F	PF Brook Trout	0.58	1.75	1.45	1.45	1.45	NA	0.48	0.90	0.90	1.46	1.46	1.46	1.46	4.13	4.13
2437	DE011202	F	PF Walleye	0.58	1.75	1.45	1.45	1.45	NA	NA	0.90	0.90	1.46	1.46	1.46	1.46	4.13	4.13
2437	DE011203	F	WB Carp	0.58	1.75	1.45	1.45	1.45	NA	0.48	0.90	0.90	1.46	1.46	1.46	1.46	4.13	4.13
2439	DE011401	F	WB Carp	NA	10.82	NA	NA	NA	NA	NA	1.91	NA	NA	NA	0.46	10.41	NA	1.06
2439	DE011402	F	WP Sm Bass	NA	4.54	0.81	NA	0.81	NA	NA	0.99	NA	NA	0.37	0.37	NA	NA	0.70
2478	DJ003901	F	FB Sucker	0.39	1.48	1.40	1.40	1.40	NA	0.29	0.41	0.41	0.58	0.58	0.58	0.58	1.28	1.28
2478	DJ003902	F	WB Sucker	0.37	1.06	1.51	1.51	1.51	5.25	0.97	0.46	0.46	2.08	0.69	0.69	0.69	1.80	1.80
2500	DC010201	F	PF Bass	NA	1.38	2.70	2.70	2.70	NA	NA	1.03	1.03	0.64	0.64	0.64	0.64	3.36	2.24
2500	DC010203	F	WB Black Buffalo	1.62	1.71	2.92	2.92	2.92	4.00	0.45	0.56	0.56	1.07	1.07	1.07	1.07	4.06	4.06
2532	DF019302	F	PF Lm Bass	NA	1.11	2.45	NA	1.37	NA	1.34	0.80	1.07	NA	2.82	2.75	1.94	1.45	2.59
2532	DF019303	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.73	NA	NA	2.57
2544	DF019202	F	WB Blacktail Redhorse	1.40	0.93	2.10	1.57	1.13	NA	NA	0.63	0.74	2.74	2.29	2.44	1.70	NA	2.18
2608	DE014501	F	PF Walleye	NA	0.95	2.46	1.84	1.37	NA	NA	0.77	NA	2.88	2.84	2.77	1.95	NA	2.61
2608	DE014504	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.42	2.76	NA	NA	2.61
2618	DE015401	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.76	2.10	NA	2.60
2618	DE015402	F	BF Carp	NA	NA	2.47	NA	1.45	NA	NA	1.13	NA	NA	NA	2.78	1.96	NA	2.62
2618	DE015403	F	WB Quillback	NA	NA	2.62	NA	1.68	NA	NA	NA	NA	2.84	2.85	2.78	1.96	NA	2.62
2618	QD102088	F	WB Quillback	NA	NA	NA	NA	1.57	NA	NA	NA	NA	2.83	2.84	2.77	1.96	NA	2.61
2651	DB008401	F	WB White Sucker	NA	1.35	1.00	1.33	0.66	8.55	NA	0.69	0.34	0.33	0.33	0.33	0.33	1.33	1.33

				DIOXIN / FURAN DETECTION LIMITS, pg/g														
Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
2653	DB008503	F	WB Carp	NA	NA	NA	NA	1.35	NA	NA	NA	NA	NA	2.78	2.71	NA	NA	2.56
2654	DB008601	F	WB Carp	1.88	1.53	1.13	2.26	1.13	3.62	NA	0.24	0.59	0.30	0.30	0.30	0.30	0.73	0.73
2709	DB005101	F	WB Catfish	7.87	4.80	2.79	5.59	2.79	NA	NA	1.86	NA	4.43	1.32	1.32	1.32	NA	NA
2721	DA006502	F	WB Sucker	NA	NA	2.43	NA	NA	NA	NA	NA	NA	NA	2.81	2.74	2.51	NA	2.58
2722	DA006601	F	WB Sucker	1.39	2.73	3.12	3.12	3.12	8.07	1.11	0.76	0.76	1.39	1.39	1.39	1.39	3.77	3.77
2725	DA006301	F	WB Sucker	NA	NA	2.46	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
2748	DY006505	F	WB Sucker	0.55	1.01	1.28	1.28	1.28	4.60	0.26	0.50	0.50	0.63	0.63	0.63	0.63	1.37	1.37
2748	DY006506	F	BF not available	0.81	1.11	1.55	1.55	1.55	NA	0.32	0.43	0.43	0.65	0.65	0.65	0.65	1.99	1.99
2776	DY007101	F	WB Carp	0.72	1.69	1.97	1.97	1.97	5.89	1.59	0.72	0.72	1.04	1.04	1.04	1.04	NA	NA
2776	DY007103	F	PF Trout	1.19	0.98	0.71	0.71	0.71	2.99	1.62	0.32	0.64	0.38	0.38	0.38	0.38	NA	NA
3001	DE019501	F	PF Walleye	0.10	0.37	0.60	0.60	0.60	1.21	0.51	0.20	0.20	0.21	0.21	0.21	0.21	0.71	0.71
3001	DE019502	F	WB White Sucker	0.28	0.93	0.90	1.21	0.60	4.22	2.25	0.41	0.31	0.39	0.26	0.26	0.26	1.38	0.92
3022	DA008401	F	WB White Sucker	NA	NA	NA	1.82	1.36	NA	NA	NA	NA	2.80	2.81	2.74	1.94	NA	2.59
3022	DA008402	F	PF Chain Pickerel	0.10	0.49	1.04	1.04	1.04	3.08	0.20	0.28	0.28	0.42	0.42	0.42	0.42	1.28	1.28
3023	DA008501	F	PF Sm Bass	0.99	0.95	2.47	1.84	1.38	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3024	DA008601	F	PF Lm Bass	0.20	0.40	3.42	1.14	1.14	5.03	NA	0.37	0.37	0.51	0.34	0.34	0.34	0.79	0.79
3025	DA008701	F	WB White Sucker	NA	NA	0.76	NA	0.50	NA	NA	0.26	0.26	0.26	0.39	0.26	NA	NA	0.85
3025	DA008702	F	PF Chain Pickerel	0.12	0.32	0.68	0.68	0.68	NA	0.20	0.21	0.32	0.37	0.37	0.37	0.37	3.48	0.71
3026	DA009001	F	WB Catfish	NA	NA	2.47	NA	NA	NA	NA	1.85	NA	NA	2.85	2.78	NA	NA	2.62
3026	DA009002	F	PF Lm Bass	NA	NA	2.47	1.85	1.38	NA	NA	0.78	NA	2.84	2.85	2.78	1.96	1.45	2.62
3027	DA009301	F	WB Sucker	1.19	0.50	0.80	3.61	0.80	4.92	NA	0.20	1.30	0.34	0.34	0.34	0.34	1.53	1.02
3028	DA008801	F	PF Chain Pickerel	0.11	0.29	0.87	0.87	0.87	5.09	0.24	0.19	0.19	0.30	0.30	0.30	0.30	0.70	0.70
3028	QD031787	L	PF Chain Pickerel	0.11	0.19	0.22	0.91	0.22	3.95	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.27	0.27
3034	DG025701	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.42	2.77	NA	NA	2.62
3034	DG025702	F	PF Lm Bass	1.01	0.92	2.46	1.84	1.37	1.26	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3035	DG025801	F	WB Carp	NA	NA	NA	NA	1.55	NA	NA	NA	NA	NA	2.83	2.76	NA	NA	2.60
3035	DG025802	F	PF Sm Bass	0.16	0.25	0.38	0.38	0.38	0.69	0.97	0.20	0.20	0.19	0.19	0.19	0.19	0.44	0.44
3036	DG025901	F	PF Freshwater Drum	0.99	0.92	2.46	1.84	1.37	1.31	0.49	0.77	0.85	2.83	2.84	2.77	1.95	1.44	2.61
3036	DG025902	F	WB Carp	1.26	NA	2.49	NA	NA	NA	NA	0.78	0.85	2.86	2.87	2.80	1.98	1.46	2.64
3036	QD120287	L	PF Freshwater Drum	0.99	0.92	2.47	1.84	1.38	1.26	0.49	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3037	DG026001	F	WB Carp	NA	NA	2.46	NA	1.37	NA	NA	0.77	0.85	NA	2.84	2.77	1.96	NA	2.61
3037	DG026002	F	PF Black Crappie	0.16	0.20	0.22	0.22	0.22	2.29	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.35	0.23
3038	DG026101	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
3038	DG026102	F	BF Channel Catfish	NA	1.50	2.47	NA	NA	NA	0.49	0.78	NA	2.84	2.85	2.78	1.96	NA	2.62
3039	DG026201	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.76	NA	NA	2.60
3039	DG026202	F	BF Channel Catfish	1.16	0.95	2.46	NA	1.38	NA	0.49	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3040	DG026301	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	0.87	NA	NA	NA	2.75	NA	NA	2.59
3040	DG026302	F	PF White Crappie	1.01	0.98	2.47	1.85	1.38	NA	0.49	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3041	DG026401	F	BF Channel Catfish	1.31	NA	2.46	NA	NA	NA	0.51	0.77	1.17	NA	2.83	2.76	1.95	NA	2.61
3041	DG026402	F	WB Carp	1.03	1.23	NA	NA	1.38	NA	NA	0.78	0.89	2.84	2.85	2.78	1.96	NA	2.62
3041	QD031588	L	BF Channel Catfish	NA	NA	NA	NA	NA	NA	NA	0.77	NA	NA	2.83	2.76	NA	NA	2.60
3042	DG026501	F	WB Carp	1.30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.20	0.97	NA	0.22
3042	DG026502	F	PF Northern Pike	0.99	0.92	2.46	1.84	1.37	NA	0.48	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3043	DG026601	F	BF Flathead Catfish	NA	2.39	0.30	NA	0.73	NA	NA	NA	0.90	NA	NA	0.20	NA	1.20	0.20

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3043	DG026602	F BF	Flathead Catfish	NA	NA	2.46	NA	1.37	NA	NA	0.77	0.85	NA	2.84	2.77	1.95	NA	2.61
3043	QD111987	L BF	Flathead Catfish	NA	0.91	2.45	NA	1.37	NA	0.48	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3044	DG026701	F WB	Carp	NA	NA	NA	2.33	NA	NA	NA	NA	NA	NA	2.85	2.78	2.47	NA	2.62
3044	DG026702	F BF	Flathead Catfish	NA	1.04	2.47	NA	1.38	NA	0.49	0.78	NA	2.84	2.85	2.78	1.96	NA	2.62
3045	DG026801	F WB	Carp	NA	6.27	1.04	NA	2.79	NA	1.97	NA	1.51	NA	0.70	0.28	NA	6.04	1.09
3045	DG026802	F BF	Flathead Catfish	0.73	NA	0.22	NA	0.22	NA	NA	0.20	0.93	0.46	0.20	0.20	0.20	0.81	0.20
3046	DG026901	F WB	Bigmouth Buffalo	NA	0.94	2.45	NA	1.37	NA	NA	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3047	DG027001	F WB	Carp	NA	NA	NA	NA	1.38	NA	NA	NA	NA	NA	2.85	2.78	NA	NA	2.62
3047	DG027002	F PF	Sm Bass	1.00	0.92	2.48	1.85	1.38	NA	0.51	0.78	0.85	2.85	2.86	2.79	1.97	1.45	2.63
3048	DG027101	F WB	Carp	NA	NA	NA	NA	5.18	NA	NA	2.78	NA	NA	2.81	0.20	2.81	8.87	0.42
3048	DG027102	F PF	White Bass	0.09	0.32	0.44	0.44	0.44	1.07	NA	0.20	0.20	0.22	0.22	0.22	0.22	0.59	0.59
3049	DG027201	F WB	Carp	NA	NA	NA	NA	NA	NA	NA	1.32	NA	NA	3.06	2.77	NA	NA	2.61
3049	DG027202	F PF	Crappie	1.01	0.92	2.46	1.84	1.38	1.26	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3049	QD111087	F PF	Crappie	1.13	0.92	2.47	1.84	1.38	1.26	0.55	0.78	0.85	2.83	2.85	2.77	1.96	1.45	2.62
3050	DG027301	F WB	Bigmouth Buffalo	NA	1.22	NA	NA	1.38	NA	NA	NA	1.10	2.83	2.85	2.77	NA	NA	2.62
3060	DF009101	F WB	Flathead Catfish	0.40	0.30	0.38	0.38	0.38	0.89	0.41	0.20	0.20	0.20	0.20	0.20	0.20	0.49	0.49
3060	DF009102	F WB	Sm Buffalo	NA	2.19	0.43	3.92	0.43	8.35	NA	0.72	NA	1.27	0.20	0.20	0.20	0.47	0.47
3061	DF019105	F PF	Bass	NA	NA	3.18	NA	NA	NA	0.60	0.77	0.99	NA	2.84	2.77	1.96	NA	2.61
3061	DF019106	F WB	Sucker	2.18	NA	0.27	NA	0.27	NA	1.17	NA	1.27	2.73	1.10	0.22	NA	NA	0.34
3062	DF024024	F WB	Blue Catfish	NA	NA	2.46	NA	1.44	NA	NA	NA	NA	NA	2.84	2.77	2.07	1.48	2.61
3062	DF024324	F BF	Grass Carp	NA	1.03	2.47	1.84	1.38	NA	NA	0.77	NA	2.83	2.84	2.77	1.96	1.45	2.61
3062	QD024324	L BF	Grass Carp	NA	0.93	2.46	1.84	1.37	NA	NA	NA	NA	2.82	2.83	2.76	1.95	1.44	2.60
3062	QD071587	F WB	Blue Catfish	NA	NA	2.46	NA	1.37	NA	NA	NA	0.84	NA	2.84	2.77	1.99	NA	2.61
3062	SF024324	F BF	Grass Carp	NA	0.35	1.37	0.67	1.98	NA	NA	0.45	NA	0.97	1.21	1.40	1.57	0.66	1.66
3063	DF023301	F WB	Sea Catfish	NA	NA	2.59	NA	NA	NA	NA	NA	NA	NA	NA	2.77	2.14	NA	2.61
3063	DF023302	F PF	Spotted Seatrout	1.02	0.92	2.45	1.83	1.37	1.58	NA	NA	0.84	NA	NA	2.76	1.95	NA	2.60
3064	DF023305	M	Shellfish	1.15	0.92	2.46	NA	1.37	NA	NA	0.77	0.84	2.82	2.84	2.76	1.95	NA	2.61
3064	DF023306	F PF	Spotted Seatrout	0.99	0.96	2.45	1.83	1.37	NA	0.52	0.77	0.84	2.81	2.82	2.75	1.95	NA	2.60
3065	DF023419	F BF	Bigmouth Buffalo	NA	NA	2.46	NA	NA	NA	NA	0.77	NA	2.82	2.83	2.76	1.95	NA	2.60
3065	DF023420	F WB	Flathead Catfish	NA	NA	NA	NA	1.38	NA	NA	NA	NA	NA	2.84	2.77	NA	NA	2.61
3065	QD022588	L WB	Flathead Catfish	NA	NA	NA	NA	1.36	NA	NA	NA	NA	NA	2.82	2.75	1.94	NA	2.59
3066	DF023503	F WB	Catfish	NA	1.83	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.62
3066	DF023504	F PF	Freshwater Drum	0.99	0.92	2.46	1.84	1.38	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3068	DF024001	M	Oysters	NA	1.06	2.45	1.97	1.37	NA	NA	0.77	1.08	2.82	2.83	2.76	1.95	1.44	2.60
3068	DF024002	F PF	Atl. Croaker	1.30	0.91	2.46	NA	1.37	1.80	NA	0.99	0.84	2.83	2.84	2.77	1.95	1.44	2.61
3069	DF024007	F WB	Sea Catfish	NA	NA	2.69	NA	1.38	NA	0.50	0.77	NA	2.83	2.84	2.77	1.96	NA	2.61
3069	DF024008	F PF	Trout	1.00	0.92	2.47	1.85	1.38	NA	0.49	0.78	0.85	2.84	2.85	2.78	1.97	1.45	2.62
3070	DF024009	F WB	Croaker	1.07	0.92	2.46	NA	NA	NA	NA	0.77	0.84	2.82	2.83	2.76	1.95	NA	2.61
3070	DF024010	F PF	Sheepshead	NA	1.16	NA	1.83	1.37	NA	NA	0.77	0.84	2.81	2.83	2.76	1.95	NA	2.60
3071	DF024014	F WB	Carp	NA	NA	2.46	NA	1.37	NA	NA	0.95	NA	NA	NA	2.77	NA	NA	2.61
3072	DF024017	F WB	Carp	1.06	2.11	2.47	1.85	1.38	NA	NA	0.78	0.95	2.84	2.85	2.78	1.96	1.45	2.62
3072	DF024018	F PF	White Bass	1.06	0.92	2.47	1.85	1.38	NA	NA	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3072	QD040788	L PF	White Bass	1.19	0.92	2.47	1.85	1.38	NA	NA	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3073	DF019221	F WB	White Sucker	NA	1.05	2.47	NA	1.38	NA	NA	0.78	NA	2.84	2.85	2.78	1.96	NA	2.62

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3073	DF019222	F	PF Sm Bass	1.10	0.92	2.47	1.85	1.38	NA	NA	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3073	QD121587	L	WB White Sucker	NA	NA	NA	NA	1.38	NA	NA	0.77	0.87	2.83	2.84	2.77	1.96	1.45	2.61
3074	DF026017	F	PF Brown Trout	0.75	0.48	0.65	0.65	0.65	1.31	0.20	0.20	0.20	0.23	0.23	0.23	0.23	0.77	0.77
3075	DF024102	F	BF Sea Catfish	1.00	0.92	2.47	1.85	1.38	NA	0.49	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3076	DF028502	F	WB Channel Catfish	NA	NA	NA	NA	1.37	NA	NA	0.77	NA	2.83	2.84	2.77	NA	NA	2.61
3076	DF028503	F	PF Spotted Bass	0.99	0.93	2.46	1.84	1.38	NA	0.49	0.77	0.85	2.83	2.84	2.77	1.96	NA	2.61
3077	DF019113	F	BF Flathead Catfish	0.99	0.92	2.44	1.83	1.37	NA	0.48	0.77	0.84	2.81	2.82	2.75	1.94	1.43	2.59
3077	DF019114	F	WB Redhorse Sucker	1.09	0.99	2.45	1.83	1.37	NA	0.86	0.77	0.84	2.81	2.82	2.75	1.94	1.44	2.59
3077	QD121087	L	BF Flathead Catfish	0.99	0.92	2.45	1.83	1.37	NA	0.48	0.77	0.84	2.81	2.82	2.75	1.95	1.44	2.60
3078	DF009118	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	0.77	NA	2.83	2.84	2.77	1.96	NA	2.61
3078	DF023815	F	WB Sm Buffalo	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.81	2.74	1.95	1.43	2.59
3078	DF023816	F	PF Black Crappie	NA	1.47	2.46	1.85	1.37	NA	NA	1.03	0.85	2.83	2.84	2.77	1.95	1.44	2.61
3078	SF009118	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.87	1.04	0.89	0.86	0.66	1.66
3079	DF019205	F	PF White Bass	1.23	0.91	2.45	1.83	1.37	NA	NA	0.77	NA	2.81	2.82	2.75	1.95	1.44	2.60
3079	DF019206	F	WB Carp	NA	1.08	2.46	NA	1.37	NA	NA	NA	NA	NA	2.84	2.77	NA	NA	2.61
3080	DF023317	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.42	0.20	NA	NA	0.24
3080	DF023318	F	PF Lm Bass	NA	0.92	0.20	NA	0.20	3.49	1.09	0.28	0.20	0.20	0.20	0.20	0.20	0.40	0.20
3080	QD040987	L	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.68	0.20	NA	NA	0.26
3081	DF024105	F	PF White Bass	NA	5.39	0.76	NA	0.68	NA	NA	0.20	0.44	0.20	0.20	0.20	0.20	0.32	0.20
3081	DF024106	F	WB Catfish	NA	2.89	NA	NA	NA	NA	0.50	0.77	NA	2.82	2.83	2.76	1.95	NA	2.60
3082	DF023401	F	WB Carp	1.43	NA	3.57	NA	NA	NA	NA	NA	1.76	NA	3.19	2.76	2.16	NA	2.61
3082	DF023402	F	PF Lm Bass	1.04	0.93	2.43	1.82	1.36	NA	NA	0.77	0.84	2.80	2.81	2.74	1.93	1.46	2.58
3082	QD120787	L	PF Lm Bass	1.12	1.01	2.43	1.81	1.35	NA	NA	0.76	0.83	2.79	2.80	2.73	1.93	NA	2.57
3083	DF023405	F	WB Black Bullhead	1.08	NA	NA	NA	NA	NA	NA	0.77	NA	2.83	2.84	2.77	1.95	1.44	2.61
3083	DF023406	F	PF Lm Bass	0.11	0.20	0.20	0.55	0.20	2.56	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.27	0.20
3084	DF024109	F	WB Channel Catfish	NA	NA	2.47	2.51	1.38	NA	NA	0.87	NA	2.84	2.85	2.78	1.96	1.45	2.62
3084	QD072188	L	WB Channel Catfish	NA	NA	2.47	NA	NA	NA	NA	NA	NA	NA	2.85	2.77	1.96	NA	2.62
3085	DF024114	F	PF Black Drum	NA	1.46	2.46	NA	1.41	NA	NA	NA	NA	NA	NA	2.77	NA	NA	NA
3086	DF023409	F	WB Catfish	4.32	NA	NA	NA	1.55	NA	NA	NA	NA	NA	3.93	2.77	NA	NA	2.61
3086	DF023411	F	PF Black Drum	0.99	0.92	2.46	1.84	1.37	1.32	NA	NA	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3087	DF023413	F	WB Carp	NA	NA	4.93	NA	NA	NA	NA	NA	NA	NA	NA	2.76	NA	1.76	2.60
3087	DF023414	F	PF White Crappie	NA	NA	2.45	1.83	1.37	1.25	NA	NA	NA	2.81	2.82	2.75	1.95	1.44	2.60
3087	DF023415	F	WP Bluegill	NA	NA	2.46	NA	1.37	2.37	NA	NA	NA	2.83	2.84	2.77	1.96	1.44	2.61
3087	DF023416	F	WP Lm Bass	NA	1.97	2.46	1.97	1.38	NA	NA	0.96	NA	2.83	2.84	2.77	1.96	1.44	2.61
3087	QD023414	L	PF White Crappie	NA	NA	2.46	NA	1.37	NA	NA	NA	NA	2.82	2.84	2.76	1.95	1.44	2.61
3087	QD072387	F	WB Carp	NA	NA	NA	NA	2.94	NA	NA	NA	NA	2.94	NA	2.78	NA	NA	2.61
3087	SF023414	F	PF White Crappie	NA	NA	1.11	0.72	1.32	NA	NA	NA	NA	0.94	1.18	1.07	1.03	0.66	1.65
3087	SF023415	F	WP Bluegill	NA	NA	1.36	NA	1.98	NA	NA	NA	NA	0.96	1.20	1.40	1.57	0.70	2.07
3088	DF023417	F	WB Channel Catfish	NA	0.92	2.46	NA	NA	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3088	DF023418	F	PF Bluegill	NA	0.94	2.46	1.84	1.37	NA	NA	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3089	DF019209	F	PF White Crappie	0.99	0.98	2.45	1.83	1.37	1.29	NA	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3089	DF019210	F	WB Carp	1.05	1.04	2.46	NA	1.38	NA	NA	0.77	NA	2.83	2.84	2.77	1.96	NA	2.61
3090	DF019213	F	PF White Crappie	0.98	0.91	2.44	1.82	1.36	1.37	NA	0.76	0.84	2.81	2.82	2.75	1.94	1.43	2.59
3090	DF019214	F	WB Channel Catfish	1.27	NA	2.46	NA	NA	NA	NA	NA	NA	2.82	2.83	2.76	1.95	1.76	2.60

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC		Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3091	DF019217	F	WB	River Carpsucker	0.99	0.92	2.46	1.84	1.38	NA	0.52	0.77	0.85	2.83	2.84	2.77	2.14	NA	2.61
3091	DF019218	F	PF	White Crappie	0.98	0.91	2.44	1.82	1.36	1.25	0.48	0.76	0.84	2.80	2.82	2.74	1.94	1.43	2.59
3092	DF023501	F	WB	Carp	NA	NA	NA	NA	NA	NA	NA	0.77	1.53	2.89	2.84	2.77	1.96	NA	2.61
3092	DF023502	F	PF	Warmouth	0.98	0.94	2.45	1.83	1.37	NA	0.48	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3093	DF024011	F	PF	Lm Bass	1.01	0.92	2.46	1.84	1.37	NA	0.48	0.77	0.84	2.83	2.84	2.77	1.96	1.44	2.61
3093	DF024118	F	WB	Sm Buffalo	NA	NA	NA	NA	NA	NA	0.86	0.77	NA	NA	3.70	3.29	3.23	1.45	2.62
3093	QD080387	L	WB	Sm Buffalo	1.07	NA	NA	NA	NA	NA	NA	0.77	NA	2.83	2.84	2.77	1.95	1.57	2.61
3094	DC017201	F	BF	Channel Catfish	NA	NA	2.46	NA	1.37	NA	NA	0.88	NA	NA	NA	2.77	1.96	NA	2.61
3094	QD092988	L	BF	Channel Catfish	NA	NA	2.46	NA	NA	NA	NA	0.77	NA	NA	NA	2.77	NA	NA	2.61
3095	DC038801	F	BF	Brown Bullhead	NA	NA	2.46	NA	1.38	NA	NA	NA	NA	NA	NA	2.76	NA	NA	2.60
3095	DC038802	F	WB	Channel Catfish	5.16	4.92	3.37	NA	NA	NA	NA	NA	NA	NA	3.85	2.77	3.06	2.45	2.61
3096	DC035001	F	BF	Brown Bullhead	NA	1.07	2.46	NA	1.37	NA	NA	0.85	NA	2.83	2.84	2.77	1.96	1.44	2.61
3096	DC035002	F	WB	Channel Catfish	NA	NA	3.69	NA	2.12	NA	NA	NA	NA	NA	3.82	2.77	NA	3.25	2.61
3096	QD052488	F	WB	Channel Catfish	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.78	NA	2.81	2.62
3097	DC038701	F	BF	Brown Bullhead	NA	4.78	18.44	6.27	3.13	24.85	NA	1.87	NA	1.71	0.85	0.51	0.85	1.37	0.91
3097	DC038702	F	WB	Carp	NA	NA	2.47	NA	NA	15.14	NA	NA	NA	NA	NA	2.78	NA	NA	2.62
3098	DC038601	F	WB	White Sucker	NA	NA	4.01	NA	0.44	NA	NA	0.51	NA	0.21	0.20	0.20	2.83	NA	0.35
3098	DC038602	F	PF	American Eel	NA	NA	2.73	NA	NA	NA	0.20	0.20	0.20	0.20	0.20	0.20	NA	NA	0.20
3098	QD032587	L	WB	White Sucker	NA	NA	0.29	NA	NA	NA	NA	0.43	NA	1.21	0.30	0.21	NA	NA	0.40
3100	DC019701	F	PF	White Perch	1.60	NA	2.47	NA	1.38	NA	NA	NA	NA	NA	2.85	2.78	1.96	1.45	2.62
3100	DC019702	F	WP	Winter Flounder	1.25	1.07	2.56	1.91	1.43	NA	NA	1.14	NA	2.94	2.95	2.88	2.03	NA	2.71
3101	DC019901	F	PF	Brown Trout	1.88	1.00	2.46	1.84	1.37	1.27	NA	NA	NA	2.82	2.83	2.76	1.95	1.44	2.60
3103	DC036201	F	WB	Channel Catfish	3.67	NA	NA	NA	NA	NA	0.70	NA	NA	NA	NA	2.77	NA	NA	2.61
3103	DC036202	F	WB	Carp	NA	1.42	NA	NA	1.37	NA	NA	NA	NA	NA	2.84	2.77	NA	NA	2.61
3104	DC020001	F	PF	Lm Bass	1.24	0.95	2.44	1.83	1.36	NA	NA	0.77	0.84	2.80	2.82	2.75	1.94	1.43	2.59
3104	DC020002	F	WB	Carp	NA	2.99	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.74	NA	NA	2.59
3105	DF025001	F	WB	Carp	NA	NA	2.45	2.05	1.37	NA	NA	0.77	NA	NA	2.83	2.76	1.95	NA	2.60
3105	DF025002	F	PF	Lm Bass	0.99	0.91	2.45	1.83	1.37	NA	0.48	0.77	0.84	2.82	2.83	2.76	1.95	NA	2.60
3106	DE026801	F	PF	Walleye	NA	0.98	2.46	NA	1.37	NA	NA	0.77	0.89	2.83	2.84	2.77	1.96	NA	2.61
3106	DE026802	F	PF	White Bass	NA	NA	2.46	2.53	1.37	NA	NA	NA	1.94	3.01	2.84	2.77	1.99	NA	2.61
3107	DE026901	F	WB	Carp	2.38	NA	2.45	NA	1.36	NA	NA	NA	NA	3.72	2.81	NA	NA	NA	2.59
3108	DE027001	F	PF	Walleye	0.98	1.03	2.45	1.83	1.36	1.25	NA	0.77	0.84	2.81	2.82	2.75	1.94	1.43	2.60
3108	DE027002	F	WB	Carp	NA	NA	2.47	NA	NA	NA	NA	NA	NA	NA	3.29	2.78	NA	NA	NA
3109	DE025001	F	WB	Carp	NA	NA	2.43	NA	1.36	NA	0.49	0.76	1.01	NA	2.80	2.73	NA	NA	2.57
3109	DE025002	F	PF	Sm Bass	NA	0.97	2.44	1.83	1.36	1.25	NA	0.78	1.03	2.81	2.82	2.75	1.94	1.43	2.59
3110	DE022501	F	BF	Flathead Catfish	1.67	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.81	2.74	NA	NA	2.59
3110	DE022502	F	BF	Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.76	NA	NA	2.60
3111	DH015801	F	PF	Walleye	0.09	0.23	0.29	0.29	0.29	2.26	0.28	0.20	0.20	0.20	0.20	0.20	0.20	0.28	0.28
3111	DH015802	F	WB	Silver Redhorse	1.16	2.64	0.20	NA	0.20	2.57	NA	0.31	0.63	0.20	0.20	0.20	0.20	0.26	0.26
3112	DE022401	F	WB	Carp	NA	NA	NA	NA	NA	NA	NA	1.20	1.80	3.39	2.85	NA	2.32	NA	2.61
3112	DE022402	F	PF	Walleye	1.26	1.06	2.46	1.84	1.37	NA	NA	0.77	0.84	2.83	2.84	2.77	1.96	1.44	2.61
3113	DE021101	F	BF	Channel Catfish	1.60	NA	2.45	NA	1.37	NA	NA	1.08	NA	2.81	2.82	2.75	1.95	1.44	2.60
3113	DE021102	F	BF	Carp	NA	NA	2.46	NA	1.72	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
3114	DE021201	F	BF	Carp	NA	1.35	2.68	NA	1.38	NA	NA	NA	NA	2.83	2.84	2.77	1.96	1.45	2.61

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3115	DE021301	F	WB Carp	NA	NA	3.45	NA	NA	NA	NA	NA	NA	NA	2.89	2.76	1.95	NA	2.60
3115	DE021302	F	PF Catfish	NA	NA	2.46	NA	NA	NA	NA	0.95	NA	3.04	2.84	2.77	1.96	2.13	2.61
3117	DE021501	F	PF Lake Trout	NA	NA	2.45	NA	1.60	NA	NA	NA	NA	NA	NA	2.76	NA	1.44	2.60
3117	DE021502	F	PF Brown Trout	2.44	NA	2.52	NA	1.41	NA	NA	1.65	NA	2.83	2.84	2.77	1.96	1.44	2.61
3118	DE021601	F	PF Walleye	NA	1.73	2.47	1.84	1.38	1.34	NA	0.98	NA	2.83	2.85	2.78	NA	1.48	2.62
3118	DE021602	F	WB Carp	NA	NA	NA	NA	1.37	NA	NA	NA	NA	2.82	NA	2.76	1.95	NA	2.60
3118	DE021603	F	WB Carp	NA	NA	NA	NA	1.37	NA	NA	NA	NA	NA	NA	2.77	1.96	NA	2.61
3118	SE021602	F	WB Carp	NA	NA	NA	NA	1.22	NA	NA	NA	NA	NA	NA	0.88	0.86	NA	1.65
3119	DE021701	F	WB Carp	4.64	NA	0.59	NA	1.31	NA	NA	0.38	1.31	1.25	0.57	0.20	NA	1.36	0.27
3119	DE021702	F	PF Lm Bass	NA	1.06	0.24	2.60	0.24	111.71	NA	0.37	1.17	0.20	0.20	0.20	0.28	0.72	0.36
3120	DE021801	F	WB Carp	NA	5.20	NA	NA	0.20	NA	NA	NA	NA	NA	0.58	0.20	NA	NA	0.21
3120	DE021802	F	PF Bass	NA	1.53	0.89	0.89	0.89	3.92	NA	0.48	0.60	0.57	0.20	0.20	0.20	0.73	0.48
3122	DE022001	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	1.98	NA	NA	NA	2.76	NA	NA	2.61
3122	DE022003	F	WB Redhorse Sucker	NA	0.22	0.32	1.51	0.32	2.21	NA	0.31	NA	0.20	0.20	0.20	0.40	0.25	0.25
3122	DE022004	F	PF Sm Bass	NA	0.24	0.32	0.32	0.32	NA	NA	0.30	0.40	0.20	0.20	0.20	0.20	0.25	0.25
3125	DE022301	F	WB Carp	NA	NA	NA	NA	1.38	NA	NA	NA	NA	NA	NA	2.78	2.13	NA	2.62
3125	DE022302	F	PF White Bass	NA	1.02	2.47	1.85	1.38	NA	NA	0.88	1.26	2.84	2.85	2.78	1.96	1.45	2.62
3125	QD120888	L	PF White Bass	NA	0.92	2.46	1.84	1.38	NA	NA	0.83	NA	2.83	2.84	2.77	1.96	1.47	2.65
3132	DE023201	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	1.62	NA	NA	2.91	2.76	NA	NA	2.60
3132	DE023202	F	WB Channel Catfish	NA	NA	2.63	NA	NA	NA	NA	1.45	NA	NA	2.82	2.75	NA	NA	2.59
3134	DE023401	F	PF Crappie	NA	0.93	2.49	1.86	1.39	1.27	NA	0.78	0.86	2.86	2.87	2.80	1.98	1.46	2.64
3134	DE023403	F	WB Carp	3.71	NA	2.43	NA	1.36	NA	NA	NA	NA	NA	2.80	2.73	2.06	1.59	2.57
3134	DE023405	F	WB Carp	NA	NA	2.45	NA	1.37	NA	NA	NA	NA	NA	2.82	2.75	1.95	1.46	2.60
3134	DE023406	F	WB Sucker	NA	1.26	2.46	1.84	1.38	NA	NA	NA	NA	2.83	2.84	2.77	1.96	1.45	2.61
3135	DE023501	F	WB Carp	NA	1.49	2.47	NA	1.38	NA	NA	0.78	1.47	2.84	2.85	2.78	2.18	NA	2.62
3136	DE023602	F	PF Walleye	0.97	0.90	2.41	1.80	1.34	1.23	0.50	0.76	0.83	2.77	2.78	2.71	1.91	1.41	2.55
3137	DE023701	F	WB Redhorse Sucker	1.35	1.29	2.45	1.83	1.37	NA	NA	0.89	1.29	2.82	2.83	2.76	1.95	1.44	2.60
3137	DE023702	F	PF Walleye	1.00	0.92	2.47	1.85	1.38	1.34	0.55	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3138	DE023801	F	WB Carp	NA	NA	3.21	2.41	1.88	1.26	NA	NA	7.13	2.83	2.84	2.77	1.96	1.44	2.61
3138	DE023802	F	PF Sm Bass	1.11	1.22	2.46	NA	1.37	NA	NA	0.83	NA	2.82	2.84	2.76	1.95	1.44	2.61
3140	DE024002	F	WB Carp	NA	1.35	2.95	NA	1.38	NA	NA	0.87	NA	2.83	2.84	2.77	1.96	1.45	2.61
3141	DE024102	F	WB Carp	NA	NA	6.72	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
3141	DE024103	F	PF Northern Pike	NA	NA	2.47	NA	1.38	NA	NA	NA	NA	2.84	2.85	2.78	1.96	NA	2.62
3141	SE024102	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.89	NA	NA	1.81
3143	DE024401	F	Rotten (catf)	1.33	1.49	2.45	3.93	1.37	NA	NA	1.34	1.38	2.81	2.83	2.76	1.95	1.45	2.60
3143	DE024402	F	PF White Bass	1.00	0.99	2.47	1.85	1.38	NA	NA	NA	NA	2.84	2.85	2.78	1.96	1.45	2.62
3143	DE024403	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.82	2.75	NA	NA	2.59
3144	DE024901	F	WB Carp	NA	NA	2.46	2.32	1.37	NA	NA	NA	NA	2.83	2.84	2.77	1.96	1.44	2.61
3145	DE026601	F	WB N. Redhorse	NA	1.09	2.46	NA	1.37	NA	NA	NA	NA	2.83	2.84	2.77	1.96	1.44	2.61
3145	QD071988	F	WB N. Redhorse	NA	NA	2.47	NA	1.38	NA	NA	0.78	NA	2.83	2.85	2.77	1.96	1.45	2.62
3146	DE026701	F	WB Carp	NA	NA	NA	NA	3.58	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.62
3146	DE026702	F	PF Walleye	NA	0.97	2.47	1.84	1.38	NA	NA	0.78	0.85	2.83	2.85	2.77	1.96	1.45	2.62
3146	QD060288	L	WB Carp	NA	NA	2.46	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
3146	SE026701	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.88	NA	NA	1.84

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3147	DC035201	F	WB Carp	NA	NA	2.52	NA	1.38	NA	NA	NA	NA	NA	2.85	2.78	NA	1.54	2.62
3148	DE027101	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.48	2.74	NA	NA	2.59
3148	DE027103	F	PF Walleye	1.30	0.91	2.45	1.84	1.37	NA	NA	0.77	NA	2.82	2.83	2.76	1.95	1.44	2.60
3149	DC038501	F	WB White Sucker	0.51	0.52	0.81	2.43	0.81	0.93	NA	0.25	0.25	3.33	0.33	0.33	0.33	0.51	0.51
3150	DA008901	F	WB White Sucker	NA	NA	NA	NA	NA	NA	NA	NA	2.23	NA	4.61	NA	NA	NA	NA
3151	DA009101	F	WB White Sucker	NA	NA	2.47	NA	NA	NA	NA	NA	NA	NA	2.85	2.78	2.71	NA	2.62
3151	DA009102	F	PF Sm Bass	NA	1.05	2.45	1.83	1.37	1.25	NA	0.77	NA	2.81	2.82	2.75	1.95	NA	2.60
3151	QD072887	F	WB White Sucker	NA	NA	2.73	NA	NA	NA	NA	NA	NA	NA	2.84	2.77	NA	2.26	2.61
3152	DA009201	F	WB White Sucker	NA	NA	2.45	NA	1.37	NA	NA	NA	NA	NA	2.83	2.76	1.95	1.59	2.60
3161	DC019801	F	BF Black Bullhead	1.34	NA	NA	NA	NA	NA	NA	NA	NA	2.80	2.81	2.74	1.98	1.83	2.59
3161	DC019802	F	WB White Sucker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.78	NA	NA	2.62
3162	DJ022121	F	WB Big Skate	NA	NA	2.46	NA	1.65	NA	NA	NA	NA	NA	NA	2.77	1.96	2.23	2.61
3162	DJ022122	F	WB Ratfish	NA	1.03	2.45	NA	1.37	2.01	NA	NA	NA	NA	3.37	2.76	1.95	1.44	2.61
3162	DJ022123	M	Dungeness Crab	1.61	1.81	2.74	3.56	1.56	NA	NA	NA	NA	NA	NA	2.77	1.96	1.79	2.61
3162	DJ022403	F	PF Quillback Rockfish	1.12	1.04	2.45	1.83	1.37	1.41	NA	1.01	0.87	2.81	2.82	2.75	1.94	1.43	2.59
3162	DJ024001	F	WP Starry Flounder	NA	NA	2.47	NA	NA	NA	NA	NA	NA	NA	NA	2.77	2.19	NA	2.61
3162	DJ025103	O	Hepatopancreas,Crab	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.62
3162	QD041889	O	Hepatopancreas	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
3163	DJ022402	M	Dungeness Crab	NA	NA	2.46	NA	5.94	NA	NA	NA	NA	NA	NA	2.77	1.98	NA	2.61
3163	DJ022404	M	Dungeness Crab	2.24	NA	2.45	NA	1.40	NA	NA	NA	NA	NA	7.19	2.76	1.95	1.79	2.60
3163	DJ024002	F	WP Starry Flounder	NA	NA	2.47	NA	1.38	NA	NA	0.78	NA	NA	2.85	2.77	1.96	NA	2.62
3163	DJ025102	O	Hepatopancreas,Crab	NA	NA	2.47	NA	NA	NA	NA	NA	NA	NA	NA	2.77	2.54	NA	2.61
3164	DD015701	F	PF Lm Bass	1.64	64.57	2.46	NA	NA	NA	NA	4.24	193.32	NA	2.84	2.77	NA	NA	2.61
3164	DD015702	F	WB Carp	NA	NA	2.46	NA	NA	NA	NA	NA	NA	NA	NA	2.77	3.08	NA	2.61
3165	DD015703	F	PF Lm Bass	1.46	1.89	2.46	NA	1.43	NA	NA	0.77	NA	NA	2.84	2.77	NA	NA	2.61
3165	DD015704	F	WB Redhorse Sucker	NA	NA	NA	NA	2.13	NA	NA	NA	NA	NA	3.31	2.77	NA	NA	2.61
3165	QD031788	L	PF Lm Bass	NA	1.86	2.47	NA	1.38	NA	0.73	0.78	NA	NA	2.85	2.78	NA	NA	2.62
3166	DD015705	F	PF Walleye	1.00	0.92	2.47	1.85	1.38	NA	0.49	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3166	DD015706	F	WB White Sucker	1.01	1.00	2.47	NA	1.38	NA	NA	0.78	NA	2.84	2.85	2.78	1.96	1.45	2.62
3167	DD015707	F	PF Lm Bass	NA	NA	3.40	NA	2.53	NA	0.49	0.77	0.94	NA	NA	2.77	NA	NA	2.61
3167	DD015708	F	WP Bluegill	NA	NA	NA	NA	NA	NA	0.67	NA	1.33	NA	NA	2.77	NA	NA	NA
3167	QD040588	L	PF Lm Bass	NA	NA	NA	NA	2.30	NA	0.49	0.77	1.03	NA	3.69	2.76	NA	NA	2.61
3167	SD015708	F	WP Bluegill	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.86	NA	NA	NA
3168	DD015711	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.12	2.77	1.96	1.44	2.61
3168	DD015712	F	PF Lm Bass	NA	1.00	2.47	1.85	1.38	NA	NA	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3168	SD015711	F	WB Carp	NA	NA	NA	NA	2.44	NA	NA	NA	NA	NA	1.28	1.40	1.57	0.67	1.87
3169	DD015713	F	WB Black Redhorse	0.99	1.10	2.46	1.84	1.37	4.43	NA	0.77	0.95	2.82	2.83	2.76	1.95	2.25	3.82
3170	DD015715	F	WB Spotted Sucker	1.16	0.92	NA	NA	NA	NA	NA	0.77	0.86	2.83	2.84	2.77	1.95	NA	2.61
3171	DD015717	F	WB Spotted Sucker	1.07	0.92	2.47	1.84	1.38	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3172	DD015719	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.76	1.95	NA	2.60
3172	DD015720	F	PF Lm Bass	NA	0.92	2.47	1.85	1.38	NA	NA	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3173	DD015721	F	PF Lm Bass	0.99	0.93	2.46	1.84	1.37	1.26	0.50	0.77	0.85	2.83	2.84	2.77	1.95	1.44	2.61
3173	DD015722	F	WB Channel Catfish	NA	NA	2.46	NA	NA	NA	NA	NA	NA	2.83	2.84	2.77	1.96	NA	2.61
3173	QD070689	L	PF Lm Bass	0.99	0.92	2.46	1.84	1.37	1.26	0.49	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3174	DD015723	F	PF Lm Bass	0.99	0.92	2.46	1.84	1.37	1.26	0.49	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.61
3174	DD015724	F	WB Channel Catfish	1.10	0.92	2.46	1.84	1.37	NA	NA	0.77	0.93	2.82	2.83	2.76	1.95	1.44	2.60
3175	DD015801	F	WB Channel Catfish	NA	NA	NA	NA	NA	NA	0.49	0.78	NA	NA	2.85	2.77	NA	NA	2.62
3175	DD015802	F	PF Lm Bass	1.02	0.94	2.46	NA	1.37	NA	0.53	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3176	DD015803	F	WB Spotted Sucker	1.23	1.68	2.47	NA	1.38	NA	NA	0.78	0.96	2.84	2.85	2.78	1.96	1.45	2.62
3176	DD015804	F	PF Lm Bass	1.11	1.14	2.46	1.84	1.37	1.34	0.56	0.77	0.85	2.83	2.84	2.77	1.95	1.44	2.61
3177	DD015805	F	WB Carp	1.06	1.52	NA	NA	1.38	NA	NA	0.80	NA	3.79	2.85	2.78	NA	NA	2.62
3177	DD015806	F	PF Lm Bass	1.04	0.92	2.47	1.85	1.38	NA	0.49	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3178	DD015807	F	WB North Hogsucker	1.00	0.97	2.47	1.85	1.38	NA	0.84	0.78	0.85	2.84	2.85	2.78	1.97	NA	2.62
3178	DD015808	F	PF Redeye Bass	1.00	0.92	2.47	1.85	1.38	1.26	0.49	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3179	DD015809	F	WB Golden Redhorse	NA	NA	2.56	NA	1.38	NA	NA	0.78	0.92	NA	2.85	2.78	NA	NA	2.62
3179	DD015810	F	PF Lm Bass	0.99	1.13	2.46	1.84	1.37	1.26	0.59	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3180	DD015812	F	PF Lm Bass	0.99	0.93	2.46	1.84	1.37	1.62	0.60	0.77	0.85	2.82	2.84	2.76	1.95	1.44	2.61
3181	DD015813	F	PF Lm Bass	1.12	0.92	2.47	1.84	1.38	1.32	0.49	0.78	0.85	2.83	2.85	2.77	1.96	1.45	2.62
3181	DD015814	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	2.18	NA	NA	NA	2.77	NA	NA	2.61
3182	DD015815	F	PF Rock Bass	1.18	0.92	2.46	NA	1.37	NA	NA	0.77	0.86	2.82	2.84	2.76	1.95	1.44	2.61
3182	DD015816	F	WB Carp	2.29	1.64	2.48	3.04	1.38	NA	NA	NA	NA	2.88	2.84	2.77	1.96	1.45	2.61
3183	DD015817	F	WB Carp	NA	NA	2.46	3.23	1.37	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
3183	DD015818	F	PF Sauger	NA	0.92	2.46	1.84	1.38	NA	0.93	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3184	DD015819	F	WB Carp	NA	NA	NA	NA	NA	NA	1.24	0.80	1.04	NA	2.85	2.77	NA	NA	2.62
3184	DD015820	F	PF White Crappie	1.04	0.92	2.47	1.84	1.38	1.44	0.52	0.78	0.85	2.83	2.85	2.77	1.96	1.45	2.62
3185	DD015821	F	WB Channel Catfish	NA	NA	NA	NA	NA	NA	NA	1.18	1.57	NA	NA	2.77	NA	NA	2.75
3185	DD015822	F	PF Lm Bass	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.75	1.94	NA	2.59
3185	SD015821	F	WB Channel Catfish	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.87	NA	NA	NA
3186	DD015823	F	PF Spot	1.22	0.92	2.46	1.84	1.37	1.32	1.00	0.79	0.86	2.83	2.84	2.77	1.95	1.44	2.61
3186	DD015824	F	WP Southern Flounder	NA	1.04	2.46	NA	1.38	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3187	DD015902	F	WP Summer Flounder	1.02	1.21	2.47	NA	NA	NA	0.71	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3188	DD015903	F	WB Carp	2.70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.78	NA	NA	2.62
3188	DD015904	F	PF Lm Bass	1.39	1.00	2.46	1.84	1.37	1.83	0.57	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3189	DD015905	F	WB Carp	2.36	NA	NA	NA	1.36	NA	NA	0.77	NA	NA	2.81	2.74	NA	NA	2.59
3189	DD015906	F	PF Lm Bass	NA	0.93	2.45	1.83	1.37	1.25	0.72	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3190	DD015907	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	0.88	NA	3.57	2.76	2.69	NA	NA	2.53
3190	DD015908	F	PF Lm Bass	NA	0.95	2.46	1.84	1.37	1.26	NA	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3191	DJ024003	F	WP Starry Flounder	1.01	0.98	2.47	1.85	1.38	NA	0.49	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3191	DJ024005	M	Soft Shell Clams	1.07	0.91	2.45	1.84	1.37	NA	NA	0.77	0.84	2.82	2.83	2.76	1.95	NA	2.60
3192	DJ024007	F	WP Starry Flounder	NA	1.09	2.45	1.83	1.37	NA	NA	0.77	NA	2.81	2.83	2.76	1.95	NA	2.60
3192	DJ024009	M	Soft Shell Clams	1.19	0.92	2.46	1.84	1.37	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	NA	2.61
3192	QD020789	L	Soft Shell Clams	1.23	0.92	2.46	1.84	1.37	NA	NA	0.77	0.84	2.82	2.83	2.76	1.95	NA	2.61
3193	DC039001	F	PF Sm Bass	NA	1.28	2.47	NA	1.38	NA	NA	0.77	NA	2.83	2.84	2.77	1.96	1.45	2.61
3193	QD039001	L	PF Sm Bass	1.26	1.31	2.46	1.86	1.38	NA	NA	1.03	NA	2.83	2.84	2.77	1.96	1.44	2.61
3195	DH020104	F	WB Carp	1.68	1.42	2.46	2.06	1.37	NA	1.09	0.79	1.27	2.83	2.84	2.77	1.96	NA	2.61
3195	DH020105	F	WB Chub	NA	NA	2.46	NA	1.37	NA	NA	0.87	NA	2.82	2.83	2.76	1.95	NA	2.61
3196	DH020108	F	WB Sucker	1.08	NA	NA	NA	1.36	NA	NA	0.77	0.84	NA	2.82	2.75	NA	NA	2.59
3197	DH020110	F	WB Sucker	1.12	1.04	2.46	1.84	1.37	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3198	DH020111	F	WB Sucker	NA	NA	2.46	NA	1.38	NA	NA	NA	NA	2.83	2.84	2.77	1.96	1.47	2.61
3199	DH020101	F	WB Carp	NA	NA	2.47	NA	NA	NA	NA	0.78	0.91	2.84	2.85	2.78	1.96	NA	2.62
3199	DH020103	F	WB Carp	1.09	0.97	2.47	1.85	1.38	NA	1.05	0.90	0.93	2.84	2.85	2.78	1.96	1.45	2.62
3200	DH020112	F	WB Sucker	NA	1.17	2.46	1.84	1.37	NA	NA	0.77	NA	2.82	2.83	2.76	1.95	1.44	2.60
3201	DJ024012	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
3203	DJ024018	F	WB Carp	NA	NA	3.47	NA	NA	NA	NA	NA	NA	NA	NA	2.79	NA	NA	2.63
3205	DJ024024	M	Crayfish (whole)	0.99	0.92	2.47	1.85	1.38	NA	0.57	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3206	DJ022301	M	WB Crayfish	NA	NA	2.64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3206	DJ024102	F	PF Lm Bass	NA	1.41	2.46	NA	1.38	NA	NA	0.84	NA	2.83	2.84	2.77	1.96	NA	2.61
3206	DJ024103	F	WB Sucker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.79	2.72	NA	NA	2.56
3208	DJ024109	F	WB Sucker	1.12	0.97	2.48	1.85	1.38	NA	NA	0.78	0.85	2.85	2.86	2.79	1.97	1.45	2.63
3212	DJ024121	F	WB Carp	NA	0.93	2.47	1.85	1.38	NA	0.61	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3212	QD050388	L	WB Carp	NA	0.91	2.45	1.83	1.37	1.65	0.77	0.77	0.84	2.81	2.82	2.75	1.94	1.44	2.59
3216	DJ023707	F	PF Squawfish	NA	NA	2.47	NA	1.38	NA	NA	NA	NA	2.84	2.85	2.78	1.96	1.45	2.62
3216	DJ023708	F	WB Sucker	NA	NA	2.48	NA	NA	NA	NA	NA	NA	2.84	2.86	2.78	1.97	NA	2.62
3216	QD091688	F	WB Sucker	NA	NA	2.46	NA	NA	NA	NA	0.87	NA	2.83	2.84	2.77	1.96	NA	2.61
3217	DJ023709	F	PF Whitefish	NA	NA	NA	NA	1.35	NA	NA	0.82	NA	NA	2.79	2.72	NA	NA	2.56
3217	DJ023710	F	WB Sucker	NA	NA	2.46	1.84	1.37	NA	NA	0.77	0.85	NA	2.84	2.77	NA	1.44	2.61
3218	DJ023711	F	PF Squawfish	NA	NA	2.46	NA	1.37	NA	NA	NA	NA	2.82	2.83	2.76	1.95	1.44	2.61
3218	DJ023712	F	WB Sucker	NA	1.48	2.46	NA	1.38	2.27	NA	0.83	1.18	NA	2.84	2.77	1.96	NA	2.61
3219	DJ023713	F	WB White Sturgeon	NA	0.92	2.46	1.84	1.37	NA	NA	NA	NA	2.82	2.83	2.76	1.95	1.44	2.60
3219	DJ023714	F	PF White Sturgeon	NA	0.92	2.47	1.84	1.38	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3220	DJ023902	F	PF Squawfish	NA	NA	2.46	NA	1.37	NA	NA	NA	1.03	2.82	2.83	2.76	1.95	1.44	2.60
3220	DJ023903	F	WB Bridgelip Sucker	NA	NA	2.98	1.84	1.37	NA	NA	NA	NA	2.82	2.83	2.76	1.95	1.46	2.60
3220	QD012288	F	PF Squawfish	NA	1.18	2.45	1.96	1.37	1.91	NA	0.77	NA	2.82	2.83	2.76	1.95	1.44	2.60
3221	DJ022405	F	WB Carp	NA	NA	2.46	NA	1.37	3.20	NA	NA	NA	2.83	2.84	2.77	1.96	1.44	2.61
3221	DJ023904	F	BF Channel Catfish	NA	NA	2.47	NA	1.38	NA	NA	0.77	NA	2.83	2.84	2.77	1.96	1.45	2.61
3221	DJ023905	F	WB Sucker	NA	NA	2.44	1.83	1.36	NA	NA	0.77	NA	NA	2.82	2.75	1.94	1.43	2.59
3222	DJ023906	F	PF Squawfish	NA	1.14	2.47	NA	1.38	1.93	NA	0.78	NA	2.84	2.85	2.78	1.96	1.45	2.62
3222	DJ023907	F	WB Sucker	NA	NA	2.46	NA	1.37	NA	NA	0.77	NA	2.83	2.84	2.77	1.95	NA	2.61
3223	DJ023717	F	WP Starry Flounder	NA	0.97	2.46	NA	1.37	NA	NA	0.77	1.24	2.82	2.83	2.76	1.95	NA	2.60
3224	DJ023715	M	Soft Shell Clams	1.11	0.91	2.45	NA	1.82	NA	NA	0.77	0.87	NA	2.83	2.76	1.95	NA	2.60
3226	DJ023721	M	Pacific Oysters	1.23	0.92	2.47	1.84	1.38	1.47	NA	0.78	0.95	2.83	2.85	2.77	1.96	1.45	2.62
3227	DJ023723	M	Pacific Oysters	1.01	1.52	2.47	2.81	NA	NA	NA	0.77	1.22	2.83	2.84	2.77	1.96	NA	2.61
3231	DJ023911	F	WB Carp	NA	NA	2.67	NA	1.37	NA	NA	NA	2.34	NA	2.84	2.76	NA	NA	2.61
3234	DH020301	F	WP Squawfish	1.15	0.94	2.53	1.90	1.42	NA	0.91	0.80	0.87	2.91	2.92	2.85	2.01	1.49	2.69
3235	DH020303	F	WB White Sucker	NA	NA	2.51	NA	1.39	NA	NA	0.83	NA	2.86	2.87	2.80	1.97	NA	2.64
3236	DH020305	F	WB Largescale Sucker	NA	NA	NA	NA	1.39	NA	NA	0.82	NA	2.86	2.87	2.80	1.98	NA	2.64
3236	DH020306	F	PF Brown Trout	1.08	NA	2.47	2.72	1.38	2.09	NA	0.99	1.08	2.84	2.85	2.78	1.96	1.45	2.62
3237	DH020307	F	PF Rainbow Trout	1.25	0.98	2.46	1.84	1.37	1.26	NA	0.77	1.06	2.82	2.83	2.76	1.95	1.44	2.61
3237	DH020308	F	WB Largescale Sucker	1.37	1.15	2.47	1.85	1.38	1.59	NA	0.81	1.40	2.84	2.85	2.78	1.96	1.45	2.62
3238	DJ023918	F	WP Dolly Varden	1.11	0.95	2.46	1.84	1.38	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3238	QD080888	F	WP Dolly Varden	1.04	0.92	2.46	1.84	1.37	NA	NA	0.77	0.85	2.83	2.84	2.77	1.95	1.44	2.61
3241	DJ023924	F	WP Dolly Varden	NA	1.21	2.46	NA	1.38	NA	NA	0.81	1.02	2.83	2.84	2.77	1.96	1.44	2.61

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3244	DJ023622	F	WB Coast Sculpin	1.11	0.94	2.46	1.84	1.37	NA	NA	0.88	0.92	2.83	2.84	2.77	1.96	1.44	2.61
3245	DJ023623	F	WP Spotted Ratfish	1.02	0.91	2.43	1.82	1.36	NA	NA	0.77	0.84	2.80	2.81	2.74	1.93	1.43	2.58
3245	DJ023624	F	WP Flathead Sole	1.11	NA	2.46	2.01	1.38	NA	1.25	0.77	1.08	2.83	2.84	2.77	1.96	1.45	2.61
3246	DJ022108	F	PF Red Striped Rockfish	1.14	0.92	2.46	1.84	1.38	3.00	0.52	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3246	DJ022109	F	WP Flathead Sole	0.95	0.88	2.36	1.76	1.32	NA	NA	0.74	0.81	2.71	2.72	2.65	1.87	1.38	2.50
3248	DJ022502	F	WB Composite Bottom	1.01	0.95	2.47	1.85	1.38	NA	NA	0.78	0.85	2.84	2.85	2.78	1.96	NA	2.62
3249	DJ022504	F	WB Sucker	1.00	0.92	2.47	1.85	1.38	NA	NA	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3250	DJ022506	F	WB Sucker	1.10	1.30	2.45	NA	1.37	NA	NA	0.77	NA	2.82	2.83	2.76	1.95	NA	2.60
3252	DJ022510	F	WB Sucker	NA	1.16	2.47	1.87	1.38	NA	NA	0.78	0.97	2.83	2.85	2.77	1.96	1.45	2.62
3252	QD082288	L	WB Sucker	NA	1.05	2.47	NA	1.38	NA	NA	0.78	NA	2.84	2.85	2.78	1.96	1.45	2.62
3256	DJ022517	F	PF Sm Bass	NA	0.92	2.46	1.84	1.37	NA	NA	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.61
3256	DJ022518	F	WB Sucker	NA	0.93	2.40	1.79	1.34	NA	NA	0.75	0.82	2.76	2.77	2.70	1.91	NA	2.54
3258	DC038901	F	PF Spot	NA	2.89	2.61	3.20	1.47	5.25	NA	NA	NA	2.87	2.90	2.81	1.99	1.45	2.62
3258	DC038902	F	WB Croaker	1.01	0.92	2.47	NA	1.39	NA	0.81	NA	0.85	NA	2.85	2.78	NA	NA	2.62
3259	DB000466	F	WB Goldfish	NA	NA	3.12	NA	NA	NA	NA	0.77	NA	NA	NA	2.77	1.96	NA	2.61
3259	DB069101	F	WB Sucker	NA	1.68	NA	NA	1.37	NA	NA	NA	NA	2.83	2.84	2.77	1.96	NA	2.61
3260	DB000493	F	WB Carp	NA	1.25	2.47	2.06	1.38	NA	NA	NA	NA	2.84	2.85	2.78	1.96	1.76	2.62
3261	DY026002	F	WB Striped Mullet	NA	1.98	NA	NA	NA	NA	NA	NA	NA	NA	2.83	2.76	NA	NA	2.60
3262	DY026004	F	WB Tilapia Tilapia	NA	0.96	2.46	NA	1.37	NA	0.66	0.84	0.89	2.82	2.84	2.76	1.95	NA	2.61
3264	DY022602	F	WB Hornyhead Turbot	NA	NA	2.47	NA	1.53	NA	NA	0.92	NA	2.86	2.85	2.78	1.96	NA	2.62
3266	DY022702	F	WB Channel Catfish	NA	1.57	2.46	1.84	1.38	NA	NA	0.77	NA	2.83	2.84	2.77	1.96	1.45	2.61
3267	DY022101	F	PF Rainbow Trout	NA	1.14	2.46	1.84	1.37	2.60	NA	NA	NA	2.83	2.84	2.77	1.96	1.44	2.61
3267	DY022102	F	WB Sacramento Sucker	NA	0.97	2.47	1.85	1.38	NA	NA	0.78	0.99	2.84	2.85	2.78	1.96	1.45	2.62
3267	QD020288	L	PF Rainbow Trout	NA	1.28	2.47	1.84	1.38	NA	NA	0.90	NA	2.83	2.85	2.77	1.96	1.45	2.62
3269	DY022106	F	WB Channel Catfish	1.74	NA	2.47	NA	1.38	NA	NA	0.81	NA	2.84	2.85	2.78	1.96	1.45	2.62
3270	DY022107	F	PF Squawfish	NA	NA	2.47	NA	1.38	2.27	NA	0.78	NA	2.84	2.85	2.78	1.96	1.45	2.62
3270	DY022108	F	WB Sucker	NA	1.03	2.46	1.84	1.38	NA	NA	0.77	0.96	2.83	2.84	2.77	1.96	1.45	2.61
3270	SY022108	F	WB Sucker	NA	0.33	1.04	0.65	1.22	NA	NA	0.43	NA	0.93	1.23	0.96	0.95	0.70	2.07
3271	DY022110	F	WB Sucker	NA	1.00	2.44	NA	1.36	NA	NA	0.77	0.84	2.80	2.81	2.74	1.94	1.43	2.58
3272	DY022111	F	PF Leopard Shark	0.99	0.92	2.46	NA	1.37	NA	NA	0.77	1.01	2.82	2.84	2.76	1.95	1.44	2.61
3272	DY022112	F	WB White Surfperch	NA	NA	2.70	NA	NA	NA	NA	NA	NA	2.83	NA	2.77	1.96	1.63	2.61
3273	DY022113	F	WB Sculpin	NA	1.35	2.47	NA	1.38	NA	NA	NA	NA	NA	2.85	2.77	NA	NA	2.62
3273	DY022114	F	WB Surf Smelt	1.23	1.07	2.47	1.84	1.38	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3274	DY022116	F	WB Sculpin	1.11	0.93	2.49	1.86	1.39	NA	NA	0.78	0.85	2.86	2.87	2.80	1.97	1.46	2.64
3275	DY022118	F	WB Sucker	0.99	1.00	2.46	1.84	1.38	NA	0.49	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3276	DY022119	F	WB Walleye	NA	NA	2.45	NA	NA	NA	NA	0.77	NA	2.81	2.82	2.75	1.94	NA	2.59
3276	DY022120	F	PF Brown Rockfish	1.13	0.98	2.42	NA	1.35	NA	NA	0.76	NA	2.78	2.79	2.72	1.92	NA	2.57
3278	DY022124	F	WB Sacramento Sucker	0.99	0.92	2.46	1.84	1.38	NA	0.49	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3281	DY022205	F	WB Sucker	0.99	1.15	2.46	1.84	1.37	NA	0.71	0.77	0.84	2.82	2.84	2.76	1.95	1.44	2.61
3282	DY022207	F	WB Carp	1.70	1.23	2.56	1.91	1.44	2.27	NA	0.98	NA	2.83	2.84	2.77	1.96	1.45	2.61
3283	DY022209	F	WB Carp	NA	NA	2.50	NA	1.40	NA	NA	NA	NA	NA	2.89	2.82	1.99	NA	2.66
3285	DY022212	F	WP Stingray	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.36	2.78	NA	NA	2.62
3285	DY022213	F	WB Diamond Turbot	1.76	NA	2.46	NA	NA	NA	NA	1.05	NA	2.91	NA	2.73	1.93	1.59	2.57
3286	DY022215	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.93	NA	2.81	1.99	NA	2.65

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3287	DY022216	F WB	Tilapia Zilli	NA	0.99	2.46	1.84	1.37	NA	NA	0.77	0.85	2.83	2.84	2.77	1.95	NA	2.61
3288	DY022218	F WB	Sucker	1.09	0.99	2.47	1.85	1.38	NA	NA	0.78	NA	2.84	2.85	2.78	1.96	1.45	2.62
3288	QD060188	F WB	Sucker	1.20	1.14	2.45	1.83	1.37	NA	NA	0.77	NA	2.81	2.83	2.76	1.95	1.44	2.60
3289	DY022219	F WP	Bocaccio	0.99	0.93	2.45	1.83	1.37	NA	NA	0.85	0.90	2.82	2.83	2.76	1.95	1.44	2.60
3289	DY022220	F WB	Sculpin	1.20	0.97	2.46	1.84	1.37	NA	NA	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3290	DY022221	F PF	Redear Sunfish	1.07	0.96	2.47	1.85	1.38	NA	0.60	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3290	DY022222	F WB	Blackfish	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.73	NA	NA	2.57
3294	DJ022111	F WP	True Cod	1.02	0.94	2.47	1.85	1.38	1.41	NA	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3294	DJ022113	M	Mussel	0.99	0.92	2.46	1.84	1.38	1.50	0.55	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3295	DJ022114	F WP	Atlantic Salmon	1.11	0.96	2.47	NA	1.38	NA	NA	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3296	DB040101	F WB	White Sucker	1.34	1.04	2.44	1.83	1.36	NA	NA	0.77	NA	2.81	2.82	2.75	1.94	1.43	2.59
3297	DB041501	F WB	Carp	NA	NA	2.78	NA	NA	NA	NA	NA	NA	NA	NA	2.77	2.37	NA	NA
3297	DB041504	F PF	Sm Bass	1.14	0.93	2.46	1.84	1.37	NA	0.51	0.77	NA	NA	NA	2.76	1.95	1.44	2.61
3297	SB041501	F WB	Carp	NA	NA	NA	NA	1.24	NA	NA	NA	NA	NA	NA	0.87	NA	NA	1.81
3298	DB041601	F WB	Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.78
3298	DB041604	F PF	Lm Bass	0.99	0.92	2.46	1.84	1.38	1.34	0.51	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3298	QD112988	L PF	Lm Bass	0.99	0.92	2.47	1.84	1.38	1.36	0.49	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3299	DB040601	F WB	White Sucker	NA	NA	NA	NA	1.37	NA	NA	NA	NA	NA	NA	2.77	NA	NA	NA
3299	DB040604	F PF	Lm Bass	NA	NA	2.46	1.84	1.37	NA	NA	NA	NA	NA	3.48	2.76	1.95	NA	2.60
3300	DB040201	F WB	White Sucker	NA	NA	2.46	2.06	1.37	NA	NA	NA	NA	NA	2.84	2.77	1.96	NA	2.61
3300	DB040204	F PF	Sm Bass	NA	1.02	2.46	1.84	1.38	1.26	NA	0.80	1.59	2.83	2.84	2.77	1.96	1.44	2.61
3300	SB040201	F WB	White Sucker	NA	NA	1.10	0.67	1.31	NA	NA	NA	NA	NA	1.17	1.06	1.03	0.65	1.64
3301	DB041101	F WB	Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.78	NA	NA	2.62
3301	DB041104	F PF	Northern Pike	NA	0.95	2.46	1.84	1.38	1.35	NA	0.79	1.08	2.83	2.84	2.77	1.96	1.45	2.61
3301	QD092088	L WB	Carp	NA	NA	5.04	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.67
3301	SB041101	F WB	Carp	NA	NA	NA	NA	1.70	NA	NA	NA	NA	NA	NA	1.07	NA	NA	2.07
3302	DB041901	F WB	White Sucker	NA	NA	2.46	2.05	1.38	NA	NA	NA	NA	NA	2.84	2.77	1.96	NA	2.61
3302	DB041904	F PF	Lm Bass	NA	0.92	2.47	1.85	1.38	NA	0.65	0.78	0.88	2.84	2.85	2.78	1.96	1.45	2.62
3303	DB042301	F WB	White Sucker	NA	NA	2.46	NA	1.37	NA	NA	0.77	NA	2.83	2.84	2.77	1.96	NA	2.61
3304	DB041001	F PF	Northern Pike	NA	0.94	2.45	1.84	1.37	1.25	NA	0.77	0.91	2.82	2.83	2.76	1.95	1.44	2.60
3304	DB041004	F WB	White Sucker	NA	NA	2.45	NA	1.37	NA	NA	NA	NA	2.82	2.83	2.76	1.95	1.44	2.60
3305	DB042001	F WB	Channel Catfish	NA	NA	2.63	NA	1.38	NA	NA	NA	NA	NA	NA	2.77	1.97	1.59	2.62
3305	DB042004	F PF	Sm Bass	1.48	0.94	2.45	1.83	1.37	1.25	NA	0.77	1.00	2.81	2.82	2.75	1.94	1.43	2.59
3306	DB041801	F WB	White Sucker	NA	1.11	2.46	1.84	1.37	NA	NA	NA	NA	2.83	2.84	2.77	1.95	1.44	2.61
3307	DB042101	F WB	White Sucker	NA	1.41	2.43	1.82	1.36	NA	NA	1.04	NA	2.79	2.81	2.74	1.93	1.43	2.58
3307	QD100588	L WB	White Sucker	NA	1.12	2.46	1.84	1.37	1.58	NA	NA	NA	2.83	2.84	2.77	1.96	1.44	2.61
3308	DB040001	F PF	Northern Pike	1.11	0.93	2.47	1.84	1.38	1.30	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3308	QD030689	L PF	Northern Pike	1.01	0.94	2.47	1.84	1.38	1.26	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3309	DB041301	F WB	White Sucker	NA	0.97	2.47	NA	1.38	NA	NA	0.78	0.86	2.84	2.85	2.78	1.96	NA	2.62
3310	DC032701	F WB	Bullhead	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.95	NA	2.76	2.02	2.31	2.61
3310	DC032702	F PF	Walleye	1.21	0.94	2.47	1.84	1.38	NA	NA	0.78	0.85	2.83	2.85	2.77	1.96	1.45	2.62
3311	DC032801	F WB	Redhorse Sucker	1.29	1.00	2.46	1.84	1.37	NA	NA	NA	NA	2.82	2.83	2.76	1.95	1.44	2.60
3311	DC032802	F PF	Sm Bass	1.37	0.94	2.47	1.85	1.38	1.26	NA	0.80	0.86	2.84	2.85	2.78	1.96	1.45	2.62
3312	DC033101	F WB	Redhorse Sucker	2.12	NA	2.47	NA	1.38	NA	NA	NA	NA	2.83	2.85	2.77	1.96	1.45	2.62

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC		Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3312	DC033102	F	PF	Sm Bass	1.01	0.92	2.47	1.84	1.38	NA	NA	0.77	0.91	2.83	2.84	2.77	1.96	1.45	2.61
3313	DC033201	F	WB	Redhorse Sucker	NA	NA	2.46	NA	1.38	NA	NA	NA	NA	2.83	2.84	2.77	1.96	1.50	2.61
3313	DC033202	F	PF	Sm Bass	NA	0.99	2.47	1.85	1.38	NA	NA	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3314	DC033301	F	WB	Channel Catfish	NA	NA	2.46	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	NA
3314	DC033302	F	PF	White Bass	NA	0.96	2.47	1.85	1.38	NA	NA	NA	NA	NA	2.85	2.78	1.96	1.45	2.62
3314	SC033301	F	WB	Channel Catfish	NA	NA	NA	NA	1.33	NA	NA	NA	NA	NA	1.10	0.99	0.91	0.71	1.87
3314	SC033302	F	PF	White Bass	NA	0.22	1.15	0.64	1.34	1.09	NA	NA	NA	0.89	1.11	0.99	0.91	0.67	1.88
3315	DC033401	F	WB	Carp	1.33	NA	NA	NA	NA	NA	NA	NA	NA	2.82	2.83	2.76	1.95	1.44	2.60
3316	DC033501	F	WB	White Sucker	NA	NA	2.46	NA	1.37	NA	NA	NA	NA	NA	NA	2.77	1.96	1.44	2.61
3316	DC033502	F	PF	Brown Trout	NA	1.05	2.46	1.84	1.37	NA	NA	0.77	NA	NA	2.84	2.77	1.95	1.44	2.61
3317	DC033601	F	WB	White Sucker	NA	NA	2.46	NA	1.37	NA	NA	NA	NA	2.83	2.84	2.77	1.95	1.44	2.61
3317	DC033602	F	WP	Pumpkinseed	NA	0.92	2.46	1.84	1.37	NA	NA	1.15	NA	2.82	2.84	2.76	1.95	1.44	2.61
3317	SC033601	F	WB	White Sucker	NA	0.38	1.07	0.64	1.22	1.08	NA	NA	NA	0.87	1.03	0.89	0.86	0.67	1.87
3317	SC033602	F	WP	Pumpkinseed	NA	0.27	1.15	0.64	1.33	NA	NA	NA	NA	0.88	1.10	0.99	0.91	0.67	1.87
3318	DC033701	F	WB	White Sucker	NA	1.00	2.46	NA	1.37	NA	NA	NA	NA	2.82	2.84	2.76	1.95	1.44	2.61
3318	DC033702	F	PF	Rock Bass	NA	0.92	2.45	1.83	1.37	NA	NA	0.77	0.84	2.81	2.83	2.76	1.95	1.44	2.60
3319	DB041401	F	WP	Winter Flounder	1.66	1.24	2.47	1.86	1.38	NA	NA	NA	NA	2.84	2.85	2.78	1.96	1.45	2.62
3319	QD063088	F	WP	Winter Flounder	NA	1.20	2.47	NA	1.38	NA	NA	NA	NA	2.83	2.85	2.77	1.96	1.45	2.62
3320	DB041412	F	WP	Bluefish	NA	1.61	2.47	1.84	1.38	4.10	NA	NA	NA	2.83	2.84	2.77	1.96	1.78	3.12
3321	DB040401	F	WP	Winter Flounder	NA	NA	2.44	NA	1.37	NA	NA	NA	NA	2.81	2.82	2.75	1.94	1.43	2.59
3322	DB040412	F	WP	Bluefish	NA	0.91	2.44	1.82	1.36	1.29	NA	NA	NA	2.80	2.81	2.74	1.94	1.43	2.59
3323	DB041206	F	WP	Winter Flounder	NA	0.92	2.47	1.84	1.38	2.23	NA	0.88	0.92	2.83	2.84	2.77	1.96	1.45	2.61
3324	DB041252	F	WP	Bluefish	NA	1.06	2.45	1.83	1.37	NA	NA	NA	NA	2.81	2.82	2.75	1.95	1.44	2.60
3325	DB041218	F	WP	Bluefish	NA	1.05	2.46	1.84	1.37	NA	NA	NA	NA	2.83	2.84	2.77	1.96	1.44	2.61
3325	QD082988	L	WP	Bluefish	NA	1.03	2.46	1.84	1.37	NA	NA	NA	NA	2.83	2.84	2.77	1.96	1.44	2.61
3326	DB041208	F	WP	Bluefish	NA	1.03	2.46	1.84	1.37	NA	NA	NA	NA	2.83	2.84	2.77	1.95	1.44	2.61
3327	DB040301	F	WP	Bluefish	NA	1.36	2.46	1.84	1.38	NA	NA	NA	NA	2.83	2.84	2.77	1.96	1.44	2.61
3327	DB040315	F	WP	Bluefish	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.83	2.84	2.77	1.96	NA	2.61
3328	DD029111	F	WB	Carp	NA	NA	NA	NA	1.37	NA	NA	NA	NA	2.82	2.83	2.76	1.95	1.44	2.60
3328	DD029112	F	PF	Lm Bass	NA	0.94	2.46	1.84	1.37	NA	NA	0.77	NA	2.82	2.83	2.76	1.95	1.44	2.60
3328	SD029111	F	WB	Carp	NA	NA	1.36	NA	1.21	NA	NA	1.04	NA	NA	1.22	0.96	0.95	0.66	1.80
3328	SD029112	F	PF	Lm Bass	NA	0.25	1.11	0.65	1.31	NA	NA	0.43	NA	0.94	1.18	1.07	1.03	0.66	1.65
3329	DD016003	F	WB	Bowfin	NA	NA	2.47	NA	1.38	1.63	NA	NA	NA	NA	NA	2.77	NA	NA	2.62
3329	SD016003	F	WB	Bowfin	NA	NA	1.04	NA	1.22	NA	NA	NA	NA	NA	NA	0.96	0.95	NA	1.81
3330	DD029109	F	PF	Suwannee Bass	1.20	1.30	2.47	1.84	1.38	NA	0.49	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3330	DD029110	F	WB	Spotted Sucker	NA	NA	2.45	NA	NA	NA	NA	0.77	NA	2.82	2.83	2.76	1.95	1.44	2.60
3330	DD029423	F	PF	Black Crappie	0.99	0.92	2.47	1.85	1.38	NA	0.49	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3331	DD016001	F	WB	Brown Bullhead	NA	0.92	2.46	NA	1.37	NA	NA	0.77	0.84	2.82	2.84	2.76	1.95	1.44	2.61
3331	DD016002	F	PF	Lm Bass	NA	0.99	2.46	1.84	1.37	NA	NA	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.61
3331	DD016007	F	WB	Carp	NA	NA	2.47	4.91	NA	NA	NA	NA	1.41	3.33	2.84	2.77	NA	NA	2.61
3331	DD016008	F	BF	White Catfish	NA	NA	2.47	NA	NA	NA	NA	0.78	NA	2.84	2.85	2.78	1.96	1.45	2.62
3331	SD016008	F	BF	White Catfish	NA	NA	1.12	NA	1.32	NA	NA	0.43	NA	0.94	1.19	1.07	1.04	0.71	2.07
3332	DD016009	F	WP	Spotted Drum	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.81	2.83	2.76	1.95	1.44	2.60
3332	DD016010	F	PF	Caranx Hippos	1.16	0.99	2.45	1.83	1.37	1.25	0.50	0.77	0.84	2.81	2.82	2.75	1.94	1.43	2.59

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3333	DD016011	F	PF Bluefish	NA	NA	2.46	2.13	1.37	NA	NA	0.77	NA	2.82	2.83	2.76	1.95	1.44	2.61
3333	DD016012	F	WB Sea Catfish	NA	NA	NA	NA	NA	NA	NA	0.77	NA	2.82	2.83	2.76	1.95	1.44	2.60
3333	DD029108	F	PF Weakfish	1.05	0.93	2.47	1.84	1.38	1.26	0.57	0.78	0.85	2.83	2.85	2.77	1.96	1.45	2.62
3333	QD121588	L	PF Bluefish	NA	NA	2.45	NA	1.37	NA	NA	0.77	NA	2.82	2.83	2.76	1.95	1.44	2.60
3334	DD016013	F	WB Sea Catfish	NA	NA	NA	NA	NA	NA	NA	0.77	2.40	2.82	2.83	2.76	1.95	1.44	2.60
3334	DD016014	F	BF Striped Mullet	1.00	0.91	2.45	1.84	1.37	1.45	0.52	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3335	DD016015	F	WP Spot	NA	NA	2.47	NA	NA	NA	NA	NA	NA	NA	NA	2.78	NA	NA	2.62
3335	DD016016	F	PF Spotted Bass	1.05	0.92	2.46	1.84	1.37	NA	NA	NA	0.84	2.82	2.84	2.76	1.95	1.44	2.61
3335	DD029101	F	WP Red Drum	NA	0.92	2.46	2.12	NA	NA	NA	NA	0.85	NA	2.84	2.77	NA	1.44	2.61
3335	DD029102	F	WB Southern Flounder	NA	NA	2.46	2.35	1.37	NA	NA	0.77	0.90	2.83	2.84	2.77	1.95	1.44	2.61
3335	DD029103	F	WP Sheepshead	NA	NA	2.45	NA	1.37	NA	NA	NA	NA	NA	NA	2.76	NA	1.59	2.60
3335	QD081588	L	WP Southern Flounder	NA	NA	2.44	NA	NA	NA	NA	0.77	0.88	2.80	2.81	2.74	1.94	1.43	2.59
3335	SD016015	F	WP Spot	NA	NA	1.09	NA	NA	NA	NA	NA	NA	NA	NA	0.97	1.65	NA	1.88
3336	DD016004	F	WP Black Drum	0.99	0.94	2.47	NA	NA	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	NA	2.61
3336	DD016005	F	PF Striped Mullet	NA	1.22	2.47	1.84	1.38	NA	NA	0.78	0.95	2.83	2.85	2.77	1.96	1.45	2.62
3336	DD016006	F	WP Sheepshead	NA	NA	2.46	2.50	NA	NA	NA	0.87	1.42	2.82	2.83	2.76	1.95	1.44	2.61
3336	DD016017	F	WP Red Drum	1.17	0.92	2.46	1.84	1.37	NA	NA	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.61
3336	DD016018	F	PF Spotted Seatrout	0.99	0.92	2.46	1.84	1.38	NA	0.62	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3336	QD092288	F	PF Spotted Seatrout	0.99	0.92	2.46	1.84	1.37	NA	0.58	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3337	DD016019	F	WB Spotted Sucker	NA	NA	NA	NA	NA	NA	NA	0.80	NA	2.86	2.85	2.78	1.97	NA	2.62
3337	DD016020	F	PF Lm Bass	NA	0.97	2.45	1.83	1.37	NA	NA	0.77	0.84	2.81	2.82	2.75	1.95	1.44	2.60
3337	QD051388	F	WB Spotted Sucker	NA	NA	NA	NA	NA	NA	NA	0.77	NA	2.82	2.84	2.76	1.95	NA	2.61
3338	DD016021	F	PF Lm Bass	1.07	0.95	2.46	1.84	1.37	1.28	0.53	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.61
3338	DD016022	F	WB Spotted Sucker	NA	NA	2.47	NA	NA	NA	NA	1.33	NA	2.91	2.85	2.78	1.96	NA	2.62
3338	DD029107	F	PF Chain Pickerel	NA	0.97	2.47	1.85	1.38	1.40	0.66	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3339	DD016023	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	1.47	NA	NA	NA	2.76	NA	NA	2.60
3339	DD016024	F	PF White Bass	NA	NA	2.47	NA	1.38	NA	NA	NA	NA	2.83	2.85	2.77	1.96	1.45	2.62
3339	QD016023	L	WB Carp	NA	NA	NA	NA	1.53	NA	NA	NA	NA	NA	NA	2.76	1.95	NA	2.60
3340	DD029113	F	PF Lm Bass	NA	0.93	2.47	1.85	1.38	1.40	NA	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3340	DD029114	F	WB Channel Catfish	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.84	2.86	2.78	NA	NA	2.62
3340	SD029114	F	WB Channel Catfish	NA	NA	1.87	NA	NA	NA	NA	0.44	NA	0.94	1.19	1.07	1.04	0.66	1.66
3341	DD016103	F	PF Lm Bass	NA	0.98	2.46	1.84	1.38	1.49	NA	NA	NA	2.83	2.84	2.77	1.96	1.44	2.61
3341	DD016104	F	WB Catfish	NA	NA	NA	NA	NA	NA	NA	0.81	NA	2.81	2.83	2.76	1.95	1.44	2.60
3341	QD092788	F	PF Lm Bass	NA	0.97	2.47	1.85	1.38	1.48	NA	0.78	NA	2.84	2.85	2.78	1.96	1.45	2.62
3341	SD016103	F	PF Lm Bass	NA	0.22	1.15	0.64	1.33	1.30	NA	0.42	0.36	0.88	1.10	0.99	0.91	0.67	1.87
3341	SD016104	F	WB Catfish	NA	NA	NA	NA	NA	NA	NA	0.41	NA	0.84	1.10	0.87	0.86	0.65	1.80
3342	DD016105	F	WB Spotted Sucker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.84	2.77	1.96	NA	2.61
3342	DD016106	F	PF Bluegill	1.10	0.92	2.47	1.85	1.38	NA	0.92	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3343	DD016107	F	WB White Sucker	NA	NA	2.47	5.95	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.62
3343	DD016108	F	PF Redbreast Sunfish	NA	1.84	4.93	NA	2.75	NA	NA	1.55	1.69	5.66	5.69	5.55	3.92	2.89	5.23
3344	DD016109	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	2.79	NA	3.48	2.78	NA	NA	2.62
3344	DD016110	F	PF Lm Bass	NA	0.97	2.46	1.84	1.38	1.48	0.53	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3344	SD016109	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.87	NA	NA	3.01
3345	DD016111	F	WB Redhorse Sucker	NA	NA	3.85	NA	NA	NA	NA	1.17	NA	NA	2.85	2.78	1.96	NA	2.62

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3345	DD016112	F	PF Lm Bass	NA	NA	2.46	NA	1.37	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3345	SD016111	F	WB Redhorse Sucker	NA	NA	NA	NA	NA	NA	NA	0.92	NA	0.76	1.25	0.88	0.83	0.81	3.01
3346	DD016113	F	WB Creek Chubsucker	NA	NA	2.47	1.85	1.38	NA	NA	NA	NA	2.84	2.85	2.78	1.96	1.45	2.62
3346	DD016114	F	PF Lm Bass	NA	0.98	2.46	1.84	1.37	NA	NA	0.77	NA	2.83	2.84	2.77	1.96	1.44	2.61
3346	QD042088	L	WB Creek Chubsucker	NA	NA	2.46	1.84	1.37	NA	NA	NA	NA	2.83	2.84	2.77	1.96	1.44	2.61
3346	SD016113	F	WB Creek Chubsucker	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.77	1.28	0.94	0.88	0.81	3.01
3346	SD016114	F	PF Lm Bass	NA	NA	0.90	0.69	1.15	NA	NA	NA	NA	0.76	1.25	0.87	0.83	0.81	3.01
3347	DD016115	F	WB Carp	NA	NA	NA	8.97	NA	NA	NA	NA	2.68	NA	3.08	2.77	NA	NA	2.61
3347	DD016116	F	PF Lm Bass	NA	NA	2.46	NA	1.37	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	NA	2.61
3347	SD016115	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.99	0.91	NA	1.81
3348	DD016117	F	PF White Perch	NA	NA	2.47	NA	1.38	NA	NA	NA	NA	2.84	2.85	2.78	1.96	1.45	2.62
3348	DD016118	F	WB Blue Catfish	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.84	2.84	2.77	1.96	1.45	2.61
3348	QD072888	F	WB Blue Catfish	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.85	2.78	1.96	1.45	2.62
3348	SD016117	F	PF White Perch	NA	NA	1.12	0.66	1.32	NA	NA	NA	NA	0.94	1.19	1.07	1.04	0.66	1.66
3348	SD016118	F	WB Blue Catfish	NA	NA	NA	NA	1.51	NA	NA	NA	NA	1.05	1.11	0.99	0.91	0.68	1.81
3349	DD016119	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.84	2.85	2.78	1.96	1.45	2.62
3349	DD016120	F	PF Lm Bass	NA	0.95	2.47	1.84	1.38	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3350	DD016121	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
3350	DD016122	F	PF Lm Bass	NA	0.91	2.45	1.83	1.37	1.68	0.77	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3350	QD052688	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.78	NA	NA	2.62
3351	DD016123	F	PF Rock Bass	NA	0.92	2.46	1.84	1.38	1.26	0.63	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3351	DD016124	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.76	NA	NA	2.60
3351	QD021888	L	WB Carp	NA	NA	NA	NA	1.36	NA	NA	NA	NA	NA	NA	2.74	NA	NA	2.59
3352	DF023723	F	PF Crappie	1.00	0.91	2.45	1.83	1.37	NA	0.58	0.77	0.84	2.81	2.82	2.75	1.94	1.43	2.59
3352	DF023724	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3352	QD091388	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	0.77	0.91	2.82	2.83	2.76	1.95	1.44	2.61
3353	DF024121	F	BF Blue Catfish	NA	NA	2.46	NA	NA	NA	NA	0.77	NA	2.82	2.83	2.76	1.95	1.44	2.60
3353	DF024122	F	WB Sm Buffalo	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.83	2.84	2.77	1.96	1.44	2.61
3353	QD024121	L	BF Blue Catfish	NA	NA	2.47	NA	NA	NA	NA	0.78	1.09	2.84	2.85	2.78	1.96	1.45	2.62
3354	DY022301	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	2.17	NA	2.62
3354	DY022302	F	PF Lm Bass	1.11	NA	2.47	NA	1.38	NA	0.57	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3355	DY022303	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	NA
3355	DY022304	F	PF Lm Bass	1.49	1.80	2.46	NA	1.37	NA	0.62	0.77	1.20	2.83	2.84	2.77	1.96	1.44	2.61
3355	SY022303	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.20	NA	NA	NA
3356	DE030201	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
3356	SE030201	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.96	NA	NA	1.87
3357	DY022223	F	PF Squawfish	NA	NA	2.46	NA	1.37	1.46	NA	0.77	NA	2.83	2.84	2.77	1.96	1.44	2.61
3357	DY022224	F	WB Sacramento Sucker	NA	NA	2.45	NA	1.37	NA	NA	NA	NA	2.82	2.83	2.76	1.95	1.44	2.60
3360	DD029117	F	WB Carp	NA	NA	2.47	NA	1.38	NA	NA	0.78	NA	2.83	2.85	2.77	1.96	1.45	2.62
3360	DD029118	F	PF Lm Bass	1.13	1.14	2.46	1.84	1.38	1.26	1.10	0.81	0.87	2.83	2.84	2.77	1.96	1.44	2.61
3360	QD022389	L	WB Carp	2.36	NA	2.46	NA	1.38	NA	NA	0.77	NA	2.83	2.84	2.77	1.96	1.45	2.61
3375	DD016305	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	NA
3375	DD016306	F	PF Lm Bass	NA	1.19	2.46	NA	1.37	NA	NA	0.81	NA	2.82	2.84	2.76	1.95	1.44	2.61
3375	QD101188	L	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.76	NA	NA	NA

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3376	DD016307	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.76	NA	NA	NA
3376	DD016308	F	PF Lm Bass	1.21	1.13	2.76	2.07	1.58	NA	0.64	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3376	QD050389	L	PF Lm Bass	1.19	1.29	2.83	2.12	1.62	1.49	0.64	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3377	DD016309	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	NA
3377	DD016310	F	PF Lm Bass	1.24	0.95	2.46	1.88	1.38	2.27	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3377	SD016309	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.40	NA	NA	0.93
3378	DD016311	F	WB Spotted Sucker	NA	1.24	2.62	2.02	1.37	NA	NA	0.91	NA	2.83	2.84	2.77	1.95	1.44	2.61
3378	DD016312	F	PF Lm Bass	1.00	1.06	2.47	1.85	1.38	1.32	0.53	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3378	DD029115	F	WB Greyfin Sucker	NA	NA	NA	NA	1.38	NA	NA	0.94	NA	2.84	2.85	2.78	1.96	1.45	2.62
3378	DD029116	F	BF Channel Catfish	1.02	1.18	2.47	1.84	1.38	1.65	0.56	0.80	0.86	2.83	2.85	2.77	1.96	1.45	2.62
3385	DD016401	F	WB Redhorse Sucker	NA	1.26	2.46	NA	1.37	NA	NA	0.77	NA	2.82	2.83	2.76	1.95	1.44	2.60
3395	DD016421	F	WB Redhorse Sucker	NA	NA	3.33	NA	NA	NA	NA	NA	NA	2.84	NA	2.78	1.96	1.54	2.62
3395	DD016422	F	PF Lm Bass	NA	1.25	2.46	1.84	1.38	NA	NA	0.78	1.16	2.83	2.84	2.77	1.96	1.45	2.61
3395	SD016421	F	WB Redhorse Sucker	NA	NA	1.59	NA	1.39	NA	NA	NA	NA	0.94	1.19	1.07	1.04	NA	1.66
3401	DD016509	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.81	2.83	2.76	1.95	NA	2.60
3401	DD016510	F	PF Lm Bass	1.12	0.94	2.46	NA	1.37	1.35	NA	0.77	0.85	2.83	2.84	2.77	1.95	1.44	2.61
3403	DD016513	F	WB River Carpsucker	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.76	NA	NA	NA
3403	DD016514	F	PF Lm Bass	NA	1.10	2.45	1.83	1.37	1.42	NA	0.77	1.04	2.82	2.83	2.76	1.95	1.44	2.60
3404	DD016515	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.82	2.91	2.76	1.95	NA	2.60
3404	DD016516	F	PF Lm Bass	NA	1.17	2.46	1.85	1.37	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3404	SD016515	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.94	1.18	1.06	1.03	NA	1.65
3409	DB040701	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
3409	DB040706	F	PF Lm Bass	1.09	0.97	2.46	1.84	1.38	NA	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.45	2.61
3411	DB040501	F	WB Redhorse Sucker	NA	NA	2.46	NA	1.38	NA	NA	0.94	NA	NA	2.84	2.77	1.96	NA	2.61
3412	DB040901	F	PF Sm Bass	NA	1.00	2.45	1.83	1.37	1.31	NA	0.77	1.18	2.82	2.83	2.76	1.95	1.44	2.60
3412	DB040907	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	2.61
3412	SB040907	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.07	1.40	NA	1.66
3414	DC036203	F	PF Sm Bass	1.11	0.92	2.46	1.84	1.37	1.26	0.54	0.77	NA	2.82	2.83	2.76	1.95	1.44	2.61
3414	DC036204	F	BF Channel Catfish	NA	1.22	2.47	NA	1.38	NA	NA	0.78	NA	2.83	2.85	2.77	1.96	1.45	2.62
3415	DC036205	F	PF Sm Bass	1.04	0.92	2.46	1.84	1.38	1.39	0.49	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3415	DC036206	F	BF Channel Catfish	NA	NA	NA	NA	1.37	NA	NA	NA	NA	2.83	2.84	2.77	1.95	1.44	2.61
3416	DF025210	F	PF Channel Catfish	NA	1.17	2.46	1.84	1.37	NA	NA	0.82	0.94	2.82	2.83	2.76	1.95	1.44	2.61
3416	DF025211	F	BF Carp	NA	1.37	2.47	1.84	1.38	NA	NA	0.77	1.24	2.83	2.84	2.77	1.96	1.45	2.61
3416	DF025212	F	PF Lm Bass	1.54	1.09	2.46	1.84	1.37	1.32	NA	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3418	DF025007	F	PF Blue Catfish	NA	1.01	2.46	1.84	1.38	1.52	NA	0.77	1.12	2.83	2.84	2.77	1.96	1.45	2.61
3419	DC036207	F	WB White Sucker	1.16	1.19	2.47	1.84	1.38	1.55	NA	0.91	1.61	2.83	2.85	2.77	1.96	1.45	2.62
3419	DC036208	F	PF Freshwater Drum	0.99	0.91	2.45	1.83	1.37	1.25	0.48	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3420	DC036209	F	PF Greenfish	NA	NA	2.46	NA	1.37	NA	NA	NA	NA	2.83	2.84	2.77	1.95	NA	2.61
3420	DC036210	F	WB Carp	NA	NA	2.95	NA	NA	NA	NA	NA	NA	2.83	2.85	2.77	1.96	1.45	2.62
3421	DC036211	F	PF White Perch	NA	0.92	2.46	1.84	1.37	1.56	NA	0.77	0.86	2.83	2.84	2.77	1.96	1.44	2.61
3421	DC036212	F	WB Carp	NA	NA	2.47	NA	NA	NA	NA	NA	7.11	NA	2.85	2.78	1.96	1.45	2.62
3421	SC036212	F	WB Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.04	0.89	0.87	0.66	1.66
3422	DC036213	F	PF Lm Bass	NA	0.94	2.47	1.85	1.38	1.71	NA	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3422	DC036214	F	WB Yellow Bullhead	NA	0.91	2.45	1.83	1.37	NA	NA	0.77	0.87	2.82	2.83	2.76	1.95	1.44	2.60

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC		Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3423	DC036215	F	PF	White Perch	NA	1.07	2.47	1.84	1.38	NA	NA	0.77	0.87	2.83	2.84	2.77	1.96	1.45	2.61
3423	DC036216	F	WB	White Catfish	NA	NA	2.45	NA	NA	NA	NA	NA	NA	2.82	2.83	2.76	1.95	1.44	2.60
3424	DC036217	F	PF	Shortnose Gar	NA	0.92	2.46	NA	1.37	NA	NA	0.77	1.19	2.82	2.84	2.76	1.95	1.44	2.61
3424	DC036218	F	WB	White Catfish	NA	NA	2.56	1.83	NA	NA	NA	0.85	NA	2.82	2.83	2.76	1.95	1.44	2.60
3425	DF025005	F	WB	Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.89	NA	2.77	1.97	NA	2.62
3425	DF025012	F	BF	Channel Catfish	NA	NA	2.46	NA	NA	NA	NA	0.87	NA	2.82	2.83	2.76	1.95	1.44	2.61
3425	QD031389	L	BF	Channel Catfish	NA	NA	2.46	2.41	NA	NA	NA	0.85	NA	2.83	2.84	2.77	1.96	1.45	2.61
3426	DB069102	F	PF	Bluefish	NA	0.95	2.47	1.85	1.38	1.26	NA	0.78	NA	2.84	2.85	2.78	1.96	1.45	2.62
3427	DB069103	F	PF	Bluefish	NA	0.94	2.47	1.84	1.38	1.26	NA	NA	NA	2.83	2.85	2.77	1.96	1.45	2.62
3428	DB069104	F	PF	Bluefish	1.06	1.01	2.46	1.84	1.37	1.26	NA	0.87	NA	2.83	2.84	2.77	1.95	1.44	2.61
3429	DB069105	F	PF	Weakfish	0.99	1.00	2.46	1.84	1.37	1.26	0.49	0.77	0.85	2.83	2.84	2.77	1.96	1.44	2.61
3430	DB069106	F	WB	White Catfish	NA	1.01	2.47	NA	1.38	NA	NA	NA	NA	2.84	2.85	2.78	1.96	1.45	2.62
3431	DB069109	F	WB	Red Snapper	1.22	NA	2.57	1.85	1.38	1.26	NA	NA	NA	2.84	2.85	2.78	1.96	1.45	2.62
3432	DB069111	F	BF	Red Snapper	0.99	1.01	2.46	1.84	1.37	1.26	0.49	0.77	0.85	2.83	2.84	2.77	1.95	1.44	2.61
3433	DB069112	F	WP	Flounder	NA	NA	2.46	NA	1.37	NA	NA	0.97	NA	2.83	2.84	2.77	1.96	1.44	2.61
3433	QD021689	L	WP	Flounder	NA	1.62	2.46	NA	1.37	NA	NA	1.03	NA	2.83	2.84	2.77	1.96	1.44	2.61
3434	DB040801	F	WP	Flounder	NA	NA	2.46	NA	1.37	NA	NA	1.14	NA	2.83	2.84	2.77	1.96	1.44	2.61
3435	DD016601	F	PF	White Bass	1.72	1.08	2.47	1.85	1.38	1.34	NA	0.80	0.87	2.84	2.85	2.77	1.96	1.45	2.62
3435	DD016602	F	WB	Bigmouth Buffalo	NA	NA	3.04	NA	NA	NA	NA	NA	NA	NA	2.84	2.77	1.96	NA	2.61
3437	DJ022302	M	WB	Crayfish	1.11	0.99	2.45	1.84	1.37	NA	NA	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3438	DJ022303	M		Dungeness Crab	NA	1.22	2.45	NA	1.37	3.95	NA	0.91	NA	2.81	2.83	2.76	1.95	1.54	2.60
3439	DJ022304	F	WB	White Sturgeon	2.07	0.94	2.47	1.84	1.38	NA	NA	1.03	0.91	2.83	2.85	2.77	1.96	1.45	2.62
3439	QD062289	L	WB	White Sturgeon	NA	1.06	2.47	1.85	1.38	NA	NA	NA	0.94	2.84	2.85	2.78	1.96	1.45	2.62
3440	DJ022305	F	WB	White Sturgeon	NA	1.12	2.46	1.84	1.37	1.51	NA	1.07	0.93	2.83	2.84	2.77	1.96	1.44	2.61
3441	DJ022306	F	WB	White Sturgeon	1.75	0.92	2.48	1.85	1.38	NA	NA	1.09	0.91	2.83	2.85	2.77	1.96	1.45	2.62
3442	DF024301	F	PF	Channel Catfish	0.99	0.96	2.47	1.85	1.38	1.33	0.49	0.78	0.85	2.84	2.85	2.78	1.96	1.45	2.62
3442	QD081089	L	PF	Channel Catfish	0.99	0.92	2.45	1.84	1.37	1.25	0.48	0.77	0.84	2.82	2.83	2.76	1.95	1.44	2.60
3444	DD016603	F	WB	Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.77	NA	NA	3.02
3444	DD016604	F	PF	Channel Catfish	NA	NA	NA	NA	NA	NA	0.59	0.82	NA	2.84	2.85	2.78	NA	NA	2.62
3444	DD029512	F	PF	Lm Bass	1.44	1.20	2.73	2.05	1.56	1.64	0.75	0.87	0.91	2.84	2.85	2.78	1.96	1.56	2.78
3444	QD091289	F	WB	Carp	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.76	NA	NA	2.97
3445	DD029513	F	WB	Flounder	1.05	1.16	2.46	1.95	1.37	NA	0.58	0.78	0.87	2.83	2.84	2.77	1.96	1.44	2.61
3445	DD029514	F	WB	Hardhead Catfish	NA	NA	3.18	NA	NA	NA	0.64	0.78	1.19	2.84	2.85	2.78	1.96	1.45	2.62
3446	DD016605	F	PF	Striped Bass	NA	1.07	2.45	1.83	1.37	1.65	NA	1.28	NA	2.96	2.83	2.76	1.95	1.44	2.60
3446	DD016606	F	WB	Carpsucker	NA	0.92	2.46	1.84	1.37	1.59	NA	1.05	1.65	2.82	2.84	2.76	1.95	1.44	2.61
3446	DD029511	F	WB	Carp	NA	1.20	2.46	NA	1.38	NA	NA	1.32	NA	NA	2.94	2.77	1.96	1.70	2.61
3446	QD092089	F	WB	Carp	NA	1.28	2.46	NA	1.37	NA	NA	1.39	NA	NA	2.84	2.77	1.95	1.67	2.61
3450	DY022308	F	PF	White Croaker	NA	1.28	2.47	1.84	1.38	1.35	0.49	0.77	0.93	2.83	2.84	2.77	1.96	1.45	2.61
3450	DY022309	F	PF	White Croaker	NA	1.64	2.46	1.84	1.37	1.26	0.49	0.77	0.97	2.82	2.83	2.76	1.95	1.44	2.61
3451	DY022310	F	PF	White Croaker	NA	1.74	2.47	1.85	1.38	1.26	0.57	0.93	0.96	2.84	2.85	2.78	1.96	1.45	2.62
3451	DY022314	F	PF	White Croaker	NA	1.48	2.47	1.85	1.38	1.26	0.55	1.02	1.02	2.84	2.85	2.78	1.96	1.45	2.62
3452	DF025218	F	WB	Sm Buffalo	NA	1.10	2.46	1.84	1.38	1.39	NA	0.93	0.96	2.83	2.84	2.77	1.96	1.44	2.61
3452	DF025219	F	PF	Blue Catfish	NA	NA	2.71	2.03	1.54	1.99	NA	0.80	1.78	2.82	2.83	2.76	1.95	1.49	2.68
3452	DF025220	F	PF	Flathead Catfish	NA	1.16	2.47	1.84	1.38	1.26	0.54	0.80	0.86	2.83	2.84	2.77	1.96	1.45	2.61

DIOXIN / FURAN DETECTION LIMITS, pg/g

Episode	SCC	Type	Description	2378 TCDD	12378 PECDD	123478 HXCDD	123678 HXCDD	123789 HXCDD	1234678 HPCDD	2378 TCDF	12378 PECDF	23478 PECDF	123478 HXCDF*	123678 HXCDF	123789 HXCDF	234678 HXCDF	1234678 HPCDF	1234789 HPCDF
3452	QD103189	F	WB Sm Buffalo	NA	1.10	2.47	1.84	1.38	1.29	NA	0.80	0.87	2.83	2.84	2.77	1.96	1.45	2.61

APPENDIX D-5

Xenobiotic Data by Episode Number

Key for Xenobiotic Data Table (Units = ng/g)

Set 1			CAS Number
Merc	=	Mercury, g	7439/97/6
123 TCB	=	1,2,3 Trichlorobenzene	87/61/6
124 TCB	=	1,2,4 Trichlorobenzene	120/82/1
135 TCB	=	1,3,5 Trichlorobenzene	108/70/3
1234 TCB	=	1,2,3,4 Tetrachlorobenzene	634/66/2
1235 TCB	=	1,2,3,5 Tetrachlorobenzene	634/90/2
1245 TCB	=	1,2,4,5 Tetrachlorobenzene	95/94/3
OCS	=	Octachlorostyrene	29082/74/4
PC	=	Pentachlorobenzene	608/93/5
PCNB	=	Pentachloronitrobenzene	82/68/8
HCB	=	Hexachlorobenzene	118/74/1
aBHC	=	alpha BHC	319/84/6
gBHC	=	gamma BHC (lindane)	58/89/9
cis CHLOR	=	cis Chlordane	51
trans CHLOR	=	trans Chlordane	5103/74/2

DATA FLAGS

D = Value below limit of quantitation
For all Xenobiotics except Mercury and PCBs,
D = 2.5 ng/g
For Polychlorinated Biphenyls

Number of Chlorines	D, na/g
1-3	1.25
4-6	2.50
7-8	3.75
9-1	6.25

Detection limit for Mercury was 0.05 g/g, except for 1990 samples which had a detection limit of 0.0013 g/g.
E = Value exceeds highest calibration standard

See Dioxin/Furan Data Table Key for explanation of other codes. The tables include environmental samples (those starting with a sample number of D) and the duplicate samples (those starting with a Q) and confirmation samples (those starting with an S). The number of samples shown on the summary tables in Volume I do not included the duplicate and confirmation samples.

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
1994	DE017703	F PF	Walleye	0.12														
1994	DE017702	F WB	Carp	0.11														
1998	13421___	F PF	Northern Pike	0.28														
1998	13285	F WB	Carp	0.08														
2015	DF001002	F WP	Crappie	0.17														
2015	DF001001	F WB	Carp	0.14	1.40 D	1.35 D	ND	ND	ND	ND	ND	ND	ND	4.07	3.58	ND	46.4	43.6
2016	DF001102	F BF	Sucker	0.31														
2016	DF001101	F WB	Sucker	0.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.67	ND
2017	DF001202	F BF	Carp	0.15														
2017	DF001201	F WB	Carp	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.52	4.10	ND	5.17	3.50
2018	DF001301	F WB	Sucker	0.07	0.19 D	0.29 D	ND	0.09 D	ND	ND	ND	ND	ND	ND	ND	ND	3.30	ND
2023	DF001402	F PF	Spotted Bass	0.24														
2023	DF001403	F WB	Carp	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.20
2026	DF001706	F WB	Flathead Catfish	0.14														
2026	DF001702	F WB	Carp	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.66 D	ND	ND	13.2	8.23
2027	DF001802	F PF	Lm Bass	1.63														
2027	DF001803	F WB	Carp	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.26 D	ND	3.04	1.96 D
2037	DY000502	F WP	not available	0.09														
2037	DY000501	F WB	not available	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2056	DE000501	F WB	Carp	0.06	69.0	191 E	2.77	11.5	15.3	15.3	3.72	4.72	ND	19.7	18.6	ND	148 E	111
2057	DE000601	F WB	Carp	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.84	15.3	60.2	38.9
2059	DE000801	F WB	Carp	0.14	ND	ND	ND	ND	ND	ND	20.7	ND	ND	4.56	9.80	ND	68.2	38.0
2060	DE000901	F WB	Carp	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.18 D	3.63	5.26	74.9	55.5
2070	DJ000901	F WP	Rainbow Trout	ND														
2070	DJ000902	F WB	Longnose Sucker	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2098	DH001504	F PF	not available	ND														
2098	DH001501	F WB	not available	ND	0.45 D	0.64 D	ND	ND	ND	ND	ND	ND	ND	ND	6.42	ND	ND	ND
2100	DH001702	F PF	Sauger	0.35														
2100	DH001703	F WB	Catfish	0.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.52	6.58	ND	26.0	22.7
2105	DH002201	F PF	Sauger	0.45														
2105	DH002204	F WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.55 D	ND	ND	ND
2109	DH002602	F BF	not available	0.12														
2109	DH002601	F WB	not available	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.3	16.5
2110	DH002710	F WP	Brown Trout	ND	0.60 D	0.35 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2122	DH003901	F PF	Rainbow Trout	0.11														
2122	DH003904	F WB	White Sucker	0.12	1.02 D	0.60 D	ND	ND	ND	ND	ND	ND	ND	ND	3.98	ND	2.43 D	ND
2126	DD000303	F PF	White Crappie	0.71														
2126	DD000302	F WB	Carp	0.14	0.15 D	0.35 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.73
2133	DD001002	F BF	Blue Catfish	0.37	0.28 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.39 D	1.64 D	4.06	3.46
2138	DD001504	F PF	Lm Bass	0.88														
2138	DD001501	F WB	Redhorse Sucker	0.437														
2139	DD001604	F PF	Rainbow Trout	ND														
2139	DD001601	F WB	Carp	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2142	DD001903	F PF	Lm Bass	0.348														
2142	DD001902	F WB	Catfish	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	45.5	22.2

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XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
2148	DD002504	F PF	Saltwater Catfish	0.28														
2148	DD002501	F WB	Saltwater Catfish	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.90	3.97
2151	DD002801	F PF	Lm Bass	0.81														
2151	DD002803	F WB	Spotted Sucker	0.07	1.35 D	1.01 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2152	DD002902	F PF	Lm Bass	0.98														
2152	DD002903	F WB	Lake Chubsucker	0.13	2.60	1.97 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2190	DG005101	F WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.51 D	1.09 D	1.68 D	69.7 E	182 E
2190	DG005104	F PF	Bluegill	0.85	0.92 D	0.67 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2191	DG005206	F BF	Carp	0.05														
2191	DG005205	F WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.15 D	10.2	ND	76.2	107
2194	DG005504	F PF	Channel Catfish	0.24														
2194	DG005501	F WB	Carp	0.10	ND	0.76 D	ND	ND	ND	ND	ND	2.43 D	ND	11.6	1.89 D	11.9	77.5	72.9
2199	DG006001	F WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34.5	34.6
2199	DG006004	F PF	Lm Bass	0.27	0.35 D	0.26 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19.9	11.0
2201	DG006204	F PF	Bowfin	0.58														
2201	DG006201	F WB	Carp	0.12	ND	0.35 D	ND	0.10 D	ND	ND	ND	ND	ND	ND	ND	ND	3.99	ND
2205	DG006602	F BF	Carp	0.16														
2205	DG006601	F WB	Carp	0.07	0.28 D	0.45 D	ND	ND	ND	ND	ND	ND	ND	ND	0.93 D	ND	ND	ND
2210	DC005401	F WB	Catfish	0.08	ND	4.60	ND	ND	ND	ND	ND	1.88 D	ND	5.07	6.55	ND	166 E	126
2211	DC005503	F WB	Redhorse Sucker	0.151	0.33 D	0.64 D	ND	ND	ND	ND	ND	ND	ND	ND	2.33 D	2.70	7.14	3.94
2212	DC005602	F PF	Sm Bass	0.24	0.71 D	0.59 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.36 D	6.05	2.27 D
2212	DC005605	F WB	White Sucker	0.06	ND	ND	ND	ND	ND	ND	ND	0.32 D	ND	2.72	ND	7.18	112 E	64.3
2215	DC005902	F WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	1.93 D	ND	ND	ND	13.6	378 E	310 E
2216	DC006002	F PF	Brown Trout	0.14														
2216	DC006003	F WB	White Sucker	0.08	ND	0.15 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2220	DC006401	F PF	Redbreast Sunfish	0.07														
2220	DC006405	F WB	Catfish	ND	ND	0.46 D	ND	ND	ND	ND	ND	ND	ND	ND	0.78 D	ND	4.57	2.40 D
2225	DC006903	F WB	Shorthead Redhorse	0.125														
2225	DC006902	F PF	Sm Bass	0.23														
2227	DC007102	F PF	Lm Bass	0.614														
2227	DC007104	F WB	Channel Catfish	0.138	ND	0.82 D	ND	ND	ND	ND	ND	ND	ND	ND	0.83 D	ND	ND	ND
2228	DC007204	F PF	Redhorse Sucker	0.08														
2228	DC007201	F PF	Longear Sunfish	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2231	DC007503	F WB	Gizzard Shad	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.12	15.7	8.78	128	87.7
2246	DJ002301	F BF	Bridgelip Sucker	0.52														
2246	DJ002302	F WB	Bridgelip Sucker	0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.07	ND
2247	DJ002403	F PF	Bridgelip Sucker	0.19														
2247	DJ002404	F WP	Mountain Whitefish	0.10	0.38 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.75	ND	3.51	9.70
2280	DF005204	F PF	Channel Catfish	0.29														
2280	DF005201	F WB	Carp	0.17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.46 D	1.17 D
2280	QD121688	L WB	Carp		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.28 D	2.41 D	1.20 D
2283	DF005502	F WP	Longear Sunfish	0.13														
2283	DF005501	F WB	Gray Redhorse	0.15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2290	DD003402	F PF	Lm Bass	1.13														
2290	DD003403	F WB	Spotted Sucker	0.21	17.7	104	9.20	ND	12.0	12.0	ND	ND	ND	ND	ND	ND	41.8	39.8

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
2294	DD003801	F	PF Lm Bass	0.592														
2294	DD003804	F	WB Carp	0.068	3.53	2.25 D	0.44 D	ND	ND	ND	ND	ND	ND	ND	2.67	3.98	ND	3.87
2297	DD004103	F	PF Lm Bass	0.522														
2297	DD004102	F	WB Carp	0.076	0.77 D	0.47 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.35	2.49 D
2298	DD004201	F	WB Channel Catfish	0.11														
2298	DD004203	F	WP Lm Bass	0.23	0.51 D	0.37 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2301	DD004502	F	WB Sm Bass	0.18														
2301	DD004503	F	WB Bluegill	0.2														
2301	DD004501	F	WP Black Crappie	0.11														
2301	DD004504	F	WP Rock Bass	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2302	DD004601	F	WB Quillback Carpsucker	0.366	ND	0.29 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2304	DD004804	F	PF Lm Bass	0.356														
2304	DD004801	F	WB Carp	0.230	ND	0.65 D	ND	ND	ND	ND	ND	ND	ND	ND	2.94	ND	ND	14.9
2309	DD005304	F	PF Lm Bass	0.32														
2309	DD005301	F	WB Carp	0.16	0.35 D	0.29 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.74
2322	DB001304	F	PF Lm Bass	0.74														
2322	DB001301	F	WB White Sucker	0.20	ND	0.47 D	ND	ND	ND	ND	ND	ND	ND	ND	1.12 D	0.58 D	1.26 D	ND
2326	DB001704	F	PF Rock Bass	0.21														
2326	DB001701	F	WB White Sucker	ND	ND	0.78 D	ND	ND	ND	ND	ND	ND	ND	1.16 D	0.27 D	1.96 D	1.08 D	ND
2328	DB001904	F	PF Chinook Salmon	0.32	0.46 D	0.54 D	0.15 D	0.35 D	0.33 D	0.33 D	16.8	0.82 D	ND	8.19	2.27 D	1.33 D	18.1	5.58
2329	DB002004	F	PF Brown Trout	0.24	2.11 D	1.73 D	ND	ND	ND	ND	14.8	1.46 D	ND	8.87	4.76	ND	17.0	1.91 D
2341	DD006002	F	PF Lm Bass	0.296														
2341	DD006003	F	WB Carpsucker	0.06	24.8	49.0	ND	11.3	12.9	12.9	14.3	8.56	ND	30.3	ND	15.2	125 E	84.7
2355	DA001603	F	WB White Sucker	0.100	ND	0.59 D	ND	ND	ND	ND	ND	ND	ND	1.95	7.22	ND	3.69	ND
2356	DA001703	F	WB White Sucker	0.2														
2356	DA001702	F	PF Lm Bass	1.07	0.60 D	0.32 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2369	DA003202	F	PF Lm Bass	0.47														
2375	DA003802	F	PF Pickeral	0.64														
2375	DA003803	F	WB White Sucker	0.17	ND	0.84 D	NA	ND	ND	ND	ND	ND	ND	1.42 D	1.09 D	ND	5.06	3.08
2376	DA003903	F	WB White Sucker	ND	ND	0.78 D	ND	ND	ND	ND	ND	0.82 D	ND	85.5	ND	5.43	55.3	30.6
2379	DE005401	F	WB Carp	0.14														
2379	DE005404	F	PF Lm Bass	0.45	1.10 D	0.71 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.28 D	ND
2380	DE005501	F	WB Carp	0.11	3.23	5.66	0.29 D	0.93 D	ND	ND	ND	2.77	ND	ND	17.4	18.1	100	78.5
2383	DE005801	F	WB Carp	0.16	ND	1.28 D	ND	ND	ND	ND	ND	3.40	ND	6.94	19.3	18.9	179	125
2385	DE006002	F	WB White Sucker	0.167	0.57 D	0.57 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2387	DE006201	F	WB Carp	0.06														
2387	DE006204	F	PF Walleye	0.15														
2394	DE006901	F	WB Carp	0.03	ND	0.69 D	ND	ND	ND	ND	ND	ND	ND	6.10	9.16	15.8	83.2	71.5
2394	QD006901	L	WB Carp		ND	1.25 D	ND	ND	ND	ND	ND	2.24 D	ND	ND	ND	25.1	129	107
2394	QD022189	L	WB Carp		ND	ND	ND	ND	ND	ND	ND	1.63 D	ND	ND	ND	18.2	118	96.0
2397	DE007204	F	PF Walleye	1.77														
2397	DE007201	F	WB Sucker	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.85 D	2.22 D	ND	2.70	ND
2410	DE008501	F	WB Carp	0.08	ND	3.33	ND	2.45 D	ND	ND	50.7	3.64	ND	25.3	20.8	ND	95.3	53.8
2410	DE008504	F	PF Sm Bass	0.16	ND	ND	ND	ND	ND	ND	5.61	ND	ND	2.38 D	1.45 D	0.86 D	1.86 D	ND
2416	DE009101	F	WB Carp	ND	ND	10.2	ND	4.76	ND	ND	ND	5.21	ND	ND	15.9	44.5	164	112

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
2422	DE009702	F WB	Carp	0.206	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.72	11.3	ND	ND	ND
2427	DE010203	F PF	Walleye	0.23														
2427	DE010202	F WB	Carp	0.10	ND	1.24 D	ND	ND	ND	ND	ND	ND	ND	7.51	29.0	ND	92.1	45.8
2429	DE010403	F PF	Walleye	0.33														
2429	DE010402	F WB	Carp	0.27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.09	4.65	31.0	14.5
2430	DE010602	F PF	Northern Pike	0.2														
2430	DE010603	F WB	Redhorse Sucker	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2430	QD121488	L WB	Redhorse Sucker		ND	ND	ND	ND	ND	ND	ND	ND	ND	0.51 D	1.56 D	ND	ND	ND
2431	DE010702	F PF	Brown Trout	0.27														
2431	DE010703	F WB	Sucker	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.32 D	ND	ND	ND
2432	DE010713	F PF	Walleye	0.49														
2432	DE010710	F WB	Redhorse Sucker	0.25	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.76 D	3.37	ND	ND	ND
2435	DE011004	F PF	Brook Trout	0.13														
2435	DE011001	F WB	Longnose Sucker	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.36 D	9.08	2.97	26.5	11.8
2437	DE011202	F PF	Walleye	0.29														
2437	DE011203	F WB	Carp	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12.2	ND
2439	DE011401	F WB	Carp	0.05	ND	1.81 D	ND	ND	ND	ND	ND	ND	ND	6.49	5.56	27.4	96.0	69.4
2439	DE011402	F WP	Sm Bass	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.08	2.61	9.95	41.0	20.3
2478	DJ003901	F BF	Sucker	0.16														
2478	DJ003903	F WB	Chiselmouth	ND														
2478	DJ003902	F WB	Sucker	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.04 D	ND	1.97 D	ND
2500	DC010201	F PF	Bass	0.26														
2500	DC010203	F WB	Black Buffalo	0.12	0.32 D	0.47 D	ND	ND	ND	ND	ND	ND	ND	ND	0.52 D	2.18 D	6.51	5.53
2532	DF019302	F PF	Lm Bass	0.11														
2532	DF019303	F WB	Carp	ND	0.65 D	ND	ND	ND	ND	ND	6.27	9.61	ND	93.7	ND	2.24 D	41.0	48.0
2544	DF019203	F PF	Lm Bass	0.73														
2544	DF019202	F WB	Blacktail Redhorse	0.58	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.86
2608	DE014501	F PF	Walleye	0.69														
2608	DE014504	F WB	Carp	0.18	2.11 D	ND	ND	ND	ND	ND	ND	ND	ND	4.03	15.9	ND	ND	6.73
2618	DE015401	F WB	Carp	0.02	ND	ND	ND	ND	ND	ND	11.3	ND	ND	22.5	6.00	17.2	147	118
2618	DE015402	F BF	Carp	0.06	0.33 D	0.34 D	ND	ND	ND	ND	1.92 D	ND	ND	5.41	2.07 D	6.58	39.4	31.4
2618	DE015403	F WB	Quillback	0.04	1.86 D	1.49 D	ND	ND	ND	ND	ND	2.92	ND	ND	ND	24.4	131	97.1
2651	DB008401	F WB	White Sucker	0.28	ND	0.45 D	ND	ND	ND	ND	ND	ND	ND	ND	0.80 D	ND	9.90	3.92
2653	DB008503	F WB	Carp	0.14	0.47 D	0.93 D	ND	ND	ND	ND	ND	0.59 D	ND	2.56	1.45 D	5.25	ND	ND
2654	DB008601	F WB	Carp	0.68	10.59	264.81E	ND	0.57 D	0.93 D	0.93 D	ND	1.98 D	ND	0.84 D	2.37 D	ND	37.25	64.66
2709	DB005101	F WB	Catfish	0.10	1.59 D	3.01	ND	ND	0.52 D	0.52 D	ND	ND	ND	3.48	3.58	3.97	41.1	20.9
2721	DA006502	F WB	Sucker	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2721	QD011089	L WB	Sucker		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2722	DA006601	F WB	Sucker	0.34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2725	DA006301	F WB	Sucker	0.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19.0	ND	ND
2748	DY006506	F BF	Sucker	ND														
2748	DY006505	F WB	Sucker	ND	0.51 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2776	DY007103	F PF	Trout	ND														
2776	DY007101	F WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.11 D	ND
2776	QD010489	L WB	Carp		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.31 D	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type		Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
3001	DE019501	F	PF	Walleye	0.82														
3001	DE019502	F	WB	White Sucker	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3022	DA008402	F	PF	Chain Pickeral	0.31														
3022	DA008401	F	WB	White Sucker	0.05	0.28 D	0.47 D	0.18 D	0.25 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3023	DA008501	F	PF	Sm Bass	0.54	0.37 D	0.22 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3024	DA008601	F	PF	Lm Bass	0.37	0.34 D	0.67 D	ND	0.28 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3025	DA008702	F	PF	Chain Pickeral	0.99														
3025	DA008701	F	WB	White Sucker	0.28	ND	.28 D	ND	.09 D	ND	ND	ND	.12 D	ND	0.59 D	2.40 D	0.67 D	5.05	3.50
3026	DA009001	F	WB	Catfish	0.08														
3026	DA009002	F	PF	Lm Bass	0.8														
3027	DA009301	F	WB	Sucker	0.21														
3028	DA008801	F	PF	Chain Pickerel	0.73	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3034	DG025702	F	PF	Lm Bass	0.13														
3034	DG025701	F	WB	Carp	0.08	ND	0.17 D	ND	ND	ND	ND	ND	ND	ND	0.73 D	2.73	10.3	8.65	8.00
3035	DG025802	F	PF	Sm Bass	0.17														
3035	DG025801	F	WB	Carp	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.41 D	1.83 D	ND	22.6	26.3
3036	DG025901	F	PF	Freshwater Drum	0.19														
3036	DG025902	F	WB	Carp	ND	0.39 D	0.57 D	ND	ND	ND	ND	ND	ND	ND	0.93 D	2.83	2.53	ND	ND
3037	DG026002	F	PF	Black Crappie	0.09														
3037	DG026001	F	WB	Carp	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.86 D	2.27 D	ND	12.4	13.0
3038	DG026102	F	PF	Channel Catfish	0.077														
3038	DG026101	F	WB	Carp	ND	ND	ND	NND	ND	ND	ND	ND	3.88	ND	ND	ND	ND	73.9	77.4
3039	DG026202	F	PF	Channel Catfish	0.08														
3039	DG026201	F	WB	Carp	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	16.8	1.84 D	8.25	102	86.8
3040	DG026302	F	PF	White Crappie	0.39														
3040	DG026301	F	WB	Carp	0.11	0.29 D	ND	0.15 D	ND	ND	ND	N	0.77 D	ND	1.73 D	0.21 D	0.51 D	8.95 E	7.03 E
3041	DG026401	F	PF	Channel Catfish	ND														
3041	DG026402	F	WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.60 D	0.99 D	0.76 D	1.50 D	1.25 D
3042	DG026501	F	WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12.3	83.3	51.8	57.1
3042	DG026502	F	PF	Northern Pike	0.64	0.19 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.34 D	0.72 D
3042	QD026501	L	WB	Carp		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.03	70.9	89.9	90.8
3043	DG026602	F	PF	Flathead Catfish	0.16														
3043	DG026601	F	BF	Flathead Catfish	ND	ND	0.46 D	ND	ND	ND	ND	ND	ND	ND	1.37 D	2.59	2.31 D	ND	ND
3044	DG026702	F	PF	Flathead Catfish	0.19														
3044	DG026701	F	WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	0.84 D	15.5	3.37	2.93	10.1	ND	ND
3045	DG026801	F	WB	Carp	0.13	ND	ND	ND	ND	ND	ND	ND	0.82 D	ND	3.06	ND	10.5	196 E	188 E
3045	DG026802	F	BF	Flathead Catfish	0.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19.9	21.2
3046	DG026901	F	WB	Bigmouth Buffalo	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.59 D	1.16 D	ND	23.6	21.8
3047	DG027002	F	PF	Sm Bass	0.21														
3047	DG027001	F	WB	Carp	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3048	DG027101	F	WB	Carp	ND	ND	1.16 D	0.66 D	ND	ND	ND	ND	2.32 D	2.01 D	3.50	4.74	4.99	147 E	135
3048	DG027102	F	PF	White Bass	0.13	0.14 D	0.09 D	ND	ND	ND	ND	ND	ND	ND	ND	0.76 D	0.80 D	ND	ND
3048	QD012689	L	PF	White Bass		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.66 D	0.77 D	ND	ND
3048	QD027101	L	WB	Carp		ND	ND	ND	ND	ND	ND	ND	ND	ND	2.23 D	1.68 D	5.02	200 E	169
3049	DG027202	F	PF	Crappie	0.17														

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
3049	DG027201	F WB	Carp	0.09	ND	0.40 D	ND	ND	ND	ND	ND	ND	ND	1.27 D	2.51	2.68	ND	30.2
3050	DG027301	F WB	Bigmouth Buffalo	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.37 D	4.51	3.19	21.0	18.2
3060	DF009101	F WB	Flathead Catfish	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3060	DF009102	F WB	Sm Buffalo	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.19	15.64
3060	QD073189	L WB	Flathead Catfish		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3061	DF019105	F PF	Bass	0.24														
3061	DF019106	F WB	Sucker	0.20	ND	0.06 D	ND	ND	ND	ND	ND	ND	ND	0.13 D	0.42 D	ND	ND	ND
3062	DF024024	F WB	Blue Catfish	ND	1.73 D	1.05 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.5	9.30
3063	DF023301	F WB	Sea Catfish	0.23	ND	1.36 D	0.54 D	3.47	8.74	8.74	43.1	10.4	ND	75.0	2.69	3.15	6.16	ND
3063	DF023302	F PF	Spotted Seatrout	0.15	ND	0.45 D	0.18 D	5.21	ND	9.10	4.53	51.40	ND	43.69	3.23	ND	8.07	3.13
3064	DF023306	F PF	Spotted Seatrout	0.07														
3064	DF023305	M	Shellfish	0.00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.80 D	1.98 D	ND	3.12
3065	DF023419	F BF	Bigmouth Buffalo	0.06	ND	0.15 D	ND	0.60 D	ND	ND	ND	ND	ND	0.30 D	ND	ND	2.70	3.08
3065	DF023420	F WB	Flathead Catfish	ND	0.37 D	0.63 D	ND	0.19 D	ND	ND	ND	0.24 D	ND	3.26	1.94 D	0.81 D	8.46	6.86
3065	QD010788	F BF	Bigmouth Buffalo	NA	ND	0.15 D	ND	ND	ND	ND	ND	ND	ND	0.31 D	ND	ND	2.88	3.30
3066	DF023503	F WB	Catfish	ND	0.51 D	1.11 D	ND	ND	ND	ND	ND	0.81 D	ND	6.19	6.63	ND	19.8	19.3
3066	DF023504	F PF	Freshwater Drum	0.08	0.52 D	0.71 D	ND	ND	ND	ND	ND	ND	ND	2.41 D	ND	ND	1.75 D	2.64
3068	DF024001	M	Oysters	ND	0.62 D	0.34 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.34	ND	ND
3068	DF024002	F PF	Atl. Croaker	ND	ND	0.66 D	0.45 D	ND	ND	ND	ND	1.99 D	ND	7.66	10.1	6.68	8.78	4.00
3069	DF024007	F WB	Sea Catfish	0.11	ND	ND	ND	ND	ND	ND	0.56 D	ND	ND	ND	3.10	ND	3.51	ND
3069	DF024008	F PF	Trout	0.20	1.04 D	0.60 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3069	QD051788	F WB	Sea Catfish	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.11	1.89 D	ND
3070	DF024009	F WB	Croaker	0.05	5.84	3.39	0.56 D	ND	ND	ND	ND	ND	ND	ND	4.71	ND	2.59	ND
3070	DF024010	F PF	Sheepshead	0.06	1.48 D	0.87	0.14 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3071	DF024014	F WB	Carp	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.53	82.09	91.94
3071	DF024015	F PF	Longnose Gar	0.66	ND	0.97 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	66.04	101.90
3072	DF024018	F PF	White Bass	0.49														
3072	DF024017	F WB	Carp	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.73 D	0.96 D	0.66 D	2.00 D	1.35 D
3072	QD070688	L WB	Carp	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.48 D	0.54 D	0.78 D	2.30 D	1.43 D
3073	DF019222	F PF	Sm Bass	0.204														
3073	DF019221	F WB	White Sucker	0.06	0.27 D	0.25 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3074	DF026017	F PF	Brown Trout	0.07	0.69 D	0.43 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3075	DF024102	F PF	Hardhead Catfish	0.38														
3076	DF028503	F PF	Spotted Bass	0.58														
3076	DF028502	F WB	Channel Catfish	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.99 D	ND	ND	1.83 D
3077	DF019113	F PF	Flathead Catfish	0.882														
3077	DF019114	F WB	Redhorse Sucker	0.42	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3078	DF009118	F WB	Carp	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3078	DF023815	F WB	Sm Buffalo	0.26	ND	ND	ND	0.38 D	ND	ND	ND	0.34 D	ND	ND	4.04	1.07 D	ND	23.2
3078	DF023816	F PF	Black Crappie	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.31 D	ND	ND	1.62 D
3079	DF019205	F PF	White Bass	0.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.10 D	ND	1.59 D	5.19	19.67
3079	DF019206	F WB	Carp	0.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.24 D	2.19 D	2.58	13.2	9.74
3080	DF023317	F WB	Carp	0.23	ND	4.81	ND	ND	0.53 3	0.53 D	ND	ND	ND	ND	3.33	14.4	ND	31.0
3080	DF023318	F PF	Lm Bass	0.83	0.64 D	0.36 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3081	DF024105	F PF	White Bass	0.68	0.16 D	ND	ND	0.06 D	ND	ND	ND	ND	ND	0.12 D	0.58 D	ND	1.70 D	0.26 D

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
3081	DF024106	F WB	Catfish	0.10	0.23 D	0.22 D	ND	0.07 D	ND	ND	ND	0.06 D	ND	ND	0.83 D	ND	ND	ND
3082	DF023402	F PF	Lm Bass	ND														
3082	DF023401	F WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.54 D	7.56	ND	ND	7.85
3083	DF023405	F WB	Black Bullhead	ND														
3083	DF023406	F PF	Lm Bass	0.313	0.32 D	0.30 D	ND	ND	ND	ND	ND	ND	ND	ND	0.43 D	ND	ND	ND
3084	DF024109	F WB	Channel Catfish	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.27 D	9.57	80.6	39.8
3085	DF024113	F WB	Sea Catfish	0.12	ND	ND	ND	ND	3.46	3.46	65.3	42.6	ND	913 E	ND	ND	ND	ND
3085	DF024114	F PF	Black Drum	0.05	ND	0.91 D	ND	ND	1.08 D	1.08 D	ND	11.02	ND	50.74	ND	ND	ND	ND
3086	DF023411	F PF	Black Drum	0.08														
3086	DF023409	F WB	Catfish	0.31	ND	ND	ND	2.18 D	3.17	3.17	138 E	125 E	ND	202 E	4.23	1.64 D	6.62	ND
3086	DF023410	F PF	Red Drum	0.32	ND	ND	ND	6.35	10.7	10.7	ND	ND	ND	18.1	0.74 D	0.29 D	ND	ND
3087	DF023416	F WP	Lm Bass	0.09														
3087	DF023413	F WB	Carp	ND	0.57 D	0.49 D	ND	ND	ND	ND	ND	ND	ND	ND	2.83	ND	ND	4.38
3087	DF023414	F PF	White Crappie	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.93 D	ND	ND	ND
3087	DF023415	F WP	Bluegill	0.03	0.55 D	0.46 D	ND	ND	ND	ND	ND	ND	ND	ND	2.98	1.54 D	ND	ND
3088	DF023417	F WB	Channel Catfish	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17.8	ND	ND	ND
3088	DF023418	F PF	Bluegill	0.18	0.26 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3089	DF019209	F PF	White Crappie	ND	ND	0.11 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3089	DF019210	F WB	Carp	ND	0.43 D	0.30 D	ND	ND	0.16 D	0.16 D	ND	ND	ND	0.34 D	0.90 D	0.49 D	4.02	2.73
3090	DF019213	F PF	White Crappie	ND	0.33 D	0.21 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.90 D	0.44 D
3090	DF019214	F WB	Channel Catfish	ND	0.35 D	0.21 D	ND	ND	0.27 D	0.27 D	0.74 D	0.57 D	ND	1.35 D	2.17 D	1.40 D	19.3	11.2
3091	DF019218	F PF	White Crappie	0.06														
3091	DF019217	F WB	River Carpsucker	ND	ND	ND	ND	0.05 D	ND	ND	ND	ND	ND	ND	0.63 D	0.42 D	0.62 D	ND
3092	DF023501	F WB	Carp	0.26	0.31 D	0.78 D	ND	ND	ND	ND	ND	0.32 D	ND	ND	1.65 D	ND	ND	ND
3092	DF023502	F PF	Warmouth	0.28	0.53 D	0.29 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3093	DF024011	F PF	Lm Bass	0.816	0.18 D	0.14 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3093	DF024118	F WB	Sm Buffalo	0.207	ND	0.08 D	ND	0.09 D	ND	ND	ND	ND	ND	0.25 D	0.65 D	ND	1.68 D	0.93 D
3094	DC017201	F BF	Channel Catfish	0.15	3.36	3.30	ND	10.4	4.25	4.25	ND	7.76	ND	5.38	2.78	1.68 D	92.8 E	58.1
3095	DC038801	F BF	Brown Bullhead	0.06	0.51 D	0.44 D	ND	1.82 D	1.44 D	1.44 D	ND	1.71 D	ND	ND	ND	2.09 D	23.1	17.2
3095	DC038802	F WB	Channel Catfish	0.08	ND	0.55 D	ND	3.50	1.64 D	1.64 D	ND	5.41	ND	ND	ND	ND	78.4	53.1
3096	DC035001	F BF	Brown Bullhead	0.06	1.35 D	1.11 D	0.08 D	1.16 D	1.29 D	1.29 D	ND	1.19 D	ND	ND	0.64 D	ND	5.80	7.61
3096	DC035002	F WB	Channel Catfish	0.11	1.47 D	1.43 D	ND	10.6	6.18	6.18	ND	9.47	ND	ND	15.3	4.86	97.7	62.2
3097	DC038701	F BF	Brown Bullhead	0.16	ND	ND	ND	20.92	4.21	4.21	ND	30.49	ND	2.57	1.10 D	ND	3.76	5.81
3097	DC038702	F WB	Carp	0.07	ND	ND	ND	6.34	0.79 D	0.79 D	ND	46.3	ND	12.5	ND	ND	7.80	ND
3097	QD071989	L PF	Brown Bullhead		54.89	103.82	0.48 D	76.65	28.30	28.30	ND	36.17	ND	1.97 D	0.41 D	ND	2.44 D	3.81
3098	DC038601	F WB	White Sucker	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3098	DC038602	F PF	American Eel	0.19	3.13	5.15	0.12 D	2.22 D	1.23 D	1.23 D	ND	1.30 D	ND	0.77 D	ND	38.8	1.95 D	7.12
3098	QD051288	F WB	White Sucker	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	44.4	ND	ND	ND
3100	DC019701	F PF	White Perch	ND	0.99 D	0.78 D	ND	ND	ND	ND	ND	0.53 D	ND	2.74	4.27	2.85	4.52	13.08
3101	DC019901	F PF	Brown Trout	ND	0.51 D	0.79 D	ND	0.28 D	ND	ND	ND	0.35 D	ND	0.31 D	ND	ND	0.22 D	2.63
3103	DC036201	F WB	Channel Catfish	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.11 D	ND	ND	26.25	51.05
3103	DC036202	F WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22.6	ND	15.9
3104	DC020001	F PF	Lm Bass	0.15	0.89 D	0.98 D	ND	ND	ND	ND	ND	ND	ND	ND	1.58 D	ND	1.80 D	4.75
3104	DC020002	F WB	Carp	ND	1.31 D	1.23 D	ND	ND	ND	ND	ND	1.26 D	ND	ND	ND	5.04	56.9	45.4
3105	DF025001	F WB	Carp	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.22 E	3.33 E

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
3105	DF025002	F	PF Lm Bass	0.134	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3106	DE026801	F	PF Walleye	0.57	0.57 D	0.42 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3107	DE026901	F	WB Carp	0.16	ND	0.07 D	ND	0.10 D	ND	ND	ND	ND	ND	0.77 D	1.81 D	ND	ND	ND
3108	DE027001	F	PF Walleye	0.25	0.18 D	0.13 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3108	DE027002	F	WB Carp	0.30	ND	ND	ND	0.11 D	ND	ND	ND	ND	ND	ND	1.77 D	ND	2.03 D	ND
3109	DE025001	F	WB Carp	0.23	0.44 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.81	3.87
3110	DE022501	F	BF Flathead Catfish	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.08 D	ND	4.42	2.09 D
3110	DE022502	F	BF Carp	0.04	7.46	4.71	ND	ND	ND	ND	ND	ND	ND	ND	5.87	ND	67.8	38.7
3111	DH015801	F	PF Walleye	0.91														
3111	DH015802	F	WB Silver Redhorse	0.14	ND	0.50 D	ND	ND	ND	ND	ND	ND	ND	ND	10.6	7.59	7.53	5.24
3112	DE022401	F	WB Carp	0.179	0.70 D	0.63 D	ND	ND	0.28 D	0.28 D	ND	ND	ND	1.63 D	2.77	ND	3.35	1.17 D
3112	DE022402	F	PF Walleye	0.47	ND	ND	ND	0.03 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3113	DE021101	F	BF Channel Catfish	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.57 D	0.79 D	1.39 D	12.1	7.44
3113	DE021102	F	BF Carp	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.88 D	ND	2.17 D	23.7	14.4
3113	QD030789	F	BF Channel Catfish		ND	0.50 D	ND	ND	ND	ND	ND	ND	ND	1.21 D	0.50 D	1.35 D	12.8	7.86
3114	DE021201	F	BF Carp	0.07	ND	0.24 D	ND	ND	ND	ND	ND	ND	ND	0.75 D	1.45 D	1.71 D	31.3	33.5
3115	DE021301	F	WB Carp	0.05	ND	2.43 D	ND	ND	ND	ND	ND	ND	ND	3.82	ND	ND	31.0	36.4
3115	DE021302	F	PF Catfish	0.09	2.48 D	4.98	0.57 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	29.1	39.4
3115	QD101689	L	WB Carp		ND	1.06 D	ND	ND	ND	ND	ND	ND	ND	ND	0.76 D	ND	28.5	34.1
3117	DE021501	F	PF Lake Trout	0.22	6.94	4.51	ND	ND	ND	ND	ND	ND	ND	5.22	5.48	ND	154	51.8
3118	DE021601	F	PF Walleye	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.10 D	ND	ND	6.74	1.71 D
3118	DE021602	F	WB Carp	0.15	1.77 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	18.8	5.80
3118	DE021603	F	WB Carp	0.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.74 D	0.39 D	ND	3.88	1.41 D
3118	QD010689	L	WB Carp		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19.6	6.29
3118	QD020488	L	PF Walleye	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.24 D	0.18 D	ND	7.73	1.87 D
3119	DE021702	F	PF Lm Bass	0.28														
3119	DE021701	F	WB Carp	0.33														
3120	DE021801	F	WB Carp	0.17	ND	0.20 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.40	6.06
3120	DE021802	F	PF Bass	0.30	0.22 D	0.13 D	ND	0.06 D	ND	ND	ND	ND	ND	0.15 D	0.42 D	0.48 D	2.99	0.86 D
3122	DE022004	F	PF Sm Bass	0.56														
3122	DE022001	F	WB Carp	1.40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.31	ND	35.2	18.4
3122	DE022003	F	WB Redhorse Sucker	0.61	0.16 D	0.19 D	ND	ND	ND	ND	ND	ND	ND	ND	1.55 D	0.69 D	ND	ND
3125	DE022301	F	WB Carp	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.64	6.56	5.68	ND	ND
3125	DE022302	F	PF White Bass	0.48	0.51 D	0.26 D	ND	ND	ND	ND	ND	ND	ND	ND	0.34 D	0.61 D	2.21 D	0.50 D
3132	DE023201	F	WB Carp	0.22	1.47 D	8.41	ND	0.74 D	ND	ND	ND	0.87 D	ND	ND	ND	12.40	53.84	41.20
3132	QD010588	L	WB Carp	NA	2.05 D	11.94	ND	0.78 D	ND	ND	ND	0.91 D	13.85	ND	ND	ND	67.69	46.00
3134	DE023403	F	WB Carp	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.73 D	1.15 D	1.17 D	3.15	2.55
3134	DE023405	F	WB Carp	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.20 D	ND	5.86	7.30
3134	DE023406	F	WB Sucker	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3135	DE023501	F	WB Carp	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.92 D	1.46 D	1.58 D	4.73	2.74
3136	DE023601	F	PF Northern Pike	0.24	ND	ND	ND	0.04 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3137	DE023701	F	WB Redhorse Sucker	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.22 D	ND	ND	ND
3138	DE023801	F	WB Carp	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.44 D	ND	ND	12.5	7.59
3140	DE024001	F	PF Walleye	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.93 D	0.72 D
3140	DE024002	F	WB Carp	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.49 D	ND	ND	3.63	2.32 D

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
3141	DE024101	F PF	Northern Pike	0.17	ND	0.59 D	ND	ND	ND	ND	ND	0.54 D	ND	ND	3.31	ND	22.2	6.93
3141	DE024102	F WB	Carp	0.02	ND	ND	ND	ND	ND	ND	ND	0.78 D	ND	4.69	ND	6.28	56.5	30.9
3141	DE024103	F PF	Northern Pike	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.90 D	ND	10.3	2.79
3143	DE024401	F	Rotten (catf)	0.01	3.78	2.32 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3143	DE024403	F WB	Carp	0.05	ND	ND	ND	ND	ND	ND	ND	0.28 D	ND	0.81 D	1.33 D	ND	6.92	3.52
3144	DE024901	F WB	Carp	0.20	ND	ND	0.26 D	ND	0.39 D	0.39 D	ND	ND	ND	ND	ND	ND	6.88	4.23
3145	DE026601	F WB	N. Redhorse	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.57 D	1.95 D	1.82 D	ND	ND
3146	DE026701	F WB	Carp	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.21 D	0.85 D	ND	ND	ND
3146	DE026702	F PF	Walleye	0.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3147	DC035201	F WB	Carp	0.05	ND	0.55 D	ND	ND	ND	ND	ND	0.81 D	ND	3.64	3.98	6.40	42.6	28.9
3148	DE027101	F WB	Carp	0.08	ND	ND	ND	0.37 D	ND	ND	ND	ND	ND	3.19	3.29	1.71 D	ND	ND
3148	DE027103	F PF	Walleye	0.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.37	2.12 D
3149	DC038501	F WB	White Sucker	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23 D	0.26 D	6.40	10.0	3.64
3150	DA008901	F WB	White Sucker	0.158	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.34	13.0	6.12
3150	QD120187	L WB	White Sucker	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.84 D	6.50	14.3	6.62
3151	DA009101	F WB	White Sucker	0.22	0.20 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.47 D	1.56 D	7.19	2.92
3152	DA009201	F WB	White Sucker	0.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.98	ND	ND
3161	DC019801	F BF	Black Bullhead	0.12	0.53 D	0.55 D	ND	ND	ND	ND	ND	0.52 D	ND	0.64 D	0.59 D	ND	23.03	36.15
3161	DC019802	F WB	White Sucker	0.05	ND	ND	ND	ND	ND	ND	ND	1.45 D	ND	ND	4.64	1.40 D	155	82.7
3162	DJ024001	F WP	Starry Flounder	0.05	ND	ND	ND	ND	ND	ND	33.4	ND	ND	29.2	0.45 D	ND	1.96 D	0.76 D
3163	DJ024002	F WP	Starry Flounder	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.25 D	0.66 D	0.58 D	ND
3164	DD015701	F PF	Lm Bass	0.665														
3164	DD015702	F WB	Carp	0.18	30.2	23.3	ND	6.29	3.12	3.12	ND	2.77	ND	ND	ND	ND	ND	ND
3165	DD015703	F PF	Lm Bass	0.43														
3165	DD015704	F WB	Redhorse Sucker	0.25	4.90	8.52	0.14 D	1.10 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3166	DD015705	F PF	Walleye	0.87														
3166	DD015706	F WB	White Sucker	0.29	0.24 D	0.25 D	ND	0.23 D	0.13 D	0.13 D	ND	ND	ND	ND	ND	ND	ND	ND
3167	DD015707	F PF	Lm Bass	0.33														
3167	DD015708	F WP	Bluegill	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3167	QD062388	L WP	Bluegill	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3168	DD015711	F WB	Carp	0.19	ND	ND	ND	ND	ND	ND	ND	0.56 D	ND	4.84	1.86 D	ND	ND	1.43 D
3168	DD015712	F PF	Lm Bass	0.37	0.22 D	ND	ND	ND	ND	ND	ND	ND	ND	0.89 D	ND	ND	ND	ND
3169	DD015714	F PF	Lm Bass	0.4														
3169	DD015713	F WB	Black Redhorse	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.83	ND
3169	QD022789	L WB	Black Redhorse		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.40	2.01 D
3170	DD015716	F PF	Lm Bass	0.82														
3170	DD015715	F WB	Spotted Sucker	0.15	ND	0.12 D	ND	ND	ND	ND	ND	ND	ND	0.09 D	ND	ND	ND	0.63 D
3171	DD015718	F PF	Lm Bass	0.72														
3171	DD015717	F WB	Spotted Sucker	0.15	ND	0.09 D	ND	ND	ND	ND	ND	ND	ND	0.09 D	ND	ND	ND	0.49 D
3172	DD015719	F WB	Carp	ND	ND	0.69 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.15 D	6.18	5.11
3172	DD015720	F PF	Lm Bass	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3173	DD015721	F PF	Lm Bass	0.31														
3173	DD015722	F WB	Channel Catfish	0.06	ND	0.42 D	ND	ND	1.26 D	1.26 D	ND	ND	ND	ND	ND	3.27	9.70	4.53
3174	DD015723	F PF	Lm Bass	0.29														
3174	DD015724	F WB	Channel Catfish	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.38	1.29 D

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
3175	DD015802	F	PF Lm Bass	0.4														
3175	DD015801	F	WB Channel Catfish	0.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.48 D	ND	ND
3176	DD015804	F	PF Lm Bass	0.13														
3176	DD015803	F	WB Spotted Sucker	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.06 D
3177	DD015805	F	WB Carp	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.32	4.18
3177	QD100488	L	WB Carp	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.25	4.12
3178	DD015808	F	PF Redeye Bass	0.55														
3178	DD015807	F	WB North Hogsucker	0.23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3179	DD015810	F	PF Lm Bass	0.44														
3179	DD015809	F	WB Golden Redhorse	0.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.32 D	ND	ND	8.13	6.73
3180	DD015812	F	PF Lm Bass	0.43	0.39 D	0.27 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3181	DD015813	F	PF Lm Bass	0.28														
3181	DD015814	F	WB Carp	0.06	1.03 D	2.25 D	ND	0.58 D	0.65 D	0.65 D	1.90 D	1.02 D	ND	3.25	3.69	ND	59.8	38.5
3182	DD015815	F	PF Rock Bass	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.33 D	ND	ND
3182	DD015816	F	WB Carp	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.891 D	ND	14.6	41.5	35.0
3183	DD015817	F	WB Carp	ND	ND	ND	ND	ND	ND	ND	ND	0.73 D	ND	9.30	7.83	ND	52.3	40.3
3183	DD015818	F	PF Sauger	0.30	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.28 D	ND	ND	1.75 D	0.47 D
3184	DD015819	F	WB Carp	0.14														
3184	DD015820	F	PF White Crappie	0.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3185	DD015822	F	PF Lm Bass	0.67														
3185	DD015821	F	WB Channel Catfish	0.12	ND	ND	ND	ND	ND	ND	ND	5.73	ND	6.57	ND	8.02	38.8	30.6
3186	DD015824	F	WP Southern Flounder	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3187	DD015902	F	WP Summer Flounder	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3188	DD015903	F	WB Carp	0.03	1.67 J	1.43 J	0.486 J	ND	ND	ND	ND	0.629 J	ND	ND	5.68 J	ND	60.1	58.4
3188	DD015904	F	PF Lm Bass	0.14	0.16 D	ND	0.09 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3189	DD015906	F	PF Lm Bass	0.26														
3189	DD015905	F	WB Carp	0.06	ND	ND	1.20 D	ND	ND	ND	ND	ND	ND	ND	3.58	3.88	25.9	18.6
3189	QD092188	L	WB Carp	NA	ND	ND	0.20 D	ND	ND	ND	ND	ND		ND	4.11	4.67	31.8	23.7
3190	DD015908	F	PF Lm Bass	0.05														
3190	DD015907	F	WB Carp	0.05	ND	ND	0.92 D	ND	ND	ND	0.48 D	ND	ND	0.33 D	0.51 D	ND	25.2	14.4
3191	DJ024003	F	WP Starry Flounder	0.01	0.09 D	0.07 D	ND	0.06 D	ND	ND	ND	ND	ND	ND	0.25 D	ND	ND	ND
3191	DJ024005	M	Soft Shell Clams	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3192	DJ024007	F	WP Starry Flounder	0.01	0.05 D	0.08 D	ND	0.06 D	ND	ND	ND	ND	ND	ND	ND	1.46 D	ND	ND
3192	DJ024009	M	Soft Shell Clams	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3193	DC039002	F	PF Sm Bass	0.4														
3193	DC039001	F	PF Sm Bass	0.35	1.71 D	2.46 D	ND	ND	ND	ND	ND	ND	ND	0.32 D	ND	ND	19.8	4.23
3195	DH020104	F	WB Carp	0.08	ND	0.83 D	ND	ND	ND	ND	ND	0.54 D	ND	ND	2.29 D	ND	14.0	11.1
3195	DH020105	F	WB Chub	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30.1	18.2
3196	DH020107	F	PF Brown Trout	0.182														
3196	DH020108	F	WB Sucker	0.182	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.56 D	1.25 D	ND
3197	DH020110	F	WB Sucker	0.06														
3197	DH020109	F	PF Rainbow Trout	ND														
3198	DH020111	F	WB Sucker	0.12	ND	2.00 D	ND	ND	ND	ND	ND	1.21 D	ND	16.3	12.0	ND	28.8	20.4
3199	DH020102	F	PF Walleye	0.37														
3199	DH020101	F	WB Carp	0.09	ND	0.17 D	0.06 D	ND	ND	ND	ND	ND	ND	0.52 D	0.93 D	0.45 D	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
3199	DH020103	F WB	Carp	0.06	2.40 D	1.39 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.33	8.64
3200	DH020112	F WB	Sucker	0.11	0.34 D	0.32 D	0.24 D	ND	ND	ND	ND	0.60 D	ND	6.88	ND	ND	13.7	ND
3203	DJ024018	F WB	Carp	0.10	ND	0.72 D	ND	ND	ND	ND	ND	0.54 D	ND	2.12 D	1.11 D	ND	9.68	6.70
3205	DJ024023	F PF	Cutthroat Trout	0.07														
3205	DJ024024	M	Crayfish (whole)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3206	DJ024103	F WB	Sucker	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.17	18.6	ND	ND
3208	DJ024109	F WB	Sucker	0.13	ND	0.38 D	ND	ND	ND	ND	ND	ND	ND	4.98	ND	ND	7.03	2.45 D
3212	DJ024120	F BF	Catfish	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.24 D	ND	ND	3.59	2.48 D
3212	DJ024121	F WB	Carp	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.6	ND	ND	13.7	7.36
3213	DJ024123	F WB	Squawfish	0.11	4.78	2.16 D	0.43 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3215	DJ023705	F WB	Sucker	0.18	7.05	6.26	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.34	18.1	6.53
3216	DJ023707	F PF	Squawfish	0.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17 D	ND
3216	DJ023708	F WB	Sucker	0.05	0.24 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.74	ND	ND	ND
3216	QD022388	L WB	Sucker	NA	ND	0.48 D	ND	ND	ND	ND	ND	ND	ND	ND	5.48	ND	ND	ND
3217	DJ023709	F PF	Whitefish	0.06														
3217	DJ023710	F WB	Sucker	0.07	0.12 D	0.17 D	ND	ND	ND	ND	ND	ND	ND	ND	4.03	ND	ND	ND
3218	DJ023712	F WB	Sucker	0.09														
3218	DJ023711	F PF	Squawfish	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.73 D	ND
3219	DJ023713	F WB	White Sturgeon	0.10	ND	0.12 D	ND	ND	ND	ND	ND	ND	ND	3.32	ND	ND	10.8	9.18
3219	DJ023714	F PF	White Sturgeon	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.80 D	0.72 D
3220	DJ023902	F PF	Squawfish	0.23														
3220	DJ023903	F WB	Bridgelip Sucker	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3221	DJ023904	F PF	Channel Catfish	0.34														
3221	DJ023905	F WB	Sucker	0.08	0.43 D	ND	ND	ND	1.61 D	1.61 D	ND	ND	ND	10.6	4.89	6.05	10.4	4.68
3222	DJ023906	F PF	Squawfish	0.74														
3222	DJ023907	F WB	Sucker	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.49 D	ND	ND	ND	ND
3223	DJ023717	F WP	Starry Flounder	0.058	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3224	DJ023715	M	Soft Shell Clams	0.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3226	DJ023721	M	Pacific Oysters	ND	0.32 D	0.23 D	ND	ND	ND	ND	ND	ND	ND	ND	0.35 D	ND	ND	ND
3227	DJ023723	M	Pacific Oysters	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3231	DJ023910	F PF	Sm Bass	0.24	0.20 D	0.14 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3231	DJ023911	F WB	Carp	0.20	0.31 D	0.55 D	ND	ND	1.02 D	1.02 D	ND	ND	ND	4.55	1.89 D	ND	12.3	7.27
3234	DH020302	F PF	Lake Whitefish	0.08														
3234	DH020301	F WP	Squawfish	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.40 D	0.91 D	ND	0.67 D	ND
3235	DH020304	F PF	Brown Trout	0.1														
3235	DH020303	F WB	White Sucker	0.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.77 D	2.78	2.88	0.58 D	ND
3236	DH020306	F PF	Brown Trout	0.1														
3236	DH020305	F WB	Largescale Sucker	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.67 D	ND	2.57	ND	ND
3237	DH020307	F PF	Rainbow Trout	0.08														
3237	DH020308	F WB	Largescale Sucker	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	3.35	ND	ND
3237	QD080988	F WB	Largescale Sucker	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.65 D	ND	3.88	ND	ND
3238	DJ023918	F WP	Dolly Varden	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.07 D	ND	ND	ND	ND
3241	DJ023923	F PF	Rainbow Trout	0.06														
3241	DJ023924	F WP	Dolly Varden	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.47 D	ND	ND	1.81 D	ND
3244	DJ023622	F WB	Coast Sculpin	ND														

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
3245	DJ023624	F WP	Flathead Sole	ND	0.27 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.48	ND	ND	ND
3246	DJ022109	F WP	Flathead Sole	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3248	DJ022502	F WB	Composite Bottom	0.16	ND	0.40 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3248	QD050588	F WB	not available	NA	ND	0.15 D	ND	ND	0.09 D	0.09 D	ND	ND	ND	ND	ND	ND	ND	ND
3249	DJ022503	F PF	Brook Trout	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3249	DJ022504	F WB	Sucker	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.74 D	ND	ND
3250	DJ022505	F PF	Pink Salmon	0.11														
3250	DJ022506	F WB	Sucker	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.24 D	ND	ND	2.61	1.98 D
3252	DJ022509	F PF	Lm Bass	0.29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3252	DJ022510	F WB	Sucker	0.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.82 J	ND	3.54 J	9.42 J	ND
3252	QD020989	L PF	Lm Bass		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3252	QD052588	L WB	Sucker	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.36	ND	ND	7.24	2.77
3256	DJ022518	F WB	Sucker	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.28	0.70 D	0.75 D	2.43 D	0.87 D
3258	DC038901	F PF	Spot	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17.48	2.67	10.76	20.85
3258	DC038902	F WB	Croaker	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.88	5.66	5.19	2.45 D
3259	DB000466	F WB	Goldfish	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.80 D	ND	ND	13.9	8.82
3259	DB000473	F PF	Lm Bass	1.66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3259	DB069101	F WB	Sucker	0.29	0.51 D	0.62 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3260	DB000493	F WB	Carp	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.03 D	2.54	1.88 D	ND	ND
3261	DY026001	F PF	Caranx Ignobliis	0.05														
3261	DY026002	F WB	Striped Mullet	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	44.5	32.1
3262	DY026004	F WB	Tilapia Tilapia	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.08 D	ND
3266	DY022701	F PF	Black Crappie	0.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3266	DY022702	F WB	Channel Catfish	0.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.70	ND	ND	11.1	ND
3266	QD012389	L PF	Black Crappie		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3267	DY022101	F PF	Rainbow Trout	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23 D	ND
3267	DY022102	F WB	Sacramento Sucker	ND	3.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.48 D	3.98	ND	ND
3270	DY022107	F PF	Squawfish	0.81														
3270	DY022108	F WB	Sucker	0.06	0.67 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.06	ND	ND
3271	DY022110	F WB	Sucker	0.18	ND	0.09 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3272	DY022111	F PF	Leopard Shark	0.89														
3272	DY022112	F WB	White Surfperch	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.82	8.43	7.78	21.9	4.62
3273	DY022113	F WB	Sculpin	0.10	ND	0.16 D	ND	ND	ND	ND	ND	ND	ND	1.89 D	ND	0.84 D	ND	ND
3273	DY022114	F WB	Surf Smelt	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3274	DY022115	F PF	Rainbow Trout	ND														
3274	DY022116	F WB	Sculpin	0.21	0.29 D	ND	ND	1.01 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3275	DY022118	F WB	Sucker	ND														
3276	DY022119	F WB	Walleye	0.06	1.02 D	0.72 D	0.08 D	ND	ND	ND	ND	ND	ND	0.15 D	1.33 D	0.39 D	ND	ND
3278	DY022123	F PF	Green Sunfish	0.42														
3278	DY022124	F WB	Sacramento Sucker	0.24	ND	ND	ND	ND	ND	ND	0.60 D	ND	ND	0.55 D	ND	ND	4.97	1.25 D
3281	DY022205	F WB	Sucker	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23 D	ND	ND	6.06	3.73
3282	DY022206	F BF	Flathead Catfish	0.03	0.38 D	0.26 D	ND	ND	ND	ND	0.56 D	ND	ND	2.02 D	ND	ND	10.1	6.56
3282	DY022207	F WB	Carp	ND	ND	ND	ND	ND	ND	ND	0.93 D	0.75 D	ND	6.83	2.91	2.01 D	10.3	7.00
3283	DY022209	F WB	Carp	0.09	ND	ND	ND	ND	ND	ND	ND	5.01	ND	23.8	ND	ND	7.99	7.63
3285	DY022212	F WP	Stingray	0.08	4.77	2.99	0.46 D	ND	ND	ND	ND	ND	ND	ND	2.82	ND	97.2 E	67.6

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
3285	DY022213	F WB	Diamond Turbot	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	37.4	17.5
3286	DY022215	F WB	Carp	ND	ND	0.354 J	ND	ND	ND	ND	ND	1.08 J	ND	ND	ND	5.59 J	43.4	31.6
3287	DY022216	F WB	Tilapia Zilli	ND	ND	0.26 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.94	3.83	ND
3288	DY022217	F PF	Squawfish	0.11	0.17 D	ND	ND	ND	ND	ND	ND	ND	ND	0.51 D	ND	ND	ND	2.48 D
3288	DY022218	F WB	Sucker	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.12 D	ND	ND	14.9	8.90
3289	DY022219	F WP	Bocaccio	0.02	3.89	2.26 D	0.36 D	ND	ND	ND	ND	ND	ND	ND	2.63	ND	ND	ND
3289	DY022220	F WB	Sculpin	NA	ND	0.12 D	ND	ND	ND	ND	ND	ND	ND	0.33 D	1.17 D	ND	1.48 D	0.80 D
3290	DY022221	F PF	Redear Sunfish	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3290	DY022222	F WB	Blackfish	0.06	ND	ND	ND	ND	ND	ND	ND	0.80 D	ND	2.14 D	2.54	4.85	33.2	17.3
3294	DJ022112	F PF	Atlantic Salmon	0.05														
3294	DJ022111	F WP	True Cod	ND	0.19 D	0.17 D	ND	ND	0.56 D	0.56 D	ND	ND	ND	0.79 D	2.64	ND	ND	ND
3294	DJ022113	M	Mussel	0.00	0.25 D	0.24 D	ND	ND	ND	ND	ND	ND	ND	ND	0.65 D	0.63 D	ND	ND
3295	DJ022114	F WP	Atlantic Salmon	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3296	DB040101	F WB	White Sucker	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.57	4.13	3.13	ND
3297	DB041501	F WB	Carp	0.03	ND	1.06 D	ND	1.78 D	0.97 D	0.97 D	ND	6.11	ND	9.43	4.05	ND	8.64	4.55
3298	DB041601	F WB	Carp	0.00	ND	2.16 D	ND	0.76 D	0.75 D	0.75 D	ND	5.82	ND	8.54	16.0	ND	28.5	18.1
3298	DB041604	F PF	Lm Bass	0.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3299	DB040601	F WB	White Sucker	0.08	ND	0.37 D	ND	ND	ND	ND	0.94 D	0.45 D	ND	5.23	0.84 D	ND	2.99	ND
3299	DB040604	F PF	Lm Bass	0.11	ND	0.28 D	ND	ND	ND	ND	N	0.66 D	ND	3.03	0.90 D	ND	1.64 D	0.32 D
3299	QD040601	L WB	Sucker		ND	ND	ND	ND	ND	ND	ND	ND	ND	1.65 D	0.39 D	ND	3.57	ND
3300	DB040201	F WB	White Sucker	0.10	ND	ND	ND	0.17 D	ND	ND	26.6	2.05 D	ND	9.80	3.42	4.16	14.6	2.62
3300	DB040204	F PF	Sm Bass	0.14	ND	ND	ND	0.13 D	ND	ND	1.35 D	ND	ND	0.54 D	ND	ND	1.08 D	ND
3300	QD021389	L WB	Channel Catfish		ND	ND	ND	ND	ND	ND	1.53 D	ND	ND	0.78 D	ND	ND	0.93 D	ND
3301	DB041101	F WB	Carp	0.08	ND	1.10 D	ND	0.68 D	0.66 D	0.66 D	49.6	5.99	ND	43.2	7.85	5.28	32.9	14.6
3301	DB041104	F PF	Northern Pike	0.17	ND	ND	ND	ND	ND	ND	1.01 D	ND	ND	1.20 D	ND	ND	1.53 D	ND
3301	QD030989	L PF	Northern Pike		ND	ND	ND	ND	ND	ND	1.42 D	ND	ND	1.13 D	ND	ND	1.86 D	ND
3302	DB041901	F WB	White Sucker	0.12	2.40 D	3.09	0.32 D	4.63	1.56 D	1.56 D	28.2	8.37	ND	11.5	3.42	1.90 D	10.3	1.54 D
3302	DB041904	F PF	Lm Bass	0.25	0.25 D	0.22 D	ND	ND	ND	ND	ND	ND	ND	0.30 D	ND	ND	0.60 D	ND
3303	DB042301	F WB	White Sucker	0.17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.70 D	ND	ND	ND
3303	DB042304	F PF	Sm Bass	1.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3303	QD102588	L WB	White Sucker		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.67	1.83 D	ND	ND
3304	DB041001	F PF	Northern Pike	0.48	0.27 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3304	DB041004	F WB	White Sucker	0.20	ND	ND	ND	ND	ND	ND	3.23	ND	ND	0.58 D	0.42 D	ND	4.43	ND
3304	QD041004	L WB	White Sucker		ND	ND	ND	ND	ND	ND	5.38	ND	ND	1.25 D	2.36 D	ND	6.19	ND
3305	DB042001	F WB	Channel Catfish	0.14	ND	1.58 D	ND	ND	ND	ND	32.8	ND	ND	11.1	3.94	1.39 D	34.8	7.40
3305	DB042004	F PF	Sm Bass	0.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3305	QD110388	L WB	Channel Catfish		ND	ND	ND	ND	ND	ND	37.1	ND	ND	12.7	6.63	ND	38.5	8.23
3306	DB041801	F WB	White Sucker	0.11	ND	0.19 D	ND	ND	ND	ND	ND	ND	ND	0.86 D	1.77 D	ND	1.94 D	ND
3306	DB041804	F PF	Sm Bass	0.72	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.72 D	ND	ND	ND
3306	QD041801	L WB	White Sucker		ND	0.42 D	ND	ND	ND	ND	0.84 D	ND	ND	1.22 D	2.87	1.82 D	3.01	ND
3307	DB042101	F WB	White Sucker	0.17	ND	0.14 D	ND	ND	ND	ND	1.20 D	ND	ND	0.84 D	0.97 D	ND	2.06 D	ND
3308	DB040001	F PF	Northern Pike	0.48	1.35 D	0.79 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3309	DB041301	F WB	White Sucker	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.91 D	ND	1.83 D	ND	ND
3310	DC032701	F WB	Bullhead	ND	1.95 D	11.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.43	12.2	8.07
3310	DC032702	F PF	Walleye	0.24	1.58 D	2.46 D	ND	ND	ND	ND	ND	ND	ND	0.80 D	ND	ND	3.20	5.16

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
3311	DC032801	F	WB Redhorse Sucker	0.10	0.22 D	0.68 D	ND	0.14 D	0.14 D	0.14 D	ND	0.34 D	ND	1.99 D	0.50 D	ND	15.3	8.77
3311	DC032802	F	PF Sm Bass	0.08	0.47 D	0.80 D	ND	0.16 D	ND	ND	ND	ND	ND	1.18 D	ND	ND	1.40 D	3.46
3312	DC033101	F	WB Redhorse Sucker	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	48.9	30.5
3312	DC033102	F	PF Sm Bass	0.09	1.10 D	1.05 D	ND	0.37 D	ND	ND	ND	0.33 D	ND	ND	2.57	ND	4.88	10.65
3313	DC033201	F	WB Redhorse Sucker	0.23	0.13 D	0.22 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.42	4.33
3313	DC033202	F	PF Sm Bass	0.63	0.48 F	0.43 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.73 D	2.03 D
3314	DC033301	F	WB Channel Catfish	0.07	ND	0.96 D	ND	ND	ND	ND	ND	ND	ND	6.39	ND	ND	112	90.7
3314	DC033302	F	PF White Bass	0.15	0.26 D	0.17 D	ND	ND	ND	ND	0.73 D	ND	ND	1.94 D	ND	0.97 D	17.1	6.70
3315	DC033401	F	WB Carp	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16.1	9.59
3315	DC033402	F	PF Lm Bass	0.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3316	DC033501	F	WB White Sucker	0.07	0.15 D	0.12 D	ND	ND	ND	ND	0.67 D	ND	ND	0.46 D	ND	0.91 D	2.61	1.16 D
3317	DC033601	F	WB White Sucker	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.11	ND	ND	ND
3318	DC033701	F	WB White Sucker	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3319	DB041401	F	WP Winter Flounder	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.69 D	0.84 D	14.5	5.16
3320	DB041412	F	WP Bluefish	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.48 D	0.76 D	ND	4.12	1.42 D
3321	DB040401	F	WP Winter Flounder	0.02	0.48 D	0.85 D	ND	ND	ND	ND	ND	ND	ND	ND	2.50	ND	24.0	11.3
3321	QD100688	L	WP Winter Flounder	NA	0.95 D	0.85 D	ND	ND	0.92 D	0.92 D	3.19	1.56 D	ND	2.58	5.01	1.70 D	27.0	10.8
3323	DB041206	F	WP Winter Flounder	0.03	0.10 D	0.07 D	ND	ND	ND	ND	ND	ND	ND	0.23 D	0.60 D	1.41 D	19.4	5.49
3324	DB041252	F	WP Bluefish	0.06	4.56	2.93	0.39 D	ND	ND	ND	ND	0.21 D	ND	ND	2.33 D	1.53 D	12.3	8.15
3325	DB041218	F	WP Bluefish	0.03	0.26 D	0.17 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.81 D	7.01	4.20
3326	DB041208	F	WP Bluefish	0.03	0.80 D	0.50 D	ND	ND	ND	ND	ND	0.09 D	ND	ND	1.51 D	ND	11.4	6.10
3327	DB040301	F	WP Bluefish	0.08	2.27 D	10.6	ND	ND	ND	ND	ND	ND	ND	ND	1.98 D	0.39 D	8.40	4.84
3327	DB040315	F	WP Bluefish	0.10	2.69	ND	ND					ND					ND	
3328	DD029111	F	WB Carp	0.05	ND	0.52 D	0.10 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.16	5.36
3329	DD016003	F	WB Bowfin	0.02	0.17 D	0.35 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3330	DD029110	F	WB Spotted Sucker	0.18	0.16 D	0.29 D	ND	ND	ND	ND	ND	0.11 D	ND	ND	0.85 D	0.64 D	ND	2.10 D
3331	DD016007	F	WB Carp	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3332	DD016009	F	WP Spotted Drum	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.09 D	ND	ND	ND
3333	DD016012	F	WB Sea Catfish	0.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.35 D	ND
3334	DD016013	F	WB Sea Catfish	0.53	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.5	ND
3335	DD016015	F	WP Spot	0.53	ND	0.49 D	ND	ND	ND	ND	ND	ND	ND	ND	5.84	2.59	ND	ND
3335	DD029101	F	WP Red Drum	0.63	ND	0.12 D	ND	ND	ND	ND	ND	ND	ND	ND	0.61 D	ND	0.46 D	ND
3335	DD029102	F	WB Southern Flounder	0.04	0.30 D	0.28 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3335	DD029103	F	WP Sheepshead	0.60	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.72 D	ND	ND	DN	ND
3335	QD091588	L	WP Red Drum		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3336	DD016004	F	WP Black Drum	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3336	DD016006	F	WP Sheepshead	0.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3336	DD016017	F	WP Red Drum	0.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3336	DD016018	F	PF Spotted Seatrout	0.08	0.10 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.69 D	ND
3337	DD016019	F	WB Spotted Sucker	0.11	1.44 D	2.09 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3338	DD016022	F	WB Spotted Sucker	0.08	0.70 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.6	ND	ND	4.63
3339	DD016023	F	WB Carp	0.10	3.16	6.57	ND	0.99 D	1.04 D	1.04 D	1.60 D	0.57 D	ND	2.61	0.85 D	ND	27.7	17.2
3340	DD029114	F	WB Channel Catfish	0.05	0.42 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20.8	ND	ND
3341	DD016104	F	WB Catfish	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.13	ND	6.43	1.30 D
3341	QD081788	L	WB Catfish	NA	ND	0.10 D	ND	ND	ND	ND	ND	ND	ND	ND	1.25 D	ND	6.07	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
3342	DD016105	F WB	Spotted Sucker	0.18	3.92	7.58	ND	0.88 D	ND	ND	ND	ND	ND	ND	ND	25.7	ND	32.8
3343	DD016107	F WB	White Sucker	ND	0.52 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.58	4.66	ND	2.55
3344	DD016110	F PF	Lm Bass	0.26														
3344	DD016109	F WB	Carp	0.23	0.37 D	0.50 D	ND	ND	ND	ND	ND	ND	ND	2.08 D	4.01	6.75	ND	11.9
3345	DD016111	F WB	Redhorse Sucker	0.87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.98 D	2.18 D	1.42 D
3346	DD016113	F WB	Creek Chubsucker	0.03	0.26 D	0.16 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.35	ND	ND
3346	DD016114	F PF	Lm Bass	0.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16 D	ND	ND
3347	DD016115	F WB	Carp	0.07	5.20	9.01	0.06 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	25.3	20.1
3348	DD016117	F PF	White Perch	0.25	0.08 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3348	DD016118	F WB	Blue Catfish	0.12	ND	ND	ND	ND	ND	ND	ND	0.12 D	ND	ND	ND	4.62	ND	ND
3349	DD016119	F WB	Carp	0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.79	ND	ND	7.98
3350	DD016121	F WB	Carp	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3350	DD016122	F PF	Lm Bass	0.65	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.29 D	ND
3351	DD016124	F WB	Carp	0.07	ND	ND	ND	ND	0.18 D	0.18 D	ND	ND	ND	1.59 D	ND	ND	ND	9.72
3352	DF023723	F PF	Crappie	0.17	0.17 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3352	DF023724	F WB	Carp	0.09	ND	ND	ND	ND	ND	ND	ND	0.25 D	ND	0.30 D	1.13 D	1.14 D	ND	2.40 D
3352	QD022089	L PF	Crappie		0.41 D	0.28 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3353	DF024121	F BF	Blue Catfish	0.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.10 D	0.58 D	6.14	3.37
3353	DF024122	F WB	Sm Buffalo	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.33 D	2.04 D	ND	3.25
3354	DY022301	F WB	Carp	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.38 D	ND	8.42	ND	6.46
3354	DY022302	F PF	Lm Bass	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3355	DY022303	F WB	Carp	0.03	ND	0.34 D	ND	ND	ND	ND	ND	1.02 D	ND	2.92	1.66 D	ND	57.9	32.0
3355	DY022304	F PF	Lm Bass	0.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3356	DE030201	F WB	Carp	0.04	ND	1.30 D	ND	ND	ND	ND	2.30 D	0.83 D	ND	ND	6.34	ND	43.8	25.8
3357	DY022223	F PF	Squawfish	0.95														
3357	DY022224	F WB	Sacramento Sucker	0.10	ND	ND	ND	ND	ND	ND	4.64	ND	ND	11.5	ND	21.3	27.0	16.8
3360	DD029117	F WB	Carp	0.07	1.83 D	1.20 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.37 D	16.2	10.9
3375	DD016305	F WB	Carp	0.08	19.4	17.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	21.9	145	155
3375	DD016306	F PF	Lm Bass	0.31	0.38 D	0.38 D	ND	ND	ND	ND	ND	ND	ND	0.90 D	ND	ND	2.01 D	6.40
3375	QD071189	L PF	Lm Bass		0.55 D	0.61 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.71 D	4.53	13.26
3376	DD016307	F WB	Carp	0.09	26.8	16.1	2.35 D	ND	ND	ND	ND	ND	ND	ND	ND	18.5	185 E	191 E
3376	DD016308	F PF	Lm Bass	0.34	0.24 D	0.24 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.57 D	2.92
3377	DD016309	F WB	Carp	0.07	4.03	2.58	ND	ND	ND	ND	ND	ND	ND	ND	ND	21.9	177	159
3377	DD016310	F PF	Lm Bass	0.20	0.54 D	0.40 D	0.04 D	ND	ND	ND	ND	ND	ND	ND	1.02 D	1.56 D	2.58	5.03
3378	DD016311	F WB	Spotted Sucker	0.07	8.16	4.77	0.79 D	ND	ND	ND	ND	ND	ND	ND	3.05	ND	ND	ND
3378	DD029115	F WB	Greyfin Sucker	0.07	4.38	2.80	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.98	ND	ND
3385	DD016401	F WB	Redhorse Sucker	0.17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.35 D	13.2	8.06
3385	QD101888	L WB	Redhorse Sucker	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.11 D	10.5	6.17
3395	DD016421	F WB	Redhorse Sucker	0.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	46.5	32.0
3401	DD016509	F WB	Carp	0.13	ND	0.51 D	0.25 D	ND	ND	ND	ND	0.36 D	ND	2.70	ND	ND	13.4	8.38
3401	DD016510	F PF	Lm Bass	0.42	0.07 D	0.08 D	ND	ND	ND	ND	ND	ND	ND	0.14 D	ND	0.39 D	0.43 D	ND
3403	DD016513	F WB	River Carpsucker	0.10	1.14 D	1.05 D	14.9	ND	ND	ND	ND	ND	ND	2.31 D	ND	3.24	64.4	30.0
3403	DD016514	F PF	Lm Bass	0.21	0.29 D	0.17 D	0.78 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.86	1.55 D
3404	DD016515	F WB	Carp	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13.1	8.75
3404	QD016515	F WB	Carp		0.97 D	0.62 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.50 D	12.9	8.77

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	Merc µg/g	123 TCB	124 TCB	135 TCB	1234 TCB	1235 TCB	1245 TCB	OCS	PCB	PCNB	HCB	aBHC	gBHC	CIS CHLOR	TRANS CHLOR
3409	DB005101	F	WB Catfish	0.1														
3409	DB040701	F	WB Carp	0.06	0.35 D	0.62 D	ND	ND	0.22 D	0.22 D	ND	0.47 D	ND	2.53	2.47 D	8.00	37.3	22.8
3409	DB040706	F	PF Lm Bass	0.26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3411	DB040501	F	WB Redhorse Sucker	0.04	1.93 D	80.4	0.95 D	ND	ND	ND	ND	ND	ND	3.91	ND	ND	ND	ND
3412	DB040901	F	PF Sm Bass	0.22	ND	ND	ND	ND	ND	ND	1.51 D	ND	ND	0.58 D	0.73 D	ND	1.72 D	ND
3412	DB040907	F	WB Carp	0.21	ND	5.11	ND	ND	ND	ND	29.5	ND	ND	11.5	ND	ND	42.6	17.8
3414	DC036203	F	PF Sm Bass	0.31	5.34	3.12	0.55 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3414	DC036204	F	BF Channel Catfish	0.09	2.19 D	1.06 D	ND	ND	ND	ND	ND	ND	ND	ND	3.63	ND	6.34	4.56
3415	DC036205	F	PF Sm Bass	0.22	0.14 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3415	DC036206	F	BF Channel Catfish	0.29	1.14 D	0.83 D	ND	ND	ND	ND	ND	ND	ND	ND	1.43 D	ND	9.54	6.39
3419	DC036207	F	WB White Sucker	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.14 D	4.65	ND	1.63 D	5.75
3419	DC036208	F	PF Freshwater Drum	0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.92 D
3420	DC036209	F	PF Greenfish	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.39 D	ND	ND	ND
3420	DC036210	F	WB Carp	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3421	DC036211	F	PF White Perch	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3421	DC036212	F	WB Carp	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.80	ND	ND	ND
3422	DC036213	F	PF Lm Bass	0.73	ND	0.22 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3422	DC036214	F	WB Yellow Bullhead	0.46	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3423	DC036216	F	WB White Catfish	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.85 D	ND	6.17	1.89 D
3424	DC036218	F	WB White Catfish	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3425	DF025005	F	WB Carp	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.37	ND	ND	ND
3426	DB069102	F	PF Bluefish	0.20	0.41 D	1.35 D	ND	ND	ND	ND	ND	ND	0.86 D	ND	1.13 D	0.37 D	2.81	1.35 D
3427	DB069103	F	PF Bluefish	0.28	17.7	11.9	1.70 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.18	1.91 D
3428	DB069104	F	PF Bluefish	0.19	0.64 D	0.72 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.36	3.61
3429	DB069105	F	PF Weakfish	0.11	0.18 D	0.15 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3430	DB069106	F	WB White Catfish	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.97	2.13 D
3431	DB069109	F	WB Red Snapper	0.15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3433	DB069112	F	WP Flounder	0.05	0.47 D	1.42 D	ND	ND	ND	ND	ND	ND	ND	ND	1.15 D	1.11 D	11.5	4.84
3434	DB040801	F	WP Flounder	0.04	0.27 D	1.00 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.25 D	13.0	6.72
3434	QD011889	L	WP Flounder		0.68 D	2.31 D	ND	ND	ND	ND	ND	ND	ND	ND	4.04	2.67	10.6	5.77
3435	DD016602	F	WB Bigmouth Buffalo	0.05	ND	ND	ND	ND	ND	ND	ND	4.90	ND	44.1	ND	ND	173	206
3443	DF009118	F	WB Carp	0.422														
3444	DD016603	F	WB Carp	0.05	ND	ND	ND	ND	ND	ND	ND	1.87 D	ND	7.24	ND	ND	86.8	85.0
3444	DD016604	F	PF Channel Catfish	0.08	ND	ND	0.35 D	ND	ND	ND	4.95	1.90 D	ND	10.7	ND	ND	113 E	126 E
3444	DD029512	F	PF Lm Bass	0.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.85 D	0.73 D	ND	7.66	12.9
3445	DD029513	F	WB Flounder	0.04	ND	0.30 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.31 D	ND	ND
3446	DD016605	F	PF Striped Bass	0.39	ND	0.13 D	ND	ND	ND	ND	1.09 D	ND	ND	1.09 D	ND	ND	5.77	23.9
3446	DD016606	F	WB Carpsucker	0.02	ND	0.22 D	ND	ND	ND	ND	2.93	ND	ND	0.94	4.97	1.41 D	10.3	20.5
3446	QD091889	F	WB Carpsucker		0.11 D	0.19 D	ND	ND	ND	ND	3.30	ND	ND	6.44	ND	1.35 D	11.3	22.1

Key for Xenobiotic Data Table (Units = ng/g) (continued)

Set 2		CAS Number
OXYCHLOR	= Oxychlordane	26880/48/8
cis NON	= cis Nonachlor	3732/49/4
trans NON	= trans Nonachlor	39765/80/5
HEPT	= Heptachlor	76/44/8
HEPT EP	= Heptachlor epoxide	1024/57/3
DDE	= p,p' DDE	72/55/9
DIELDRIN		60/57/1
ENDRIN		72/20/8
DICOFOL	= Dicofol (Kelthane)	115/32/2
ME CHL	= Methoxychlor	72/43/5
PERTHANE		72/56/0
MIREX		2385/85/5
NITROFEN		1836/75/5
CHLORPYRIFOST	2921/88/2	
ISOPROP	= Isopropalin	33820/53/0

DATA FLAGS

D = Value below limit of quantitation for all Xenobiotics except Mercury and PCBs,
D = 2.5 ng/g
For Polychlorinated Biphenyls

Number of Chlorines	D, ng/g
1-3	1.25
4-6	2.50
7-8	3.75
9-10	6.25R

E = Value exceeds highest calibration standard

See Dioxin/Furan Data Table Key for explanation of other codes. The tables include environmental samples (those starting with a sample number of D) and the duplicate samples (those starting with a Q) and confirmation samples (those starting with an S). The number of samples shown on the summary tables in Volume I do not included the duplicate and confirmation samples.

Episode	SCC	Type	Description	OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
				XENOBIOTICS CONCENTRATIONS, ng/g														
2015	DF001001	F WB	Carp	ND	22.6	61.7	ND	6.34	471 E	73.7	ND	ND	ND	ND	ND	ND	ND	ND
2016	DF001101	F WB	Sucker	ND	ND	18.1	ND	ND	1223 E	ND	ND	0.61 D	ND	ND	4.24	ND	ND	ND
2017	DF001201	F WB	Carp	ND	ND	2.49 D	ND	ND	66.7	ND	ND	ND	ND	ND	21.6	ND	ND	ND
2018	DF001301	F WB	Sucker	ND	ND	8.66	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2023	DF001403	F WB	Carp	ND	ND	4.96	ND	ND	30.5	1.70 D	3.73	ND	ND	ND	ND	ND	ND	ND
2026	DF001702	F WB	Carp	ND	6.14	16.1	ND	ND	252 E	ND	ND	0.26 D	ND	ND	ND	ND	ND	8.65
2027	DF001803	F WB	Carp	ND	ND	3.85	ND	ND	64.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
2037	DY000501	F WB	not available	ND	ND	3.18	ND	ND	0.51 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
2056	DE000501	F WB	Carp	ND	30.4	82.9	ND	ND	38.7	58.5	ND	ND	8.22	ND	2.07 D	ND	11.4	ND
2057	DE000601	F WB	Carp	28.5	31.2	89.1	ND	15.0	64.6	110	ND	ND	ND	ND	ND	ND	ND	ND
2059	DE000801	F WB	Carp	ND	25.5	74.6	ND	16.0	769 E	81.2	ND	ND	ND	ND	6.22	ND	ND	ND
2060	DE000901	F WB	Carp	19.1	27.7	77.4	ND	23.2	46.5	153	ND	ND	ND	ND	0.76 D	ND	ND	ND
2070	DJ000902	F WB	Longnose Sucker	ND	ND	ND	ND	ND	2.89	ND	ND	ND	ND	ND	ND	ND	ND	ND
2098	DH001501	F WB	N/A	ND	ND	ND	ND	ND	5.04	ND	ND	ND	ND	ND	ND	ND	ND	ND
2100	DH001703	F WB	Catfish	ND	8.56	25.2	ND	ND	187 E	18.1	ND	ND	ND	ND	1.30 D	ND	ND	ND
2105	DH002204	F WB	Carp	ND	ND	ND	ND	ND	2.57	ND	ND	ND	ND	ND	ND	ND	ND	ND
2109	DH002601	F WB	N/A	12.9	ND	17.6	ND	24.4	62.8	108	ND	ND	ND	ND	ND	ND	ND	ND
2110	DH002710	F WP	Brown Trout	ND	ND	ND	ND	ND	5.61	ND	ND	ND	ND	ND	ND	ND	ND	ND
2122	DH003904	F WB	White Sucker	ND	ND	3.31	ND	ND	18.9	7.64	ND	ND	ND	ND	ND	ND	ND	ND
2126	DD000302	F WB	Carp	ND	ND	9.23	ND	3.77	474 E	18.2	ND	ND	2.81	ND	23.1	ND	3.21	ND
2133	DD001002	F BF	Blue Catfish	ND	ND	6.17	ND	ND	659 E	15.4	ND	0.79 D	ND	ND	3.62	ND	1.82 D	ND
2139	DD001601	F WB	Carp	ND	ND	ND	ND	ND	4.95	ND	ND	ND	ND	ND	ND	ND	ND	ND
2142	DD001902	F WB	Catfish	ND	20.5	36.8	ND	ND	75.1	21.9	ND	ND	ND	ND	ND	ND	ND	ND
2148	DD002501	F WB	Saltwater Catfish	ND	ND	11.1	ND	ND	34.4	7.36	ND	5.37	ND	ND	ND	ND	ND	ND
2151	DD002803	F WB	Spotted Sucker	ND	ND	ND	ND	ND	8.97	ND	ND	ND	ND	ND	ND	ND	5.61	ND
2152	DD002903	F WB	Lake Chubsucker	ND	ND	ND	ND	ND	10.4	ND	ND	4.09	ND	ND	ND	ND	ND	ND
2190	DG005101	F WB	Carp	36.0	14.6	39.7	ND	63.2	56.2 E	224 E	ND	ND	ND	ND	ND	ND	10.4	ND
2190	DG005104	F PF	Bluegill	ND	ND	ND	ND	ND	4.61	14.7	ND	ND	ND	ND	ND	ND	ND	ND
2191	DG005205	F WB	Carp	ND	17.8	56.2	ND	ND	52.3	258	7.50	4.56	ND	ND	ND	ND	ND	ND
2194	DG005501	F WB	Carp	28.8	23.3	73.6	3.79	32.7	41.8	60.8	ND	2.32 D	1.04 D	ND	ND	ND	19.4	ND
2199	DG006001	F WB	Carp	ND	9.67	26.3	ND	19.1	70.0	312 E	ND	1.23 D	ND	ND	ND	ND	ND	ND
2199	DG006004	F PF	Lm Bass	9.94	12.6	36.4	ND	7.91	48.8	70.4 E	ND	0.66 D	ND	ND	ND	ND	ND	ND
2201	DG006201	F WB	Carp	ND	ND	2.38 D	ND	ND	19.2	8.79	ND	ND	ND	ND	ND	ND	ND	ND
2205	DG006601	F WB	Carp	ND	ND	ND	ND	ND	22.3	7.94	ND	ND	ND	ND	ND	ND	ND	ND
2210	DC005401	F WB	Catfish	5.62	52.0	158	ND	15.7	381 E	73.1	9.02	ND	4.82	ND	2.24 D	ND	23.9	ND
2211	DC005503	F WB	Redhorse Sucker	4.26	5.57	15.6	ND	ND	88.8 E	8.45	ND	ND	ND	ND	2.31 D	ND	ND	ND
2212	DC005602	F PF	Sm Bass	4.09	6.57	22.9	ND	1.07	52.1 E	4.92	ND	ND	ND	ND	ND	ND	ND	ND
2212	DC005605	F WB	White Sucker	25.3	42.5	142 E	ND	ND	186 E	112 E	2.25 D	0.64 D	ND	ND	ND	ND	7.66	ND
2215	DC005902	F WB	Carp	91.4	124	477 E	19.6	21.9	122	128	ND	6.02	ND	ND	ND	ND	26.3	ND
2216	DC006003	F WB	White Sucker	ND	ND	ND	ND	ND	2.04 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
2220	DC006405	F WB	Catfish	ND	ND	7.07	ND	ND	19.6	ND	ND	ND	ND	ND	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
2227	DC007104	F	WB Channel Catfish	ND	ND	3.61	ND	ND	29.8	4.34	ND	ND	ND	ND	ND	ND	6.49	ND
2228	DC007201	F	PF Longear Sunfish	ND	ND	ND	ND	ND	1.09 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
2231	DC007503	F	WB Gizzard Shad	ND	33.7	96.7	ND	8.84	151	49.6	ND	ND	ND	ND	ND	ND	ND	ND
2246	DJ002302	F	WB Bridgelip Sucker	ND	ND	10.5	ND	ND	41.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
2247	DJ002404	F	WP Mountain Whitefish	ND	ND	8.20	ND	ND	21.6	ND	ND	0.47 D	ND	ND	ND	ND	ND	ND
2280	DF005201	F	WB Carp	ND	ND	4.12	ND	ND	45.9	ND	ND	ND	ND	ND	1.03 D	ND	ND	ND
2280	QD121688	L	WB Carp	ND	ND	4.34	ND	ND	46.9	ND	ND	ND	ND	ND	0.85 D	ND	ND	ND
2283	DF005501	F	WB Gray Redhorse	ND	ND	ND	ND	ND	5.79	ND	ND	ND	ND	ND	ND	ND	ND	ND
2290	DD003403	F	WB Spotted Sucker	ND	16.5	53.3	ND	ND	94.0	21.1	ND	ND	ND	ND	ND	ND	ND	ND
2294	DD003804	F	WB Carp	ND	ND	ND	ND	ND	371 E	14.5	ND	ND	N	ND	7.89	ND	ND	ND
2297	DD004102	F	WB Carp	ND	ND	11.0	ND	ND	18.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
2298	DD004203	F	WP Lm Bass	ND	ND	ND	ND	ND	186 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
2301	DD004504	F	WP Rock Bass	ND	ND	2.06 D	ND	ND	14.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
2302	DD004601	F	WB Quillback Carpsucker	ND	ND	3.40	ND	ND	53.9 E	ND	ND	ND	ND	ND	0.89 D	ND	ND	ND
2304	DD004801	F	WB Carp	ND	12.7	37.2	ND	ND	337 E	38.0	ND	ND	ND	ND	7.13	ND	ND	ND
2309	DD005301	F	WB Carp	ND	ND	14.9	ND	ND	217 E	ND	ND	ND	ND	ND	6.39	ND	ND	ND
2322	DB001301	F	WB White Sucker	ND	ND	2.12 D	ND	ND	15.9	1.29 D	ND	ND	ND	ND	ND	ND	ND	ND
2326	DB001701	F	WB White Sucker	ND	ND	ND	ND	ND	9.63	3.76	ND	ND	ND	ND	ND	ND	ND	ND
2328	DB001904	F	PF Chinook Salmon	11.3	42.3	129 E	ND	2.92	682 E	53.5	4.19	3.88	ND	ND	225 E	3.39	0.95 D	ND
2329	DB002004	F	PF Brown Trout	10.6	24.6	60.3	ND	5.06	415 E	47.3	ND	2.82	ND	ND	131	ND	ND	ND
2341	DD006003	F	WB Carpsucker	18.5	47.2	151 E	ND	ND	56.1	83.7	ND	ND	ND	ND	ND	ND	ND	ND
2355	DA001603	F	WB White Sucker	ND	ND	2.81	ND	ND	14.9	9.73	ND	ND	ND	ND	ND	ND	ND	ND
2356	DA001702	F	PF Lm Bass	ND	ND	ND	ND	ND	3.02	ND	ND	ND	ND	ND	ND	ND	ND	ND
2375	DA003803	F	WB White Sucker	ND	ND	8.27	ND	ND	63.0	16.3	ND	ND	ND	ND	ND	ND	ND	ND
2376	DA003903	F	WB White Sucker	18.3	12.2	38.5	ND	ND	39.0	25.6	ND	1.78 D	ND	ND	ND	ND	4.66	ND
2379	DE005404	F	PF Lm Bass	ND	ND	2.18 D	ND	ND	6.62	ND	ND	ND	ND	ND	ND	ND	ND	ND
2380	DE005501	F	WB Carp	55.4	35.1	96.9	ND	ND	497 E	105	ND	ND	ND	ND	2.81	ND	26.4	ND
2383	DE005801	F	WB Carp	68.0	65.7	172	ND	ND	997	114	5.91	3.10	ND	ND	8.63	ND	33.0	ND
2385	DE006002	F	WB White Sucker	ND	ND	ND	ND	ND	10.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
2394	DE006901	F	WB Carp	36.9	61.9	279 E	ND	15.3	114	90.0	ND	ND	ND	ND	ND	ND	18.2	ND
2394	QD006901	L	WB Carp	63.2	59.9	197 E	ND	26.1	86.6	73.0	ND	ND	ND	ND	ND	ND	21.5	ND
2394	QD022189	L	WB Carp	57.6	50.0	167 E	ND	ND	73.4	68.3	ND	ND	ND	ND	ND	ND	11.2	ND
2397	DE007201	F	WB Sucker	ND	ND	2.46 D	ND	ND	19.6	6.17	ND	ND	ND	ND	0.45 D	ND	ND	ND
2410	DE008501	F	WB Carp	ND	ND	63.4	ND	ND	579 E	99.0	ND	ND	ND	ND	3.98	ND	9.44	ND
2410	DE008504	F	PF Sm Bass	ND	ND	3.63	ND	ND	15.3	4.30	ND	ND	ND	ND	ND	ND	ND	ND
2416	DE009101	F	WB Carp	ND	ND	83.9	ND	ND	115	64.2	ND	ND	ND	ND	ND	ND	46.7	ND
2422	DE009702	F	WB Carp	ND	ND	8.21	ND	ND	108	21.5	ND	ND	ND	ND	ND	ND	ND	ND
2427	DE010202	F	WB Carp	243	ND	58.3	ND	52.8	1521 E	168	ND	ND	ND	ND	2.46 D	ND	ND	ND
2429	DE010402	F	WB Carp	ND	14.9	37.8	ND	ND	640 E	4.60	ND	ND	ND	ND	3.21	ND	ND	ND
2430	DE010603	F	WB Redhorse Sucker	ND	ND	ND	ND	ND	12.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
2430	QD121488	L	F not available	ND	ND	1.38 D	ND	ND	11.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
2431	DE010703	F	WB Sucker	ND	ND	ND	ND	ND	7.73	2.48 D	ND	ND	ND	ND	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
2432	DE010710	F	WB Redhorse Sucker	17.9	19.6	58.6	ND	ND	516 E	ND	ND	ND	ND	ND	1.03 D	ND	ND	ND
2435	DE011001	F	WB Longnose Sucker	4.64	10.0	20.4	ND	11.4	114 E	55.8	13.4	ND	ND	ND	0.44 D	ND	ND	ND
2437	DE011203	F	WB Carp	ND	ND	10.9	ND	ND	128	58.6	ND	ND	ND	ND	ND	ND	ND	ND
2439	DE011401	F	WB Carp	77.0	54.8	147	ND	20.8	109	99.8	ND	ND	ND	ND	ND	ND	ND	ND
2439	DE011402	F	WP Sm Bass	37.7	48.3	173 E	ND	16.8	80.9	103 E	ND	ND	ND	ND	ND	ND	17.3	ND
2478	DJ003902	F	WB Sucker	ND	ND	4.53	ND	ND	197 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
2500	DC010203	F	WB Black Buffalo	ND	ND	7.15	ND	ND	6.98	3.99	ND	ND	ND	ND	1.73 D	ND	1.50 D	ND
2532	DF019303	F	WB Carp	ND	12.5	30.7	ND	12.4	73.8	99.5	7.45	ND	ND	ND	1.16 D	ND	ND	ND
2544	DF019202	F	WB Blacktail Redhorse	ND	ND	15.3	ND	ND	25.3	38.2	ND	ND	ND	ND	2.63	ND	ND	ND
2608	DE014504	F	WB Carp	ND	ND	ND	ND	ND	64.4	35.0	ND	ND	ND	ND	ND	ND	ND	ND
2618	DE015401	F	WB Carp	96.2	57.7	197	ND	28.6	77.6	128	35.1	ND	ND	ND	ND	ND	17.8	ND
2618	DE015402	F	BF Carp	24.3	19.3	66.1	ND	8.16	23.2	47.3	12.9	ND	ND	ND	ND	ND	5.55	ND
2618	DE015403	F	WB Quillback	68.9	51.2	164	ND	ND	65.2	88.5	6.30	ND	ND	ND	ND	ND	ND	ND
2651	DB008401	F	WB White Sucker	1.45 D	7.04	17.2	ND	ND	89.0 E	6.90	ND	2.17 D	ND	ND	0.97 D	ND	2.91	ND
2653	DB008503	F	WB Carp	16.4	38.4	138 E	ND	6.57	177 E	23.8	ND	ND	ND	ND	5.90	ND	4.59	ND
2654	DB008601	F	WB Carp	9.34	37.25	65.61	ND	8.07	59.92	19.25	ND	ND	1.51 D	ND	ND	10.40	ND	2.11
2709	DB005101	F	WB Catfish	ND	20.8	57.2	ND	ND	223 E	14.9	ND	ND	ND	ND	2.21 D	ND	3.62	ND
2721	DA006502	F	WB Sucker	ND	ND	ND	ND	ND	20.6	ND	8.55	ND	ND	ND	4.77	ND	ND	ND
2721	QD011089	L	WB Sucker	ND	ND	ND	ND	ND	13.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
2722	DA006601	F	WB Sucker	ND	ND	ND	ND	ND	3.01	ND	ND	ND	ND	ND	ND	ND	ND	ND
2725	DA006301	F	WB Sucker	ND	ND	ND	ND	ND	10.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
2748	DY006505	F	WB Sucker	ND	ND	ND	ND	ND	31.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
2776	DY007101	F	WB Carp	ND	ND	3.14	ND	ND	58.7 E	ND	ND	ND	ND	ND	0.36 D	ND	ND	ND
2776	QD010489	L	WB Carp	ND	ND	5.42	ND	ND	101 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3001	DE019502	F	WB White Sucker	ND	ND	ND	ND	ND	27.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
3022	DA008401	F	WB White Sucker	ND	ND	ND	ND	ND	14.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
3023	DA008501	F	PF Sm Bass	ND	ND	ND	ND	ND	2.18 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3024	DA008601	F	PF Lm Bass	ND	ND	ND	ND	ND	118 E	46.0	ND	ND	ND	ND	ND	ND	ND	ND
3025	DA008701	F	WB White Sucker	ND	ND	11.1 E	ND	ND	18.6 E	3.68 E	4.52 E	ND	ND	ND	ND	ND	ND	ND
3028	DA008801	F	PF Chain Pickerel	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3034	DG025701	F	WB Carp	ND	5.29	ND	ND	6.64	39.2	35.5	ND	ND	ND	ND	ND	ND	ND	ND
3035	DG025801	F	WB Carp	13.5	12.3	47.9	ND	22.4	258 E	160 E	ND	ND	ND	ND	1.03 D	ND	1.46 D	ND
3036	DG025902	F	WB Carp	ND	9.88	ND	ND	ND	72.0	323 E	ND	ND	2.50 D	ND	ND	ND	4.53	15.0
3037	DG026001	F	WB Carp	3.91	6.69	20.1	ND	19.9	103 E	136 E	ND	ND	ND	ND	ND	ND	5.13	ND
3038	DG026101	F	WB Carp	ND	ND	ND	ND	ND	70.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
3039	DG026201	F	WB Carp	28.0	44.1	133 E	ND	14.5	185 E	36.0	ND	3.57	ND	ND	ND	ND	12.4	ND
3040	DG026301	F	WB Carp	1.17 D	8.37 E	23.4 E	ND	ND	555 E	24.6 E	ND	ND	ND	ND	0.39 D	ND	0.81 D	2.82 E
3041	DG026402	F	WB Carp	ND	ND	2.07 D	ND	1.03	374 E	74.3 E	4.97	ND	ND	ND	ND	ND	ND	ND
3042	DG026501	F	WB Carp	4.08	ND	84.6	8.84	ND	165 E	61.3	ND	ND	ND	ND	ND	ND	30.1	13.4
3042	DG026502	F	PF Northern Pike	ND	ND	2.33 D	ND	ND	12.0	1.58 D	ND	ND	ND	ND	ND	ND	1.62 D	ND
3042	QD026501	L	WB Carp	ND	18.8	50.7	ND	ND	108	55.8	ND	ND	ND	ND	ND	ND	40.8	25.9
3043	DG026601	F	BF Flathead Catfish	ND	11.3	ND	ND	ND	85.8	79.3	ND	ND	ND	ND	ND	ND	5.44	37.5

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
3044	DG026701	F WB	Carp	8.44	20.4	ND	4.43	10.9	133 E	116 E	ND	ND	ND	ND	ND	ND	9.04	10.5
3045	DG026801	F WB	Carp	42.3	59.6	186 E	9.74	24.1	166 E	107 E	7.37	ND	ND	ND	0.70 D	ND	17.8	6.53
3045	DG026802	F BF	Flathead Catfish	2.53	7.31	22.3	2.09 D	2.26	23.4	18.5	ND	ND	ND	ND	ND	ND	6.12	ND
3046	DG026901	F WB	Bigmouth Buffalo	6.95	8.02	20.7	ND	10.6	36.4	216 E	ND	N	ND	ND	ND	ND	ND	ND
3047	DG027001	F WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16.5
3048	DG027101	F WB	Carp	19.6	64.6	225 E	3.63	17.6	67.1	190 E	18.5	ND	ND	ND	ND	ND	12.1	5.92
3048	DG027102	F PF	White Bass	2.27 D	5.42	12.9	ND	4.15	13.1	26.2	ND	ND	0.30 D	ND	ND	ND	ND	ND
3048	QD012689	L PF	White Bass	1.94 D	4.98	11.8	ND	3.88	11.6	25.3	ND	ND	ND	ND	ND	ND	ND	ND
3048	QD027101	L WB	Carp	18.6	38.1	97.5	ND	17.0	32.0	92.8	ND	ND	ND	ND	ND	ND	12.3	ND
3049	DG027201	F WB	Carp	10.1	37.6	ND	ND	16.6	206 E	201 E	ND	ND	ND	ND	ND	ND	4.37	13.9
3050	DG027301	F WB	Bigmouth Buffalo	6.75	8.92	23.9	ND	9.34	30.6	125	ND	ND	ND	ND	ND	ND	ND	ND
3060	DF009101	F WB	Flathead Catfish	ND	ND	ND	ND	ND	21.99	ND	ND	ND	ND	ND	ND	ND	ND	ND
3060	DF009102	F WB	Sm Buffalo	ND	9.19	21.47	ND	ND	447.57E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3060	QD073189	L WB	Flathead Catfish	ND	ND	ND	ND	ND	14.87	ND	ND	ND	ND	ND	ND	ND	ND	ND
3061	DF019106	F WB	Sucker	2.23 D	ND	ND	ND	2.26	5.93	4.18	ND	ND	ND	ND	1.17 D	ND	ND	ND
3062	DF024024	F WB	Blue Catfish	ND	ND	20.3	ND	ND	271 E	8.33	ND	ND	ND	ND	ND	ND	ND	ND
3063	DF023301	F WB	Sea Catfish	2.79	8.66	20.1	ND	ND	41.5	12.4	ND	ND	ND	ND	2.03 D	ND	ND	ND
3063	DF023302	F PF	Spotted Seatrout	ND	3.60	7.55	ND	ND	8.54	5.91	ND	ND	ND	ND	0.88 D	ND	ND	ND
3064	DF023305	M	Shellfish	ND	ND	3.77	ND	ND	3.17	ND	ND	ND	ND	ND	ND	ND	ND	ND
3065	DF023419	F BF	Bigmouth Buffalo	ND	ND	4.24	ND	ND	18.8	3.61	ND	ND	ND	ND	0.33 D	ND	ND	ND
3065	DF023420	F WB	Flathead Catfish	ND	4.97	10.6	ND	ND	29.1	6.44	ND	ND	ND	ND	0.51 D	ND	0.81 D	ND
3065	QD010788	F BF	Bigmouth Buffalo	ND	ND	7.28	ND	ND	31.3	4.95	ND	ND	ND	ND	0.42 D	ND	ND	ND
3066	DF023503	F WB	Catfish	ND	7.74	16.3	ND	9.10	39.6	61.5	2.52	ND	ND	ND	ND	ND	3.11	9.09
3066	DF023504	F PF	Freshwater Drum	ND	1.75	ND	ND	ND	9.49	8.28	ND	ND	ND	ND	ND	ND	ND	ND
3068	DF024001	M	Oysters	ND	ND	ND	ND	ND	16.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
3068	DF024002	F PF	Atl. Croaker	ND	5.18	10.4	ND	ND	12.2	13.4	ND	ND	ND	ND	ND	ND	ND	ND
3069	DF024007	F WB	Sea Catfish	ND	5.56	9.98	ND	ND	51.2	5.38	ND	ND	ND	ND	0.35 D	ND	ND	ND
3069	DF024008	F PF	Trout	ND	ND	ND	ND	ND	3.33	ND	ND	ND	ND	ND	ND	ND	ND	ND
3069	QD051788	F WB	Sea Catfish	ND	ND	15.8	ND	ND	69.7	5.71	0.64 D	ND	ND	ND	ND	ND	ND	ND
3070	DF024009	F WB	Croaker	ND	ND	4.44	ND	ND	6.80	ND	ND	ND	ND	ND	ND	ND	ND	ND
3070	DF024010	F PF	Sheepshead	ND	ND	ND	ND	ND	0.56 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3071	DF024014	F WB	Carp	ND	82.09	104.14	ND	ND	154.75E	53.11	ND	ND	ND	ND	ND	ND	63.68	ND
3071	DF024015	F PF	Longnose Gar	61.5	66.04	172.05E	ND	ND	302.29E	89.36	ND	ND	2.10 D	ND	4.19	ND	11.78	ND
3072	DF024017	F WB	Carp	ND	ND	6.55	ND	ND	545 E	ND	ND	ND	ND	ND	ND	ND	1.83 D	ND
3072	QD070688	L WB	Carp	ND	ND	4.47	ND	ND	416 E	ND	ND	ND	ND	ND	ND	ND	2.10 D	ND
3073	DF019221	F WB	White Sucker	ND	ND	ND	ND	ND	7.79	2.20 D	ND	ND	ND	ND	ND	ND	ND	ND
3074	DF026017	F PF	Brown Trout	ND	ND	ND	ND	ND	43.0	ND	ND	ND	ND	ND	0.94 D	ND	ND	ND
3076	DF028502	F WB	Channel Catfish	ND	ND	7.10	ND	ND	55.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
3077	DF019114	F WB	Redhorse Sucker	ND	ND	ND	ND	ND	6.39	ND	ND	ND	ND	ND	ND	ND	ND	ND
3078	DF009118	F WB	Carp	ND	ND	6.72	ND	ND	2425 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3078	DF023815	F WB	Sm Buffalo	1.85 D	11.3	45.9	ND	3.21	152 E	30.6	ND	ND	ND	ND	ND	ND	5.68	ND
3078	DF023816	F PF	Black Crappie	ND	ND	2.89	ND	ND	51.1 E	4.78	ND	ND	ND	ND	ND	ND	0.82 D	ND

Episode	SCC	Type	Description	XENOBIOTICS CONCENTRATIONS, ng/g OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
3079	DF019205	F	PF White Bass	ND	5.19	24.86	ND	2.87	23.21	9.96	ND	ND	ND	ND	ND	ND	3.57	ND
3079	DF019206	F	WB Carp	ND	7.44	18.3	ND	3.40	32.4	8.44	2.51	ND	ND	ND	ND	ND	1.61 D	ND
3080	DF023317	F	WB Carp	2.27 D	13.2	31.9	ND	4.29	298 E	ND	ND	ND	1.81 D	ND	42.4	ND	17.5	ND
3080	DF023318	F	PF Lm Bass	ND	ND	ND	ND	ND	10.66	ND	ND	0.70 D	ND	ND	ND	ND	ND	ND
3081	DF024105	F	PF White Bass	ND	ND	2.54	ND	ND	10.3	0.62 D	ND	ND	ND	ND	0.34 D	ND	ND	ND
3081	DF024106	F	WB Catfish	ND	ND	ND	ND	ND	4.40	ND	ND	ND	ND	ND	0.71 D	ND	ND	ND
3082	DF023401	F	WB Carp	ND	ND	7.87	ND	ND	2199 E	ND	ND	ND	ND	ND	10.4	ND	ND	ND
3083	DF023406	F	PF Lm Bass	ND	ND	ND	ND	ND	93.2	ND	ND	0.76 D	ND	ND	ND	ND	ND	ND
3084	DF024109	F	WB Channel Catfish	6.59	34.6	70.4	ND	ND	3221 E	66.4	18.0	4.05	ND	ND	ND	ND	20.6	ND
3085	DF024113	F	WB Sea Catfish	ND	ND	ND	ND	ND	86.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
3085	DF024114	F	PF Black Drum	ND	ND	ND	ND	ND	14.97	ND	ND	ND	ND	ND	ND	ND	ND	ND
3086	DF023409	F	WB Catfish	3.53	18.8	53.8	ND	ND	48.6	25.1	1.65 D	ND	ND	ND	2.45 D	ND	ND	ND
3086	DF023410	F	PF Red Drum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3087	DF023413	F	WB Carp	ND	ND	ND	ND	ND	38.4	ND	4.0	ND	ND	ND	0.99 D	ND	ND	ND
3087	DF023414	F	PF White Crappie	ND	ND	ND	ND	ND	8.92	ND	ND	ND	ND	ND	ND	ND	ND	ND
3087	DF023415	F	WP Bluegill	ND	ND	2.29 D	ND	ND	35.8	ND	ND	ND	ND	ND	0.68 D	ND	ND	ND
3088	DF023417	F	WB Channel Catfish	ND	ND	ND	ND	ND	6.89	ND	ND	ND	ND	ND	3.68	ND	ND	ND
3088	DF023418	F	PF Bluegill	ND	ND	ND	ND	ND	2.09 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3089	DF019209	F	PF White Crappie	ND	ND	ND	ND	ND	2.46 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3089	DF019210	F	WB Carp	ND	1.58 D	3.17	ND	0.80	20.8	3.97	ND	ND	ND	ND	0.52 D	ND	ND	ND
3090	DF019213	F	PF White Crappie	ND	ND	1.12 D	ND	ND	1.48 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3090	DF019214	F	WB Channel Catfish	3.48	13.8	28.9	ND	2.87	52.7	9.89	ND	ND	ND	ND	0.57 D	ND	1.82 D	ND
3091	DF019217	F	WB River Carpsucker	ND	ND	0.98 D	ND	ND	33.1	0.51 D	ND	ND	ND	ND	ND	ND	ND	ND
3092	DF023501	F	WB Carp	ND	ND	ND	ND	ND	40.93	8.34	12.25	ND	ND	ND	0.71 D	ND	ND	ND
3092	DF023502	F	PF Warmouth	ND	ND	ND	ND	ND	0.81 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3093	DF024011	F	PF Lm Bass	ND	ND	ND	ND	ND	0.76 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3093	DF024118	F	WB Sm Buffalo	ND	ND	1.29 D	ND	ND	5.51	ND	ND	ND	ND	ND	0.29 D	ND	ND	ND
3094	DC017201	F	BF Channel Catfish	ND	34.5	106	ND	ND	984 E	83.5	ND	10.4	ND	5.12	ND	ND	19.8	ND
3095	DC038801	F	BF Brown Bullhead	ND	8.64	30.8	ND	ND	322	20.3	ND	ND	ND	ND	ND	ND	8.95	ND
3095	DC038802	F	WB Channel Catfish	11.7	40.6	126	ND	ND	2329 E	64.9	ND	3.69	ND	ND	ND	ND	19.4	ND
3096	DC035001	F	BF Brown Bullhead	ND	5.80	3.70	ND	ND	34.38	6.89	ND	ND	ND	ND	3.01	ND	2.50	ND
3096	DC035002	F	WB Channel Catfish	21.5	65.6	162 E	ND	ND	1189 E	ND	ND	ND	ND	ND	1.88 D	ND	23.0	ND
3097	DC038701	F	BF Brown Bullhead	ND	3.76	5.42	ND	ND	77.72	ND	ND	ND	ND	ND	0.21 D	ND	ND	ND
3097	DC038702	F	WB Carp	ND	ND	7.65	ND	ND	114	ND	5.63	ND	ND	ND	ND	ND	ND	ND
3097	QD071989	L	PF Brown Bullhead	ND	2.44	5.45	ND	ND	70.09	ND	ND	ND	ND	ND	ND	ND	ND	ND
3098	DC038601	F	WB White Sucker	ND	ND	ND	ND	ND	224 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3098	DC038602	F	PF American Eel	7.29	1.95	19.0	ND	2.10 D	551 E	11.7	ND	ND	3.40	ND	ND	ND	2.09 D	ND
3098	QD051288	F	WB White Sucker	ND	ND	ND	ND	ND	284 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3100	DC019701	F	PF White Perch	ND	4.52	11.88	ND	ND	18.81	7.47	ND	ND	ND	ND	ND	ND	ND	ND
3101	DC019901	F	PF Brown Trout	5.53	0.22	12.9	ND	1.18 D	18.8	13.1	ND	ND	5.21	ND	ND	ND	ND	ND
3103	DC036201	F	WB Channel Catfish	ND	26.25	40.69	ND	ND	164.92	7.69	ND	1.13 D	ND	ND	ND	ND	1.96 D	ND
3103	DC036202	F	WB Carp	ND	ND	ND	ND	ND	152	ND	ND	ND	ND	ND	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
3104	DC020001	F	PF Lm Bass	ND	1.8	7.66	ND	ND	15.61	6.37	ND	ND	ND	ND	0.63 D	ND	ND	ND
3104	DC020002	F	WB Carp	7.98	16.0	50.7	ND	ND	81.6 E	29.4	4.45	4.66	ND	ND	ND	ND	14.0	ND
3105	DF025001	F	WB Carp	ND	ND	8.32 E	ND	ND	1448 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3105	DF025002	F	PF Lm Bass	ND	ND	ND	ND	ND	75.9 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3106	DE026801	F	PF Walleye	ND	ND	ND	ND	ND	5.57	ND	ND	ND	ND	ND	ND	ND	ND	ND
3107	DE026901	F	WB Carp	ND	ND	2.08	ND	ND	22.99	1.73 D	ND	ND	ND	ND	ND	ND	ND	ND
3108	DE027001	F	PF Walleye	ND	ND	ND	ND	ND	2.06 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3108	DE027002	F	WB Carp	ND	ND	2.40 D	ND	ND	22.81	ND	ND	ND	ND	ND	ND	ND	ND	ND
3109	DE025001	F	WB Carp	ND	ND	10.2	ND	ND	136 E	ND	ND	ND	ND	ND	5.95	ND	ND	ND
3110	DE022501	F	BF Flathead Catfish	ND	ND	4.36	ND	ND	91.5 E	7.73	ND	ND	ND	ND	ND	ND	ND	ND
3110	DE022502	F	BF Carp	ND	25.8	81.5	ND	29.5	658 E	228	ND	ND	ND	ND	ND	ND	ND	ND
3111	DH015802	F	WB Silver Redhorse	ND	ND	10.8	ND	ND	60.6	8.60	ND	ND	ND	ND	0.47 D	ND	2.19 D	ND
3112	DE022401	F	WB Carp	ND	ND	3.47	ND	ND	53.5	5.15	ND	2.44 D	ND	1.93 D	2.98	ND	ND	ND
3112	DE022402	F	PF Walleye	ND	ND	ND	ND	ND	4.69	ND	ND	ND	ND	ND	ND	ND	ND	ND
3113	DE021101	F	BF Channel Catfish	4.83	5.73	13.9	ND	ND	130 E	11.1	ND	ND	ND	ND	ND	ND	6.92	ND
3113	DE021102	F	BF Carp	9.75	25.3	78.0	ND	ND	1003 E	ND	ND	ND	ND	ND	1.71 D	ND	7.23	ND
3113	QD030789	F	BF Channel Catfish	5.24	5.95	15.0	ND	ND	133 E	10.3	ND	ND	ND	ND	ND	ND	7.40	ND
3114	DE021201	F	BF Carp	11.9	23.7	60.1	ND	25.8	46.6	187 E	ND	ND	ND	ND	ND	ND	ND	ND
3115	DE021301	F	WB Carp	5.6	31.0	48.1	ND	ND	76.6	50.8	ND	ND	ND	ND	ND	ND	7.44	ND
3115	DE021302	F	PF Catfish	9.74	29.1	47.7	ND	10.2	104 E	55.3	ND	ND	ND	ND	34.3	ND	12.8	ND
3115	QD101689	L	WB Carp	ND	28.5	47.4	ND	9.95	73.3	52.1	ND	ND	ND	ND	ND	ND	7.22	ND
3117	DE021501	F	PF Lake Trout	87.2	127	350 E	ND	40.7	1891 E	405 E	ND	14.9	ND	ND	7.06	ND	ND	ND
3118	DE021601	F	PF Walleye	3.90	9.25	22.3	ND	0.84	145	12.2	ND	ND	ND	ND	0.32 D	ND	ND	ND
3118	DE021602	F	WB Carp	ND	14.6	36.6	ND	ND	814 E	17.7	ND	ND	ND	ND	1.88 D	ND	ND	ND
3118	DE021603	F	WB Carp	ND	3.51	9.62	ND	ND	181	ND	ND	ND	0.64 D	ND	0.64 D	ND	ND	ND
3118	QD010689	L	WB Carp	ND	16.2	40.1	ND	ND	895 E	19.5	ND	ND	ND	ND	2.24 D	ND	ND	ND
3118	QD020488	L	PF Walleye	5.00	10.4	28.7	ND	0.97	180	16.0	ND	ND	ND	ND	0.27 D	ND	ND	ND
3120	DE021801	F	WB Carp	ND	ND	7.22	ND	ND	48.71	11.09	ND	ND	ND	ND	ND	ND	ND	ND
3120	DE021802	F	PF Bass	6.65	ND	5.30	ND	ND	35.60	4.36	ND	ND	ND	ND	ND	ND	ND	ND
3122	DE022001	F	WB Carp	ND	10.5	28.7	ND	ND	450 E	ND	ND	ND	ND	ND	3.32	ND	ND	ND
3122	DE022003	F	WB Redhorse Sucker	ND	ND	1.73 D	ND	ND	10.70	ND	ND	ND	ND	ND	ND	ND	ND	ND
3125	DE022301	F	WB Carp	ND	ND	ND	ND	ND	136	54.0	ND	ND	ND	ND	ND	ND	ND	ND
3125	DE022302	F	PF White Bass	ND	ND	2.66	ND	ND	30.6	5.17	ND	ND	ND	ND	0.70 D	ND	0.61 D	ND
3132	DE023201	F	WB Carp	24.82	37.37	106.17	ND	ND	50.71	83.39	3.60	ND	ND	ND	ND	ND	ND	ND
3132	QD010588	L	WB Carp	25.93	48.02	133.24	ND	ND	63.70	69.62	3.07	ND	ND	ND	ND	ND	ND	ND
3134	DE023403	F	WB Carp	ND	ND	3.14	ND	ND	22.2	2.80	ND	ND	ND	ND	ND	ND	ND	ND
3134	DE023405	F	WB Carp	14.5	3.88	12.1	ND	ND	74.4 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3134	DE023406	F	WB Sucker	ND	ND	ND	ND	ND	33.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
3135	DE023501	F	WB Carp	ND	ND	7.41	ND	ND	59.1	8.62	ND	ND	ND	ND	ND	ND	0.80 D	ND
3136	DE023601	F	PF Northern Pike	ND	ND	ND	ND	ND	0.94 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3137	DE023701	F	WB Redhorse Sucker	ND	ND	ND	ND	ND	6.86 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3138	DE023801	F	WB Carp	ND	4.02	11.6	ND	ND	85.6	4.15	ND	ND	ND	ND	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
3140	DE024001	F	PF Walleye	ND	ND	1.82 D	ND	ND	14.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
3140	DE024002	F	WB Carp	ND	ND	5.11	ND	ND	42.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
3141	DE024101	F	PF Northern Pike	24.0	18.6	57.3 E	ND	ND	291 E	50.0	ND	1.51 D	ND	ND	1.16 D	ND	62.7 E	ND
3141	DE024102	F	WB Carp	ND	21.8	63.2	ND	ND	564 E	63.8	ND	ND	ND	ND	2.90	ND	ND	ND
3141	DE024103	F	PF Northern Pike	13.8	9.40	27.9	ND	ND	137 E	29.9	ND	ND	1.72 D	ND	0.34 D	ND	5.23	ND
3143	DE024401	F	Rotten (catf)	ND	ND	ND	ND	ND	29.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
3143	DE024403	F	WB Carp	ND	ND	7.64	ND	ND	34.49	4.04	ND	ND	ND	ND	ND	ND	ND	ND
3144	DE024901	F	WB Carp	ND	ND	9.34	ND	1.86	137	23.9	ND	ND	7.71	ND	ND	ND	ND	ND
3145	DE026601	F	WB N. Redhorse	ND	ND	3.80	ND	ND	17.5	4.22	ND	ND	ND	ND	0.48 D	ND	ND	ND
3146	DE026701	F	WB Carp	ND	ND	15.1	ND	ND	100	16.5	ND	ND	ND	ND	1.52 D	ND	ND	ND
3146	DE026702	F	PF Walleye	ND	ND	ND	ND	ND	1.78 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3147	DC035201	F	WB Carp	ND	ND	32.3	ND	ND	79.2	15.8	ND	ND	ND	ND	ND	ND	7.90	ND
3148	DE027101	F	WB Carp	ND	17.1	58.0	ND	ND	282 E	4.51	ND	ND	ND	ND	ND	ND	ND	ND
3148	DE027103	F	PF Walleye	3.86	7.70	15.7	ND	0.67	85.7	9.37	ND	ND	ND	ND	0.29 D	ND	ND	ND
3149	DC038501	F	WB White Sucker	3.56	ND	26.5	ND	ND	289	15.6	ND	ND	ND	ND	ND	ND	3.99	ND
3150	DA008901	F	WB White Sucker	8.64	ND	7.32	ND	ND	19.1	3.36	ND	ND	ND	ND	ND	ND	6.09	ND
3150	QD120187	L	WB White Sucker	9.45	ND	7.63	ND	ND	18.4	3.43	ND	ND	ND	ND	0.69 D	ND	4.22	ND
3151	DA009101	F	WB White Sucker	ND	ND	7.93	ND	ND	26.2	2.36	ND	0.92 D	ND	ND	ND	ND	ND	ND
3152	DA009201	F	WB White Sucker	ND	ND	ND	ND	ND	5.83	1.75 D	1.63 D	ND	ND	ND	ND	ND	ND	ND
3161	DC019801	F	BF Black Bullhead	6.33	23.03	23.72	ND	8.60	26.38	63.26	ND	ND	2.66	ND	ND	ND	4.35	ND
3161	DC019802	F	WB White Sucker	29.8	47.2	161	ND	36.8	114	450	ND	8.16	ND	ND	ND	ND	13.6	ND
3162	DJ024001	F	WP Starry Flounder	ND	ND	4.39	ND	ND	21.0	ND	ND	ND	ND	ND	0.50 D	ND	ND	ND
3163	DJ024002	F	WP Starry Flounder	ND	ND	1.57 D	ND	ND	4.84	0.28 D	ND	ND	ND	ND	ND	ND	ND	ND
3164	DD015702	F	WB Carp	ND	29.1	104	ND	ND	111	32.2	ND	ND	ND	ND	ND	ND	ND	ND
3165	DD015704	F	WB Redhorse Sucker	ND	16.4	52.3	ND	ND	35.5	4.76	4.73	ND	ND	ND	ND	ND	ND	ND
3166	DD015706	F	WB White Sucker	ND	ND	ND	ND	ND	79.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
3167	DD015708	F	WP Bluegill	ND	ND	1.75 D	ND	ND	15.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
3167	QD062388	L	WP Bluegill	ND	ND	2.64	ND	ND	21.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
3168	DD015711	F	WB Carp	ND	ND	2.80	ND	ND	590 E	ND	ND	ND	ND	ND	4.96	2.04 D	ND	ND
3168	DD015712	F	PF Lm Bass	ND	ND	ND	ND	ND	65.4 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3169	DD015713	F	WB Black Redhorse	ND	ND	6.93	ND	ND	384 E	ND	ND	0.73 D	ND	ND	11.3	ND	ND	ND
3169	QD022789	L	WB Black Redhorse	ND	ND	5.71	ND	ND	335 E	ND	ND	0.89 D	ND	ND	10.8	ND	ND	ND
3170	DD015715	F	WB Spotted Sucker	ND	ND	3.51	ND	ND	104 E	ND	ND	ND	ND	ND	0.21 D	ND	ND	ND
3171	DD015717	F	WB Spotted Sucker	ND	ND	3.53	ND	ND	48.6	ND	ND	ND	ND	ND	0.28 D	ND	ND	ND
3172	DD015719	F	WB Carp	ND	ND	9.08	ND	ND	638 E	ND	ND	ND	8.15	ND	3.26	ND	ND	ND
3172	DD015720	F	PF Lm Bass	ND	ND	ND	ND	ND	32.1	ND	ND	ND	ND	ND	0.36 D	ND	ND	ND
3173	DD015722	F	WB Channel Catfish	ND	9.12	13.4	ND	ND	55.0	ND	ND	ND	ND	ND	ND	ND	ND	10.2
3174	DD015724	F	WB Channel Catfish	ND	ND	3.15	ND	ND	78.5	2.07 D	ND	0.50 D	ND	ND	ND	ND	1.90 D	ND
3175	DD015801	F	WB Channel Catfish	ND	ND	8.60	ND	ND	55.9 E	3.74	ND	ND	ND	ND	73.2 E	ND	ND	ND
3176	DD015803	F	WB Spotted Sucker	ND	ND	3.54	ND	ND	82.2 E	ND	ND	ND	ND	ND	1.47 D	ND	ND	ND
3177	DD015805	F	WB Carp	ND	ND	7.82	ND	ND	33.0	1.95 D	ND	ND	ND	ND	0.30 D	ND	ND	ND
3177	QD100488	L	WB Carp	ND	ND	7.10	ND	ND	30.8	1.89 D	ND	ND	ND	ND	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
3178	DD015807	F	WB North Hogsucker	ND	ND	1.95 D	ND	ND	9.37	ND	ND	ND	ND	ND	ND	ND	ND	ND
3179	DD015809	F	WB Golden Redhorse	2.37 D	3.82	15.4	ND	ND	38.6	6.99	ND	ND	ND	ND	ND	ND	ND	ND
3180	DD015812	F	PF Lm Bass	ND	ND	ND	ND	ND	13.1	ND	ND	ND	ND	ND	1.39 D	ND	ND	ND
3181	DD015814	F	WB Carp	5.35	57.0	242 E	ND	3.55	121 E	57.3	ND	ND	ND	ND	5.89	ND	ND	ND
3182	DD015815	F	PF Rock Bass	ND	ND	1.38 D	ND	ND	3.16	ND	ND	ND	ND	ND	ND	0.65 D	ND	ND
3182	DD015816	F	WB Carp	ND	24.9	94.2 E	ND	ND	87.7 E	46.1	6.53	ND	ND	ND	ND	ND	ND	ND
3183	DD015817	F	WB Carp	ND	27.7	94.9	76.2 E	ND	38.8	13.5	ND	ND	ND	ND	1.89 D	ND	1.39 D	ND
3183	DD015818	F	PF Sauger	ND	ND	2.39 D	ND	ND	2.00 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3184	DD015820	F	PF White Crappie	ND	ND	ND	ND	ND	27.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
3185	DD015821	F	WB Channel Catfish	ND	19.2	60.7	ND	ND	41.9	17.6	ND	ND	ND	ND	6.88	ND	19.2	ND
3186	DD015824	F	WP Southern Flounder	ND	ND	1.01 D	ND	ND	4.70	ND	ND	ND	ND	ND	ND	ND	ND	ND
3187	DD015902	F	WP Summer Flounder	ND	ND	ND	ND	ND	3.75	ND	ND	ND	ND	ND	ND	ND	ND	ND
3188	DD015903	F	WB Carp	ND	35.5	130 E	ND	ND	162 E	100	ND	ND	ND	ND	3.68 J	ND	ND	ND
3188	DD015904	F	PF Lm Bass	ND	ND	1.83 D	ND	ND	2.85	ND	ND	ND	ND	ND	ND	ND	ND	ND
3189	DD015905	F	WB Carp	4.51	14.0	42.6	ND	ND	148 E	29.6	ND	ND	ND	ND	ND	ND	ND	ND
3189	QD092188	L	WB Carp	ND	18.3	55.5	ND	ND	203 E	47.6	ND	ND	ND	ND	ND	ND	ND	2.32 D
3190	DD015907	F	WB Carp	2.60	11.1	29.1	ND	1.83	31.6	8.39	ND	ND	ND	ND	ND	ND	ND	ND
3191	DJ024003	F	WP Starry Flounder	ND	ND	ND	ND	ND	0.89 D	ND	ND	ND	0.27 D	ND	ND	ND	ND	ND
3191	DJ024005	M	Soft Shell Clams	ND	ND	ND	ND	ND	1.04 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3192	DJ024007	F	WP Starry Flounder	ND	ND	ND	ND	ND	1.44 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3192	DJ024009	M	Soft Shell Clams	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3193	DC039001	F	PF Sm Bass	ND	15.4	31.8	ND	ND	201 E	9.76	ND	ND	ND	ND	ND	ND	ND	ND
3195	DH020104	F	WB Carp	ND	5.16	16.4	ND	ND	84.4 E	18.5	ND	ND	46.5	ND	ND	ND	7.08	ND
3195	DH020105	F	WB Chub	ND	10.6	33.4	ND	ND	225 E	27.6	ND	ND	393 E	ND	ND	ND	15.4	ND
3196	DH020108	F	WB Sucker	ND	ND	1.38 D	ND	ND	11.8	1.97 D	ND	ND	ND	ND	ND	ND	2.51	ND
3198	DH020111	F	WB Sucker	2.93	4.36	14.7	ND	ND	35.4	24.7	ND	21.1	2.55	ND	ND	ND	26.5	ND
3199	DH020101	F	WB Carp	ND	6.26	21.3	ND	ND	78.8	33.5	ND	ND	ND	ND	0.39 D	ND	ND	ND
3199	DH020103	F	WB Carp	3.75	6.77	20.2	ND	ND	39.9	11.5	ND	ND	ND	ND	ND	ND	ND	ND
3200	DH020112	F	WB Sucker	ND	ND	10.9	ND	ND	200	79.2	26.5	2.29 D	ND	ND	ND	ND	ND	ND
3203	DJ024018	F	WB Carp	ND	5.41	14.4	ND	ND	333 E	12.4	ND	ND	ND	ND	0.94 D	ND	ND	ND
3205	DJ024024	M	Crayfish (whole)	ND	ND	ND	ND	ND	0.58 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3206	DJ024103	F	WB Sucker	ND	ND	ND	ND	ND	37.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
3208	DJ024109	F	WB Sucker	5.56	ND	13.4	ND	ND	1142 E	88.0	ND	18.4	3.42	ND	ND	ND	ND	ND
3212	DJ024120	F	BF Catfish	ND	ND	4.54	ND	ND	517 E	74.3 E	ND	11.6	ND	ND	ND	ND	2.36 D	ND
3212	DJ024121	F	WB Carp	ND	ND	24.7	ND	ND	3214 E	182	ND	ND	ND	ND	ND	ND	ND	ND
3213	DJ024123	F	WB Squawfish	ND	ND	ND	ND	ND	43.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
3215	DJ023705	F	WB Sucker	ND	ND	33.3	ND	ND	463 E	37.3	ND	9.91	ND	ND	ND	ND	ND	ND
3216	DJ023707	F	PF Squawfish	ND	ND	1.58 D	ND	ND	34.3	ND	ND	ND	0.39 D	ND	0.26 D	ND	ND	ND
3216	DJ023708	F	WB Sucker	ND	ND	ND	ND	ND	80.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
3216	QD022388	L	WB Sucker	ND	ND	ND	ND	ND	89.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
3217	DJ023710	F	WB Sucker	ND	ND	ND	ND	ND	35.8	ND	ND	ND	0.56 D	ND	ND	ND	ND	ND
3218	DJ023711	F	PF Squawfish	ND	ND	2.67	ND	ND	52.0	ND	ND	ND	ND	ND	ND	ND	ND	ND

Episode	SCC	Type	Description	OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
				XENOBIOTICS CONCENTRATIONS, ng/g														
3219	DJ023713	F WB	White Sturgeon	ND	ND	20.1	ND	ND	797 E	ND	ND	ND	ND	ND	0.51 D	ND	ND	ND
3219	DJ023714	F PF	White Sturgeon	ND	ND	1.88 D	ND	ND	136 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3220	DJ023903	F WB	Bridgelip Sucker	ND	ND	ND	ND	ND	107	ND	ND	ND	ND	ND	ND	ND	ND	ND
3221	DJ023905	F WB	Sucker	ND	ND	15.8	ND	ND	590 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3222	DJ023907	F WB	Sucker	ND	ND	4.45	ND	ND	89.2 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3223	DJ023717	F WP	Starry Flounder	ND	ND	ND	ND	ND	1.46 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3224	DJ023715	M	Soft Shell Clams	ND	ND	ND	ND	ND	1.00	ND	ND	ND	ND	ND	ND	ND	ND	ND
3226	DJ023721	M	Pacific Oysters	ND	ND	ND	ND	ND	1.50 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3227	DJ023723	M	Pacific Oysters	ND	ND	ND	ND	ND	7.21	ND	ND	ND	ND	ND	ND	ND	ND	ND
3231	DJ023910	F PF	Sm Bass	ND	ND	ND	ND	ND	63.6 E	5.32	ND	ND	ND	ND	ND	ND	ND	ND
3231	DJ023911	F WB	Carp	ND	ND	23.9	ND	3.62	2493 E	103	ND	3.44	ND	ND	ND	ND	3.44	ND
3234	DH020301	F WP	Squawfish	ND	ND	7.32	ND	ND	44.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
3235	DH020303	F WB	White Sucker	ND	ND	1.81 D	ND	ND	16.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
3236	DH020305	F WB	Largescale Sucker	ND	ND	ND	ND	ND	15.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
3237	DH020308	F WB	Largescale Sucker	ND	ND	ND	ND	ND	13.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
3237	QD080988	F WB	Largescale Sucker	ND	ND	ND	ND	ND	12.7	1.40 D	ND	ND	ND	ND	ND	ND	ND	ND
3238	DJ023918	F WP	Dolly Varden	ND	ND	1.17 D	ND	ND	7.94	ND	ND	ND	ND	ND	ND	ND	ND	ND
3241	DJ023924	F WP	Dolly Varden	ND	ND	4.57	ND	ND	50.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
3245	DJ023624	F WP	Flathead Sole	ND	ND	ND	ND	ND	5.29	ND	ND	ND	ND	ND	ND	ND	ND	ND
3246	DJ022109	F WP	Flathead Sole	ND	ND	ND	ND	ND	1.80 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3248	DJ022502	F WB	Composite Bottom	ND	ND	ND	ND	ND	32.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
3248	QD050588	F WB	not available	ND	ND	ND	ND	ND	31.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
3249	DJ022503	F PF	Brook Trout	ND	ND	ND	ND	ND	1.99 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3249	DJ022504	F WB	Sucker	ND	ND	ND	ND	ND	7.37	ND	ND	ND	ND	ND	ND	ND	ND	ND
3250	DJ022506	F WB	Sucker	ND	ND	6.36	ND	ND	60.6 E	4.00	ND	ND	ND	ND	ND	ND	ND	ND
3252	DJ022509	F PF	Lm Bass	ND	ND	ND	ND	ND	84.0 E	5.50	ND	1.58 D	ND	ND	ND	ND	ND	ND
3252	DJ022510	F WB	Sucker	4.39 J	ND	23.7 J	ND	ND	848 E	56.8 J	ND	24.3 J	ND	ND	ND	ND	7.18 J	ND
3252	QD020989	L PF	Lm Bass	ND	ND	ND	ND	ND	62.1 E	3.77	ND	1.49 D	ND	ND	ND	ND	ND	ND
3252	QD052588	L WB	Sucker	ND	ND	20.3	ND	ND	1061 E	56.1	ND	36.0	ND	ND	ND	ND	ND	ND
3256	DJ022518	F WB	Sucker	ND	ND	3.69	ND	ND	117	10.8	ND	ND	ND	ND	ND	ND	ND	ND
3258	DC038901	F PF	Spot	ND	10.76	19.66	ND	ND	58.31	14.99	ND	ND	ND	ND	1.87 D	ND	ND	ND
3258	DC038902	F WB	Croaker	5.33	5.26	13.9	ND	ND	45.8	16.8	ND	ND	ND	ND	ND	ND	ND	ND
3259	DB000466	F WB	Goldfish	ND	ND	11.6	ND	ND	94.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
3259	DB000473	F PF	Lm Bass	ND	ND	ND	ND	ND	5.37	ND	ND	ND	ND	ND	ND	ND	ND	ND
3259	DB069101	F WB	Sucker	ND	ND	14.1	ND	ND	202	ND	ND	ND	ND	ND	ND	ND	ND	ND
3260	DB000493	F WB	Carp	ND	ND	ND	ND	ND	54.0	6.51	ND	ND	ND	ND	ND	ND	ND	ND
3261	DY026002	F WB	Striped Mullet	ND	44.7	88.2	ND	ND	144 E	41.2	ND	ND	ND	ND	ND	ND	ND	ND
3262	DY026004	F WB	Tilapia Tilapia	ND	5.66	10.9	ND	ND	48.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
3266	DY022701	F PF	Black Crappie	ND	ND	ND	ND	ND	54.8 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3266	DY022702	F WB	Channel Catfish	ND	ND	10.9	ND	ND	2090 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3266	QD012389	L PF	Black Crappie	ND	ND	ND	ND	ND	77.1 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3267	DY022101	F PF	Rainbow Trout	ND	ND	1.71 D	ND	ND	3.90	ND	ND	ND	ND	ND	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
3267	DY022102	F WB	Sacramento Sucker	ND	ND	2.78	ND	ND	10.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
3270	DY022108	F WB	Sucker	ND	ND	4.57	ND	ND	53.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
3271	DY022110	F WB	Sucker	ND	ND	ND	ND	ND	3.10	ND	ND	ND	ND	ND	ND	ND	ND	ND
3272	DY022112	F WB	White Surfperch	14.3	ND	16.0	ND	ND	805 E	260	16.2	ND	ND	ND	ND	ND	ND	ND
3273	DY022113	F WB	Sculpin	ND	ND	1.11 D	ND	ND	11.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
3273	DY022114	F WB	Surf Smelt	ND	ND	ND	ND	ND	4.34	ND	ND	ND	ND	ND	ND	ND	ND	ND
3274	DY022116	F WB	Sculpin	ND	ND	ND	ND	ND	1.65 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3276	DY022119	F WB	Walleye	ND	ND	ND	ND	ND	7.23	ND	ND	ND	ND	ND	ND	ND	ND	ND
3278	DY022124	F WB	Sacramento Sucker	ND	ND	11.6	ND	ND	73.2 E	ND	ND	ND	ND	ND	0.48 D	ND	ND	ND
3281	DY022205	F WB	Sucker	2.14 D	ND	7.21	ND	ND	80.4 E	1.21 D	ND	0.93 D	ND	ND	ND	ND	ND	ND
3282	DY022206	F BF	Flathead Catfish	ND	ND	10.9	ND	ND	2820 E	44.0	13.8	5.13	ND	ND	ND	ND	78.7 E	ND
3282	DY022207	F WB	Carp	ND	ND	36.8	ND	ND	8708 E	188 E	45.4	ND	ND	ND	ND	ND	344 E	ND
3283	DY022209	F WB	Carp	ND	ND	9.27	ND	ND	772 E	ND	ND	ND	ND	ND	ND	ND	61.7	ND
3285	DY022212	F WP	Stingray	19.2	83.2	140 E	ND	ND	10.9	21.9	ND	ND	ND	ND	ND	ND	ND	ND
3285	DY022213	F WB	Diamond Turbot	ND	22.2	43.5	ND	ND	101	ND	ND	ND	ND	ND	ND	ND	ND	ND
3286	DY022215	F WB	Carp	ND	25.7	60.6 E	ND	ND	149 E	ND	ND	ND	ND	ND	ND	ND	5.12 J	ND
3287	DY022216	F WB	Tilapia Zilli	ND	8.94	25.5	ND	ND	45.7	4.12	ND	ND	ND	ND	ND	ND	3.40	ND
3288	DY022217	F PF	Squawfish	ND	ND	3.63	ND	ND	1433 E	174 E	7.39	11.8	0.36 D	0.29 D	ND	3.95	ND	ND
3288	DY022218	F WB	Sucker	ND	ND	16.6	ND	ND	1484 E	161	16.0	ND	ND	ND	ND	3.17	ND	ND
3289	DY022219	F WP	Bocaccio	ND	ND	ND	ND	ND	95.3	5.07	ND	ND	ND	ND	ND	ND	ND	ND
3289	DY022220	F WB	Sculpin	ND	ND	5.16	ND	ND	172 E	6.78	ND	ND	ND	ND	ND	ND	ND	ND
3290	DY022221	F PF	Redear Sunfish	ND	ND	ND	ND	ND	13.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
3290	DY022222	F WB	Blackfish	ND	15.6	37.8	ND	ND	997 E	ND	ND	1.37 D	ND	ND	0.88 D	ND	2.22 D	ND
3294	DJ022111	F WP	True Cod	ND	ND	ND	ND	ND	9.46	ND	ND	ND	ND	ND	ND	ND	ND	ND
3294	DJ022113	M	Mussel	ND	ND	ND	ND	ND	0.38 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3295	DJ022114	F WP	Atlantic Salmon	ND	ND	1.22 D	ND	ND	31.0	ND	ND	ND	ND	ND	ND	ND	ND	ND
3296	DB040101	F WB	White Sucker	ND	ND	6.99	ND	ND	43.6	13.7	ND	ND	ND	ND	0.57 D	ND	ND	ND
3297	DB041501	F WB	Carp	ND	ND	9.59	ND	ND	58.2	19.8	ND	ND	ND	ND	2.78 D	ND	ND	ND
3298	DB041601	F WB	Carp	ND	ND	29.2	ND	ND	202 E	22.4	ND	ND	ND	ND	ND	ND	12.0	ND
3298	DB041604	F PF	Lm Bass	ND	ND	0.83 D	ND	ND	11.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
3299	DB040601	F WB	White Sucker	ND	ND	27.1	ND	ND	141 E	19.3	ND	ND	ND	ND	0.75 D	ND	ND	ND
3299	DB040604	F PF	Lm Bass	ND	ND	3.63	ND	N	21.7	3.69	ND	ND	ND	ND	0.28 D	ND	ND	ND
3299	QD040601	L WB	Sucker	ND	ND	17.6	ND	ND	106 E	14.6	ND	ND	ND	ND	1.29 D	ND	ND	ND
3300	DB040201	F WB	White Sucker	9.83	10.9	26.7	ND	ND	267 E	18.1	ND	1.95 D	ND	ND	37.9	12.8	ND	ND
3300	DB040204	F PF	Sm Bass	ND	ND	4.97	ND	ND	41.4	2.53	ND	ND	ND	ND	7.91	ND	ND	ND
3300	QD021389	L WB	Channel Catfish	ND	ND	3.80	ND	ND	30.9	1.65 D	ND	ND	ND	ND	6.03	ND	ND	ND
3301	DB041101	F WB	Carp	ND	23.3	68.7	ND	ND	1005 E	85.4	ND	6.71	ND	ND	73.7	ND	14.0	ND
3301	DB041104	F PF	Northern Pike	ND	ND	3.03	ND	ND	29.9	2.64	ND	0.36 D	ND	ND	5.92	ND	4.29	ND
3301	QD030989	L PF	Northern Pike	ND	ND	3.69	ND	ND	35.5	3.86	ND	0.57 D	ND	ND	6.87	ND	5.29	ND
3302	DB041901	F WB	White Sucker	7.89	18.7	39.4	ND	1.51	509 E	25.8	ND	ND	ND	ND	65.6	10.6	ND	ND
3302	DB041904	F PF	Lm Bass	ND	ND	2.16 D	ND	ND	19.8	ND	ND	ND	ND	ND	3.63	ND	ND	ND
3303	DB042301	F WB	White Sucker	ND	ND	ND	ND	ND	31.0	ND	ND	ND	ND	ND	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
3303	DB042304	F PF	Sm Bass	ND	ND	ND	ND	ND	1.81 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3303	QD102588	L WB	White Sucker	ND	ND	ND	ND	ND	10.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
3304	DB041001	F PF	Northern Pike	ND	ND	2.04 D	ND	ND	20.7	ND	ND	ND	ND	ND	7.25	ND	ND	ND
3304	DB041004	F WB	White Sucker	ND	ND	8.03	ND	ND	115 E	ND	ND	ND	ND	ND	12.7	ND	ND	ND
3304	QD041004	L WB	White Sucker	ND	6.29	16.1	ND	ND	207 E	12.5	ND	ND	ND	ND	18.1	ND	ND	ND
3305	DB042001	F WB	Channel Catfish	36.1	29.0	77.1	ND	ND	602 E	43.0	ND	ND	ND	ND	135	ND	ND	ND
3305	DB042004	F PF	Sm Bass	ND	ND	ND	ND	ND	9.75	ND	ND	ND	ND	ND	2.25 D	ND	ND	ND
3305	QD110388	L WB	Channel Catfish	43.3	28.9	77.2	ND	5.17	607 E	42.9	ND	ND	ND	ND	137	ND	ND	ND
3306	DB041801	F WB	White Sucker	ND	ND	3.93	ND	ND	42.1	12.9	ND	ND	ND	ND	5.53	ND	ND	ND
3306	DB041804	F PF	Sm Bass	ND	ND	1.53 D	ND	ND	13.5	ND	ND	ND	ND	ND	4.10	ND	ND	ND
3306	QD041801	L WB	White Sucker	ND	ND	5.90	ND	ND	63.4	12.6	ND	ND	ND	ND	8.84	ND	ND	ND
3307	DB042101	F WB	White Sucker	3.02	3.75	5.98	ND	ND	78.8 E	5.55	ND	ND	ND	ND	18.8	ND	ND	ND
3308	DB040001	F PF	Northern Pike	ND	ND	ND	ND	ND	2.49 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3309	DB041301	F WB	White Sucker	ND	ND	ND	ND	ND	15.2	4.05	ND	ND	ND	ND	ND	ND	ND	ND
3310	DC032701	F WB	Bullhead	ND	ND	30.8	ND	ND	100 E	12.4	ND	ND	ND	ND	ND	ND	ND	ND
3310	DC032702	F PF	Walleye	ND	3.20	ND	0.28 D	ND	12.4	4.50	ND	ND	ND	ND	ND	ND	0.34 D	ND
3311	DC032801	F WB	Redhorse Sucker	2.96	4.54	13.2	ND	ND	6.28	3.74	ND	ND	ND	ND	0.57 D	ND	0.93 D	ND
3311	DC032802	F PF	Sm Bass	ND	1.40	3.95	ND	ND	1.51 D	1.18 D	ND	ND	ND	ND	0.18 D	ND	ND	ND
3312	DC033101	F WB	Redhorse Sucker	ND	20.3	53.9	ND	ND	22.6	5.69	ND	ND	ND	ND	1.36 D	ND	2.86	ND
3312	DC033102	F PF	Sm Bass	1.99	4.88	12.83	ND	ND	5.33	4.55	ND	ND	ND	ND	1.14 D	ND	1.23 D	ND
3313	DC033201	F WB	Redhorse Sucker	3.33	6.35	26.4	ND	ND	200 E	7.75	ND	ND	ND	ND	0.83 D	ND	1.12 D	ND
3313	DC033202	F PF	Sm Bass	2.03	0.73	4.16	ND	ND	19.48	ND	ND	ND	ND	ND	ND	ND	ND	ND
3314	DC033301	F WB	Channel Catfish	9.51	50.9	185 E	ND	ND	51.7	19.6	118	ND	ND	ND	ND	ND	17.2	ND
3314	DC033302	F PF	White Bass	1.93 D	7.53	24.1	ND	ND	10.0	4.79	4.54	ND	ND	ND	0.22 D	ND	2.40 D	ND
3315	DC033401	F WB	Carp	2.41 D	ND	22.1	ND	ND	14028 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3315	DC033402	F PF	Lm Bass	ND	ND	2.08 D	ND	ND	915	ND	ND	ND	ND	ND	ND	ND	ND	ND
3316	DC033501	F WB	White Sucker	ND	ND	1.84 D	ND	ND	3.92	ND	ND	ND	ND	ND	ND	ND	ND	ND
3317	DC033601	F WB	White Sucker	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3318	DC033701	F WB	White Sucker	ND	ND	5.56	ND	ND	22.2	5.93	ND	ND	ND	ND	ND	ND	22.3	ND
3319	DB041401	F WP	Winter Flounder	ND	ND	13.5	ND	ND	25.8	14.1	ND	ND	ND	ND	ND	ND	ND	ND
3320	DB041412	F WP	Bluefish	ND	ND	12.3	ND	ND	42.9	4.52	ND	ND	ND	ND	ND	ND	ND	ND
3321	DB040401	F WP	Winter Flounder	2.20 D	6.21	20.6	ND	ND	26.2	12.1	ND	ND	ND	ND	ND	ND	1.45 D	ND
3321	QD100688	L WP	Winter Flounder	2.13 D	5.47	20.9	ND	ND	26.4	9.85	4.24	2.39 D	ND	3.72	3.30	ND	1.61 D	ND
3323	DB041206	F WP	Winter Flounder	2.75	11.9	39.4	ND	ND	29.5	8.18	ND	ND	ND	ND	0.63 D	ND	0.63 D	ND
3324	DB041252	F WP	Bluefish	4.56	4.14	8.77	ND	ND	27.3	9.74	ND	ND	ND	ND	ND	ND	3.38	ND
3325	DB041218	F WP	Bluefish	ND	2.59	7.12	ND	ND	15.9	2.78	ND	ND	ND	ND	ND	ND	1.11 D	ND
3326	DB041208	F WP	Bluefish	3.05	6.11	14.6	ND	ND	29.0	8.90	ND	ND	ND	ND	ND	ND	0.84 D	ND
3327	DB040301	F WP	Bluefish	ND	3.34	8.90	ND	ND	46.2	4.82	ND	ND	ND	ND	ND	ND	2.88	ND
3327	DB040315	F WP	Bluefish	ND	6.82	17.1	ND	ND	43.8	8.41	ND	ND	ND	ND	0.32 D	ND	ND	ND
3328	DD029111	F WB	Carp	ND	6.72	18.2	ND	ND	247 E	ND	ND	ND	ND	ND	5.84	ND	ND	ND
3329	DD016003	F WB	Bowfin	ND	ND	ND	ND	ND	2.07 D	4.25	ND	ND	ND	ND	ND	ND	ND	ND
3330	DD029110	F WB	Spotted Sucker	0.46 D	ND	6.59	ND	ND	15.1	1.84 D	ND	0.53 D	ND	ND	7.00	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
3331	DD016007	F	WB Carp	ND	ND	ND	ND	ND	8.31	ND	ND	ND	ND	ND	2.39 D	ND	ND	ND
3332	DD016009	F	WP Spotted Drum	ND	ND	ND	ND	ND	11.9	ND	ND	ND	ND	ND	ND	ND	ND	ND
3333	DD016012	F	WB Sea Catfish	1.70 D	ND	5.03	ND	ND	51.2	ND	ND	ND	ND	ND	0.27 D	ND	ND	ND
3334	DD016013	F	WB Sea Catfish	5.94	29.8	65.0	ND	ND	254 E	ND	ND	ND	ND	ND	8.17	ND	ND	ND
3335	DD016015	F	WP Spot	ND	ND	ND	ND	ND	6.32	ND	ND	ND	ND	ND	ND	ND	ND	ND
3335	DD029101	F	WP Red Drum	ND	ND	1.45 D	ND	ND	3.37 D	1.76 D	ND	ND	ND	ND	ND	0.51 D	ND	ND
3335	DD029102	F	WB Southern Flounder	ND	ND	1.12 D	ND	ND	6.03	ND	ND	ND	ND	ND	ND	ND	ND	ND
3335	DD029103	F	WP Sheepshead	ND	ND	2.19 D	ND	ND	5.83	ND	ND	ND	ND	ND	ND	ND	ND	ND
3335	QD091588	L	WP Red Drum	ND	ND	ND	ND	ND	2.20 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3336	DD016004	F	WP Black Drum	ND	ND	ND	ND	ND	1.13 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3336	DD016006	F	WP Sheepshead	ND	ND	ND	ND	ND	3.49	ND	ND	ND	ND	ND	ND	ND	ND	ND
3336	DD016017	F	WP Red Drum	ND	ND	ND	ND	ND	1.71 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3336	DD016018	F	PF Spotted Seatrout	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.52 D	0.42 D	ND	ND	ND
3337	DD016019	F	WB Spotted Sucker	ND	ND	ND	ND	ND	18.2	3.46	ND	ND	ND	ND	7.22	ND	ND	ND
3338	DD016022	F	WB Spotted Sucker	ND	9.81	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3339	DD016023	F	WB Carp	5.52	19.6	53.9	ND	ND	95.5 E	30.7	ND	ND	ND	ND	1.41 D	ND	2.67	ND
3340	DD029114	F	WB Channel Catfish	ND	ND	ND	ND	ND	15.9	7.75	ND	ND	ND	ND	10.2	ND	ND	ND
3341	DD016104	F	WB Catfish	4.46	18.0	41.8	ND	ND	288 E	16.7	ND	ND	ND	ND	3.67	ND	ND	ND
3341	QD081788	L	WB Catfish	ND	16.2	38.7	ND	ND	265 E	14.3	ND	ND	ND	ND	3.25	ND	ND	ND
3342	DD016105	F	WB Spotted Sucker	ND	ND	41.0	ND	ND	207 E	22.0	ND	ND	ND	ND	ND	ND	ND	ND
3343	DD016107	F	WB White Sucker	ND	ND	5.42	ND	ND	9.57	ND	ND	ND	ND	ND	ND	ND	ND	ND
3344	DD016109	F	WB Carp	ND	ND	42.0	ND	ND	229 E	36.4	ND	ND	ND	ND	4.55	ND	ND	ND
3345	DD016111	F	WB Redhorse Sucker	ND	ND	14.4	ND	ND	106 E	3.50	ND	ND	ND	ND	ND	ND	ND	ND
3346	DD016113	F	WB Creek Chubsucker	ND	ND	3.62	ND	ND	17.7	ND	3.45	ND	ND	ND	ND	ND	ND	ND
3346	DD016114	F	PF Lm Bass	ND	ND	ND	ND	ND	4.45	ND	ND	ND	ND	ND	ND	ND	ND	ND
3347	DD016115	F	WB Carp	ND	21.2	76.4 E	ND	ND	178 E	ND	ND	ND	ND	ND	1.50 D	ND	0.88 D	ND
3348	DD016117	F	PF White Perch	ND	ND	ND	ND	ND	3.85	0.96 D	ND	ND	ND	ND	ND	ND	ND	ND
3348	DD016118	F	WB Blue Catfish	ND	ND	2.50	ND	ND	13.8	6.06	ND	ND	ND	ND	0.27 D	ND	ND	ND
3349	DD016119	F	WB Carp	1.13 D	7.86	17.0	ND	1.46	242 E	7.18	ND	ND	ND	ND	1.47 D	ND	0.98 D	ND
3350	DD016121	F	WB Carp	ND	29.6	89.3	ND	ND	146 E	47.0	ND	ND	ND	ND	ND	ND	ND	ND
3350	DD016122	F	PF Lm Bass	ND	ND	4.21	ND	ND	6.27	ND	ND	ND	ND	ND	ND	ND	ND	ND
3351	DD016124	F	WB Carp	ND	16.5	ND	ND	ND	559 E	3.30	ND	ND	ND	ND	ND	ND	ND	ND
3352	DF023723	F	PF Crappie	ND	ND	ND	ND	ND	144 D	ND	ND	ND	ND	ND	ND	ND	ND	ND
3352	DF023724	F	WB Carp	ND	ND	6.17	ND	ND	2237 E	ND	ND	ND	ND	ND	6.00	ND	ND	ND
3352	QD022089	L	PF Crappie	ND	ND	ND	ND	ND	118 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3353	DF024121	F	BF Blue Catfish	ND	ND	7.49	ND	ND	1082	ND	ND	0.54 D	ND	ND	4.96	ND	ND	ND
3353	DF024122	F	WB Sm Buffalo	ND	ND	11.3	ND	ND	1980 E	ND	ND	ND	ND	ND	12.0	ND	ND	ND
3354	DY022301	F	WB Carp	ND	14.1	ND	ND	ND	835	2.29	ND	1.73 D	ND	ND	ND	17.9	ND	ND
3354	DY022302	F	PF Lm Bass	ND	ND	0.98 D	ND	ND	14.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
3355	DY022303	F	WB Carp	4.65	24.4	53.9	ND	ND	477 E	22.3	ND	74.3	ND	ND	1.00 D	ND	1.37 D	ND
3355	DY022304	F	PF Lm Bass	ND	ND	2.02 D	ND	ND	22.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
3356	DE030201	F	WB Carp	ND	ND	37.1	ND	ND	382 E	25.6	ND	ND	ND	ND	1.45 D	ND	ND	ND

Episode	SCC	Type	Description	OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
				XENOBIOTICS CONCENTRATIONS, ng/g														
3357	DY022224	F WB	Sacramento Sucker	ND	ND	30.3	ND	ND	207	20.5	ND	1.77 D	ND	ND	ND	ND	1.57 D	ND
3360	DD029117	F WB	Carp	ND	15.9	33.8	ND	ND	409 E	ND	ND	ND	ND	ND	10.2	ND	4.78	ND
3375	DD016305	F WB	Carp	ND	ND	188	ND	ND	447 E	94.1	ND	ND	17.9	ND	14.4	ND	64.5	ND
3375	DD016306	F PF	Lm Bass	0.88	2.21	6.08	ND	ND	2.57	1.82 D	ND	ND	ND	ND	ND	ND	1.15 D	ND
3375	QD071189	L PF	Lm Bass	ND	4.53	21.65	ND	ND	8.22	7.06	ND	0.78 D	ND	ND	ND	ND	2.72	ND
3376	DD016307	F WB	Carp	ND	48.5	157	ND	ND	167 E	41.5	ND	ND	ND	ND	20.9	ND	45.6	ND
3376	DD016308	F PF	Lm Bass	ND	1.57	4.39	ND	ND	4.38	ND	ND	0.46 D	ND	ND	ND	ND	0.90 D	ND
3377	DD016309	F WB	Carp	ND	123	398 E	ND	ND	632 E	ND	ND	ND	ND	ND	35.5	ND	23.6	ND
3377	DD016310	F PF	Lm Bass	1.78	2.58	13.70	ND	ND	11.42	3.37	ND	1.25 D	ND	ND	ND	ND	3.42	ND
3378	DD016311	F WB	Spotted Sucker	ND	5.11	7.18	ND	ND	175 E	6.77	ND	ND	ND	ND	1.73 D	ND	ND	ND
3378	DD029115	F WB	Greyfin Sucker	ND	ND	ND	ND	ND	194 E	ND	ND	ND	ND	ND	10.6	ND	ND	ND
3385	DD016401	F WB	Redhorse Sucker	ND	6.76	19.8	ND	ND	17.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
3385	QD101888	L B	not available	2.77	5.70	25.3	ND	ND	18.6	ND	ND	ND	ND	ND	ND	ND	ND	ND
3395	DD016421	F WB	Redhorse Sucker	4.78	23.7	65.6	ND	ND	174 E	28.7	8.80	ND	ND	ND	1.89 D	ND	ND	ND
3401	DD016509	F WB	Carp	ND	ND	27.2	ND	ND	1157	ND	ND	ND	ND	ND	4.83	ND	ND	ND
3401	DD016510	F PF	Lm Bass	ND	ND	1.72 D	ND	ND	68.0 E	ND	ND	ND	ND	ND	0.21 D	ND	ND	ND
3403	DD016513	F WB	River Carpsucker	14.4	28.0	99.8	ND	ND	32.5	66.7	2.88	ND	ND	ND	ND	ND	ND	ND
3403	DD016514	F PF	Lm Bass	ND	ND	8.36	ND	ND	3.40	3.97	ND	ND	ND	ND	ND	ND	ND	ND
3404	DD016515	F WB	Carp	ND	6.60	19.2	ND	ND	136 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3404	QD016515	F WB	Carp	1.84 D	8.52	22.0	ND	ND	185 E	ND	ND	ND	ND	ND	ND	ND	ND	ND
3409	DB040701	F WB	Carp	26.5	25.2	78.0	ND	ND	374 E	16.9	ND	ND	ND	ND	ND	ND	2.07 D	ND
3409	DB040706	F PF	Lm Bass	ND	ND	3.17	ND	ND	14.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
3411	DB040501	F WB	Redhorse Sucker	ND	ND	ND	ND	ND	17.2	12.3	ND	ND	ND	ND	ND	ND	ND	ND
3412	DB040901	F PF	Sm Bass	ND	3.01	6.58	ND	ND	55.6 E	2.59	ND	ND	ND	ND	14.2	ND	ND	ND
3412	DB040907	F WB	Carp	ND	19.2	47.2	ND	ND	671 E	29.3	ND	ND	ND	ND	85.4	ND	ND	ND
3414	DC036203	F PF	Sm Bass	ND	ND	ND	ND	ND	13.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
3414	DC036204	F BF	Channel Catfish	ND	ND	13.4	ND	ND	54.6	14.7	ND	ND	ND	ND	ND	ND	ND	ND
3415	DC036205	F PF	Sm Bass	ND	ND	ND	ND	ND	8.56	ND	ND	ND	ND	ND	ND	ND	ND	ND
3415	DC036206	F BF	Channel Catfish	ND	3.45	20.7	ND	ND	81.9	11.4	ND	ND	ND	ND	0.77 D	ND	ND	ND
3419	DC036207	F WB	White Sucker	ND	1.63	9.20	ND	ND	29.58	20.02	ND	1.19 D	ND	ND	ND	ND	ND	ND
3419	DC036208	F PF	Freshwater Drum	ND	ND	4.88	ND	ND	9.47	4.78	ND	ND	ND	ND	ND	ND	ND	ND
3420	DC036209	F PF	Greenfish	ND	ND	4.12	ND	ND	10.31	7.59	ND	ND	ND	ND	1.03 D	ND	ND	ND
3420	DC036210	F WB	Carp	ND	ND	11.4	ND	ND	36.9	ND	8.10	ND	ND	ND	ND	ND	ND	ND
3421	DC036211	F PF	White Perch	ND	ND	3.38	ND	ND	2.76	ND	ND	ND	ND	ND	ND	ND	ND	ND
3421	DC036212	F WB	Carp	ND	ND	ND	ND	ND	22.2	13.4	ND	ND	ND	ND	ND	ND	ND	ND
3422	DC036213	F PF	Lm Bass	ND	ND	ND	ND	ND	4.35	ND	ND	ND	ND	ND	ND	ND	ND	ND
3422	DC036214	F WB	Yellow Bullhead	ND	ND	ND	ND	ND	5.91	ND	ND	ND	ND	ND	ND	ND	ND	ND
3423	DC036216	F WB	White Catfish	ND	5.42	10.3	ND	ND	57.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
3424	DC036218	F WB	White Catfish	ND	ND	1.75 D	ND	ND	14.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
3425	DF025005	F WB	Carp	ND	ND	ND	ND	ND	55.1	ND	ND	ND	ND	ND	ND	ND	ND	ND
3426	DB069102	F PF	Bluefish	ND	ND	5.98	ND	ND	27.2	4.13	ND	ND	ND	ND	0.38 D	ND	ND	ND
3427	DB069103	F PF	Bluefish	ND	ND	5.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	OXY	CIS CHLOR	TRANS NON	HEPT NON	HEPT EP	DDE	DIELDRIN	ENDRIN	DICOFOL	ME CHL	PERTHANE	MIREX	NITROFEN	CHLOR PYRIFOS	ISOPROP
3428	DB069104	F	PF Bluefish	ND	ND	11.6	ND	ND	60.2 E	4.47	ND	ND	ND	ND	ND	ND	ND	ND
3429	DB069105	F	PF Weakfish	ND	ND	ND	ND	ND	10.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
3430	DB069106	F	WB White Catfish	ND	ND	7.51	ND	ND	28.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
3431	DB069109	F	WB Red Snapper	ND	ND	5.01	ND	ND	8.33	ND	ND	ND	ND	ND	ND	ND	ND	ND
3433	DB069112	F	WP Flounder	7.09	3.94	8.48	ND	ND	36.8	5.05	ND	ND	ND	ND	0.24 D	ND	0.96 D	ND
3434	DB040801	F	WP Flounder	8.39	5.95	14.2	ND	ND	65.3 E	14.8	ND	ND	ND	ND	ND	0.24 D	ND	ND
3434	QD011889	L	WP Flounder	6.61	7.09	20.1	ND	ND	88.1 E	16.5	ND	ND	ND	ND	ND	ND	ND	ND
3435	DD016602	F	WB Bigmouth Buffalo	ND	44.3	115	ND	28.7	141	236	162	4.53	ND	ND	1.73 D	ND	22.6	ND
3444	DD016603	F	WB Carp	ND	86.8	76.4	ND	15.4	2448 E	115	ND	ND	4.55	ND	2.01	ND	21.7	ND
3444	DD016604	F	PF Channel Catfish	10.	113.0	109 E	ND	10.5	2459 E	58.9	3.22	2.83	0.88 D	ND	3.49	ND	22.3	ND
3444	DD029512	F	PF Lm Bass	1.87	7.66	16.1	ND	1.36	28.7	14.3	ND	ND	ND	ND	ND	ND	1.53 D	ND
3445	DD029513	F	WB Flounder	ND	ND	ND	ND	ND	8.08	1.36 D	ND	ND	ND	ND	ND	ND	ND	ND
3446	DD016605	F	PF Striped Bass	2.62	5.77	30.5	ND	ND	11.1	1.22 D	ND	1.40 D	ND	ND	0.65 D	ND	0.48 D	ND
3446	DD016606	F	WB Carpsucker	2.52	10.3	26.9	ND	ND	12.9	1.70 D	ND	0.43 D	ND	ND	ND	ND	ND	ND
3446	QD091889	F	WB Carpsucker	ND	11.3	27.8	ND	ND	13.2	ND	ND	0.57 D	ND	ND	ND	ND	0.45 D	ND

Key for Xenobiotic Data Table (Units = ng/g) (continued)

Set3		CAS Number
TRIFLUR	= Trifluralin	1582/09/8
PCA	= PentachloroanisoleT1825/21/4	
BIPHENYL		92/52/4
TOT PCBs	= Total Polychlorinated Biphenyls	1336/36/3
1 Cl	= Total Monochlorobiphenyls	27323/18/8
2 Cl	= Total Dichlorobiphenyls	2551/42/9
3 Cl	= Total Trichlorobiphenyls	25323/68/6
4 Cl	= Total Tetrachlorobiphenyls	26914/33/0
5 Cl	= Total Pentachlorobiphenyls	25429/29/2
6 Cl	= Total Hexachlorobiphenyls	26601/64/4
7 Cl	= Total Hectachlorobiphenyls	28655/71/2
8 Cl	= Total Octachlorobiphenyls	31472/83/0
9 Cl	= Total Nonachlorobiphenyls	53742/07/7
10 Cl	= Total Decachlorobiphenyls	2051/24/3
DIPHEN DIS	= Diphenyl Disulfide	882/33/7
HCBUT	= Hexachlorobutadiene	87/68/3

DATA FLAGS

D = Value below limit of quantitation for all Xenobiotics except Mercury and PCBs,
D = 2.5 ng/g
For Polychlorinated Biphenyls

Number of Chlorines	D, ng/g
1-3	1.25
4-6	2.50
7-8	3.75
9-10	6.25

E = Value exceeds highest calibration standard

See Dioxin/Furan Data Table Key for explanation of other codes. The tables include environmental samples (those starting with a sample number of D) and the duplicate samples (those starting with a Q) and confirmation samples (those starting with an S). The number of samples shown on the summary tables in Volume I do not included the duplicate and confirmation samples.

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	1C1	2C1	3C1	4C1	5C1	6C1	7C1	8C1	9C1	10C1	DIPHEN DIS	HCBUT
2015	DF001001	F WB	Carp	ND	7.41	0.57 D	924.75	ND	ND	4.75	129 E	300 E	367 E	124	ND	ND	ND	ND	ND
2016	DF001101	F WB	Sucker	ND	1.82 D	0.34 D	142	ND	ND	ND	20.3	50.3	54.7	16.7	ND	ND	ND	ND	ND
2017	DF001201	F WB	Carp	ND	2.85	ND	6.12	ND	ND	ND	ND	2.27 D	3.85	ND	ND	ND	ND	ND	ND
2018	DF001301	F WB	Sucker	ND	0.15 D	0.45 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2023	DF001403	F WB	Carp	ND	0.33 D	0.13 D	101.67	ND	ND	1.17 D	13.9	24.6	41.0	21.0	ND	ND	ND	ND	ND
2026	DF001702	F WB	Carp	ND	2.31 D	0.59 D	106.85	ND	ND	1.11 D	4.61	33.0	48.1	16.9	3.13	ND	ND	ND	ND
2027	DF001803	F WB	Carp	ND	0.82 D	0.29 D	7.64	ND	ND	ND	ND	ND	7.64	ND	ND	ND	ND	ND	ND
2037	DY000501	F WB	not available	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2056	DE000501	F WB	Carp	ND	13.6	33.4	1295.2	22.4	4.00	24.4	102	209 E	552 E	328 E	53.4	ND	ND	ND	ND
2057	DE000601	F WB	Carp	ND	4.47	1.05 D	1051	ND	ND	95.6	517 E	305 E	108	25.4	ND	ND	ND	ND	ND
2059	DE000801	F WB	Carp	ND	3.59	22.5	15897.	ND	46.3	1196 E	7183 E	4523 E	2169 E	663 E	117	ND	ND	ND	ND
2060	DE000901	F WB	Carp	16.4	3.06	0.56 D	461.7	ND	ND	32.5	147	147	109	26.2	ND	ND	ND	ND	ND
2070	DJ000902	F WB	Longnose Sucker	ND	ND	0.22 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2098	DH001501	F WB	N/A	ND	ND	0.85 D	2.94	ND	ND	ND	ND	ND	2.94	ND	ND	ND	ND	ND	ND
2100	DH001703	F WB	Catfish	ND	14.1	1.08 D	685.64	4.97	1.55	12.1	131	265 E	213 E	54.2	3.82	ND	ND	ND	ND
2105	DH002204	F WB	Carp	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2109	DH002601	F WB	N/A	120	ND	0.46 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2110	DH002710	F WP	Brown Trout	ND	ND	0.17 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2122	DH003904	F WB	White Sucker	ND	ND	0.45 D	19.62	ND	ND	ND	ND	11.1	8.52	ND	ND	ND	ND	ND	ND
2126	DD000302	F WB	Carp	4.62	4.02	0.36 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2133	DD001002	F BF	Blue Catfish	ND	1.70 D	0.13 D	30.74	ND	ND	ND	2.44 D	11.6	16.7	ND	ND	ND	ND	ND	ND
2139	DD001601	F WB	Carp	ND	ND	0.61 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2142	DD001902	F WB	Catfish	ND	ND	0.54 D	273.95	ND	ND	ND	2.85	63.3	139 E	58.3	10.5	ND	ND	ND	ND
2148	DD002501	F WB	Saltwater Catfish	ND	ND	ND	24.66	ND	ND	ND	ND	6.06	18.6	ND	ND	ND	ND	ND	ND
2151	DD002803	F WB	Spotted Sucker	ND	ND	0.64 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2152	DD002903	F WB	Lake Chubsucker	ND	2.01 D	0.66 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2190	DG005101	F WB	Carp	85.5 E	1.23 D	0.15 D	5.04	ND	ND	ND	ND	2.06 D	1.81 D	1.17 D	ND	ND	ND	ND	ND
2190	DG005104	F PF	Bluegill	ND	ND	0.49 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2191	DG005205	F WB	Carp	458 E	5.66	2.07 D	146.37	ND	ND	9.37	41.0	56.3	28.9	10.8	ND	ND	ND	ND	ND
2194	DG005501	F WB	Carp	ND	15.0	2.47 D	297	0.50 D	ND	16.1	54.0	106	94.3	26.1	ND	ND	ND	ND	ND
2199	DG006001	F WB	Carp	ND	6.28	2.63	26.64	ND	ND	ND	ND	6.80	16.0	3.84	ND	ND	ND	ND	ND
2199	DG006004	F PF	Lm Bass	ND	ND	0.57 D	42.63	ND	ND	3.18	19.3	7.88	10.2	2.07 D	ND	ND	ND	ND	ND
2201	DG006201	F WB	Carp	ND	ND	0.86 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2205	DG006601	F WB	Carp	ND	0.57 D	0.40 D	19.06	ND	ND	ND	ND	6.74	10.8	1.52 D	ND	ND	ND	ND	ND
2210	DC005401	F WB	Catfish	ND	19.9	25.9	2313.4	ND	7.58	28.7	229 E	578 E	1017 E	389 E	64.2	ND	ND	ND	ND
2211	DC005503	F WB	Redhorse Sucker	ND	0.87 D	0.89 D	1322.6	ND	ND	3.71	81.0 E	242 E	525 E	346 E	88.8 E	27.1 E	8.99	ND	ND
2212	DC005602	F PF	Sm Bass	ND	0.59 D	0.41 D	856.34	ND	ND	3.14	86.9 E	258 E	340 E	148 E	20.3	ND	ND	ND	ND
2212	DC005605	F WB	White Sucker	ND	12.1	0.24 D	3804.1	ND	10.4	206 E	1032 E	1203 E	1005 E	309 E	38.7	ND	ND	ND	ND
2215	DC005902	F WB	Carp	ND	23.8	10.2	9437	ND	112 E	1689 E	4112 E	2230 E	1063 E	231 E	ND	ND	ND	ND	ND
2216	DC006003	F WB	White Sucker	ND	ND	0.29 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2220	DC006405	F WB	Catfish	ND	1.69 D	0.82 D	31.2	ND	ND	ND	ND	7.50	23.7	ND	ND	ND	ND	ND	ND

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	1C1	2C1	3C1	4C1	5C1	6C1	7C1	8C1	9C1	10C1	DIPHEN DIS	HCBUT
				XENOBIOTICS CONCENTRATIONS, ng/g															
2227	DC007104	F	WB Channel Catfish	ND	ND	0.87 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2228	DC007201	F	PF Longear Sunfish	ND	ND	0.10 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2231	DC007503	F	WB Gizzard Shad	ND	4.27	1.84 D	1228.9	ND	ND	11.4	161	337 E	445 E	171	45.1	42.0	16.4	ND	ND
2246	DJ002302	F	WB Bridgelip Sucker	ND	ND	0.56 D	205.5	ND	ND	ND	21.5	94.4 E	77.7	11.9	ND	ND	ND	ND	ND
2247	DJ002404	F	WP Mountain Whitefish	ND	ND	0.49 D	82.24	ND	ND	ND	4.38	37.0	36.1	4.76	ND	ND	ND	ND	ND
2280	DF005201	F	WB Carp	ND	ND	ND	5.48	ND	ND	ND	ND	ND	5.48	ND	ND	ND	ND	ND	ND
2280	QD121688	L	WB Carp	ND	ND	0.14 D	2.68	ND	ND	ND	ND	ND	2.68	ND	ND	ND	ND	ND	ND
2283	DF005501	F	WB Gray Redhorse	ND	ND	0.51 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2290	DD003403	F	WB Spotted Sucker	ND	37.9	12.5	472.7	ND	ND	11.8	88.7	171	170	31.2	ND	ND	ND	ND	ND
2294	DD003804	F	WB Carp	ND	3.08	0.82 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2297	DD004102	F	WB Carp	ND	ND	0.14 D	132.5	ND	ND	ND	ND	33.1	83.3 E	16.1	ND	ND	ND	ND	ND
2298	DD004203	F	WP Lm Bass	ND	ND	0.22 D	4.52	ND	ND	ND	ND	ND	4.52	ND	ND	ND	ND	ND	ND
2301	DD004504	F	WP Rock Bass	ND	ND	0.15 D	28.24	ND	ND	ND	3.74	11.7	12.8	ND	ND	ND	ND	ND	ND
2302	DD004601	F	WB Quillback Carpsucker	ND	ND	0.22 D	26.21	ND	ND	ND	ND	4.08	16.5	5.63	ND	ND	ND	ND	ND
2304	DD004801	F	WB Carp	ND	31.5	0.72 D	1058.6	ND	ND	5.26	109	390 E	435 E	105	14.4	ND	ND	ND	ND
2309	DD005301	F	WB Carp	ND	6.02	0.16 D	828.56	ND	ND	2.26	69.3 E	262 E	392 E	95.2 E	7.80	ND	ND	ND	ND
2322	DB001301	F	WB White Sucker	ND	0.33 D	0.79 D	93.28	ND	ND	2.11 D	19.9	41.3	25.8	4.17	ND	ND	ND	ND	ND
2326	DB001701	F	WB White Sucker	ND	10.3	1.12 D	18.87	ND	ND	ND	ND	9.16	9.71	ND	ND	ND	ND	ND	ND
2328	DB001904	F	PF Chinook Salmon	ND	0.70 D	1.04 D	3937.2	ND	9.82	63.7 E	557 E	1343 E	1455 E	442 E	66.7	ND	ND	ND	ND
2329	DB002004	F	PF Brown Trout	ND	ND	1.17 D	2109.3	ND	ND	8.76	250 E	679 E	818 E	307 E	46.6	ND	ND	ND	ND
2341	DD006003	F	WB Carpsucker	ND	15.4	ND	1776.9	7.74	6.07	34.5	313 E	507 E	625 E	245 E	38.6	ND	ND	ND	ND
2355	DA001603	F	WB White Sucker	ND	4.14	0.86 D	84.6	ND	ND	ND	18.1	44.5	22.0	ND	ND	ND	ND	ND	ND
2356	DA001702	F	PF Lm Bass	ND	ND	0.32 D	39.62	ND	ND	ND	ND	6.83	23.3	9.49	ND	ND	ND	ND	ND
2375	DA003803	F	WB White Sucker	ND	3.65	0.58 D	796.74	ND	2.04 D	19.8	270 E	323 E	162 E	19.9	ND	ND	ND	ND	ND
2376	DA003903	F	WB White Sucker	ND	11.6	3.59	1110.2	ND	2.23 D	59.5 E	309 E	348 E	274 E	101 E	16.5	ND	ND	ND	ND
2379	DE005404	F	PF Lm Bass	ND	ND	0.16 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2380	DE005501	F	WB Carp	ND	62.3	1.71 D	8471.2	ND	9.31	184 E	2072 E	3142 E	2254 E	672 E	124	13.9	ND	ND	ND
2383	DE005801	F	WB Carp	ND	42.7	0.99 D	8783.0	ND	8.79	323 E	1921 E	2803 E	2636 E	924 E	159	8.28	ND	ND	ND
2385	DE006002	F	WB White Sucker	ND	0.87 D	0.92 D	343.1	ND	ND	ND	32.4	79.2 E	141 E	78.4 E	12.1	ND	ND	ND	ND
2394	DE006901	F	WB Carp	ND	25.8	2.05 D	7319.9	ND	21.5	1105 E	2740 E	2348 E	1048 E	57.4	ND	ND	ND	ND	ND
2394	QD006901	L	WB Carp	ND	30.0	2.38 D	5332.9	ND	36.7	577 E	1576 E	1713 E	1198 E	202	30.2	ND	ND	ND	ND
2394	QD022189	L	WB Carp	ND	25.8	1.13 D	4609.8	ND	30.9	477 E	1262 E	1524 E	1100 E	190	25.9	ND	ND	ND	ND
2397	DE007201	F	WB Sucker	ND	ND	0.24 D	45.37	ND	ND	1.31	4.56	20.2	19.3	ND	ND	ND	ND	ND	ND
2410	DE008501	F	WB Carp	ND	ND	12.4	11119.	ND	17.2	194 E	2789 E	3743 E	2872 E	1306 E	198	ND	ND	ND	ND
2410	DE008504	F	PF Sm Bass	ND	ND	0.19 D	422.66	ND	ND	3.46	45.7	91.4 E	188 E	82.3 E	11.8	ND	ND	ND	ND
2416	DE009101	F	WB Carp	ND	60.4	7.54	3680.9	ND	32.0	260 E	1030 E	1044 E	955 E	327	32.9	ND	ND	ND	ND
2422	DE009702	F	WB Carp	ND	ND	0.36 D	938.69	ND	ND	2.69	81.7	264 E	378 E	174	38.3	ND	ND	ND	ND
2427	DE010202	F	WB Carp	ND	ND	1.42 D	18490.	ND	7.23	1108 E	12055 E	3699 E	1226 E	328	67.3	ND	ND	ND	ND
2429	DE010402	F	WB Carp	ND	1.70 D	1.35 D	29129.	ND	81.7	2458 E	17379 E	6251 E	2147 E	619 E	169	25.0	ND	ND	ND
2430	DE010603	F	WB Redhorse Sucker	ND	ND	0.32 D	10.15	ND	ND	ND	ND	2.15 D	8.00	ND	ND	ND	ND	ND	ND
2430	QD121488	L	F not available	ND	0.56 D	0.40 D	9.27	ND	ND	ND	ND	1.71 D	7.56	ND	ND	ND	ND	ND	ND

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	1C1	2C1	3C1	4C1	5C1	6C1	7C1	8C1	9C1	10C1	DIPHEN DIS	HCBUT
							XENOBIOTICS CONCENTRATIONS, ng/g												
2431	DE010703	F WB	Sucker	ND	ND	0.21 D	29.3	ND	ND	ND	ND	13.0	16.3	ND	ND	ND	ND	ND	ND
2432	DE010710	F WB	Redhorse Sucker	ND	ND	0.64 D	1676.9	ND	ND	6.69	242 E	601 E	638 E	167	22.3	ND	ND	ND	ND
2435	DE011001	F WB	Longnose Sucker	ND	ND	0.27 D	115.18	ND	ND	ND	6.65	35.4	55.1	16.5	1.53	ND	ND	ND	ND
2437	DE011203	F WB	Carp	54.8	9.40	0.82 D	789.5	ND	ND	ND	40.1	303 E	379 E	67.4	ND	ND	ND	ND	ND
2439	DE011401	F WB	Carp	ND	44.5	0.55 D	7977.2	ND	24.2	647 E	2843 E	2745 E	1526 E	192	ND	ND	ND	ND	ND
2439	DE011402	F WP	Sm Bass	ND	46.8	0.18 D	5444	ND	45.0 E	616 E	1970 E	1718 E	982 E	113	ND	ND	ND	ND	ND
2478	DJ003902	F WB	Sucker	ND	ND	0.53 D	40.77	ND	ND	ND	ND	11.1	22.8	6.87	ND	ND	ND	ND	ND
2500	DC010203	F WB	Black Buffalo	ND	0.76	3.50	687.2	ND	ND	ND	ND	42.4	206 E	303 E	124 E	11.8 E	ND	ND	ND
2532	DF019303	F WB	Carp	23.1	3.19	0.54 D	677	ND	ND	16.8	91.9	201 E	254 E	96.5	16.8	ND	ND	ND	ND
2544	DF019202	F WB	Blacktail Redhorse	ND	24.2	0.62 D	24.79	ND	ND	ND	ND	7.99	16.8	ND	ND	ND	ND	ND	ND
2608	DE014504	F WB	Carp	ND	6.02	1.91 D	3955.9	ND	6.28	432 E	2341 E	895 E	258	23.7	ND	ND	ND	ND	ND
2618	DE015401	F WB	Carp	ND	122	ND	8706.3	ND	72.2	1280 E	3140 E	2594 E	1418 E	186	16.1	ND	ND	ND	ND
2618	DE015402	F BF	Carp	ND	33.1	0.20 D	2909.5	ND	27.4	455 E	1162 E	800 E	419 E	46.1	ND	ND	ND	ND	ND
2618	DE015403	F WB	Quillback	ND	240 E	1.37 D	7091.4	ND	45.9 E	1022 E	2514 E	2014 E	1276 E	197	22.5	ND	ND	ND	ND
2651	DB008401	F WB	White Sucker	ND	2.91	0.71 D	480.04	ND	ND	1.34 D	27.0	114 E	220 E	99.6 E	18.1	ND	ND	ND	ND
2653	DB008503	F WB	Carp	ND	1.50 D	0.76 D	1833.1	ND	3.29	82.5 E	461 E	649 E	482 E	118 E	32.0	5.37	ND	ND	ND
2654	DB008601	F WB	Carp	ND	10.88	131.69E	ND	ND	ND	ND	8.83	11.67	ND	ND	ND	ND	20.50	ND	ND
2709	DB005101	F WB	Catfish	ND	4.06	1.19 D	8444.0	ND	5.49	303 E	2918 E	2502 E	1963 E	620 E	121	11.6	ND	ND	ND
2721	DA006502	F WB	Sucker	ND	ND	ND	460.31	ND	4.41	14.9	21.6	86.1 E	209 E	110	14.3	ND	ND	ND	ND
2721	QD011089	L WB	Sucker	ND	ND	ND	384.89	ND	12.6	4.29	10.4	84.9 E	180 E	92.7	ND	ND	ND	ND	ND
2722	DA006601	F WB	Sucker	ND	ND	0.08 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2725	DA006301	F WB	Sucker	ND	ND	2.16 D	321.71	14.8	15.6	1.74 D	28.0	64.4	124 E	64.4	8.77	ND	ND	ND	ND
2748	DY006505	F WB	Sucker	ND	ND	0.24 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2776	DY007101	F WB	Carp	ND	ND	ND	21.2	ND	ND	ND	ND	5.32	12.4	3.48	ND	ND	ND	ND	ND
2776	QD010489	L WB	Carp	ND	ND	ND	32.69	ND	ND	ND	ND	9.01	19.1	4.58	ND	ND	ND	ND	ND
3001	DE019502	F WB	White Sucker	ND	ND	ND	10.2	ND	10.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3022	DA008401	F WB	White Sucker	ND	ND	0.75 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3023	DA008501	F PF	Sm Bass	ND	ND	0.11 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3024	DA008601	F PF	Lm Bass	ND	ND	0.53 D	30.78	ND	ND	ND	4.72	16.9	9.16	ND	ND	ND	ND	ND	ND
3025	DA008701	F WB	White Sucker	ND	16.1 E	.25 D	33.6	ND	ND	ND	ND	18.2 E	15.4 E	ND	ND	ND	ND	ND	ND
3028	DA008801	F PF	Chain Pickerel	ND	ND	0.09 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3034	DG025701	F WB	Carp	1.79 D	2.97	0.72 D	872.12	ND	ND	5.02	85.5 E	235 E	372 E	144 E	30.6	ND	ND	ND	ND
3035	DG025801	F WB	Carp	23.1	3.20	0.65 D	731.85	ND	ND	6.75	87.2	244 E	330 E	63.9	ND	ND	ND	ND	ND
3036	DG025902	F WB	Carp	117 E	6.21	0.64 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3037	DG026001	F WB	Carp	53.0	3.33	0.48 D	38.55	ND	ND	ND	5.85	17.2	15.5	ND	ND	ND	ND	ND	ND
3038	DG026101	F WB	Carp	222	6.49	70.2	148.7	ND	20.7	0.80 D	ND	17.3	94.8	15.1	ND	ND	ND	ND	ND
3039	DG026201	F WB	Carp	ND	3.87	0.36 D	635.4	ND	ND	16.0	103	264 E	199 E	53.4	ND	ND	ND	ND	ND
3040	DG026301	F WB	Carp	28.6 E	1.01 D	0.29 D	58.26	ND	ND	ND	3.16 E	23.7 E	31.4 E	ND	ND	ND	ND	ND	ND
3041	DG026402	F WB	Carp	6.15	0.30 D	0.52 D	8.9	ND	ND	1.54	4.72	2.64	ND	ND	ND	ND	ND	ND	ND
3042	DG026501	F WB	Carp	27.7	3.43	75.6 E	285.12	7.32	20.9	28.6	34.3	111	83	ND	ND	ND	ND	ND	ND
3042	DG026502	F PF	Northern Pike	ND	ND	0.52 D	3.96	ND	ND	ND	ND	ND	3.96	ND	ND	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	1C1	2C1	3C1	4C1	5C1	6C1	7C1	8C1	9C1	10C1	DIPHEN DIS	HCBUT
3042	QD026501	L WB	Carp	25.9	ND	28.9	245.69	ND	ND	8.29	60.8	95.1	65.5	16.0	ND	ND	ND	ND	ND
3043	DG026601	F BF	Flathead Catfish	55.9	0.65 D	0.75 D	153.19	ND	ND	5.29	40.1	68.6	39.2	ND	ND	ND	ND	ND	ND
3044	DG026701	F WB	Carp	82.8 E	4.03	3.37	100.23	ND	ND	ND	12.2	46.5	31.9	9.63	ND	ND	ND	ND	ND
3045	DG026801	F WB	Carp	39.1	3.98	32.8	2220.9	ND	17.1	310 E	1104 E	458 E	239 E	86.5	6.39	ND	ND	ND	ND
3045	DG026802	F BF	Flathead Catfish	5.58	0.60 D	13.2	121.03	ND	ND	8.98	38.0	31.2	33.1	9.75	ND	ND	ND	ND	ND
3046	DG026901	F WB	Bigmouth Buffalo	ND	8.01	1.89 D	31.28	ND	ND	1.43	9.26	9.17	9.87	1.55 D	ND	ND	ND	ND	ND
3047	DG027001	F WB	Carp	ND	ND	1.17 D	192.3	ND	8.10	ND	50.5	26.5	88.1	19.1	ND	ND	ND	ND	ND
3048	DG027101	F WB	Carp	ND	15.4	4.82	2472.5	ND	12.9	263 E	1247 E	687 E	219 E	43.6	ND	ND	ND	ND	ND
3048	DG027102	F PF	White Bass	1.64 D	0.96 D	0.37 D	80.31	ND	ND	1.70 D	23.7	32.0	18.4	4.51	ND	ND	ND	ND	ND
3048	QD012689	L PF	White Bass	1.43 D	0.96 D	0.35 D	75.81	ND	ND	1.69 D	23.2	29.7	17.2	4.02	ND	ND	ND	ND	ND
3048	QD027101	L WB	Carp	ND	9.14	4.69	1125.6	ND	1.96 D	66.4	503 E	347 E	167	40.3	ND	ND	ND	ND	ND
3049	DG027201	F WB	Carp	46.5	10.5	1.10 D	1661.6	ND	ND	26.7	231 E	499 E	652 E	238 E	14.9	ND	ND	ND	ND
3050	DG027301	F WB	Bigmouth Buffalo	27.8	7.31	0.58 D	15.55	ND	ND	ND	ND	5.58	9.97	ND	ND	ND	ND	ND	ND
3060	DF009101	F WB	Flathead Catfish	ND	ND	0.15 D	ND	ND	ND	ND	0.87 D	4.09	ND	ND	ND	ND	4.96	ND	ND
3060	DF009102	F WB	Sm Buffalo	ND	2.51	0.53 D	ND	1.96 D	13.52	1128.1E	1782.7E	937.37E	96.30	ND	ND	ND	3960.0	ND	ND
3060	QD073189	L WB	Flathead Catfish	ND	ND	0.06 D		ND	ND	ND	0.79 D	2.75	0.42 D	ND	ND	ND	3.96	ND	ND
3061	DF019106	F WB	Sucker	ND	7.52	0.43 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3062	DF024024	F WB	Blue Catfish	ND	3.75	0.54 D	282.4	ND	ND	ND	45.0	92.6	124	20.8	ND	ND	ND	ND	ND
3063	DF023301	F WB	Sea Catfish	ND	ND	0.65 D	349.34	ND	ND	2.54	35.9	84.7	177	42.6	6.60	ND	ND	ND	164
3063	DF023302	F PF	Spotted Seatrout	ND	ND	0.69 D	163.17	2.90	ND	4.97	22.4	66.5	55.9	10.5	ND	ND	ND	ND	88.31
3064	DF023305	M	Shellfish	ND	ND	0.38 D	9.04	ND	ND	ND	ND	4.80	4.24	ND	ND	ND	ND	ND	ND
3065	DF023419	F BF	Bigmouth Buffalo	ND	0.48 D	0.38 D	92.73	ND	ND	ND	2.63	22.8	49.0	18.3	ND	ND	ND	ND	ND
3065	DF023420	F WB	Flathead Catfish	ND	1.47 D	0.59 D	180.95	0.45 D	ND	1.70 D	33.0	62.5	69.1	14.2	ND	ND	ND	ND	2.54
3065	QD010788	F BF	Bigmouth Buffalo	ND	0.50 D	0.53 D	133.2	ND	ND	ND	4.60	37.8	71.5	19.3	ND	ND	ND	ND	ND
3066	DF023503	F WB	Catfish	5.23	8.12	0.77 D	190.55	1.12 D	ND	9.33	31.5	45.1	78.5	25.0	ND	ND	ND	ND	1.96 D
3066	DF023504	F PF	Freshwater Drum	ND	0.87 D	0.43 D	ND	ND	ND	ND	2.61 D	14.3	4.25	ND	ND	ND	21.2	ND	ND
3068	DF024001	M	Oysters	ND	3.25	ND	ND	ND	ND	ND	24.1	16.7	ND	ND	ND	ND	40.8	ND	ND
3068	DF024002	F PF	Atl. Croaker	ND	0.73 D	1.25 D	136.39	ND	ND	7.29	46.2	48.7	34.2	ND	ND	ND	ND	ND	0.81 D
3069	DF024007	F WB	Sea Catfish	ND	ND	0.19 D	216.37	ND	ND	ND	3.17	48.7	119 E	45.5	ND	ND	ND	ND	ND
3069	DF024008	F PF	Trout	ND	ND	0.25 D	ND	ND	ND	ND	3.88	6.48	1.12 D	ND	ND	ND	11.48	ND	ND
3069	QD051788	F WB	Sea Catfish	ND	ND	0.24 D	324	ND	ND	ND	11.7	85.7 E	178 E	48.6	ND	ND	ND	ND	ND
3070	DF024009	F WB	Croaker	ND	ND	0.56 D	84	ND	ND	ND	10.3	19.3	39.0	15.4	ND	ND	ND	ND	ND
3070	DF024010	F PF	Sheepshead	ND	ND	0.21 D	ND	ND	ND	1.70 D	50.72	75.12	13.54	ND	ND	ND	141.08	ND	ND
3071	DF024014	F WB	Carp	ND	3.09	3.06	ND	ND	14.34	22.96	76.06	137.27	28.26	ND	ND	ND	278.89	ND	ND
3071	DF024015	F PF	Longnose Gar	ND	8.03	2.25 D	ND	1.65 D	17.47	78.44	219.80E	372.82E	144.40	20.79	ND	ND	859.56	ND	ND
3072	DF024017	F WB	Carp	2.90	0.32 D	0.12 D	102.65	ND	ND	ND	3.05	31.5	55.8 E	12.3	ND	ND	ND	ND	ND
3072	QD070688	L WB	Carp	2.20 D	0.21 D	0.11 D	87.24	ND	ND	ND	6.44	23.6	47.2	10.0	ND	ND	ND	ND	ND
3073	DF019221	F WB	White Sucker	ND	0.28 D	0.79 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3074	DF026017	F PF	Brown Trout	ND	ND	0.20 D	44.76	ND	ND	ND	7.56	18.9	18.3	ND	ND	ND	ND	ND	ND
3076	DF028502	F WB	Channel Catfish	ND	4.47	0.39 D	46	ND	ND	ND	ND	18.4	27.6	ND	ND	ND	ND	ND	ND
3077	DF019114	F WB	Redhorse Sucker	ND	ND	0.13 D	ND	ND	0.10 D	ND	0.24 D	1.09 D	ND	ND	ND	ND	1.43	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	1C1	2C1	3C1	4C1	5C1	6C1	7C1	8C1	9C1	10C1	DIPHEN DIS	HCBUT
3078	DF009118	F	WB Carp	ND	ND	0.65 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3078	DF023815	F	WB Sm Buffalo	ND	11.8	0.98 D	114.89	ND	ND	7.98	31.8	38.4	29.9	6.81	ND	ND	ND	ND	ND
3078	DF023816	F	PF Black Crappie	ND	0.31 D	0.17 D	10.53	ND	ND	ND	ND	3.47	5.77	1.29 D	ND	ND	ND	ND	ND
3079	DF019205	F	PF White Bass	ND	1.27 D	0.25 D	ND	ND	0.75 D	2.94	22.98	24.98	3.56	ND	ND	ND	55.21	ND	ND
3079	DF019206	F	WB Carp	ND	2.77	0.20 D	97.67	ND	ND	ND	5.27	33.0	45.9	13.5	ND	ND	ND	ND	ND
3080	DF023317	F	WB Carp	ND	8.30	3.52	337.71	6.00	18.0	8.81	71.8	103	103	27.1	ND	ND	ND	ND	ND
3080	DF023318	F	PF Lm Bass	ND	ND	0.16 D	ND	ND	ND	ND	2.44 D	6.00	1.90 D	ND	ND	ND	10.34	ND	ND
3081	DF024105	F	PF White Bass	ND	0.38 D	0.34 D	10.45	ND	ND	ND	0.81 D	3.61	6.03	ND	ND	ND	ND	ND	0.27 D
3081	DF024106	F	WB Catfish	ND	3.39	0.51 D	12.3	ND	ND	ND	ND	2.50	9.80	ND	ND	ND	ND	ND	ND
3082	DF023401	F	WB Carp	6.05	3.44	1.11 D	7	ND	ND	ND	ND	7.00	ND	ND	ND	ND	ND	ND	ND
3083	DF023406	F	PF Lm Bass	ND	ND	0.33 D	ND	ND	ND	ND	0.75 D	0.74 D	ND	ND	ND	ND	1.49	ND	ND
3084	DF024109	F	WB Channel Catfish	16.0	5.61	0.75 D	239.7	ND	ND	8.10	43.0	86.7	78.6	23.3	ND	ND	ND	ND	ND
3085	DF024113	F	WB Sea Catfish	ND	ND	8.74	82.2	ND	ND	ND	ND	45.7	36.5	ND	ND	ND	ND	ND	23.0
3085	DF024114	F	PF Black Drum	ND	ND	13.79	ND	ND	2.25 D	13.89	37.96	21.69	1.61 D	ND	ND	ND	77.40	ND	3.53
3086	DF023409	F	WB Catfish	ND	ND	0.61 D	1116.9	1.53	ND	8.94	98.7 E	399 E	455 E	98.8 E	24.4	15.5 E	15.1	ND	2.37 D
3086	DF023410	F	PF Red Drum	ND	ND	2.76	14.63	ND	ND	0.86 D	ND	6.67	7.10	ND	ND	ND	ND	ND	ND
3087	DF023413	F	WB Carp	ND	1.05 D	1.68 D	142.6	ND	9.30	ND	ND	109	ND	24.3	ND	ND	ND	ND	ND
3087	DF023414	F	PF White Crappie	ND	ND	0.08 D	8.95	ND	ND	ND	1.59 D	1.81 D	5.55	ND	ND	ND	ND	ND	ND
3087	DF023415	F	WP Bluegill	ND	1.60 D	0.70 D	86.56	ND	ND	0.86 D	12.8	20.7	36.6	15.6	ND	ND	ND	ND	ND
3088	DF023417	F	WB Channel Catfish	ND	ND	0.45 D	8.86	ND	ND	ND	ND	3.68	5.18	ND	ND	ND	ND	ND	ND
3088	DF023418	F	PF Bluegill	ND	ND	0.23 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3089	DF019209	F	PF White Crappie	ND	ND	0.21 D	6.93	ND	ND	ND	ND	1.68 D	5.25	ND	ND	ND	ND	ND	ND
3089	DF019210	F	WB Carp	ND	1.80 D	0.62 D	67.65	ND	ND	ND	5.15	21.9	29.2	11.4	ND	ND	ND	ND	ND
3090	DF019213	F	PF White Crappie	ND	1.33 D	0.25 D	74.7	ND	ND	ND	12.5	42.1	20.1	ND	ND	ND	ND	ND	ND
3090	DF019214	F	WB Channel Catfish	ND	4.92	0.96 D	1887.5	ND	0.51 D	7.64	135 E	704 E	891 E	134	15.4	ND	ND	ND	ND
3091	DF019217	F	WB River Carpsucker	ND	0.11 D	0.16 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3092	DF023501	F	WB Carp	ND	2.69	1.30 D	67.6	ND	3.70	ND	ND	29.7	30.4	3.80 D	ND	ND	ND	ND	ND
3092	DF023502	F	PF Warmouth	ND	ND	0.14 D	ND	0.07 D	ND	ND	ND	ND	ND	ND	ND	ND	0.07	ND	ND
3093	DF024011	F	PF Lm Bass	ND	ND	0.17 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3093	DF024118	F	WB Sm Buffalo	ND	0.63 D	0.50 D	4.3	ND	ND	ND	ND	1.10 D	3.20	ND	ND	ND	ND	ND	ND
3094	DC017201	F	BF Channel Catfish	ND	8.95	4.70	1961.5	ND	8.26	38.2	321 E	616 E	710 E	223 E	36.6	8.52	ND	ND	ND
3095	DC038801	F	BF Brown Bullhead	ND	3.92	ND	838.8	ND	9.09	30.0 E	171 E	282 E	244 E	86.4 E	10.9	5.41	ND	ND	ND
3095	DC038802	F	WB Channel Catfish	ND	13.2	0.98 D	2974.6	ND	ND	72.1 E	551 E	877 E	1006 E	333 E	67.3	52.1 E	16.1	ND	ND
3096	DC035001	F	BF Brown Bullhead	ND	2.15 D	0.74 D	ND	2.77 D	5.04	24.78	54.76	43.19	11.71	2.62	3.28	1.93	150.08	ND	ND
3096	DC035002	F	WB Channel Catfish	ND	13.8	1.64 D	4412.9	ND	18.0	91.6 E	807 E	1556 E	1432 E	419 E	66.6	22.7	ND	ND	ND
3097	DC038701	F	BF Brown Bullhead	ND	0.45 D	0.17 D	ND	1.07 D	4.35	30.78	68.03	84.38	41.58	14.29	17.30	8.29	270.28	ND	ND
3097	DC038702	F	WB Carp	ND	0.39 D	ND	463.54	ND	3.94	40.1 E	120 E	151 E	119 E	29.5	ND	ND	ND	ND	ND
3097	QD071989	L	PF Brown Bullhead	ND	0.44 D	0.61 D		1.42 D	4.94	30.30	63.02	65.27	28.40	8.48	11.10	3.74	216.67	ND	ND
3098	DC038601	F	WB White Sucker	ND	35.0	ND	809.24	ND	6.87	45.8	379 E	298 E	74.0	5.57	ND	ND	ND	ND	ND
3098	DC038602	F	PF American Eel	ND	17.4	0.98 D	ND	ND	6.26	310	370	123	ND	ND	ND	ND	809	ND	ND
3098	QD051288	F	WB White Sucker	ND	39.9	ND	1042.6	9.71	4.46	62.1	473	400	87.4	6.00	ND	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	1Cl	2Cl	3Cl	4Cl	5Cl	6Cl	7Cl	8Cl	9Cl	10Cl	DIPHEN DIS	HCBUT
3100	DC019701	F	PF White Perch	ND	0.80 D	1.71 D	ND	ND	12.71	66.64	105.01	123.28	43.51	11.16	5.24	2.62	370.17	ND	ND
3101	DC019901	F	PF Brown Trout	ND	0.27 D	1.06 D	ND	ND	ND	129	1076 E	2634 E	1248	61.1	ND	ND	5148	ND	ND
3103	DC036201	F	WB Channel Catfish	ND	0.64 D	0.35 D	ND	ND	2.79	80.75	290.82	542.44	271.36	81.24	85.10	37.51	1392.0	ND	ND
3103	DC036202	F	WB Carp	ND	ND	0.34 D	778.7	ND	ND	ND	77.0	234	384	83.7	ND	ND	ND	ND	ND
3104	DC020001	F	PF Lm Bass	ND	ND	1.19 D	ND	1.11 D	23.64	106.43	95.67	70.04	21.18	2.96	ND	ND	322.27	ND	ND
3104	DC020002	F	WB Carp	ND	4.76	5.07	1783.4	ND	17.5	184 E	655 E	522 E	298 E	96.5	10.4	ND	ND	ND	ND
3105	DF025001	F	WB Carp	ND	ND	0.68 D	8.62	ND	ND	ND	ND	ND	8.62 E	ND	ND	ND	ND	ND	ND
3105	DF025002	F	PF Lm Bass	ND	ND	0.14 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3106	DE026801	F	PF Walleye	ND	0.90 D	0.19 D	231.79	ND	ND	18.5	124 E	62.7 E	22.3	4.29	ND	ND	ND	ND	ND
3107	DE026901	F	WB Carp	ND	3.38	0.32 D	761.4	ND	ND	46.4	298	274	110	28.9	4.10	ND	ND	ND	ND
3108	DE027001	F	PF Walleye	ND	0.33 D	0.20 D	37.85	ND	ND	1.01 D	18.7	12.2	5.94	ND	ND	ND	ND	ND	ND
3108	DE027002	F	WB Carp	ND	4.49	0.61 D	483.7	ND	ND	25.1	164	185	86.5	23.1	ND	ND	ND	ND	ND
3109	DE025001	F	WB Carp	ND	13.4	0.50 D	5863.4	0.90 D	1.35 D	115 E	2833 E	2047 E	630 E	182 E	47.9	6.31	ND	ND	ND
3110	DE022501	F	BF Flathead Catfish	ND	ND	0.20 D	1804.4	ND	ND	6.03	159 E	807 E	710 E	110	12.4	ND	ND	ND	ND
3110	DE022502	F	BF Carp	ND	ND	1.22 D	23809	ND	102	1114 E	9812 E	8766 E	3502 E	453 E	60.0	ND	ND	ND	ND
3111	DH015802	F	WB Silver Redhorse	23.7	1.92	0.60 D	271.46	ND	ND	7.76	66.3	115 E	69.8	12.6	ND	ND	ND	ND	ND
3112	DE022401	F	WB Carp	ND	0.77 D	1.79 D	176.1	ND	ND	ND	20.7	71.8	66.3	17.3	ND	ND	ND	ND	ND
3112	DE022402	F	PF Walleye	ND	ND	0.15 D	12.2	ND	ND	ND	ND	5.30	6.90	ND	ND	ND	ND	ND	ND
3113	DE021101	F	BF Channel Catfish	ND	6.05	0.55 D	537.6	ND	ND	3.50	52.9	132 E	234 E	97.8	17.4	ND	ND	ND	ND
3113	DE021102	F	BF Carp	ND	4.68	1.25 D	2658.9	ND	ND	37.5	418 E	928 E	980 E	268 E	27.4	ND	ND	ND	ND
3113	QD030789	F	BF Channel Catfish	ND	5.26	1.30 D	570.79	ND	ND	3.49	54.8	141 E	249 E	104	18.5	ND	ND	ND	ND
3114	DE021201	F	BF Carp	20.0	1.27 D	0.52 D	74	ND	ND	ND	ND	36.4	37.6	ND	ND	ND	ND	ND	ND
3115	DE021301	F	WB Carp	58.5	3.10	5.63	ND	17.1	104 E	259 E	231 E	220 E	86.1	5.36	ND	ND	923	ND	8.53
3115	DE021302	F	PF Catfish	33.1	5.68	53.8		27.5	34.9	126 E	203 E	227 E	89.7	15.1	ND	ND	758	ND	10.5
3115	QD101689	L	WB Carp	52.5	2.79	3.16		19.5	101 E	250 E	217 E	204 E	91.1	18.9	ND	ND	902	ND	2.99
3117	DE021501	F	PF Lake Trout	ND	ND	ND	5108.2	ND	ND	47.2	951 E	1744 E	1848 E	446 E	72.0	ND	ND	ND	ND
3118	DE021601	F	PF Walleye	ND	ND	0.13 D	515.1	ND	ND	5.10	138	203	142	27.0	ND	ND	ND	ND	ND
3118	DE021602	F	WB Carp	ND	ND	0.68 D	2516.5	ND	ND	11.9	543 E	969 E	753 E	197	42.6	ND	ND	ND	ND
3118	DE021603	F	WB Carp	ND	ND	0.18 D	832.6	ND	ND	24.6	280	302	184	42.0	ND	ND	ND	ND	ND
3118	QD010689	L	WB Carp	ND	ND	0.62 D	2744.8	ND	ND	11.9	569 E	1058 E	839 E	221	45.9	ND	ND	ND	ND
3118	QD020488	L	PF Walleye	ND	0.19 D	0.11 D	666.3	ND	ND	8.10	186	245	161	66.2	ND	ND	ND	ND	ND
3120	DE021801	F	WB Carp	ND	2.32 D	0.90 D	1938.2	ND	3.86	196	829	622	251	36.4	ND	ND	ND	ND	ND
3120	DE021802	F	PF Bass	ND	ND	0.26 D	854.05	ND	1.07 D	63.7	313	293	151	28.2	4.08	ND	ND	ND	ND
3122	DE022001	F	WB Carp	ND	1.37 D	1.23 D	17723.	ND	ND	6.26	1102 E	7377 E	7159 E	1850 E	229	ND	ND	ND	ND
3122	DE022003	F	WB Redhorse Sucker	ND	0.69 D	0.22 D	473.66	0.50 D	2.66	ND	20.5	131	231	78.4	9.60	ND	ND	ND	ND
3125	DE022301	F	WB Carp	ND	11.5	1.80 D	3938.2	ND	ND	100	863 E	1896 E	1005 E	74.2	ND	ND	ND	ND	ND
3125	DE022302	F	PF White Bass	ND	1.26 D	1.37 D	792.96	ND	0.52 D	10.6	127 E	354 E	263 E	34.5	3.34	ND	ND	ND	ND
3132	DE023201	F	WB Carp	5.20	5.21	1.89 D	2804.3	ND	4.40	127	684	787	700	404	97.9	ND	ND	ND	ND
3132	QD010588	L	WB Carp	6.03	7.30	2.13 D	3145.8	ND	8.60	126	792	815	859	469	76.2	ND	ND	ND	ND
3134	DE023403	F	WB Carp	ND	ND	0.38 D	9223.9	ND	3.46	298 E	2744 E	3656 E	2128 E	348 E	46.5	ND	ND	ND	ND
3134	DE023405	F	WB Carp	ND	ND	0.33 D	13587.	ND	ND	56.9 E	2234 E	6093 E	4363 E	771 E	65.5	4.01 D	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	1C1	2C1	3C1	4C1	5C1	6C1	7C1	8C1	9C1	10C1	DIPHEN DIS	HCBUT
3134	DE023406	F	WB Sucker	ND	ND	0.69 D	25240	ND	ND	253	4664 E	11880 E	7582 E	861	ND	ND	ND	ND	ND
3135	DE023501	F	WB Carp	ND	0.92 D	0.72 D	1521.4	ND	1.13 D	36.2	273 E	667 E	478 E	66.1	ND	ND	ND	ND	ND
3136	DE023601	F	PF Northern Pike	ND	ND	0.23 D	8	ND	ND	ND	6.00	2.00 D	ND	ND	ND	ND	ND	ND	ND
3137	DE023701	F	WB Redhorse Sucker	ND	ND	1.01 D	ND	0.62 D	ND	8.82	19.0	8.67	1.08 D	ND	ND	ND	38.2	ND	ND
3138	DE023801	F	WB Carp	ND	0.59 D	0.50 D	13362	ND	79.1 E	1194 E	7801 E	2343 E	1228 E	570 E	133	13.9	ND	ND	ND
3140	DE024001	F	PF Walleye	ND	0.66 D	0.22 D	1467.4	1.41	53.3 E	388 E	660 E	256 E	98.5 E	10.2	ND	ND	ND	ND	ND
3140	DE024002	F	WB Carp	ND	0.95 D	0.15 D	4390.3	0.95 D	83.9 E	788 E	2093 E	1008 E	330 E	69.8	14.6	2.06 D	ND	ND	ND
3141	DE024101	F	PF Northern Pike	ND	7.79	8.43	4117	ND	50.5 E	609 E	1675 E	962 E	622 E	174 E	24.5	ND	ND	ND	ND
3141	DE024102	F	WB Carp	ND	0.86 D	2.14 D	22695.	ND	283 E	3334 E	9981 E	5180 E	2816 E	946 E	150	5.85	ND	ND	ND
3141	DE024103	F	PF Northern Pike	ND	1.90 D	1.47 D	3678.1	ND	93 E	598 E	1639 E	824 E	414 E	102 E	8.1	ND	ND	ND	ND
3143	DE024401	F	Rotten (catf)	ND	ND	3.35	206.97	ND	ND	4.87	64.2	87.0	50.9	ND	ND	ND	ND	ND	ND
3143	DE024403	F	WB Carp	ND	4.05	2.29 D	435.6	ND	2.10	20.6	125	167	108	12.9	ND	ND	ND	ND	ND
3144	DE024901	F	WB Carp	ND	ND	0.93 D	22283.	12.6	267 E	3123 E	13038 E	5317 E	508 E	18.3	ND	ND	ND	ND	ND
3145	DE026601	F	WB N. Redhorse	ND	0.76 D	0.37 D	643.2	ND	ND	26.1	244 E	248 E	99.8	25.3	ND	ND	ND	ND	ND
3146	DE026701	F	WB Carp	ND	23.0	3.58	4137.6	ND	ND	224 E	2149 E	1261 E	397 E	92.2	14.4	ND	ND	ND	ND
3146	DE026702	F	PF Walleye	ND	2.93	0.32 D	68.72	ND	ND	6.71	39.2	17.2	5.61	ND	ND	ND	ND	ND	ND
3147	DC035201	F	WB Carp	ND	6.59	1.91 D	786.1	ND	5.00	53.7 E	131 E	227 E	312 E	57.4	ND	ND	ND	ND	ND
3148	DE027101	F	WB Carp	ND	ND	0.72 D	1824.1	ND	ND	13.7	267 E	792 E	613 E	125	13.4	ND	ND	ND	ND
3148	DE027103	F	PF Walleye	ND	ND	0.10 D	363.9	ND	ND	3.40	82.7	139	115	23.8	ND	ND	ND	ND	ND
3149	DC038501	F	WB White Sucker	ND	12.2	0.03 D	51	ND	ND	3.00	12.5	18.3	17.2	ND	ND	ND	ND	ND	ND
3150	DA008901	F	WB White Sucker	ND	88.8	0.31 D	669.98	3.30	1.08 D	61.8	256	172	96.5	47.4	27.6	4.30 D	ND	ND	ND
3150	QD120187	L	WB White Sucker	ND	87.4	0.32 D	646.07	2.86	0.61 D	58.9	243	169	95.9	47.7	23.5	4.60 D	ND	ND	ND
3151	DA009101	F	WB White Sucker	ND	16.0	0.31 D	5365.9	ND	4.43	403 E	3153 E	1388 E	332 E	68.1	17.4	ND	ND	ND	ND
3152	DA009201	F	WB White Sucker	ND	0.58 D	0.72 D	479.7	ND	ND	ND	19.2	80.6	218	139	22.9	ND	ND	ND	ND
3161	DC019801	F	BF Black Bullhead	ND	23.19	4.29	ND	1.31 D	20.30	52.72	44.07	50.87	24.72	4.11	ND	ND	198.10	ND	ND
3161	DC019802	F	WB White Sucker	ND	72.8	18.3	1697.5	ND	49.5 E	339 E	690 E	311 E	227 E	72.3	8.73	ND	ND	ND	ND
3162	DJ024001	F	WP Starry Flounder	ND	ND	ND	525.54	ND	ND	ND	47.1	178 E	208 E	63.8	22.1	6.54	ND	ND	ND
3163	DJ024002	F	WP Starry Flounder	ND	0.17 D	0.35 D	82.01	ND	ND	ND	5.71	26.6	38.6	11.1	ND	ND	ND	ND	ND
3164	DD015702	F	WB Carp	ND	47.4	2.08	1033.4	ND	ND	ND	299 E	366 E	289 E	74.9	4.53	ND	ND	ND	ND
3165	DD015704	F	WB Redhorse Sucker	ND	7.74	0.65 D	548.2	ND	ND	25.5	237 E	180 E	87.1 E	18.6	ND	ND	ND	ND	ND
3166	DD015706	F	WB White Sucker	ND	1.41 D	0.56 D	11.8	ND	4.50	ND	ND	7.30	ND	ND	ND	ND	ND	ND	ND
3167	DD015708	F	WP Bluegill	ND	1.75 D	0.14 D	3.13	ND	ND	ND	ND	ND	3.13	ND	ND	ND	ND	ND	ND
3167	QD062388	L	WP Bluegill	ND	1.19 D	0.10 D	14.43	ND	1.10 D	ND	ND	5.81	7.52	ND	ND	ND	ND	ND	ND
3168	DD015711	F	WB Carp	ND	2.02 D	0.36 D	354.59	ND	ND	1.97 D	27.0	98.6 E	151 E	58.1	15.1	2.82	ND	ND	ND
3168	DD015712	F	PF Lm Bass	ND	ND	0.10 D	1.36	ND	ND	ND	ND	ND	1.36 D	ND	ND	ND	ND	ND	ND
3169	DD015713	F	WB Black Redhorse	ND	ND	0.47 D	10.1	ND	ND	ND	ND	ND	10.1	ND	ND	ND	ND	ND	ND
3169	QD022789	L	WB Black Redhorse	ND	ND	0.43 D	9.55	ND	ND	ND	ND	ND	9.55	ND	ND	ND	ND	ND	ND
3170	DD015715	F	WB Spotted Sucker	ND	ND	0.48 D	5.14	ND	ND	ND	ND	ND	4.22	0.92 D	ND	ND	ND	ND	ND
3171	DD015717	F	WB Spotted Sucker	ND	0.07 D	0.36 D	2.03	ND	ND	ND	ND	ND	2.03 D	ND	ND	ND	ND	ND	ND
3172	DD015719	F	WB Carp	ND	1.95 D	0.50 D	2803.4	ND	ND	20.9	298 E	1140 E	1021 E	280 E	43.5	ND	ND	ND	ND
3172	DD015720	F	PF Lm Bass	ND	ND	0.23 D	293.6	ND	ND	ND	21.6	110 E	119 E	36.7	6.30	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	1C1	2C1	3C1	4C1	5C1	6C1	7C1	8C1	9C1	10C1	DIPHEN DIS	HCBUT
3173	DD015722	F	WB Channel Catfish	ND	1.83 D	1.50 D	485.52	ND	ND	ND	10.3	97.9	265 E	103	9.32	ND	ND	ND	ND
3174	DD015724	F	WB Channel Catfish	ND	ND	0.40 D	2.54	ND	ND	ND	ND	ND	2.54	ND	ND	ND	ND	ND	ND
3175	DD015801	F	WB Channel Catfish	ND	2.45 D	0.53 D	170.6	ND	1.98	2.67	18.7	42.0	68.9 E	23.9	9.71	2.74 D	ND	ND	ND
3176	DD015803	F	WB Spotted Sucker	ND	ND	0.10 D	21.72	ND	ND	ND	1.67 D	6.65	13.4	ND	ND	ND	ND	ND	ND
3177	DD015805	F	WB Carp	ND	1.73 D	ND	67.37	ND	ND	ND	1.17 D	18.3	33.4	14.5	ND	ND	ND	ND	ND
3177	QD100488	L	WB Carp	ND	1.30 D	0.21 D	63.79	ND	ND	ND	1.09 D	15.5	32.5	14.7	ND	ND	ND	ND	ND
3178	DD015807	F	WB North Hogsucker	ND	0.74 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3179	DD015809	F	WB Golden Redhorse	ND	0.96 D	0.19 D	79.63	ND	ND	ND	3.13	22.5	38.9	15.1	ND	ND	ND	ND	ND
3180	DD015812	F	PF Lm Bass	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3181	DD015814	F	WB Carp	ND	14.1	0.32 D	1367.4	ND	ND	25.4	265 E	450 E	521 E	106 E	ND	ND	ND	ND	ND
3182	DD015815	F	PF Rock Bass	ND	ND	0.31 D	780.42	ND	1.83	26.5 E	322 E	356 E	65.2 E	8.89	ND	ND	ND	ND	ND
3182	DD015816	F	WB Carp	16.7	1.70 D	0.279 D	24118.	0.792 D	100 E	1754 E	9934 E	9872 E	2061 E	346 E	50.4	ND	ND	ND	ND
3183	DD015817	F	WB Carp	ND	2.13 D	1.19 D	1218.0	5.02	4.20	13.8	167 E	393 E	456 E	160 E	19	ND	ND	ND	ND
3183	DD015818	F	PF Sauger	ND	ND	0.52 D	93.79	ND	ND	ND	3.29	25.1	47.9	17.5	ND	ND	ND	ND	ND
3184	DD015820	F	PF White Crappie	ND	ND	0.31 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3185	DD015821	F	WB Channel Catfish	ND	570	4.43	315.1	ND	ND	37.2	138	83.8	56.1	ND	ND	ND	ND	ND	ND
3186	DD015824	F	WP Southern Flounder	ND	ND	0.24 D	19.08	ND	ND	ND	ND	10.1	8.98	ND	ND	ND	ND	ND	ND
3187	DD015902	F	WP Summer Flounder	ND	ND	0.12 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3188	DD015903	F	WB Carp	ND	4.64 J	2.61 J	3309.2	10.4 J	26.5	28.3	443 E	1297 E	1270 E	234 E	ND	ND	ND	ND	ND
3188	DD015904	F	PF Lm Bass	ND	ND	0.57 D	32.02	ND	ND	ND	ND	11.6	16.9	3.52	ND	ND	ND	ND	ND
3189	DD015905	F	WB Carp	ND	2.76	0.99 D	1029.3	ND	ND	19.4	154 E	344 E	396 E	103 E	12.9	ND	ND	ND	ND
3189	QD092188	L	WB Carp	ND	4.48	1.44 D	1389.3	ND	ND	29.4	206 E	484 E	519 E	132 E	18.9	ND	ND	ND	ND
3190	DD015907	F	WB Carp	ND	1.07 D	0.16 D	541.5	ND	ND	3.30	75.4 E	166 E	212 E	74.0	10.8	ND	ND	ND	ND
3191	DJ024003	F	WP Starry Flounder	ND	ND	0.25 D	8	ND	ND	ND	ND	3.30	4.70	ND	ND	ND	ND	ND	ND
3191	DJ024005	M	Soft Shell Clams	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3192	DJ024007	F	WP Starry Flounder	ND	ND	0.21 D	7.27	ND	ND	ND	ND	1.60 D	5.67	ND	ND	ND	ND	ND	ND
3192	DJ024009	M	Soft Shell Clams	ND	ND	0.11 D	5.79	ND	5.79	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3193	DC039001	F	PF Sm Bass	ND	0.91 D	0.35 D	1064.3	ND	ND	20.7	456 E	420 E	140 E	27.6	ND	ND	ND	ND	ND
3195	DH020104	F	WB Carp	ND	0.58 D	3.64	382	ND	ND	15.8	40.4	111 E	164 E	50.8	ND	ND	ND	ND	ND
3195	DH020105	F	WB Chub	ND	1.48 D	4.59	516.9	ND	ND	20.6	73.1	152 E	205 E	66.2	ND	ND	ND	ND	ND
3196	DH020108	F	WB Sucker	ND	ND	0.51 D	31.29	0.93 D	3.62	2.52	3.35	6.72	10.8	3.35 D	ND	ND	ND	ND	ND
3198	DH020111	F	WB Sucker	ND	29.7	8.85	256.6	ND	8.00	23.9	59.6	81.2	66.9	17.0	ND	ND	ND	ND	ND
3199	DH020101	F	WB Carp	20.0	1.11 D	0.27 D	64.24	ND	ND	ND	ND	24.1	30.9	9.24	ND	ND	ND	ND	ND
3199	DH020103	F	WB Carp	ND	ND	0.21 D	23.47	ND	ND	ND	ND	8.36	12.5	2.61	ND	ND	ND	ND	ND
3200	DH020112	F	WB Sucker	163	3.11	1.04 D	80.09	ND	6.50	9.79	7.60	31.5	24.7	ND	ND	ND	ND	ND	ND
3203	DJ024018	F	WB Carp	ND	2.13 D	3.41	2043.1	1.32 D	ND	14.5	208 E	890 E	713 E	186 E	30.3	ND	ND	ND	ND
3205	DJ024024	O	Crayfish (whole)	ND	ND	0.09 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3206	DJ024103	F	WB Sucker	ND	5.24	7.33	1536.9	ND	ND	ND	236 E	702 E	502 E	84.3	12.6	ND	ND	ND	ND
3208	DJ024109	F	WB Sucker	20.5	ND	0.59 D	31.12	ND	ND	ND	ND	7.62	23.5	ND	ND	ND	ND	ND	ND
3212	DJ024120	F	BF Catfish	64.8 E	ND	0.33 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3212	DJ024121	F	WB Carp	153	ND	0.79 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	1C1	2C1	3C1	4C1	5C1	6C1	7C1	8C1	9C1	10C1	DIPHEN DIS	HCBUT
3213	DJ024123	F WB	Squawfish	ND	1.16 D	ND	102.74	ND	ND	0.98 D	9.86	32.9	45.5	13.5	ND	ND	ND	ND	ND
3215	DJ023705	F WB	Sucker	ND	16.9	0.79 D	722.01	ND	ND	4.91	149	381 E	160	27.1	ND	ND	ND	ND	ND
3216	DJ023707	F PF	Squawfish	ND	ND	0.06 D	37.1	ND	ND	ND	ND	12.4	19.8	4.90	ND	ND	ND	ND	ND
3216	DJ023708	F WB	Sucker	ND	0.92 D	0.73 D	127.9	ND	ND	ND	15.0	55.1	57.8	ND	ND	ND	ND	ND	ND
3216	QD022388	L WB	Sucker	ND	1.32 D	1.09 D	173	ND	ND	ND	21.7	71.0	68.6	11.7	ND	ND	ND	ND	ND
3217	DJ023710	F WB	Sucker	ND	2.49 D	0.70 D	8.2	ND	ND	ND	ND	ND	8.20	ND	ND	ND	ND	ND	ND
3218	DJ023711	F PF	Squawfish	ND	ND	0.06 D	55.6	ND	ND	ND	ND	20.8	29.7	5.10	ND	ND	ND	ND	ND
3219	DJ023713	F WB	White Sturgeon	ND	0.18 D	0.31 D	190.84	ND	ND	ND	7.01	57.9 E	95.4 E	29.3	1.23 D	ND	ND	ND	ND
3219	DJ023714	F PF	White Sturgeon	ND	ND	ND	23.91	ND	ND	ND	ND	4.97	15.4	3.54	ND	ND	ND	ND	ND
3220	DJ023903	F WB	Bridgelip Sucker	ND	6.74	ND	174.72	ND	ND	0.72 D	41.3	67.1	55.1	10.5	ND	ND	ND	ND	ND
3221	DJ023905	F WB	Sucker	ND	ND	1.47 D	265	ND	ND	ND	11.7	129	107	17.3	ND	ND	ND	ND	ND
3222	DJ023907	F WB	Sucker	ND	0.68 D	0.20 D	92.36	ND	ND	0.63 D	24.9	37.5	25.3	4.03	ND	ND	ND	ND	ND
3223	DJ023717	F WP	Starry Flounder	ND	ND	ND	10.48	ND	ND	ND	ND	2.50	7.98	ND	ND	ND	ND	ND	ND
3224	DJ023715	M	Soft Shell Clams	ND	ND	1.20 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3226	DJ023721	M	Pacific Oysters	ND	ND	0.24 D	2.51	ND	ND	ND	ND	ND	2.51	ND	ND	ND	ND	ND	ND
3227	DJ023723	M	Pacific Oysters	ND	ND	0.14 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3231	DJ023910	F PF	Sm Bass	ND	ND	0.15 D	2.89	ND	ND	ND	ND	ND	2.89	ND	ND	ND	ND	ND	ND
3231	DJ023911	F WB	Carp	7.16	ND	0.89 D	330.9	ND	ND	ND	13.3	73.5	163	81.1	ND	ND	ND	ND	ND
3234	DH020301	F WP	Squawfish	ND	ND	0.17 D	33.3	ND	ND	ND	ND	14.0	19.3	ND	ND	ND	ND	ND	ND
3235	DH020303	F WB	White Sucker	ND	12.5	0.68 D	22.01	2.34 D	ND	ND	ND	14.9	4.77	ND	ND	ND	ND	ND	ND
3236	DH020305	F WB	Largescale Sucker	ND	8.55	0.42 D	202.12	ND	ND	ND	18.1	105 E	72.5	6.52	ND	ND	ND	ND	ND
3237	DH020308	F WB	Largescale Sucker	ND	0.35 D	0.45 D	741.17	ND	ND	21.2	205 E	311 E	197 E	6.97	ND	ND	ND	ND	ND
3237	QD080988	F WB	Largescale Sucker	ND	0.33 D	0.31 D	683.21	ND	ND	15.9	174 E	291 E	195 E	7.31	ND	ND	ND	ND	ND
3238	DJ023918	F WP	Dolly Varden	ND	ND	0.19 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3241	DJ023924	F WP	Dolly Varden	ND	ND	0.53 D	142.92	ND	ND	ND	2.72	38.1	81.5	20.6	ND	ND	ND	ND	ND
3245	DJ023624	F WP	Flathead Sole	ND	ND	ND	131.56	ND	1.99 D	5.02	10.1	47.3	51.3	15.0	0.85 D	ND	ND	ND	ND
3246	DJ022109	F WP	Flathead Sole	ND	ND	0.18 D	17.4	ND	ND	ND	ND	ND	13.0	4.40	ND	ND	ND	ND	ND
3248	DJ022502	F WB	Composite Bottom	ND	ND	0.83 D	56.3	ND	ND	ND	ND	20.4	21.3	14.6	ND	ND	ND	ND	ND
3248	QD050588	F WB	not available	ND	ND	ND	112.32	ND	1.10	ND	1.62 D	22.1	70.1	17.4	ND	ND	ND	ND	ND
3249	DJ022503	F PF	Brook Trout	ND	ND	0.09 D	1.27	ND	ND	ND	ND	ND	1.27 D	ND	ND	ND	ND	ND	ND
3249	DJ022504	F WB	Sucker	ND	ND	0.25 D	563.8	ND	ND	ND	11.4	60.6 E	265 E	187 E	39.8	ND	ND	ND	ND
3250	DJ022506	F WB	Sucker	ND	ND	0.14 D	313.6	ND	ND	ND	10.9	92.4 E	157 E	53.3	ND	ND	ND	ND	ND
3252	DJ022509	F PF	Lm Bass	ND	ND	0.14 D	1.38	ND	ND	ND	ND	ND	1.38 D	ND	ND	ND	ND	ND	ND
3252	DJ022510	F WB	Sucker	11.4 J	ND	0.28 D	182.29	ND	3.90 J	4.59 J	61.4	71.2	41.2 J	ND	ND	ND	ND	ND	ND
3252	QD020989	L PF	Lm Bass	ND	ND	0.07 D	3.18	ND	ND	ND	ND	0.80 D	2.38 D	ND	ND	ND	ND	ND	ND
3252	QD052588	L WB	Sucker	ND	ND	0.90 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3256	DJ022518	F WB	Sucker	ND	0.22 D	1.03 D	53.9	ND	ND	ND	ND	30.5	23.4	ND	ND	ND	ND	ND	ND
3258	DC038901	F PF	Spot	ND	2.20 D	1.15 D	ND	5.63	8.85	69.26	215.80	251.35	73.36	3.64	ND	ND	629.76	ND	ND
3258	DC038902	F WB	Croaker	ND	1.15 D	0.55 D	486.4	ND	ND	10.6	94.6 E	192 E	155 E	34.2	ND	ND	ND	ND	ND
3259	DB000466	F WB	Goldfish	ND	ND	2.55	82276.	235 E	1132 E	4748 E	42685 E	23843 E	7513 E	1663 E	369 E	81.4 E	7.18	ND	ND
3259	DB000473	F PF	Lm Bass	ND	ND	0.15 D	4539.4	4.41	32.0	241	1929 E	1495 E	660 E	137	41.0	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	1C1	2C1	3C1	4C1	5C1	6C1	7C1	8C1	9C1	10C1	DIPHEN DIS	HCBUT
3259	DB069101	F WB	Sucker	ND	2.05 D	3.15	124192	ND	5072 E	18344 E	60764 E	29578 E	8862 E	1332	177	63.1 E	ND	ND	ND
3260	DB000493	F WB	Carp	ND	ND	0.31 D	293.2	ND	ND	20.3	141	97.9	34.0	ND	ND	ND	ND	ND	ND
3261	DY026002	F WB	Striped Mullet	ND	ND	ND	690.9	ND	35.1	29.9	97.3 E	159 E	266 E	92 E	11.6	ND J	ND	ND	ND
3262	DY026004	F WB	Tilapia Tilapia	ND	ND	ND	6.3	ND	ND	ND	ND	1.78 D	4.52	ND	ND	ND	ND	ND	ND
3266	DY022701	F PF	Black Crappie	ND	ND	0.10 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3266	DY022702	F WB	Channel Catfish	ND	ND	0.69 D	13.6	ND	ND	ND	ND	ND	13.6	ND	ND	ND	ND	ND	ND
3266	QD012389	L PF	Black Crappie	ND	ND	0.12 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3267	DY022101	F PF	Rainbow Trout	ND	ND	0.11 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3267	DY022102	F WB	Sacramento Sucker	ND	0.56 D	ND	3.75	ND	ND	0.94 D	ND	ND	2.81	ND	ND	ND	ND	ND	ND
3270	DY022108	F WB	Sucker	ND	0.62 D	ND	34.9	ND	ND	ND	ND	17.9	17.0	ND	ND	ND	ND	ND	ND
3271	DY022110	F WB	Sucker	ND	ND	1.47 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3272	DY022112	F WB	White Surfperch	ND	ND	1.27 D	126.72	ND	ND	ND	8.35	49.9	59.1	9.37	ND	ND	ND	ND	ND
3273	DY022113	F WB	Sculpin	ND	0.54 D	0.56 D	25.21	ND	ND	ND	ND	12.1	11.7	1.41 D	ND	ND	ND	ND	ND
3273	DY022114	F WB	Surf Smelt	ND	ND	0.16 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3274	DY022116	F WB	Sculpin	ND	ND	0.10 D	76.21	ND	ND	ND	ND	8.31	47.7	20.2	ND	ND	ND	ND	ND
3276	DY022119	F WB	Walleye	ND	ND	0.88 D	ND	ND	ND	0.21 D	1.64 D	2.62	0.51 D	ND	ND	ND	4.98	ND	ND
3278	DY022124	F WB	Sacramento Sucker	ND	ND	ND	121.8	ND	ND	1.05 D	23.2	50.1	42.4	5.05	ND	ND	ND	ND	ND
3281	DY022205	F WB	Sucker	ND	ND	0.45 D	4.47	ND	ND	ND	ND	2.02 D	2.45 D	ND	ND	ND	ND	ND	ND
3282	DY022206	F BF	Flathead Catfish	116 E	ND	0.25 D	6.1	ND	ND	ND	ND	1.51 D	4.59	ND	ND	ND	ND	ND	ND
3282	DY022207	F WB	Carp	43.8	ND	0.57 D	16.79	3.69	ND	ND	ND	5.88	7.22	ND	ND	ND	ND	ND	ND
3283	DY022209	F WB	Carp	19.7	ND	0.95 D	41.42	ND	ND	ND	ND	ND	32.6	8.82	ND	ND	ND	ND	ND
3285	DY022212	F WP	Stingray	ND	ND	0.33 D	725	ND	ND	3.70	78.5	223 E	325 E	76.9	17.9	ND	ND	ND	ND
3285	DY022213	F WB	Diamond Turbot	ND	ND	ND	60.3	ND	ND	ND	ND	30.4	29.9	ND	ND	ND	ND	ND	ND
3286	DY022215	F WB	Carp	ND	0.425 J	0.700 J	199.63	ND	ND	8.00 J	64.0 E	78.7 E	40.1	8.83 J	ND	ND	ND	ND	ND
3287	DY022216	F WB	Tilapia Zilli	ND	4.35	ND	61	ND	ND	2.30 D	11.4	25.1	22.2	ND	ND	ND	ND	ND	ND
3288	DY022217	F PF	Squawfish	ND	ND	0.15 D	59.37	ND	ND	ND	ND	26.3	30.3	2.77	ND	ND	ND	ND	ND
3288	DY022218	F WB	Sucker	ND	ND	1.09 D	70.4	ND	ND	ND	ND	30.8	39.6	ND	ND	ND	ND	ND	ND
3289	DY022219	F WP	Bocaccio	ND	ND	0.45 D	35.5	ND	ND	ND	2.76	13.8	15.8	3.14	ND	ND	ND	ND	ND
3289	DY022220	F WB	Sculpin	ND	ND	1.14 D	90.57	ND	ND	2.08 D	17.6	39.5	29.3	2.09 D	ND	ND	ND	ND	ND
3290	DY022221	F PF	Redear Sunfish	ND	0.31 D	0.19 D	6.62	ND	ND	ND	ND	2.41 D	4.21	ND	ND	ND	ND	ND	ND
3290	DY022222	F WB	Blackfish	ND	64.2	1.55 D	1217.4	ND	ND	12.1	199 E	505 E	412 E	84.7	4.60	ND	ND	ND	ND
3294	DJ022111	F WP	True Cod	ND	ND	0.51 D	16.31	ND	ND	ND	ND	6.86	9.45	ND	ND	ND	ND	ND	ND
3294	DJ022113	M	Mussel	ND	ND	0.30 D	ND	ND	0.06 D	0.32 D	0.88 D	0.86 D	ND	ND	ND	ND	2.12	ND	ND
3295	DJ022114	F WP	Atlantic Salmon	ND	ND	0.07 D	23.84	ND	ND	ND	ND	8.87	13.4	1.57 D	ND	ND	ND	ND	ND
3296	DB040101	F WB	White Sucker	ND	ND	0.17 D	579.63	ND	ND	14.4	109 E	182 E	208 E	60.9	5.33	ND	ND	ND	ND
3297	DB041501	F WB	Carp	ND	ND	0.73 D	754.3	ND	ND	42.3	300 E	260 E	125	27.0	ND	ND	ND	ND	ND
3298	DB041601	F WB	Carp	ND	2.79	1.68 D	3029.4	ND	45.6	243 E	1006 E	791 E	668 E	246 E	29.8	ND	ND	ND	ND
3298	DB041604	F PF	Lm Bass	ND	ND	0.14 D	126.25	ND	ND	1.75 D	24.5	40.7	43.0	16.3	ND	ND	ND	ND	ND
3299	DB040601	F WB	White Sucker	ND	ND	0.60 D	6345.7	4.26	109 E	437 E	2478 E	1901 E	1083 E	311 E	22.5	ND	ND	ND	ND
3299	DB040604	F PF	Lm Bass	ND	ND	0.42 D	610.32	ND	3.62	43.7 E	247 E	193 E	97.5 E	25.5	ND	ND	ND	ND	ND
3299	QD040601	L WB	Sucker	ND	ND	0.24 D	4057	ND	24.0 E	160 E	1246 E	1401 E	887 E	300 E	39.0	ND	ND	ND	ND

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	1C1	2C1	3C1	4C1	5C1	6C1	7C1	8C1	9C1	10C1	DIPHEN DIS	HCBUT
				XENOBIOTICS CONCENTRATIONS, ng/g															
3300	DB040201	F WB	White Sucker	ND	0.28 D	0.13 D	1896.2	ND	ND	16.1	331 E	619 E	622 E	258 E	47.4	2.72	ND	ND	ND
3300	DB040204	F PF	Sm Bass	ND	ND	0.21 D	205.47	ND	ND	ND	32.6	69.6 E	75.1 E	26.3	1.87 D	ND	ND	ND	ND
3300	QD021389	L WB	Channel Catfish	ND	ND	0.25 D	160.97	ND	ND	1.62 D	27.6	53.9 E	56.9 E	19.8	1.15 D	ND	ND	ND	ND
3301	DB041101	F WB	Carp	ND	4.21	12.1	9305.9	ND	46.7	1163 E	4133 E	2256 E	1313 E	357 E	37.2	ND	ND	ND	ND
3301	DB041104	F PF	Northern Pike	ND	1.28 D	0.18 D	399.86	ND	5.16	60.5 E	175 E	98.8 E	50.2	10.2	ND	ND	ND	ND	ND
3301	QD030989	L PF	Northern Pike	ND	1.25 D	0.13 D	474.21	ND	4.81	68.6 E	207 E	119 E	62.5 E	12.3	ND	ND	ND	ND	ND
3302	DB041901	F WB	White Sucker	ND	0.39 D	1.41 D	2561.8	ND	ND	30.8	407 E	926 E	910 E	262 E	26.0	ND	ND	ND	1.84 D
3302	DB041904	F PF	Lm Bass	ND	ND	0.11 D	93.6	ND	ND	ND	14.3	36.0	35.5	7.80	ND	ND	ND	ND	ND
3303	DB042301	F WB	White Sucker	ND	ND	0.30 D	6055.6	ND	17.1	879 E	3813 E	1076 E	206 E	52.0	12.5	ND	ND	ND	ND
3303	DB042304	F PF	Sm Bass	ND	ND	0.20 D	755.66	ND	0.86 D	65.0 E	460 E	183 E	35.9	10.9	ND	ND	ND	ND	ND
3303	QD102588	L WB	White Sucker	ND	ND	0.81 D	8371	ND	31.2	1302 E	5619 E	1106 E	243 E	56.2	13.6	ND	ND	ND	ND
3304	DB041001	F PF	Northern Pike	ND	ND	0.09 D	127.2	ND	ND	ND	29.0	50.8 E	39.2	8.20	ND	ND	ND	ND	ND
3304	DB041004	F WB	White Sucker	ND	1.31 D	0.46 D	4770.9	ND	5.98	162 E	1526 E	1823 E	1013 E	211 E	30.0	ND	ND	ND	ND
3304	QD041004	L WB	White Sucker	ND	2.89	0.64 D	8811.7	ND	16.1	364 E	3170 E	3316 E	1634 E	286 E	25.6	ND	ND	ND	ND
3305	DB042001	F WB	Channel Catfish	ND	ND	1.48 D	5579.1	ND	10.5	116	1154 E	1989 E	1635 E	580 E	94.6	ND	ND	ND	ND
3305	DB042004	F PF	Sm Bass	ND	ND	0.13 D	85.83	ND	ND	1.81	22.9	32.9	22.5	5.72	ND	ND	ND	ND	ND
3305	QD110388	L WB	Channel Catfish	ND	ND	1.56 D	5562.8	ND	6.26	105	1034 E	1925 E	1735 E	621 E	126	10.6	ND	ND	ND
3306	DB041801	F WB	White Sucker	ND	ND	0.43 D	7435.9	2.00 D	146 E	698 E	2477 E	2064 E	1280 E	586 E	168 E	14.9	ND	ND	ND
3306	DB041804	F PF	Sm Bass	ND	ND	0.20 D	3172.0	1.27	52.3 E	279 E	1127 E	835 E	546 E	261 E	65.7	4.76	ND	ND	ND
3306	QD041801	L WB	White Sucker	ND	ND	0.50 D	12027	5.55	249 E	1122 E	4490 E	3174 E	1890 E	880 E	203 E	13.5	ND	ND	ND
3307	DB042101	F WB	White Sucker	ND	ND	0.47 D	488.7	ND	ND	3.20	77.6 E	169 E	172 E	55.4	11.5	ND	ND	ND	ND
3308	DB040001	F PF	Northern Pike	ND	ND	0.12 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3309	DB041301	F WB	White Sucker	ND	1.93 D	0.37 D	62.47	ND	ND	ND	2.97	29.3	27.0	3.20	ND	ND	ND	ND	ND
3310	DC032701	F WB	Bullhead	ND	1.23 D	1.70 D	372.6	ND	ND	19.5	62.8	153 E	107 E	30.3	ND	ND	ND	ND	ND
3310	DC032702	F PF	Walleye	ND	1.08 D	1.63 D	ND	ND	2.40 D	16.9	29.6	40.9	6.27	4.94	ND	ND	101	ND	ND
3311	DC032801	F WB	Redhorse Sucker	ND	1.37 D	0.15 D	285.95	ND	ND	6.55	35.6	81.4 E	110 E	44.3	8.10	ND	ND	ND	0.36 D
3311	DC032802	F PF	Sm Bass	ND	0.37 D	0.24 D	ND	0.63 D	2.75	14.89	25.30	29.97	9.07	0.43 D	ND	ND	83.22	ND	ND
3312	DC033101	F WB	Redhorse Sucker	ND	3.08	0.33 D	741.47	ND	ND	6.77	95.6 E	254 E	279 E	93.7 E	12.4	ND	ND	ND	ND
3312	DC033102	F PF	Sm Bass	ND	1.59 D	1.24 D	ND	1.88 D	5.94	42.23	84.98	86.64	25.04	2.52	ND	ND	250.37	ND	ND
3313	DC033201	F WB	Redhorse Sucker	ND	0.62 D	0.21 D	326.61	ND	ND	0.61 D	20.8	116 E	141 E	37.8	10.4	ND	ND	ND	ND
3313	DC033202	F PF	Sm Bass	ND	ND	0.42 D	ND	ND	0.23 D	1.46 D	10.01	11.49	1.79 D	ND	ND	ND	24.98	ND	ND
3314	DC033301	F WB	Channel Catfish	ND	7.77	1.95 D	3201.5	ND	ND	37.3	403 E	1261 E	1229 E	260 E	11.2	ND	ND	ND	ND
3314	DC033302	F PF	White Bass	ND	0.78 D	0.76 D	502.84	ND	ND	4.39	62.2 E	188 E	192 E	51.9	4.35	ND	ND	ND	ND
3315	DC033401	F WB	Carp	ND	ND	0.18 D	65.9	ND	ND	ND	11.6	27.1	22.2	5.00	ND	ND	ND	ND	ND
3315	DC033402	F PF	Lm Bass	ND	ND	0.19 D	4.58	ND	ND	ND	ND	1.11 D	3.47	ND	ND	ND	ND	ND	ND
3316	DC033501	F WB	White Sucker	ND	0.46 D	0.32 D	1783.5	ND	ND	0.59 D	187 E	1019 E	517 E	52.7	7.25	ND	ND	ND	ND
3317	DC033601	F WB	White Sucker	ND	1.78 D	4.93	6.38	ND	ND	ND	ND	6.38	ND	ND	ND	ND	ND	ND	ND
3318	DC033701	F WB	White Sucker	ND	1.50 D	1.53 D	51.5	ND	ND	ND	3.68	27.3	16.9	3.62	ND	ND	ND	ND	ND
3319	DB041401	F WP	Winter Flounder	ND	ND	0.14 D	129.77	ND	ND	3.92	28.0	53.2 E	38.9	5.75	ND	ND	ND	ND	ND
3320	DB041412	F WP	Bluefish	ND	ND	0.70 D	279.73	ND	ND	2.73	43.2	111 E	108 E	14.8	ND	ND	ND	ND	ND
3321	DB040401	F WP	Winter Flounder	ND	1.29 D	0.35 D	312	ND	ND	12.0	64.8 E	113 E	100 E	22.2	ND	ND	ND	ND	ND

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	1C1	2C1	3C1	4C1	5C1	6C1	7C1	8C1	9C1	10C1	DIPHEN DIS	HCBUT
3321	QD100688	L WP	Winter Flounder	ND	1.23 D	1.28 D	303.09	ND	ND	7.79	62.8	113	98.5	21.0	ND	ND	ND	3.24	ND
3323	DB041206	F WP	Winter Flounder	ND	0.45 D	0.07 D	227.46	ND	ND	3.96	45.4	88.3 E	77.6 E	12.2	ND	ND	ND	ND	ND
3324	DB041252	F WP	Bluefish	ND	1.67 D	0.48 D	411.27	ND	ND	9.77	95.5 E	157 E	122 E	27.0	ND	ND	ND	ND	ND
3325	DB041218	F WP	Bluefish	ND	ND	0.08 D	184.81	ND	ND	2.74	38.8	84.0 E	51.9 E	7.37	ND	ND	ND	ND	ND
3326	DB041208	F WP	Bluefish	ND	0.35 D	0.19 D	394.07	ND	ND	6.77	87.2 E	161 E	121 E	18.1	ND	ND	ND	ND	ND
3327	DB040301	F WP	Bluefish	ND	ND	2.37 D	628.2	ND	ND	17.6	164 E	221 E	186 E	39.6	ND	ND	ND	ND	ND
3327	DB040315	F WP	Bluefish	ND		0.65 D	1319.2	ND	3.01			395 E						ND	
3328	DD029111	F WB	Carp	ND	0.67 D	0.67 D	3305.7	ND	ND	27.0	368 E	987 E	1371 E	439 E	96.3	17.4 E	ND	ND	ND
3329	DD016003	F WB	Bowfin	ND	8.11	1.05 D	26.3	ND	ND	1.50	6.41	8.73	9.66	ND	ND	ND	ND	ND	ND
3330	DD029110	F WB	Spotted Sucker	ND	2.32 D	1.47 D	144.85	ND	0.91 D	5.37	22.9	54.1 E	52.3 E	8.71	0.56 D	ND	ND	ND	ND
3331	DD016007	F WB	Carp	ND	0.85 D	0.28 D	144.3	ND	ND	ND	ND	30.5	90.0	23.8	ND	ND	ND	ND	ND
3332	DD016009	F WP	Spotted Drum	ND	ND	0.85 D	12.3	ND	ND	ND	ND	ND	12.3	ND	ND	ND	ND	ND	ND
3333	DD016012	F WB	Sea Catfish	ND	ND	0.39 D	89.57	ND	ND	ND	1.77 D	25.9	51.1	10.8	ND	ND	ND	ND	ND
3334	DD016013	F WB	Sea Catfish	ND	1.34 D	2.95	1066.2	ND	ND	17.6	14.7	138 E	539 E	259 E	79.1	18.8	ND	2.50	ND
3335	DD016015	F WP	Spot	ND	11.7	1.83 D	344	ND	ND	ND	ND	22.0	45.8	64.8	150	61.4 E	ND	ND	ND
3335	DD029101	F WP	Red Drum	ND	1.99 D	0.67 D	522.57	ND	ND	1.88 D	14.4	22.2	39.9	97.7 E	239 E	102 E	5.49 D	ND	ND
3335	DD029102	F WB	Southern Flounder	ND	1.17 D	0.43 D	ND	ND	0.24 D	0.83 D	4.62	6.91	5.46	17.14	13.78	ND	48.98	ND	ND
3335	DD029103	F WP	Sheepshead	ND	1.79 D	0.74 D	1327.8	ND	ND	ND	8.60	27.4	70.3	186 E	593 E	413 E	29.5	ND	ND
3335	QD091588	L WP	Red Drum	ND	0.82 D	0.31 D	611.44	ND	ND	ND	2.31 D	7.73	28.5	98.7 E	327 E	135 E	12.2	ND	ND
3336	DD016004	F WP	Black Drum	ND	ND	3.34	37.48	ND	ND	2.12 D	ND	ND	3.88	4.28	14.4	12.8 E	ND	ND	ND
3336	DD016006	F WP	Sheepshead	ND	ND	0.42 D	210.12	ND	ND	ND	3.22	28.6	82.5 E	51.1	30.0	14.7	ND	ND	ND
3336	DD016017	F WP	Red Drum	ND	ND	0.06 D	15.67	ND	ND	ND	ND	4.49	9.29	1.89 D	ND	ND	ND	ND	ND
3336	DD016018	F PF	Spotted Seatrout	ND	ND	0.23 D	15.25	ND	ND	ND	ND	2.55	8.81	3.89	ND	ND	ND	ND	ND
3337	DD016019	F WB	Spotted Sucker	ND	1.45 D	1.33 D	41.47	ND	19.0	ND	2.98	5.27	12.6	1.62 D	ND	ND	ND	ND	ND
3338	DD016022	F WB	Spotted Sucker	ND	121 E	2.30 D	429.25	3.35	ND	20.8	90.7 E	142 E	146 E	26.4	ND	ND	ND	ND	ND
3339	DD016023	F WB	Carp	5.07	0.65 D	0.87 D	757.1	ND	ND	13.9	173 E	218 E	251 E	88.8	12.4	ND	ND	ND	ND
3340	DD029114	F WB	Channel Catfish	ND	8.90	2.38 D	78.66	ND	ND	11.6	9.07	24.6	25.9	7.49	ND	ND	ND	ND	ND
3341	DD016104	F WB	Catfish	ND	0.75 D	5.30	456.67	ND	ND	ND	51.2	114 E	227 E	57.8	6.67	ND	ND	ND	ND
3341	QD081788	L WB	Catfish	ND	0.56 D	5.89	439.4	ND	ND	ND	47.3	104 E	219 E	58.5	10.6	ND	ND	ND	ND
3342	DD016105	F WB	Spotted Sucker	ND	12.5	13.8	132.8	ND	ND	ND	21.2	64.2	47.4	ND	ND	ND	ND	ND	ND
3343	DD016107	F WB	White Sucker	ND	8.28	0.93 D	16.27	ND	ND	ND	ND	12.0	4.27	ND	ND	ND	ND	ND	ND
3344	DD016109	F WB	Carp	ND	4.67	1.01 D	1444.2	ND	ND	7.19	71.6 E	249 E	322 E	192 E	379 E	207 E	16.5	ND	ND
3345	DD016111	F WB	Redhorse Sucker	ND	1.49 D	0.80 D	86.21	ND	ND	ND	3.11	23.2	44.4	15.5	ND	ND	ND	ND	ND
3346	DD016113	F WB	Creek Chubsucker	ND	1.44 D	ND	74.65	1.44 D	20.2	17.8	10.6	16.3	8.31	ND	ND	ND	ND	ND	ND
3346	DD016114	F PF	Lm Bass	ND	ND	0.10 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3347	DD016115	F WB	Carp	ND	14.7	2.16 D	1935.0	ND	2.38	32.2 E	335 E	503 E	720 E	289 E	53.5	ND	ND	ND	ND
3348	DD016117	F PF	White Perch	ND	0.28 D	0.26 D	6.04	ND	ND	ND	ND	2.56	3.48	ND	ND	ND	ND	ND	ND
3348	DD016118	F WB	Blue Catfish	ND	2.82	0.18 D	38.22	ND	0.81 D	2.63	7.41	8.07	14.2	5.10	ND	ND	ND	ND	ND
3349	DD016119	F WB	Carp	ND	6.17	0.10 D	550.06	ND	ND	2.56	53.3	162 E	229 E	86.0 E	17.2	ND	ND	ND	ND
3350	DD016121	F WB	Carp	ND	ND	0.51 D	569.5	ND	ND	ND	67.0	226 E	240 E	36.5	ND	ND	ND	ND	ND
3350	DD016122	F PF	Lm Bass	ND	ND	0.24 D	34.07	ND	ND	ND	ND	10.8	18.3	4.97	ND	ND	ND	ND	ND

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	XENOBIOTICS CONCENTRATIONS, ng/g 1C1	2C1	3C1	4C1	5C1	6C1	7C1	8C1	9C1	10C1	DIPHEN DIS	HCBUT
3351	DD016124	F	WB Carp	ND	3.18	0.68 D	1085.9	ND	ND	2.35 D	92.0	353 E	456 E	158	24.6	ND	ND	ND	ND
3352	DF023723	F	PF Crappie	ND	ND	0.14 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3352	DF023724	F	WB Carp	10.9	0.29 D	0.19 D	22.79	ND	1.17 D	9.26	2.42 D	2.45 D	7.49	ND	ND	ND	ND	ND	ND
3352	QD022089	L	PF Crappie	ND	ND	0.18 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3353	DF024121	F	BF Blue Catfish	40.3	0.57 D	0.34 D	20.31	ND	ND	ND	1.08 D	6.22	10.1	2.91 D	ND	ND	ND	ND	ND
3353	DF024122	F	WB Sm Buffalo	3.21	5.95	0.29 D	213	ND	ND	10.8	49.7	61.5	74.2	16.8	ND	ND	ND	ND	ND
3354	DY022301	F	WB Carp	ND	18.4	0.96 D	311.95	ND	ND	6.15	65.3	148 E	79.5	13.0	ND	ND	ND	ND	ND
3354	DY022302	F	PF Lm Bass	ND	ND	0.14 D	25.58	ND	ND	ND	2.22 D	11.2	10.8	1.36 D	ND	ND	ND	ND	ND
3355	DY022303	F	WB Carp	26.8	21.9	2.37 D	1950.8	ND	0.60 D	11.2	184	600 E	811 E	296 E	48.0	ND	ND	ND	ND
3355	DY022304	F	PF Lm Bass	ND	ND	0.13 D	113.45	ND	ND	ND	2.35 D	20.9	59.7 E	29.2	1.30 D	ND	ND	ND	ND
3356	DE030201	F	WB Carp	ND	2.00 D	26.4	6819.1	3.55	24.9	786 E	3517 E	1649 E	618 E	190 E	30.7	ND	ND	ND	ND
3357	DY022224	F	WB Sacramento Sucker	ND	1.43 D	0.35 D	270.38	ND	ND	2.48 D	41.6	98.1	105	23.2	ND	ND	ND	ND	ND
3360	DD029117	F	WB Carp	ND	16.4	0.51 D	843.09	ND	ND	4.09	99.0 E	253 E	364 E	123	ND	ND	ND	ND	ND
3375	DD016305	F	WB Carp	ND	647 E	15.3	2847	ND	45.0	258 E	799 E	756 E	747 E	242	ND	ND	ND	ND	ND
3375	DD016306	F	PF Lm Bass	ND	9.70	0.52 D	ND	1.14 D	6.53	22.10	14.28	12.24	4.09	ND	ND	ND	60.38	ND	ND
3375	QD071189	L	PF Lm Bass	ND	14.45	0.80 D		3.06	16.43	63.15	44.09	37.55	11.64	0.68 D	ND	ND	176.60	ND	ND
3376	DD016307	F	WB Carp	ND	334 E	1.92 D	3030.2	ND	5.77	73.1	508 E	820 E	1042 E	490 E	91.4	ND	ND	ND	ND
3376	DD016308	F	PF Lm Bass	ND	3.09	0.15 D	ND	0.15 D	1.44 D	9.73	13.19	19.64	8.14	1.48 D	ND	ND	53.77	ND	ND
3377	DD016309	F	WB Carp	ND	187	0.90 D	6061.5	7.56	ND	104 E	1171 E	1960 E	2102 E	717 E	ND	ND	ND	ND	ND
3377	DD016310	F	PF Lm Bass	ND	1.82 D	0.30 D	ND	0.87 D	3.32	31.83	36.23	45.39	17.18	3.13	ND	ND	137.95	ND	ND
3378	DD016311	F	WB Spotted Sucker	ND	1.56 D	0.52 D	89	ND	ND	5.70	16.3	30.1	36.9	ND	ND	ND	ND	ND	ND
3378	DD029115	F	WB Greyfin Sucker	ND	4.14	4.20	4.51	ND	ND	4.51	ND	ND	ND	ND	ND	ND	ND	ND	ND
3385	DD016401	F	WB Redhorse Sucker	ND	1.21 D	0.60 D	182.43	ND	ND	0.63 D	16.2	77.3 E	76.5 E	11.8	ND	ND	ND	ND	ND
3385	QD101888	L	B not available	ND	1.09 D	0.44 D	191.77	ND	ND	ND	21.2	91.8 E	72.2 E	6.57	ND	ND	ND	ND	ND
3395	DD016421	F	WB Redhorse Sucker	ND	9.59	0.73 D	926.8	ND	ND	ND	29.8	206 E	457 E	194 E	40.0	ND	ND	ND	ND
3401	DD016509	F	WB Carp	3.40	1.67 D	1.07 D	1116.6	ND	ND	2.63	66.9	293 E	643 E	106	5.10	ND	ND	ND	ND
3401	DD016510	F	PF Lm Bass	ND	ND	0.17 D	29.66	ND	ND	ND	ND	8.10	19.4	2.16 D	ND	ND	ND	ND	ND
3403	DD016513	F	WB River Carpsucker	ND	27.7	70.6 E	2528.3	0.86 D	ND	2.76	156 E	436 E	1515 E	335 E	76.3	6.38	ND	ND	ND
3403	DD016514	F	PF Lm Bass	ND	0.36 D	3.66	80.05	ND	ND	1.71	6.27	21.7	44.3	6.07	ND	ND	ND	ND	ND
3404	DD016515	F	WB Carp	ND	ND	ND	332.4	ND	ND	ND	26.4	81.0 E	142 E	68.2	14.8	ND	ND	ND	ND
3404	QD016515	F	WB Carp	ND	0.59 D	0.29 D	414.96	ND	ND	1.16 D	28.9	100 E	188 E	80.8	16.1	ND	ND	ND	ND
3409	DB040701	F	WB Carp	ND	1.92 D	0.60 D	14323.	ND	8.00	1007 E	6345 E	4164 E	2225 E	475 E	87.3	12.0	ND	ND	ND
3409	DB040706	F	PF Lm Bass	ND	ND	0.73 D	256.9	ND	ND	20.3	118 E	83.4 E	35.2	ND	ND	ND	ND	ND	ND
3411	DB040501	F	WB Redhorse Sucker	ND	13.0	12.0	207.43	ND	ND	14.0	62.5	75.3	46.0	9.63	ND	ND	ND	ND	ND
3412	DB040901	F	PF Sm Bass	ND	ND	0.22 D	274.7	ND	ND	ND	35.2	92.3 E	109 E	38.2	ND	ND	ND	ND	ND
3412	DB040907	F	WB Carp	ND	ND	0.69 D	3784.9	ND	ND	3.90	440 E	1397 E	1340 E	495 E	84.3	9.19	15.6	ND	ND
3414	DC036203	F	PF Sm Bass	ND	ND	0.23 D	142.6	ND	ND	ND	11.8	43.2	64.4 E	23.2	ND	ND	ND	ND	ND
3414	DC036204	F	BF Channel Catfish	ND	2.99	2.70 D	586.95	ND	ND	3.85	79.5	158 E	257 E	88.6	ND	ND	ND	ND	ND
3415	DC036205	F	PF Sm Bass	ND	ND	0.60 D	102.21	ND	ND	ND	2.20 D	22.1	51.4 E	25.1	1.41 D	ND	ND	ND	ND
3415	DC036206	F	BF Channel Catfish	ND	2.53	1.62 D	1075.2	ND	ND	17.8	99.3	230 E	480 E	219 E	29.1	ND	ND	ND	ND
3419	DC036207	F	WB White Sucker	ND	ND	0.15 D		0.41 D	3.12	41.50	116.65E	117.16E	26.24	ND	ND	ND	305.08	ND	ND

D-5-50

XENOBIOTICS CONCENTRATIONS, ng/g

Episode	SCC	Type	Description	TRIFLUR	PCA	BIPHENYL	TOT PCBS	1C1	2C1	3C1	4C1	5C1	6C1	7C1	8C1	9C1	10C1	DIPHEN DIS	HCBUT
3419	DC036208	F PF	Freshwater Drum	ND	ND	ND		ND	ND	5.59	29.62	57.09	22.05	3.57	ND	ND	117.92	ND	ND
3420	DC036209	F PF	Greenfish	ND	10.54	0.13 D	ND	2.98	3.22	13.60	22.73	28.39	9.91	0.49 D	ND	ND	82.35	ND	ND
3420	DC036210	F WB	Carp	ND	12.3	0.95 D	324.5	ND	5.51	7.99	65.0	132 E	93.3 E	20.7	ND	ND	ND	ND	ND
3421	DC036211	F PF	White Perch	ND	0.33 D	0.21 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3421	DC036212	F WB	Carp	ND	2.92	2.22 D	33.99	ND	6.92	2.47 D	ND	24.6	ND	ND	ND	ND	ND	ND	ND
3422	DC036213	F PF	Lm Bass	ND	0.77 D	0.23 D	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3422	DC036214	F WB	Yellow Bullhead	ND	ND	0.09 D	13.25	ND	ND	ND	ND	1.97 D	8.99	2.29 D	ND	ND	ND	ND	ND
3423	DC036216	F WB	White Catfish	ND	1.10 D	0.14 D	693.9	ND	ND	ND	17.0	111 E	334 E	196 E	35.9	ND	ND	ND	ND
3424	DC036218	F WB	White Catfish	ND	0.86 D	0.13 D	76.4	ND	ND	ND	ND	15.4	43.8	17.2	ND	ND	ND	ND	ND
3425	DF025005	F WB	Carp	ND	ND	0.44 D	187.07	ND	ND	1.37 D	17.4	33.8	77.2	44.9	12.4	ND	ND	ND	ND
3426	DB069102	F PF	Bluefish	ND	0.16 D	0.28 D	213.34	ND	ND	5.64	49.6	81.2 E	66.5 E	10.4	ND	ND	ND	ND	ND
3427	DB069103	F PF	Bluefish	ND	ND	0.31 D	193.05	ND	ND	6.93	47.4	73.0 E	57.2	8.52	ND	ND	ND	ND	ND
3428	DB069104	F PF	Bluefish	ND	ND	ND	697.8	ND	ND	24.4	246 E	260 E	151 E	16.4	ND	ND	ND	ND	ND
3429	DB069105	F PF	Weakfish	ND	ND	0.12 D	16.98	ND	ND	ND	ND	5.08	11.9	ND	ND	ND	ND	ND	ND
3430	DB069106	F WB	White Catfish	ND	ND	0.17 D	107.04	ND	ND	ND	5.74	28.7	54.8 E	17.8	ND	ND	ND	ND	ND
3431	DB069109	F WB	Red Snapper	ND	ND	0.34 D	231.18	ND	ND	2.05 D	18.6	48.8	118 E	40.8	2.93	ND	ND	ND	ND
3433	DB069112	F WP	Flounder	ND	0.57 D	0.60 D	485.37	ND	ND	20.9	122 E	154 E	139 E	42.3	7.17	ND	ND	ND	ND
3434	DB040801	F WP	Flounder	ND	0.56 D	0.41 D	759.78	ND	ND	39.3 E	240 E	264 E	175 E	39.6	1.88 D	ND	ND	ND	ND
3434	QD011889	L WP	Flounder	ND	0.77 D	0.98 D	1082.5	ND	0.93 D	83.5 E	410 E	357 E	203 E	28.1	ND	ND	ND	ND	ND
3435	DD016602	F WB	Bigmouth Buffalo	ND	85.1	7.11	593.6	ND	10.1	73.0	172	189	129	20.5	ND	ND	ND	ND	ND
3444	DD016603	F WB	Carp	21.8	57.3	2.77 D	ND	4.51	22.6	112	127	102	36.2	ND	ND	ND	406	ND	ND
3444	DD016604	F PF	Channel Catfish	13.4	48.6	1.44 D		3.89	15.5	107 E	152 E	130 E	49.5	8.78	ND	ND	470	ND	ND
3444	DD029512	F PF	Lm Bass	ND	1.82 D	0.22 D		ND	5.74	39.1	50.2	39.7	10.4	0.82 D	ND	ND	146	ND	ND
3445	DD029513	F WB	Flounder	ND	ND	0.44 D		ND	0.37 D	1.33 D	5.53	8.60	2.74 D	ND	ND	ND	18.6	ND	ND
3446	DD016605	F PF	Striped Bass	ND	ND	0.28 D		0.90 D	3.16	54.9 E	219 E	306 E	124 E	27.6	3.79 D	0.97 D	741	ND	ND
3446	DD016606	F WB	Carpsucker	ND	ND	0.62 D		ND	4.36	68.8 E	146 E	192 E	74.5 E	15.5	2.51 D	0.80 D	504	ND	ND
3446	QD091889	F WB	Carpsucker	ND	1.19 D	0.47 D		ND	18.5	70.1 E	150 E	195 E	74.9 E	17.1	2.72 E	0.90 D	529	ND	ND

APPENDIX D-6

Information on Fish Samples

Key to Table D-6

FISH AND SHELLFISH SAMPLE INFORMATION

Episode Number
SCC Number

Dioxin/Furan Analyses
- Percent Lipid Content
- Wet Weight of Sample Analyzed

Xenobiotic Analyses
- Percent Lipid Content
- Wet Weight of Sample Analyzed

Number of fish use to make Composite Sample

Date Sample Collected

Key

NA = Not Available
NM = Not Measured

Episode No	SCC No	Dioxin/Furans %lipid	Dioxin/Furans wet weight (g)	Xenobiotics %lipid	Xenobiotics wet weight (g)	No. of Samples in Composite	Sampling Date
1994	DE017702	NM	19 98	NM	NM	NA	850617
1994	DE017703	NM	20	NM	NM	NA	850617
1994	QD110586	NM	20 01	NM	NM	NA	850617
1998	13285	NM	20 02	NM	NM	NA	830527
1998	13421	NM	19 92	NM	NM	NA	830527
2015	DF001001	5.8	20.09	9.2	20 01	03	841117
2015	DF001002	3.5	20 07	NM	NM	03	841117
2016	DF001101	3.5	19 98	7	19 98	01	850522
2016	DF001102	1.8	20.06	NM	NM	01	850522
2017	DF001201	NM	19 95	10.5	20.09	01	850531
2017	DF001202	NM	20.12	NM	NM	01	850531
2018	DF001301	NM	20 01	3	20 09	NA	850309
2023	DF001402	NM	20	NM	NM	NA	840722
2023	DF001403	NM	20	1.1	19 98	NA	840722
2026	DF001702	5	20	7.6	20	NA	840905
2026	DF001703	NM	5 67	NM	NM	NA	840905
2026	DF001706	NM	NM	NM	NM	NA	840905
2027	DF001802	NM	20 02	NM	NM	NA	840816
2027	DF001803	NM	20 1	9.7	20 01	NA	840816
2037	DY000501	NM	19 98	7	20 04	NA	840801
2037	DY000502	NM	20 09	NM	NM	NA	840801
2056	DE000501	NM	20 06	11.2	20.04	NA	840808
2057	DE000601	13	20 06	15.2	20 03	NA	841017
2059	DE000801	13 3	20.02	17.4	20 01	04	841009
2060	DE000901	NM	20 07	12.9	20.21	NA	841016
2070	DJ000901	NM	20.05	NM	NM	NA	840820
2070	DJ000902	NM	20.01	4.8	20 18	NA	840820
2070	QD072186	NM	20 04	NM	NM	NA	840820
2098	DH001501	NM	19 99	6.8	20 15	NA	841004
2098	DH001504	NM	20	NM	NM	NA	841004
2100	DH001702	NM	20 04	NM	NM	NA	840920
2100	DH001703	NM	19 97	12 7	19 98	NA	840920
2100	QD111086	NM	20 04	NM	NM	NA	840920
2105	DH002201	NM	20 09	NM	NM	NA	841004
2105	DH002204	4 4	20	3 1	20 09	NA	841004
2105	QD063086	NM	20 12	NM	NM	NA	841004
2109	DH002601	NM	20 06	12 5	20	NA	840906
2109	DH002602	NM	20	NM	NM	NA	840906
2110	DH002710	NM	20 06	2 4	17 33	NA	840913
2122	DH003901	NM	19 88	NM	NM	NA	841017
2122	DH003904	NM	20 03	7.7	20 07	NA	841017
2126	DD000302	3.2	20 04	4.9	20 12	NA	841002
2126	DD000303	NM	20 04	NM	NM	NA	841002
2126	QD062686	3.2	20 01	NM	NM	NA	841002
2133	DD001002	NM	20	2 1	20 05	NA	841114
2138	DD001501	NM	20 01	NM	NM	01	841023
2138	DD001504	NM	20 22	NM	NM	01	841023
2139	DD001601	0 9	20	8 2	20 04	NA	841017
2139	DD001604	NM	20 02	NM	NM	NA	841017
2139	QD071486	NM	20 02	NM	NM	NA	841017
2142	DD001902	3.8	20	4 9	20	01	840918
2142	DD001903	NM	20 06	NM	NM	01	840918
2148	DD002501	NM	19 91	4 8	20 07	NA	840725
2148	DD002504	NM	19 99	NM	NM	NA	840725
2151	DD002801	NM	19 93	NM	NM	NA	841030
2151	DD002803	NM	19 98	6.2	20 04	NA	841030
2152	DD002902	NM	20	NM	NM	NA	840918
2152	DD002903	NM	20 3	10.2	20 13	NA	840918
2190	DG005101	NM	19 98	4.8	20 06	NA	840807
2190	DG005104	NM	20 02	1	20 16	NA	840807
2191	DG005205	NM	20.07	21 1	20 11	NA	841009
2191	DG005206	NM	20	NM	NM	NA	841009
2191	QD092486	NM	19 96	NM	NM	NA	841009
2194	DG005501	NM	19 93	9.1	20 14	NA	840906
2194	DG005504	2.6	20 07	NM	NM	NA	840906
2199	DG006001	NM	19 95	10 2	20 06	NA	840911
2199	DG006004	NM	20 03	2 1	19 99	NA	840911

Episode No.	SCC No.	Dioxin/Furans %lipid	Dioxin/Furans wet weight (g)	Xenobiotics %lipid	Xenobiotics wet weight (g)	No. of Samples in Composite	Sampling Date
2201	DG006201	NM	20	9.7	19.98	NA	840919
2201	DG006204	NM	20	NM	NM	NA	840919
2205	DG006601	NM	20.03	5.1	20	NA	841027
2205	DG006602	NM	20.01	NM	NM	NA	841027
2210	DC005401	10.9	20 06	13 5	20 04	NA	840829
2211	DC005503	4 8	19.98	3.9	20.17	01	1984
2212	DC005602	NM	20	1.8	20 04	NA	1984
2212	DC005605	NM	20.04	7.7	20 1	NA	1984
2215	DC005902	NM	20	10.5	20.03	NA	1984
2216	DC006002	NM	20.08	NM	NM	NA	1984
2216	DC006003	NM	20.04	4.8	19 99	NA	1984
2220	DC006401	NM	20.06	NM	NM	06	840920
2220	DC006405	NM	19 99	8 9	19 99	03	840920
2225	DC006902	1.2	19.96	NM	NM	05	840906
2225	DC006903	31.9	20 15	NM	NM	03	840906
2225	QD101387	25.7	20 05	NM	NM	03	840906
2227	DC007102	NM	20 43	NM	NM	03	840817
2227	DC007104	NM	20 1	8.6	19 94	02	840817
2228	DC007201	NM	20 03	0 4	20.13	NA	840809
2228	DC007204	NM	19 98	NM	NM	NA	840809
2228	QD070286	NM	20.01	NM	NM	NA	840809
2231	DC007503	NM	20 01	18.6	20 11	NA	850918
2246	DJ002301	NM	20 02	NM	NM	NA	840918
2246	DJ002302	NM	20 05	7.2	19 97	NA	840918
2247	DJ002403	NM	20.01	NM	NM	NA	840919
2247	DJ002404	NM	20 07	5.5	20 06	NA	840919
2280	DF005201	NM	20 1	2.6	20 04	NA	850507
2280	DF005204	NM	18 98	NM	NM	NA	850507
2280	QD062386	NM	19 97	NM	NM	NA	850507
2280	QD121688	NM	NM	3 1	20 06	NA	850507
2283	DF005501	NM	20 02	6 3	20 03	NA	841120
2283	DF005502	10.4	20 18	NM	NM	NA	841120
2290	DD003402	NM	NM	NM	NM	01	841127
2290	DD003403	4 1	20 3	15	20	01	841127
2294	DD003801	3 2	20 09	NM	NM	01	850422
2294	DD003804	9 5	19 95	9 9	19 97	01	850422
2297	DD004102	3 7	20 14	2 1	20 11	01	841128
2297	DD004103	1	20 01	NM	NM	01	841128
2298	DD004201	16 6	18 83	NM	NM	NA	850410
2298	DD004203	2 8	20 1	1 5	20 08	NA	850410
2301	DD004501	NM	NM	NM	NM	NA	850116
2301	DD004502	NM	NM	NM	NM	NA	850116
2301	DD004503	NM	NM	NM	NM	NA	850116
2301	DD004504	NM	20 02	2 1	20	NA	850116
2301	QD071786	NM	20 02	NM	NM	NA	850116
2302	DD004601	2.2	20 11	3.3	20 06	02	841101
2304	DD004801	15 5	19 89	15 5	20 04	01	841102
2304	DD004804	3 8	20 03	NM	NM	03	841102
2309	DD005301	NM	20 13	3 6	19 99	NA	841026
2309	DD005304	NM	20 21	NM	NM	NA	841026
2322	DB001301	4	20 06	2 9	19 94	NA	840919
2322	DB001304	NM	20 16	NM	NM	NA	840919
2322	QD082686	NM	20 11	NM	NM	NA	840919
2326	DB001701	NM	20 05	7 1	20 04	NA	840926
2326	DB001704	NM	20 05	NM	NM	NA	840926
2328	DB001904	NM	20 08	4 2	20 01	NA	840918
2329	DB002004	NM	20 01	11 9	20 05	NA	840919
2341	DD006002	2 8	20	NM	NM	01	850423
2341	DD006003	8 8	20 08	10.3	20 11	01	840726
2355	DA001603	10 9	20 1	10 2	20 14	01	840814
2356	DA001702	NM	20 05	0 6	20 09	NA	840805
2356	DA001703	NM	19 96	NM	NM	NA	840805
2358	DA001901	NM	4 75	NM	NM	NA	840723
2369	DA003202	NM	20 01	NM	NM	NA	840917
2369	DA003203	16	20 1	NM	NM	NA	840917
2369	QD030387	12 6	20 02	NM	NM	NA	840917
2375	DA003802	NM	20 02	NM	NM	NA	840828

Episode No	SCC No.	Dioxin/Furans %lipid	Dioxin/Furans wet weight (g)	Xenobiotics %lipid	Xenobiotics wet weight (g)	No. of Samples in Composite	Sampling Date
2375	DA003803	7.4	20 09	6 8	20 01	01	840828
2376	DA003903	NM	19 95	5 3	20 06	NA	840828
2376	QD111886	NM	20 03	NM	NM	NA	840828
2379	DE005401	NM	NM	NM	NM	05	840921
2379	DE005404	NM	20 02	0.6	20 07	NA	840921
2380	DE005501	NM	20 03	15 8	20 12	NA	840828
2383	DE005801	NM	20.02	16.9	20 03	NA	840717
2385	DE006002	4	20	3.7	20 09	04	840813
2385	QD101987	4.1	20.03	NM	NM	04	840813
2387	DE006201	8.5	19 98	NM	NM	01	840821
2387	DE006204	NM	NM	NM	NM	NA	840821
2394	DE006901	10 8	20 02	14	20 15	03	841025
2394	QD006901	NM	NM	12 9	20 05	03	841025
2394	QD022189	NM	NM	11 4	20.09	03	841025
2397	DE007201	NM	20 05	5 7	20 11	NA	1984
2397	DE007204	NM	20	NM	NM	NA	1984
2410	DE008501	NM	20 07	23.8	19 99	NA	850619
2410	DE008504	3.1	20 08	1 5	20 09	NA	850619
2416	DE009101	NM	20 09	21.1	19 99	NA	841016
2422	DE009702	11 2	20 04	13.7	20.03	05	1984
2427	DE010202	24 4	20 12	29 1	20 11	03	841010
2427	DE010203	1.9	20 59	NM	NM	05	841010
2427	QD102887	1.7	20.06	NM	NM	05	841010
2429	DE010402	NM	19 98	17.1	20.1	05	840910
2429	DE010403	NM	20 06	NM	NM	05	840910
2429	QD010687	NM	20 05	NM	NM	05	840910
2430	DE010602	1.4	20 06	NM	NM	01	841017
2430	DE010603	NM	19.92	5.1	20 17	NA	841017
2430	QD121488	NM	NM	4 7	20 04	NA	841017
2431	DE010702	5 6	20 07	NM	NM	01	841016
2431	DE010703	3 2	20 05	3 4	20.05	01	841016
2432	DE010710	NM	20 75	8 9	20 12	NA	850603
2432	DE010713	NM	20 11	NM	NM	NA	850603
2435	DE011001	NM	20	5 9	19 96	NA	850626
2435	DE011004	NM	20 93	NM	NM	NA	850626
2437	DE011202	NM	20 47	NM	NM	NA	841002
2437	DE011203	NM	20 16	17 9	19 98	NA	841002
2439	DE011401	NM	20	16 2	20 15	NA	841025
2439	DE011402	NM	20 03	7 1	20 15	NA	841025
2478	DJ003901	NM	20 01	NM	NM	NA	841120
2478	DJ003902	NM	20 07	3 3	20 18	NA	841120
2478	DJ003903	NM	NM	NM	NM	NA	841120
2500	DC010201	NM	20 11	NM	NM	NA	841114
2500	DC010203	NM	20	3 2	20 04	NA	841114
2532	DF019302	2 3	20 18	NM	NM	01	850809
2532	DF019303	10 8	20 37	11 4	20 02	01	850809
2544	DF019202	NM	20 02	10 5	20 03	NA	850725
2544	DF019203	NM	NM	NM	NM	01	850725
2608	DE014501	1 7	20 07	NM	NM	04	840801
2608	DE014504	21 5	20 09	22 5	19 96	03	840801
2618	DE015401	14 7	20 1	20 4	20 03	01	841025
2618	DE015402	5.9	19 99	6 3	20 06	01	841025
2618	DE015403	8 9	20	12	20	01	841025
2618	QD102088	8 8	20 04	NM	NM	01	841025
2651	DB008401	7 6	20 02	3 1	19 97	NA	840809
2653	DB008503	3 9	20 48	3 4	20 02	02	841004
2654	DB008601	NM	20 01	7.3	0 8	NA	840919
2709	DB005101	NM	20	9 3	20 04	NA	850618
2721	DA006502	6 2	20 27	6 3	20 02	03	850613
2721	QD011089	NM	NM	6 2	20 01	03	850613
2722	DA006601	NM	20 04	2 2	20 11	NA	850613
2725	DA006301	6 3	20 05	7 2	19 93	02	850613
2748	DY006505	NM	20 02	6.3	20 05	NA	850630
2748	DY006506	NM	20 04	NM	NM	NA	850630
2776	DY007101	2 6	20 02	2 6	20	NA	850914
2776	DY007103	NM	20 01	NM	NM	NA	850914
2776	QD010489	NM	NM	2.6	20 11	NA	850914

Episode No	SCC No	Dioxin/Furans %lipid	Dioxin/Furans wet weight (g)	Xenobiotics %lipid	Xenobiotics wet weight (g)	No. of Samples in Composite	Sampling Date
3001	DE019501	1.6	20 01	NM	NM	NA	851023
3001	DE019502	8.2	20 01	3.6	20 07	NA	851023
3022	DA008401	21 8	20 23	17.9	20 06	01	860818
3022	DA008402	1.4	20.1	NM	NM	02	860818
3023	DA008501	1.6	20 02	1.2	20 08	01	860818
3024	DA008601	0.9	20.16	1.3	20 03	01	860820
3025	DA008701	5.2	20.19	4.3	20.18	02	860820
3025	DA008702	2	20 04	NM	NM	01	860805
3026	DA009001	2.1	19 99	2	20 11	02	860805
3026	DA009002	0 9	19 98	NM	NM	01	860805
3027	DA009301	9 8	20 13	NM	NM	02	860805
3028	DA008801	1.3	20 04	0 2	0 04	01	860814
3028	QD031787	1 3	20.6	NM	NM	01	860814
3034	DG025701	7.9	20 01	8.6	20.11	03	860908
3034	DG025702	0.7	20 06	NM	NM	05	860908
3035	DG025801	NM	20 15	13 5	20 07	04	860827
3035	DG025802	1.1	20.1	NM	NM	04	860827
3036	DG025901	2 5	20 07	NM	NM	05	860904
3036	DG025902	3.1	19 85	9.3	20	05	860904
3036	QD120287	2 2	20 02	NM	NM	05	860904
3037	DG026001	9.5	20 05	10	20 06	05	860827
3037	DG026002	1.5	20 08	NM	NM	05	860827
3038	DG026101	NM	20.02	17 7	20	04	860827
3038	DG026102	NM	19 99	NM	NM	05	860827
3039	DG026201	8.6	20 1	9	19 77	05	871014
3039	DG026202	1 7	20 04	NM	NM	05	871014
3040	DG026301	5 7	20 18	5 1	20 04	05	860820
3040	DG026302	NM	19 98	NM	NM	05	860820
3041	DG026401	9	20 09	NM	NM	03	860820
3041	DG026402	5 1	19 96	5.2	20 06	05	860908
3041	QD031588	9 2	20 11	NM	NM	03	860820
3042	DG026501	15 2	20 25	14 1	20 07	05	860909
3042	DG026502	NM	20 1	0 8	20 08	01	860909
3042	QD026501	NM	NM	15.5	20 14	05	860909
3043	DG026601	9 7	20 18	9 5	20 12	05	860910
3043	DG026602	NM	20 07	NM	NM	07	860910
3043	QD111987	NM	20.11	NM	NM	07	860910
3044	DG026701	NM	19 99	8 4	19 99	05	860911
3044	DG026702	NM	20	NM	NM	03	860911
3045	DG026801	4 5	20 02	6 2	19 97	05	860916
3045	DG026802	2 8	20 06	2 5	20 02	02	860916
3046	DG026901	5 7	20 13	5 4	20 12	03	871203
3047	DG027001	10 8	19 95	10 3	20 12	05	860819
3047	DG027002	1 4	19 93	NM	NM	05	860819
3048	DG027101	13 7	20 01	13 7	20 01	05	860819
3048	DG027102	1 8	20	2 3	20	05	860819
3048	QD012689	NM	NM	2 5	20 12	05	860819
3048	QD027101	NM	NM	14 5	20 03	05	860819
3049	DG027201	10 3	20 07	9	20	05	860820
3049	DG027202	0 6	20 03	NM	NM	05	860820
3049	QD111087	0 5	20.01	NM	NM	05	860820
3050	DG027301	17	20 01	16 4	20 08	05	871229
3060	DF009101	1 6	20 06	2 1	0 42	02	861117
3060	DF009102	11 9	20 04	19.9	0.82	02	861117
3060	QD073189	NM	NM	2	0 4	02	861117
3061	DF019105	1 2	20 02	NM	NM	01	861231
3061	DF019106	2 4	20	2 2	20 04	01	861231
3062	DF024024	10 4	20 03	15 1	20 04	07	861106
3062	DF024324	5 2	20 02	NM	NM	01	871119
3062	QD024324	5 2	20 1	NM	NM	01	871119
3062	QD071587	9 7	20	NM	NM	07	861106
3062	SF024324	5 2	20 02	NM	NM	01	871119
3063	DF023301	9 8	20 02	10 3	20 04	05	870507
3063	DF023302	6.7	20.14	5.8	19 96	03	870507
3064	DF023305	1 8	20 08	3	20 14	30	870405
3064	DF023306	6 4	20 16	NM	NM	08	870404
3065	DF023419	2 3	20 1	0 9	20 02	03	870326

Episode No.	SCC No	Dioxin/Furans %lipid	Dioxin/Furans wet weight (g)	Xenobiotics %lipid	Xenobiotics wet weight (g)	No. of Samples in Composite	Sampling Date
3065	DF023420	8 7	20 04	6 8	20 04	03	870326
3065	QD010788	NM	NM	0 6	20.09	NA	870320
3065	QD022588	7.6	20.2	NM	NM	03	870326
3066	DF023503	14.2	20.01	8 6	20.04	07	870409
3066	DF023504	1.3	20 03	1.1	0.23	07	870409
3068	DF024001	1.7	20.08	2.4	0.49	25	870320
3068	DF024002	7 1	20 01	7.2	20 01	04	870320
3069	DF024007	4 8	20.04	4.9	20.13	05	870225
3069	DF024008	1.5	19 95	1 1	0 22	05	870225
3069	QD051788	NM	NM	4 9	20 04	05	870225
3070	DF024009	6 3	20 09	5 7	20 03	04	870303
3070	DF024010	1	20 15	0.7	0.13	04	870303
3071	DF024014	9.9	20 07	12.1	0.86	03	870721
3071	DF024015	NM	NM	10	0 8	02	870721
3072	DF024017	3 2	20	2 6	20.16	04	870623
3072	DF024018	0 7	20	NM	NM	09	870610
3072	QD040788	0 7	19 99	NM	NM	09	870610
3072	QD070688	NM	NM	2.4	19 95	04	870623
3073	DF019221	7 2	19 97	8.3	19 98	03	870423
3073	DF019222	2 1	19 98	NM	NM	02	870423
3073	QD121587	6.7	20 02	NM	NM	03	870423
3074	DF026017	2	20 01	1.7	20 12	09	861112
3075	DF024102	1.9	20	NM	NM	04	870218
3076	DF028502	6.3	20 07	8.2	19.98	05	861203
3076	DF028503	0 9	20 04	NM	NM	05	870127
3077	DF019113	3.1	20 19	NM	NM	01	870409
3077	DF019114	4 6	20 17	2.3	0 46	03	870409
3077	QD121087	0 6	20 06	NM	NM	01	870409
3078	DF009118	8 2	20 03	6 1	19 93	02	870306
3078	DF023815	3 6	20 24	3 1	20 11	03	870306
3078	DF023816	1 4	20 07	0 8	20 01	01	870306
3078	SF009118	8 2	20 03	NM	NM	02	870306
3079	DF019205	4 8	20 16	4 9	0 81	06	861125
3079	DF019206	8 2	20 07	9 6	19 99	05	861125
3080	DF023317	12 3	19 98	11 9	19.96	03	870211
3080	DF023318	1	20 02	0 3	0.06	05	870211
3080	QD040987	12 8	20 06	NM	NM	NA	870211
3081	DF024105	3.1	20 17	5.1	20 02	04	861209
3081	DF024106	5 8	20 1	5 4	20 03	04	861209
3082	DF023401	8 3	20 09	8 3	19 92	03	870212
3082	DF023402	1 5	20 28	NM	NM	05	870212
3082	QD120787	1 3	20 35	NM	NM	05	870212
3083	DF023405	4 8	20 07	NM	NM	03	870305
3083	DF023406	1 3	20 11	0 6	0.12	05	870212
3084	DF024109	8 1	19 99	8 1	19 73	05	871208
3084	QD072188	NM	20 01	NM	NM	05	871208
3085	DF024113	4 5	20 02	4 6	19 95	08	870625
3085	DF024114	1 6	20 07	1 3	0.27	06	870625
3085	SF024113	4 5	20 02	NM	NM	08	870625
3086	DF023409	9 1	20 03	8 9	20 02	04	870507
3086	DF023410	NM	NM	2	19 99	02	870507
3086	DF023411	1	20 1	NM	NM	03	870507
3087	DF023413	9.6	20 1	9 5	20 08	05	870213
3087	DF023414	1	20 16	0 7	20 05	02	870213
3087	DF023415	4.6	20 06	3 9	20 12	01	870213
3087	DF023416	1 4	20 04	NM	NM	01	870213
3087	QD023414	2	20 08	NM	NM	02	870213
3087	QD072387	9 6	19 99	NM	NM	05	870213
3087	SF023414	1	20 08	NM	NM	02	870213
3087	SF023415	4 6	20 06	NM	NM	01	870213
3088	DF023417	8 2	20 04	8 4	20 06	08	870508
3088	DF023418	1 4	20 1	0 9	19 94	06	870508
3089	DF019209	1 1	20 08	0 5	20 11	06	870113
3089	DF019210	4 1	20 03	4 3	19 97	05	870113
3090	DF019213	0 5	20 17	0 8	19 96	05	871203
3090	DF019214	7 2	20 06	7 8	19 97	05	861201
3091	DF019217	1 9	20 03	2	19 98	05	870128

Episode No	SCC No	Dioxin/Furans %lipid	wet weight (g)	Xenobiotics %lipid	wet weight (g)	No of Samples in Composite	Sampling Date
3091	DF019218	0 7	20 19	NM	NM	07	870128
3092	DF023501	9 7	20 04	9 7	20.08	05	870430
3092	DF023502	1.7	20 09	1.5	0.3	08	870430
3093	DF024011	0 4	19 99	0 6	19.9	04	870603
3093	DF024118	8	19 96	8	19.97	04	870603
3093	QD080387	NM	20 02	NM	NM	04	870603
3094	DC017201	7 3	20.06	7.9	20.02	05	871001
3094	QD092988	7.2	20 04	NM	NM	05	871001
3095	DC038801	3 4	20 1	2.9	20 05	02	871001
3095	DC038802	11.5	20 03	13 3	20 02	05	871001
3096	DC035001	1 7	20 06	1.3	0.26	03	870930
3096	DC035002	11 2	20 05	12 2	20 23	05	870930
3096	QD052488	11 2	20	NM	NM	05	870930
3097	DC038701	4 4	20 07	1 6	0.32	05	861118
3097	DC038702	7 5	20	7	19 96	03	861118
3097	QD071989	NM	NM	1	0.2	05	861118
3098	DC038601	1 9	20 02	2 1	20	03	861024
3098	DC038602	3	20 34	2.9	0.59	01	861024
3098	QD032587	2	20	NM	NM	NA	861024
3098	QD051288	NM	NM	2	20.03	03	861024
3100	DC019701	4.4	19 97	2 3	0 46	04	861120
3100	DC019702	3.9	19 3	NM	NM	01	861120
3101	DC019901	3 5	20 01	1.6	0.33	04	861118
3103	DC036201	4.6	20.05	4.3	0.87	05	861105
3103	DC036202	10.7	20.06	12 5	20	01	861105
3104	DC020001	1 2	20 22	0 6	0.12	05	861217
3104	DC020002	8 6	20 24	8 3	20 06	03	861217
3105	DF025001	4 9	20 14	4 7	20 08	05	870210
3105	DF025002	2 5	20 13	0 9	19 98	05	870210
3106	DE026801	NM	19 99	2	20 11	03	860617
3106	DE026802	NM	20 04	NM	NM	07	851014
3107	DE026901	7 8	20 14	7 7	20 13	05	860811
3108	DE027001	1.9	20 13	0 6	20 01	04	860811
3108	DE027002	9.1	19 94	10	19 94	04	860811
3109	DE025001	1.5	20 34	2 5	20 1	02	860729
3109	DE025002	2 2	20 2	NM	NM	03	860729
3110	DE022501	7.3	20.24	7 3	19 99	04	860426
3110	DE022502	19 6	20 1	25 5	20 09	02	860920
3111	DH015801	1 2	20	NM	NM	04	861030
3111	DH015802	9.7	20	9 9	20 05	04	861030
3112	DE022401	11 8	20	10 9	19 95	05	860815
3112	DE022402	NM	19 99	0 3	20 06	05	860815
3113	DE021101	5 6	20 16	5 9	20 03	07	870731
3113	DE021102	7 9	20 05	6 3	20 02	05	870731
3113	QD030789	NM	NM	5 7	20 12	07	870731
3114	DE021201	11 3	20 02	11 8	20 1	05	860904
3115	DE021301	9 1	20 12	10	0 8	04	890629
3115	DE021302	7 2	20 05	7 8	0 87	08	890629
3115	QD101689	NM	NM	8 4	0 87	04	890629
3117	DE021501	16 3	20 13	17 5	20	05	870929
3117	DE021502	8 1	20 04	NM	NM	05	870929
3118	DE021601	2 6	19 97	0 4	20 05	05	860730
3118	DE021602	14 6	20 13	15 8	19 97	05	860730
3118	DE021603	7 6	20 05	1 5	20 04	05	860730
3118	QD010689	NM	NM	18.7	20 02	05	860730
3118	QD020488	NM	NM	0 4	20 06	05	860730
3118	SE021602	14 6	20 13	NM	NM	05	860730
3119	DE021701	2 1	20 26	NM	NM	05	850708
3119	DE021702	5 4	19 99	NM	NM	05	850708
3120	DE021801	6 3	19 96	5 9	20 11	05	850709
3120	DE021802	1 9	20 02	0 9	19 97	05	850709
3122	DE022001	NM	20 08	17 4	20 06	01	861009
3122	DE022003	1 6	20 02	1 7	20 01	05	861009
3122	DE022004	1 4	20 03	NM	NM	05	861009
3125	DE022301	21 3	20	22 6	19 99	05	870819
3125	DE022302	3.7	20	3 2	20 08	05	870819
3125	QD120888	3 7	20 03	NM	NM	05	870819

Episode No.	SCC No	Dioxin/Furans %lipid	wet weight (g)	Xenobiotics %lipid	wet weight (g)	No of Samples in Composite	Sampling Date
3132	DE023201	8 4	20 11	8 5	20 07	05	850917
3132	DE023202	9 1	20 18	NM	NM	01	850916
3132	QD010588	NM	NM	8 5	19 97	05	850917
3134	DE023401	1 9	19 82	NM	NM	01	870513
3134	DE023403	5	20 33	4 4	20.27	02	860513
3134	DE023405	4.3	20 16	NM	20.13	02	860513
3134	DE023406	5.2	20 03	5 5	20 06	02	860513
3135	DE023501	11 1	20	11.4	20 04	01	1986
3136	DE023601	NM	NM	1.1	20 03	02	870520
3136	DE023602	0.9	20 5	NM	NM	01	870520
3137	DE023701	9 7	20 14	7.4	0 84	05	890508
3137	DE023702	1.3	20	NM	NM	NA	890508
3138	DE023801	7 9	20 06	8.1	20 16	04	870903
3138	DE023802	2 5	20 08	NM	NM	01	870903
3140	DE024001	NM	NM	1 9	20 07	01	870902
3140	DE024002	3 3	20 02	2 8	20 07	04	870902
3141	DE024101	NM	NM	3 9	20 02	01	870729
3141	DE024102	15 8	20 03	15	20 08	03	870326
3141	DE024103	2.6	19 97	2.5	19 98	05	870326
3141	SE024102	15.8	20 03	NM	NM	03	870326
3143	DE024401	10.4	20.15	13	20.09	01	870616
3143	DE024402	3	19 99	NM	NM	02	870616
3143	DE024403	10.8	20 18	10	20	03	870615
3144	DE024901	11 1	20 05	12 5	20 21	03	870521
3145	DE026601	10 8	20.06	11	20 01	04	870910
3145	QD071988	10.9	20.01	NM	NM	04	870910
3146	DE026701	16 3	20 01	17 8	20 02	03	870904
3146	DE026702	1 3	20 01	1 9	19 99	05	870904
3146	QD060288	16 3	20 05	NM	NM	03	870904
3146	SE026701	16 3	20 01	NM	NM	03	870904
3147	DC035201	9 6	19 96	9 1	19 97	05	861217
3148	DE027101	NM	20 2	12 7	20 02	05	860806
3148	DE027103	1 7	20 11	0 3	20 06	05	870806
3149	DC038501	2 8	20	2 9	20 05	01	861118
3150	DA008901	4	20 08	4 6	20	03	861028
3150	QD120187	NM	NM	5 2	20 08	03	861028
3151	DA009101	1 4	20	4 5	20 1	01	861017
3151	DA009102	1	20 16	NM	NM	01	861017
3151	QD072887	1 4	20 05	NM	NM	01	861017
3152	DA009201	3 7	20 1	3.9	20 02	03	861017
3161	DC019801	3.5	20 23	2.6	0.52	02	861218
3161	DC019802	8 2	19 99	7 4	20 02	05	861218
3162	DJ022121	3 4	20 04	NM	NM	01	890222
3162	DJ022122	10 6	20 13	NM	NM	04	890222
3162	DJ022123	0 8	20 04	NM	NM	05	890222
3162	DJ022403	0 5	20 18	NM	NM	01	890222
3162	DJ024001	1 9	20 02	1 4	20 14	09	870513
3162	DJ025103	4	20 01	NM	NM	05	890222
3162	QD041889	5	20 03	NM	NM	05	890222
3163	DJ022402	4 1	20 04	NM	NM	05	890222
3163	DJ022404	0 7	20 13	NM	NM	05	890223
3163	DJ024002	1 5	20 01	1 9	20 03	09	870513
3163	DJ025102	2 6	20.02	NM	NM	05	890223
3164	DD015701	2	20 06	NM	NM	05	870518
3164	DD015702	14 7	20 04	12 8	20 09	04	870518
3165	DD015703	2 1	20 06	NM	NM	05	870519
3165	DD015704	4 6	20 02	3.2	19 98	02	870519
3165	QD031788	1 9	20	NM	NM	05	870519
3166	DD015705	1 8	19 98	NM	NM	02	870527
3166	DD015706	7 2	19 99	7 9	19 96	02	870527
3167	DD015707	1	20 04	NM	NM	04	870529
3167	DD015708	2 4	20 02	2 1	19 95	06	870529
3167	QD040588	0 8	20 09	NM	NM	04	870529
3167	QD062388	NM	NM	2 9	20 02	06	870529
3167	SD015708	2 4	20 02	NM	NM	06	870529
3168	DD015711	5 3	20 06	4 7	20 19	02	871014
3168	DD015712	0 8	20	0 5	20 06	05	871015

Episode No.	SCC No	Dioxin/Furans %lipid	Dioxin/Furans wet weight (g)	Xenobiotics %lipid	Xenobiotics wet weight (g)	No. of Samples in Composite	Sampling Date
3168	SD015711	5 3	20 06	NM	NM	02	871014
3169	DD015713	10 2	20.09	11 3	20 1	05	871112
3169	DD015714	NM	NM	NM	NM	04	871112
3169	QD022789	NM	NM	10.7	20 1	05	871112
3170	DD015715	5 5	20 07	6	19 97	04	871027
3170	DD015716	NM	NM	NM	NM	03	871027
3171	DD015717	3.9	20.02	3.7	20 04	05	871028
3171	DD015718	NM	NM	NM	NM	05	871028
3172	DD015719	8.4	20 11	6.6	19.9	04	871111
3172	DD015720	0.6	19 99	0.7	19 92	03	871111
3173	DD015721	0 5	20 07	NM	NM	04	870713
3173	DD015722	20.3	20 05	19 7	20	02	870721
3173	QD070689	0 6	20.06	NM	NM	04	870713
3174	DD015723	0 7	20 09	NM	NM	05	870623
3174	DD015724	10 8	20 1	8 9	20 08	05	870623
3175	DD015801	3 4	20 01	2.9	20 37	03	870915
3175	DD015802	1 4	20 05	NM	NM	03	870915
3176	DD015803	4 6	19 99	3 2	19 98	05	870626
3176	DD015804	1 2	20 07	NM	NM	05	870626
3177	DD015805	9	19 99	7	20 08	04	870914
3177	DD015806	1.8	20	NM	NM	04	870914
3177	QD100488	NM	NM	6.7	20.16	04	870914
3178	DD015807	3 3	19.95	3.3	20 32	20	870911
3178	DD015808	0 7	19 96	NM	NM	13	870911
3179	DD015809	7.9	19 98	8.2	20 08	04	870915
3179	DD015810	2	20 06	NM	NM	03	870915
3180	DD015812	1	20 08	0 8	20 11	06	870923
3181	DD015813	2.5	20 01	NM	NM	05	871006
3181	DD015814	7 2	20 03	6.8	20 07	03	871006
3182	DD015815	1 1	20 08	0 4	19 97	05	870813
3182	DD015816	7 4	20 02	8 6	19 97	03	870813
3183	DD015817	7	20 07	6 9	20 29	05	871008
3183	DD015818	0 6	20 04	0 3	20	04	871008
3184	DD015819	5 5	20 01	NM	NM	05	870903
3184	DD015820	0 5	20 01	0 9	19 94	05	870903
3185	DD015821	6 5	20 04	6 9	20 12	05	870915
3185	DD015822	2.2	20 21	NM	NM	01	870915
3185	SD015821	6 3	20 04	NM	NM	05	870915
3186	DD015823	2 9	20 07	NM	NM	04	871124
3186	DD015824	1 7	20 03	1 4	20 05	04	871124
3187	DD015902	2 7	20 02	2 8	20 05	03	870819
3188	DD015903	4 5	19 98	10 8	20 04	03	870707
3188	DD015904	0 4	20 1	1 9	20 03	04	870819
3189	DD015905	4 8	20 23	6 2	20	03	870708
3189	DD015906	0 5	20 13	NM	NM	03	870708
3189	QD092188	NM	NM	6.8	19 99	03	870708
3190	DD015907	6 3	20 65	5 9	19 97	04	870709
3190	DD015908	0 7	20 1	NM	NM	04	870709
3191	DJ024003	1 4	20 16	2.7	20 02	05	870625
3191	DJ024005	1 4	20 11	1 8	20 1	NA	870625
3192	DJ024007	1	20 15	2	20	01	870625
3192	DJ024009	1 2	20 06	1 5	20 14	NA	870625
3192	QD020789	1	20 09	NM	NM	NA	870625
3193	DC039001	3 5	20 02	4 6	20 09	05	870526
3193	QD039001	4 5	20 04	NM	NM	05	870526
3195	DH020104	3 9	20 05	4 1	20 14	05	870819
3195	DH020105	8 7	20 09	8 5	20 12	04	870819
3196	DH020107	NM	NM	NM	NM	05	870823
3196	DH020108	1 4	20 21	2 1	20 23	05	870823
3197	DH020109	NM	NM	NM	NM	05	870826
3197	DH020110	3 8	20 06	NM	NM	05	870826
3198	DH020111	11 5	20 04	10 2	20	05	870822
3199	DH020101	8 4	20	10 1	20 01	02	870817
3199	DH020102	NM	NM	NM	NM	03	870817
3199	DH020103	4 9	20	4 8	20 12	02	870817
3200	DH020112	6 1	20 1	6 5	20 04	05	870824
3201	DJ024012	10 3	20 04	NM	NM	NA	870714

Episode No	SCC No.	Dioxin/Furans %lipid	Dioxin/Furans wet weight (g)	Xenobiotics %lipid	Xenobiotics wet weight (g)	No of Samples in Composite	Sampling Date
3203	DJ024018	4 3	19 88	8 9	20 11	03	870714
3205	DJ024023	NM	NM	NM	NM	04	870813
3205	DJ024024	1 1	20	0 7	19 9	01	870813
3206	DJ022301	3 9	20 1	NM	NM	NA	870722
3206	DJ024102	2	20 03	NM	NM	04	870722
3206	DJ024103	4.2	20 44	6	20 09	04	870722
3208	DJ024109	14.1	19 91	18 3	20 14	05	870804
3212	DJ024120	NM	NM	3.4	20.02	07	870804
3212	DJ024121	4.5	19 98	6 3	20	05	870804
3212	QD050388	NM	20.17	NM	NM	NA	870804
3213	DJ024123	NM	NM	5 8	19 99	NA	870723
3215	DJ023705	NM	NM	15 9	20 11	NA	870811
3216	DJ023707	2	20	1 4	20.07	04	870819
3216	DJ023708	9 6	19 94	7 8	20 06	04	870819
3216	QD022388	NM	NM	7 7	20 15	04	870819
3216	QD091688	8 2	20 03	NM	NM	04	870819
3217	DJ023709	8 8	20 42	NM	NM	05	870729
3217	DJ023710	9 6	20 06	8.3	19.98	04	870729
3218	DJ023711	2 9	20 09	2 8	20.11	05	870819
3218	DJ023712	7	20 03	NM	NM	05	870819
3219	DJ023713	3 9	20 1	3 3	20	NA	870630
3219	DJ023714	0 7	20 02	0.5	20 1	NA	870630
3220	DJ023902	3	20.1	NM	NM	05	870818
3220	DJ023903	11 4	20 08	15 9	20 09	04	870818
3220	QD012288	3	20.11	NM	NM	05	870818
3221	DJ022405	25 1	20 05	NM	NM	03	890328
3221	DJ023904	3.6	20 02	NM	NM	01	870804
3221	DJ023905	10 9	20 21	23.7	20 13	01	870804
3222	DJ023906	1 3	20	NM	NM	03	870903
3222	DJ023907	9 2	20 07	8	20 06	05	870903
3223	DJ023717	2 5	20 1	2 4	19 94	11	870724
3224	DJ023715	0 7	20 13	1 9	20 18	NA	870613
3226	DJ023721	2 8	20 01	2 8	20 09	30	870904
3227	DJ023723	2 1	20 02	1 3	20 03	20	870904
3231	DJ023910	NM	NM	0 7	20	04	870825
3231	DJ023911	12 1	20 08	15 3	20 05	03	870825
3234	DH020301	3 2	19.47	2 8	20 01	04	870924
3234	DH020302	NM	NM	NM	NM	05	870924
3235	DH020303	7 4	19 86	6.8	20 08	02	870915
3235	DH020304	NM	NM	NM	NM	04	870915
3236	DH020305	9 5	19 84	8.5	20 09	02	870928
3236	DH020306	3	19 98	NM	NM	04	870928
3237	DH020307	4 1	20 09	NM	NM	04	870902
3237	DH020308	7 6	20	7 2	20 11	02	870902
3237	QD080988	NM	NM	7 1	20 12	02	870902
3238	DJ023918	9 9	20 03	10	19 98	11	870613
3238	QD080888	2 1	20 07	NM	NM	11	870813
3241	DJ023923	NM	NM	NM	NM	06	870612
3241	DJ023924	9 2	20 04	9 9	20 04	05	870612
3244	DJ023622	1 9	20 05	NM	NM	10	871016
3245	DJ023623	1 1	20 27	NM	NM	04	870618
3245	DJ023624	4 2	20 03	3 9	20 07	10	870618
3246	DJ022108	1 3	20 04	NM	NM	10	870404
3246	DJ022109	1 6	20 92	2 2	20 01	10	870404
3248	DJ022502	6 2	20	6	20	04	870804
3248	QD050588	NM	NM	6 3	20.15	04	870804
3249	DJ022503	NM	NM	0 7	20 03	06	870804
3249	DJ022504	3 7	19 98	3 4	19 97	02	870804
3250	DJ022505	NM	NM	NM	NM	10	870804
3250	DJ022506	6 3	20 12	5 8	19 98	06	870804
3252	DJ022509	NM	NM	0 8	20 13	04	870916
3252	DJ022510	20 5	20 01	25	20 1	04	870916
3252	QD020989	NM	NM	0 7	20 13	04	870916
3252	QD052588	NM	NM	26 6	20 12	04	870916
3252	QD082288	19 3	19 98	NM	NM	04	870916
3256	DJ022517	4 4	20 09	NM	NM	12	871124
3256	DJ022518	6 4	20 57	6 1	20	06	871124

Episode No	SCC No	Dioxin/Furans %lipid	Dioxin/Furans wet weight (g)	Xenobiotics %lipid	Xenobiotics wet weight (g)	No. of Samples in Composite	Sampling Date
3258	DC038901	17	19 99	18 6	3.73	03	870812
3258	DC038902	8 4	19 98	8 3	20 04	03	870812
3259	DB000466	10	20.02	13 2	20 01	04	870609
3259	DB000473	NM	NM	0 2	20.07	03	870609
3259	DB069101	NM	20 06	8.3	20.1	03	870721
3260	DB000493	8.9	19 99	17 8	20 02	03	870610
3261	DY026001	NM	NM	NM	NM	02	870729
3261	DY026002	8	20 14	7 6	20.02	01	870729
3262	DY026004	3 1	20.08	2	20 34	10	870716
3264	DY022602	8 4	20	NM	NM	06	871119
3266	DY022701	NM	NM	0.5	20 04	05	871020
3266	DY022702	6.9	20 03	6 7	20 3	05	871020
3266	QD012389	NM	NM	0.7	20 04	05	871020
3267	DY022101	5 4	20 06	1 2	20.13	04	871009
3267	DY022102	9.1	20	9	20 09	04	871009
3267	QD020288	5 6	20.01	NM	NM	04	871009
3269	DY022106	5.2	20	NM	NM	01	871217
3270	DY022107	2 4	19 99	NM	NM	04	871006
3270	DY022108	7 2	20 03	6 9	20 29	04	871006
3270	SY022108	7.2	20 03	NM	NM	04	871006
3271	DY022110	9 7	20 26	6 7	20 04	09	870916
3272	DY022111	1 1	20 08	NM	NM	01	871210
3272	DY022112	7.6	20 05	6.3	20 01	04	871210
3273	DY022113	6 7	20 01	4.7	19 94	22	870914
3273	DY022114	2	20 02	0.1	20 08	20	870914
3274	DY022115	NM	NM	NM	NM	10	870914
3274	DY022116	3.7	19 86	2.9	20 11	09	870914
3275	DY022118	11 2	20 03	NM	NM	10	870913
3276	DY022119	4 4	20 17	4 4	0 89	03	870915
3276	DY022120	3 3	20 38	NM	NM	07	870915
3278	DY022123	NM	NM	NM	NM	06	871014
3278	DY022124	1 7	20 04	3 5	20 02	06	871014
3281	DY022205	10 9	20 08	8.1	20 13	10	870728
3282	DY022206	NM	NM	1 8	20 04	03	870903
3282	DY022207	7 6	20 03	7 8	20 2	03	870903
3283	DY022209	5 1	19 71	3 5	20 08	03	870903
3285	DY022212	6 3	19 99	7 4	20 02	06	870616
3285	DY022213	4 3	20 34	3	19 91	03	870616
3286	DY022215	5 3	19 73	4 6	19 96	04	870617
3287	DY022216	2 4	20 07	2 3	20 07	04	870616
3288	DY022217	NM	NM	3 2	20 02	07	870812
3288	DY022218	4 5	19 98	4 5	20 03	08	870812
3288	QD060188	4 5	20.15	NM	NM	08	870812
3289	DY022219	4 9	20 13	5	20 05	10	870813
3289	DY022220	3 6	20 1	2 6	20 11	07	870813
3290	DY022221	0 9	20	1 6	20 03	08	871119
3290	DY022222	18 4	20 33	17 7	19 98	03	871119
3294	DJ022111	4 4	19 99	6 9	19 97	20	871121
3294	DJ022112	NM	NM	NM	NM	07	870921
3294	DJ022113	1.5	20 03	0 9	0.17	20	870921
3295	DJ022114	1 8	20	1 1	20 03	10	871021
3296	DB040101	6	20 2	6 1	20 06	03	870714
3297	DB041501	14 6	20 04	14 7	20 02	03	870731
3297	DB041504	1 1	20 09	NM	NM	03	870731
3297	SB041501	14 6	20 04	NM	NM	03	870731
3298	DB041601	16 8	20 06	15 8	20 02	03	870724
3298	DB041604	0 7	20 04	1 7	20 09	03	870724
3298	QD112988	1	20 02	NM	NM	03	870724
3299	DB040601	3 4	20 05	2.8	20 08	03	870723
3299	DB040604	1 7	20 1	1 6	20 05	03	870723
3299	QD040601	NM	NM	2 7	19 9	03	870723
3300	DB040201	3 8	20 05	5 8	20 02	03	870713
3300	DB040204	1 1	20 04	2.1	19 98	03	870713
3300	QD021389	NM	NM	2 1	20	03	870713
3300	SB040201	3 8	20 23	NM	NM	03	870713
3301	DB041101	19 7	19 98	19 4	20 07	03	870713
3301	DB041104	0 8	20 03	0 6	20 21	03	870713

Episode No	SCC No	Dioxin/Furans %lipid	Dioxin/Furans wet weight (g)	Xenobiotics %lipid	Xenobiotics wet weight (g)	No. of Samples in Composite	Sampling Date
3301	QD030989	NM	NM	0 7	20 02	03	870713
3301	QD092088	20.4	20.07	NM	NM	NA	870713
3301	SB041101	19 7	19 98	NM	NM	03	870713
3302	DB041901	6 7	20 04	7 1	20 08	03	870723
3302	DB041904	0 6	20	0 4	20 14	03	870723
3303	DB042301	5 2	20 06	6 1	20 1	03	870630
3303	DB042304	NM	NM	0 7	20 1	03	870630
3303	QD102588	NM	NM	6	20.1	03	870630
3304	DB041001	NM	20 11	0 4	20 05	03	870827
3304	DB041004	5.5	20.11	6.1	19.96	03	870827
3304	QD041004	NM	NM	8.2	20.06	03	870827
3305	DB042001	23	20 01	21.2	20 03	03	870909
3305	DB042004	NM	20 18	1 2	20 14	04	870909
3305	QD110388	NM	NM	23.2	20 12	03	870909
3306	DB041801	4 5	20 07	5 2	19 95	04	880828
3306	DB041804	NM	NM	2 2	20 03	05	880828
3306	QD041801	NM	NM	6 1	20 07	04	880828
3307	DB042101	3.7	20 29	3 7	20 02	03	870917
3307	QD100588	4.6	20 06	NM	NM	03	870917
3308	DB040001	0 6	20 02	0 7	20 03	03	870813
3308	QD030689	1 5	20 02	NM	NM	03	870813
3309	DB041301	6 3	20	5 9	20 06	03	870724
3310	DC032701	6 1	20 08	5 6	20 15	05	871027
3310	DC032702	0 7	20 01	0 7	0.14	04	871027
3311	DC032801	3	20 1	2 9	19 93	05	870928
3311	DC032802	1 5	19 99	0.6	0 13	05	870928
3312	DC033101	3 9	20 01	3 8	19 83	05	870929
3312	DC033102	1.4	20.02	1 7	0.34	05	870929
3313	DC033201	1 9	20 04	1	20	05	871014
3313	DC033202	0 8	20	0.5	0 1	05	871014
3314	DC033301	10 9	20 05	10 7	19 84	04	871007
3314	DC033302	2 7	19 97	2 1	20 02	05	871007
3314	SC033301	10 9	20 05	NM	NM	04	871007
3314	SC033302	2 8	19 97	NM	NM	05	871007
3315	DC033401	3 9	20 11	4 5	19 81	02	870922
3315	DC033402	NM	NM	1	20 06	02	870922
3316	DC033501	2 5	20 05	2 2	20 24	05	870924
3316	DC033502	1 6	20 07	NM	NM	03	870924
3317	DC033601	4 9	20 07	3 7	19 96	05	871015
3317	DC033602	4 7	20 08	NM	NM	10	871015
3317	SC033601	4 9	20 07	NM	NM	05	871015
3317	SC033602	4 7	20 08	NM	NM	10	871015
3318	DC033701	3 9	20 08	3 5	19 83	05	870923
3318	DC033702	0 8	20 15	NM	NM	05	870923
3319	DB041401	3 6	19 98	3 6	20	11	870616
3319	QD063088	3 8	20 01	NM	NM	11	870616
3320	DB041412	3	20 02	3	20 01	28	870915
3321	DB040401	3 2	20 19	4	19 99	11	870630
3321	QD100688	NM	NM	4	19 99	11	870630
3322	DB040412	2 7	20 24	NM	NM	29	870908
3323	DB041206	2 7	20 02	2 9	20 14	02	870826
3324	DB041252	3.4	20 16	4 7	20 03	10	871002
3325	DB041218	2 6	20 06	2 3	19 94	34	870921
3325	QD082988	2 5	20 06	NM	NM	34	880921
3326	DB041208	3 2	20 07	4 2	20 15	10	870921
3327	DB040301	NM	20 04	3.8	20 11	14	870929
3327	DB040315	3 6	20 03	3 1	20 03	08	871002
3328	DD029111	5 8	20 1	6 1	19 93	03	880512
3328	DD029112	1 4	20 1	NM	NM	04	880512
3328	SD029111	5.8	20 1	NM	NM	03	880512
3328	SD029112	1 4	20 1	NM	NM	04	880512
3329	DD016003	8 4	20 01	8 1	20 1	02	880513
3329	SD016003	8.4	20 01	NM	NM	02	880513
3330	DD029109	1.5	20.02	NM	NM	02	880419
3330	DD029110	3.5	20 12	3 5	20 1	04	880419
3330	DD029423	0 5	19 99	NM	NM	04	880419
3331	DD016001	3 2	20 08	NM	NM	01	880108

Episode No	SCC No	Dioxin/Furans %lipid	Dioxin/Furans wet weight (g)	Xenobiotics %lipid	Xenobiotics wet weight (g)	No. of Samples in Composite	Sampling Date
3331	DD016002	1 1	20.09	NM	NM	01	880108
3331	DD016007	5	20 02	1.1	20	02	880108
3331	DD016008	2 7	19 99	NM	NM	02	880108
3331	SD016008	2.7	19 99	NM	NM	02	880108
3332	DD016009	13.4	20.15	14 2	20 07	22	880621
3332	DD016010	1 2	20.18	-0-	-0-	09	880621
3333	DD016011	7 6	20.09	NM	NM	03	880609
3333	DD016012	6 3	20 13	6 2	19.99	05	880609
3333	DD029108	0 8	20 01	NM	NM	02	880609
3333	QD121588	NM	20.11	NM	NM	03	880609
3334	DD016013	12 2	20 14	9 4	20 06	05	880606
3334	DD016014	1.5	20 11	NM	NM	05	880606
3335	DD016015	13 2	19.96	11 3	20 04	04	880425
3335	DD016016	2 3	20 08	NM	NM	05	880425
3335	DD029101	4 8	20 04	3.3	20.02	02	880425
3335	DD029102	1 4	20.07	1.1	0.23	01	880425
3335	DD029103	8 1	20 11	9 5	20	01	880425
3335	QD081588	2.1	20 23	NM	NM	01	880425
3335	QD091588	NM	NM	3.6	19 81	02	880425
3335	SD016015	13 2	19 96	NM	NM	04	880425
3336	DD016004	2 7	20 02	1.6	19.93	02	880519
3336	DD016005	7 6	20 01	NM	NM	02	880519
3336	DD016006	5.1	20.09	4 8	20 02	01	880519
3336	DD016017	2	20 09	3	19 98	02	880519
3336	DD016018	1 2	20 04	1 1	20 04	06	880519
3336	QD092288	8 2	20 06	NM	NM	06	880519
3337	DD016019	5 9	19 95	6 1	20 01	08	880407
3337	DD016020	2	20 16	NM	NM	03	880407
3337	QD051388	NM	20 08	NM	NM	08	880407
3338	DD016021	0 8	20 09	NM	NM	08	880129
3338	DD016022	4 9	19 98	5	20 04	10	880129
3338	DD029107	0 6	19 98	NM	NM	09	880129
3339	DD016023	7 4	20 12	7 3	20	04	880524
3339	DD016024	1 9	20 01	NM	NM	07	880524
3339	QD016023	7 3	20 1	NM	NM	04	880524
3340	DD029113	0 9	20	NM	NM	03	880428
3340	DD029114	8 8	19 94	8 2	20 13	04	880428
3340	SD029114	8 8	19 94	NM	NM	04	880428
3341	DD016103	0 7	20 04	NM	NM	05	870929
3341	DD016104	7 7	20 15	7 8	20 01	05	870929
3341	QD081788	NM	NM	8 2	20 02	05	870929
3341	QD092788	0 7	19 98	NM	NM	05	870929
3341	SD016103	0 7	20 04	NM	NM	05	870929
3341	SD016104	7 7	20 15	NM	NM	05	870929
3342	DD016105	0 9	20.04	13 9	20 03	03	871202
3342	DD016106	1 4	20	NM	NM	04	871202
3343	DD016107	6 9	20 01	1 4	20 12	02	871102
3343	DD016108	3 4	10 01	NM	NM	06	871102
3344	DD016109	8 2	20	8 4	20 04	01	871028
3344	DD016110	0 9	20 04	NM	NM	05	871028
3344	SD016109	8.2	20	NM	NM	01	871028
3345	DD016111	1 1	20	2 1	20 07	06	871103
3345	DD016112	0 5	20 05	NM	NM	01	871103
3345	SD016111	2 4	20	NM	NM	06	871103
3346	DD016113	3 9	20	3 9	19 88	01	871214
3346	DD016114	0 9	20 05	2 6	20 12	05	871214
3346	QD042088	4	20 06	NM	NM	01	871214
3346	SD016113	3 9	20	NM	NM	01	871214
3346	SD016114	0 9	20 05	NM	NM	05	871214
3347	DD016115	6 1	20 03	4 5	20 05	05	880307
3347	DD016116	1 4	20 06	NM	NM	04	880307
3347	SD016115	6 1	20 03	NM	NM	05	880307
3348	DD016117	2 1	19.98	2 1	20 06	06	880318
3348	DD016118	5 3	20 02	5 1	20 03	06	880318
3348	QD072888	5 7	20	NM	NM	06	880318
3348	SD016117	2 1	19 98	NM	NM	06	880318
3348	SD016118	5 3	20 02	NM	NM	06	880318

Episode No	SCC No	Dioxin/Furans %lipid	Dioxin/Furans wet weight (g)	Xenobiotics %lipid	Xenobiotics wet weight (g)	No. of Samples in Composite	Sampling Date
3349	DD016119	8 5	20	5 8	20 05	03	880218
3349	DD016120	1.5	20 02	NM	NM	02	880218
3350	DD016121	10 6	20 07	10 4	20	06	880406
3350	DD016122	0.5	20.13	0.9	19 99	04	880406
3350	QD052688	NM	20	NM	NM	06	880406
3351	DD016123	1 2	20 03	NM	NM	01	880202
3351	DD016124	10 3	20 12	9 7	19 99	02	880202
3351	QD021888	7 7	20 23	NM	NM	02	880202
3352	DF023723	1 3	20 18	1	20 09	01	871211
3352	DF023724	5 5	19 99	5 6	19 74	03	871211
3352	QD022089	NM	NM	0 7	20 05	01	871211
3352	QD091388	NM	20 09	NM	NM	03	871211
3353	DF024121	3	20 1	2 6	19 96	02	871210
3353	DF024122	6 2	20 04	6 3	19 74	03	871210
3353	QD024121	2 9	19 98	NM	NM	02	871210
3354	DY022301	8 4	20 01	9 2	20 01	03	871114
3354	DY022302	1 1	20 02	0 8	19 99	03	871114
3355	DY022303	7 5	20 02	6 5	19 97	03	871119
3355	DY022304	1	20 06	0 6	19 98	03	871119
3355	SY022303	7.5	20 02	NM	NM	03	871119
3356	DE030201	10.4	20 05	10 1	19 66	04	871118
3356	SE030201	10.4	20 05	NM	NM	04	871118
3357	DY022223	0.5	20 06	NM	NM	01	871202
3357	DY022224	18 5	20 11	22 7	20 02	01	871202
3360	DD029117	5 9	20.01	6 9	20 06	04	880901
3360	DD029118	1 9	20 05	NM	NM	04	880901
3360	QD022389	6 7	20 03	NM	NM	04	880901
3375	DD016305	16 9	20 01	19 3	19 97	03	880914
3375	DD016306	1 4	20 08	0 8	0 16	05	880914
3375	QD071189	NM	NM	1 4	0 29	05	880914
3375	QD101188	18	20 12	NM	NM	03	880914
3376	DD016307	12 6	20 09	13	20.03	05	880906
3376	DD016308	2 4	19 99	0 5	0 09	05	880906
3376	QD050389	1 7	19 99	NM	NM	05	880906
3377	DD016309	12 7	20 05	14 7	20 12	05	880906
3377	DD016310	1 3	20 04	1	0 2	05	880906
3377	SD016309	12 7	20 05	NM	NM	05	880906
3378	DD016311	7.4	20 07	1 5	19 98	02	880912
3378	DD016312	1 6	19 98	NM	NM	05	880912
3378	DD029115	10.8	20	12	19 96	03	880912
3378	DD029116	2 7	20 01	NM	NM	01	880912
3385	DD016401	4 8	20 1	4 7	20 08	05	880901
3385	QD101888	NM	NM	6 7	20 11	NA	880901
3395	DD016421	8 2	19 97	8 1	20	06	880901
3395	DD016422	0.8	20 03	NM	NM	03	880901
3395	SD016421	8 2	19 97	NM	NM	06	880901
3401	DD016509	11 1	20 15	12 3	19 98	03	880421
3401	DD016510	1 3	20 07	0 6	20 1	04	880421
3403	DD016513	10.7	20 12	11 7	19 98	05	880810
3403	DD016514	6 4	20 13	1 4	20 01	04	880810
3404	DD016515	6 2	20 14	6 1	20 03	05	880810
3404	DD016516	0 8	20 05	NM	NM	03	880810
3404	QD016515	NM	NM	6 2	20 12	05	880810
3404	SD016515	6 2	20 14	NM	NM	05	880810
3409	DB040701	12 2	20 07	11 7	20	05	870915
3409	DB040706	1 1	20 03	0 6	20 08	NA	870915
3411	DB040501	8 3	20 03	10 3	20	03	870909
3412	DB040901	1 8	20 13	2 1	20 02	06	870917
3412	DB040907	14 7	20 03	16 9	20 06	03	870917
3412	SB040907	14 7	20 03	NM	NM	03	870917
3414	DC036203	0 8	20 09	2 3	20 06	NA	871007
3414	DC036204	9 6	20 01	10 4	20 12	NA	871007
3415	DC036205	0 8	20 04	1 1	20 02	05	870922
3415	DC036206	11 5	20 07	8.1	20 04	NA	870922
3416	DF025210	3 1	20 09	NM	NM	03	890906
3416	DF025211	2	20 02	NM	NM	03	890906
3416	DF025212	1 6	20 06	NM	NM	03	890906

Episode No	SCC No	Dioxin/Furans %lipid	Dioxin/Furans wet weight (g)	Xenobiotics %lipid	Xenobiotics wet weight (g)	No. of Samples in Composite	Sampling Date
3418	DF025007	2	20 03	NM	NM	08	890516
3419	DC036207	7 3	20 01	7.3	0.86	03	890606
3419	DC036208	1 8	20 13	1.4	0.27	05	890606
3420	DC036209	2 9	20.07	2.8	0.57	03	881115
3420	DC036210	6 2	20.01	5.4	20 08	03	881115
3421	DC036211	1 2	20.05	0.9	20.09	05	880907
3421	DC036212	9 7	19 99	10	20	05	880907
3421	SC036212	9 7	19 99	NM	NM	05	880907
3422	DC036213	7 6	19 97	0.3	0.05	05	880920
3422	DC036214	1 9	20 13	0.8	20 15	03	881006
3423	DC036215	2 1	20 02	NM	NM	05	880913
3423	DC036216	6 2	20 13	6	20 12	05	880929
3424	DC036217	2 1	20 08	NM	NM	03	880914
3424	DC036218	4 1	20 12	4 2	20	05	880914
3425	DF025005	5.6	20 01	5 7	20 04	03	890131
3425	DF025012	2 3	20 09	NM	NM	03	890131
3425	QD031389	2 1	20.03	NM	NM	03	890131
3426	DB069102	NM	20	3 8	19 98	03	880908
3427	DB069103	NM	20 01	1	20.01	03	880908
3428	DB069104	NM	20.07	4.6	20 05	03	880908
3429	DB069105	NM	20 05	1.7	20.1	05	880829
3430	DB069106	NM	20	2.9	20 14	05	880927
3431	DB069109	NM	19 99	2.9	20 11	02	870927
3432	DB069111	NM	20.07	NM	NM	02	870926
3433	DB069112	3 6	20 05	4	19 99	05	870820
3433	QD021689	3 6	20 05	NM	NM	05	870820
3434	DB040801	NM	20 05	4 2	19 95	05	870820
3434	QD011889	NM	NM	4 1	20 11	05	870820
3435	DD016601	2 8	20	NM	NM	02	890105
3435	DD016602	22.6	20 02	23 6	20	01	890105
3437	DJ022302	3 5	20 11	NM	NM	NA	870822
3438	DJ022303	3 6	20 15	NM	NM	30	890321
3439	DJ022304	2 9	20 01	NM	NM	05	890327
3439	QD062289	2 6	19 99	NM	NM	05	890327
3440	DJ022305	3 2	20 06	NM	NM	04	890328
3441	DJ022306	4	20 01	NM	NM	05	890328
3442	DF024301	1 2	20	NM	NM	07	890426
3442	QD081089	1 1	20 11	NM	NM	07	890426
3443	DF009118	8 2	20 03	6 1	19 93	02	870306
3444	DD016603	12 1	20 03	10 9	0 82	05	890829
3444	DD016604	7 1	19 98	6 4	0 8	05	890829
3444	DD029512	1 2	20	0 8	0 16	03	890829
3444	QD091289	11 4	20 12	NM	NM	05	890829
3445	DD029513	2 7	20 06	2 2	0 45	03	890524
3445	DD029514	6 5	19 99	NM	NM	05	890524
3446	DD016605	1 2	20 13	0 5	0 1	02	890718
3446	DD016606	2 8	20 08	2 9	0 57	03	890718
3446	DD029511	7 5	20 03	NM	NM	03	890718
3446	QD091889	NM	NM	2 9	0.58	03	890718
3446	QD092089	7 8	20.07	NM	NM	03	890718
3450	DY022308	1.3	20 02	NM	NM	04	1988
3450	DY022309	1 8	20 09	NM	NM	04	1988
3451	DY022310	2 1	20	NM	NM	04	880518
3451	DY022314	1 9	19 97	NM	NM	04	880518
3452	DF025218	2 2	20 04	NM	NM	06	890912
3452	DF025219	3	20 11	NM	NM	06	890912
3452	DF025220	1 2	20 02	NM	NM	02	890912
3452	QD103189	2 4	20 02	NM	NM	06	890912

APPENDIX D-7

List of Confirmation Samples

TABLE D-7
List of Confirmation Samples

Episode Number	SCC No. for Environmental Sample	SCC No. for Confirmation Sample
3062	DF024324	SF024324
3085	DF024113	SF024113
3087	DF023414	SF023414
3087	DF023415	SF023415
3118	DE021602	SE021602
3141	DE024102	SE024102
3146	DE026701	SE026701
3167	DD015708	SD015708
3168	DD015711	SD015711
3185	DD015821	SD015821
3297	DB041501	SB041501
3300	DB040201	SB040201
3301	DB041101	SB041101
3314	DC033301	SC033301
3314	DC033302	SC033302
3317	DC033601	SC033601
3317	DC033602	SC033602
3328	DD029111	SD029111
3328	DD029112	SD029112
3329	DD016003	SD016003
3331	DD016008	SD016008
3335	DD016015	SD016015
3340	DD029114	SD029114
3341	DD016103	SD016103
3341	DD016104	SD016104
3345	DD016111	SD016111
3346	DD016113	SD016113
3347	DD016115	SD016115
3348	DD016117	SD016117
3348	DD016118	SD016118
3355	DY022303	SY022303
3356	DE030201	SE030201
3377	DD016309	SD016309
3395	DD016421	SD016421
3404	DD016515	SD016515
3412	DB040907	SB040907
3421	DC036212	SC036212
3443	DF009118	SF009118

APPENDIX D-8

List of Duplicate Samples

TABLE D-8
List of Duplicate Samples

Episode Number	SCC No. for Environmental Sample	SCC No. for Duplicate Sample
1994	DE017702	QD110586
2070	DJ000901	QD072186
2100	DH001703	QD111086
2105	DH002204	QD063086
2126	DD000302	QD062686
2139	DD001604	QD071486
2191	DG005206	QD092486
2225	DC006903	QD101387
2228	DC007204	QD070286
2280	DF005201	QD121688
2280	DF005204	QD062386
2301	DD004504	QD071786
2322	DB001304	QD082686
2369	DA003203	QD030387
2376	DA003903	QD111886
2385	DE006002	QD101987
2394	DE006901	QD006901 and QD022189
2427	DE010203	QD102887
2427	DE010403	QD010687
2429	DE010403	QD010687
2430	DE010603	QD121486
2618	DE015403	QD102088
2721	DA006502	QD011089
2776	DY007101	QD010489
3028	DA008801	QD031787
3036	DG025901	QD120287
3041	DG026401	QD031588
3042	DG026501	QD026501
3043	DG026602	QD111987
3048	DG027101	QD027101
3048	DG027102	QD012689
3049	DG027202	QD111087
3060	DF009101	QD073189
3062	DF024024	QD071587
3062	DF024324	QD024324
3065	DF023419	QD010788
3065	DF023420	QD022588
3069	DF024008	QD051788
3072	DF024017	QD070688
3072	DF024018	QD040788
3073	DF019221	QD121587
3077	DF019113	QD121087
3080	DF023317	QD040987

TABLE D-8(Continued)

Episode Number	SCC No. for Environmental Sample	SCC No. for Duplicate Sample
3082	DF023402	QD120787
3084	DF024109	QD072188
3087	DF023413	QD072387
3087	DF023414	QD023414
3088	DF023418	QD091587
3093	DF024118	QD080387
3093	DF024118	QD080387
3094	DC017201	QD092988
3096	DC035002	QD052488
3097	DC038701	QD071989
3098	DC038601	QD032587
3113	DE021101	QD030789
3115	DE021301	QD101689
3118	DE021601	QD020488
3118	DE021602	QD010689
3125	DE022302	QD120888
3132	DE023201	QD010588
3145	DE026601	QD071988
3146	DE026701	QD060288
3150	DA008901	QD120187
3151	DA009101	QD072887
3162	DJ025103	QD041889
3165	DD015703	QD031788
3167	DD015707	QD040588
3167	DD015708	QD062388
3169	DD015713	QD022789
3177	DD015805	QD100488
3189	DD015905	QD092188
3192	DJ024009	QD020789
3193	DC039001	QD039001
3212	DJ024121	QD050388
3216	DJ023708	QD022388 and QD091688
3220	DJ023902	QD012288
3237	DJ020308	QD080988
3238	DJ023918	QD080888
3248	DJ022502	QD050588
3252	DJ022509	QD020989
3252	DJ022510	QD082288 and QD052588
3266	DY022701	QD012389
3267	DY022101	QD020288
3288	DY022218	QD060188
3298	DB041604	QD112988
3299	DB041601	QD040601
3300	DB040204	QD021398

TABLE D-8 (Continued)

Episode Number	SCC No. for Environmental Samnle	SCC No. for Duplicate Samnle
3301	DB041101	QD092088
3303	DB042301	QD102588
3304	DB041004	QD041004
3305	DB042001	QD110388
3306	DB041801	QD041801
3307	DB042101	QD100588
3308	DB040001	QD030689
3319	DB041401	QD063088
3321	DB040401	QD100688
3325	DB041218	QD082988
3333	DD016011	QD121588
3335	DD029101	QD091588
3335	DD029102	QD081588
3336	DD016018	QD092288
3337	DD016019	QD051388
3339	DD016023	QD016023
3341	DD016103	QD092788
3341	DD016104	QD081788
3346	DD016113	QD042088
3348	DD016118	QD072888
3350	DD016121	QD052688
3351	DD016124	QD012888
3352	DF023723	QD022089
3352	DF023724	QD091388
3353	DF024121	QD024121
3360	DD029117	QD022398
3375	DD016305	QD101188
3375	DD016306	QD071189
3376	DD016308	QD050389
3385	DD016401	QD101888
3404	DD016515	QD016515
3425	DF025012	QD031389
3433	DB069112	QD021689
3434	DB040801	QD011889
3439	DJ022304	QD062289
3442	DF024301	QD081089
3444	DF016603	QD091289
3446	DD016606	QD091889
3446	DD029511	QD092089
3452	DF025218	QD103189

APPENDIX D-9

Comments Regarding Sample Analyses from EPA Duluth Laboratory

TABLE D-9
Comments Regarding Sample Analyses From EPA-Duluth Laboratory

Episode	SCC Ho.	Comments	
2016	DF001101	XC:	CONC OF DDE TAKEN FROM DILUTION
2017	DF001201	XC:	CONCENTRATION FOR DDE TAKEN FROM DILUTION
2057	DE000601	SC:	RERUN OF C102086LH
2110	DH002710	SC:	SAMPLE NUMBER ASSIGNED AT LAB AND DSR FILLED OUT AT LAB
2122	DH003904	SC:	DH003905 WAS COMBINED WITH DH003904 TO MAKE THIS SAMPLE
2133	DD001002	XC:	DDE QUANT. ION SATURATED, DDE CONCENTRATION IS A MINIMUM VAL
2190	DG005104	SC:	NS = NO MORE SAMPLE
2194	DG005504	SC: XC:	SAMPLE CONTAINER BROKEN POSSIBLE CONTAMINATION NS = NO MORE SAMPLE, XENOBIOTIC ANALYSIS WAS NOT DONE
2212	DC005602	SC:	RERUN OF D070286SN
2283	DF005502	SC:	RERUN FROM C082686CS,C070786KJ
2298	DD004201	SC: XC:	RERUN FROM D082686CS,D070786KJ NS = NO MORE SAMPLE, XENOBIOTIC ANALYSIS WAS NOT DONE.
2309	DD005301	SC:	ORIGINAL WAS F070786KJ
2309	DD005304	SC:	ORIGINAL WAS G070786KJ
2322	DB001304	SC:	ORIGINAL WAS I070786KJ
2328	DB001904	XC:	DDE VALUE HIGHER THAN REPORTED, DUE TO TIME CONSTRAINTS UNABLE TO DILUTE SAMPLE
2358	DA001901	XC:	NS = NO MORE SAMPLE, XENOBIOTIC ANALYSIS WAS NOT DONE
2383	DE005801	XC:	CONC FOR DDE TAKEN FROM DILUTION
2427	DE010202	XC:	CONC FOR DDE AND 4CL-PCB TAKEN FROM DILUTION
2429	DE010402	XC:	CONC FOR 4CL-PCB TAKEN FROM DILUTION
2432	DE010710	XC:	CONC FOR DDE TAKEN FROM DILUTION
3022	DA008401	DC: SC: DC:	1234678 HPCDD HAS LEVEL OF CONTAMINATION BELOW 1.5 PPT LEVEL OF CONTAMINATION IN BLANK IS AT 0.6 PPT, (QA: 2.5 X BLANK LEVEL)
3039	DG026202	DC: DC:	PCDD/F BLANK SAMPLE INDICATED 0.5 PPT OF 123567 HXCDD AND .5 PPT OF 1234678 HPCDD
3041	QD031588	DC: DC:	234678 HXCDF CONTAIMINATION BELOW 0.5 PPT BLANK LEVEL AT 0.2 PPT (QA: 2.5 X BLANK LEVEL)
3042	DG026501	XC:	LOW CHRYSENE D12 INTERNAL STD. AREA WILL AFFECT VALUES
3048	DG027101	XC:	LOW CHRYSENE D12 INTERNAL STD. AREA WILL AFFECT VALUES
3048	QD027101	XC:	HIGH CHRYSENE D12 RESPONSE MAY PRODUCE LOWER TA VALUE FOR THESE ANALYTES RELATED

TABLE D-9(Continued)

Episode	SCC No.		Comments
3066	DF023504	DC:	PCDD/F BLANK SAMPLE INDICATED 0.5 PPT OF 123678 HXCDD
		DC:	AND 0.5 PPT OF 1234678 HPCDD
3069	DF024008	DC:	1234678 HPCDD CONTAMINATION BELOW 1.5 PPT, BLANK CONTAMINATION AT 0.6 PPT
		DC:	(GA: 2.5 X BLANK LEVEL)
3082	DF023401	XC:	XENO SAMPLE DILUTED 10:1
3084	DF024109	XC:	DDE CONC. CALCULATED FROM DILUTED RUN OF ORIGINAL SAMPLE
3085	DF024113	XC:	SAMPLE DILUTED 10:1
3087	DF023416	XC:	NS = NO MORE SAMPLE, XENO ANALYSIS WAS DONE BUT DID NOT MEET XENO QA
3092	DF023502	XC:	HYDROCARBON PATTERN PRESENT
3094	DC017201	XC:	DDE QUANT ION SATURATED DDE CONCENTRATION IS A MINIMUM VALUE
3095	DC038801	XC:	CONC FOR DDE TAKEN FROM DILUTION
3095	DC038802	XC:	DDE CONC. CALCULATED FROM DILUTED RUN OF ORIGINAL SAMPLE
3098	DC038602	XC:	PCB AND DDE-P,P' VALUES TAKEN FROM DILUTIONS
3100	DC019702	XC:	NS = NO MORE SAMPLE, XENOBIOTIC ANALYSIS WAS NOT DONE
3101	DC019901	XC:	PCB VALUES ARE TAKEN FROM DILUTIONS
3105	DF025001	XC:	SAMPLE DILUTED 10:1
3109	DE025001	XC:	4CL-PCB SATURATED SO VALUE REPORTED IS A MINIMUM VALUE
3115	DE021301	XC:	RECEIVED GROUND SAMPLE ID NUMBER IS 89-578-147
3115	DE021302	XC:	RECEIVED GROUND SAMPLE ID NUMBER IS 89-567-150
3115	QD01689	XC:	SAMPLE ID NUMBER IS 89-576-147
3117	DE021501	XC:	DDE QUANT ION SATURATED DDE CONCENTRATION IS A MINIMUM VALUE
3134	DE023401	XC:	NS = NO MORE SAMPLE, XENOBIOTIC ANALYSIS WAS NOT DONE
3134	DE023402	SC:	NS = RECEIVED GROUND. NOT ENOUGH SAMPLE FOR ANALYSIS
3134	DE023406	XC:	ALL PCB CONCENTRATIONS TAKEN FROM DILUTION
3138	DE023801	XC:	CONC OF 4CL-PCB TAKEN FROM DILUTION
3151	DA009101	XC:	4CL-PCB SATURATED VALUE REPORTED IS A MINIMUM CONCENTRATION
3167	DD015708	SC:	ACTUAL OMNIVORE ANALYZED AS BOTTOM FEEDER
3168	DD015711	XC:	DDE CONC. CALCULATED FROM DILUTED RUN OF ORIGINAL SAMPLE
3172	DD015719	DC:	PENTA WINDOW HAD CHROMATOGRAPHY PROBLEMS
		XC:	DDE CONC. CALCULATED FROM DILUTED RUN OF ORIGINAL SAMPLE
3175	DD015802	DC:	PCDD/F BLANK SAMPLE INDICATED 0.5 PPT OF 123678 HXCDD
		DC:	PCDD/F BLANK SAMPLE INDICATED 0.5 PPT OF 1234678 HPCDD

TABLE D-9 (Continued)

Episode	SCC No.	Comments3	
3310	DC032701	XC:	INTERNAL STD. AREA FOR CHRYSENE WAS LOW
3315	DC033401	XC:	DDE CONC. CALCULATED FROM DILUTED RUN OF ORIGINAL SAMPLE
3315	DC033402	XC:	CONC FOR DDE TAKEN FROM DILUTION
3317	DC033602	SC:	SAMPLE TO SMALL TO FILLET, GROUND WHOLE
		XC:	FAILED QA XENOBIOTICS, NO MORE SAMPLE FOR REANALYSIS
3331	DD016002	XC:	NS = NO MORE SAMPLE, XENOBIOTIC ANALYSIS WAS NOT DONE
3333	DD016011	DC:	PCDD/F: DUPLICATE IS 00121588 PCDD/F BLANK SAMPLE INDICATED 0.5 PPT OF 123678 HXCDD AND 0.5 PPT OF 1234678 HPCDD
3343	DD016108	XC:	NS = NO MORE SAMPLE XENOBIOTIC ANALYSIS WAS NOT DONE
3333	QD121588	DC:	PCDD/F: DUPLICATE OF QD016011 PCDD/F: BLANK SAMPLE INDICATED 0.5 PPT OF 123678 HXCDD AND 0.5 PPT OF 1234678 HPCDD
3335	DD029101	XC:	XENO: DUPLICATE OF DD091588, DUPLICATE NOT RUN WITH SET WAS MISTAKENLY REASSIGNED BUT DATA USED FOR PRECISION
3335	QD091588	XC:	XENO: DUPLICATE OF QD029101 NOT RUN WITH SET WAS MISTAKENLY REASSIGNED BUT USED FOR PRECISION
3345	DD016112	XC:	NS = NO MORE SAMPLE, XENOBIOTIC ANALYSIS WAS NOT DONE
3352	DF023724	XC:	DDE CONC. CALCULATED FROM DILUTED RUN OF ORIGINAL SAMPLE
3533	DF024121	XC:	CONC OF DDE TAKEN FROM DILUTION
3353	DF024122	XC:	DDE CONC. CALCULATED FROM DILUTED RUN OF ORIGINAL SAMPLE
3354	DY022301	XC:	DDE CONC. CALCULATED FROM DILUTED RUN OF ORIGINAL SAMPLE
3355	DY022303	XC:	DDE CONC. CALCULATED FROM DILUTION RUN OF ORIGINAL SAMPLE
3401	DD016509	XC:	DDE NUMBER TAKEN FROM DILUTION
3401	DD016510	DC:	PCDD/F BLANK SAMPLE INDICATED 0.5 PPT OF 123678 HXCDD AND 0.5 PPTOF 1234678 HPCDD
3404	DD016516	DC:	PCDD/F BLANK SAMPLE INDICATED 0.5 PPT OF HXCDD AND 0.5 PPT OF 1234678 HPCDD
3416	DF025212	DC:	NO WEIGHTS GIVEN
3433	DB069112	XC:	CHRYSENE-D12 HIGH RESPONSE MAY GIVE LOWER VALUES FOR RELATED
3443	DF009118	XC:	SAMPLE DILUTED 10:1
3450	DY022308	DC:	SAMPLE CONTAINS THE FOLLOWING ID NUMBERS: AA 948,949,950,951
3450	DY022309	DC:	SAMPLE CONTAINS THE FOLLOWING ID NUMBERS: AA 952,953,954,955
3451	DY022310	DC:	SAMPLE CONTAINS THE FOLLOWING ID NUMBERS: AA 396,397,398,399
3451	DY022314	DC:	SAMPLE CONTAINS THE FOLLOWING ID NUMBERS: AA 412,413,414,415

TABLE D-9(Continued)

Episode	SCC No.	Comments
3182	DD015815	DC: PCDD/F BLANK SAMPLE INDICATED 0.5 PPT OF 123678 HXCDD DC: PCDD/F BLANK SAMPLE INDICATED 0.5 PPT OF 1234678 HPCDD
3185	DD015821	XC: SAMPLE DILUTED 10:1
3206	DJ024102	DC: PCDD/F BLANK SAMPLE INDICATED 0.5 PPT OF 123678 HXCDD AND 0.5 PPTOF 1234678 HPCDD
3206	DJ024103	XC: TO MUCH NOISE IN TRICHLOROBIPHENYL WINDOW (M/Z 256) TO QUANT
3212	DJ024120	XC: CONCENTRATION FOR DDE TAKEN FROM DILUTION
3212	DJ024121	XC: SAMPLE DILUTED 10:1
3213	DJ024123	SC: WERE RECIEVED GROUND
3219	DJ023713	XC: DDE CONCENTRATIONS CALCULATED FROM DILUTED SAMPLE
3231	DJ023911	XC: DDE CONCENTRATIONS CALCULATED FROM DILUTED SAMPLE
3245	DJ023623	DC: 1234678 HPCDD CONTAMINATION BELOW 1.5 PPT, BLANK CONTAMINATION AT 0.6 PPT, (GA:2.5 X BLANK LEVEL)
3252	QD020989	XC: DOES NOT PASS GA FOR IODONAPHTHALENE BUT CORRELATES WELL WITH
3259	DB000466	XC: CONC FOR DDE, 4CL-PCB & 5CL-PCB ARE TAKEN FROM DILUTION
3259	DB000473	XC: CONC FOR ALL PCBS TAKEN FROM DILUTION
3259	DB069101	XC: CONC FOR DDE AND PCBS TAKEN FROM DILUTION
3266	DY022702	XC: DILUTED SAMPLE BY A FACTOR OF 10:1
3272	DY022111	DC: PCDD/F BLANK SAMPLE INDICATED 0.5 PPT OF 123678 HXCDD AND 0.5 PPT OF 1234678 HPCDD
3272	DY022112	XC: SAMPLE DILUTED 10:1
3282	DY022206	XC: C0NC FOR DDE TAKEN FROM DILUTION
3282	DY022207	XC: DDE CONC. CALCULATED FROM DILUTED RUN OF ORIGINAL SAMPLE
3283	DY022209	XC: SAMPLE DILUTED 10:1
3288	DY022217	XC: CONC FOR DDE TAKEN FROM DILUTION
3288	DY022218	XC: SAMPLE DILUTED 10:1
3289	DY022220	SC: NS = NO MORE SAMPLE
3290	DY022222	XC: DDE CONC. CALCULATED FROM DILUTED RUN OF ORIGINAL SAMPLE
3299	QD040601	XC: LOW CHRYSENE MAY PRODUCE ELEVATED VALUES FOR TA'S RELATED TO QUANTIFICATION
3300	DB040201	XC: DDE CONC. CALCULATED FROM DILUTED RUN OF ORIGINAL SAMPLE
3303	QD102588	XC: CONC FOR 4CL-PCB TAKEN FROM DILUTION
3306	QD041801	XC: CONC FOR 4CL-PCB AND 5CL-PCB TAKEN FROM DILUTION