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Region 2

CONTAMINANTS INVESTIGATION OF NORTHERN, CENTRAL, AND EASTERN PORTIONS OF CADDO LAKE NATIONAL WILDLIFE REFUGE, TEXAS 2003

Project ID No. 1902-2007-21420

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ABSTRACT

In March and April, 2003, a contaminants investigation was conducted at Caddo Lake National Wildlife Refuge (CLNWR) in Harrison County, Texas, by the United States Fish and Wildlife Service (USFWS). This Refuge is an overlay refuge located on the site of a former munitions production facility, Longhorn Army Ammunition Plant. The purpose of the investigation was to determine contaminant levels (metals, semi-volatile organic compounds, organochlorine pesticides, total polychlorinated biphenyls, dioxin/furans, and perchlorate) in soils and/or sediments in approximately 5,140 acres (2,080 hectares) in the northern, central, and eastern portions of the Refuge. Surficial soil and/or sediment grab samples were collected from 200 sites within this area. The individual sampling sites were selected through a computer generated stratified random matrix grid. The distance between sampling points ranged from approximately 100 to 400 meters (300 to 1300 feet). Metals, residual organochlorine pesticides, total-polychlorinated biphenyls (PCBs), and dioxin/furans concentrations were detected at elevated levels in comparison to ecological screening criteria throughout the area sampled. Semi-volatile organic compounds were detected at low levels at multiple locations, while perchlorate was detected above the analytical detection limit at only one site.

Of the metals analyzed, beryllium, boron, cadmium, chromium, copper, molybdenum, and nickel were detected at elevated levels in surficial sediment collected from one site in the central portion of the Refuge. Lead was detected at elevated levels at five sites in the northern and central portions. Manganese was detected at elevated concentrations in 53% of the soil samples collected. Mercury was detected above the analytical detection limits in 92% of the samples collected, with the majority being below levels of ecological concern; however, elevated levels were detected in a cluster in the northern portion of the Refuge that may be indicative of contamination associated with past operations. Vanadium and zinc were detected at elevated levels in surficial soil collected from single, separate sites in the northern portion of the Refuge. The majority of organochlorine pesticides detected were at levels where adverse affects to ecological resources would not be expected to occur. Residual chlordane was detected at 29% of the sites, while total-dichloro-diphenyl-trichloroethane (DDT) was detected at 41% of the sites sampled. Total-PCBs were detected in 97% of the sites sampled, primarily at low concentrations.

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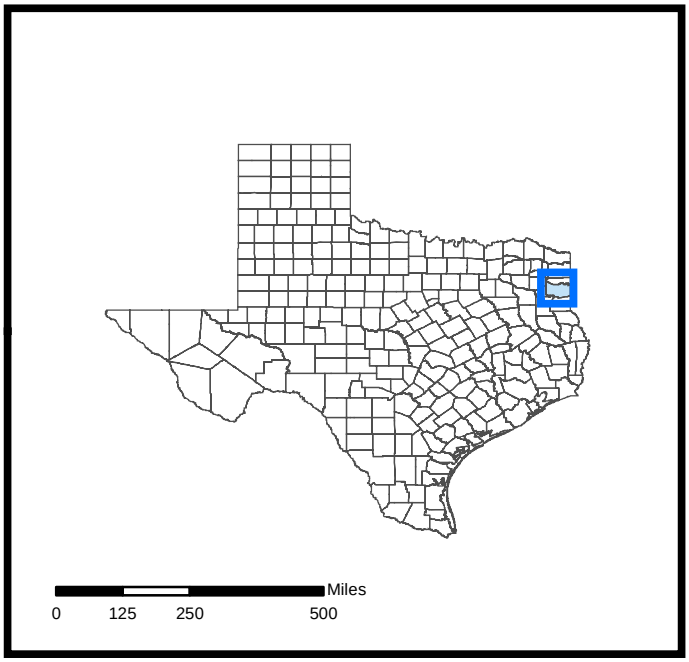
INTRODUCTION

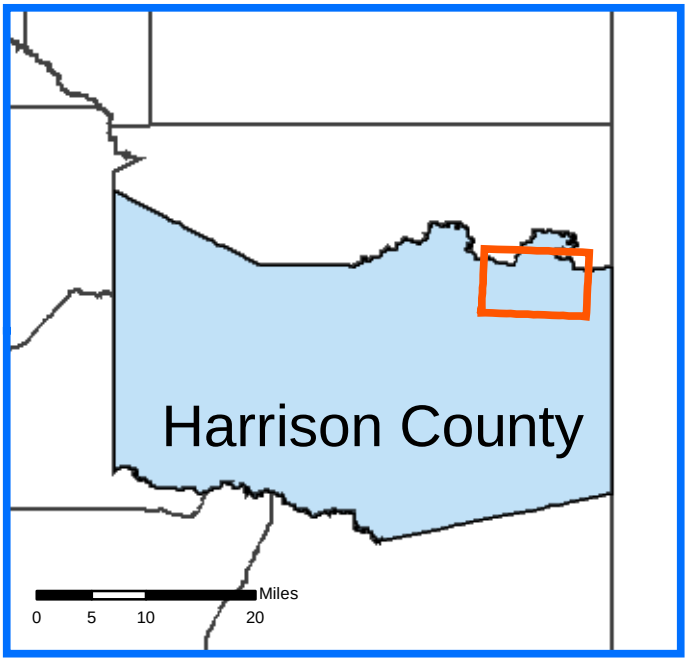
In March and April, 2003, a contaminants investigation was conducted at Caddo Lake National Wildlife Refuge (CLNWR) by the United States Fish and Wildlife Service (USFWS). The purpose of this investigation was to determine contaminant (metals, semi-volatile organic compounds, organochlorine pesticides, total polychlorinated biphenyls, dioxin/furans, and perchlorate) levels in soils and/or sediments in approximately 5,140 acres (2,080 hectares) in the northern, central, and eastern portions of the Refuge. Data resulting from this investigation would be used by the USFWS to determine the suitability of transfer of administrative control of these portions of the Refuge from the United States Army to the USFWS.

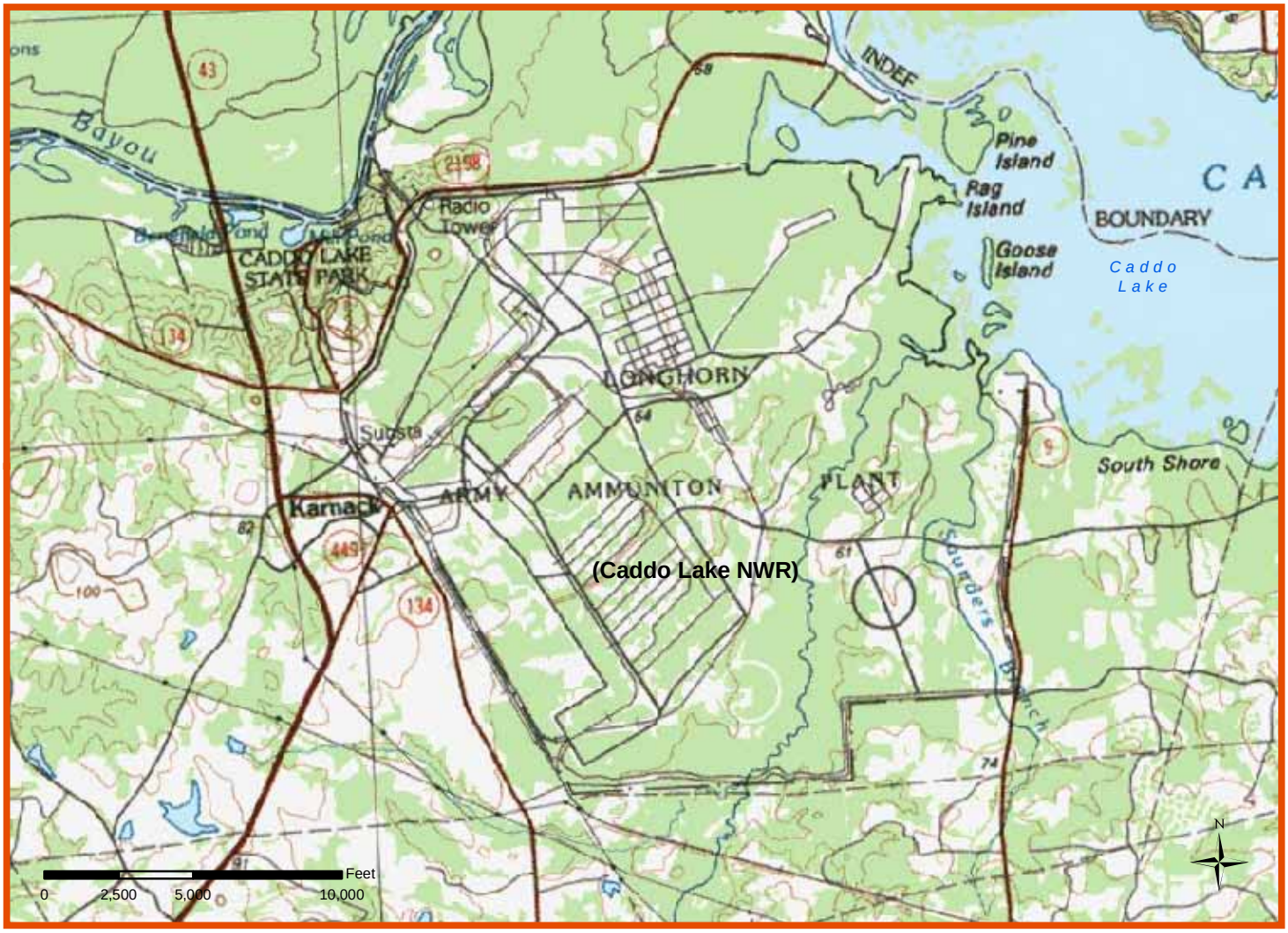
STUDY AREA & BACKGROUND

Caddo Lake National Wildlife Refuge is an overlay refuge located on the site of a former military munitions production facility in Harrison County, Texas, southwest of Caddo Lake (Figure 1). The entire site consists of 8, 493 acres (3,437 hectares)of mixed upland pine and bottomland hardwood forests interlaced with remnant structures from the munitions plant. The area is drained by four principal lotic systems, Goose Prairie Bayou, Central Creek, Harrison Bayou, and Saunders Branch, all flowing into Caddo Lake. The former production facility was known as Longhorn Army Ammunition Plant (LHAAP). This plant was established by the United States Department of Defense (USDOD) under the jurisdiction of the U.S. Army Armament, Munitions, and Chemical Command (AMCCOM) in 1941 to produce trinitrotoluene (TNT) flake through the contract operator Monsanto Chemical Company (TSHA, 2002). The plant produced over four hundred million pounds (greater than 180 million kilograms) of TNT between 1942 and 1945 (TSHA, 2002). In late 1945, TNT production ceased and Monsanto suspended all operations at the site, while the facility was placed on standby status by the USDOD (TSHA, 2002). The plant remained inactive until 1952, when operations were re-initiated under the contract operator, Universal Match Corporation to produce pyrotechnic and illuminating ammunition such as photoflash bombs, simulators, hand signals, and 40 millimeter tracers (GS, 2002; TSHA, 2002). By 1956, Morton-Thiokol Incorporated (formerly known as the Thiokol Corporation) had assumed contract operation responsibilities at the facility (GS, 2002; TSHA, 2002). From 1956 through 1965, the primary mission of the plant was the production of solid propellant rocket motors and fuels for the Nike-Hercules, Falcon, Lacrosse, Honest John, and Sergeant missile programs (GS, 2002). In 1965, the production of pyrotechnic and illuminating ammunition was re-initiated at the plant by Thiokol. The plant continued to produce munitions all during the 1960s and 1970s. At its peak, the facility employed over 2,200 people (Tolbert, personal communication, 2002).

Figure 1: Caddo Lake National Wildlife Refuge Study Area Map







In 1987, LHAAP was selected as one of the sites for the static firing and elimination of Pershing IA and II rocket motors in order to comply with the terms of the Intermediate Nuclear Force Treaty between the U.S. and the Soviet Union (GS, 2002). This project was completed by 1991 (TSHA, 2002). In 1990, the facility was placed by the U.S. Environmental Protection Agency (USEPA) on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priority List (NPL). This listing as a Superfund site was due to groundwater, surface water, sediments, and soil contamination (ATSDR, 2002). Contaminants associated with the listing included metals, explosives, semi-volatile organic compounds, and volatile organic compounds (ATSDR, 2002). Activities to remediate this contamination were initiated in 1990 and are expected to be completed no earlier than 2030. Thiokol continued operations at the plant, primarily the production of the plastic explosive CL-20, until 1997 (ATSDR, 2002). By 1998, Thiokol had ceased operations at the site and AMCCOM had classified the plant as excess property. In 1999, negotiations were initiated between AMCCOM and USFWS over the possible absorption of the site into the National Wildlife Refuge System. In October, 2000, LHAAP became Caddo Lake National Wildlife Refuge, an overlay refuge, with the U.S. Army maintaining administrative control of the property until primary jurisdiction for the site is deemed suitable for transfer to the USFWS.

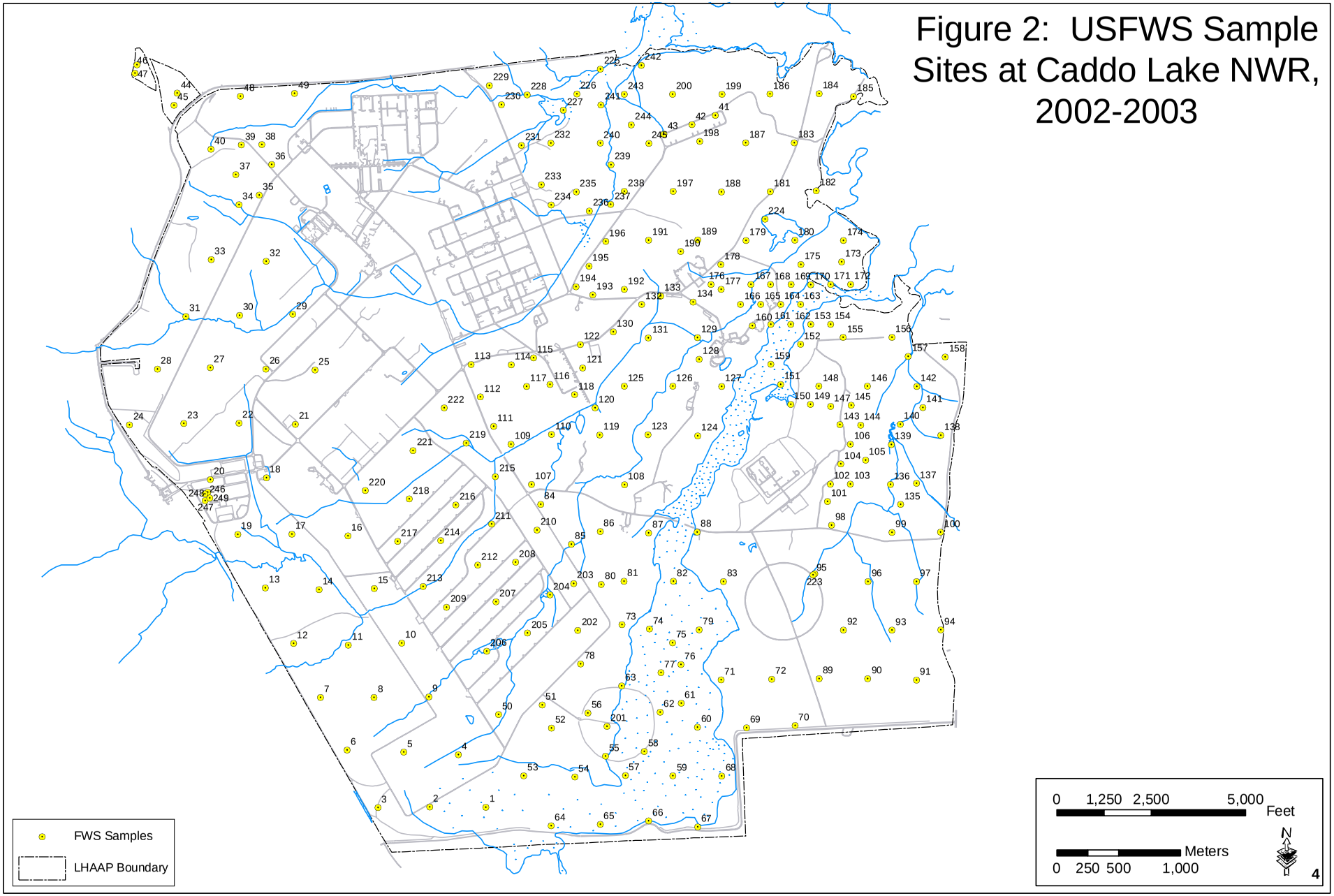
In 2002, the USFWS conducted a contaminants investigation in the western portion of CLNWR (Figure 2, Sites 1 through 49) (Giggleman and Lewis, 2002). The results of this investigation indicated that elevated metals, organochlorine pesticides, and total-PCB contamination were scattered throughout this portion of the Refuge, while perchlorate contamination was limited to a small area in the southwestern portion of the Refuge (Giggleman and Lewis, 2002).

MATERIALS & METHODS

Surficial grab soil and/or sediment samples were collected from 200 sites (Sites 50 through 249) within the the northern, central, and eastern portions of CLNWR (Figure 2) by USFWS personnel in March and April, 2003. The overall area sampled covered approximately 5,140 acres (2,080 hectares). The individual sampling sites were selected through a computer generated stratified random matrix grid. The distance between sampling points ranged from approximately 100 to 400 meters (300 to 1300 feet). Sediment samples were collected from 19 sites (Sites 60, 64, 68, 118, 139, 149, 153, 154, 157, 162, 163, 170, 171, 180, 182, 215, 224, 225, and 227), while soils were collected from the remaining 181 sites. Sites 246 through 249 were located in the perimeter surrounding the Administrative Building. The ecological value of habitat within the administrative area is limited, but soil samples were collected from these four sites to address potential health concerns of future staff raised during the previous sampling conducted by the USFWS in 2002 (Giggleman and Lewis, 2002).

Each soil and/or sediment sample was collected at a depth of 0 to 6 inches [0 to 15 centimeters (cm)] using a disposable plastic scoop, placed in a pre-cleaned glass container, and placed on ice in a cooler. These samples were then shipped over-night through the Patuxent Analytical Control

Figure 2: USFWS Sample Sites at Caddo Lake NWR, 2002-2003



Facility (PACF) to contract laboratories for chemical analyses. Samples from each site were analyzed for moisture, sand, silt, and clay content (as percentages); metals (aluminum, arsenic, barium, beryllium, boron, cadmium, chromium, copper, iron, lead, magnesium, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, vanadium, and zinc) in milligrams/kilogram (mg/kg) dry weight; semi-volatile organic compounds [1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1-chloronaphthalene, 1-naphthylamine, 2,3,4,6-tetrachlorophenol, 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, 2,4-dichlorophenol, 2,4-dimethylphenol, 2,4-dinitrophenol, 2,4-dinitrotoluene, 2,6-dichlorophenol, 2,6-dinitrotoluene, 2-chloronaphthalene, 2-chlorophenol, 2-methylphenol, 2-naphthylamine, 2-nitroaniline, 2-nitrophenol, 2-picoline, 2-methylnaphthalene, 3,3'-dichlorobenzidine, 3-methylcholanthrene, 3-nitroaniline, 4,6-dinitro-2-methylphenol, 4-aminobiphenyl, 4-bromophenyl-phenylether, 4-chloro-3-methylphenol, 4-chloroaniline,4-chlorophenyl-phenylether, 4-methylphenol, 4-nitrophenol, 7,12-dimethylbenz(a)anthracene, acentophenone, aniline, benzidine, benzo(a)anthracene, benzoic acid, benzyl alcohol, bis(2-chloroethoxy)methane, bis(2-chloroethyl)ether, bis(2-ethylhexyl)phthalate, bis(2chloroisopropy)ether, butylbenzylphthalate, carbazole, di-n-butylphthalate, di-n-octylphthalate, dibenz(a,h)anthracene, dibenz(a,j)acridine, dibenzofuran, diethyl phthalate, dimethylphthalate, diphenylamine, ethyl methanesulfonate, hexachlorobutadiene, hexachlorocyclopentadiene, hexachloroethane, isophorone, methyl methanesulfonate, n-nitroso-di-n-propylamine, n-nitrosopiperidine, nitrobenzene, pentachlorobenzene, pentachloronitrobenzene, pentachlorophenol, phenacetin, phenol, pronamide, a,a-dimethylphenylamine, acenaphthalene, acenaphthene, anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, n-nitrosodiphenylamine, naphthalene, p-dimethylaminoazobenzene, phenanthrene, and pyrene] in mg/kg dry weight; organochlorine pesticides [1,2,3,4-terachlorobenzene, 1,2,4,5-tetrachlorobenzene, aldrin, hexachlorobenzene (HCB), heptachlor, alpha hexachlorocyclohexane (αBHC), alpha (α) chlordane, beta hexachlorocyclohexane (βBHC), cis-nonachlor, delta hexachlorocyclohexane (δBHC), dieldrin, endosulfan II, endrin, gamma hexachlorocyclohexane (γBHC), gamma (γ) chlordane, heptachlor epoxide, mirex, o,p'-dichloro-diphenyl-dichloroethane (o,p'-DDD), o,p'-dichloro-diphenyl-dichloroethylene (o,p'-DDE), o,p'-dichloro-diphenyl-trichloroethane (o,p'-DDT), oxychlordane, p,p'-dichloro-diphenyl-dichloroethane (p,p'-DDD), p,p'-dichloro-diphenyl-dichloroethylene (p,p'-DDE), p,p'-dichloro-diphenyl-trichloroethane (p,p'-DDT), pentachloro-anisole, toxaphene, and trans-nonachlor] in mg/kg dry weight; and total polychlorobiphenyls (PCBs) in mg/kg dry weight (for analytical methods see Appendix A). Additional soil/sediment samples were also collected in the same manner from all 200 sites and submitted to the Institute of Environmental and Human Health at Texas Tech University to be analyzed for perchlorate content in micrograms/kilogram (μg/kg) dry weight (for analytical methods see Appendix A).

At Sites 55, 59, 73, 78, 84, 96, 107, 112, 118, 128, 149, 157, 158, 164, 167, 176, 178, 193, 203, and 236 additional soil and/or sediment samples were collected and handled in the same manner. These additional samples were submitted through PACF to be analyzed for dioxins/furans [2,3,7,8-tetrachlordibenzo-p-dioxin (TCDD), 1,2,3,7,8-pentachlorodibenzo-p-dioxin (PeCDD), 1,2,3,4,7,8-hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-HxCDD), 1,2,3,6,7,8-hexachlorodibenzo-p-dioxin (1,2,3,6,7,8-HxCDD), 1,2,3,7,8,9-hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-HxCDD), 1,2,3,4,6,7,8-

heptachlorodibenzo-p-dioxin (HpCDD), 1,2,3,4,6,7,8,9-octachlorodibenzo-p-dioxin (OCDD), 2,3,7,8-tetrachlorodibenzofuran (TCDF), 1,2,3,7,8-pentachlorodibenzofuran (1,2,3,7,8-PeCDF), 2,3,4,7,8-pentachlorodibenzofuran (2,3,4,7,8-PeCDF), 1,2,3,4,7,8-hexachlorodibenzofuran (1,2,3,4,7,8-HxCDF), 1,2,3,6,7,8-hexachlorodibenzofuran (1,2,3,6,7,8-HxCDF), 1,2,3,7,8,9-hexachlorodibenzofuran (1,2,3,7,8,9-HxCDF), 2,3,4,6,7,8-hexachlorodibenzofuran (2,3,4,6,7,8-HxCDF), 1,2,3,4,6,7,8-heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF), 1,2,3,4,7,8,9-heptachlorodibenzofuran(1,2,3,4,7,8,9-HpCDF), and 1,2,3,4,6,7,8,9-octachlorodibenzofuran (OCDF)] in mg/kg dry weight (for analytical methods see Appendix A).

Following the methodology recommended by the USEPA (1995), field duplicate soil and/or sediment samples were collected from Sites 53, 56, 65, 71, 75, 91, 113, 131, 138, 140, 152, 160, 186, 194, 200, 201, 209, 214, 231, and 238 and handled in the same manner as the other samples collected at these sites. These duplicate samples were also submitted through PACF and Texas Tech University to be analyzed for metals, semi-volatile organic compounds, organochlorine pesticides, total-PCBs, and perchlorate, respectively. The purpose of these duplicates was to assess the laboratory analytical procedures as well as to assess the quality of field sampling techniques. In addition to the sampling, all observed anomalies encountered in the field (i.e., drums, solid waste, foundations, craters, etc.) were documented. The coordinates of each anomaly were entered into a geographical information systems (GIS) database for possible future corrective measures.

RESULTS & DISCUSSION

The results of the analyses are presented in Tables 1-8 in Appendix B. Field duplicate analytical results are presented in Appendix C. Where applicable, all analytical results were compared with soil benchmarks proposed by Efroymson *et al.* (1997), the USEPA, and the Texas Commission on Environmental Quality [TCEQ formerly known as the Texas Natural Resource Conservation Commission (TNRCC)] (2001), and sediment screening criteria recommended by the Ontario Ministry of the Environment (OME) (Persaud *et al.*, 1993), Long *et al.* (1995), the TCEQ (2000), MacDonald *et al.* (2000), as well as with data from comparative studies and other screening criteria such as remedial target values to determine the possible effects of contamination in soils and/or sediments collected from CLNWR. Benchmarks and/or screening criteria are values derived from toxicity data resulting from multiple studies. Soil benchmarks are typically based on the degree of toxicity of a given contaminant to plants, earthworms, heterotrophic microbes, and other invertebrates (Efroymson *et al.*, 1997). Remedial target values are soil cleanup levels employed to address human health concerns. In sediments, the OME considers the lowest effects level (LEL) indicative of a level of contamination that is non-toxic to the majority of benthic organisms, whereas the severe effect level (SEL) is indicative of contaminated sediments that would be detrimental to a majority of benthic organisms (Persaud *et al.*, 1993). In comparison, according to Long *et al.* (1995), the effects range-low (ER-L) of a detected chemical represents the lower 10th percentile of toxicological effects data for that specific chemical, whereas the effects range-median (ER-M) represents the toxicological effects data for the chemical at the 50th percentile. Concentrations

detected below the ER-L represent a value where minimal effects would be expected, whereas concentrations detected at or above the ER-L but below the ER-M, represent a possible effects range (Long *et al.*, 1995). Concentrations detected at or above the ER-M represent a probable effects range where adverse toxicological effects would frequently occur (Long *et al.*, 1995). In a consensus based approach towards evaluating screening criteria in sediments, Macdonald *et al.* (2000), state that the threshold effect concentration (TEC) for a contaminant in sediments is the concentration below which adverse effects are not expected, whereas the probable effect concentration (PEC) is the level above which adverse effects would likely occur. In the State of Texas, the TCEQ (2000) has developed 85th percentile values which are screening criteria for freshwater sediments based on the percentage of the lack of toxic effects to aquatic organisms from a given contaminant. As with the OME LEL and SEL values, ER-L, ER-M, TEC, PEC, and TCEQ 85th percentile values are non-regulatory sediment screening guidelines developed to assist in assessing the degree of contamination in a given area.

Field observations are presented in Appendix D. The anomalies encountered in the northern, central, and eastern portions of CLNWR ranged from spent flares to discarded transformers. Observed physical hazards such as open pits were also characterized and their locations documented for future corrective measures.

Moisture, sand, silt, and clay content as percentages for the 200 sites are presented in Appendix B, Table1. Measured moisture content ranged from 9.5% at Site 121 to 65.7% at Site 162 (Appendix B, Table 1). Ninety-eight percent of the sites were dominated by sands (Appendix B, Table 1). Soils collected from Sites 173, 187, 206 and 231 were the only samples that were predominantly composed of silts, while the soils collected from Sites 185 and 199 and the sediment collected from Site 227 were the only samples that contained clays greater than 1% (Appendix B, Table 1).

Metals

Results of the metals analyses for the 181 soil samples and the 19 sediment samples are presented in Appendix B, Table 2. All of the 20 metallic analytes were detected in one or more of the samples.

[Aluminum (Al)] Approximately 8.1% of the Earth's crust is composed of aluminum (Miller and Gardiner, 1998). Background surface soil concentrations in the western U.S. range up to 74,000 mg Al/kg (Shacklette and Boerngen, 1984). According to the TCEQ (2001), a soil-aluminum concentration of 30,000 mg Al/kg is considered background in the State of Texas. Efroymson *et al.* (1997), proposed 600 mg Al/kg dry weight as a screening benchmark value for aluminum toxicity to soil microorganisms. In freshwater sediments, the threshold effects level (TEL) for aluminum toxicity is 25,500 mg Al/kg dry weight (Buchman, 1999). Bio-availability of aluminum in an aqueous environment is driven by pH (Sparling and Lowe, 1996). Aluminum is relatively innocuous when the pH ranges from 5.5 to 7.5 but becomes soluble and biologically available when the pH is less than 5.5 (Sparling and Lowe, 1996). For many species of fish exposed to elevated levels of aluminum, toxic effects appear to correlate with decreasing pH, resulting in adverse effects that shift from asphyxiation to impaired ion regulation (Sparling and Lowe, 1996). In birds, elevated

levels of aluminum in the diet can result in adverse effects in calcium and phosphorus metabolism (Sparling and Lowe, 1996).

Aluminum levels were detected above the analytical detection limits in every sample collected (Appendix B, Table 2). Soil-aluminum concentrations ranged from 678 mg Al/kg dry weight at Site 216 to 21,700 mg Al/kg dry weight at Site 82 [sample size (n) = 181] (Appendix B, Table 2). All of these concentrations exceeded the soil benchmark value proposed by Efroymson *et al.* (1997), but none of the measured aluminum levels exceeded the soil background values suggested by Shacklette and Boerngen (1984) and the TCEQ (2001). Sediment-aluminum concentrations ranged from 3,299 mg Al/kg dry weight at Site 149 to 17, 790 mg Al/kg dry weight at Site 227 (n = 19) (Appendix B, Table 2), all below the sediment criterion proposed by Buchman (1999).

[Arsenic (As)] According to Shacklette and Boerngen (1984), the estimated arithmetic mean for background elemental arsenic concentrations in surface soils in the western U.S. is 7 mg As/kg, while the TCEQ (2001), considers a soil-arsenic concentration of 5.9 mg As/kg as background in the State of Texas. Pennington (1991) reported soil-arsenic concentrations ranging up to 13.36 mg As/kg in the Texas Panhandle. Efroymson *et al.* (1997), proposed an earthworm soils toxicity screening benchmark value of 60 mg As/kg dry weight, while the USEPA (2000a) considers a soil-arsenic concentration of 37 mg As/kg dry weight as a benchmark value for terrestrial plants. In aquatic environments, elemental arsenic is insoluble in water, but many arsenic species are highly soluble in freshwater (Schneider, 1971). Common arsenic species include arsenate, arsenite, methanearsonic acid, and dimethyl arsenic acid (USEPA, 1980). In aerobic waters, reduced forms of arsenic tend to be oxidized into arsenates (USEPA, 1980). In turn, the adsorption of arsenate by metal oxides and the formation of arsenic sulfide appears to remove arsenic from the water column, binding it to the sediments, and preventing high concentrations of arsenic being present in solution (USEPA, 1980). The estimated residence time for arsenic in lentic systems is 45 years (Eisler, 1988b). The OME suggest a sediment LEL of 6 mg As/kg dry weight and a SEL of 33 mg As/kg dry weight (Persaud *et al.*, 1993), while Long *et al.* (1995), consider 8.2 mg As/kg dry weight as the ER-L for arsenic in sediments. MacDonald *et al.* (2000), recommend a sediment TEC of 9.79 mg As/kg dry weight and a PEC of 33 mg As/kg dry weight. Toxic effects of arsenic to aquatic life are significantly dependent on numerous biological and abiotic factors, including water temperature, pH, organic content, phosphate concentrations, suspended solids, and arsenic speciation (Eisler, 1988a). Birds and freshwater biota usually contain arsenic concentrations less than 1 mg As/kg wet weight (USDOI, 1998).

Arsenic concentrations were detected above the analytical detection limits in all of the soil samples collected with the exception of samples taken from Sites 150 and 151, which contained no detectable amounts (Appendix B, Table 2). The detected soil-arsenic concentrations ranged from 0.54 mg As/kg dry weight at Site 216 to 12 mg As/kg dry weight at Site 248 (n = 179) (Appendix B, Table 2). The detected concentrations at Sites 82 (6.75 mg As/kg dry weight), 165 (7.75 mg As/kg dry weight), 230 (5.95 mg As/kg dry weight), 243 (10.5 mg As/kg dry weight), 246 (9.91 mg As/kg dry weight), and 248 exceeded some or all of the cited background values, but were well below the cited ecological benchmarks (Shacklette and Boerngen, 1984; Efroymson *et al.*, 1997; USEPA, 2000a;

TCEQ, 2001). Arsenic concentrations were detected above the analytical detection limits in every sediment sample collected with the exception of the samples taken from Sites 157, 170, and 171, which contained no detectable amounts (Appendix B, Table 2). The detected sediment-arsenic concentrations ranged from 0.61 mg As/kg dry weight at Site 163 to 4.24 mg As/kg dry weight at Site 60 (n = 16) (Appendix B, Table 2), all below the cited sediment screening criteria (Persaud *et al.*, 1993; Long *et al.*, 1995; MacDonald *et al.*, 2000).

[Barium (Ba)] Barium compounds are used in a variety of industrial applications. In nature, barium chiefly occurs as the relatively insoluble salts, barite and witherite (USEPA, 1986). Shacklette and Boerngen (1984) reported an estimated arithmetic mean of 670 mg Ba/kg as background for soils in the western U.S. while a soils concentration of 300 mg Ba/kg dry weight is considered background in the State of Texas (TCEQ, 2001). According to Efroymson *et al.* (1997), a proposed screening benchmark value for barium toxicity to soil microorganisms is 3000 mg Ba/kg dry weight, while the TCEQ (2001) considers a soil-barium concentration of 500 mg Ba/kg dry weight as a benchmark value for terrestrial plants. In freshwater environments, the 85th percentile values reported by the TCEQ (2000) for sediment-barium levels range from 181 mg Ba/kg dry weight in lotic systems to 297 mg Ba/kg dry weight in lentic systems.

Barium levels were detected above the analytical detection limits in all samples collected (Appendix B, Table 2). The soil-barium concentrations ranged from 25.5 mg Ba/kg dry weight at Site 192 to 1,526 mg Ba/kg dry weight at Site 222 (n = 181), while the sediment-barium concentrations ranged from 21.9 mg Ba/kg dry weight at Site 215 to 316 mg Ba/kg dry weight at Site 60 (n = 19) (Appendix B, Table 2). Sites 65 (404 mg Ba/kg dry weight), 75 (334 mg Ba/kg dry weight), 76 (383 mg Ba/kg dry weight), 82 (397 mg Ba/kg dry weight), 109 (377 mg Ba/kg dry weight), 140 (335 mg Ba/kg dry weight), and 222 contained soil-barium levels that exceeded the background concentration reported by the TCEQ (2001); however, all soil-barium concentrations were below the background concentration estimated by Shacklette and Boerngen (1984) and the cited ecological screening criteria (Efroymson *et al.*, 1997; TCEQ, 2001), with the the exception of the concentration detected at Site 222. The barium level measured at Site 222 exceeded all of the reported background values (Shacklette and Boerngen, 1984; TCEQ) and the lower ecological threshold proposed by the TCEQ (2001), but was less than the toxicity threshold for soil microorganisms recommended by Efroymson *et al.* (1997). Of the 19 sites where sediments were collected, nine sites (Sites 60, 68, 154, 157, 163, 170, 171, 180, and 227) contained sediment-barium levels (Appendix B, Table 2) that exceeded the 85th percentile value for lotic systems (TCEQ, 2000), however only two of these sites [Sites 60 (316 mg Ba/kg dry weight) and 68 (289 mg Ba/kg dry weight)] contained sediment-barium concentrations that exceeded the 85th percentile value for lentic systems. Currently, there are no definitive ecological benchmarks developed for assessing the toxicological significance of sediment-barium levels, but in comparing sediment-barium concentrations (Appendix B, Table 2) to established soil ecological benchmarks, none of the measured sediment-barium levels exceeded any of the ecological benchmarks recommended by the TCEQ (2001) or Efroymson *et al.* (1997).

[Beryllium (Be)] Although not truly a heavy metal, beryllium is a rare element that is considered potentially toxic (Irwin and Dodson, 1991; Manahan, 1991). The distribution of beryllium in the

environment largely results from the combustion of coal and oil (Goyer, 1991; Manahan, 1991). Coal mined from the mid-west U.S. contains an average of about 2.5 mg Be/kg while crude oil can contain approximately 0.08 mg Be/kg (Goyer, 1991). Beryllium concentrations in soils in the U.S. can range up to 15 mg Be/kg (Shacklette and Boerngen, 1984), however according to Shacklette and Boerngen (1984), the estimated arithmetic mean for background beryllium concentrations in soils in the western U.S. is 0.97 mg Be/kg. In the State of Texas, a soil-beryllium concentration of 1.5 mg Be/kg dry weight is considered background (TCEQ, 2001). The TCEQ (2001) considers a soil-beryllium concentration of 10 mg Be/kg dry weight as a benchmark value for terrestrial plants. In freshwater environments, Irwin and Dodson (1991) state that in the absence of a known source, lotic systems usually contain very low or non-detectable amounts of beryllium.

Beryllium concentrations were detected above the analytical detection limits in all of the soil samples collected with the exception of samples taken from 18 sites (Sites 69, 73, 74, 95, 97, 114, 116, 120, 161, 176, 192, 202, 204, 209, 214, 216, 247, and 249), which contained no detectable amounts (Appendix B, Table 2). The detected soil-beryllium concentrations ranged from 0.21 mg Be/kg dry weight at Site 91 to 2.24 mg Be/kg dry weight at Site 82 (n = 163) (Appendix B, Table 2). Twenty-five percent of these samples (40/163) contained soil-beryllium concentrations that equaled or exceeded the estimated arithmetic mean for background beryllium levels reported by Shacklette and Boerngen (1984), whereas only 6% (10/163) exceeded the background concentration reported by the TCEQ (2001). None of the soil samples contained beryllium levels that approached the ecological benchmark recommended by the TCEQ (2001). In sediments, beryllium concentrations were detected above the analytical detection limits in every sample collected with the exception of the sample taken from Site 215, which contained no detectable amount (Appendix B, Table 2). The detected sediment-beryllium concentrations ranged from 0.38 mg Be/kg dry weight at Site 149 to 14.5 mg Be/kg dry weight at Site 118 (n = 18) (Appendix B, Table 2). Currently, there are no definitive screening criteria developed for assessing the ecological significance of sediment-beryllium levels, but the concentration detected at Site 118 did exceed the ecological benchmark recommended by the TCEQ (2001) for plants.

[Boron (B)] Boron compounds are used in the production of fertilizers and other agricultural chemicals such as herbicides and insecticides (Moore *et al.*, 1990; USDOI, 1998). In the U.S., boron concentrations in soils typically range from 10-300 mg B/kg (USDOI, 1998). According to Shacklette and Boerngen (1984), the estimated arithmetic mean for background boron concentrations in western soils is 29 mg B/kg while a soils concentration of 30 mg B/kg is considered background in the State of Texas (TCEQ, 2001). Efroymson *et al.* (1997), recommend a screening benchmark value of 20 mg B/kg dry weight for boron toxicity to soil microorganisms and microbial processes, while the TCEQ (2001) considers a soil-boron concentration of 0.5 mg B/kg dry weight as a benchmark value for terrestrial plants. Usually, arid, saline soils will contain higher boron concentrations in comparison to watered, loamy soils (USDOI, 1998). Furthermore, soils formed from marine sediments typically contain higher concentrations of boron than those formed from igneous rocks (Moore *et al.*, 1990). In aquatic systems, boron can react and bind with clays, suspended matter, and sediments (USDOI, 1998). Eisler (1990) reports that freshwater sediments with a high clay composition usually contain less than 10 mg B/kg dry weight.

Boron concentrations were detected above the analytical detection limits in eight soil samples (from Sites 50, 51, 56, 69, 71, 73, 87, and 89) and one sediment sample (from Site 118) (Appendix B, Table 2). The measured boron-soil levels ranged from 2.1 mg B/kg dry weight at Site 73 to 3.25 mg B/kg dry weight at Site 71 (n = 8), while the detected sediment-boron concentration at Site 118 equaled 12.7 mg B/kg dry weight (Appendix B, Table 2). All of the detected soil-boron concentrations exceeded the lower benchmark value recommended by the TCEQ (2001); however, none of these concentrations exceeded the background values reported by Shacklette and Boerngen (1984), USDOI (1998), or the TCEQ (2001), nor approached the higher toxicity threshold value recommended by Efroymson *et al.* (1997). The concentration measured at Site 118 exceeded the sediment value reported by Eisler (1990).

[Cadmium (Cd)] Ryan *et al.* (1980) reported that the normal range for elemental cadmium in surface soils in the U.S. is 0.06 to 0.5 mg Cd/kg. According to Efroymson *et al.* (1997), a proposed screening benchmark value for cadmium toxicity to soil microorganisms is 20 mg Cd/kg dry weight, while the TCEQ (2001) reports concentrations of 110 mg Cd/kg dry weight and 29 mg Cd/kg dry weight as ecological benchmarks for earthworms and terrestrial plants, respectively. In aquatic systems, elemental cadmium is insoluble in water whereas cadmium chloride, nitrate, and sulfate compounds are highly soluble in freshwater (Schneider, 1971). Cadmium toxicity in freshwater is moderated by increasing water hardness through either complexation with carbonate or competition with calcium ions (Wren *et al.*, 1995). In sediments, the OME recommends a LEL of 0.6 mg Cd/kg dry weight and a SEL of 10 mg Cd/kg dry weight (Persaud *et al.*, 1993), whereas Long *et al.* (1995), consider 1.2 mg Cd/kg dry weight as the ER-L for cadmium. MacDonald *et al.* (2000), suggest a sediment TEC of 0.99 mg Cd/kg dry weight and a PEC of 4.98 mg Cd/kg dry weight.

Cadmium concentrations were detected above the analytical detection limits in 22 soil samples (from Sites 54, 59, 65, 71, 76, 79, 82, 83, 85, 88, 92, 106, 109, 110, 119, 128, 131, 196, 199, 232, 238, and 249) and five sediment samples (from Sites 68, 118, 154, 163, and 227) (Appendix B, Table 2). The detected soil-cadmium levels ranged from 0.25 mg Cd/kg dry weight at Site 92 to 0.56 mg Cd/kg dry weight at Site 249 (n = 22) (Appendix B, Table 2), all well below cited ecological benchmarks for terrestrial systems (Efroymson *et al.*, 1997; TCEQ, 2001). With the exception of the sediment-cadmium concentration measured at Site 118 (14.2 mg Cd/kg dry weight), the detected sediment-cadmium levels ranged from 0.26 mg Cd/kg dry weight at Site 163 to 0.5 mg Cd/kg dry weight at Site 68 (n = 4) (Appendix B, Table 2), and were all below cited sediment screening criteria (Persaud *et al.*, 1993; Long *et al.*, 1995; MacDonald *et al.*, 2000). Site 118 contained a highly elevated sediment-cadmium concentration in comparison to the cited criteria (Persaud *et al.*, 1993; Long *et al.*, 1995; MacDonald *et al.*, 2000).

[Chromium (Cr)] Excessive chromium can be mutagenic, carcinogenic, and teratogenic to a wide variety of organisms (Eisler, 1986a). Shacklette and Boerngen (1984) reported an estimated arithmetic mean of 56 mg Cr/kg as background for soils in the western U.S. According to the TCEQ (2001), a soil-chromium concentration of 30 mg Cr/kg dry weight can be considered background in the State of Texas. Efroymson *et al.* (1997), proposed soil toxicity screening benchmark values ranging from 0.4 mg Cr/kg dry weight for earthworms to 10 mg Cr/kg dry weight for soil

microorganisms. The USEPA (2000a) considers a soil-chromium concentration of 5 mg Cr/kg dry weight as a benchmark value for terrestrial plants. In freshwater systems, hydrolysis and precipitation are more important physical processes in determining the fate of chromium in comparison to adsorption and bio-accumulation (Eisler, 1986). It occurs in aqueous environments in various ionic forms, including the chromous, chromic, chromite, chromate, and/or dichromate ions (Becker and Thatcher, 1973). In the chromic or chromite forms, the ions are trivalent, whereas in the chromate and dichromate forms, the ions are hexavalent (Becker and Thatcher, 1973). Overall toxicity of chromium to aquatic biota is dependent on water hardness, temperature, pH, chemical speciation, and salinity, but in general, hexavalent chromium is more toxic than trivalent chromium (Becker and Thatcher, 1973; Eisler, 1986a). According to Eisler (1986a), the majority of chromium bound in sediments is unavailable for living organisms. The OME suggest a LEL of 26 mg Cr/kg dry weight and a SEL of 110 mg Cr/kg dry weight for chromium in sediments (Persaud *et al.*, 1993), whereas MacDonald *et al.* (2000), recommend a sediment TEC of 43.4 mg Cr/kg dry weight and a PEC of 111 mg Cr/kg dry weight.

Chromium concentrations were detected above the analytical detection limits in all samples collected (Appendix B, Table 2). Soil-chromium concentrations ranged from 1.24 mg Cr/kg dry weight at Site 247 to 35.3 mg Cr/kg dry weight at Site 243 (n = 181), while sediment-chromium levels ranged from 4.34 mg Cr/kg dry weight at Site 215 to 31.5 mg Cr/kg dry weight at Site 118 (n = 19) (Appendix B, Table 2). All of the soil samples contained chromium levels that exceeded the lower toxicity threshold value proposed by Efroymson *et al.* (1997), while 83% of these samples (150/181) contained chromium concentrations that exceeded the benchmark for plants recommended by the USEPA (2000a) and 38% (69/181) contained chromium levels that exceeded the benchmark for soil microorganisms (Efroymson *et al.*, 1997). In contrast, only the sample collected from Site 243 contained a soil-chromium concentration that exceeded the TCEQ (2001) background value, whereas none of the samples contained chromium concentrations above the background value suggested by Shacklette and Boerngen (1984). Of the sediment samples, Site 118 was the only site that contained elevated chromium levels in comparison to sediment screening criteria. The detected concentration at this site exceeded the OME LEL, but was below all other cited sediment screening values (Persaud *et al.*, 1993; MacDonald *et al.*, 2000).

[Copper (Cu)] Copper is primarily used in the manufacturing of electrical equipment, pipe, and machinery (1998a). It is also an essential micronutrient that interacts in animals with other essential trace elements such as iron, zinc, molybdenum, manganese, nickel, and selenium and also with nonessential elements including silver, cadmium, mercury, and lead (Goyer, 1991; Eisler, 1998a). In aquatic environments, enzymes concerned with nitrate transformations in algae require copper (Horne and Goldman, 1994). For soils, Shacklette and Boerngen (1984), consider 27 mg Cu/kg as the arithmetic mean background copper concentration in the western U.S., while a soil-copper concentration of 15 mg/kg dry weight is considered background in the State of Texas (TCEQ, 2001). Efroymson *et al.* (1997) proposed a soils toxicity screening benchmark value of 100 mg Cu/kg dry weight. The TCEQ (2001) report 61 mg Cu/kg dry weight as the soils benchmark value for earthworms. In freshwater environments, the type and amount of various copper compounds present in the water depends on water pH, temperature, alkalinity, and on the concentrations of bicarbonate,

sulfide, and organic ligands (Eisler, 1998a). The solubility of copper and copper salts is decreased under reducing conditions and is further modified by pH, temperature, and hardness; size and density of suspended materials; rates of coagulation and sedimentation of particulates; and concentration of dissolved organics (Eisler, 1998a). Copper concentrations in sediment interstitial pore waters correlate positively with concentrations of dissolved copper in the overlying water column (Eisler, 1998a). Typically, sediment bound copper is available to benthic organisms under anoxic and low pH conditions (Eisler, 1998a). The OME recommends a sediment LEL of 16 mg Cu/kg dry weight and a SEL of 110 mg Cu/kg dry weight (Persaud *et al.*, 1993), whereas Long *et al.* (1995), consider 34 mg Cu/kg dry weight as the ER-L for copper in sediments. MacDonald *et al.* (2000), suggest a sediment TEC of 31.6 mg Cu/kg dry weight and a PEC of 149 mg Cu/kg dry weight.

Copper concentrations were detected above the analytical detection limits in every sample collected with the exception of the soil sample from Site 72, which contained no detectable amount (Appendix B, Table 2). Measured soil-copper concentrations ranged from 0.69 mg Cu/kg dry weight at Site 204 to 26.9 mg Cu/kg dry weight at Site 89 (n = 180) (Appendix B, Table 2). Of the 181 sites sampled for soils, only Sites 89 and 165 contained soil-copper concentrations that were elevated in comparison to any of the cited soils screening criteria. The copper levels detected at Sites 89 (26.9 mg Cu/kg dry weight) and 165 (17 mg Cu/kg dry weight) exceeded the TCEQ (2001) background value, but were below the background level reported by Shacklette and Boerngen (1984) and well less than the ecological benchmarks suggested by the TCEQ (2001) and Efroymson *et al.* (1997) for soils. Sediment-copper concentrations ranged from 1.79 mg Cu/kg dry weight at Site 215 to 23.1 mg Cu/kg dry weight at Site 118 (n = 19) (Appendix B, Table 2). All of the 19 sites sampled for sediments contained copper concentrations below the cited sediment screening criteria with the exception of Sites 68, 118, and 227, which contained copper levels (17.8 mg Cu/kg, 23.1 mg Cu/kg, and 22.1 mg Cu/kg dry weight, respectively) exceeding the OME LEL, but were less than all other cited sediment criteria (Persaud *et al.*, 1993; Long *et al.*, 1995; MacDonald *et al.*, 2000).

[Iron (Fe)] Iron is a necessary nutrient that is a constituent of many enzymatic and other cellular processes (Horne and Goldman, 1994). It is absolutely essential both for the transport of oxygen to the tissues and for maintenance of oxidative systems within the tissue cells (Guyton, 1981). Iron composes approximately 5% of the Earth's crust (Miller and Gardiner, 1998). Background iron concentrations in surface soils in the western U.S. range up to 26,000 mg Fe/kg (Shacklette and Boerngen, 1984). In Texas, median background soil-iron concentrations are reported as 15,000 mg Fe/kg (TCEQ, 2001). Under normal oxidizing conditions in freshwater systems, ferric iron predominates over ferrous iron, and in turn, ferric iron forms insoluble compounds that rapidly disassociate from the water column and drop to the sediments (Horne and Goldman, 1994). The OME recommends a LEL of 20,000 mg Fe/kg dry weight and a SEL of 40,000 mg Fe/kg dry weight for iron in sediments (Persaud *et al.*, 1993). According to Beyer (1990), sediments from the Great Lakes containing less than 17,000 mg Fe/kg dry weight are considered non-polluted, whereas sediments containing iron concentrations greater than 25,000 mg Fe/kg dry weight are considered extremely polluted.

Iron levels were detected above the analytical detection limits in all samples collected (Appendix B, Table 2). Soil-iron concentrations ranged from 1,408 mg Fe/kg dry weight at Site 212 to 48,410 mg Fe/kg dry weight at Site 243 (n = 181), while sediment-iron concentrations ranged from 3,272 mg Fe/kg dry weight at Site 182 to 21,940 mg Fe/kg dry weight at Site 60 (n = 19) (Appendix B, Table 2). Thirteen sites (Sites 75, 76, 79, 82, 105, 147, 164, 168, 226, 230, 240, 241, and 243) contained soil-iron levels that exceeded the reported median background concentration for Texas (TCEQ, 2001). Of these 13 sites, four (Sites 82, 147, 168, and 243) contained soil-iron concentrations that exceeded the background value reported by Shacklette and Boerngen (1984). Although elevated at these four sites (especially at Site 243), the detected iron levels would not be expected to cause significant detrimental affects to ecological resources. With the exception of the sediment-iron concentration detected at Site 60, all sediment samples contained iron levels below cited screening criteria (Beyer, 1990; Persaud *et al.*, 1993). The iron concentration measured at Site 60 exceeded the OME LEL but was less than the upper threshold reported by Beyer (1990) and well below the OME SEL (Persaud *et al.*, 1993).

[Lead (Pb)] Listed by the USEPA as a priority pollutant, lead is used in pigment and chemical production, metallurgy and steel manufacturing, storage batteries, ceramics, petroleum products, cable sheathing, pipe and sheeting fabrication, and ammunition production (Eisler, 1988b). Lead is neither essential nor beneficial to living organisms, and unlike mercury, lead does not exhibit bio-magnification through progressive trophic levels (Eisler, 1988b; Pain 1995). Lead is naturally occurring in soils. According to Shacklette and Boerngen (1984), the estimated arithmetic mean for background lead concentrations in surface soils in the western U.S. is 20 mg Pb/kg. The TCEQ (2001), considers a soil-lead concentration of 15 mg Pb/kg dry weight as background in the State of Texas. Soil ecological screening criteria range from 50 mg Pb/kg dry weight for terrestrial plants to 500 mg Pb/kg dry weight for earthworms (TCEQ, 2001). In water, lead is most soluble and bio-available under conditions of low pH, low organic content, low concentrations of suspended sediments, and low concentrations of calcium, iron, manganese, zinc, and cadmium salts (Eisler, 1988b). The deposition of lead to sediments in aqueous environments is attributed primarily to the strong binding capacities of many sediment components for metals (Pain, 1995). In turn, lead concentrations in aquatic plants have been directly correlated with sediment lead concentrations (Pain, 1995). The OME suggests a sediment LEL of 31 mg Pb/kg dry weight and a SEL of 250 mg Pb/kg dry weight (Persaud *et al.*, 1993), while Long *et al.* (1995), consider 47 mg Pb/kg dry weight as the ER-L for lead in sediments. MacDonald *et al.* (2000), suggest a sediment TEC of 35.8 mg Pb/kg dry weight and a PEC of 128 mg Pb/kg dry weight.

Lead was detected above the analytical detection limits in every sample collected (Appendix B, Table 2). Soil-lead concentrations ranged from 4.37 mg Pb/kg dry weight at Site 161 to 99.7 mg Pb/kg dry weight at Site 242 (n = 181) (Appendix B, Table 2). Detected soil-lead levels exceeded the background concentration reported by the TCEQ (2001) in 33% (59/181) of the samples and were greater than the background value estimated by Shacklette and Boerngen (1984) in 18 % (32/181) of the samples (Appendix B, Table 2). Of these soil samples, only the concentrations detected at Sites 147 (74.7 mg Pb/kg dry weight), 240 (56.7 mg Pb/kg dry weight), and 242 exceeded any of the ecological benchmark recommended by the TCEQ (2001). The lead

concentrations measured at these three sites exceeded the lower threshold value (TCEQ, 2001) and warrant further investigation. Sediment-lead levels ranged from 4.49 mg Pb/kg dry weight at Site 215 to 78.7 mg Pb/kg dry weight at Site 225 (n = 19) (Appendix B, Table 2). All of the measured sediment-lead levels were below cited screening criteria with the exception of the concentrations measured at Sites 118 (31.6 mg Pb/kg dry weight) and 225 (Persaud *et al.*, 1993; Long *et al.*, 1995; MacDonald *et al.*, 2000). The concentration detected at Site 118 slightly exceeded the OME LEL, but was less than all other cited criteria (Persaud *et al.*, 1993; Long *et al.*, 1995; MacDonald *et al.*, 2000). In contrast, the concentration detected at Site 225 not only exceeded the OME LEL (Persaud *et al.*, 1993) but also was elevated in comparison to the ER-L value suggested by Long *et al.* (1995) and the TEC proposed by MacDonald *et al.* (2000).

[Magnesium (Mg)] Magnesium is an essential nutrient that is required for energy transfer in all living cells because it catalyzes the change from adenosine triphosphate (ATP) to adenosine diphosphate (ADP) (Horne and Goldman, 1994). The Earth's crust is composed of approximately 2.1% magnesium (Miller and Gardiner, 1998). Shacklette and Boerngen (1984), estimated the arithmetic mean for background magnesium concentrations in surface soils in the western U.S. as 10,000 mg Mg/kg. In freshwater environments, along with calcium, magnesium is one of the two most common polyvalent metallic ions encountered (Cole, 1983; Irwin and Dodson, 1991). Currently, there are no screening criteria for magnesium levels in sediments, but samples collected by the USFWS in 1993 from Cypress Springs Reservoir, Lake O'The Pines, and Caddo Lake in East Texas contained mean sediment concentrations of 928.8 mg Mg/kg dry weight, 475.6 mg Mg/kg dry weight, and 1,148.1 mg Mg/kg dry weight, respectively (Giggleman *et al.*, 1998).

Magnesium concentrations were detected above the analytical detection limits in every sample collected (Appendix B, Table 2). Soil-magnesium levels ranged from 65.4 mg Mg/kg dry weight at Site 216 to 2,503 mg Mg/kg dry weight at Site 222 (n = 181), while sediment-magnesium concentrations ranged from 190 mg Mg/kg dry weight at Site 149 to 2,114 mg Mg/kg dry weight at Site 154 (n = 19) (Appendix B, Table 2). Eight sites (Sites 60, 118, 154, 162, 163, 170, 171, and 180) contained magnesium levels (Appendix B, Table 2) that were elevated in comparison to the sediment concentration reported by Giggleman *et al.* (1998) for Caddo Lake; however, none of these sites nor any of the remaining 192 sites sampled contained magnesium levels above the background soil value reported by Shacklette and Boerngen (1984).

[Manganese (Mn)] Manganese is a widely distributed, abundant element that constitutes approximately 0.085% of the earth's crust (Irwin and Dodson, 1991). It is a necessary nutrient for plants and animals that is relatively nontoxic to aquatic biota (Wiener and Giesy, 1979; Cole 1983). In freshwater systems, it stimulates planktonic growth by activating enzymatic mechanisms (Cole, 1983). For surface soils, 480 mg Mn/kg is considered an estimated arithmetic mean for background manganese concentrations in the western U.S. (Shacklette and Boerngen, 1984). The TCEQ (2001), considers a soil-manganese concentration of 300 mg Mn/kg dry weight as background in the State of Texas. According to Efroymson *et al.* (1997), a proposed screening benchmark value for manganese toxicity to soil microorganisms is 100 mg Mn/kg dry weight, while the TCEQ (2001) reports a soil-manganese concentration of 500 mg Mn/kg dry weight as a benchmark value for

terrestrial plants. The ecological screening benchmark recommended by the USEPA for manganese in soils is 100 mg Mn/kg (RAIS, 2002). In sediments, the OME recommends a LEL of 460 mg Mn/kg dry weight and a SEL of 1,100 mg Mn/kg dry weight (Persaud *et al.*, 1993). In comparison, sediments from the Great Lakes containing less than 300 mg Mn/kg dry weight are considered non-polluted, whereas sediments containing manganese concentrations greater than 500 mg Mn/kg dry weight are considered heavily polluted (Beyer, 1990).

Manganese concentrations were detected above the analytical detection limits in every sample collected (Appendix B, Table 2). Soil-manganese concentrations ranged from 13.9 mg Mn/kg dry weight at Site 151 to 5,436 mg Mn/kg dry weight at Site 241 (n = 181) (Appendix B, Table 2). Seventy-two percent (167/181) of these soil samples contained manganese levels that exceeded the Texas background concentration (TCEQ, 2001), while 54% (98/181) contained manganese concentrations that exceeded the background value estimated by Shacklette and Boerngen (1984) (Appendix B, Table 2). In addition, 92% (167/181) of the soil samples contained manganese levels that exceeded the lower ecological threshold value suggested by Efroymson *et al.* (1997) and the USEPA (RAIS, 2002), while 53% (96/181) had manganese levels that exceeded the upper ecological benchmark recommended by the TCEQ (2001) (Appendix B, Table 2). The widespread distribution of elevated soil-manganese levels may be indicative of naturally high background concentrations; however, further investigation is warranted to determine if a site-related gradient exists for soil-manganese contamination at the Refuge. Sediment-manganese levels ranged from 13.5 mg Mn/kg dry weight at Site 182 to 1,812 mg Mn/kg dry weight at Site 60 (n = 19) (Appendix B, Table 2). With the exception of four sites (Sites 60, 64, 68, and 227), measured sediment-manganese levels were less than the sediment screening criteria reported by Beyer (1990) and Persaud *et al.* (1993) (Appendix B, Table 2). The manganese concentrations at Sites 60, 64 (472 mg Mn/kg dry weight), 68 (637 mg Mn/kg dry weight), and 227 (1,089 mg Mn/kg dry weight) were elevated in comparison to the lower cited criteria (Beyer, 1990; Persaud *et al.*, 1993); however, only Site 60 contained a manganese level that exceeded the OME SEL (Persaud *et al.*, 1993).

[Mercury (Hg)] Mercury has been used in metallurgy, the preparation of dental amalgams, in switches, thermometers, barometers, pharmaceuticals, munitions, and in the electrolytic preparation of chlorine (Eisler, 1987a). Major anthropogenic sources of mercury include pulp and paper mills, mining and processing of metallic ores, and the incomplete combustion of fossil fuels (Eisler, 1987a). In an aquatic environment, mercury can exist in many forms including elemental mercury, dissolved and particulate ionic forms, and/or to a lesser extent, dissolved and particulate methylmercury (Wiener and Spry, 1996). The formation of methylmercury by the methylation of inorganic mercury in the sediments and the water column is dependent on microbial activity, nutrient content, pH, salinity, oxidation-reduction conditions, and alkalinity (Eisler, 1987a; Wiener and Spry, 1996; Alpers and Hunerlach, 2000). In freshwater systems exposed to mercury influxes, methylmercury is generally found in sediments that, although subject to anoxic or sub-oxic conditions, have limited sulfate availability (Jaffe *et al.*, 1997). Typical concentrations of mercury in benthic invertebrates from uncontaminated sediments are generally less than 0.1 mg Hg/kg wet weight (Wren *et al.*, 1995). The OME suggest a sediment LEL of 0.2 mg Hg/kg dry weight and a SEL of 2 mg Hg/kg dry weight (Persaud *et al.*, 1993), while Long *et al.* (1995) recommend 0.15 mg

Hg/kg dry weight as the ER-L for mercury in sediments. MacDonald *et al.* (2000) suggest a sediment TEC of 0.18 mg Hg/kg dry weight and a PEC of 1.06 mg Hg/kg dry weight. In terrestrial systems, background surface-soil mercury concentrations in the western U.S. are typically less than or equal to 0.065 mg Hg/kg (Shacklette and Boerngen, 1984). In the State of Texas, a soil-mercury concentration of 0.04 is considered background (TCEQ, 2001). The TCEQ (2001) recommends soil-mercury concentrations of 0.1 mg Hg/kg dry weight as a benchmark for earthworms and 0.3 mg Hg/kg dry weight as a benchmark for terrestrial plants.

Mercury levels were detected above the analytical detection limits in every site sampled, with the exception of soil samples collected from 16 sites (Sites 52, 67, 69, 70, 73, 80, 89, 90, 91, 94, 111, 178, 203, 210, 213, and 221) and a sediment sample collected from one site (Site 215) (Appendix B, Table 2). Detected soil-mercury concentrations ranged from 0.018 mg Hg/kg dry weight at Site 99 to 0.19 mg Hg/kg dry weight at Sites 236 and 240 (n = 165) (Appendix B, Table 2). Thirty-four (21%) of the 165 soil samples that contained detectable amounts of mercury equaled or exceeded the background concentration recommended by Shacklette and Boerngen, (1984), while 52% of the soil samples (86/165) contained mercury levels that equaled or exceeded the background concentration recommended by the TCEQ (2001) (Appendix B, Table 2). Furthermore, Sites 159, 226, 236, 237, 239, 240, and 241contained soil-mercury concentrations that exceeded the earthworm-benchmark suggested by the TCEQ (2001) (Appendix B, Table 2). However, none of the soil samples analyzed contained mercury levels that equaled or exceeded the TCEQ's (2001) benchmark for terrestrial plants (Appendix B, Table 2). The detected sediment-mercury concentrations ranged from 0.027 mg Hg/kg dry weight at Site 149 to 0.15 mg Hg/kg dry weight at Site 225 (n = 18) (Appendix B, Table 2), all at or below cited sediment screening criteria (Persaud *et al.*, 1993; Long *et al.*, 1995; MacDonald *et al.*, 2000).

[Molybdenum (Mo)] Molybdenum is a comparatively rare element that does not occur free in nature and is usually found in conjunction with sulfur, oxygen, tungsten, lead, uranium, iron, magnesium, cobalt, vanadium, bismuth, or calcium (Eisler, 1989). It is an essential micronutrient for most life forms. It is even necessary for fixing atmospheric nitrogen by bacteria in plants; however, excessive exposure can result in toxicity to both animals and humans (Goyer, 1991; USDOI, 1998). In terrestrial environments, the highest soil-molybdenum concentrations are usually found within the top 30 cm of surface soils (USDOI, 1998). Ionic forms of molybdenum such as molybdate, tend to be sorbed most readily in alkaline soils which are high in calcium and chlorides, whereas retention is limited in low pH and low sulfate soils (Eisler, 1989). According to Shacklette and Boerngen (1984), the estimated arithmetic mean for background molybdenum concentrations in surface soils in the western U.S. is 1.1 mg Mo/kg. Efroymson *et al.* (1997), proposed a soils toxicity screening benchmark value of 200 mg Mo/kg dry weight for soil microorganisms, while the TCEQ (2001) considers a soils concentration of 2 mg Mo/kg as the benchmark value for terrestrial plants. Pastures containing between 20-100 mg Mo/kg may produce a disease in grazing animals known as teart (molybdenosis) which can prove fatal (Goyer, 1991). In freshwater systems with a pH greater than 7, molybdenum exists primarily as the molybdate ion, whereas at a pH less than 7, various polymeric compounds are formed, including the paramolybdate ion (Eisler, 1989). Aquatic organisms are relatively resistant to molybdenum (USDOI, 1998). Background concentrations in

lotic sediments in the U.S. range from 5 to 57 mg Mo/kg dry weight (USDOI, 1998). Sediment samples collected by the USFWS in 1993 from Cypress Springs Reservoir, Lake O'The Pines, and Caddo Lake in East Texas contained no detectable molybdenum concentrations (Giggleman *et al.*, 1998).

Of the 200 sites sampled, only the soil sample collected from Site 103 and the sediment sample collected from Site 118 contained molybdenum levels above the analytical detection limits (Appendix B, Table 2). The concentration measured at Site 103 was 1.47 mg Mo/kg dry weight which exceeded the background value estimated by Shacklette and Boerngren (1984), but was below the benchmark values reported by the TCEQ (2001) and Efroymson *et al.* (1997). The sediment-molybdenum concentration detected at Site 118 was 4.77 mg Mo/kg dry weight which was below the range of background values reported by the USDOI (1998).

[Nickel (Ni)] Background surface soil-nickel concentrations range up to 19 mg Ni/kg in the western U.S. and up to 10 mg Ni/kg in the State of Texas (Shacklette and Boerngen, 1984; TCEQ, 2001). According to Efroymson *et al.* (1997), a proposed screening benchmark value for nickel toxicity to soil microorganisms is 90 mg Ni/kg dry weight, while the TCEQ (2001) reports a soil-nickel concentration of 30 mg Ni/kg dry weight as a benchmark value for terrestrial plants. The physical and chemical forms of nickel and its salts strongly influence its bio-availability and toxicity in aqueous environments (Eisler, 1998b). In freshwater, nickel occurs as soluble salts adsorbed onto clay particles and organic matter (Eisler, 1998b). The distribution of nickel in an aquatic environment can be affected by pH, ionic strength, and availability of solid surfaces for adsorption (Eisler, 1998b). Sediment samples collected adjacent to a nickel smelter in Canada contained nickel concentrations as high as 5,000 mg Ni/kg dry weight, whereas sediments collected from lakes in the Rocky Mountains in the U.S. with no known sources other than background, contained nickel concentrations ranging from 10 to 18 mg Ni/kg dry weight (Eisler, 1998b). The OME recommends a sediment LEL of 16 mg Ni/kg dry weight and a SEL of 75 mg Ni/kg dry weight (Persaud *et al.*, 1993), whereas Long *et al.* (1995), recommend 21 mg Ni/kg dry weight as the ER-L for nickel in sediments. MacDonald *et al.* (2000), suggest a sediment TEC of 22.7 mg Ni/kg dry weight and a PEC of 48.6 mg Ni/kg dry weight.

Nickel concentrations were detected above the analytical detection limits in all samples collected (Appendix B, Table 2). Soil-nickel concentrations ranged from 1.42 mg Ni/kg dry weight at Site 247 to 29.5 mg Ni/kg dry weight at Site 82 (n = 181) (Appendix B, Table 2). Nineteen percent (35/181) of the soil samples contained nickel levels that exceeded the TCEQ (2001) background concentration, while only 3% (5/181) had nickel levels that were elevated in comparison to the background value reported by Shacklette and Boerngen (1984) (Appendix B, Table 2). None of the soil samples contained nickel concentrations that exceeded any of the cited ecological benchmarks (Efroymson *et al.*, 1997; TCEQ, 2001). Sediment-nickel concentrations ranged from 3.44 mg Ni/kg dry weight at Site 215 to 28.4 mg Ni/kg dry weight at Site 118 (n = 19) (Appendix B, Table 2). Of these 19 samples, Sites 60 (24.3 mg Ni/kg dry weight) and 118 were the only sites that contained nickel concentrations that exceeded all of the lower sediment screening criteria; however, neither

of these sites had nickel levels that approached or exceeded the upper screening values (Persaud *et al.*, 1993; Long *et al.*, 1995; MacDonald *et al.*, 2000).

[Selenium (Se)] Selenium is an essential micronutrient but like other necessary dietary minerals, elevated levels can have detrimental effects on exposed organisms. It typically exists in nature and biotic systems as either selenate, selenite, elemental selenium, and/or selenide (Eisler, 1985b; Goyer, 1991). According to Shacklette and Boerngen (1984), the estimated arithmetic mean for background selenium concentrations in surface soils in the western U.S. is 0.34 mg Se/kg. The TCEQ (2001), considers a soil-selenium concentration of 0.3 mg Se/kg dry weight as background in the State of Texas. Selenium volatilizes from soils and sediments at rates that are modified by temperature, moisture, time, season of year, concentration of water soluble selenium, and microbial activity (Eisler, 1985b). The TCEQ (2001) reports soil-selenium concentrations of 1 mg Se/kg dry weight as a benchmark value for terrestrial plants and 70 mg Se/kg as a benchmark value for earthworms. In an aqueous environment, selenium concentrations are a function of selenium levels contained within the drainage system and water pH (Eisler, 1985b). In sediments, elemental selenium has a tendency to predominate in reducing environments (Van Derveer and Canton, 1997). According to Van Derveer and Canton (1997), the predicted effects concentration of selenium in sediments would be 2.5 mg Se/kg, while the observed effects threshold for fish and wildlife toxicity would be 4 mg Se/kg.

Selenium levels were measured above the analytical detection limits in soil samples collected from 23 sites (Sites 53, 80, 82, 104, 106, 115, 135, 140, 164, 165, 168, 172, 181, 185, 188, 190, 191, 193, 197, 199, 230, 234, and 243) and in sediment samples collected from four sites (Sites 60, 154, 162, and 227) (Appendix B, Table 2). The detected soil-selenium concentrations ranged from 0.53 mg Se/kg dry weight at Sites 172, 190, and 197, to 1.67 at Site 104 (n = 23) (Appendix B, Table 2). All of the measured soil-selenium concentrations (Appendix B, Table 2) exceeded background values reported by Shacklette and Boerngen (1984) and the TCEQ (2001). However, with the exception of the concentration measured at Site 104, all other detected soil-selenium concentrations (Appendix B, Table 2) were less than all of the benchmark values recommended by the TCEQ (2001). The detected selenium concentration at Site 104 slightly exceeded the lower threshold criterion but was well less than the soil benchmark value recommended for earthworms by the TCEQ (2001). The detected sediment-selenium concentrations ranged from 0.57 mg Se/kg dry weight at Site 154 to 0.88 mg Se/kg dry weight at Site 162 (n = 4) (Appendix B, Table 2), all below the threshold values reported by Van Derveer and Canton (1997).

[Silver (Ag)] Silver and its compounds have a wide variety of industrial uses. They were used at the former Longhorn Army Ammunition Plant in x-rays and photographic materials (Tolbert, personal communication, 2002). In aqueous environments, adsoprtion is the dominant process involved in partitioning silver onto sediments (Warrington, 1996). According to Warrington (1996), silver concentrations of lotic sediments in mineralized areas average 0.93 mg Ag/kg, while sediments from non-mineralized areas contain approximately 0.14 mg Ag/kg. Silver concentrations in sediments from U.S. streams can range from 0.3 to 1.5 mg Ag/kg (Warrington, 1996). However, according to Buchman (1999), background sediment-silver concentrations are typically less than 0.5

mg Ag/kg. In Texas, the TCEQ (2001) recommends a concentration of 1 mg Ag/kg dry weight as the ecological benchmark value for sediments. In soils, Efroymson *et al.* (1997), proposed a toxicity screening benchmark value of 50 mg Ag/kg dry weight for soil microorganisms, while the TCEQ (2001) considers a soil-silver concentration of 2 mg Ag/kg dry weight as a benchmark value for terrestrial plants.

Silver was measured above the analytical detection limit at CLNWR in six soil and four sediment samples (Appendix B, Table 2). The measured silver concentrations in soils collected from Sites 167, 185, 212, 238, 239, and 240 ranged from 0.2 mg Ag/kg dry weight at Site 239 to 0.8 mg Ag/kg dry weight at Site 238 (n = 6) (Appendix B, Table 2). Detected silver concentrations in sediments collected from Sites 118, 162, 225, and 227 ranged from 0.2 mg Ag/kg dry weight at Site 118 to 0.68 mg Ag/kg dry weight at Site 225 (n = 4) (Appendix B, Table 2). With the exception of the level measured at Site 225, sediment-silver concentrations were below all applicable screening criteria and benchmark values (Warrington, 1996; Efroymson *et al.*, 1997; TCEQ, 2001). The detected concentration at Site 225 slightly exceeded the sediment criterion proposed by Buchman (1999), but was below all other cited sediment benchmark values (Warrington, 1996; TCEQ, 2001).

[Strontium (Sr)] Strontium compounds are used in the manufacturing of pyrotechnics including signal flares and tracer bullets, the production of glass and ceramics, and sugar refining (Merck, 1989). Strontium is a fairly common alkaline earth metal (Irwin and Dodson, 1991). According to Shacklette and Boerngen (1984), the estimated arithmetic mean for background strontium concentrations in western soils in the U.S. is 270 mg Sr/kg, while a soils concentration of 100 mg Sr/kg is considered background in the State of Texas (TCEQ, 2001). In localities where it is abundant, like calcium, strontium is an important freshwater quality ion that contributes to water hardness (Irwin and Dodson, 1991). Buchman (1999) considers 49 mg Sr/kg dry weight to be the background level for strontium in freshwater sediments.

Strontium concentrations were detected above the analytical detection limits in every sample collected (Appendix B, Table 2). Soil-strontium concentrations ranged from 1.63 mg Sr/kg dry weight at Site 192 to 52.4 mg Sr/kg dry weight at Site 65 (n = 181) (Appendix B, Table 2), all below the suggested background values (Shacklette and Boerngen, 1984; TCEQ, 2001). Sediment-strontium levels ranged from 4.06 mg Sr/kg dry weight at Site 149 to 80 mg Sr/kg dry weight at Site 154 (n = 19) (Appendix B, Table 2). Sites 154, 163 (74.8 mg Sr/kg dry weight), and 170 (63.8 mg Sr/kg dry weight) were the only sites that contained strontium concentrations that exceeded the sediment background value reported by Buchman (1999).

[Vanadium (V)] Approximately 0.01% of the Earth's crust is composed of vanadium (Merck, 1989). Vanadium compounds are used in the production of rust-resistant metals, the manufacturing of ammunition, in x-rays, as catalysts in the distillation of alcohols and the production of synthetic rubber, and to reduce mercuric and ferric salts to mercurous and ferrous salts in industrial processes (Sax and Lewis, 1987; Merck, 1989). Vanadium is also a trace component of fossil fuels (Merck, 1989; ETC, 2000). Crude oil from West Texas contains approximately 3.2 mg V/L (ETC, 2000). In soils, vanadium concentrations can range up to 500 mg V/kg in the U.S. (Shacklette and

Boerngen, 1984). The estimated arithmetic mean for background vanadium concentrations in soils in the western U.S. is 88 mg V/kg (Shacklette and Boerngen, 1984), while a soils concentration of 50 mg V/kg dry weight is considered background in the State of Texas (TCEQ, 2001). The soils ecological screening benchmark recommended by the USEPA for vanadium is 2 mg V/kg (RAIS, 2002). However, Efroymson *et al.* (1997), proposed a screening criterion of 20 mg V/kg for soil microorganisms, while the TCEQ (2001) considers a soil-vanadium concentration of 2 mg V/kg dry weight as a benchmark value for terrestrial plants. In freshwater systems, Buchman (1999) considers a vanadium concentration of 50 mg V/kg dry weight as the background value for sediments.

Vanadium concentrations were detected above the analytical detection limits in every sample collected (Appendix B, Table 2). Soil-vanadium concentrations ranged from 2.03 mg V/kg dry weight at Site 247 to 53 mg V/kg dry weight at Site 243 (n = 181) (Appendix B, Table2). All of the 181 sites sampled for soils contained vanadium concentrations below the Texas background value (TCEQ, 2001), with the exception of Site 243. The measured soil-vanadium level at this site exceeded the TCEQ's (2001) background value but was below the background concentration estimated by Shacklette and Boerngen (1984). Furthermore, everyone of these181 sites contained soil-vanadium levels that exceeded the lower ecological benchmarks recommended by the USEPA (RAIS, 2002) and TCEQ (2001). In addition, 16% (29/181) of these sites contained soil-vanadium concentrations that equaled or exceeded the upper ecological benchmark proposed by Efroymson *et al.* (1997). Sediment-vanadium concentrations ranged from 6.8 mg V/kg dry weight at Site 215 to 43.6 mg V/kg dry weight at Site 68 (n = 19) (Appendix B, Table 2), all below the sediment background value reported by Buchman (1999).

[Zinc (Zn)] Zinc is a naturally occurring metallic element found in soil but is also listed by the USEPA as a priority pollutant (Giggleman *et al.*; 1998). It is used in the production of non-corrosive alloys and brass and in galvanizing steel and iron products (Eisler, 1993). Shacklette and Boerngen (1984), estimated the arithmetic mean for background zinc concentrations in surface soils in the western U.S. at 65 mg Zn/kg. The TCEQ (2001), considers a soil-zinc concentration of 30 mg Zn/kg as background in the State of Texas. Efroymson *et al.* (1997), proposed a soils toxicity screening benchmark value of 100 mg Zn/kg dry weight for soil microorganisms and invertebrates, whereas the ecological screening benchmark recommended by the USEPA for zinc in soils is 50 mg Zn/kg (RAIS, 2002).

According to Eisler (1993), the majority of zinc introduced into an aquatic environment is partitioned into the sediment. Bio-availability of zinc from sediments is enhanced under conditions of high dissolved oxygen, low salinity, low pH, and high levels of inorganic oxides and humic substances (Eisler, 1993). Sediment-zinc concentrations less than 90 mg Zn/kg dry weight are considered supportive of aquatic biota, whereas zinc concentrations greater than 200 mg Zn/kg dry weight can be harmful to aquatic biota (Eisler, 1993). The OME recommends a sediment LEL of 120 mg Zn/kg dry weight and a SEL of 820 mg Zn/kg dry weight (Persaud *et al.*, 1993), while Long *et al.* (1995), consider 150 mg Zn/kg dry weight as the ER-L for zinc in sediments. MacDonald *et*

al. (2000), suggest a sediment TEC of 121 mg Zn/kg dry weight and a PEC of 459 mg Zn/kg dry weight.

Zinc concentrations were detected above the analytical detection limits in every sample collected, with the exception of soil samples collected from Sites 90, 95, 192, 204, 216, and 220, which contained no detectable amounts (Appendix B, Table 2). Measured soil-zinc levels ranged from 5.31 mg Zn/kg dry weight at Site 91 to 130 mg Zn/kg dry weight at Site 226 (n = 175) (Appendix B, Table 2). Twenty-six percent (45/175) of the soil samples that contained detectable zinc levels exceeded the TCEQ (2001) background concentration, while 6% (10/175) had zinc levels that were elevated in comparison to the background value reported by Shacklette and Boerngen (1984). Fifteen (9%) of these sites (Sites 76, 128, 131, 164, 165, 168, 186, 201, 226, 232, 237, 239, 240, 243, and 249) contained soil-zinc concentrations that exceeded the lower ecological benchmark suggested by the USEPA (RAIS, 2002), while one site (Site 226) contained a soil-zinc concentration that exceeded the upper ecological benchmark proposed by Efroymson *et al.* (1997). Sediment-zinc concentrations ranged from 10.7 mg Zn/kg dry weight at Site 215 to 161 mg Zn/kg dry weight at Site 227 (n = 19) (Appendix B, Table 2). (Appendix B, Table 2). With the exception of the sediment-zinc concentration measured at Site 227, the detected sediment-zinc levels were below all cited sediment screening criteria (Persaud *et al.*, 1993; Long *et al.*, 1995; MacDonald *et al.*, 2000). The zinc concentration measured at Site 227 exceeded the OME LEL, ER-L, and TEC, but was well below the OME SEL and PEC (Persaud *et al.*, 1993; Long *et al.*, 1995; MacDonald *et al.*, 2000).

Semi-volatile Organic Compounds

Results of the semi-volatile organic compound analyses for the 181 soil samples and 19 sediment samples are presented in Appendix B, Table 3. Twenty-four of the 88 semi-volatile organic analytes were detected above the analytical detection limits in one or more of the samples. The detected compounds are as follows:

[1,3-Dichlorobenzene] Also known as m-dichlorobenzol, MDCB, m-dichlorobenzene, m-phenylenedichloride, and chloroden, 1,3-dichlorobenzene is a halogenated compound that is used in the production of insecticides, solvents, plastics, and dyes (CL21, 2003a). When released to a terrestrial environment, 1,3-dichlorobenzene can be moderately to tightly adsorbed to the soil and can slowly biodegrade under aerobic conditions (Spectrum, 2003a). For soils, the USEPA recommends a concentration of 37.7 mg/kg as an ecological benchmark (RAIS, 2003). In Texas, in order to protect groundwater, the remedial target value for 1,3-dichlorobenzene contaminated soils in residential areas is 60 mg/kg (TAC, 1993), while in the State of Louisiana, the cleanup standard for non-industrial soils is 63 mg/kg (AEHS, 2002). In sediments, the USEPA considers a concentration of 3.01 as an ecological screening criterion (RAIS, 2003), while the 85th percentile screening value reported for lotic sediments in Texas is 0.67 mg/kg dry weight (TCEQ, 2000). This compound was detected above the analytical detection limits in 41 soil samples and one sediment sample (from Site 163) (Appendix B, Table 3). Detected soil-1,3-dichlorobenzene levels ranged from 0.0322 mg/kg dry weight at Site 203 to 0.103 mg/kg dry weight at Site 127 (Appendix B, Table 3), all below the referenced screening criterion and remedial target values (TAC, 1993; AEHS, 2002;

RAIS, 2003), while the sediment-1,3-dichlorobenzene concentration detected at Site 163 (0.155 mg/kg dry weight) was below all cited sediment criteria (TCEQ, 2000; RAIS, 2003).

[1-Naphthylamine] Listed by Oxford University (2002) as a suspected human carcinogen, 1-naphthylamine (also known as α-naphthylamine) is used as an intermediate in the manufacture of dyes, pesticides, and as an antioxidant in the rubber industry (Sax and Lewis, 1987; EHP, 2002). This compound can be released into the environment through the break down of organic compounds in the waste stream of industrial processes; by the microbial degradation of herbicides; and by the combustion of fuels containing high nitrogen levels (Spectrum, 2002a). The soil half-life for 1-naphthylamine is estimated to exceed 1 year (Spectrum, 2002a). The USEPA recommends a soil screening benchmark of 9.34 mg/kg and a sediment criterion of 0.00109 mg/kg (RAIS, 2003). This compound was detected above the analytical detection limits in only nine of the 181 soil samples analyzed, while none of the 19 sediment samples submitted for analyses contained detectable amounts of 1-naphthylamine (Appendix B, Table 3). Detected soil-1-naphthylamine concentrations ranged from 0.034 mg/kg dry weight at Site 72 to 0.238 mg/kg dry weight at Site 66 (Appendix B, Table 3), all well below the cited soil screening value (RAIS, 2003).

[2,4-Dinitrotoluene] Listed by the USEPA as a priority pollutant, 2,4-dinitrotoluene (DNT) is used as an intermediate in the production of the explosive trinitrotoluene (TNT) and as an intermediate in the manufacturing of polyurethanes, dyes, and gunpowder (Smets *et al.*, 1999; NSC, 2003). There are no natural sources of DNT (NSC, 2003). For soils, the USEPA considers a concentration of 1.28 mg/kg as a screening level (RAIS, 2003). In the Sate of Louisiana, the remedial target value for DNT in non-industrial soils is 8.3 mg/kg (AEHS, 2002). In sediments, the USEPA recommends a screening concentration of 0.07 mg/kg (RAIS, 2003), while the 85th percentile screening value reported for lotic sediments in Texas is 0.8 mg/kg dry weight (TCEQ, 2000). This compound was not detected above the analytical detection limits in any of the soil or sediment samples analyzed, with the exception of the soil sample collected from Site 59 (Appendix B, Table 3). The DNT concentration measured at this site (0.35 mg/kg dry weight) was less than the cited soil screening criterion and remedial target value (AEHS, 2002; RAIS, 2003).

[2-Chloronaphthalene] Also known as β-chloronaphthalene and halowax, 2-chloronaphthalene is used as a component of heat exchange fluids, chemical resistant gage fluids, solvents, crank case additives, and motor tune up compounds (Spectrum, 2003b). This compound exhibits low mobility in soils and biodegrades slowly (Spectrum, 2003b). The USEPA recommends a concentration of 0.0122 mg/kg as a soil screening level (RAIS, 2003). In Texas, in order to protect groundwater, the remedial target value for 2-chloronaphthalene contaminated soils in residential areas is 292 mg/kg (TAC, 1993), while in the State of Louisiana, the cleanup standard for non-industrial soils is 370 mg/kg (AEHS, 2002). In aquatic systems, 2-chloronaphthalene will bioconcentrate in aquatic organisms and can partition from the water column to organic matter contained in sediments and suspended solids (Spectrum, 2003b). The USEPA recommends a sediment screening concentration of 0.41 mg/kg (RAIS, 2003), while the 85th percentile screening value reported for lotic sediments in Texas is 0.95 mg/kg dry weight (TCEQ, 2000). This compound was not detected above the analytical detection limits in any of the soil or sediment samples analyzed, with the exception of the

soil sample collected from Site 65 (Appendix B, Table 3). The 2-chloronaphthalene concentration measured at this site (0.123 mg/kg dry weight) exceeded the USEPA screening criterion (RAIS, 2003), but was well below the cited remedial target values (TAC, 1993; AEHS, 2002).

[2-Picoline] A derivative of pyridine, 2-picoline (synonymous with 2-methylpyridine and α-picoline) is an organic intermediate used in solvents, dyes, rubber chemicals, herbicides, and pharmaceuticals (Spectrum, 2003c). In soils, the USEPA recommends a screening benchmark of 9.9 mg/kg (RAIS, 2003). For aquatic systems, the USEPA suggests a value of 0.75 mg/kg as a screening criterion for 2-picoline in sediments (RAIS, 2003). This compound was detected above the analytical detection limits in only five of the 181 soil samples (from Sites 50, 70, 95, 111, and 165), while none of the 19 sediment samples contained detectable amounts of 2-picoline (Appendix B, Table 3). Detected soil-2-picoline concentrations ranged from 0.0324 mg/kg dry weight at Site 70 to 0.201 mg/kg dry weight at Site 95 (Appendix B, Table 3), all well below the referenced soil benchmark (RAIS, 2003).

[2-Methylnaphthalene] Also known as β-methylnaphthalene, 2-methylnaphthalene is a polycyclic aromatic hydrocarbon that is used in the production of resins, dyes, and insecticides (USEPA, 2003). The USEPA recommends a soil screening benchmark of 3.24 mg/kg and a sediment benchmark of 0.07 mg/kg (RAIS, 2003). This compound was not detected above the analytical detection limits in any of the soil or sediment samples analyzed, with the exception of the soil sample collected from Site 56 (Appendix B, Table 3). The concentration measured at this site (0.068 mg/kg dry weight) was less than the cited soil screening criterion (RAIS, 2003).

[4-Aminobiphenyl] A suspected human carcinogen, 4-aminobiphenyl (synonymous with *para*-aminobiphenyl, *para*-aminodiphenyl, 4-aminodiphenyl, *para*-biphenylamine, *para*-phenylaniline, and xenylamine) was used in the production of dyes and as a rubber antioxidant (LES, 2002). This compound is no longer produced commercially in the United States (LES, 2002). The USEPA recommends a soil benchmark of 0.0031 mg/kg and a sediment criterion of 0.0057 mg/kg (RAIS, 2003). This compound was not detected above the analytical detection limits in any of the soil or sediment samples analyzed, with the exception of the soil sample collected from Site 81 (Appendix B, Table 3). The concentration measured at this site (0.038 mg/kg dry weight) exceeded the cited soil screening criterion (RAIS, 2003).

[4-Chloro-3-Methylphenol] Synonymous with 3-methyl-4-chlorophenol, chlorcresol, 2-chloro-5-hydroxytoluene, aptal, baktol, baktolan, candaseptic, p-chloro-m-cresol, parol, PCMC, and p-chlorocresol, 4-chloro-3-methylphenol was used in the production of pesticides, preservatives, and adhesives (Spectrum, 2003d). This compound readily biodegrades in soils (Spectrum, 2003d). The USEPA recommends a soil screening benchmark of 7.95 mg/kg and a sediment benchmark of 0.38 mg/kg (RAIS, 2003). In Texas, the 85th percentile screening value for lotic sediments is 1.4 mg/kg dry weight (TCEQ, 2000). Of the 181 soil and 19 sediment samples analyzed, only one sample, the soil collected from Site 50, contained a 4-chloro-3-methylphenol level above the analytical detection limit (Appendix B, Table 3). The concentration measured at this site (0.046 mg/kg dry weight) was well below the cited benchmark value (RAIS, 2003).

[Acetophenone] Also known as acetylbenzene, methylphenylketone, and phenylmethylketone, acetophenone is used as a solvent and an intermediate in the organic synthesis of alcohol and acetate (Schenectady, 1999). The USEPA recommends a soil benchmark of 300 mg/kg and a sediment criterion of 0.24 mg/kg (RAIS, 2003). In Texas, the soil remedial target value for the protection of groundwater in residential areas is 365 mg/kg (TAC, 1993). This compound was not detected above the analytical detection limits in any of the soil or sediment samples analyzed, with the exception of the soil sample collected from Site 113 (Appendix B, Table 3). The concentration measured at this site (0.043 mg/kg dry weight) was well less than the cited soil screening criterion (RAIS, 2003).

[Aniline] Also known as aminobenzene, aminophade, aminophen, anyvim, arylamine, benzamine, benzeneamine, blue oil, krystallin, kyanol, and phenylamine, aniline is an aromatic amine that is typically a colorless, oily liquid (USEPA, 1994a; PTCL, 2002). It is used in the production of explosives, pesticides, preservatives, rubber, and dyes and is also a by-product of the incineration of plastics (USEPA, 1994a; PTCL, 2002). When released to terrestrial environments, depending on soil pH and ionic composition, aniline will moderately adsorb to organic material and can also slowly volatilize and biodegrade (USEPA, 1994a; Kosson and Byrne, 1995; ATSDR, 2002). However, according to Kosson and Byrne (1995), once bound to soils, aniline is not readily biodegradeable. This compound is considered a probable human carcinogen (USEPA, 1994a). In Texas, in order to protect groundwater, the remedial target level for aniline contaminated soils in residential areas is 1.5 mg/kg (TAC, 1993), while in the State of Louisiana, the cleanup standard for non-industrial soils is 2.5 mg/kg (AEHS, 2002). In a more conservative approach, the State of New York recommends a cleanup objective of 0.1 mg/kg for aniline contaminated soils (NYSDEC, 2002).

Aniline levels were detected above the analytical detection limits only 12 of the 181 soil samples, while none of the 19 sediment samples contained detectable amounts of this compound (Appendix B, Table 3). Measured soil-aniline concentrations at these 12 sites ranged from 0.0295 mg/kg dry weight at Site 96 to 0.558 mg/kg dry weight at Site 98 (Appendix B, Table 3). All of the detected soil-aniline levels (Appendix B, Table 3) were below the referenced remedial target values (TAC, 1993; AEHS, 2002; NYSDEC, 2002) with the exception of the concentrations measured at Sites 91 (0.218 mg/kg dry weight) and 98. The levels detected at these two sites exceeded the conservative concentration proposed by the State of New York, but were less than the Texas and Louisiana remedial criteria (TAC, 1993; AEHS, 2002; NYSDEC, 2002).

[Benzoic Acid] Synonymous with benzenemethanoic acid, carboxybenzene, benzenecarboxylic acid, phenylcarboxylic acid, and phenylformic acid, benzoic acid is a carboxylic acid that has a wide range of uses, such as in food preservatives, crude oil diverting agents, pesticides, dyestuffs, plasticizers, rubber activators and retardants, and polyesters, and can also occur naturally in plants and animals (Verschueren, 1983; Sax and Lewis, 1987; CL21, 2003b). Soil screening data for this compound could not be located, however, in aquatic systems, the State of Washington recommends a sediment benchmark of 0.65 mg/kg (RAIS, 2003). Benzoic acid levels were detected above the analytical detection limits in 20 of the 181 soil samples, while none of the 19 sediment samples contained detectable amounts of this compound (Appendix B, Table 3). Detected soil-benzoic acid

concentrations ranged from 0.035 at Site 89 to 0.335 at Site 66 (Appendix B, Table 3). As stated, no soil screening criteria are currently available for comparative purposes, but it is noted that all of the detected soil-benzoic acid concentrations were below the cited sediment benchmark (RAIS, 2003).

[Bis(2-Chloroethyl)Ether] Bis(2-chloroethyl)ether (BCEE) is a component of pesticides, solvents, paint, varnish, rust inhibitors, and as an intermediate to produce other chemicals (ATSDR, 1999a). Although still produced commercially in the United States, BCEE is no longer manufactured or used commercially in Canada (CCME, 2002). The USEPA recommends a soil benchmark of 23.7 mg/kg and a sediment criterion of 0.21 mg/kg (RAIS, 2003). The State of Louisiana recommends a soil-BCEE concentration of 0.26 mg/kg as the target value for remedial actions in non-industrial areas to address potential carcinogenic health concerns (AEHS, 2002), while the State of Texas considers a soil-BCEE concentration of 0.22 mg/kg as protective of human health in residential areas (TAC, 1993). This compound was not detected above the analytical detection limits in any of the soil or sediment samples analyzed, with the exception of the soil sample collected from Site 59 (Appendix B, Table 3). The BCEE concentration measured at this site (0.055 mg/kg dry weight) was less than the cited soil screening criterion and remedial target values (TAC, 1993; AEHS, 2002; RAIS, 2003).

[Bis(2-Ethylhexyl)Phthalate] Considered by the USEPA as a probable human carcinogen, bis(2-ethylhexyl)phthalate (DEHP) is a phthalate that is widely used in the manufacturing of plastics (ATSDR, 2003). Its synonyms include di(2-ethylhexyl)phthalate, dioctylphthalate (DOP) and bis(2-ethylhexyl)phthalate (BEHP) (ATSDR, 2003). When released into the environment, DEHP binds readily to soil particles (ATSDR, 2003). This compound readily biodegrades in both terrestrial and aquatic systems, however it does not break easily when buried deep within soils and sediments (ATSDR, 2003). The USEPA recommends a soil benchmark of 0.93 mg/kg (RAIS, 2003). The State of Louisiana recommends a soil-DEHP concentration of 32 mg/kg as the target value for remedial actions in non-industrial areas to address potential carcinogenic health concerns (AEHS, 2002), while the State of Texas considers a soil-DEHP concentration of 46 mg/kg as protective of human health in residential areas (TAC, 1993). For sediments, the USEPA recommends a screening criterion of 0.18 mg/kg, while the State of Florida reports a sediment TEL of 0.18 mg/kg and a PEL of 2.64 mg/kg (RAIS, 2003). In Texas, the 85th percentile screening value for lotic sediments is 0.9 mg/kg dry weight (TCEQ, 2000). This compound was detected above the analytical detection limits in 20 soil samples and one sediment sample (from Site 162) (Appendix B, Table 3). Detected soil concentrations ranged from 0.031 mg/kg dry weight at Site 111 to 0.426 mg/kg dry weight at Site 247 (Appendix B, Table 3), all below the cited soil criterion and remedial target values (TAC, 1993; AEHS, 2002; RAIS, 2003). The sediment-DEHP concentration detected at Site 162 (0.2 mg/kg dry weight) exceeded the lower threshold sediment criteria recommended by the USEPA and the State of Florida, but was less than the Texas 85th percentile value and the upper sediment benchmark reported by the State of Florida (TCEQ, 2000; RAIS, 2003).

[Butylbenzylphthalate] Like DEHP, butylbenzylphthalate (BBP) is a phthalate that is commonly used in the production of plastics (CCME, 2000). It is not readily persistent in water, sediments, or soils under aerobic conditions, but can be resistive to breakdown in soils and sediments under

anaerobic conditions (CCME, 2000). In soils, the USEPA suggests a screening benchmark of 0.24 mg/kg, while the State of Louisiana recommends a soil concentration of 220 mg/kg as the target value for remedial actions in non-industrial areas (AEHS, 2002; RAIS, 2003). For sediments, the USEPA recommends a screening benchmark of 4.19 mg/kg, while the 85th percentile screening value for lotic sediments in Texas is 0.79 mg/kg dry weight (TCEQ, 2000; RAIS, 2003). This compound was detected above the analytical detection limits in two soil samples (from Sites 79 and 185) and two sediment samples (from Sites 68 and 182) (Appendix B, Table 3). The soil-BBP concentrations measured at Sites 79 (0.148 mg/kg dry weight) and 185 (0.114 mg/kg dry weight) were less than the referenced benchmark and remedial action level, while the sediment-BBP concentrations at Sites 68 (0.128 mg/kg dry weight) and 182 (0.0509 mg/kg dry weight) were below the cited sediment criteria (TCEQ, 2000; AEHS, 2002; RAIS, 2003).

[Di-n-Butylphthalate] As with DEHP and BBP, di-n-butylphthalate (DBP) is a phthalate that is widely used in the production of plastics (ATSDR, 2001). The USEPA recommends soil screening benchmarks ranging from 0.15 mg/kg to 200 mg/kg (RAIS, 2003). In the State of Texas, a concentration of 365 mg/kg is the target value considered protective of groundwater for remedial actions in residential areas (TAC, 1993). For sediments, the USEPA recommends a screening benchmark of 0.11 mg/kg (RAIS, 2003). This compound was measured above the analytical detection limits in 12 of the 181 soil samples, while none of the 19 sediment samples contained detectable amounts of DHP (Appendix B, Table 3). Detected soil-DHP concentrations ranged from 0.0305 mg/kg dry weight at Site 79 to 0.072 at Site 249 (Appendix B, Table 3), all below the referenced screening criteria and remedial action level (TAC, 1993; RAIS, 2003).

[Diethylphthalate] Like DEHP, BBP, and DHP, diethylphthalate (DEP) is a phthalate that is commonly used in the manufacturing of plastics. Soil benchmarks recommended by the USEPA for DEP range from 24.8 mg/kg to 100 mg/kg (RAIS, 2003). In the State of Texas, a DEP concentration of 2,920 mg/kg is the target value considered protective of groundwater for remedial actions in residential areas (TAC, 1993). Louisiana reports a remedial action level of 670 mg/kg for non-industrial soils (AEHS, 2002). Sediment screening criteria suggested by the USEPA for DEP ranges from 0.008 mg/kg to 0.63 mg/kg, while in Texas, the 85th percentile value for lotic sediments is 0.77 mg/kg dry weight (TCEQ, 2000; RAIS, 2003). This compound was detected above the analytical detection limits in 16 soil samples and one sediment sample (from Site 68) (Appendix B, Table 3). Detected soil-DEP concentrations ranged from 0.0317 mg/kg dry weight at Site 107 to 0.0787 mg/kg dry weight at Site 55 (Appendix B, Table 3), all below the cited screening criteria and remedial target values (TAC, 1993; AEHS, 2002; RAIS, 2003). The sediment concentration detected at Site 68 (0.084 mg/kg dry weight) exceeded the lower threshold sediment criteria recommended by the USEPA, but was less than the Texas 85th percentile value and the upper sediment benchmark reported by the USEPA (TCEQ, 2000; RAIS, 2003).

[Ethyl Methanesulfonate] Releases of ethyl methanesulfonate to the environment from anthropogenic sources are expected to be minimal since this compound is not produced commercially in the United States and is used primarily for research purposes (USDOH, 2002). It is reasonably anticipated to be a human carcinogen USDOH, 2002). This compound was measured above the analytical detection limits in only three of the 181 soil samples (from Sites 131, 194, and

197), while none of the 19 sediment samples contained detectable amounts of ethyl methanesulfonate (Appendix B, Table 3). The concentration detected at Site 131 was 0.0348 mg/kg dry weight, while the concentrations measured at Sites 194 and 197 were 0.0624 mg/kg dry weight and 0.0413 mg/kg dry weight, respectively. Currently, no soil screening criteria are available for comparative purposes.

[Hexachloroethane] Also known as perchloroethane and carbon hexachloride, hexachloroethane (HCE) is a suspected human carcinogen that is used in the production of pesticides, lubricants, plastics, aluminum, and by the military for smoke producing devices (ATSDR, 1997a). When released into the environment, HCE biodegrades more easily under anaerobic conditions than in aerobic settings (ATSDR, 1997a). For soils, the USEPA recommends a screening benchmark of 0.6 mg/kg (RAIS, 2003). In the State of Texas, a soil-HCE concentration of 6.08 mg/kg is the target value considered protective of groundwater for remedial actions in residential areas (TAC, 1993). The State of Louisiana recommends a soil-HCE concentration of 25 mg/kg as the target value for remedial actions in non-industrial areas to address potential carcinogenic health concerns (AEHS, 2002). In sediments, the USEPA recommends a screening benchmark of 2.23 mg/kg, whereas the 85th percentile value reported for lotic sediments in Texas is 0.8 mg/kg dry weight (TCEQ, 2000; RAIS, 2003). With the exception of the soil sample collected from Site 221, HCE was not detected above the analytical detection limits in any of the soil or sediment samples analyzed (Appendix B, Table 3). The concentration measured at Site 221 (0.0443 mg/kg dry weight) was below all referenced soil screening values (TAC, 1993; AEHS, 2002; RAIS, 2003).

[Phenol] Synonymous with carbolic acid, phenylic acid, and phenyl hydroxide, phenol is obtained from coal tar and is used in the manufacturing of pesticides, disinfectants, and synthetic fibers (ATSDR, 1999b). For soils, USEPA Region VI recommends a screening value of 30 mg/kg to be protective of earthworms and a screening criterion of 70 mg/kg to be protective of plants (RAIS, 2003). In Texas, a soil-phenol concentration of 2,190 mg/kg is the target value considered protective of groundwater for remedial actions in residential areas, while the State of Louisiana recommends a soil-phenol concentration of 2,100 mg/kg as the target value for remedial actions in non-industrial areas (TAC, 1993; AEHS, 2002). In sediments, the USEPA recommends a screening criterion of 0.02 mg/kg, while the 85th percentile value reported for lotic sediments in Texas is 1.05 mg/kg dry weight (TCEQ, 2000; RAIS, 2003). With the exception of the soil sample collected from Site 95, phenol was not detected above the analytical detection limits in any of the soil or sediment samples analyzed (Appendix B, Table 3). The concentration measured at Site 95 (1.04 mg/kg dry weight) was below all referenced soil screening values (TAC, 1993; AEHS, 2002; RAIS, 2003).

[Benzo(b)fluoranthene] Benzo(b)fluoranthene is a heavy molecular weight polycyclic aromatic hydrocarbon (PAH) (molecular weight equals 252) that contains four benzene rings and is considered a probable human carcinogen (RAIS, 1994a). Sources can include the incineration of municipal and industrial wastes, petroleum and/or crude oil releases, and emissions from the incomplete combustion of fossil fuels (Eisler, 1987b). For soils, the USEPA recommends a screening benchmark of 59.8 mg/kg (RAIS, 2003). The Canadian Council of Ministers of the Environment (CCME) recommends a soils-benzo(b)fluoranthene screening criterion of 0.1 mg/kg

for agricultural soils (EPT, 1999), whereas the cleanup standard for non-industrial soils in the State of Louisiana is 0.56 mg/kg (AEHS, 2002). In sediments, the USEPA recommends a screening criterion of 10.4 mg/kg, while the 85th percentile value reported for lotic sediments in Texas is 0.8 mg/kg dry weight (TCEQ, 2000; RAIS, 2003). With the exception of the soil samples collected from Sites 160 and 249, benzo(b)fluoranthene was not detected above the analytical detection limits in any of the remaining soil or sediment samples (Appendix B, Table 3). The concentration measured at Site 160 (0.041 mg/kg dry weight) was below all referenced soil screening values, whereas the soil concentration detected at Site 249 (0.2 mg/kg dry weight) exceeded the CCME criterion, but was less than the other cited screening levels (EPT, 1999; AEHS, 2002; RAIS, 2003).

[Benzo(k)fluoranthene] Like benzo(b)fluoranthene, benzo(k)fluoranthene is a heavy molecular weight PAH (molecular weight equals 252) that contains four benzene rings and is considered a probable human carcinogen (RAIS, 1994b). Sources can include the incineration of municipal and industrial wastes, petroleum and/or crude oil releases, and emissions from the incomplete combustion of fossil fuels (Eisler, 1987b). In soils, the USEPA recommends a screening benchmark of 148 mg/kg (RAIS, 2003). For non-industrial soils, the cleanup standard in the State of Louisiana is 5.5 mg/kg (AEHS, 2002), while the State of New York recommends a cleanup objective of 1.1 mg/kg (NYSDEC, 2002). In sediments, the OME recommends a LEL of 0.24 mg/kg dry weight and a SEL of 13.4 mg/kg dry weight (Persaud *et al.*, 1993). With the exception of the soil sample collected from Site 249, benzo(k)fluoranthene was not detected above the analytical detection limits in any of the remaining samples collected (Appendix B, Table 3). The concentration measured at Site 249 (0.055 mg/kg dry weight) was below all referenced soil screening values (AEHS, 2002; NYSDEC, 2002; RAIS, 2003).

[Chrysene] As with benzo(b)fluoranthene and benzo(k)fluoranthene, chrysene is a heavy molecular weight PAH (molecular weight equals 228) that contains four benzene rings and is classified as a probable human carcinogen (RAIS, 1994c). Sources can include the incineration of municipal and industrial wastes, petroleum and/or crude oil releases, and emissions from the incomplete combustion of fossil fuels (Eisler, 1987b). The screening criterion in Ontario (Canada) for chrysene in coarse textured agricultural, residential, and parkland soils is 12 mg/kg (EPT, 1999), while the USEPA recommends a screening benchmark of 4.73 mg/kg (EPT, 1999; RAIS, 2003). In Louisiana, the cleanup standard for non-industrial soils is 61 mg/kg (AEHS, 2002). In contrast to these values, the soils cleanup objective recommended by the State of New York is 0.4 mg/kg (NYSDEC, 2002). For sediments, the OME recommends a LEL of 0.34 mg/kg dry weight and a SEL of 4.6 mg/kg dry weight (Persaud *et al.*, 1993). Long *et al.* (1995), consider 0.38 mg/kg dry weight as the ER-L and 2.8 mg/kg dry weight as the ER-M, while MacDonald *et al.* (2000), suggest a sediment TEC of 0.166 mg/kg dry weight and a PEC of 1.29 mg/kg dry weight. With the exception of the soil sample collected from Site 249, chrysene levels were not detected above the analytical detection limits in any of the remaining samples collected (Appendix B, Table 3). The concentration measured at Site 249 (0.2 mg/kg dry weight) was below all referenced soil screening values (AEHS, 2002; NYSDEC, 2002; RAIS, 2003).

[Fluoranthene] Unlike benzo(b)fluoranthene, benzo(k)fluoranthene, and chrysene, fluoranthene is a light molecular weight PAH (molecular weight equals 202) that contains three benzene rings and is not considered a human carcinogen (RAIS, 1993a). As with all PAHs, sources of releases can include the incineration of municipal and industrial wastes, petroleum and/or crude oil spills, and emissions from the incomplete combustion of fossil fuels (Eisler, 1987b). For soils, the USEPA recommends an ecological screening benchmark of 0.1 mg/kg (RAIS, 2002). In Texas, a soil-fluoranthene concentration of 146 mg/kg is the target value considered protective of groundwater for remedial actions in residential areas, whereas the State of Louisiana recommends a soil-fluoranthene concentration of 200 mg/kg as the target value for remedial actions at non-industrial sites (TAC, 1993; AEHS, 2002). For sediments, the OME recommends a LEL of 0.75 mg/kg dry weight and a SEL of 10.2 mg/kg dry weight (Persaud *et al.*, 1993). Long *et al.* (1995), consider 0.6 mg/kg dry weight as the ER-L and 3.6 mg/kg dry weight as the ER-M, while MacDonald *et al.* (2000), suggest a sediment TEC of 0.42 mg/kg dry weight and a PEC of 2.23 mg/kg dry weight. With the exception of the soil samples collected from Sites 160 and 249, fluoranthene was not detected above the analytical detection limits in any of the remaining soil or sediment samples collected (Appendix B, Table 3). The concentration measured at Site 160 (0.05 mg/kg dry weight) was below all referenced soil screening values, whereas the soil concentration detected at Site 249 (0.13 mg/kg dry weight) exceeded the USEPA ecological criterion, but was less than the other cited screening levels (TAC, 1993; AEHS, 2002; RAIS, 2002).

[Pyrene] Pyrene is a heavy molecular weight PAH (molecular weight equals 202.26) that contains four benzene rings, but like fluoranthene, it is not considered a human carcinogen (RAIS, 1993b). For soils, the ecological screening benchmark recommended by the USEPA for pyrene is 0.1 mg/kg (RAIS, 2002). In Texas, a soil-pyrene concentration of 110 mg/kg is the target value considered protective of groundwater for remedial actions in residential areas, whereas the State of Louisiana recommends a soil-pyrene concentration of 150 mg/kg as the target value for remedial actions in non-industrial areas (TAC, 1993; AEHS, 2002). In sediments, the OME recommends a LEL of 0.49 mg/kg dry weight and a SEL of 8.5 mg/kg dry weight (Persaud *et al.*, 1993). Long *et al.* (1995), consider 0.35 mg/kg dry weight as the ER-L and 2.2 mg/kg dry weight as the ER-M, while MacDonald *et al.* (2000), suggest a sediment TEC of 0.19 mg/kg dry weight and a PEC of 1.52 mg/kg dry weight. With the exception of the soil samples collected from Sites 160 and 249, pyrene levels were not detected above the analytical detection limits in any of the remaining samples collected (Appendix B, Table 3). The concentration measured at Site 160 (0.034 mg/kg dry weight) was below all referenced soil screening values, whereas the soil concentration detected at Site 249 (0.12 mg/kg dry weight) exceeded the USEPA ecological criterion, but was less than the other cited screening levels (TAC, 1993; AEHS, 2002; RAIS, 2002).

Organochlorine Pesticides

Results of the organochlorine analyses for the 181 soil samples and 19 sediment samples, including total-PCBs, are presented in Appendix B, Table 4. Each sample was analyzed for 27 compounds. Of these, the compounds alpha-, beta-, and delta-BHC, and toxaphene were not detected above the analytical detection limits in any of the samples collected (Appendix B, Table 4). No organochlorine

compounds, including total-PCBs, were detected above the analytical detection limits in the soil samples collected from Sites 121, 124, and 245, and in the sediment samples collected from Sites 153 and 163 (Appendix B, Table 4).

[1,2,3,4-Tetrachlorobenzene] Used as an ingredient in dielectric fluids and pesticides, 1,2,3,4-tetrachlorobenzene is highly toxic to aquatic organisims and is considered a suspected teratogen (Sax and Lewis, 1987). In soils, the ecological benchmark recommended by the USEPA for 1,2,3,4-tetrachlorobenzene is 0.01 mg/kg, while the Oak Ridge National Laboratory considers 10 mg/kg as a benchmark protective of soil invertebrates (RAIS, 2002). For agricultural soils, Buchman (1999) reports a remedial target value of 0.1 mg/kg for residual chlorobenzenes as a group. This compound was detected above the analytical detection limits in only four of the 181 soil samples (from Sites 66, 71, 105, and 128), while none of the 19 sediment samples contained detectable amounts of 1,2,3,4-tetrachlorobenzene (Appendix B, Table 4). Measured concentrations ranged from 0.0003 mg/kg dry weight at Site 105 to 0.001 mg/kg dry weight at Site 128 (Appendix B, Table 4), all below the referenced screening criteria (Buchman, 1999; RAIS, 2002).

[1,2,4,5-Tetrachlorobenzene] Listed by the USEPA as a persistent, bio-accumulative, and toxic chemical (PBT), 1,2,4,5-tetrachlorobenzene is a common component of many herbicides, insecticides, defoliants, and electrical insulation fluids (Sax and Lewis, 1987; NDDH, 2002). For soils, as previously stated, Buchman (1999) reports a remedial target value of 0.1 mg/kg for residual chlorobenzenes as a group. In Texas, the remedial target value for residential soils is 1.1 mg/kg (TAC, 1993), while in the State of Louisiana, the cleanup standard for non-industrial soils is also 1.1 mg/kg (AEHS, 2002). In freshwater lotic systems, the 85th percentile screening criterion reported by the State of Texas for sediments is 0.67 mg/kg dry weight (TCEQ, 2000). This compound was detected above the analytical detection limit in 94 soil samples and seven sediment samples (Appendix B, Table 4). The measured soil-1,2,4,5-tetrachlorobenzene concentrations ranged from 0.0003 mg/kg dry weight at Site 216 to 0.0075 mg/kg dry weight at Site 186 (Appendix B, Table 4), all of which were below the cited remedial criteria (TAC, 1993; Buchman, 1999; AEHS, 2002). Detected sediment-1,2,4,5-tetrachlorobenzene levels ranged from 0.00037 mg/kg dry weight at Site 215 to 0.001 mg/kg dry weight at Site 162 (Appendix B, Table 4), all of which were less than the cited screening criterion (TCEQ, 2000).

[Aldrin] Considered by the USEPA as a probable human carcinogen, aldrin was used as a pesticide in the United States from 1950 through 1970 (ATSDR, 1993). In 1974, the USEPA banned all uses of aldrin except for subterranean termite control (ATSDR, 1993). In 1987, the USEPA banned all commercial uses of this compound in the United States (ATSDR, 1993). Once in the environment, aldrin readily breaks down to the epoxide dieldrin through microbial and photic degradation (ATSDR, 1993; Cornell, 1998). For soils, the ecological screening criterion recommended by the USEPA for aldrin is 0.0025 mg/kg (RAIS, 2002). The State of Louisiana recommends a soil-aldrin concentration of 0.025 mg/kg as the target value for remedial actions in non-industrial areas to address potential carcinogenic health concerns (AEHS, 2002), while the State of Texas considers a soil-aldrin concentration of 0.038 mg/kg as protective of human health in residential areas (TAC,

1993). In sediments, the OME recommends a LEL of 0.002 mg/kg dry weight and a SEL of 0.08 mg/kg dry weight (Persaud *et al.*, 1993).

Aldrin concentrations were measured above the analytical detection limits in only six of the 181 soil samples (from Sites 113, 122, 129, 133, 238, and 249), while none of the 19 sediment samples contained detectable amounts of this compound (Appendix B, Table 4). The detected concentrations ranged from 0.000452 mg/kg dry weight at Site 122 to 0.0034 mg/kg dry weight at Site 249 (Appendix B, Table 4). Only the concentration measured at Site 249 exceeded the ecological benchmark suggested by the USEPA for soils (RAIS, 2002); however, this concentration was well below the Louisiana and Texas remedial target values (TAC, 1993; AEHS, 2002).

[Chlordane, isomers, and metabolites)] Technical chlordane consists of the stereoisomers alpha (α) and gamma (γ) or *cis* and *trans*-chlordane, heptachlor, *cis*-nonachlor and *trans*-nonachlor, and the metabolites oxychlordane and heptachlor epoxide (ATSDR, 1994). First developed in 1946, chlordane was used as a general pesticide until 1983 (LMF, 2002). Between 1983 and 1988, use of chlordane in the United States was restricted by the USEPA to subterranean termite control (ATSDR, 1994). All commercial use of chlordane as a pesticide was banned by the USEPA in the United States in 1988 (ATSDR, 1994). In the environment, chlordane binds tightly with soil particles and can remain in the soil for more than 20 years (LMF, 2002). It can bio-accumulate in the tissues of fish, birds, and mammals and can adversely affect the nervous, digestive, and hepatic systems in both humans and animals (ATSDR, 1994; LMF, 2002). The screening criterion in Ontario for chlordane in coarse textured agricultural, residential, and parkland soils is 0.29 mg/kg (EPT, 1999). The State of Louisiana recommends a soil-chlordane concentration of 1.5 mg/kg as the target value for remedial actions in non-industrial areas to address potential carcinogenic health concerns (AEHS, 2002), while the State of Texas considers a soil-chlordane concentration of 0.49 mg/kg as protective of human health in residential areas (TAC, 1993). In freshwater systems, the OME reports a no effect level of total chlordane in sediments as 0.005 mg/kg dry weight and recommends a LEL of 0.007 mg/kg dry weight and a SEL of 6 mg/kg dry weight (Persaud *et al.*, 1993), while the TCEQ (2001) considers a concentration of 0.0045 mg/kg dry weight as an ecological benchmark for sediments. MacDonald *et al.* (2000), suggest a sediment TEC of 0.0032 mg/kg dry weight and a PEC of 0.018 mg/kg dry weight.

Chlordane residues (isomers and/or metabolites) were detected above the analytical detection limits in 54 soil samples and 4 sediment samples (Appendix B, Tables 4 and 5). The detected residues from each of these 58 sites were used to calculate site-specific total chlordane values (sum of α- and γchlordane, *cis*- and *trans*-nonachlor, oxychlordane, heptachlor, and heptachlor epoxide) following Munn and Gruber (1997) (Appendix B, Table 5). In the soil samples, total chlordane values ranged from 0.00031 mg/kg dry weight at Site 102 to 0.14 mg/kg dry weight at Site 249 (Appendix B, Table 5), all below the cited screening criteria (TAC, 1993; EPT, 1999; AEHS, 2002). Sediment-total chlordane levels ranged from 0.0007 mg/kg dry weight at Site 162 to 0.0083 mg/kg dry weight at Site 227 (Appendix B, Table 5). All of the sediment-total chlordane concentrations were below screening levels, with the exception of the concentration calculated for Site 227 which exceeded the

cited lower threshold values, but was below all of the referenced higher threshold benchmarks (Persaud *et al.*, 1993; MacDonald *et al.*, 2000; TCEQ, 2001).

[Dichloro-diphenyl-trichloroethane (DDT), isomers, and metabolites] First developed in 1939, dichloro-diphenyl-trichloroethane (DDT) was used extensively throughout the world as an insecticide (ATSDR, 1995). Considered a probable human carcinogen by the USEPA, commercial production of DDT was banned in the United States in 1972 because of adverse affects to non-target wildlife species and the potential harm to human health (ATSDR, 1995; ATSDR, 2000a). The metabolites dichloro-diphenyl-dichloroethane (DDD) and dichloro-diphenyl-dichloroethylene (DDE) are microbial degradation products formed by the dehydrohalogenation of DDT (ATSDR, 2000a). In wildlife, DDT exposure has resulted in birds, alligators, and turtles producing eggs with shells too thin for offspring survival (Baskin, 2002). This compound exhibits very low solubility in aquatic environments and bio-accumulates in the fatty tissues of fish, birds, and other animals (Baskin, 2002). In soils, DDT binds readily to soil particles, with a half life estimated at 2 to 15 years (ATSDR, 1995). The screening criteria in Ontario for DDD, DDE, and DDT for coarse textured agricultural, residential, and parkland soils is 2.2, 1.6, and 1.6 mg/kg, respectively (EPT, 1999). The CCME recommends a soil-DDT screening criterion of 0.7 mg/kg for agricultural, residential, and parkland soils (EPT, 1999). The State of Louisiana recommends soil-DDD, -DDE, and -DDT concentrations of 2.3, 1.6, and 1.7 mg/kg, respectively, as target values for remedial actions in non-industrial areas to address potential carcinogenic health concerns (AEHS, 2002), while the State of Texas considers soil-DDD, -DDE, and -DDT concentrations of 2.7, 1.9, and 1.9 mg/kg, respectively, as protective of human health in residential areas (TAC, 1993). For total-DDT (the sum of all isomers and metabolites), the USEPA recommends a soil screening criterion of 0.0025 mg/kg (RAIS, 2002). In sediments, the TCEQ (2001) recommends concentrations of 0.00354, 0.00142, and 0.00119 mg/kg dry weight, as ecological benchmarks for DDD, DDE, and DDT, respectively. For total-DDT, the TCEQ (2001) considers a concentration of 0.007 mg/kg dry weight as an ecological benchmark for sediments, while MacDonald *et al.* (2000), suggest a sediment TEC of 0.0053 mg/kg dry weight and a PEC of 0.57 mg/kg dry weight.

No DDT compounds including metabolites were detected above the analytical detection limits in soil samples collected from Sites 62, 65, 70, 97, 105, 121, 123, 124, 125, 151, 161, 178, 193, 222, and 245, and from sediment samples collected from Sites 149, 153, 163, and 215 (Appendix B, Table 4). For screening purposes, the sum of the detected isomer concentrations of DDD (o,p'-DDD + p,p'-DDD) and DDE (o,p'-DDE + p,p'-DDE) metabolites, and DDT isomers (o,p'-DDT + p,p'-DDT) were calculated following Munn and Gruber (1997) for each site where detected above the analytical detection limits (Appendix B, Table 6).

One or both isomers of the metabolite DDD (o,p'-DDD and p,p'-DDD) were detected above the analytical detection limits in 19 soil samples and 4 sediment samples (Appendix B, Table 4). Calculated soil-DDD concentrations ranged from 0.0004 mg/kg dry weight at Site 85 to 0.0073 mg/kg dry weight at Site 246, while sediment-DDD concentrations ranged from 0.00123 mg/kg dry weight at Site 182 to 0.00268 mg/kg dry weight at Site 162 (Appendix B, Table 6). All of the

calculated soil and sediment DDD values (Appendix B, Table 6) were below the pertinent referenced screening criteria (TAC, 1993; EPT, 1999; TCEQ, 2001; AEHS, 2002).

One or both isomers of the metabolite DDE (o,p'-DDE and p,p'-DDE) were detected above the analytical detection limits in 165 soil samples and 15 sediment samples (Appendix B, Table 4). Calculated soil-DDE concentrations ranged from 0.00032 mg/kg dry weight at Site 111 to 0.25 mg/kg dry weight at Site 249 (Appendix B, Table 6), all less than the cited soil screening criteria (TAC, 1993; EPT, 1999; AEHS, 2002). Calculated sediment-DDE concentrations ranged from 0.00048 mg/kg dry weight at Site 60 to 0.0093 mg/kg dry weight at Site 227 (Appendix B, Table 6). The values calculated for sediments collected from Sites 118 (0.00296 mg/kg dry weight), 162 (0.00451 mg/kg dry weight), 170 (0.00205 mg/kg dry weight), 180 (0.00181 mg/kg dry weight), 182 (0.00389 mg/kg dry weight), 225 (0.0016 mg/kg dry weight), and 227 exceeded the criterion reported by the TCEQ (2001) for DDE.

Isomers of the parent compound DDT (o,p'-DDT and p,p'-DDT) were detected above the analytical detection limits in samples collected from 81 sites (Appendix B, Table 4). Seventy-four of these samples were soils, while the remaining seven were sediments. Calculated soil-DDT concentrations for the 74 soil samples ranged from 0.00029 mg/kg dry weight at Site 107 to 0.047 mg/kg dry weight at Site 246 (Appendix B, Table 6), all were below the cited soil screening criteria (TAC, 1993; EPT, 1999; AEHS, 2002). Calculated sediment-DDT concentrations from the seven sediment sites ranged from 0.00055 mg/kg dry weight at Site 139 to 0.00326 mg/kg dry weight at Site 227 (Appendix B, Table 6). The values calculated for sediments collected from Sites 64 (0.00149 mg/kg dry weight), 162 (0.00309 mg/kg dry weight), 182 (0.00164 mg/kg dry weight), and 227 exceeded the criterion reported by the TCEQ (2001) for DDT. Site-specific total-DDT concentrations were calculated for the 81 sites by adding the sum of DDD, DDE, and DDT (Appendix B, Table 6). Calculated soil-total DDT concentrations for the 74 soil sites ranged from 0.00077 mg/kg dry weight at Site 93 to 0.29203 mg/kg dry weight at 246 (Appendix B, Table 6). The soil-total DDT values measured at 33 of these sites equaled or exceeded the ecological screening criterion recommended by the USEPA (RAIS, 2002). The sites of these exceedances with their corresponding calculated total-DDT values are as follows:

Site 76 (0.0026 mg/kg dry weight),
Site 82 (0.0183 mg/kg dry weight),
Site 83 (0.0088 mg/kg dry weight),
Site 85 (0.0097 mg/kg dry weight),
Site 108 (0.0072 mg/kg dry weight),
Site 113 (0.0408 mg/kg dry weight),
Site 122 (0.0119 mg/kg dry weight),
Site 126 (0.0026 mg/kg dry weight),
Site 128 (0.0035 mg/kg dry weight),
Site 133 (0.0937 mg/kg dry weight),
Site 135 (0.0031 mg/kg dry weight),
Site 136 (0.0030 mg/kg dry weight),
Site 165 (0.0025 mg/kg dry weight),
Site 175 (0.0271 mg/kg dry weight),
Site 176 (0.0028 mg/kg dry weight),
Site 181 (0.01381 mg/kg dry weight),
Site 185 (0.0027 mg/kg dry weight),
Site 186 (0.0871 mg/kg dry weight),
Site 188 (0.0095 mg/kg dry weight),
Site 203 (0.0033 mg/kg dry weight),
Site 207 (0.0043 mg/kg dry weight),
Site 208 (0.0042 mg/kg dry weight),
Site 226 (0.0082 mg/kg dry weight),
Site 228 (0.0050 mg/kg dry weight),

Site 235 (0.0031 mg/kg dry weight), Site 236 (0.0100 mg/kg dry weight), Site 237 (0.0029 mg/kg dry weight), Site 238 (0.0029 mg/kg dry weight), Site 241 (0.0031 mg/kg dry weight), Site 246 (0.2920 mg/kg dry weight), Site 247 (0.0210 mg/kg dry weight), Site 248 (0.0223 mg/kg dry weight), and Site 249 (0.2845 mg/kg dry weight).

None of these concentrations exceeded the CCME DDT criterion recommended for non-industrial soils or approached the Louisiana or Texas remedial target values for DDT in soils (TAC, 1993; EPT, 1999; AEHS, 2002). However, the levels of total-DDT measured at Sites, 82, 113, 122, 133, 175, 181, 186, and 236 are at high enough concentrations to warrant further investigation to determine the affects to wildlife resources.

Calculated sediment-total DDT values for the seven sediment sites ranged from 0.0012 mg/kg dry weight at Site 139 to 0.0149 mg/kg dry weight at Site 227 (Appendix B, Table 6). All of the sediment-total DDT levels were below cited sediment screening values (MacDonald *et al.*, 2000; TCEQ, 2001) with the exception of the concentrations measured at Sites 162 (0.0103 mg/kg dry weight), 182 (0.0068 mg/kg dry weight), and 227. The sediment-total DDT level at Site 182 exceeded the TEC, but was below all other referenced sediment criteria (MacDonald *et al.*, 2000; TCEQ, 2001). The concentrations calculated for Sites 162 and 227 exceeded the ecological benchmark recommended by the TCEQ (2001) and the TEC proposed by MacDonald *et al.* (2000), but were well below the PEC suggested by MacDonald *et al.* (2000).

[Dieldrin] Dieldrin is a synthetic cyclic hydrocarbon that exhibits high toxicity and is persistent in soils (Cornell, 1998). It is formed as a degradation product of aldrin (Cornell, 1998). From 1950 through 1970, this compound was used in the United States as a pesticide (ATSDR, 1993). In 1974 the USEPA banned all uses of dieldrin except for termite control (ATSDR, 1993). In the environment, dieldrin degrades very slowly and binds tightly to soil and sediment particles (ATSDR, 1993). A disappearance rate of 95% is expected to occur in surface soils anywhere from 5 to 25 years after application (Cornell, 1998). Soil persistence is affected by soil type, with soils high in organic matter demonstrating higher persistency than sandy soils (Cornell, 1998). The ecological benchmark recommended by the USEPA for dieldrin in soils is 0.0005 mg/kg (RAIS, 2002). The State of Louisiana recommends a soil-dieldrin concentration of 0.027 mg/kg as the target value for remedial actions in non-industrial areas to address potential carcinogenic health concerns (AEHS, 2002). In sediments, the OME reports a no effect level of 0.0006 mg/kg dry weight and recommends a LEL of 0.002 mg/kg dry weight and a SEL of 0.91 mg/kg dry weight (Persaud *et al.*, 1993). Long *et al.* (1995), consider 0.00002 mg/kg dry weight as the ER-L and 0.008 mg/kg dry weight as the ER-M, while MacDonald *et al.* (2000), suggest a sediment TEC of 0.0019 mg/kg dry weight and a PEC of 0.063 mg/kg dry weight.

Dieldrin concentrations were measured above the analytical detection limits in only five of the 181 soil samples (from Sites 84, 185, 233, 248, and 249) and one of the 19 sediment samples (from Site 182) (Appendix B, Table 4). The detected soil concentrations ranged from 0.00038 mg/kg dry weight at Site 248 to 0.0021 mg/kg dry weight at Site 249 (Appendix B, Table 4). The concentration

measured at Sites 84 (0.00053 mg/kg dry weight), 233 (0.0005 mg/kg dry weight), and 249 equaled or exceeded the ecological benchmark suggested by the USEPA for soils (RAIS, 2002); however, all of these concentrations were well below the remedial target value proposed by the State of Louisiana (AEHS, 2002). The sediment-dieldrin concentration detected at Site 182 (0.0006 mg/kg dry weight) equaled or exceeded the OME no effects concentration (Persaud *et al.*, 1993) and the ER-L value recommended by Long *et al.* (1995), but was less than all other cited screening criteria (Persaud *et al.*, 1993; Long *et al.*, 1995; MacDonald *et al.*, 2000).

[Endosulfan] The organochlorine pesticide endosulfan was first introduced in the United States in 1954, however it has not been commercially produced in the U.S. since 1982 (ATSDR, 2000b). This compound exists as two principal isomers, α- and β-endosulfan (ATSDR, 2000b). Endosulfan can degrade in the environment through photolysis, bio-transformation, or oxidation into the metabolite, endosulfan sulfate (ATSDR, 2000b). For soils, the screening criterion in Ontario for endosulfan in coarse textured agricultural, residential, and parkland soils is 0.18 mg/kg (EPT, 1999). In freshwater systems in Texas, the 85th percentile screening value reported for endosulfan in sediments is 0.0107 mg/kg dry weight (TCEQ, 2000). Endosulfan concentrations were measured above the analytical detection limits in only six of the 181 soil samples (from Sites 65, 79, 143, 160, 185, and 217) and one of the 19 sediment samples (from Site 64) (Appendix B, Table 4). The detected soil concentrations ranged from 0.00044 mg/kg dry weight at Sites 143 and 217 to 0.0033 mg/kg dry weight at Site 185 (Appendix B, Table 4), all below the referenced screening value (EPT, 1999). The sediment-endosulfan concentration detected at Site 64 (0.0012 mg/kg dry weight) was below the screening criterion cited for sediments in Texas (TCEQ, 2000).

[Endrin] Endrin is a stereoisomer of dieldrin (ATSDR, 1996). It was first used as an insecticide, rodenticide, and avicide in 1951 (ATSDR, 1996). Manufacturing of this compound discontinued in the United States in 1991 primarily because of its toxicity to non-target populations of raptors and migratory birds (ATSDR, 1996). The ecological screening benchmark recommended by the USEPA for endrin in soils is 0.001 mg/kg (RAIS, 2002). The State of Louisiana recommends a soil-endrin concentration of 1.6 mg/kg as the target value for remedial actions in non-industrial areas (AEHS, 2002). In sediments, the OME reports a no effect level of 0.0005 mg/kg dry weight for endrin and recommends a LEL of 0.003 mg/kg dry weight and a SEL of 1.3 mg/kg dry weight (Persaud *et al.*, 1993).

Endrin was detected above the analytical detection limits in 34 soil samples and two sediment samples (Appendix B, Table 4). The detected soil concentrations ranged from 0.000283 mg/kg dry weight at Site 62 to 0.00197 mg/kg dry weight at Site 249 (Appendix B, Table 4). Of these 34 samples, only the concentrations measured at Sites 91 (0.00111 mg/kg dry weight) , 101 (0.00104 mg/kg dry weight), 184 (0.00123 mg/kg dry weight), and 249 exceeded the ecological benchmark suggested by the USEPA (RAIS, 2002); however, all detected soil-endrin levels were well below the Louisiana remedial target value (AEHS, 2002). Sediment-endrin concentrations measured at Sites 64 (0.00125 mg/kg dry weight) and 162 (0.00328 mg/kg dry weight) exceeded the OME no effects concentration, but the level detected at Site 64 was below all other cited criteria (Persaud *et*

al., 1993). The concentration measured at Site 162 slightly exceeded the cited LEL but was well less than the reported SEL (Persaud *et al.*, 1993).

[Heptachlor/Heptachlor epoxide] Developed in 1946, heptachlor is an organochlorine cyclodiene pesticide formerly used to kill termites (ETN, 1996a; NSC, 2002). It is also present as an impurity in the pesticide chlordane (NSC, 2002). Both heptachlor and heptachlor epoxide are highly persistent in soils (ETN, 1996a). The half life of heptachlor in temperate soils can be two years, however it has been detected in trace amounts 14 to 16 years after application (ETN, 1996a; EMS 2000). It can evaporate from soil surfaces and is degraded by bacteria once it passes into the soil (USEPA, 2002). In contrast, heptachlor epoxide is not produced commercially, but rather is formed by the chemical and biological transformation of heptachlor in the environment (USEPA, 2002). This compound is not very susceptible to bio-degradation, photolysis, oxidation, or hydrolysis, consequently it can persist for many years in the upper soil layers (ETN, 1996a; USEPA, 2002). In 1988, the sale of all heptachlor products was banned in the United States by the USEPA, while use of this pesticide was restricted to the control of fire ants in buried, pad-mounted electric power transformers and underground cable television and telephone cable boxes (EMS, 2000; USEPA, 2002). In Ontario, the screening criterion for heptachlor in medium to fine textured agricultural, residential, and parkland soils is 0.12 mg/kg, while in coarse textured soils its 0.084 mg/kg (EPT, 1999). The screening criterion for heptachlor epoxide in coarse textured agricultural, residential, and parkland soils is 0.06 mg/kg (EPT, 1999). In sediments, the OME reports a heptachlor concentration of 0.0003 mg/kg dry weight as the no effect level, whereas the recommended LEL for heptachlor epoxide is 0.005 mg/kg dry weight and the SEL is 0.05 mg/kg dry weight (Persaud *et al.*, 1993). MacDonald *et al.* (2000), suggest a sediment TEC of 0.0025 mg/kg dry weight and a PEC of 0.016 mg/kg dry weight.

Of the 200 samples collected, heptachlor was detected above the analytical detection limit in only one sample, a soil sample taken from Site 128, while heptachlor epoxide concentrations were measured above the analytical detection limits in only three samples, soils collected from Sites 247, 248, and 249 (Appendix B, Table 4). The heptachlor concentration measured at Site 128 (0.00048 mg/kg dry weight) and the detected heptachlor epoxide concentrations at Sites 247 (0.00251 mg/kg dry weight), 248 (0.00042 mg/kg dry weight), and 249 (0.00072 mg/kg dry weight) were all below cited soil criteria (EPT, 1999).

[Hexachlorobenzene (HCB)] First introduced in 1945, hexachlorobenzene was widely used in the United States as a fungicide (ATSDR, 1997b; EMS 2002a). It was also used in the manufacturing of fireworks, ammunition, and synthetic rubber, and can be produced as a by-product in the waste streams of chloralkali and wood-preserving plants and the incineration of industrial and municipal solid wastes (ATSDR, 1997b). This compound is a suspected carcinogen and is toxic to fish and avian species, while chronic exposure in humans can lead to liver disease and cancer (ATSDR, 1997b; EMS, 2002a). Production of HCB as a fungicide ceased in 1965 and currently there are no commercial uses for this compound in the United States (ATSDR, 1997b). Hexachlorobenzene is highly persistent in soils, with reported half lives ranging from 2.7 to 22.9 years (ETN, 1996b; EMS, 2002a). At the surface, evaporation is rapid, but once HCB is mixed into the soil, degragdation

slows down considerably (ETN, 1996b). The ecological screening benchmark recommended by the USEPA for hexachlorobenzene in soils is 0.0025 mg/kg, while the Oak Ridge National Laboratory considers a soils-HCB concentration of 1000 mg/kg as a benchmark value protective of soil microorganisms (RAIS, 2002). In Canada, a soils-HCB concentration of 0.1 mg/kg is considered background, while an HCB concentration of 1.0 mg.kg is indicative of moderate soil contamination (Beyer, 1990). Hexachlorobenzene exhibits low water solubility, but once it is released into an aquatic environment it can rapidly degrade into pentachlorophenol and related compounds (ETN, 1996b; ATSDR, 1997; EMS, 2002a). The no effect level for HCB in sediments as reported by the OME is 0.01 mg/kg dry weight, whereas the recommended LEL is 0.02 mg/kg dry weight and the SEL is 24 mg/kg dry weight (Persaud *et al.*, 1993).

Hexachlorobenzene was detected above the analytical detection limits in 18 soil samples and one sediment sample (Appendix B, Table 4). Detected soil-HCB concentrations ranged from 0.000326 mg/kg dry weight at Site 178 to 0.00178 mg/kg dry weight at Site 105 (Appendix B, Table 4), all below the cited soil criteria (Beyer, 1990). The sediment-HCB concentration detected at Site 60 (0.00058 mg/kg dry weight) was below all referenced sediment screening criteria (Persaud *et al.*, 1993).

[gamma-Hexachlorocyclohexane (γBHC)] Hexachlorocyclohexane represents a group of manufactured chemicals used in pesticides that do not occur naturally in the environment (ATSDR, 1999c). Eight isomers are formed from hexachlorocyclohexane of which the four most common are alpha (α)-, beta (β)-, delta (δ)-, and gamma (γ)-BHC (ATSDR, 1999c). In the United States, the commercial production of γBHC, also known as lindane, began in 1945 (EHP, 2002). This compound was used extensively in the 1950s as an insecticide in the timber industry but is no longer produced commercially in the United States (ATSDR, 1999c; EHP, 2002). The commercial production of all hexachlorocyclohexane pesticides in the United States ceased after 1983 (EHP, 2002). In soils, hexachlorocyclohexane can degrade rapidly under anaerobic conditions but is considered extremely persistent in upland soils (Damborsky *et al.*, 2002). Under aerobic conditions, bio-degradation mineralizes αBHC and γBHC, whereas βBHC persists (Middeldorp and McLeish, 2002). Anaerobically, βBHC can biodegrade in soils to benzene and chlorobenzene (Middeldorp and McLeish, 2002). In aquatic environments, hexachlorocyclohexane can become absorbed and adsorbed to sediments and broken down biologically by microflora and fauna (ETN, 1993). It can accumulate in the fatty tissue of fish, birds, and mammals (ETN, 1993; ATSDR, 1999c). Lindane is highly toxic to fish and aquatic invertebrates and may cause birth defects in amphibians (ETN, 1993). Hexachlorocyclohexane and its isomers are reasonably anticipated to be human carcinogens (EHP, 2002). The ecological benchmark recommended by the USEPA for γBHC in soils is 0.00005 mg/kg (RAIS, 2002). The State of Louisiana recommends a soil-αBHC concentration of 0.079 mg/kg, a soil-βBHC concentration of 0.28 mg/kg, and a soil-γBHC concentration of 0.38 mg/kg as target values for remedial actions in non-industrial areas to address potential carcinogenic health concerns (AEHS, 2002). In sediments, USEPA Region VI (2001) suggests a γBHC criterion of 0.00094 mg/kg dry weight. The OME recommends a LEL for γBHC of 0.003 mg/kg dry weight and a SEL of 0.01 mg/kg dry weight (Persaud *et al.*, 1993), while MacDonald *et al.* (2000), suggest a sediment TEC of 0.0024 mg/kg dry weight and a PEC of 0.005 mg/kg dry weight.

Of the 200 samples analyzed, only one sample, a soil sample collected from Site 128, contained a γBHC concentration above the analytical detection limit (Appendix B, Table 4). The concentration measured at this site (0.00057 mg/kg dry weight) exceeded the soil screening criterion but was well below the remedial target value (AEHS, 2002; RAIS, 2002).

[Mirex] First developed in 1946, the pesticide mirex is a highly stable chlorinated hydrocarbon compound that exhibits very low solubility in water and is highly resistant to chemical, thermal, and biochemical degradation (Eisler, 1985a). From 1959 to 1972, mirex was used to control fire ants and as a flame retardant in plastics, rubber, paint, paper, and electrical goods (Eco-USA, 2002). It has not been produced are used in the United States since 1978 (Eco-USA, 2002). Because of its resistance to degradation, mirex has a half-life of over 10 years in terrestrial soils and aquatic sediments (Eisler, 1985a; EMS, 2002b). In sediments from lentic systems, mirex can continue to remain bio-available for 200 to 600 years (Eisler, 1985a). Listed by the USEPA as PBT, mirex is a known endocrine disruptor and suspected carcinogen (Eco-USA, 2002; EMS, 2002b). A limit of 0.000001 mg/L has been established in surface water to protect fish and other aquatic organisms from harmful effects (Eco-USA, 2002). The OME recommends a sediment LEL of 0.007 mg/kg dry weight and a SEL of 1.3 mg/kg dry weight (Persaud *et al.*, 1993). Mirex was detected above the analytical detection limit in 32 soil samples and three sediment samples (Appendix B, Table 4). Detected soil-mirex concentrations ranged from 0.000333 mg/kg dry weight at Site 143 to 0.00306 mg/kg dry weight at Site 135 (Appendix B, Table 4). Although soil benchmark values for this compound have not been established, all of the detected concentrations were below the lowest sediment benchmark (Persaud *et al.*, 1993). The measured sediment-mirex concentrations at Sites 139 (0.000546 mg/kg dry weight), 154 (0.00098 mg/kg dry weight), and 157 (0.00161 mg/kg dry weight) were also lower than this criterion (Persaud *et al.*, 1993).

[Pentachloroanisole] A suspected carcinogen, pentachloroanisole is a chlorinated aromatic compound that is widely distributed in the environment (NTP, 2002). It is formed as a degradation product of pentachloronitrobenzene and pentachlorophenol (NTP, 2002). Pentachloroanisole concentrations were measured above the analytical detection limits in 44 of the 181 soil samples, while none of the 19 sediment samples contained detectable amounts of this compound (Appendix B, Table 4). The detected concentrations ranged from 0.000325 mg/kg dry weight at Site 93 to 0.0315 mg/kg dry weight at Site 73 (Appendix B, Table 4). Currently, there are no screening criteria available for pentachloroanisole in soils and/or sediments. However, there are criteria available for its parent compound, pentachlorophenol which is used as a pesticide and wood preservative. The ecological screening benchmark recommended by the USEPA for pentachlorophenol in soils is 0.002 mg/kg, while the Oak Ridge National Laboratory considers a soils-pentachlorophenol concentration of 3 mg/kg as a benchmark value protective of plants (RAIS, 2002). In sediments, the State of Washington considers a pentachlorophenol concentration of 0.36 mg/kg as an apparent effects threshold level (RAIS, 2002). All of the sites where pentachloroanisole was detected contained pentachloroanisole concentrations below the lower ecological screening criterion recommended for pentachlorophenol (RAIS, 2002) with the exception of the concentrations measured at Sites 73, 92 (0.0033 mg/kg dry weight), and 94 (0.0026 mg/kg dry weight). The levels measured in soils

collected from these three sites exceeded the lower ecological threshold, but were well less than the upper ecological threshold suggested for pentachlorophenol (RAIS, 2002).

Polychlorinated Biphenyls

[Total Polychlorinated Biphenyls (PCBs)] Polychlorinated biphenyls were used extensively in electrical transformers, capacitors, heat transfer fluids, and electrical utilities as lubricants, insulators, and coolants until production was banned in 1979 (USEPA, 1994b; Moring, 1997). Total PCBs represents a quantification of approximately 209 individual congeners (Moring, 1997). These congeners are relatively stable compounds that exhibit low water solubilities, high heat capacities, low flammabilities, low electric conductivities, and low vapor pressures (USEPA, 1994b; Moring, 1997). In wildlife, PCBs can be teratogenic and tumorigenic and demonstrate a trend to bio-accumulate and bio-magnify in succeeding trophic levels. In fish, PCBs are stored in fat, liver, and brain tissue, but can be found in trace amounts in all tissues. According to Eisler (1986b), total PCB concentrations greater than 0.4 mg/kg wet weight in whole body fish and greater than 3 mg/kg in the diet of avian species would result in lethal and/or sublethal toxicological affects. Studies cited by Niimi (1996), suggest that PCB concentrations greater than 25 mg/kg wet weight in macroinvertebrates and greater than 50 mg/kg wet weight in fish tissues may adversely affect reproduction and growth. For soils, the ecological screening benchmark recommended by the USEPA is 0.02 mg/kg, while the Oak Ridge National Laboratory considers a soil-total PCBs concentration of 40 mg/kg as a benchmark value protective of plants (RAIS, 2002). The CCME recommends a soil-total PCBs concentration of 0.3 mg/kg as the screening criterion for agricultural, residential, and parkland soils (EPT, 1999). Buchman (1999), considers a soil-total PCBs concentration of 0.5 mg/kg dry weight as the target value for remedial efforts in agricultural areas and a concentration of 5 mg/kg dry weight as the target value for remedial activities in urban park/residential soils. The State of Louisiana recommends a soil-total- PCB concentration of 0.19 mg/kg as the target value for remedial actions in non-industrial areas to address potential carcinogenic health concerns (AEHS, 2002), while the State of Texas considers a soil-total-PCB concentration of 10 mg/kg as protective of human health in residential areas (TAC, 1993). In sediments, the OME suggest a LEL of 0.07 mg/kg dry weight and a SEL of 5.3 mg/kg dry weight (Persaud *et al.*, 1993), while Long *et al.* (1995), consider 0.05 mg/kg dry weight as the ER-L for total PCBs. MacDonald *et al.* (2000), recommend a sediment TEC of 0.06 mg/kg dry weight and a sediment PEC of 0.68 mg/kg dry weight.

Total-PCBs were detected above the analytical detection limits in every sample with the exception of soil samples collected from Sites 121, 123, 124, and 245, and sediment samples collected from Sites 153 and 163, all of which contained no detectable amounts (Appendix B, Table 4). Measured soil-total-PCB concentrations ranged from 0.00208 mg/kg dry weight at Site 120 to 0.18 mg/kg dry weight at Site 226 (Appendix B, Table 4). The levels detected at the following sites exceeded the lower ecological threshold recommended by the USEPA (RAIS, 2002);

Site 79 (0.0212 mg/kg dry weight), Site 82 (0.0234 mg/kg dry weight),
Site 85 (0.0236 mg/kg dry weight), Site 92 (0.0256 mg/kg dry weight),

Site 93 (0.0202 mg/kg dry weight),
Site 108 (0.0223 mg/kg dry weight),
Site 109 (0.0259 mg/kg dry weight),
Site 128 (0.0293 mg/kg dry weight),
Site 133 (0.0228 mg/kg dry weight),
Site 181 (0.0320 mg/kg dry weight),
Site 184 (0.0281 mg/kg dry weight),
Site 185 (0.0298 mg/kg dry weight),
Site 186 (0.0406 mg/kg dry weight),
Site 207 (0.0203 mg/kg dry weight),
Site 226 (0.180 mg /kg dry weight),
Site 237 (0.0348 mg/kg dry weight), and
Site 249 (0.0845 mg/kg dry weight).

However, none of these samples, nor any of the other soil samples analyzed, contained total-PCB concentrations that exceeded any of the other cited screening criteria (TAC, 1993; Buchman, 1999; EPT, 1999; AEHS, 2002).

Detected sediment-total-PCB levels ranged from 0.002 mg/kg dry weight at Site 149 to 0.384 mg/kg dry weight at Site 227 (Appendix B, Table 4). Of these samples, the sediment collected from Site 227 was the only sample that contained elevated total-PCB levels in comparison to screening criteria. The concentration measured at Site 227 exceeded the cited lower threshold sediment criteria but was below the referenced upper benchmark values (Persaud *et al.*, 1993; Long *et al.*, 1995; MacDonald *et al.*, 2000).

Dioxins/Furans

[Dioxins/Furans] There are 75 polychlorinated dibenzodioxin compounds classified as dioxins and 135 polychlorinated dibenzofuran compounds categorized as furans (ATSDR, 1999d; CHEJ, 1999). Of these compounds, seven dioxins and 10 furans exhibit dioxin-like toxicity (CHEJ, 1999). These compounds can be released into the environment as unintentional by-products of the incineration of chlorinated municipal and industrial wastes (CHEJ, 1999; USEPA, 2000b). Once these compounds are released into the environment they are fairly resistant to degradation and thus tend to be persistent (McArleton *et al.*, 2001).

In aquatic systems, dioxins can bind readily to sediment particles because of their low water solubilities (Rice and O'Keefe, 1995). Although all dioxin-like compounds are thought to act in the same manner, they are not equally toxic (CHEJ, 1999). The compound 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) is considered to be the most toxic of the dioxins (ATSDR, 1999d; CHEJ, 1999). Consequently, the health risk of each dioxin-like compound is assessed by rating its toxicity in comparison to TCDD (CHEJ, 1999). The compound TCDD is assigned a value of 1 while each of the remaining16 toxic dioxins/furans is assigned a toxicity factor that estimates its toxicity relative to TCDD with the resulting estimates being designated as toxic equivalency factors (TEFs) (USEPA, 1998; CHEJ, 1999). The TEF values from the USEPA table on the following page can then be used to determine the toxic equivalency (TEQ) of the compound by multiplying the concentration of the given dioxin-like compound with its corresponding TEF (USEPA, 1998; CHEJ, 1999). The total TEQ of a given sample can then be calculated by adding up all of the individual TEQ values for that sample (CHEJ, 1999).

The World Health Organization has determined that TCDD is a human carcinogen (ATSDR, 1999d), while the USEPA (2001) considers the other dioxins as likely human carcinogens. In humans, acute exposure to dioxins has resulted in chloracne, liver toxicity, skin rashes, nausea, vomiting, and muscular aches and pains (EDF, 2002). Symptoms of chronic exposure can include splenic and testicular atrophy, elevated cholesteral levels, and abnormal neurological responses (EDF,2002). Non-lethal symptoms of acute exposure to dioxins include weight loss, edema, and gastrointestinal hemorrhaging in rodents and birds, while chronic exposure has resulted in developmental and reproductive abnormalities in fish, birds, and rodents (Rice and O'Keefe, 1995). According to Harrison (1999), the OME considers a level of 0.00001 mg/kg TEQ as a soils-dioxin concentration protective of wildlife. According to Buchman (1999), a soils-TCDD concentration of 0.00001 mg/kg dry weight as the target value for remedial actions in agricultural soils and a concentration of 0.001 mg/kg dry weight as the target value for remedial activities in urban park/residential soils. For sediments, the Wisconsin Department of Natural Resources recommends a TEQ of 0.000001 mg/kg dry weight as a screening criterion for dioxin/furan levels within sediments in harbors of the Great Lakes (Beyer, 1990).

Toxic Equivalency Factors (TEFs) of the 17 compounds that exhibit dioxin-like toxicity (USEPA, 1998).

Compound	Acronym	TEF
2,3,7,8-tetrachlorodibenzo-p-dioxin	TCDD	1.0
1,2,3,7,8-pentachlorodibenzo-p-dioxin	PeCDD	0.5
1,2,3,4,7,8-hexachlorodibenzo-p-dioxin	1,2,3,4,7,8-HxCDD	0.1
1,2,3,6,7,8-hexachlorodibenzo-p-dioxin	1,2,3,6,7,8-HxCDD	0.1
1,2,3,7,8,9-hexachlorodibenzo-p-dioxin	1,2,3,7,8,9-HxCDD	0.1
1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin	HpCDD	0.01
1,2,3,4,6,7,8,9-octachlorodibenzo-p-dioxin	OCDD	0.001
2,3,7,8-tetrachlorodibenzofuran	TCDF	0.1
1,2,3,7,8-pentachlorodibenzofuran	1,2,3,7,8-PeCDF	0.05
2,3,4,7,8-pentachlorodibenzofuran	2,3,4,7,8-PeCDF	0.5
1,2,3,4,7,8-hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	0.1
1,2,3,6,7,8-hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	0.1
1,2,3,7,8,9-hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	0.1
2,3,4,6,7,8-hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	0.1
1,2,3,4,6,7,8-heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	0.01
1,2,3,4,7,8,9-heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	0.01
1,2,3,4,6,7,8,9-octachlorodibenzofuran	OCDF	0.001

Of the 17 dioxin-like compounds analyzed for in the samples collected from 20 sites at CLNWR (three sediment samples collected from Sites 118, 149, and 157, and 17 soil samples collected from Sites 55, 59, 73, 78, 84, 96, 107, 112, 128, 158, 164, 167, 176, 178, 193, 203, and 236), only seven compounds (1,2,3,6,7,8-HxCDD, 1,2,3,7,8,9-HxCDD, HpCDD, OCDD, TCDF, 1,2,3,4,6,7,8-HpCDF, and OCDF) were detected above the analytical detection limits (Appendix B, Table 7) Two of these compounds (1,2,3,6,7,8-HxCDD and 1,2,3,7,8,9-HxCDD) were detected above the analytical detection limits at only Site 118, while one compound (TCDF) was detected above the

analytical detection limits at only Sites 118 and 193 (Appendix B, Table 7). Of the remaining four detected compounds, 1,2,3,4,6,7,8-HpCDF was detected above the analytical detection limits at Sites 118, 164, and 176; HpCDD was detected above the analytical detection limits at every site sampled with the exception of Site 96; OCDD levels were detected above the analytical detection limits in all 20 samples; and OCDF concentrations were detected above the analytical detection limits in all three of the sediment samples from Sites 118, 149, and 157, and in soil samples collected from Sites 59, 118, 128, 164, 167, 176, and 236. The calculated TEQ values for the 17 soil samples ranged from 0.00000005 mg/kg dry weight at Site 96 to 0.000018 mg/kg dry weight at Site 112 (Appendix B, Table7). All of the soil TEQ values were below cited screening criteria with the exception of the TEQ calculated for Site 112 which exceeded the OME criterion and the lower remedial threshold suggested for agricultural soils, but was well below the upper remedial target value recommended for urban soils (Buchman, 1999; Harrison, 1999). The TEQ values for the three sediment samples ranged from 0.0000007 mg/kg dry weight at Site 149 to 0.0000071 mg/kg dry weight at Site 118 (Appendix B, Table 7). The TEQ for Site 149 was below the cited screening criterion, but the TEQs calculated for Sites 118 and 157 (0.0000064 mg/kg dry weight) exceeded this benchmark (Beyer, 1990).

Perchlorate

[Perchlorate (ClO_4)] Perchlorate compounds are strong oxidizers that have been widely used as additives in solid rocket propellants and ignitable sources in munitions and fireworks (Smith *et al.*, 2001; York *et al.*, 2001). In the environment, perchlorate is highly soluble in water, readily moves through both groundwater and surface water, and can persist for decades (Nzengung and Wang, 2000; Smith *et al.*, 2001). In humans, perchlorate can interfere with iodine uptake in the thyroid gland and at elevated concentrations interferes with the thyroid's ability to produce hormones and regulate metabolism (Nzengung and Wang, 2000). Nationally, the toxicological and risk characteristics of perchlorate are currently being reviewed by the USEPA. In the interim, the current action level for perchlorate in groundwater in Texas is 4 μg/L (Sher, personal communication, 2002). Of the 200 sites sampled, perchlorate was measured above the minimum reporting limit at only one site, Site 53 (Appendix B, Table 8). Considering that recent studies have indicated that perchlorate bio-accumulates in plants with unknown bio-magnification potential (Smith *et al.*, 2001), combined with the lack of soil/sediment criteria or standards currently available for comparative purposes, the detected concentration at this site (122 μg/kg) warrants further investigation.

CONCLUSIONS & RECOMMENDATIONS

Metals, residual organochlorine pesticides, total-PCBs, and dioxin/furans concentrations were detected at elevated levels in comparison to ecological screening criteria throughout the 5,140 acres (2,080 hectares) sampled in the northern, central, and eastern portions of CLNWR. Semi-volatile

organic compounds were detected at low levels at multiple locations scattered throughout the area sampled. Perchlorate was detected above the analytical detection limit at only one site (Site 53).

Of the metals analyzed, beryllium, boron, cadmium, chromium, copper, molybdenum, and nickel were detected at elevated levels in surficial sediment collected from Site 118. Lead was detected at elevated levels at Sites 118, 147, 225, 240, and 242. Manganese was detected at elevated concentrations in 53% of the soil samples collected. Furthermore, the surficial sediment collected from Site 60 contained a concentration of manganese that exceeded a severe effects level. This widespread distribution of elevated manganese may be indicative of naturally high background concentrations; however, further investigation is warranted to determine if a site-related gradient exists for manganese contamination at the Refuge. Mercury was detected above the analytical detection limits in 92% of the samples collected, with the majority being below levels of ecological concern. The widespread distribution of low levels of mercury through out the Refuge may be indicative of aerial deposition associated with the incomplete combustion of fossil fuels from upwind of the site; however, elevated levels were detected in a cluster at Sites 236, 237, and 239-241. This may be indicative of contamination associated with past operations and warrants further investigation. In comparison to conservative ecological screening benchmarks, vanadium was detected at an elevated level in surficial soil collected from Site 243, while zinc was detected at an elevated concentration in soil from Site 226.

The majority of organochlorine pesticides detected in surficial soils and sediments collected from the Refuge were at levels where adverse affects to ecological resources would not be expected to occur. Residual chlordane was detected at 29% of the sites, all below levels of concern. Forty-one percent of the sites sampled contained detectable amounts of total-DDT. Of these sites, 10 (Sites 82, 113, 122, 133, 162, 175, 181, 186, 227, and 236) contained total-DDT levels that were high enough to warrant further investigation to determine the affects to wildlife resources. Furthermore, the sediment collected from Site 118 contained DDT metabolite concentrations that exceeded ecological benchmarks. Surficial soils collected from Sites 246, 247, 248, and 249 contained elevated organochlorine pesticides, primarily DDT and its metabolites; however, as previously stated in this report, the habitat within this area is of limited ecological value and the concentrations detected at these sites were well below conservative human health remedial action levels. Total-PCBs were detected above the analytical detection limits in 97% of the sites, all at levels where adverse affects to fish and wildlife resources would not be expected to occur. Dioxins/furans were detected in every sample analyzed, primarily at low levels. However, surficial sediments collected from Sites 118 and 157 contained elevated levels that warrant further investigation.

In conclusion, further evaluation is recommended at the following sites to determine the affects to ecological resources prior to the USFWS assuming administrative control over these areas, pending results of the installation-wide background study currently being conducted by the U.S. Army (Murray, personal communication, 2003):

Site 53 (perchlorate),
Site 60 (manganese),
Site 236 (mercury, organochlorine pesticides),
Site 237 (mercury),

Site 82 (organochlorine pesticides),
Site 113 (organochlorine pesticides),
Site 118 (metals, organochlorines, dioxins),
Site 122 (organochlorine pesticides),
Site 133 (organochlorine pesticides),
Site 147 (lead),
Site 162 (organochlorine pesticides),
Site 157 (dioxins),
Site 175 (organochlorine pesticides),
Site 181 (organochlorine pesticides),
Site 186 (organochlorine pesticides),
Site 225 (lead),
Site 226 (zinc),
Site 227 (organochlorine pesticides),
Site 239 (mercury),
Site 240 (lead, mercury),
Site 241 (mercury),
Site 242 (lead), and
Site 243 (vanadium).

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APPENDIX A
(ANALYTICAL METHODS)

Method Code: 003 for % Moisture, % Dry Weight
Laboratory: Geochemical % Environmental Research Group, Texas A&M

Approximately 1 gram of wet sample is weighed into a clean, labeled, pre-weighed 10 ml beaker. The beaker is placed in a forced air oven at approximately 75°Celsisu for 24 hours. The beaker with the dry sample is then weighed and the % dry weight is calculated by the formula:

$$\frac{\text{(wt. dry sample and beaker) - (wt. beaker)(100)}}{\text{(wt. wet sample and beaker) - (wt. beaker)}}$$

Method Code: 004 for 1,2,3,4-terachlorobenzene, 1,2,4,5-tetrachlorobenzene, aldrin, hexachlorobenzene (HCB), heptachlor, alpha hexachlorocyclohexane (αBHC), alpha (α) chlordane, beta hexachlorocyclohexane (βBHC), cis-nonachlor, delta hexachlorocyclohexane (δBHC), dieldrin, endosulfan II, endrin, gamma hexachlorocyclohexane (γBHC), gamma (γ) chlordane, heptachlor epoxide, mirex, o,p'-dichloro-diphenyl-dichloroethane (o,p'-DDD), o,p'-dichloro-diphenyl-trichloroethane (o,p'-DDT), oxychlordane, p,p'-dichloro-diphenyl-dichloroethane (p,p'-DDD), p,p'-dichloro-diphenyl-dichloroethylene (p,p'-DDE), p,p'-dichloro-diphenyl-trichloroethane (p,p'-DDT), pentachloro-anisole, toxaphene, trans-nonachlor, and total polychlorobiphenyls (PCBs)
Laboratory: Geochemical % Environmental Research Group, Texas A&M

The soil/sediment samples were freeze dried and extracted in a Soxhlet extraction apparatus. Briefly, the freeze dried soil/sediment samples were homogenized and a 10 gram sample was weighed into the extraction thimble. Surrogate standards and methylene chloride were added and the samples extracted for 12 hours. The extracts were treated with copper to remove sulfur and were purified by silica/alumina column chromatography (MacLeod *et al.*, 1985; Brooks *et al.*, 1989) to isolate the pesticide and PCB fractions. The quantative analyses were performed by capillary gas chromatography (CGC) with electron capture detector for pesticides and PCBS (Wade *et al.*, 1988). There are specific cases where analytes requested for the pesticide and PCB analyses and are known to co-elute with other analytes in the normal CGC with electron capture. These include the pesticide endosulfan I and the PCB congeners 114 and 157. In these cases, the samples were analyzed by CGC with mass spectrometer detector in the SIM mode.

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Method Code: 006 for Soil/Sediment Clay, Silt, and Sand Grain Sizes
Laboratory: Geochemical % Environmental Research Group, Texas A&M

A small aliquot of sediment is treated with 30% hydrogen peroxide to remove organic coating from grains. A dispersing agent is then added to the sample. The sand/mud fractions are then separated using a 63 micron sieve. The sand fraction (greater than 63 microns) is retained on the screen and the mud fraction (silt and clay less than 63 microns) is washed into a 1 liter volumetric cylinder. The sand fraction is dried, sieved on a 63 micron screen and weighed. The sediment which passes through the screen a second time is added to the 1 liter cylinder. The mud fraction is analyzed by stirring the cylinder and sampling 20 ml aliquots at 4 and 8 phi intervals. The 4 and 8 phi samples are dried and weighed. The % sand, silt, and clay fractions are determined on a dry weight basis.

Method Code: 026 for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), 1,2,3,7,8-pentachlorodibenzo-p-dioxin (PeCDD), 1,2,3,4,7,8-hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-HxCDD), 1,2,3,6,7,8-hexachlorodibenzo-p-dioxin (1,2,3,6,7,8-HxCDD), 1,2,3,7,8,9-hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-HxCDD), 1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin (HpCDD), 1,2,3,4,6,7,8,9-octachlorodibenzo-p-dioxin (OCDD), 2,3,7,8-tetrachlorodibenzofuran (TCDF), 1,2,3,7,8-pentachlorodibenzofuran (1,2,3,7,8-PeCDF), 2,3,4,7,8-pentachlorodibenzofuran (2,3,4,7,8-PeCDF), 1,2,3,4,7,8-hexachlorodibenzofuran (1,2,3,4,7,8-HxCDF), 1,2,3,6,7,8-hexachlorodibenzofuran (1,2,3,6,7,8-HxCDF), 1,2,3,7,8,9-hexachlorodibenzofuran (1,2,3,7,8,9-HxCDF), 2,3,4,6,7,8-hexachlorodibenzofuran (2,3,4,6,7,8-HxCDF), 1,2,3,4,6,7,8-heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF), 1,2,3,4,7,8,9-heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF), and 1,2,3,4,6,7,8,9-octachlorodibenzofuran (OCDF)
Laboratory: Geochemical % Environmental Research Group, Texas A&M

The procedure uses matrix specific extraction, analyte specific cleanup, and HRGC/HRMS analysis techniques. If interferences are encountered, the method provides selected cleanup procedures to aid in their elimination. A specified amount of the sample matrix is spiked with a solution containing each of 15 isotopically (13C12) labeled PCDDs/PCDFs. The sample is then extracted according to a matrix specific extraction procedure. Aqueous samples that are judged to contain 1% or more solids, and solid samples that show an aqueous phase, are filtered, the soil phase and the

aqueous phase extracted separately, and the extracts combined before cleanup. Following a solvent exchange step, the extracts are cleaned up by column chromatography on alumina, silica gel, and AX-21 activated carbon on silica. The preparation of the final extract for HRGA/HRMS analysis is accomplished by adding 2 isotopically (13C12) labeled recovery standards. 2 µl of the concentrated extracts were injected into an HRGC/HRMS system capable of performing selected ion monitoring at resolving powers of at least 10,000 (10% valley definition). The identification of the 16 2378-substituted isomers for which a 13C-labeled standard is available is based on their elution at their exact retention time and the simultaneous detection of the two most abundant ions in the molecular ion region. The identification of OCDF is based on its retention time relative to 13C-OCDD. Confirmation is based on a comparison of the ratios of the integrated ion abundance of the molecular ion species to their theoretical abundance ratios. Qunatitation of the individual congeners is achieved in conjunction with the establishment of a multipoint calibartion curve for each homologue, during which, each calibration solution is analyzed once.

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acenaphthalene, acenaphthene, anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, n-nitrosodiphenylamine, naphthalene, p-dimethylaminoazobenzene, phenanthrene, and pyrene

Laboratory: Geochemical % Environmental Research Group, Texas A&M

The soil/sediment samples are dried with sodium sulfate; surrogate standards are added and the soil/sediment sample is extracted with methylene chloride in an Accelarated Solvent Extraction (ASE) apparatus. Copper is added to remove elemental sulfur. The quantitative analyses were performed by capillary gas chromatography (GC) with a mass spectrometer detector in the SCAN mode for semivolatile hydrocarbons (EPA Contract Laboratory for Organic Analyses OLM04.2 and EPA 8270). The compound list is based on the EPA CLP protocol but analytes from SW846 Method 8270 have been added.

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Method Codes: 001, 004, and 006 for aluminum, barium, beryllium, boron, cadmium, chromium, copper, iron, lead, magnesium, manganese, molybdenum, nickel, strontium, vanadium, and zinc.

Laboratory: Research Triangle Institute

Homogenization (001) - Soil/sediment samples are pre-homogenized using a food processor. A portion of the sample is then freeze dried for determination of moisture content and ground to 100 mesh with a mill.

Digestion for Graphite Furnace and Cold Vapor Atomic Absorption (GFAA) Measurement (004) - Using a CEM microwave oven, 0.25 to 0.5 grams of freeze dried sample are heated in a capped 120 ml Teflon vessel in the presence of 5 ml of Baker Instra-Analyzed nitric acid for three minutes at 120 watts, three minutes at 300 watts, and 15 minutes at 450 watts. The residue is then diluted to 50 ml with laboratory pure water.

ICP (006) - ICP measurements are made using a Leeman Labs Plasma Spec 1 sequential or ES2000 simultaneous spectrometer.

Method Codes: 001, 004, and 007 for arsenic and selenium.

Laboratory: Research Triangle Institute

Homogenization (001) - Soil/sediment samples are pre-homogenized using a food processor. A portion of the sample is then freeze dried for determination of moisture content and ground to 100 mesh with a mill.

Digestion for Graphite Furnace and Cold Vapor Atomic Absorption (GFAA) Measurement (004) - Using a CEM microwave oven, 0.25 to 0.5 grams of freeze dried sample are heated in a capped 120 ml Teflon vessel in the presence of 5 ml of Baker Instra-Analyzed nitric acid for three minutes at 120 watts, three minutes at 300 watts, and 15 minutes at 450 watts. The residue is then diluted to 50 ml with laboratory pure water.

GFAA (007) - GFAA measurements are made using a Perkin-Elmer Zeeman 3030 or 4100ZL atomic absorption spectrometer.

Method Codes: 001, 004, and 008 for mercury.
Laboratory: Research Triangle Institute

Homogenization (001) - Soil/sediment samples are pre-homogenized using a food processor. A portion of the sample is then freeze dried for determination of moisture content and ground to 100 mesh with a mill.

Digestion for Graphite Furnace and Cold Vapor Atomic Absorption (GFAA) Measurement (004) - Using a CEM microwave oven, 0.25 to 0.5 grams of freeze dried sample are heated in a capped 120 ml Teflon vessel in the presence of 5 ml of Baker Instra-Analyzed nitric acid for three minutes at 120 watts, three minutes at 300 watts, and 15 minutes at 450 watts. The residue is then diluted to 50 ml with laboratory pure water.

Cold Vapor Atomic Absorption (CVAA) - mercury measurements are conducted using SnC14 as the reducing agent. A Leeman PS200 Mercury Analyzer is employed for the analysis.

Method Codes: 001, 004, and 039 for silver.
Laboratory: Research Triangle Institute

Homogenization (001) - Soil/sediment samples are pre-homogenized using a food processor. A portion of the sample is then freeze dried for determination of moisture content and ground to 100 mesh with a mill.

Digestion for Graphite Furnace and Cold Vapor Atomic Absorption (GFAA) Measurement (004) - Using a CEM microwave oven, 0.25 to 0.5 grams of freeze dried sample are heated in a capped 120 ml Teflon vessel in the presence of 5 ml of Baker Instra-Analyzed nitric acid for three minutes at 120 watts, three minutes at 300 watts, and 15 minutes at 450 watts. The residue is then diluted to 50 ml with laboratory pure water.

ICP-MS (039) - sample is measured by ICP-MS.

Method Code:	Modification of EPA Method 314.0 for perchlorate
Laboratory:	Institute of Environmental and Human Health, Texas Tech University

Soil/sediment samples were analyzed by ion chromatography using a modification of EPA Method 314.0 because at the time this study was conducted, the USEPA had not established a method for analyzing soil matrices fro perchlorate.

APPENDIX B
(ANALYTICAL RESULTS)

Table 1. Moisture, sand, silt, and clay content as percentages measured in soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003.

Sample Site	% Moisture	% Sand	% Silt	% Clay
50	28.1	57.2	41.6	0.7
51	24.2	60.4	37.9	0.4
52	20.4	67.2	32.7	0.2
53	21.3	68.7	30.8	0.6
54	29.8	88.8	10.8	0.5
55	30.1	64.2	35.5	0.5
56	22.0	70.7	29.0	0.2
57	24.9	77.4	22.4	0.3
58	18.3	85.3	14.4	0.2
59	29.1	93.6	5.9	0.2
60	41.8	68.3	32.9	0.0
61	34.1	90.3	9.3	0.1
62	17.7	85.1	15.1	0.1
63	31.2	83.6	16.1	0.2
64	39.6	88.7	10.9	0.1
65	32.5	93.8	6.3	0.1
66	30.3	89.8	8.8	0.2
67	16.8	88.2	11.8	0.1
68	56.0	86.9	12.6	0.2
69	17.1	84.5	15.3	0.1
70	16.3	68.9	31.1	0.3
71	36.1	76.4	23.8	0.2
72	13.6	76.4	23.9	0.2
73	25.8	83.0	16.5	0.1
74	20.7	71.5	28.0	0.3
75	29.4	88.6	9.89	0.4
76	37.9	61.0	38.2	0.4
77	26.9	86.1	10.9	0.1
78	24.0	86.9	12.6	0.2
79	22.6	94.1	4.6	0.1
80	23.4	72.7	24.5	0.4
81	23.0	57.1	43.0	0.6
82	32.9	92.3	7.66	0.4
83	30.1	82.2	18.0	0.2
84	23.5	61.4	37.7	0.5
85	27.8	73.6	27.9	0.3
86	20.3	59.4	470.1	0.2
87	19.3	73.4	25.0	0.2

Table 1 (continued). Moisture, sand, silt, and clay content as percentages measured in soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003.

Sample Site	% Moisture	% Sand	% Silt	% Clay
88	34.2	65.5	34.0	0.2
89	17.6	79.3	20.5	0.2
90	15.5	77.3	21.8	0.2
91	21.9	96.5	4.6	0.3
92	35.0	82.4	16.4	0.2
93	22.9	85.9	14.7	0.1
94	19.2	78.4	22.3	0.1
95	22.8	77.2	23.8	0.2
96	18.8	69.1	31.3	0.2
97	18.7	74.9	24.9	0.1
98	24.9	61.0	38.7	0.2
99	22.0	55.0	38.7	0.1
100	21.0	68.3	32.5	0.4
101	19.0	75.2	24.6	0.0
102	18.9	70.3	29.1	0.2
103	23.3	90.6	7.8	0.4
104	31.2	57.3	41.7	0.5
105	18.7	83.9	14.6	0.0
106	28.5	96.1	7.6	0.1
107	14.1	80.3	19.3	0.2
108	34.3	91.7	5.7	0.2
109	25.5	87.9	12.1	0.1
110	32.0	74.8	25.6	0.1
111	15.0	85.1	14.7	0.2
112	19.3	89.8	9.4	0.1
113	17.9	78.1	19.9	0.1
114	18.9	71.1	28.1	0.1
115	20.8	82.6	16.4	0.2
116	35.1	89.7	9.9	0.0
117	27.1	77.3	22.5	0.0
118	42.7	79.3	19.4	0.2
119	16.3	90.9	3.0	0.2
120	21.5	91.2	7.8	0.1
121	9.5	88.6	10.4	0.7
122	28.7	82.5	19.9	0.3
123	20.1	66.0	32.8	0.2
124	20.8	79.2	20.0	0.0
125	33.3	92.3	8.9	0.4

Table 1 (continued). Moisture, sand, silt, and clay content as percentages measured in soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003.

Sample Site	% Moisture	% Sand	% Silt	% Clay
126	19.2	86.7	14.3	0.1
127	16.0	62.8	35.4	0.3
128	27.2	70.5	26.9	0.2
129	29.7	84.6	15.4	0.3
130	18.4	80.0	18.7	0.2
131	21.4	64.5	33.9	0.0
132	21.4	89.4	13.9	0.3
133	23.6	70.2	26.3	0.1
134	16.0	77.7	23.7	0.3
135	27.9	80.6	18.8	0.3
136	33.2	73.2	25.9	0.4
137	22.9	77.9	22.9	0.1
138	22.9	62.9	35.7	0.3
139	27.3	86.8	14.1	0.1
140	33.5	82.6	16.4	0.9
141	27.1	71.9	28.1	0.3
142	18.8	72.3	26.2	0.7
143	27.7	53.0	45.8	0.3
144	22.6	64.7	27.7	0.1
145	17.6	50.9	48.4	0.5
146	22.8	63.9	34.4	0.1
147	20.9	64.7	33.1	0.2
148	18.4	57.5	41.7	0.4
149	22.2	52.2	46.5	0.1
150	30.7	74.2	21.2	0.3
151	37.3	97.4	7.0	0.3
152	34.7	96.5	7.4	0.5
153	57.3	88.1	11.9	0.6
154	62.0	65.9	39.2	0.3
155	29.0	83.2	21.3	0.5
156	25.6	80.0	19.2	0.8
157	57.6	92.2	10.2	0.3
158	28.0	65.2	33.6	0.7
159	36.4	93.3	5.0	0.3
160	17.1	86.8	14.0	0.1
161	16.4	84.3	15.8	1.0
162	65.7	95.5	4.5	0.1
163	63.8	78.3	20.5	0.1

Table 1 (continued). Moisture, sand, silt, and clay content as percentages measured in soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003.

Sample Site	% Moisture	% Sand	% Silt	% Clay
164	19.2	91.0	8.5	0.5
165	47.0	86.5	11.7	0.3
166	22.0	72.9	21.8	0.2
167	28.8	78.1	22.0	0.6
168	23.8	90.5	9.4	0.3
169	20.7	90.1	13.2	0.4
170	62.0	99.4	3.7	0.2
171	51.2	91.7	8.3	0.2
172	21.3	83.1	16.6	0.1
173	29.8	43.8	55.3	0.5
174	33.8	58.5	41.5	0.2
175	26.1	84.4	15.7	0.1
176	17.1	61.1	33.6	0.2
177	23.3	50.3	49.3	0.6
178	9.6	80.6	18.3	0.5
179	21.1	88.5	15.4	0.0
180	40.7	58.7	10.6	0.3
181	24.7	66.1	36.9	0.3
182	33.1	90.7	13.1	0.2
183	29.2	79.8	16.8	0.1
184	23.0	80.3	18.7	0.4
185	36.1	65.8	32.7	1.4
186	33.7	53.1	45.0	0.5
187	25.3	40.0	60.1	0.3
188	27.0	68.1	30.7	0.6
189	20.8	71.1	19.7	0.4
190	27.5	56.3	43.1	0.5
191	25.5	59.1	39.5	0.4
192	14.5	67.2	33.0	0.5
193	23.6	79.6	20.3	0.3
194	23.3	68.2	31.7	0.1
195	24.1	81.5	20.3	0.0
196	23.7	82.4	16.5	0.1
197	25.8	82.1	20.4	0.3
198	33.5	71.1	28.1	0.7
199	25.7	53.7	45.4	1.02
200	29.7	85.4	14.1	0.8
201	32.0	72.4	25.9	0.5

Table 1 (continued). Moisture, sand, silt, and clay content as percentages measured in soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003.

Sample Site	% Moisture	% Sand	% Silt	% Clay
202	24.2	65.2	33.5	0.9
203	18.8	55.8	35.7	0.4
204	18.8	63.2	36.3	0.1
205	20.7	66.5	33.2	0.2
206	28.7	49.5	49.8	0.3
207	18.5	56.6	41.4	0.1
208	26.4	68.5	31.1	0.4
209	19.9	52.0	47.3	0.5
210	18.0	91.7	8.1	0.8
211	25.7	71.8	28.0	0.3
212	23.1	72.8	26.5	0.1
213	15.2	92.4	11.2	0.1
214	19.1	84.2	16.0	0.2
215	22.2	94.9	8.3	0.0
216	17.5	79.9	25.2	0.2
217	29.9	67.8	31.2	0.7
218	18.6	56.3	39.9	0.2
219	17.1	65.1	35.9	0.5
220	17.9	71.3	28.5	0.2
221	13.1	63.5	36.4	0.5
222	17.9	96.6	7.5	0.1
223	24.8	64.5	34.4	0.3
224	43.5	68.0	30.4	0.6
225	31.3	79.1	20.0	0.5
226	30.8	89.1	11.2	0.5
227	54.0	88.1	11.3	1.1
228	31.5	82.1	16.9	0.4
229	39.1	96.6	6.7	0.3
230	18.5	81.3	16.9	0.2
231	26.0	45.6	51.2	0.1
232	25.6	58.9	40.7	0.2
233	26.1	59.2	41.9	0.2
234	20.6	59.6	39.3	0.3
235	23.8	57.2	38.9	0.1
236	30.7	76.5	22.5	0.2
237	25.0	68.5	34.2	0.2
238	28.4	95.2	1.8	0.6
239	28.2	72.7	26.2	0.2

Table 1 (concluded). Moisture, sand, silt, and clay content as percentages measured in soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003.

Sample Site	% Moisture	% Sand	% Silt	% Clay
240	35.6	86.0	12.6	0.2
241	31.6	88.4	10.2	0.1
242	29.1	66.5	32.0	0.6
243	20.9	78.4	20.8	0.5
244	37.2	59.2	40.3	0.2
245	34.0	66.8	32.2	0.4
246	29.9	72.6	27.5	0.3
247	30.9	78.9	21.7	0.0
248	20.8	79.4	20.6	0.2
249	36.6	70.7	29.6	0.2

Table 2. Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 50	Site 51	Site 52	Site 53	Site 54	Site 55	Site 56	Site 57	Site 58
Aluminum	3030.00	5295.00	3378.00	1674.00	8474.00	3143.00	4050.00	3435.00	3560.00
dl	10.5	10.6	10.8	10.7	10.8	10.8	10.8	10.9	10.8
Arsenic	1.30	1.65	2.11	1.08	2.12	0.92	1.83	1.03	1.18
dl	0.52	0.53	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Barium	132.00	117.00	38.00	71.20	216.00	66.50	149.00	38.40	41.10
dl	1.05	1.06	1.08	1.07	1.08	1.08	1.08	1.09	1.08
Beryllium	0.35	0.56	0.29	0.37	1.07	0.45	0.50	0.26	0.33
dl	0.21	0.21	0.22	0.21	0.22	0.22	0.22	0.22	0.22
Boron	2.40	3.19	bdl	bdl	bdl	bdl	2.64	bdl	bdl
dl	2.10	2.12	2.15	2.14	2.15	2.16	2.16	2.17	2.15
Cadmium	bdl	bdl	bdl	bdl	0.38	bdl	bdl	bdl	bdl
dl	0.26	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Chromium	4.97	7.28	14.60	6.26	9.33	4.73	8.06	5.75	6.10
dl	1.05	1.06	1.08	1.07	1.08	1.08	1.08	1.09	1.08
Copper	2.08	2.67	1.48	1.75	6.95	1.39	3.45	1.50	1.59
dl	0.52	0.53	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Iron	3345.00	5537.00	7285.00	2760.00	11,863.00	3615.00	4643.00	5395.00	4872.00
dl	10.5	10.6	10.8	10.7	10.8	10.8	10.8	10.9	10.8
Lead	11.00	11.60	7.84	11.90	14.30	9.10	12.10	7.16	7.87
dl	2.10	2.12	2.15	2.14	2.15	2.16	2.16	2.17	2.15
Magnesium	300.00	311.00	199.00	117.00	1820.00	224.00	291.00	250.00	225.00
dl	10.5	10.6	10.8	10.7	10.8	10.8	10.8	10.9	10.8
Manganese	1021.00	599.00	214.00	485.00	1086.00	48.80	787.00	261.00	315.00
dl	1.05	1.06	1.08	1.07	1.08	1.08	1.08	1.09	1.08
Mercury	0.047	0.031	bdl	0.039	0.043	0.028	0.029	0.040	0.027
dl	0.024	0.024	0.026	0.015	0.025	0.021	0.019	0.020	0.018
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.05	1.06	1.08	1.07	1.08	1.08	1.08	1.09	1.08
Nickel	4.29	4.47	2.87	2.22	13.90	2.63	4.60	2.29	2.48
dl	1.05	1.06	1.08	1.07	1.08	1.08	1.08	1.09	1.08
Selenium	bdl	bdl	bdl	0.62	bdl	bdl	bdl	bdl	bdl
dl	0.52	0.53	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.20	0.19
Strontium	12.70	8.87	4.64	4.54	44.90	4.14	15.00	6.69	3.01
dl	0.52	0.53	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Vanadium	10.80	12.40	15.30	9.66	12.20	9.36	12.10	9.68	9.16
dl	0.52	0.53	0.54	0.54	0.54	0.54	0.54	0.54	0.54
Zinc	13.10	10.10	8.29	7.33	45.40	8.23	16.70	10.20	9.78
dl	5.24	5.30	5.38	5.36	5.38	5.40	5.40	5.43	5.38

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 59	Site 60	Site 61	Site 62	Site 63	Site 64	Site 65	Site 66	Site 67
Aluminum	6379.00	17,400.00	2647.00	3336.00	4301.00	10,272.00	9531.00	10,429.00	5290.00
dl	10.60	10.40	10.80	10.80	10.80	10.40	10.80	10.60	11.10
Arsenic	2.86	4.24	0.85	1.67	2.63	1.73	2.44	4.02	2.71
dl	0.53	0.52	0.54	0.54	0.54	0.52	0.54	0.53	0.55
Barium	135.00	316.00	71.20	129.00	102.00	180.00	404.00	142.00	55.90
dl	1.06	1.04	1.08	1.08	1.08	1.04	1.08	1.06	1.11
Beryllium	0.78	1.68	0.32	0.50	0.92	0.88	0.62	0.91	0.51
dl	0.21	0.21	0.22	0.22	0.22	0.21	0.22	0.21	0.22
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.13	2.08	2.15	2.17	2.15	2.08	2.17	2.13	2.21
Cadmium	0.30	bdl	bdl	bdl	bdl	bdl	0.32	bdl	bdl
dl	0.27	0.26	0.27	0.27	0.27	0.26	0.27	0.27	0.28
Chromium	7.78	18.30	3.56	5.13	6.24	14.20	11.70	13.70	9.48
dl	1.06	1.04	1.08	1.08	1.08	1.04	1.08	1.06	1.11
Copper	4.70	8.79	2.51	4.39	3.85	9.56	7.26	6.83	4.57
dl	0.53	0.52	0.54	0.54	0.54	0.52	0.54	0.53	0.55
Iron	9953.00	21,940.00	3031.00	4067.00	7165.00	9308.00	14,940.00	13,729.00	7996.00
dl	10.60	10.40	10.80	10.80	10.80	10.40	10.80	10.60	11.10
Lead	17.00	22.00	6.02	10.30	12.90	16.70	20.00	11.70	7.39
dl	2.13	2.08	2.15	2.17	2.15	2.08	2.17	2.13	2.21
Magnesium	800.00	1596.00	411.00	331.00	445.00	874.00	1424.00	1347.00	771.00
dl	10.60	10.40	10.80	10.80	10.80	10.40	10.80	10.60	11.10
Manganese	1003.00	1812.00	294.00	904.00	793.00	472.00	2400.00	814.00	123.00
dl	1.06	1.04	1.08	1.08	1.08	1.04	1.08	1.06	1.11
Mercury	0.058	0.070	0.041	0.039	0.042	0.047	0.065	0.037	bdl
dl	0.025	0.025	0.018	0.021	0.019	0.019	0.019	0.020	0.016
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.06	1.04	1.08	1.08	1.08	1.04	1.08	1.06	1.11
Nickel	8.04	24.30	3.66	5.24	5.86	12.10	23.20	6.03	1.98
dl	1.06	1.04	1.08	1.08	1.08	1.04	1.08	1.06	1.11
Selenium	bdl	0.62	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.53	0.52	0.54	0.54	0.54	0.52	0.54	0.53	0.55
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.19	0.19	0.19	0.20	0.19	0.19	0.20	0.19	0.20
Strontium	22.90	34.50	14.60	13.50	22.20	29.80	52.40	30.60	22.10
dl	0.53	0.52	0.54	0.54	0.54	0.52	0.54	0.53	0.55
Vanadium	15.00	26.70	6.11	7.08	12.90	19.10	20.70	18.40	12.10
dl	0.53	0.52	0.54	0.54	0.54	0.52	0.54	0.53	0.55
Zinc	25.80	51.60	12.40	13.40	11.30	33.50	48.20	44.20	20.40
dl	5.32	5.19	5.38	5.42	5.38	5.19	5.42	5.32	5.54

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 68	Site 69	Site 70	Site 71	Site 72	Site 73	Site 74	Site 75	Site 76
Aluminum	9634.00	2387.00	2533.00	4199.00	1587.00	2561.00	2041.00	9359.00	10,250.00
dl	10.80	10.20	10.20	10.50	10.60	10.50	10.10	10.50	10.20
Arsenic	3.83	1.02	3.80	1.56	1.38	1.16	1.30	4.52	4.83
dl	0.54	0.51	0.51	0.52	0.53	0.52	0.50	0.52	0.51
Barium	289.00	45.00	34.80	21.80	41.90	33.80	37.60	334.00	383.00
dl	1.08	1.02	1.02	1.05	1.06	1.05	1.01	1.05	1.02
Beryllium	1.26	bdl	0.86	0.65	0.23	bdl	bdl	1.61	1.52
dl	0.22	0.20	0.20	0.21	0.21	0.21	0.20	0.21	0.21
Boron	bdl	2.71	bdl	3.25	bdl	2.10	bdl	bdl	bdl
dl	2.17	2.04	2.03	2.09	2.12	2.10	2.01	2.10	2.05
Cadmium	0.50	bdl	bdl	0.34	bdl	bdl	bdl	bdl	0.54
dl	0.27	0.26	0.25	0.26	0.27	0.26	0.25	0.26	0.26
Chromium	11.70	3.20	28.90	5.49	2.78	5.11	3.78	11.80	9.13
dl	1.08	1.02	1.02	1.05	1.06	1.05	1.01	1.05	1.02
Copper	17.80	0.91	1.57	3.95	bdl	0.88	0.81	7.43	9.28
dl	0.54	0.51	0.51	0.52	0.53	0.52	0.50	0.52	0.51
Iron	11,444.00	2495.00	9828.00	5157.00	2327.00	3043.00	2670.00	16,080.00	17,470.00
dl	10.80	10.20	10.20	10.50	10.60	10.50	10.10	10.50	10.20
Lead	17.90	4.44	9.74	10.90	7.38	6.83	7.59	23.60	24.20
dl	2.17	2.04	2.03	2.09	2.12	2.10	2.01	2.10	2.05
Magnesium	1128.00	192.00	122.00	522.00	135.00	364.00	165.00	1310.00	1507.00
dl	10.80	10.20	10.20	10.50	10.60	10.50	10.10	10.50	10.20
Manganese	637.00	128.00	325.00	1617.00	87.60	177.00	166.00	2669.00	4518.00
dl	1.08	1.02	1.02	1.05	1.06	1.05	1.01	1.05	1.02
Mercury	0.081	bdl	bdl	0.045	0.022	bdl	0.035	0.076	0.080
dl	0.027	0.026	0.019	0.021	0.016	0.023	0.024	0.026	0.028
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.08	1.02	1.02	1.05	1.06	1.05	1.01	1.05	1.02
Nickel	17.90	1.98	2.60	12.50	1.52	2.07	1.67	16.40	28.40
dl	1.08	1.02	1.02	1.05	1.06	1.05	1.01	1.05	1.02
Selenium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.54	0.51	0.51	0.52	0.53	0.52	0.50	0.52	0.51
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.20	0.18	0.18	0.19	0.19	0.19	0.18	0.19	0.18
Strontium	43.60	7.68	3.17	32.20	7.89	14.30	4.28	37.60	50.80
dl	0.54	0.51	0.51	0.52	0.53	0.52	0.50	0.52	0.51
Vanadium	21.20	6.54	24.40	7.94	5.65	7.31	6.10	22.00	22.90
dl	0.54	0.51	0.51	0.52	0.53	0.52	0.50	0.52	0.51
Zinc	46.70	6.43	9.96	30.20	bdl	8.07	7.54	43.10	59.40
dl	5.42	5.10	5.08	5.23	5.30	5.24	5.03	5.24	5.12

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 77	Site 78	Site 79	Site 80	Site 81	Site 82	Site 83	Site 84	Site 85
Aluminum	2761.00	5275.00	10,870.00	7037.00	5067.00	21,700.00	4264.00	2716.00	9522.00
dl	10.30	10.30	10.20	10.20	10.40	10.30	10.90	9.93	10.40
Arsenic	1.63	1.50	4.22	2.65	2.15	6.75	3.13	3.03	4.20
dl	0.52	0.52	0.51	0.51	0.52	0.52	0.55	0.50	0.52
Barium	63.80	80.20	247.00	72.00	205.00	397.00	109.00	57.90	225.00
dl	1.03	1.03	1.03	1.02	1.04	1.03	1.09	0.99	1.04
Beryllium	0.40	0.47	1.19	0.59	1.09	2.24	0.61	0.34	0.97
dl	0.21	0.21	0.20	0.20	0.21	0.21	0.22	0.20	0.21
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.06	2.07	2.03	2.04	2.08	2.07	2.18	1.99	2.08
Cadmium	bdl	bdl	0.34	bdl	bdl	0.27	0.33	bdl	0.29
dl	0.26	0.26	0.25	0.26	0.26	0.26	0.27	0.25	0.26
Chromium	3.74	7.62	12.50	10.90	10.00	22.90	7.40	5.70	11.70
dl	1.03	1.03	1.02	1.02	1.04	1.03	1.09	0.99	1.04
Copper	1.48	2.17	6.77	2.37	4.51	12.30	4.52	1.07	5.11
dl	0.52	0.52	0.51	0.51	0.52	0.52	0.55	0.50	0.52
Iron	4200.00	4131.00	15,850.00	6842.00	5604.00	27,040.00	7103.00	4892.00	9365.00
dl	10.30	10.30	10.20	10.20	10.40	10.30	10.90	9.93	10.40
Lead	21.00	11.20	22.20	14.50	14.10	34.10	17.40	13.90	18.90
dl	2.06	2.07	2.03	2.04	2.08	2.07	2.18	1.99	2.08
Magnesium	247.00	280.00	1409.00	401.00	375.00	2260.00	558.00	189.00	626.00
dl	10.30	10.30	10.20	10.20	10.40	10.30	10.90	9.93	10.40
Manganese	622.00	304.00	2962.00	486.00	1084.00	4346.00	1370.00	144.00	2123.00
dl	1.03	1.03	1.02	1.02	1.04	1.03	1.09	0.99	1.04
Mercury	0.040	0.026	0.078	bdl	0.030	0.085	0.048	0.033	0.052
dl	0.020	0.025	0.023	0.024	0.021	0.023	0.023	0.022	0.026
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.03	1.03	1.02	1.02	1.04	1.03	1.09	0.99	1.04
Nickel	2.39	3.70	19.50	4.94	7.78	29.50	8.23	1.97	11.10
dl	1.03	1.03	1.02	1.02	1.04	1.03	1.09	0.99	1.04
Selenium	bdl	bdl	bdl	0.56	bdl	0.73	bdl	bdl	bdl
dl	0.52	0.52	0.51	0.51	0.52	0.52	0.55	0.50	0.52
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.19	0.19	0.18	0.18	0.19	0.19	0.20	0.18	0.19
Strontium	7.82	6.01	39.60	4.87	15.30	51.80	16.00	5.43	16.00
dl	0.52	0.52	0.51	0.51	0.52	0.52	0.55	0.50	0.52
Vanadium	8.49	11.20	19.60	16.50	13.50	31.90	12.20	13.80	17.50
dl	0.52	0.52	0.51	0.51	0.52	0.52	0.55	0.50	0.52
Zinc	10.80	11.70	47.60	14.60	20.00	72.10	20.90	7.35	37.30
dl	5.15	5.17	5.08	5.10	5.19	5.17	5.45	4.97	5.19

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 86	Site 87	Site 88	Site 89	Site 90	Site 91	Site 92	Site 93	Site 94
Aluminum	1866.00	5554.00	10,180.00	2081.00	1720.00	1598.00	3015.00	2735.00	2102.00
dl	10.60	10.70	10.50	10.10	10.60	10.50	10.00	10.50	10.20
Arsenic	1.44	2.88	4.61	1.54	1.49	1.40	2.59	1.48	1.94
dl	0.53	0.54	0.53	0.51	0.53	0.53	0.50	0.52	0.51
Barium	147.00	98.70	185.00	89.20	33.20	35.10	79.40	81.50	44.30
dl	1.06	1.07	1.05	1.01	1.06	1.05	1.00	1.05	1.02
Beryllium	0.71	0.49	0.99	0.40	0.33	0.21	0.56	0.36	0.32
dl	0.21	0.21	0.21	0.20	0.21	0.21	0.20	0.21	0.21
Boron	bdl	2.34	bdl	2.19	bdl	bdl	bdl	bdl	bdl
dl	2.12	2.14	2.11	2.02	2.12	2.11	2.01	2.09	2.05
Cadmium	bdl	bdl	0.36	bdl	bdl	bdl	0.25	bdl	bdl
dl	0.27	0.27	0.26	0.25	0.27	0.26	0.25	0.26	0.26
Chromium	11.50	12.30	11.40	6.21	6.78	4.53	5.15	6.45	7.78
dl	1.06	1.07	1.05	1.01	1.06	1.05	1.00	1.05	1.02
Copper	1.76	2.63	7.52	26.90	0.93	1.15	2.89	1.82	1.68
dl	0.53	0.54	0.53	0.51	0.53	0.53	0.50	0.52	0.51
Iron	4562.00	6953.00	14,990.00	2920.00	3427.00	2943.00	4656.00	4721.00	4459.00
dl	10.60	10.70	10.50	10.10	10.60	10.50	10.00	10.50	10.20
Lead	9.27	9.88	18.10	9.61	8.35	6.48	11.60	6.55	7.69
dl	2.12	2.14	2.11	2.02	2.12	2.11	2.01	2.09	2.05
Magnesium	141.00	427.00	1140.00	158.00	114.00	116.00	280.00	271.00	151.00
dl	10.60	10.70	10.50	10.10	10.60	10.50	10.00	10.50	10.20
Manganese	807.00	256.00	1815.00	376.00	519.00	262.00	764.00	287.00	353.00
dl	1.06	1.07	1.05	1.01	1.06	1.05	1.00	1.05	1.02
Mercury	0.025	0.045	0.060	bdl	bdl	bdl	0.039	0.024	bdl
dl	0.019	0.021	0.025	0.024	0.020	0.025	0.027	0.022	0.024
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.06	1.07	1.05	1.01	1.06	1.05	1.00	1.05	1.02
Nickel	4.95	5.62	14.50	2.49	2.97	1.84	3.85	3.66	2.46
dl	1.06	1.07	1.05	1.01	1.06	1.05	1.00	1.05	1.02
Selenium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.53	0.54	0.53	0.51	0.53	0.53	0.50	0.52	0.51
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.19	0.19	0.19	0.18	0.19	0.19	0.18	0.19	0.18
Strontium	6.25	10.70	36.90	6.70	2.79	3.65	13.90	14.50	4.85
dl	0.53	0.54	0.53	0.51	0.53	0.53	0.50	0.52	0.51
Vanadium	10.60	12.00	19.10	7.97	8.43	7.38	13.30	9.16	10.10
dl	0.53	0.54	0.53	0.51	0.53	0.53	0.50	0.52	0.51
Zinc	9.27	20.00	41.90	22.00	bdl	5.31	8.70	12.80	7.23
dl	5.30	5.36	5.26	5.05	5.30	5.26	5.02	5.23	5.12

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 95	Site 96	Site 97	Site 98	Site 99	Site 100	Site 101	Site 102	Site 103
Aluminum	4487.00	1471.00	2296.00	4604.00	2199.00	6925.00	1983.00	3486.00	5140.00
dl	10.20	10.40	10.10	10.30	10.80	10.50	10.10	10.20	10.10
Arsenic	0.79	1.23	1.38	2.97	1.35	2.38	2.06	2.03	2.47
dl	0.51	0.52	0.51	0.52	0.54	0.52	0.51	0.51	0.51
Barium	43.50	55.90	35.10	170.00	35.60	89.80	89.10	71.90	112.00
dl	1.02	1.04	1.01	1.03	1.08	1.05	1.01	1.02	1.01
Beryllium	bdl	0.35	bdl	0.77	0.28	0.77	0.42	0.63	0.68
dl	0.20	0.21	0.20	0.21	0.22	0.21	0.20	0.20	0.20
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.03	2.08	2.03	2.07	2.15	2.09	2.02	2.04	2.02
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.25	0.26	0.25	0.26	0.27	0.26	0.25	0.26	0.25
Chromium	2.49	7.37	7.73	14.90	8.02	20.20	14.90	14.60	15.20
dl	1.02	1.04	1.01	1.03	1.08	1.05	1.01	1.02	1.01
Copper	0.83	1.40	0.96	3.23	0.86	3.12	1.65	1.55	2.25
dl	0.51	0.52	0.51	0.52	0.54	0.52	0.51	0.51	0.51
Iron	4861.00	3543.00	4139.00	11,919.00	4139.00	10,467.00	7116.00	6109.00	9267.00
dl	10.20	10.40	10.10	10.30	10.80	10.50	10.10	10.20	10.10
Lead	6.40	7.95	7.00	12.30	7.18	13.50	9.64	10.70	10.40
dl	2.03	2.08	2.03	2.07	2.15	2.09	2.02	2.04	2.02
Magnesium	121.00	106.00	144.00	326.00	131.00	360.00	189.00	223.00	274.00
dl	10.20	10.40	10.10	10.30	10.80	10.50	10.10	10.20	10.10
Manganese	577.00	543.00	268.00	721.00	346.00	715.00	477.00	641.00	532.00
dl	1.02	1.04	1.01	1.03	1.08	1.05	1.01	1.02	1.01
Mercury	0.019	0.023	0.020	0.044	0.018	0.028	0.025	0.028	0.028
dl	0.019	0.016	0.015	0.019	0.018	0.014	0.019	0.017	0.014
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	1.47
dl	1.02	1.04	1.01	1.03	1.08	1.05	1.01	1.02	1.01
Nickel	1.93	2.62	2.09	6.17	2.53	5.91	3.84	4.41	5.62
dl	1.02	1.04	1.01	1.03	1.08	1.05	1.01	1.02	1.01
Selenium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.51	0.52	0.51	0.52	0.54	0.52	0.51	0.51	0.51
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.18	0.19	0.18	0.19	0.19	0.19	0.18	0.18	0.18
Strontium	5.76	3.91	3.34	12.00	3.39	7.79	7.89	4.73	8.41
dl	0.51	0.52	0.51	0.52	0.54	0.52	0.51	0.51	0.51
Vanadium	4.50	8.08	11.70	20.50	9.31	21.40	15.50	14.70	21.50
dl	0.51	0.52	0.51	0.52	0.54	0.52	0.51	0.51	0.51
Zinc	bdl	6.92	6.16	25.50	5.59	12.50	8.47	8.91	13.20
dl	5.08	5.21	5.07	5.17	5.38	5.23	5.05	5.10	5.05

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 104	Site 105	Site 106	Site 107	Site 108	Site 109	Site 110	Site 111	Site 112
Aluminum	5879.00	4782.00	11,880.00	1530.00	12,690.00	8017.00	8160.00	2257.00	2803.00
dl	10.10	10.20	10.60	10.20	10.30	10.30	10.30	10.20	10.80
Arsenic	2.65	3.33	3.77	0.79	2.73	3.27	2.28	1.05	1.09
dl	0.50	0.51	0.53	0.51	0.52	0.51	0.51	0.51	0.54
Barium	84.00	79.20	286.00	47.30	107.00	377.00	241.00	27.00	108.00
dl	1.01	1.02	1.06	1.02	1.03	1.03	1.03	1.02	1.08
Beryllium	0.90	1.37	1.55	0.30	0.70	1.53	1.00	0.28	0.63
dl	0.20	0.21	0.21	0.20	0.21	0.21	0.21	0.20	0.22
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.01	2.05	2.11	2.04	2.07	2.05	2.05	2.03	2.17
Cadmium	bdl	bdl	0.37	bdl	bdl	0.36	0.39	bdl	bdl
dl	0.25	0.26	0.26	0.26	0.26	0.26	0.26	0.25	0.27
Chromium	11.10	17.50	15.80	4.09	15.20	8.71	10.70	9.53	5.66
dl	1.01	1.02	1.06	1.02	1.03	1.03	1.03	1.02	1.08
Copper	2.28	3.07	5.25	0.92	5.93	7.40	6.73	0.96	2.00
dl	0.50	0.51	0.53	0.51	0.52	0.51	0.51	0.51	0.54
Iron	8628.00	15,330.00	13,200.00	2965.00	14,323.00	13,920.00	11,250.00	5149.00	4740.00
dl	10.10	10.20	10.60	10.20	10.30	10.30	10.30	10.20	10.80
Lead	26.30	11.80	27.70	7.07	13.80	23.90	17.90	7.67	11.90
dl	2.01	2.05	2.11	2.04	2.07	2.05	2.05	2.03	2.17
Magnesium	346.00	201.00	946.00	149.00	1368.00	1146.00	1018.00	124.00	208.00
dl	10.10	10.20	10.60	10.20	10.30	10.30	10.30	10.20	10.80
Manganese	1738.00	754.00	2255.00	242.00	273.00	1773.00	2208.00	64.10	465.00
dl	1.01	1.02	1.06	1.02	1.03	1.03	1.03	1.02	1.08
Mercury	0.041	0.030	0.070	0.023	0.058	0.057	0.070	bdl	0.026
dl	0.021	0.020	0.019	0.019	0.019	0.019	0.020	0.016	0.019
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.01	1.02	1.06	1.02	1.03	1.03	1.03	1.02	1.08
Nickel	5.20	6.95	15.70	1.84	11.10	17.30	18.90	2.24	3.82
dl	1.01	1.02	1.06	1.02	1.03	1.03	1.03	1.02	1.08
Selenium	1.67	bdl	0.65	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.50	0.51	0.53	0.51	0.52	0.51	0.51	0.51	0.54
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.18	0.18	0.19	0.18	0.19	0.19	0.19	0.18	0.20
Strontium	6.11	4.72	14.60	4.87	23.00	50.40	31.50	2.10	8.41
dl	0.50	0.51	0.53	0.51	0.52	0.51	0.51	0.51	0.54
Vanadium	17.50	24.00	24.00	7.02	20.90	19.60	16.80	10.60	10.50
dl	0.50	0.51	0.53	0.51	0.52	0.51	0.51	0.51	0.54
Zinc	14.80	14.40	36.80	5.69	32.90	44.20	48.30	5.51	6.84
dl	5.03	5.12	5.28	5.10	5.17	5.14	5.15	5.08	5.42

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 113	Site 114	Site 115	Site 116	Site 117	Site 118	Site 119	Site 120	Site 121
Aluminum	4088.00	4030.00	3758.00	2055.00	2832.00	6700.00	6672.00	1836.00	5517.00
dl	10.10	10.10	10.10	10.20	10.10	10.00	10.30	10.20	10.00
Arsenic	2.77	0.87	1.57	0.62	1.20	2.32	3.22	0.72	3.00
dl	0.51	0.51	0.51	0.51	0.51	0.50	0.52	0.51	0.50
Barium	63.00	39.30	96.70	40.80	119.00	152.00	119.00	122.00	35.70
dl	1.01	1.01	1.01	1.02	1.01	1.00	1.01	1.03	1.02
Beryllium	0.45	bdl	0.36	bdl	0.31	14.50	0.91	bdl	0.61
dl	0.20	0.20	0.20	0.20	0.20	0.20	0.21	0.20	0.20
Boron	bdl	bdl	bdl	bdl	bdl	12.70	bdl	bdl	bdl
dl	2.03	2.02	2.02	2.03	2.03	2.00	2.07	2.03	2.00
Cadmium	bdl	bdl	bdl	bdl	bdl	14.20	0.39	bdl	bdl
dl	0.25	0.25	0.25	0.25	0.25	0.25	0.26	0.25	0.25
Chromium	10.60	6.22	9.15	3.87	7.85	31.50	9.10	3.00	12.70
dl	1.01	1.01	1.01	1.02	1.01	1.00	1.03	1.02	1.00
Copper	3.92	1.45	1.48	1.19	2.10	23.10	7.93	1.04	2.72
dl	0.51	0.51	0.51	0.51	0.51	0.50	0.52	0.51	0.50
Iron	9358.00	4214.00	5204.00	2096.00	3851.00	10,608.00	7649.00	11,941.00	10,765.00
dl	10.10	10.10	10.10	10.20	10.10	10.00	10.30	10.20	10.00
Lead	15.90	7.94	8.92	8.24	10.70	31.60	17.40	7.88	17.80
dl	2.03	2.02	2.02	2.03	2.03	2.00	2.07	2.03	2.00
Magnesium	370.00	302.00	296.00	163.00	230.00	1179.00	682.00	197.00	367.00
dl	10.10	10.10	10.10	10.20	10.10	10.00	10.30	10.00	10.00
Manganese	650.00	157.00	909.00	508.00	760.00	336.00	347.00	174.00	85.70
dl	1.01	1.01	1.01	1.02	1.01	1.00	1.03	1.02	1.00
Mercury	0.043	0.059	0.030	0.020	0.032	0.049	0.031	0.030	0.028
dl	0.016	0.019	0.019	0.015	0.015	0.018	0.017	0.017	0.015
Molybdenum	bdl	bdl	bdl	bdl	bdl	4.77	bdl	bdl	bdl
dl	1.01	1.01	1.01	1.02	1.01	1.00	1.03	1.02	1.00
Nickel	5.04	2.85	4.02	2.16	3.19	28.40	8.36	1.91	3.42
dl	1.01	1.01	1.01	1.02	1.01	1.00	1.03	1.02	1.00
Selenium	bdl	bdl	0.72	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.51	0.51	0.51	0.51	0.51	0.50	0.52	0.51	0.50
Silver	bdl	bdl	bdl	bdl	bdl	0.20	bdl	bdl	bdl
dl	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.18	0.18
Strontium	10.80	7.53	6.49	3.99	9.40	34.70	17.70	6.57	6.96
dl	0.51	0.51	0.51	0.51	0.51	0.50	0.52	0.51	0.50
Vanadium	18.40	8.15	16.00	5.26	11.00	34.90	14.60	5.71	21.80
dl	0.51	0.51	0.51	0.51	0.51	0.50	0.52	0.51	0.50
Zinc	17.50	9.08	7.67	5.41	16.10	76.00	49.00	6.07	11.00
dl	5.07	5.05	5.05	5.08	5.07	5.00	5.17	5.08	5.00

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 122	Site 123	Site 124	Site 125	Site 126	Site 127	Site 128	Site 129	Site 130
Aluminum	3850.00	2649.00	2983.00	7619.00	3879.00	2437.00	6725.00	7744.00	2920.00
dl	10.00	11.00	10.30	10.50	10.50	10.00	10.90	10.80	10.50
Arsenic	1.89	1.34	1.54	1.08	1.83	1.55	2.93	2.57	1.40
dl	0.50	0.55	0.51	0.53	0.53	0.50	0.54	0.54	0.53
Barium	46.40	82.00	160.00	166.00	106.00	52.30	161.00	136.00	262.00
dl	1.00	1.10	1.03	1.05	1.05	1.00	1.09	1.08	1.05
Beryllium	0.53	0.60	0.97	1.23	0.72	1.00	1.07	1.08	0.61
dl	0.20	0.22	0.21	0.21	0.21	0.20	0.22	0.22	0.21
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.00	2.20	2.05	2.11	2.11	2.00	2.17	2.17	2.11
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	0.35	bdl	bdl
dl	0.25	0.28	0.26	0.26	0.26	0.25	0.27	0.27	0.26
Chromium	10.00	9.91	8.88	9.72	8.20	16.70	12.30	12.30	12.70
dl	1.00	1.10	1.03	1.05	1.05	1.00	1.09	1.08	1.05
Copper	3.23	2.80	3.00	7.34	3.13	2.22	7.80	7.73	3.37
dl	0.50	0.55	0.51	0.53	0.53	0.50	0.54	0.54	0.53
Iron	10,765.00	5802.00	5247.00	8052.00	6747.00	10,178.00	11,449.00	14,223.00	5995.00
dl	10.00	11.00	10.30	10.50	10.50	10.00	10.90	10.80	10.50
Lead	24.30	10.30	8.72	21.00	12.80	8.70	15.00	15.80	14.60
dl	2.00	2.20	2.05	2.11	2.11	2.00	2.17	2.17	2.11
Magnesium	156.00	228.00	237.00	726.00	601.00	184.00	669.00	1058.00	225.00
dl	10.00	11.00	10.30	10.50	10.50	10.00	10.90	10.80	10.50
Manganese	40.50	440.00	773.00	163.00	553.00	403.00	823.00	803.00	740.00
dl	1.00	1.10	1.03	1.05	1.05	1.00	1.09	1.08	1.05
Mercury	0.032	0.032	0.034	0.066	0.048	0.019	0.043	0.052	0.043
dl	0.020	0.017	0.016	0.017	0.019	0.015	0.016	0.018	0.020
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.00	1.10	1.03	1.05	1.05	1.00	1.09	1.08	1.05
Nickel	2.85	4.83	8.27	8.88	9.13	11.30	10.80	13.60	5.49
dl	1.00	1.10	1.03	1.05	1.05	1.00	1.09	1.08	1.05
Selenium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.50	0.55	0.51	0.53	0.53	0.50	0.54	0.54	0.53
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.18	0.20	0.19	0.19	0.19	0.18	0.20	0.20	0.19
Strontium	5.36	6.99	12.60	17.50	15.40	4.62	25.00	26.40	29.70
dl	0.50	0.55	0.51	0.53	0.53	0.50	0.54	0.54	0.53
Vanadium	18.40	11.70	10.60	14.80	11.10	14.10	20.10	19.70	12.70
dl	0.50	0.55	0.51	0.53	0.53	0.50	0.54	0.54	0.53
Zinc	16.50	11.80	18.80	32.50	21.00	25.30	65.80	47.40	14.10
dl	5.00	5.49	5.14	5.26	5.26	5.00	5.43	5.42	5.26

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 131	Site 132	Site 133	Site 134	Site 135	Site 136	Site 137	Site 138	Site 139
Aluminum	4860.00	4209.00	3838.00	6757.00	10,105.00	8418.00	4434.00	5177.00	10,033.00
dl	10.60	10.60	11.00	10.50	10.10	10.50	10.50	10.40	10.50
Arsenic	1.76	1.61	3.17	1.19	2.75	2.52	2.38	1.56	1.96
dl	0.53	0.53	0.55	0.52	0.51	0.53	0.52	0.52	0.52
Barium	115.00	60.30	72.20	157.00	245.00	295.00	95.60	66.80	162.00
dl	1.06	1.06	1.10	1.05	1.01	1.05	1.05	1.04	1.05
Beryllium	0.56	0.41	0.49	0.64	1.25	1.02	0.86	0.41	1.35
dl	0.21	0.21	0.22	0.21	0.20	0.21	0.21	0.21	0.21
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.11	2.12	2.20	2.10	2.03	2.11	2.10	2.08	2.10
Cadmium	0.38	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.26	0.27	0.28	0.26	0.25	0.26	0.26	0.26	0.26
Chromium	8.11	11.80	7.78	8.46	12.90	11.40	14.40	11.50	12.70
dl	1.06	1.06	1.10	1.05	1.01	1.05	1.05	1.04	1.05
Copper	8.78	1.62	7.05	3.74	6.15	5.55	3.73	2.37	5.20
dl	0.53	0.53	0.55	0.52	0.51	0.53	0.52	0.52	0.52
Iron	8403.00	5647.00	6348.00	5595.00	10,639.00	9998.00	8432.00	5536.00	9564.00
dl	10.60	10.60	11.00	10.50	10.10	10.50	10.50	10.40	10.50
Lead	11.60	10.40	27.10	8.42	29.20	24.10	13.20	10.30	19.30
dl	2.11	2.12	2.20	2.10	2.03	2.11	2.10	2.08	2.10
Magnesium	771.00	285.00	263.00	447.00	675.00	712.00	404.00	312.00	641.00
dl	10.60	10.60	11.00	10.50	10.10	10.50	10.50	10.40	10.50
Manganese	1310.00	528.00	602.00	444.00	1730.00	2322.00	567.00	495.00	353.00
dl	1.06	1.06	1.10	1.05	1.01	1.05	1.05	1.04	1.05
Mercury	0.044	0.030	0.038	0.020	0.077	0.065	0.029	0.026	0.051
dl	0.017	0.016	0.018	0.017	0.017	0.020	0.016	0.016	0.018
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.06	1.06	1.10	1.05	10.1	1.05	1.05	1.04	1.05
Nickel	9.66	4.70	4.59	4.42	11.00	11.20	10.70	6.09	8.99
dl	1.06	1.06	1.10	1.05	1.01	1.05	1.05	1.04	1.05
Selenium	bdl	bdl	bdl	bdl	0.56	bdl	bdl	bdl	bdl
dl	0.53	0.53	0.55	0.52	0.51	0.53	0.52	0.52	0.52
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.19	0.19	0.20	0.19	0.18	0.19	0.19	0.19	0.19
Strontium	24.10	8.79	8.42	13.30	17.00	27.50	12.10	7.01	13.50
dl	0.53	0.53	0.55	0.52	0.51	0.53	0.52	0.52	0.52
Vanadium	14.10	13.20	12.70	12.00	20.90	19.70	16.50	14.50	19.60
dl	0.53	0.53	0.55	0.52	0.51	0.53	0.52	0.52	0.52
Zinc	68.40	9.94	33.00	11.60	30.90	34.80	15.70	12.10	21.80
dl	5.28	5.30	5.49	5.24	5.07	5.26	5.24	5.19	5.24

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 140	Site 141	Site 142	Site 143	Site 144	Site 145	Site 146	Site 147	Site 148
Aluminum	10,090.00	5501.00	6681.00	2440.00	2219.00	2158.00	3033.00	2873.00	1951.00
dl	10.40	10.20	10.80	10.20	10.00	10.50	10.40	9.97	10.20
Arsenic	1.93	2.07	0.62	1.15	1.24	0.90	1.98	5.60	1.06
dl	0.52	0.51	0.54	0.51	0.50	0.53	0.52	0.50	0.51
Barium	335.00	196.00	71.30	86.40	141.00	67.50	158.00	95.50	93.90
dl	1.02	1.08	1.02	1.02	1.00	1.05	1.04	1.00	1.02
Beryllium	1.67	1.01	0.25	0.46	0.31	0.34	0.69	1.00	0.45
dl	0.21	0.20	0.22	0.20	0.20	0.21	0.21	0.20	0.21
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.08	2.03	2.16	2.04	2.00	2.11	2.08	1.99	2.05
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.26	0.25	0.27	0.26	0.25	0.26	0.26	0.25	0.26
Chromium	11.50	8.44	8.63	3.93	4.95	4.27	11.10	24.00	4.65
dl	1.04	1.02	1.08	1.02	1.00	1.05	1.04	1.00	1.02
Copper	6.41	3.65	2.62	2.14	1.54	1.59	1.92	1.70	1.98
dl	0.52	0.51	0.54	0.51	0.50	0.53	0.52	0.50	0.51
Iron	8555.00	9501.00	3565.00	2653.00	2861.00	2603.00	5069.00	32,550.00	3111.00
dl	10.40	10.20	10.80	10.20	10.00	10.50	10.40	9.97	10.20
Lead	27.50	20.60	11.90	12.40	8.23	9.19	10.10	74.70	6.64
dl	2.08	2.03	2.16	2.04	2.00	2.11	2.08	1.99	2.05
Magnesium	562.00	429.00	469.00	206.00	218.00	175.00	218.00	247.00	154.00
dl	10.40	10.20	10.80	10.20	10.00	10.50	10.40	9.97	10.20
Manganese	390.00	1230.00	60.40	474.00	619.00	683.00	950.00	1410.00	1013.00
dl	1.04	1.02	1.08	1.02	1.00	1.05	1.04	1.00	1.02
Mercury	0.071	0.078	0.028	0.035	0.035	0.029	0.039	0.030	0.026
dl	0.020	0.016	0.018	0.019	0.019	0.014	0.014	0.016	0.018
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.04	1.02	1.08	1.02	1.00	1.05	1.04	1.00	1.02
Nickel	10.10	8.08	4.85	3.15	3.75	2.97	5.50	3.48	4.19
dl	1.04	1.02	1.08	1.02	1.00	1.05	1.04	1.00	1.02
Selenium	0.73	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.52	0.51	0.54	0.51	0.50	0.53	0.52	0.50	0.51
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.19	0.18	0.19	0.18	0.18	0.19	0.19	0.18	0.18
Strontium	13.10	12.50	5.85	5.10	10.80	4.52	10.20	8.77	5.50
dl	0.52	0.51	0.54	0.51	0.50	0.53	0.52	0.50	0.51
Vanadium	21.60	16.10	11.70	9.03	7.06	8.48	11.20	28.90	7.29
dl	0.52	0.51	0.54	0.51	0.50	0.53	0.52	0.50	0.51
Zinc	30.90	21.00	19.10	8.35	11.00	7.17	8.90	12.20	9.80
dl	5.21	5.08	5.40	5.10	5.00	5.26	5.19	4.98	5.12

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 149	Site 150	Site 151	Site 152	Site 153	Site 154	Site 155	Site 156	Site 157
Aluminum	3299.00	8531.00	3006.00	9311.00	5436.00	11,439.00	5306	3374.00	6149.00
dl	10.30	10.30	10.30	10.10	10.20	10.50	10.10	10.30	10.00
Arsenic	1.14	bdl	bdl	1.58	0.92	0.98	1.65	0.64	bdl
dl	0.52	0.52	0.51	0.51	0.51	0.52	0.51	0.52	0.50
Barium	61.20	180.00	149.00	143.00	97.10	210.00	156.00	81.70	251.00
dl	1.03	1.03	1.03	1.01	1.02	1.05	1.01	1.03	1.00
Beryllium	0.38	0.83	0.59	1.32	0.78	1.27	0.73	0.39	1.41
dl	0.21	0.21	0.21	0.20	0.21	0.21	0.20	0.21	0.20
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.07	2.06	2.05	2.02	2.05	2.09	2.02	2.07	2.00
Cadmium	bdl	bdl	bdl	bdl	bdl	0.28	bdl	bdl	bdl
dl	0.26	0.26	0.26	0.25	0.26	0.26	0.25	0.26	0.25
Chromium	4.85	9.53	3.65	10.50	6.80	11.80	8.78	4.09	7.87
dl	1.03	1.03	1.03	1.01	1.02	1.05	1.01	1.03	1.00
Copper	1.82	4.28	2.96	7.58	4.51	13.60	3.43	3.08	7.04
dl	0.52	0.52	0.51	0.51	0.51	0.52	0.51	0.52	0.50
Iron	3538.00	3893.00	1690.00	8698.00	5500.00	8534.00	5484.00	3425.00	4766.00
dl	10.30	10.30	10.30	10.10	10.20	10.50	10.10	10.30	10.00
Lead	7.14	19.30	16.30	31.00	21.60	26.90	38.40	21.50	25.70
dl	2.07	2.06	2.05	2.02	2.05	2.09	2.02	2.07	2.00
Magnesium	190.00	705.00	369.00	1042.00	700.00	2114.00	582.00	262.00	507.00
dl	10.30	10.30	10.30	10.10	10.20	10.50	10.10	10.30	10.00
Manganese	249.00	24.60	13.90	125.00	66.30	294.00	777.00	42.3	313.00
dl	1.03	1.03	1.03	1.01	1.02	1.05	1.01	1.03	1.00
Mercury	0.027	0.035	0.094	0.065	0.076	0.090	0.053	0.059	0.073
dl	0.018	0.016	0.017	0.018	0.019	0.018	0.015	0.015	0.020
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.03	1.03	1.03	1.01	1.02	1.05	1.01	1.03	1.00
Nickel	3.47	7.13	3.40	10.80	6.56	18.40	8.39	2.88	8.43
dl	1.03	1.03	1.03	1.01	1.02	1.05	1.01	1.03	1.00
Selenium	bdl	bdl	bdl	bdl	bdl	0.57	bdl	bdl	bdl
dl	0.52	0.52	0.51	0.51	0.51	0.52	0.51	0.52	0.50
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.19	0.19	0.19	0.18	0.18	0.19	0.18	0.19	0.18
Strontium	4.06	7.22	4.61	16.40	18.70	80.00	22.50	3.74	23.00
dl	0.52	0.52	0.51	0.51	0.51	0.52	0.51	0.52	0.50
Vanadium	8.40	10.70	5.24	16.20	12.30	15.50	13.00	8.56	12.70
dl	0.52	0.52	0.51	0.51	0.51	0.52	0.51	0.52	0.50
Zinc	26.00	20.80	8.85	27.20	17.00	45.60	32.50	12.20	25.90
dl	5.17	5.15	5.14	5.05	5.12	5.23	5.05	5.17	5.00

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 158	Site 159	Site 160	Site 161	Site 162	Site 163	Site 164	Site 165	Site 166
Aluminum	7182.00	9475.00	3848.00	1281.00	7108.00	12,514.00	9904.00	15,133.00	2740.00
dl	10.20	10.40	10.40	10.10	10.30	10.30	10.10	10.30	10.30
Arsenic	1.24	1.67	3.21	2.24	1.62	0.61	5.49	7.75	1.05
dl	0.51	0.52	0.52	0.51	0.52	0.52	0.50	0.52	0.51
Barium	74.90	229.00	65.10	38.00	179.00	267.00	73.60	214.00	76.20
dl	1.02	1.04	1.04	1.01	1.03	1.03	1.01	1.03	1.03
Beryllium	0.37	1.10	0.57	bdl	0.83	1.22	0.77	1.36	0.29
dl	0.21	0.21	0.21	0.20	0.21	0.21	0.20	0.21	0.21
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.05	2.08	2.08	2.02	2.07	2.06	2.01	2.07	2.05
Cadmium	bdl	bdl	bdl	bdl	bdl	0.26	bdl	bdl	bdl
dl	0.26	0.26	0.26	0.25	0.26	0.26	0.25	0.26	0.26
Chromium	11.00	11.10	6.34	3.51	8.70	13.10	15.10	20.50	7.98
dl	1.02	1.04	1.04	1.01	1.03	1.03	1.01	1.03	1.03
Copper	2.38	8.23	4.17	1.97	10.90	13.80	6.35	17.00	2.33
dl	0.51	0.52	0.52	0.51	0.52	0.52	0.50	0.52	0.51
Iron	6610.00	11,807.00	7674.00	2595.00	5431.00	8842.00	25,730.00	16,093.00	3937.00
dl	10.20	10.40	10.40	10.10	10.30	10.30	10.10	10.30	10.30
Lead	11.20	23.80	9.86	4.37	20.90	26.70	9.87	22.80	8.43
dl	2.05	2.08	2.08	2.02	2.07	2.06	2.01	2.07	2.05
Magnesium	442.00	1365.00	374.00	226.00	1329.00	2031.00	910.00	1169.00	337.00
dl	10.20	10.40	10.40	10.10	10.30	10.30	10.10	10.30	10.30
Manganese	351.00	1195.00	110.00	252.00	344.00	311.00	180.00	447.00	526.00
dl	1.02	1.04	1.04	1.01	1.03	1.03	1.01	1.03	1.03
Mercury	0.027	0.109	0.019	0.019	0.102	0.092	0.029	0.086	0.031
dl	0.015	0.019	0.015	0.018	0.020	0.018	0.020	0.019	0.017
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.02	1.04	1.04	1.01	1.03	1.03	1.01	1.03	1.03
Nickel	5.15	16.10	5.12	1.80	11.20	17.80	8.38	19.70	4.78
dl	1.02	1.04	1.04	1.01	1.03	1.03	1.01	1.03	1.03
Selenium	bdl	bdl	bdl	bdl	0.88	bdl	0.56	0.74	bdl
dl	0.51	0.52	0.52	0.51	0.52	0.52	0.50	0.52	0.51
Silver	bdl	bdl	bdl	bdl	0.38	bdl	bdl	bdl	bdl
dl	0.18	0.19	0.19	0.18	0.19	0.19	0.18	0.19	0.19
Strontium	7.52	43.80	9.76	6.39	46.10	74.80	17.80	31.60	13.80
dl	0.51	0.52	0.52	0.51	0.52	0.52	0.50	0.52	0.51
Vanadium	15.10	16.20	11.20	5.62	14.30	15.80	25.10	22.80	8.11
dl	0.51	0.52	0.52	0.51	0.52	0.52	0.50	0.52	0.51
Zinc	16.30	42.10	39.80	17.10	35.60	57.20	75.70	79.80	13.50
dl	5.12	5.19	5.21	5.05	5.17	5.15	5.03	5.17	5.14

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 167	Site 168	Site 169	Site 170	Site 171	Site 172	Site 173	Site 174	Site 175
Aluminum	10,313.00	11,620.00	2071.00	12,004.00	7673.00	3611.00	2112.00	3722.00	2473.00
dl	10.20	10.30	10.40	10.30	10.00	10.20	10.00	10.60	10.70
Arsenic	1.75	4.23	1.35	bdl	bdl	2.30	1.15	2.48	1.17
dl	0.52	0.52	0.51	0.51	0.50	0.51	0.50	0.53	0.54
Barium	161.00	111.00	58.90	246.00	199.00	139.00	124.00	129.00	175.00
dl	1.02	1.03	1.04	1.03	1.00	1.02	1.00	1.06	1.07
Beryllium	0.93	1.06	0.55	1.01	1.24	0.89	0.57	1.47	0.44
dl	0.21	0.21	0.21	0.21	0.20	0.21	0.20	0.21	0.21
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.05	2.07	2.08	2.05	2.01	2.05	2.00	2.12	2.14
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.26	0.26	0.26	0.26	0.25	0.26	0.25	0.27	0.27
Chromium	13.10	17.50	5.10	12.60	9.24	10.20	5.13	10.40	8.10
dl	1.02	1.03	1.04	1.03	1.03	1.02	1.00	1.06	1.07
Copper	7.14	7.71	1.85	12.10	13.60	3.37	1.41	3.48	3.21
dl	0.51	0.52	0.52	0.51	0.50	0.51	0.50	0.53	0.54
Iron	9803.00	26,170.00	3266.00	8765.00	4264.00	9485.00	4498.00	8093.00	4371.00
dl	10.20	10.30	10.40	10.30	10.00	10.20	10.00	10.60	10.70
Lead	18.40	11.20	9.52	21.20	24.50	12.80	12.40	14.60	9.90
dl	2.05	2.07	2.08	2.05	2.01	2.05	2.00	2.12	2.14
Magnesium	944.00	1056.00	205.00	1979.00	1227.00	428.00	193.00	245.00	384.00
dl	10.20	10.30	10.40	10.30	10.00	10.20	10.00	10.60	10.70
Manganese	1131.00	303.00	334.00	295.00	161.00	723.00	1062.00	1091.00	1032.00
dl	1.02	1.03	1.04	1.03	1.03	1.02	1.00	1.06	1.07
Mercury	0.075	0.038	0.025	0.074	0.097	0.053	0.074	0.094	0.045
dl	0.016	0.016	0.015	0.017	0.017	0.013	0.016	0.016	0.017
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.02	1.03	1.04	1.03	1.00	1.02	1.00	1.06	1.07
Nickel	13.40	11.30	4.06	14.60	9.87	11.50	4.76	7.38	7.08
dl	1.02	1.03	1.04	1.03	1.00	1.02	1.00	1.06	1.07
Selenium	bdl	0.58	bdl	bdl	bdl	0.53	bdl	bdl	bdl
dl	0.51	0.52	0.52	0.51	0.50	0.51	0.50	0.53	0.54
Silver	0.29	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.18	0.19	0.19	0.19	0.18	0.18	0.18	0.19	0.19
Strontium	23.40	20.50	6.60	63.80	46.00	14.70	6.37	12.00	18.20
dl	0.51	0.52	0.52	0.51	0.50	0.51	0.50	0.53	0.54
Vanadium	17.20	25.60	7.26	10.70	13.70	16.90	10.10	17.30	9.21
dl	0.51	0.52	0.52	0.51	0.50	0.51	0.50	0.53	0.54
Zinc	43.90	66.30	9.71	47.60	37.60	32.60	16.20	39.90	24.20
dl	5.12	5.17	5.21	5.14	5.02	5.12	5.00	5.30	5.36

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 176	Site 177	Site 178	Site 179	Site 180	Site 181	Site 182	Site 183	Site 184
Aluminum	1665.00	2088.00	2729.00	5445.00	12,700.00	4248.00	3962.00	4404.00	3776.00
dl	10.00	10.20	10.30	10.70	10.40	10.40	10.40	10.20	10.40
Arsenic	0.67	0.86	2.05	1.64	2.34	2.11	0.86	1.98	2.61
dl	0.50	0.51	0.52	0.54	0.52	0.52	0.52	0.51	0.52
Barium	40.90	106.00	56.60	41.30	196.00	43.10	72.30	52.80	119.00
dl	1.00	1.02	0.21	0.21	0.21	0.21	0.21	0.20	0.20
Beryllium	bdl	0.42	0.49	0.43	1.30	0.55	0.44	0.69	1.74
dl	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.20	0.21
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.00	2.05	2.06	2.14	2.08	2.08	2.08	2.03	2.08
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.25	0.26	0.26	0.27	0.26	0.26	0.26	0.25	0.26
Chromium	5.23	4.30	4.25	11.30	15.80	9.85	5.64	8.45	11.60
dl	1.00	1.02	1.03	1.07	1.04	1.04	1.04	1.02	1.04
Copper	1.29	1.60	4.27	1.96	12.40	1.60	3.53	2.01	2.89
dl	0.50	0.51	0.52	0.54	0.52	0.52	0.52	0.51	0.52
Iron	2604.00	2600.00	6516.00	5309.00	9841.00	8422.00	3272.00	5818.00	9751.00
dl	10.00	10.20	10.30	10.70	10.40	10.40	10.40	10.20	10.40
Lead	6.65	8.53	6.34	9.09	25.00	14.10	13.80	16.80	15.30
dl	2.00	2.05	2.06	2.14	2.08	2.08	2.08	2.03	2.08
Magnesium	204.00	145.00	796.00	272.00	1391.00	265.00	373.00	304.00	337.00
dl	10.00	10.20	10.30	10.70	10.40	10.40	10.40	10.20	10.40
Manganese	464.00	636.00	92.40	340.00	422.00	696.00	13.50	565.00	645.00
dl	1.00	1.02	1.03	1.07	1.04	1.04	1.04	1.02	1.04
Mercury	0.032	0.035	bdl	0.032	0.084	0.032	0.034	0.058	0.038
dl	0.016	0.018	0.017	0.016	0.018	0.014	0.016	0.018	0.017
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.00	1.02	1.03	1.07	1.04	1.04	1.04	1.02	1.04
Nickel	2.70	3.37	8.33	5.92	18.70	4.78	6.26	5.82	7.86
dl	1.00	1.02	1.03	1.07	1.04	1.04	1.04	1.02	1.04
Selenium	bdl	bdl	bdl	bdl	bdl	0.74	bdl	bdl	bdl
dl	0.50	0.51	0.52	0.54	0.52	0.52	0.52	0.51	0.52
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.18	0.18	0.19	0.19	0.19	0.19	0.19	0.18	0.19
Strontium	4.84	6.95	13.40	5.00	37.50	5.90	12.20	6.28	12.30
dl	0.50	0.51	0.52	0.54	0.52	0.52	0.52	0.51	0.52
Vanadium	5.16	7.82	9.20	13.60	20.70	16.50	8.94	13.70	16.80
dl	0.50	0.51	0.52	0.54	0.52	0.52	0.52	0.51	0.52
Zinc	5.86	11.70	20.40	8.23	69.90	14.10	12.10	18.90	24.00
dl	5.00	5.12	5.15	5.36	5.19	5.21	5.21	5.08	5.19

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 185	Site 186	Site 187	Site 188	Site 189	Site 190	Site 191	Site 192	Site 193
Aluminum	3973.00	6652.00	3858.00	5420.00	2836.00	5240.00	4181.00	2944.00	5515.00
dl	10.20	10.10	10.50	10.00	10.50	10.40	10.60	10.40	10.70
Arsenic	0.62	1.30	1.29	1.88	1.82	1.19	2.56	1.45	5.31
dl	0.51	0.51	0.53	0.50	0.53	0.52	0.53	0.52	0.53
Barium	93.10	218.00	36.50	36.00	106.00	99.10	76.80	25.50	49.50
dl	0.20	0.20	0.21	0.20	0.21	0.21	0.21	0.21	0.21
Beryllium	0.57	1.68	0.36	0.41	0.74	0.55	0.87	bdl	0.71
dl	0.20	0.20	0.21	0.20	0.21	0.21	0.21	0.21	0.21
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.03	2.02	2.11	2.00	2.11	2.08	2.13	2.08	2.14
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.25	0.25	0.26	0.25	0.26	0.26	0.27	0.26	0.27
Chromium	6.01	9.80	6.78	7.20	5.11	7.47	10.60	5.99	24.60
dl	1.02	1.01	1.05	1.00	1.05	1.04	1.06	1.04	1.07
Copper	3.73	3.85	1.34	1.54	1.30	2.94	2.86	0.76	1.96
dl	0.51	0.51	0.53	0.50	0.53	0.52	0.53	0.52	0.53
Iron	4198.00	10,270.00	3746.00	5373.00	3895.00	3994.00	6465.00	4448.00	14,450.00
dl	10.20	10.10	10.50	10.00	10.50	10.40	10.60	10.40	10.70
Lead	32.50	21.70	11.50	9.31	11.50	14.30	14.00	5.29	15.20
dl	2.03	2.02	2.11	2.00	2.11	2.08	2.13	2.08	2.14
Magnesium	367.00	395.00	213.00	360.00	179.00	292.00	337.00	123.00	300.00
dl	10.20	10.10	10.50	10.00	10.50	10.40	10.60	10.40	10.70
Manganese	129.00	1179.00	1159.00	616.00	504.00	1172.00	1430.00	178.00	1164.00
dl	1.02	1.01	1.05	1.00	1.05	1.04	1.06	1.04	1.07
Mercury	0.060	0.054	0.050	0.040	0.035	0.070	0.068	0.025	0.060
dl	0.019	0.023	0.022	0.021	0.019	0.024	0.021	0.019	0.022
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.02	1.01	1.05	1.00	1.05	1.04	1.06	1.04	1.07
Nickel	3.44	14.20	4.66	3.86	3.97	6.34	6.66	1.75	4.88
dl	1.02	1.01	1.05	1.00	1.05	1.04	1.06	1.04	1.07
Selenium	0.76	bdl	bdl	0.75	bdl	0.53	0.58	bdl	0.68
dl	0.51	0.51	0.53	0.50	0.53	0.52	0.53	0.52	0.53
Silver	0.21	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.18	0.18	0.19	0.18	0.19	0.19	0.19	0.19	0.19
Strontium	12.70	13.90	4.50	5.46	5.10	8.52	10.20	1.63	8.54
dl	0.51	0.51	0.53	0.50	0.53	0.52	0.53	0.52	0.53
Vanadium	10.30	20.70	13.10	12.70	10.40	12.40	16.50	12.80	40.90
dl	0.51	0.51	0.53	0.50	0.53	0.52	0.53	0.52	0.53
Zinc	20.60	56.20	11.50	11.80	8.15	17.00	14.60	bdl	13.80
dl	5.08	5.05	5.26	5.00	5.26	5.19	5.32	5.19	5.34

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 194	Site 195	Site 196	Site 197	Site 198	Site 199	Site 200	Site 201	Site 202
Aluminum	3617.00	4296.00	4396.00	6144.00	9552.00	4643.00	8892.00	5649.00	2937.00
dl	10.20	10.40	10.00	10.30	10.20	10.00	10.40	10.30	10.00
Arsenic	1.15	1.47	3.87	2.17	1.04	2.71	0.60	1.71	0.86
dl	0.51	0.52	0.50	0.52	0.51	0.50	0.52	0.52	0.50
Barium	109.00	108.00	198.00	164.00	55.40	47.70	26.60	263.00	46.90
dl	0.21	0.21	0.20	0.21	0.21	0.20	0.21	0.21	0.20
Beryllium	0.56	0.37	0.84	1.15	0.66	1.01	0.31	0.48	bdl
dl	0.21	0.21	0.20	0.21	0.21	0.20	0.21	0.21	0.20
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.05	2.08	2.01	2.07	2.05	2.00	2.08	2.06	2.00
Cadmium	bdl	bdl	0.27	bdl	bdl	0.44	bdl	bdl	bdl
dl	0.26	0.26	0.25	0.26	0.26	0.25	0.26	0.26	0.25
Chromium	5.87	9.35	14.00	10.10	11.50	9.84	10.40	11.80	4.93
dl	1.02	1.04	1.00	1.03	1.02	1.00	1.04	1.03	1.00
Copper	1.18	1.68	2.23	2.36	4.00	1.98	1.77	13.80	1.16
dl	0.51	0.52	0.50	0.52	0.51	0.50	0.52	0.52	0.50
Iron	4343.00	4604.00	11,640.00	7135.00	6771.00	8798.00	2755.00	3991.00	2493.00
dl	10.20	10.40	10.00	10.30	10.20	10.00	10.40	10.30	10.00
Lead	17.00	12.20	15.80	14.10	21.60	20.10	12.60	11.40	10.90
dl	2.05	2.08	2.01	2.07	2.05	2.00	2.08	2.06	2.00
Magnesium	341.00	343.00	384.00	501.00	514.00	269.00	232.00	515.00	185.00
dl	10.20	10.40	10.00	10.30	10.20	10.00	10.40	10.30	10.00
Manganese	1198.00	924.00	2285.00	3160.00	398.00	417.00	17.80	69.10	870.00
dl	1.02	1.04	1.00	1.03	1.02	1.00	1.04	1.03	1.00
Mercury	0.055	0.054	0.055	0.077	0.061	0.038	0.043	0.031	0.045
dl	0.023	0.023	0.020	0.022	0.022	0.021	0.020	0.021	0.020
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.02	1.04	1.00	1.03	1.02	1.00	1.04	1.03	1.00
Nickel	5.35	5.52	7.34	11.10	4.98	4.59	2.07	4.79	2.24
dl	1.02	1.04	1.00	1.03	1.02	1.00	1.04	1.03	1.00
Selenium	bdl	bdl	bdl	0.53	bdl	0.65	bdl	bdl	bdl
dl	0.51	0.52	0.50	0.52	0.51	0.50	0.52	0.52	0.50
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.18	0.19	0.18	0.19	0.18	0.18	0.19	0.19	0.18
Strontium	11.50	12.60	36.70	12.20	14.40	6.36	12.60	17.00	5.81
dl	0.51	0.52	0.50	0.52	0.51	0.50	0.52	0.52	0.50
Vanadium	11.30	12.20	24.50	16.30	19.20	23.00	8.88	9.50	8.56
dl	0.51	0.52	0.50	0.52	0.51	0.50	0.52	0.52	0.50
Zinc	12.90	18.80	28.20	21.80	21.60	17.10	17.30	80.50	6.63
dl	5.12	5.19	5.02	5.17	5.12	5.00	5.19	5.15	5.00

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 203	Site 204	Site 205	Site 206	Site 207	Site 208	Site 209	Site 210	Site 211
Aluminum	2126.00	1440.00	6526.00	2659.00	1500.00	4124.00	2505.00	2100.00	2962.00
dl	10.50	10.20	10.60	10.40	10.30	10.20	10.00	10.20	10.60
Arsenic	1.32	0.59	1.27	1.86	1.48	1.06	1.13	0.93	1.14
dl	0.53	0.51	0.53	0.52	0.52	0.51	0.50	0.51	0.53
Barium	41.10	46.60	47.20	67.00	57.10	53.90	28.00	51.20	97.90
dl	0.21	0.20	0.21	0.21	0.21	0.20	0.20	0.20	0.21
Beryllium	0.30	bdl	0.26	0.30	0.30	0.46	bdl	0.31	0.47
dl	0.21	0.20	0.21	0.21	0.21	0.20	0.20	0.20	0.21
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.11	2.04	2.12	2.08	2.07	2.04	2.00	2.04	2.12
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.26	0.26	0.27	0.26	0.26	0.26	0.25	0.26	0.27
Chromium	7.35	4.20	8.53	7.14	9.29	6.91	6.32	6.66	4.89
dl	1.05	1.02	1.06	1.04	1.03	1.02	1.00	1.02	1.06
Copper	0.92	0.69	2.50	1.38	0.87	1.82	0.74	1.28	2.67
dl	0.53	0.51	0.53	0.52	0.52	0.51	0.50	0.51	0.53
Iron	3343.00	1929.00	7441.00	3849.00	4130.00	2955.00	3242.00	3234.00	5054.00
dl	10.50	10.20	10.60	10.40	10.30	10.20	10.00	10.20	10.60
Lead	8.54	7.70	7.36	9.53	10.40	10.00	8.72	7.02	9.44
dl	2.11	2.04	2.12	2.08	2.07	2.04	2.00	2.04	2.12
Magnesium	153.00	141.00	477.00	160.00	117.00	259.00	157.00	289.00	404.00
dl	10.50	10.20	10.60	10.40	10.30	10.20	10.00	10.20	10.60
Manganese	361.00	374.00	77.00	193.00	358.00	60.40	177.00	172.00	827.00
dl	1.05	1.02	1.06	1.04	1.03	1.02	1.00	1.02	1.06
Mercury	bdl	0.027	0.033	0.030	0.027	0.032	0.025	bdl	0.029
dl	0.026	0.021	0.021	0.027	0.024	0.026	0.023	0.021	0.028
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.05	1.02	1.06	1.04	1.03	1.02	1.00	1.02	1.06
Nickel	2.44	1.72	4.24	3.49	2.41	3.20	1.83	2.99	5.77
dl	1.05	1.02	1.06	1.04	1.03	1.02	1.00	1.02	1.06
Selenium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.53	0.51	0.53	0.52	0.52	0.51	0.50	0.51	0.53
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.19	0.18	0.19	0.19	0.19	0.18	0.18	0.18	0.19
Strontium	3.08	4.61	7.58	3.90	4.83	5.52	2.74	5.60	13.70
dl	0.53	0.51	0.53	0.52	0.52	0.51	0.50	0.51	0.53
Vanadium	9.81	4.64	14.30	9.36	9.25	9.06	11.80	7.66	9.74
dl	0.53	0.51	0.53	0.52	0.52	0.51	0.50	0.51	0.53
Zinc	5.89	bdl	10.30	11.00	6.39	11.80	5.52	6.60	14.20
dl	5.26	5.10	5.30	5.19	5.17	5.10	5.00	5.10	5.30

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 212	Site 213	Site 214	Site 215	Site 216	Site 217	Site 218	Site 219	Site 220
Aluminum	1027.00	2302.00	983.00	1248.00	678.00	3058.00	1819.00	4868.00	2512.00
dl	10.30	10.60	10.70	10.30	10.30	10.30	10.60	10.70	10.30
Arsenic	1.02	0.99	0.83	0.76	0.54	0.58	1.31	2.08	1.60
dl	0.52	0.53	0.53	0.52	0.52	0.52	0.53	0.54	0.52
Barium	122.00	31.60	85.90	21.90	54.60	82.40	88.80	54.30	45.40
dl	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Beryllium	0.39	0.35	bdl	bdl	bdl	0.29	0.57	0.63	0.27
dl	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.06	2.13	2.14	2.07	2.06	2.07	2.12	2.14	2.06
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.26	0.27	0.27	0.26	0.26	0.26	0.27	0.27	0.26
Chromium	2.28	5.17	3.80	4.34	3.30	4.61	3.81	10.20	4.32
dl	1.03	1.06	1.07	1.03	1.03	1.03	1.06	1.07	1.03
Copper	1.36	2.45	0.82	1.79	0.72	1.86	1.03	5.69	0.85
dl	0.52	0.53	0.53	0.52	0.52	0.52	0.53	0.54	0.52
Iron	1408.00	4506.00	1621.00	3721.00	1598.00	2466.00	3916.00	12,050.00	3071.00
dl	10.30	10.60	10.70	10.30	10.30	10.30	10.60	10.70	10.30
Lead	7.33	6.04	7.61	4.49	6.17	14.10	13.10	11.10	11.80
dl	2.06	2.13	2.14	2.07	2.06	2.07	2.12	2.14	2.06
Magnesium	167.00	322.00	116.00	302.00	65.40	171.00	126.00	657.00	104.00
dl	10.30	10.60	10.70	10.30	10.30	10.30	10.60	10.70	10.30
Manganese	404.00	129.00	425.00	48.50	240.00	146.00	2955.00	221.00	1543.00
dl	1.03	1.06	1.07	1.03	1.03	1.03	1.06	1.07	1.03
Mercury	0.052	bdl	0.036	bdl	0.028	0.064	0.049	0.068	0.071
dl	0.025	0.022	0.022	0.025	0.018	0.023	0.021	0.022	0.022
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.03	1.06	1.07	1.03	1.03	1.03	1.06	1.07	1.03
Nickel	3.97	3.98	1.72	3.44	1.67	2.66	4.43	7.76	2.32
dl	1.03	1.06	1.07	1.03	1.03	1.03	1.06	1.07	1.03
Selenium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.52	0.53	0.53	0.52	0.52	0.52	0.53	0.54	0.52
Silver	0.26	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Strontium	19.70	6.55	14.80	5.62	4.94	5.50	3.52	8.91	3.99
dl	0.52	0.53	0.53	0.52	0.52	0.52	0.53	0.54	0.52
Vanadium	3.41	7.00	5.68	6.80	4.44	9.95	8.37	15.60	10.40
dl	0.52	0.53	0.53	0.52	0.52	0.52	0.53	0.54	0.52
Zinc	8.73	16.30	15.90	10.70	bdl	7.54	5.82	24.70	bdl
dl	5.15	5.32	5.34	5.17	5.15	5.17	5.30	5.36	5.15

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 221	Site 222	Site 223	Site 224	Site 225	Site 226	Site 227	Site 228	Site 229
Aluminum	2268.00	6978.00	4333.00	7927.00	6885.00	17,040.00	17,790.00	8673.00	3291.00
dl	10.20	10.70	10.70	10.70	10.20	10.50	10.40	10.00	10.70
Arsenic	0.60	5.50	1.29	1.11	1.00	5.22	3.14	1.91	1.82
dl	0.51	0.54	0.54	0.54	0.51	0.53	0.52	0.50	0.53
Barium	37.60	1526.00	75.70	103.00	174.00	228.00	219.00	177.00	134.00
dl	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.20	0.21
Beryllium	0.24	1.00	0.39	1.38	0.43	1.73	1.46	1.19	0.61
dl	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.20	0.21
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.03	2.14	2.14	2.14	2.05	2.11	2.08	2.01	2.14
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	0.29	bdl	bdl
dl	0.25	0.27	0.27	0.27	0.26	0.26	0.26	0.25	0.27
Chromium	5.98	11.20	6.92	9.58	12.80	19.00	18.70	11.50	11.60
dl	1.02	1.07	1.07	1.07	1.02	1.05	1.04	1.00	1.07
Copper	0.98	7.31	1.81	5.10	12.20	9.86	22.10	5.17	2.43
dl	0.51	0.54	0.54	0.54	0.51	0.53	0.52	0.50	0.53
Iron	2645.00	14,850.00	5074.00	6048.00	4540.00	24,320.00	13,520.00	11,160.00	7092.00
dl	10.20	10.70	10.70	10.70	10.20	10.50	10.40	10.00	10.70
Lead	9.29	9.22	7.83	18.10	78.70	30.50	30.40	17.70	12.60
dl	2.03	2.14	2.14	2.14	2.05	2.11	2.08	2.01	2.14
Magnesium	119.00	2503.00	256.00	655.00	543.00	967.00	964.00	712.00	266.00
dl	10.20	10.70	10.70	10.70	10.20	10.50	10.40	10.00	10.70
Manganese	151.00	193.00	394.00	238.00	135.00	2351.00	1089.00	2820.00	969.00
dl	1.02	1.07	1.07	1.07	1.02	1.05	1.04	1.00	1.07
Mercury	bdl	0.042	0.025	0.058	0.15	0.12	0.12	0.094	0.057
dl	0.021	0.022	0.020	0.024	0.021	0.025	0.028	0.024	0.023
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.02	1.07	1.07	1.07	1.02	1.05	1.04	1.00	1.07
Nickel	2.39	6.99	4.55	12.10	7.06	17.10	18.00	14.40	6.35
dl	1.02	1.07	1.07	1.07	1.02	1.05	1.04	1.00	1.07
Selenium	bdl	bdl	bdl	bdl	bdl	bdl	0.60	bdl	bdl
dl	0.51	0.54	0.54	0.54	0.51	0.53	0.52	0.50	0.53
Silver	bdl	bdl	bdl	bdl	0.68	bdl	0.23	bdl	bdl
dl	0.18	0.19	0.19	0.19	0.18	0.19	0.19	0.18	0.19
Strontium	1.73	26.10	7.12	19.30	16.40	23.20	29.50	22.20	13.20
dl	0.51	0.54	0.54	0.54	0.51	0.53	0.52	0.50	0.53
Vanadium	7.74	11.00	11.70	15.50	14.40	30.80	29.30	21.60	16.60
dl	0.51	0.54	0.54	0.54	0.51	0.53	0.52	0.50	0.53
Zinc	16.10	37.60	9.69	18.40	22.10	130.00	161.00	33.40	19.70
dl	5.08	5.36	5.36	5.36	5.12	5.26	5.19	5.02	5.34

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 230	Site 231	Site 232	Site 233	Site 234	Site 235	Site 236	Site 237	Site 238
Aluminum	4258.00	2812.00	3853.00	3203.00	4508.00	2320.00	1625.00	7025.00	7824.00
dl	10.60	10.70	10.30	10.30	10.70	10.00	10.80	10.00	10.10
Arsenic	5.95	3.12	2.29	1.77	1.69	1.38	1.24	1.75	3.12
dl	0.53	0.53	0.51	0.52	0.54	0.50	0.54	0.50	0.50
Barium	56.60	275.00	194.00	58.30	144.00	172.00	106.00	115.00	108.00
dl	0.21	0.21	0.21	0.21	0.21	0.20	0.22	0.20	0.20
Beryllium	0.78	1.47	0.85	0.55	0.73	0.66	0.46	0.50	1.44
dl	0.21	0.21	0.21	0.21	0.21	0.20	0.22	0.20	0.20
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.12	2.14	2.05	2.06	2.14	2.00	2.15	2.00	2.01
Cadmium	bdl	bdl	0.45	bdl	bdl	bdl	bdl	bdl	0.36
dl	0.27	0.27	0.26	0.26	0.27	0.25	0.27	0.25	0.25
Chromium	15.70	6.14	10.70	5.83	9.69	6.64	7.28	16.40	12.70
dl	1.06	1.07	1.03	1.03	1.07	1.00	1.08	1.00	1.01
Copper	1.39	3.13	2.32	1.64	2.07	1.56	1.14	6.78	4.08
dl	0.53	0.53	0.51	0.52	0.54	0.50	0.54	0.50	0.50
Iron	21,960.00	5306.00	6786.00	4085.00	5035.00	4026.00	3426.00	9034.00	14,210.00
dl	10.60	10.70	10.30	10.30	10.70	10.00	10.80	10.00	10.10
Lead	8.22	15.40	15.60	18.10	11.60	10.60	6.60	19.10	23.30
dl	2.12	2.14	2.05	2.06	2.14	2.00	2.15	2.00	2.01
Magnesium	199.00	279.00	274.00	190.00	319.00	260.00	164.00	1053.00	587.00
dl	10.60	10.70	10.30	10.30	10.70	10.00	10.80	10.00	10.10
Manganese	350.00	801.00	1291.00	427.00	1053.00	888.00	553.00	956.00	3956.00
dl	1.06	1.07	1.03	1.03	1.07	1.00	1.08	1.00	1.01
Mercury	0.058	0.052	0.061	0.043	0.039	0.037	0.19	0.12	0.085
dl	0.021	0.022	0.021	0.019	0.021	0.022	0.028	0.024	0.027
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.06	1.07	1.03	1.03	1.07	1.00	1.08	1.00	1.01
Nickel	3.40	8.38	7.12	3.55	6.05	5.24	3.32	9.30	15.60
dl	1.06	1.07	1.03	1.03	1.07	1.00	1.08	1.00	1.01
Selenium	0.75	bdl	bdl	bdl	0.67	bdl	bdl	bdl	bdl
dl	0.53	0.53	0.51	0.52	0.54	0.50	0.54	0.50	0.50
Silver	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.80
dl	0.19	0.19	0.19	0.19	0.19	0.18	0.19	0.18	0.18
Strontium	5.57	21.50	17.70	3.14	9.72	19.50	12.40	24.50	14.30
dl	0.53	0.53	0.51	0.52	0.54	0.50	0.54	0.50	0.50
Vanadium	32.90	10.00	16.60	10.80	12.70	9.77	7.91	14.00	24.70
dl	0.53	0.53	0.51	0.52	0.54	0.50	0.54	0.50	0.50
Zinc	16.50	23.50	88.30	8.06	15.50	18.40	12.40	52.40	35.90
dl	5.30	5.34	5.14	5.15	5.36	5.00	5.38	5.00	5.03

Table 2 (continued). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 239	Site 240	Site 241	Site 242	Site 243	Site 244	Site 245	Site 246	Site 247
Aluminum	7173.00	11,440.00	12,930.00	3147.00	6762.00	5466.00	5119.00	5380.00	2579.00
dl	10.40	10.90	10.10	10.30	10.50	10.90	10.50	10.80	10.70
Arsenic	2.10	3.14	2.35	1.69	10.50	2.09	2.11	9.91	0.89
dl	0.52	0.55	0.51	0.52	0.53	0.55	0.53	0.54	0.53
Barium	125.00	210.00	137.00	55.10	53.30	146.00	68.50	75.30	44.00
dl	0.21	0.22	0.20	0.21	0.21	0.22	0.21	0.22	0.21
Beryllium	0.79	1.21	1.30	0.75	1.76	0.95	1.04	0.33	bdl
dl	0.21	0.22	0.20	0.21	0.21	0.22	0.21	0.22	0.21
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.08	2.18	2.02	2.07	2.11	2.19	2.11	2.15	2.14
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.26	0.27	0.25	0.26	0.26	0.27	0.26	0.27	0.27
Chromium	15.80	16.00	16.40	6.44	35.30	8.57	9.01	8.82	1.24
dl	1.04	1.09	1.01	1.03	1.05	1.09	1.05	1.08	1.07
Copper	8.48	13.80	8.00	3.22	7.31	3.18	3.04	3.51	0.88
dl	0.52	0.55	0.51	0.52	0.53	0.55	0.53	0.54	0.53
Iron	11,400.00	17,760.00	17,840.00	4592.00	48,410.00	6347.00	8687.00	5688.00	1504.00
dl	10.40	10.90	10.10	10.30	10.50	10.90	10.50	10.80	10.70
Lead	25.80	56.70	25.90	99.70	17.20	16.20	14.10	17.10	7.99
dl	2.08	2.18	2.02	2.07	2.11	2.19	2.11	2.15	2.14
Magnesium	1064.00	1596.00	1561.00	293.00	429.00	385.00	303.00	288.00	210.00
dl	10.40	10.90	10.10	10.30	10.50	10.90	10.50	10.80	10.70
Manganese	448.00	3140.00	5436.00	204.00	183.00	2113.00	1112.00	279.00	194.00
dl	1.04	1.09	1.01	1.03	1.05	1.09	1.05	1.08	1.07
Mercury	0.11	0.19	0.16	0.056	0.056	0.079	0.054	0.031	0.034
dl	0.024	0.026	0.026	0.024	0.026	0.023	0.024	0.022	0.026
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.04	1.09	1.01	1.03	1.05	1.09	1.05	1.08	1.07
Nickel	10.20	17.60	15.80	4.36	12.00	8.08	6.14	3.54	1.42
dl	1.04	1.09	1.01	1.03	1.05	1.09	1.05	1.08	1.07
Selenium	bdl	bdl	bdl	bdl	0.61	bdl	bdl	bdl	bdl
dl	0.52	0.55	0.51	0.52	0.53	0.55	0.53	0.54	0.53
Silver	0.20	0.36	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.19	0.20	0.18	0.19	0.19	0.20	0.19	0.19	0.19
Strontium	25.80	36.60	22.90	9.78	10.20	29.40	8.65	7.22	5.15
dl	0.52	0.55	0.51	0.52	0.53	0.55	0.53	0.54	0.53
Vanadium	17.70	20.00	20.00	12.60	53.00	14.80	19.60	13.10	2.03
dl	0.52	0.55	0.51	0.52	0.53	0.55	0.53	0.54	0.53
Zinc	51.70	65.00	45.30	19.80	56.40	23.20	15.60	22.40	18.20
dl	5.21	5.45	5.05	5.17	5.26	5.47	5.26	5.38	5.34

Table 2 (concluded). Results of metals analysis in mg/kg dry weight for soil/sediment samples collected from 200 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 248	Site 249
Aluminum	5708.00	5018.00
dl	10.60	10.40
Arsenic	12.00	1.33
dl	0.53	0.52
Barium	103.00	67.40
dl	0.21	0.21
Beryllium	0.48	bdl
dl	0.21	0.21
Boron	bdl	bdl
dl	2.11	2.08
Cadmium	bdl	0.56
dl	0.26	0.26
Chromium	8.14	4.95
dl	1.06	1.04
Copper	3.77	4.76
dl	0.53	0.52
Iron	5715.00	3029.00
dl	10.60	10.40
Lead	17.60	18.70
dl	2.11	2.08
Magnesium	308.00	286.00
dl	10.60	10.40
Manganese	327.00	184.00
dl	1.06	1.04
Mercury	0.032	0.044
dl	0.018	0.027
Molybdenum	bdl	bdl
dl	1.06	1.04
Nickel	3.75	3.16
dl	1.06	1.04
Selenium	bdl	bdl
dl	0.53	0.52
Silver	bdl	bdl
dl	0.19	0.19
Strontium	7.16	9.50
dl	0.53	0.52
Vanadium	8.05	5.37
dl	0.53	0.52
Zinc	25.50	76.90
dl	5.28	5.21

Table 3. Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 50	Site 51	Site 52	Site 53	Site 54	Site 55	Site 56	Site 57	Site 58	Site 59
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
1,3-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
1-naphthylamine ★	bdl	0.102	0.0788	bdl	0.209	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2,4-dinitrotoluene ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.350
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2-picoline ★	0.0727	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
2-methylnaphthalene ★	bdl	bdl	bdl	bdl	bdl	bdl	0.0678	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 60	Site 61	Site 62	Site 63	Site 64	Site 65	Site 66	Site 67	Site 68	Site 69
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
1,3-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
1-naphthylamine ★	bdl	bdl	bdl	bdl	bdl	bdl	0.238	bdl	bdl	0.0535
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2-chloronaphthalene ★	bdl	bdl	bdl	bdl	bdl	0.123	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 70	Site 71	Site 72	Site 73	Site 74	Site 75	Site 76	Site 77	Site 78	Site 79
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
1,3-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
1-naphthylamine ★	bdl	bdl	0.0340	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2-picoline ★	0.0324	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 80	Site 81	Site 82	Site 83	Site 84	Site 85	Site 86	Site 87	Site 88	Site 89
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
1,3-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
1-naphthylamine ★	bdl	0.0400	0.0605	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 90	Site 91	Site 92	Site 93	Site 94	Site 95	Site 96	Site 97	Site 98	Site 99
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
1,3-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
1-naphthylamine ★	bdl	0.155	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2-picoline ★	bdl	bdl	bdl	bdl	bdl	0.201	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site100	Site101	Site102	Site103	Site104	Site105	Site106	Site107	Site108	Site109
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
1,3-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site110	Site111	Site112	Site113	Site114	Site115	Site116	Site117	Site118	Site119
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
1,3-dichlorobenzene ★	bdl	bdl	0.0891	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2-picoline ★	bdl	0.0394	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site120	Site121	Site122	Site123	Site124	Site125	Site126	Site127	Site128	Site129
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
1,3-dichlorobenzene ★	bdl	bdl	bdl	bdl	bdl	0.0949	0.0635	0.103	0.0933	0.0665
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site130	Site131	Site132	Site133	Site134	Site135	Site136	Site137	Site138	Site139
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
1,3-dichlorobenzene ★	0.0741	bdl	0.0753	0.0730	0.0757	0.0727	0.0620	0.0662	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site140	Site141	Site142	Site143	Site144	Site145	Site146	Site147	Site148	Site149
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
1,3-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site150	Site151	Site152	Site153	Site154	Site155	Site156	Site157	Site158	Site159
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
1,3-dichlorobenzene ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0832	0.0983
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site160	Site161	Site162	Site163	Site164	Site165	Site166	Site167	Site168	Site169
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
1,3-dichlorobenzene ★	bdl	bdl	bdl	0.155	0.0829	bdl	bdl	bdl	0.0348	0.0357
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2-picoline ★	bdl	bdl	bdl	bdl	bdl	bdl	0.166	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site170	Site171	Site172	Site173	Site174	Site175	Site176	Site177	Site178	Site179
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
1,3-dichlorobenzene ★	bdl	bdl	0.0337	bdl	bdl	0.0380	bdl	bdl	bdl	0.0368
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site180	Site181	Site182	Site183	Site184	Site185	Site186	Site187	Site188	Site189
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
1,3-dichlorobenzene ★	bdl	bdl	bdl	0.0508	bdl	bdl	0.0424	bdl	0.0527	0.0344
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site190	Site191	Site192	Site193	Site194	Site195	Site196	Site197	Site198	Site199
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
1,3-dichlorobenzene ★	0.0461	bdl	0.0514	0.0657	bdl	0.0431	0.0522	bdl	0.0569	0.0642
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site200	Site201	Site202	Site203	Site204	Site205	Site206	Site207	Site208	Site209
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
1,3-dichlorobenzene ★	0.0601	0.0566	bdl	0.0322	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site210	Site211	Site212	Site213	Site214	Site215	Site216	Site217	Site218	Site219
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
1,3-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site220	Site221	Site222	Site223	Site224	Site225	Site226	Site227	Site228	Site229
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
1,3-dichlorobenzene ★	0.0347	bdl	bdl	0.0408	bdl	bdl	bdl	bdl	bdl	0.0621
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site230	Site231	Site232	Site233	Site234	Site235	Site236	Site237	Site238	Site239
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
1,3-dichlorobenzene ★	0.0410	0.0424	bdl	0.0441	bdl	bdl	bdl	0.0415	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site240	Site241	Site242	Site243	Site244	Site245	Site246	Site247	Site248	Site249
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
1,3-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 50	Site 51	Site 52	Site 53	Site 54	Site 55	Site 56	Site 57	Site 58	Site 59
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
4-chloro-3-methylphenol ★	0.0458	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
aniline ★	bdl	bdl	bdl	bdl	bdl	bdl	0.0521	bdl	bdl	0.0987
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
benzoic acid ★	bdl	0.0887	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
bis(2-chloroethyl)ether★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0552
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
bis(2-ethylhexyl)phthalate ★	bdl	bdl	bdl	bdl	0.0361	bdl	bdl	0.0374	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
diethyl phthalate ★	0.0650	0.0688	0.0480	bdl	0.0574	0.0787	0.0521	bdl	bdl	0.0438
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 60	Site 61	Site 62	Site 63	Site 64	Site 65	Site 66	Site 67	Site 68	Site 69
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
aniline ★	bdl	0.0711	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
benzoic acid ★	bdl	bdl	bdl	bdl	bdl	bdl	0.0346	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
bis(2-ethylhexyl)phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
butylbenzylphthalate ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.128	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
di-n-butylphthalate ★	bdl	0.0381	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
diethyl phthalate ★	bdl	0.0598	0.0725	bdl	bdl	bdl	0.0716	0.0593	0.0837	0.0742
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 70	Site 71	Site 72	Site 73	Site 74	Site 75	Site 76	Site 77	Site 78	Site 79
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
benzoic acid ★	bdl	0.0616	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
bis(2-ethylhexyl)phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
butylbenzylphthalate ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.148
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 80	Site 81	Site 82	Site 83	Site 84	Site 85	Site 86	Site 87	Site 88	Site 89
4-aminobiphenyl ★	bdl	0.0383	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
benzoic acid ★	bdl	0.0518	0.126	0.0428	bdl	0.0407	bdl	bdl	bdl	0.0351
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
bis(2-ethylhexyl)phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 90	Site 91	Site 92	Site 93	Site 94	Site 95	Site 96	Site 97	Site 98	Site 99
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
aniline ★	bdl	0.218	0.0518	bdl	bdl	bdl	0.0295	bdl	0.558	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
benzoic acid	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
bis(2-ethylhexyl)phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site100	Site101	Site102	Site103	Site104	Site105	Site106	Site107	Site108	Site109
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
benzoic acid	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
bis(2-ethylhexyl)phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
diethyl phthalate ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0317	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site110	Site111	Site112	Site113	Site114	Site115	Site116	Site117	Site118	Site119
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
acentophenone ★	bdl	bdl	bdl	0.0427	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
benzoic acid ★	bdl	bdl	bdl	0.0907	bdl	bdl	bdl	0.316	bdl	0.0693
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
bis(2-ethylhexyl)phthalate ★	bdl	0.0308	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site120	Site121	Site122	Site123	Site124	Site125	Site126	Site127	Site128	Site129
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
benzoic acid ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0877	0.0370
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
bis(2-ethylhexyl)phthalate ★	bdl	bdl	0.0563	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site130	Site131	Site132	Site133	Site134	Site135	Site136	Site137	Site138	Site139
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
benzoic acid ★	0.0341	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
bis(2-ethylhexyl)phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
diethyl phthalate ★	bdl	0.0479	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site140	Site141	Site142	Site143	Site144	Site145	Site146	Site147	Site148	Site149
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
benzoic acid ★	bdl	bdl	0.0362	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
bis(2-ethylhexyl)phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site150	Site151	Site152	Site153	Site154	Site155	Site156	Site157	Site158	Site159
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
benzoic acid ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0443	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
bis(2-ethylhexyl)phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site160	Site161	Site162	Site163	Site164	Site165	Site166	Site167	Site168	Site169
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
aniline ★	bdl	bdl	bdl	bdl	bdl	0.0473	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
benzoic acid	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
bis(2-ethylhexyl)phthalate ★	bdl	bdl	0.196	bdl	0.0718	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site170	Site171	Site172	Site173	Site174	Site175	Site176	Site177	Site178	Site179
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
benzoic acid ★	bdl	bdl	bdl	bdl	bdl	0.156	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
bis(2-ethylhexyl)phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
di-n-butylphthalate ★	bdl	bdl	0.0519	0.0404	bdl	0.0435	bdl	bdl	bdl	0.0305
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site180	Site181	Site182	Site183	Site184	Site185	Site186	Site187	Site188	Site189
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
aniline ★	bdl	bdl	bdl	bdl	bdl	bdl	0.0767	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
benzoic acid ★	bdl	bdl	bdl	bdl	bdl	bdl	0.0468	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
bis(2-ethylhexyl)phthalate ★	bdl	bdl	bdl	bdl	0.0443	bdl	bdl	bdl	0.0559	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
butylbenzylphthalate ★	bdl	bdl	0.0509	bdl	bdl	0.114	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
di-n-butylphthalate ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0336	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site190	Site191	Site192	Site193	Site194	Site195	Site196	Site197	Site198	Site199
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
benzoic acid	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
bis(2-ethylhexyl)phthalate ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0315
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site200	Site201	Site202	Site203	Site204	Site205	Site206	Site207	Site208	Site209
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
benzoic acid	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
bis(2-ethylhexyl)phthalate ★	bdl	bdl	bdl	0.0921	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
di-n-butylphthalate ★	0.0426	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site210	Site211	Site212	Site213	Site214	Site215	Site216	Site217	Site218	Site219
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
aniline ★	bdl	bdl	bdl	bdl	0.0767	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
benzoic acid	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
bis(2-ethylhexyl)phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
di-n-butylphthalate ★	0.0331	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site220	Site221	Site222	Site223	Site224	Site225	Site226	Site227	Site228	Site229
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
aniline ★	bdl	bdl	bdl	0.0451	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
benzoic acid ★	bdl	bdl	bdl	0.0555	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
bis(2-ethylhexyl)phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site230	Site231	Site232	Site233	Site234	Site235	Site236	Site237	Site238	Site239
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
aniline ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0424	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
benzoic acid	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
bis(2-ethylhexyl)phthalate ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0502	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
di-n-butylphthalate ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0411	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site240	Site241	Site242	Site243	Site244	Site245	Site246	Site247	Site248	Site249
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
benzoic acid ★	0.0615	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
bis(2-ethylhexyl)phthalate ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.426	bdl	0.104
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
di-n-butylphthalate ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0454	0.0559	0.0720
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
diethyl phthalate ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0371	0.0375	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 50	Site 51	Site 52	Site 53	Site 54	Site 55	Site 56	Site 57	Site 58	Site 59
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 60	Site 61	Site 62	Site 63	Site 64	Site 65	Site 66	Site 67	Site 68	Site 69
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 70	Site 71	Site 72	Site 73	Site 74	Site 75	Site 76	Site 77	Site 78	Site 79
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 80	Site 81	Site 82	Site 83	Site 84	Site 85	Site 86	Site 87	Site 88	Site 89
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 90	Site 91	Site 92	Site 93	Site 94	Site 95	Site 96	Site 97	Site 98	Site 99
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
phenol ★	bdl	bdl	bdl	bdl	bdl	1.04	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site100	Site101	Site102	Site103	Site104	Site105	Site106	Site107	Site108	Site109
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site110	Site111	Site112	Site113	Site114	Site115	Site116	Site117	Site118	Site119
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site120	Site121	Site122	Site123	Site124	Site125	Site126	Site127	Site128	Site129
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site130	Site131	Site132	Site133	Site134	Site135	Site136	Site137	Site138	Site139
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
ethyl methanesulfonate ★	bdl	0.0348	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site140	Site141	Site142	Site143	Site144	Site145	Site146	Site147	Site148	Site149
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site150	Site151	Site152	Site153	Site154	Site155	Site156	Site157	Site158	Site159
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site160	Site161	Site162	Site163	Site164	Site165	Site166	Site167	Site168	Site169
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
benzo(b)fluoranthene ★	0.0405	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
fluoranthene ★	0.0500	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site170	Site171	Site172	Site173	Site174	Site175	Site176	Site177	Site178	Site179
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site180	Site181	Site182	Site183	Site184	Site185	Site186	Site187	Site188	Site189
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site190	Site191	Site192	Site193	Site194	Site195	Site196	Site197	Site198	Site199
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
ethyl methanesulfonate ★	bdl	bdl	bdl	bdl	0.0624	bdl	bdl	0.0413	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site200	Site201	Site202	Site203	Site204	Site205	Site206	Site207	Site208	Site209
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site210	Site211	Site212	Site213	Site214	Site215	Site216	Site217	Site218	Site219
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site220	Site221	Site222	Site223	Site224	Site225	Site226	Site227	Site228	Site229
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
hexachloroethane ★	bdl	0.0443	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site230	Site231	Site232	Site233	Site234	Site235	Site236	Site237	Site238	Site239
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site240	Site241	Site242	Site243	Site244	Site245	Site246	Site247	Site248	Site249
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
benzo(b)fluoranthene ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.198
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
benzo(k)fluoranthene ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0545
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
chrysene ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.202
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
fluoranthene ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.130
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 50	Site 51	Site 52	Site 53	Site 54	Site 55	Site 56	Site 57	Site 58	Site 59
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0351	0.0362	0.0304	0.0327	0.0355	0.0416	0.0315	0.0326	0.0302	0.0348

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 60	Site 61	Site 62	Site 63	Site 64	Site 65	Site 66	Site 67	Site 68	Site 69
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0427	0.0359	0.0274	0.0388	0.0362	0.0392	0.0346	0.0294	0.0369	0.0300

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 70	Site 71	Site 72	Site 73	Site 74	Site 75	Site 76	Site 77	Site 78	Site 79
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0300	0.0378	0.0285	0.0347	0.0302	0.0365	0.0476	0.0349	0.0342	0.0335

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 80	Site 81	Site 82	Site 83	Site 84	Site 85	Site 86	Site 87	Site 88	Site 89
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0333	0.0343	0.0367	0.0353	0.0330	0.0336	0.0317	0.0301	0.0355	0.0299

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site 90	Site 91	Site 92	Site 93	Site 94	Site 95	Site 96	Site 97	Site 98	Site 99
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0294	0.0336	0.0432	0.0326	0.0303	0.0348	0.0287	0.0306	0.0316	0.0328

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site100	Site101	Site102	Site103	Site104	Site105	Site106	Site107	Site108	Site109
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0310	0.0294	0.0299	0.0332	0.0349	0.0295	0.0330	0.0285	0.0330	0.0331

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site110	Site111	Site112	Site113	Site114	Site115	Site116	Site117	Site118	Site119
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0365	0.0278	0.0319	0.0304	0.0303	0.0292	0.0299	0.0313	0.0537	0.0296

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site120	Site121	Site122	Site123	Site124	Site125	Site126	Site127	Site128	Site129
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0306	0.0273	0.0398	0.0305	0.0310	0.0383	0.0291	0.0291	0.0316	0.0342

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site130	Site131	Site132	Site133	Site134	Site135	Site136	Site137	Site138	Site139
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0299	0.0306	0.0313	0.0333	0.0326	0.0344	0.0357	0.0318	0.0367	0.0342

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site140	Site141	Site142	Site143	Site144	Site145	Site146	Site147	Site148	Site149
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0426	0.0322	0.0329	0.0334	0.0289	0.0309	0.0298	0.0294	0.0280	0.0361

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site150	Site151	Site152	Site153	Site154	Site155	Site156	Site157	Site158	Site159
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0364	0.0408	0.0374	0.0780	0.0764	0.0338	0.0321	0.0657	0.0326	0.0358

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site160	Site161	Site162	Site163	Site164	Site165	Site166	Site167	Site168	Site169
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307
pyrene ★	0.0344	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0266	0.0273	0.0552	0.0525	0.0306	0.0402	0.0300	0.0360	0.0313	0.0307

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site170	Site171	Site172	Site173	Site174	Site175	Site176	Site177	Site178	Site179
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0434	0.0433	0.0312	0.0349	0.0341	0.0330	0.0302	0.0328	0.0261	0.0303

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site180	Site181	Site182	Site183	Site184	Site185	Site186	Site187	Site188	Site189
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0380	0.0343	0.0470	0.0344	0.0311	0.0386	0.0348	0.0333	0.0332	0.0335

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site190	Site191	Site192	Site193	Site194	Site195	Site196	Site197	Site198	Site199
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0334	0.0319	0.0308	0.0321	0.0313	0.0300	0.0311	0.0326	0.0319	0.0302

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site200	Site201	Site202	Site203	Site204	Site205	Site206	Site207	Site208	Site209
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0345	0.0379	0.0326	0.0304	0.0299	0.0302	0.0398	0.0303	0.0369	0.0313

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site210	Site211	Site212	Site213	Site214	Site215	Site216	Site217	Site218	Site219
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0333	0.0299	0.0298	0.0309	0.0346	0.0295	0.0398	0.0309	0.0287

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site220	Site221	Site222	Site223	Site224	Site225	Site226	Site227	Site228	Site229
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0298	0.0289	0.0325	0.0374	0.0421	0.0393	0.0351	0.0469	0.0365	0.0397

Table 3 (continued). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site230	Site231	Site232	Site233	Site234	Site235	Site236	Site237	Site238	Site239
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0304	0.0329	0.0339	0.0334	0.0315	0.0332	0.0342	0.0326	0.0351	0.0344

Table 3 (concluded). Results of semi-volatile analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site240	Site241	Site242	Site243	Site244	Site245	Site246	Site247	Site248	Site249
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535
pyrene ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.120
dl	0.0359	0.0352	0.0344	0.0311	0.0373	0.0337	0.0342	0.0348	0.0315	0.0535

Table 4. Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 50	Site 51	Site 52	Site 53	Site 54	Site 55	Site 56	Site 57	Site 58
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
1,2,4,5-tetrachlorobenzene ★	0.000642	0.000403	0.000307	0.000327	0.000582	0.000691	0.000328	bdl	0.000923
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
HCB	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
total PCB ★	0.00689	0.00551	0.00646	0.00318	0.00911	0.00402	0.00646	0.00631	0.00427
dl	0.00176	0.00181	0.00152	0.00163	0.00177	0.00208	0.00157	0.00163	0.00151
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
αchlordane ★	bdl	bdl	bdl	bdl	0.000532	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
cis-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
endrin ★	bdl	bdl	bdl	bdl	bdl	0.000424	bdl	0.000570	0.000385
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
mirex ★	bdl	bdl	bdl	bdl	bdl	0.000516	bdl	0.000498	0.000559
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
o,p'-DDT	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
p,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
p,p'-DDE ★	0.0110	0.00199	0.00219	0.00479	0.00733	0.000845	0.000797	0.000798	0.000394
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
p,p'-DDT ★	bdl	bdl	bdl	bdl	bdl	0.000427	bdl	0.000496	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
pentachloro-anisole ★	bdl	bdl	0.000457	bdl	bdl	0.000429	0.000631	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00176	0.00181	0.00152	0.00163	0.00177	0.00208	0.00157	0.00163	0.00151
trans-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000351	0.000362	0.000304	0.000327	0.000355	0.000416	0.000315	0.000326	0.000302

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 59	Site 60	Site 61	Site 62	Site 63	Site 64	Site 65	Site 66	Site 67
1,2,3,4-tetrachlorobenzene ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000404	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
1,2,4,5-tetrachlorobenzene ★	0.00115	bdl	bdl	bdl	0.000484	bdl	bdl	0.000587	0.000381
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
HCB ★	bdl	0.000580	bdl	bdl	bdl	bdl	bdl	0.0011	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
total PCB ★	0.00545	0.00838	0.00536	0.00265	0.00914	0.0233	0.00790	0.00743	0.00485
dl	0.00174	0.00214	0.00180	0.00137	0.00194	0.00181	0.00196	0.00173	0.00147
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
αchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
cis-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
endosulfan II ★	bdl	bdl	bdl	bdl	bdl	0.00122	0.000447	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
endrin ★	bdl	bdl	bdl	0.000283	bdl	0.00125	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
mirex	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
o,p'-DDE ★	bdl	bdl	bdl	bdl	bdl	0.000918	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
o,p'-DDT ★	bdl	0.000872	bdl	bdl	0.000615	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
p,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
p,p'-DDE ★	0.000435	0.000479	0.000436	bdl	0.000854	0.000989	bdl	0.000899	0.00231
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
p,p'-DDT ★	bdl	bdl	bdl	bdl	0.000392	0.00149	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
pentachloro-anisole ★	0.000736	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00174	0.00214	0.00180	0.00137	0.00194	0.00181	0.00196	0.00173	0.00147
trans-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000428	0.000359	0.000274	0.000388	0.000362	0.000392	0.000346	0.000294

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 68	Site 69	Site 70	Site 71	Site 72	Site 73	Site 74	Site 75	Site 76
1,2,3,4-tetrachlorobenzene ★	bdl	bdl	bdl	0.000604	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
1,2,4,5-tetrachlorobenzene ★	0.000416	0.000478	0.000401	0.000654	0.000533	0.000828	0.000435	0.000753	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
HCB ★	bdl	bdl	bdl	0.000476	bdl	bdl	bdl	0.000471	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
total PCB ★	0.00738	0.00654	0.00913	0.0114	0.00623	0.00864	0.00478	0.00834	0.00894
dl	0.00184	0.00150	0.00150	0.00189	0.00142	0.00174	0.00151	0.00180	0.00238
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
αchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
cis-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
endrin ★	bdl	bdl	bdl	0.000430	bdl	bdl	bdl	0.000364	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
mirex	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
o,p'-DDE ★	bdl	bdl	bdl	0.000595	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
o,p'-DDT	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
p,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
p,p'-DDE ★	0.000650	0.000397	bdl	0.00117	0.000690	0.00255	0.000435	0.000714	0.00170
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
p,p'-DDT ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000548	0.000909
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
pentachloro-anisole ★	bdl	0.000369	bdl	0.00104	0.000553	0.0315	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00184	0.00150	0.00150	0.00189	0.00142	0.00174	0.00151	0.00180	0.00238
trans-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000369	0.000300	0.000300	0.000378	0.000285	0.000347	0.000302	0.000361	0.000477

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 77	Site 78	Site 79	Site 80	Site 81	Site 82	Site 83	Site 84	Site 85
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
1,2,4,5-tetrachlorobenzene ★	bdl	0.000355	bdl	bdl	0.000601	0.000401	0.000423	0.000543	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
HCB ★	bdl	bdl	bdl	bdl	bdl	bdl	0.000421	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
total PCB ★	0.00679	0.00522	0.0212	0.00747	0.0123	0.0234	0.0145	0.0123	0.0236
dl	0.00175	0.00171	0.00168	0.00167	0.00172	0.00183	0.00177	0.00165	0.00168
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
αchlordane ★	bdl	bdl	bdl	bdl	0.000500	0.00153	0.000405	bdl	0.000447
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
cis-nonachlor ★	bdl	bdl	bdl	bdl	bdl	0.00101	bdl	bdl	0.000375
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
dieldrin ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000530	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
endosulfan II ★	bdl	bdl	0.00276	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
endrin ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000719	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
mirex	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
o,p'-DDE ★	0.000403	bdl	bdl	0.000491	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
o,p'-DDT ★	bdl	bdl	bdl	bdl	bdl	0.000432	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
p,p'-DDD ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000403
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
p,p'-DDE ★	0.000630	0.000626	0.000526	0.000644	0.0113	0.0173	0.00806	0.000898	0.00863
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
p,p'-DDT ★	0.000372	bdl	0.000674	0.000333	bdl	0.000612	0.000752	0.000686	0.000670
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
pentachloro-anisole ★	bdl	0.00047	bdl	bdl	bdl	bdl	0.000371	0.00039	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00175	0.00171	0.00168	0.00167	0.00172	0.00183	0.00177	0.00165	0.00168
trans-nonachlor ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000719	bdl
dl	0.000349	0.000342	0.000335	0.000333	0.000343	0.000367	0.000353	0.000331	0.000336

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 86	Site 87	Site 88	Site 89	Site 90	Site 91	Site 92	Site 93	Site 94
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
1,2,4,5-tetrachlorobenzene ★	0.000548	bdl	bdl	bdl	0.000892	0.000822	bdl	0.000841	0.000914
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
HCB ★	bdl	bdl	bdl	bdl	bdl	bdl	0.000466	bdl	0.000409
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
total PCB ★	0.00443	0.00581	0.0118	0.00880	0.00780	0.0198	0.0256	0.0202	0.0158
dl	0.00158	0.00149	0.00177	0.00150	0.00144	0.00167	0.00212	0.00161	0.00149
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
αchlordane ★	bdl	bdl	bdl	bdl	bdl	0.000680	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
cis-nonachlor ★	bdl	bdl	bdl	bdl	bdl	0.000392	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
endrin ★	bdl	0.000358	bdl	bdl	bdl	0.00111	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
mirex ★	bdl	bdl	bdl	bdl	bdl	0.000646	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
o,p'-DDT	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
p,p'-DDD ★	bdl	bdl	bdl	bdl	bdl	0.00232	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
p,p'-DDE ★	0.000355	0.000507	0.00121	0.00288	0.000795	0.00795	0.00159	0.000426	0.000355
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
p,p'-DDT ★	bdl	0.000319	0.000355	bdl	bdl	bdl	bdl	0.000346	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
pentachloro-anisole ★	bdl	bdl	bdl	bdl	bdl	bdl	0.00326	0.000325	0.0026
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00158	0.00149	0.00177	0.00150	0.00144	0.00167	0.00212	0.00161	0.00149
trans-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000317	0.000299	0.000355	0.000299	0.000289	0.000335	0.000424	0.000323	0.000298

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 95	Site 96	Site 97	Site 98	Site 99	Site 100	Site 101	Site 102	Site 103
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
1,2,4,5-tetrachlorobenzene ★	bdl	0.000350	0.00117	bdl	0.000604	0.000886	0.000723	0.000438	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
HCB ★	bdl	0.000863	0.00119	bdl	bdl	bdl	0.00106	0.000332	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
total PCB ★	0.0107	0.00863	0.0101	0.00987	0.0136	0.0123	0.0172	0.0129	0.0136
dl	0.00171	0.00144	0.00151	0.00157	0.00166	0.00153	0.00147	0.00151	0.00166
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
αchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
cis-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
endrin ★	bdl	0.000463	bdl	bdl	0.000678	bdl	0.00104	0.000672	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
mirex ★	bdl	0.000411	0.000600	bdl	0.00185	0.000849	0.000629	bdl	0.000939
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
o,p'-DDE ★	bdl	0.000293	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
o,p'-DDT	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
p,p'-DDD ★	bdl	bdl	bdl	bdl	0.000682	bdl	0.000550	0.000551	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
p,p'-DDE ★	0.000603	0.00134	bdl	0.000527	0.00383	0.00116	0.00193	0.00194	0.00127
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
p,p'-DDT	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
pentachloro-anisole ★	0.000477	bdl	0.000360	bdl	bdl	bdl	0.000428	bdl	0.0009
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00171	0.00144	0.00151	0.00157	0.00166	0.00153	0.00147	0.00151	0.00166
trans-nonachlor ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000313	bdl
dl	0.000343	0.000289	0.000303	0.000314	0.000332	0.000307	0.000295	0.000303	0.000333

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 104	Site 105	Site 106	Site 107	Site 108	Site 109	Site 110	Site 111	Site 112
1,2,3,4-tetrachlorobenzene ★	bdl	0.000296	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
1,2,4,5-tetrachlorobenzene ★	0.000553	0.000855	0.000919	bdl	0.000593	0.00139	0.00106	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
HCB ★	bdl	0.00178	bdl	bdl	bdl	0.000337	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
total PCB ★	0.00882	0.00698	0.0121	0.00863	0.0223	0.0259	0.00624	0.00326	0.00529
dl	0.00174	0.00147	0.00166	0.00143	0.00164	0.00167	0.00182	0.00139	0.00160
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
αchlordane ★	bdl	bdl	bdl	bdl	0.000403	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
cis-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
endrin ★	bdl	bdl	bdl	0.000357	bdl	bdl	0.000611	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
mirex ★	0.00241	0.000464	0.000433	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
o,p'-DDT	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
p,p'-DDD ★	bdl	bdl	bdl	bdl	0.00100	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
p,p'-DDE ★	0.000857	bdl	0.000931	0.000840	0.00577	0.00123	0.00204	0.000317	0.000869
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
p,p'-DDT ★	bdl	bdl	bdl	0.000286	0.000377	bdl	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
pentachloro-anisole ★	bdl	bdl	bdl	0.000372	bdl	bdl	bdl	bdl	0.00832
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00174	0.00147	0.00166	0.00143	0.00164	0.00167	0.00182	0.00139	0.00160
trans-nonachlor ★	bdl	bdl	bdl	bdl	bdl	0.000392	bdl	bdl	bdl
dl	0.000348	0.000293	0.000331	0.000286	0.000329	0.000333	0.000363	0.000278	0.000319

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 113	Site 114	Site 115	Site 116	Site 117	Site 118	Site 119	Site 120	Site 121
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
1,2,4,5-tetrachlorobenzene ★	0.000332	bdl	0.000408	bdl	bdl	0.000999	0.000308	0.000462	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
aldrin ★	0.001	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
HCB	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
total PCB ★	0.0115	0.00293	0.0113	0.00420	0.00393	0.00839	0.00505	0.00208	bdl
dl	0.00151	0.00151	0.00149	0.00149	0.00158	0.00268	0.00149	0.00150	0.00135
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
αchlordane ★	0.000411	bdl	bdl	bdl	0.000318	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
cis-nonachlor ★	0.000562	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
endrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
mirex	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
o,p'-DDE ★	0.0245	bdl	0.000299	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
o,p'-DDT ★	0.000780	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
p,p'-DDD ★	0.000697	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
p,p'-DDE ★	0.0120	0.000388	0.000328	0.000588	0.00144	0.00296	0.00103	0.000682	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
p,p'-DDT ★	0.00285	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
pentachloro-anisole ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000662	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0015	0.0015	0.00149	0.00149	0.00158	0.00125	0.00149	0.00150	0.00135
trans-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000301	0.000303	0.000297	0.000299	0.000315	0.000536	0.000298	0.000301	0.000270

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 122	Site 123	Site 124	Site 125	Site 126	Site 127	Site 128	Site 129	Site 130
1,2,3,4-tetrachlorobenzene ★	bdl	bdl	bdl	bdl	bdl	bdl	0.00101	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
1,2,4,5-tetrachlorobenzene ★	0.00165	0.000363	bdl	0.000413	0.00107	0.000327	0.00532	0.00292	0.000430
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
aldrin ★	0.000452	bdl	bdl	bdl	bdl	bdl	bdl	0.000695	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
HCB	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
heptachlor ★	bdl	bdl	bdl	bdl	bdl	bdl	0.000484	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
total PCB ★	0.0153	bdl	bdl	0.00495	0.00693	0.00318	0.0293	0.0107	0.0149
dl	0.00202	0.00153	0.00158	0.00190	0.00146	0.00147	0.00157	0.00173	0.00149
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
αchlordane ★	0.000626	bdl	bdl	bdl	bdl	bdl	0.000428	bdl	0.000454
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
cis-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
endrin ★	0.000834	bdl	bdl	bdl	bdl	bdl	0.000392	0.000987	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
γBHC ★	bdl	bdl	bdl	bdl	bdl	bdl	0.000569	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
mirex	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
o,p'-DDE ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000601
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
o,p'-DDT ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000398	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
p,p'-DDD ★	0.000611	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
p,p'-DDE ★	0.0101	bdl	bdl	bdl	0.00216	0.000351	0.00223	0.000952	0.00271
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
p,p'-DDT ★	0.00121	bdl	bdl	bdl	0.000457	bdl	0.00115	0.000359	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
pentachloro-anisole ★	bdl	bdl	bdl	bdl	0.00131	bdl	bdl	bdl	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00202	0.00153	0.00158	0.00190	0.00146	0.00147	0.00157	0.00173	0.00149
trans-nonachlor ★	0.000559	bdl	bdl	bdl	bdl	bdl	bdl	0.000367	bdl
dl	0.000405	0.000305	0.000315	0.000381	0.000292	0.000293	0.000314	0.000347	0.000298

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 131	Site 132	Site 133	Site 134	Site 135	Site 136	Site 137	Site 138	Site 139
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
1,2,4,5-tetrachlorobenzene ★	0.000316	bdl	0.000641	bdl	0.000841	0.000798	0.000400	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
aldrin ★	bdl	bdl	0.000960	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
HCB	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
total PCB ★	0.00838	0.00729	0.0228	0.00538	0.0108	0.00625	0.0178	0.00328	0.00344
dl	0.00155	0.00155	0.00165	0.00161	0.00172	0.00180	0.00158	0.00185	0.00172
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
αchlordane ★	bdl	0.000459	0.00131	bdl	bdl	bdl	0.000430	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
cis-nonachlor ★	bdl	bdl	0.00169	bdl	bdl	bdl	0.000336	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
endrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
γchlordane ★	bdl	bdl	0.00135	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
mirex ★	bdl	bdl	bdl	bdl	0.00306	0.00129	0.00154	0.000628	0.000546
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
o,p'-DDD ★	bdl	bdl	0.000460	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
o,p'-DDE ★	bdl	bdl	bdl	bdl	bdl	bdl	0.000357	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
o,p'-DDT ★	bdl	bdl	0.00356	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
p,p'-DDD ★	bdl	bdl	0.00430	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
p,p'-DDE ★	0.00174	0.00111	0.0468	0.000349	0.00159	0.00264	0.00367	0.00831	0.000655
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
p,p'-DDT ★	0.000371	bdl	0.0386	0.000335	0.00153	0.000738	bdl	bdl	0.000547
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
pentachloro-anisole ★	bdl	bdl	0.00111	bdl	0.000656	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00155	0.00155	0.00165	0.00161	0.00172	0.00180	0.00158	0.00185	0.00172
trans-nonachlor ★	bdl	bdl	0.00417	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000310	0.000309	0.000331	0.000322	0.000344	0.000360	0.000315	0.000370	0.000344

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 140	Site 141	Site 142	Site 143	Site 144	Site 145	Site 146	Site 147	Site 148
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
1,2,4,5-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
HCB	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
total PCB ★	0.00531	0.00843	0.00899	0.00602	0.00337	0.00680	0.00485	0.00500	0.00406
dl	0.00211	0.00163	0.00164	0.00166	0.00144	0.00155	0.00151	0.00148	0.00140
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
αchlordane ★	0.000509	bdl	0.000486	0.000483	bdl	0.000456	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
cis-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
endosulfan II ★	bdl	bdl	bdl	0.000440	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
endrin ★	bdl	bdl	bdl	0.000428	bdl	0.000596	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
mirex ★	bdl	0.00187	0.000653	0.000333	bdl	0.00170	0.000484	0.00110	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
o,p'-DDT	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
p,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
p,p'-DDE ★	0.000781	0.00146	0.00153	0.00121	0.000674	0.00168	0.000508	0.00127	0.000528
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
p,p'-DDT ★	bdl	0.000565	0.000609	bdl	0.000635	bdl	bdl	0.000456	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
pentachloro-anisole ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000536	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00211	0.00163	0.00164	0.00166	0.00144	0.00155	0.00151	0.00148	0.00140
trans-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000421	0.000326	0.000327	0.000332	0.000288	0.000310	0.000302	0.000297	0.000280

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 149	Site 150	Site 151	Site 152	Site 153	Site 154	Site 155	Site 156	Site 157
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
1,2,4,5-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
HCB	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
total PCB ★	0.00202	0.00600	0.00347	0.00780	bdl	0.00618	0.00422	0.00599	0.00374
dl	0.00179	0.00181	0.00206	0.00185	0.00392	0.00379	0.00170	0.00163	0.00332
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
αchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
cis-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
endrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
mirex ★	bdl	0.000681	bdl	bdl	bdl	0.000980	bdl	bdl	0.00161
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
o,p'-DDT	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
p,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
p,p'-DDE ★	bdl	0.000937	bdl	0.00117	bdl	0.00103	0.000837	0.00121	0.000709
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
p,p'-DDT ★	bdl	bdl	bdl	0.000987	bdl	bdl	0.000383	0.00109	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
pentachloro-anisole ★	bdl	bdl	bdl	bdl	bdl	bdl	0.000726	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00179	0.00181	0.00206	0.00185	0.00392	0.00379	0.00170	0.00163	0.00332
trans-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000359	0.000362	0.000412	0.000371	0.000785	0.000758	0.000339	0.000326	0.000663

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 158	Site 159	Site 160	Site 161	Site 162	Site 163	Site 164	Site 165	Site 166
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
1,2,4,5-tetrachlorobenzene ★	bdl	bdl	0.00108	0.000858	0.00101	bdl	bdl	0.000436	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
HCB ★	0.000536	bdl	bdl	bdl	bdl	bdl	bdl	0.000464	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
total PCB ★	0.00471	0.00459	0.00867	0.00430	0.00333	bdl	0.00884	0.0124	0.00338
dl	0.00162	0.00178	0.00134	0.00136	0.00276	0.00260	0.00152	0.00202	0.00149
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
αchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
cis-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
endosulfan II ★	bdl	bdl	0.00138	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
endrin ★	bdl	bdl	bdl	0.000736	0.00328	bdl	bdl	0.000723	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
γchlordane ★	bdl	bdl	bdl	bdl	0.000678	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
mirex ★	0.000436	0.000516	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
o,p'-DDD ★	bdl	bdl	0.000580	bdl	0.00188	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
o,p'-DDT ★	bdl	bdl	bdl	bdl	0.00165	bdl	bdl	0.000714	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
p,p'-DDD ★	bdl	bdl	0.000353	bdl	0.000798	bdl	bdl	bdl	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
p,p'-DDE ★	0.000543	0.000531	bdl	bdl	0.00451	bdl	0.00167	0.00122	0.00407
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
p,p'-DDT ★	bdl	bdl	0.00128	bdl	0.00144	bdl	bdl	0.000597	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
pentachloro-anisole ★	bdl	bdl	0.000326	bdl	bdl	bdl	0.000786	0.000536	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00162	0.00178	0.00134	0.00136	0.00276	0.00260	0.00152	0.00202	0.00149
trans-nonachlor ★	bdl	bdl	bdl	bdl	0.000960	bdl	bdl	0.000574	bdl
dl	0.000324	0.000356	0.000269	0.000272	0.000551	0.000520	0.000304	0.000405	0.000298

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 167	Site 168	Site 169	Site 170	Site 171	Site 172	Site 173	Site 174	Site 175
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
1,2,4,5-tetrachlorobenzene ★	0.000389	bdl	0.000419	bdl	bdl	0.000348	0.000495	0.000400	0.000758
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
HCB	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
total PCB ★	0.0102	0.0105	0.00398	0.00915	0.00700	0.00725	0.00755	0.00692	0.0198
dl	0.00178	0.00154	0.00153	0.00216	0.00218	0.00156	0.00176	0.00170	0.00167
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
αchlordane ★	0.000440	0.00110	0.000318	bdl	bdl	bdl	bdl	bdl	0.00231
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
cis-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
endrin ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000353	0.000370
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
mirex	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
o,p'-DDD ★	bdl	bdl	bdl	bdl	0.00137	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
o,p'-DDE ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000409
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
o,p'-DDT ★	0.000375	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000515
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
p,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
p,p'-DDE ★	0.00149	0.00572	0.00152	0.00205	0.000980	0.000819	0.000643	0.00105	0.0262
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
p,p'-DDT ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000350	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
pentachloro-anisole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00178	0.00154	0.00153	0.00216	0.00218	0.00156	0.00173	0.00170	0.00167
trans-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000357	0.000308	0.000305	0.000432	0.000437	0.000311	0.000352	0.000341	0.000334

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 176	Site 177	Site 178	Site 179	Site 180	Site 181	Site 182	Site 183	Site 184
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
1,2,4,5-tetrachlorobenzene ★	bdl	0.000552	0.000543	0.000636	0.000423	bdl	0.000928	bdl	0.000341
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
HCB ★	bdl	bdl	0.000326	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
total PCB ★	0.00838	0.0149	0.00383	0.0155	0.0220	0.0320	0.0120	0.00415	0.0281
dl	0.00150	0.00164	0.00133	0.00152	0.00174	0.00171	0.00236	0.00171	0.00155
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
αchlordane ★	bdl	0.00120	bdl	0.000910	bdl	0.00162	bdl	bdl	0.00105
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
cis-nonachlor ★	bdl	bdl	bdl	bdl	bdl	0.00192	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
dieldrin ★	bdl	bdl	bdl	bdl	bdl	bdl	0.000602	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
endrin ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.00123
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
mirex	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
o,p'-DDE ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000401
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
o,p'-DDT ★	0.000452	bdl	bdl	bdl	0.000548	0.00112	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
oxychlordane ★	bdl	bdl	bdl	bdl	bdl	0.000554	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
p,p'-DDD ★	bdl	bdl	bdl	bdl	bdl	0.000760	0.00123	bdl	0.000814
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
p,p'-DDE ★	0.00199	0.0114	bdl	0.00828	0.00181	0.00444	0.00389	0.000524	0.00940
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
p,p'-DDT ★	0.000306	bdl	bdl	bdl	0.000540	0.00749	0.00164	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
pentachloro-anisole ★	bdl	bdl	bdl	bdl	bdl	0.000749	bdl	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00150	0.00164	0.00133	0.00152	0.00190	0.00174	0.00236	0.00171	0.00155
trans-nonachlor ★	bdl	bdl	bdl	bdl	0.000679	0.00139	0.000685	bdl	bdl
dl	0.000300	0.000328	0.000266	0.000304	0.000380	0.000347	0.000473	0.000341	0.000311

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 185	Site 186	Site 187	Site 188	Site 189	Site 190	Site 191	Site 192	Site 193
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
1,2,4,5-tetrachlorobenzene ★	0.00199	0.00746	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
HCB	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
total PCB ★	0.0298	0.0406	0.00467	0.00536	0.00635	0.00980	0.00949	0.00347	0.00348
dl	0.00193	0.00175	0.00170	0.00166	0.00166	0.0166	0.00161	0.00154	0.00159
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
αchlordane ★	bdl	0.00443	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
cis-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
dieldrin ★	0.000391	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
endosulfan II ★	0.00329	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
endrin ★	bdl	0.000692	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
γchlordane ★	0.000436	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
mirex ★	bdl	0.000430	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
o,p'-DDD ★	bdl	0.000632	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
o,p'-DDT	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
p,p'-DDD ★	0.000645	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
p,p'-DDE ★	0.00155	0.0854	0.000603	0.00896	0.000608	0.00159	0.00128	0.00432	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
p,p'-DDT ★	0.000451	0.00108	bdl	0.000493	0.000400	0.000381	0.000515	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
pentachloro-anisole ★	bdl	0.000413	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00193	0.00175	0.00170	0.00166	0.00166	0.00166	0.00161	0.00154	0.00159
trans-nonachlor ★	0.000492	0.000527	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000386	0.000350	0.000339	0.000332	0.000333	0.000332	0.000323	0.000308	0.000318

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 194	Site 195	Site 196	Site 197	Site 198	Site 199	Site 200	Site 201	Site 202
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
1,2,4,5-tetrachlorobenzene ★	0.000852	bdl	bdl	0.00146	0.000610	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
HCB ★	bdl	bdl	bdl	0.000792	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
total PCB ★	0.00674	0.0181	0.00428	0.00765	0.0120	0.00493	0.00378	0.00290	0.00532
dl	0.00157	0.00151	0.00155	0.00165	0.00161	0.00151	0.00173	0.00186	0.00164
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
αchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
cis-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
endrin ★	bdl	0.000343	bdl	bdl	0.000497	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
mirex	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
o,p'-DDT	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
p,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
p,p'-DDE ★	0.000655	0.00131	0.00127	0.000888	0.00172	0.000502	0.000592	0.000624	0.00152
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
p,p'-DDT ★	0.000552	bdl	0.000356	0.000874	0.000589	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
pentachloro-anisole ★	bdl	0.000393	bdl	0.000424	0.0004	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00157	0.00151	0.00155	0.00165	0.00161	0.00151	0.00173	0.00186	0.00164
trans-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000313	0.000302	0.000311	0.000330	0.000322	0.000302	0.000346	0.000372	0.000329

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 203	Site 204	Site 205	Site 206	Site 207	Site 208	Site 209	Site 210	Site 211
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
1,2,4,5-tetrachlorobenzene ★	bdl	bdl	0.000425	0.000441	0.000794	0.000490	0.000942	0.000689	0.000409
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
HCB ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000415
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
total PCB ★	0.0149	0.00680	0.00901	0.0159	0.0203	0.00927	0.0179	0.00677	0.0145
dl	0.00152	0.00151	0.00151	0.00201	0.00153	0.00186	0.00155	0.00151	0.00167
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
αchlordane ★	0.000566	bdl	bdl	bdl	bdl	bdl	0.000360	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
cis-nonachlor ★	bdl	bdl	bdl	0.000644	0.000787	0.000457	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
endrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
mirex	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
o,p'-DDT	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
p,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
p,p'-DDE ★	0.00277	0.000389	0.000362	0.00639	0.00343	0.00282	0.00238	0.000545	0.00155
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
p,p'-DDT ★	0.000501	0.000543	bdl	bdl	0.000859	0.00137	bdl	bdl	bdl
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
pentachloro-anisole ★	0.000406	bdl	0.00114	bdl	0.000365	bdl	bdl	bdl	0.000478
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00152	0.00151	0.00151	0.00201	0.00153	0.00186	0.00155	0.00151	0.00167
trans-nonachlor ★	0.000459	bdl	bdl	0.000703	0.000518	0.00111	bdl	bdl	0.000737
dl	0.000304	0.000303	0.000301	0.000402	0.000306	0.000373	0.000311	0.000301	0.000334

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 212	Site 213	Site 214	Site 215	Site 216	Site 217	Site 218	Site 219	Site 220
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
1,2,4,5-tetrachlorobenzene ★	0.000801	bdl	0.000758	0.000371	0.000296	0.000624	0.000657	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
HCB ★	0.000338	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
total PCB ★	0.0123	0.0103	0.0106	0.00253	0.00617	0.00671	0.00948	0.00339	0.00745
dl	0.00148	0.00150	0.00155	0.00174	0.00147	0.00199	0.00155	0.00143	0.00149
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
αchlordane ★	bdl	bdl	0.000927	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
cis-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
endosulfan II ★	bdl	bdl	bdl	bdl	bdl	0.000441	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
endrin ★	bdl	bdl	0.000329	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
γchlordane ★	bdl	bdl	0.000326	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
mirex	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
o,p'-DDT	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
p,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
p,p'-DDE ★	0.00133	0.000733	0.00114	bdl	0.000483	0.00126	0.000918	0.000772	0.000460
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
p,p'-DDT ★	bdl	bdl	0.000658	bdl	bdl	bdl	bdl	0.000386	0.000373
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
pentachloro-anisole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00148	0.00150	0.00155	0.00174	0.00147	0.00199	0.00155	0.00143	0.00149
trans-nonachlor ★	0.000376	bdl	0.000357	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000296	0.000300	0.000311	0.000348	0.000294	0.000398	0.000309	0.000287	0.000298

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 221	Site 222	Site 223	Site 224	Site 225	Site 226	Site 227	Site 228	Site 229
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
1,2,4,5-tetrachlorobenzene ★	bdl	bdl	bdl	bdl	bdl	0.000418	0.000741	bdl	0.00135
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
HCB	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
total PCB ★	0.00813	0.00300	0.0148	0.0171	0.0429	0.180	0.384	0.0180	0.0102
dl	0.00145	0.00163	0.00187	0.00210	0.0268	0.00176	0.00235	0.00182	0.00198
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
αchlordane ★	0.000557	bdl	0.000921	bdl	bdl	bdl	0.00150	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
cis-nonachlor ★	0.000324	bdl	0.000617	bdl	bdl	0.000496	0.00311	0.000475	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
endrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
γchlordane ★	bdl	bdl	bdl	bdl	bdl	bdl	0.00105	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
mirex ★	bdl	bdl	bdl	bdl	bdl	0.00111	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
o,p'-DDD ★	bdl	bdl	bdl	bdl	bdl	bdl	0.00127	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
o,p'-DDT ★	bdl	bdl	bdl	bdl	bdl	0.00102	0.00195	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
oxychlordane ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000419	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
p,p'-DDD ★	bdl	bdl	bdl	bdl	bdl	0.000466	0.00116	bdl	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
p,p'-DDE ★	0.00296	bdl	0.00337	0.000675	0.00160	0.00488	0.00930	0.00389	0.00112
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
p,p'-DDT ★	bdl	bdl	bdl	bdl	bdl	0.00187	0.00131	0.00109	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
pentachloro-anisole ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000926
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00145	0.00163	0.00187	0.00210	0.00197	0.00176	0.00235	0.00182	0.00198
trans-nonachlor ★	bdl	bdl	bdl	bdl	bdl	0.000836	0.00219	0.00160	bdl
dl	0.000289	0.000325	0.000373	0.000420	0.000393	0.000351	0.000469	0.000365	0.000397

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 230	Site 231	Site 232	Site 233	Site 234	Site 235	Site 236	Site 237	Site 238
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
1,2,4,5-tetrachlorobenzene ★	bdl	bdl	bdl	bdl	bdl	0.000380	bdl	0.000401	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
aldrin ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000645
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
HCB	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
total PCB ★	0.0060	0.0173	0.00812	0.0114	0.00454	0.00522	0.0188	0.0348	0.00905
dl	0.00152	0.00164	0.00170	0.00167	0.00156	0.00164	0.00171	0.00163	0.00175
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
αchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
cis-nonachlor ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000673	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
dieldrin ★	bdl	bdl	bdl	0.000501	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
endrin ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000681
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
mirex	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
o,p'-DDT ★	bdl	bdl	bdl	bdl	bdl	bdl	0.000470	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
p,p'-DDD ★	bdl	bdl	bdl	bdl	bdl	bdl	0.000405	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
p,p'-DDE ★	0.000648	0.00195	0.00117	0.00150	0.000720	0.00272	0.00435	0.00211	0.00193
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
p,p'-DDT ★	0.000451	0.000400	0.00107	0.000822	bdl	0.000373	0.00437	0.000761	0.00101
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
pentachloro-anisole ★	0.000441	bdl	bdl	0.000778	bdl	0.000609	bdl	bdl	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00152	0.00164	0.00170	0.00167	0.00156	0.00164	0.00171	0.00163	0.00175
trans-nonachlor ★	bdl	bdl	bdl	0.000399	bdl	bdl	bdl	0.00198	bdl
dl	0.000304	0.000329	0.000339	0.000334	0.000312	0.000328	0.000342	0.000326	0.000351

Table 4 (continued). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 239	Site 240	Site 241	Site 242	Site 243	Site 244	Site 245	Site 246	Site 247
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
1,2,4,5-tetrachlorobenzene ★	0.000455	bdl	bdl	0.000362	bdl	bdl	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
HCB	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
total PCB ★	0.00581	0.00679	0.00916	0.00361	0.00394	0.00288	bdl	0.0110	0.0117
dl	0.00171	0.00178	0.00176	0.00172	0.00157	0.00185	0.00166	0.00171	0.00174
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
αchlordane ★	bdl	0.000714	bdl	bdl	bdl	bdl	bdl	0.000689	0.00328
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
cis-nonachlor ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.00342	0.00871
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
endosulfan II	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
endrin ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000659	0.000562
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
γchlordane ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000859	0.00217
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
heptachlor epoxide ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.00251
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
mirex ★	bdl	bdl	bdl	bdl	0.000360	bdl	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
o,p'-DDD ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.00242	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
o,p'-DDT ★	bdl	bdl	0.000845	bdl	bdl	bdl	bdl	0.0125	0.00130
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
oxychlordane ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000895	0.00236
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
p,p'-DDD ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.00491	0.000755
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
p,p'-DDE ★	0.000856	0.00341	0.00146	0.000501	0.00132	0.000401	bdl	0.238	0.0150
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
p,p'-DDT ★	bdl	bdl	0.000798	bdl	0.000796	bdl	bdl	0.0342	0.00469
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
pentachloro-anisole ★	bdl	bdl	bdl	0.000413	bdl	0.00156	bdl	bdl	bdl
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00171	0.00178	0.00176	0.00172	0.00157	0.00185	0.00166	0.00171	0.00174
trans-nonachlor ★	bdl	bdl	0.000631	bdl	bdl	bdl	bdl	0.00724	0.0242
dl	0.000341	0.000356	0.000353	0.000344	0.000314	0.000370	0.000331	0.000341	0.000348

Table 4 (concluded). Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for sediment and/or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site 248	Site 249
1,2,3,4-tetrachlorobenzene	bdl	bdl
dl	0.000314	0.000534
1,2,4,5-tetrachlorobenzene	bdl	bdl
dl	0.000314	0.000534
aldrin ★	bdl	0.00336
dl	0.000314	0.000534
HCB	bdl	bdl
dl	0.000314	0.000534
heptachlor	bdl	bdl
dl	0.000314	0.000534
total PCB ★	0.00950	0.0845
dl	0.00157	0.00267
αBHC	bdl	bdl
dl	0.000314	0.000534
αchlordane ★	bdl	0.0156
dl	0.000314	0.000534
βBHC	bdl	bdl
dl	0.000314	0.000534
cis-nonachlor ★	0.000553	0.0350
dl	0.000314	0.000534
δBHC	bdl	bdl
dl	0.000314	0.000534
dieldrin ★	0.000382	0.00211
dl	0.000314	0.000534
endosulfan II	bdl	bdl
dl	0.000314	0.000534
endrin ★	0.000857	0.00197
dl	0.000314	0.000534
γBHC	bdl	bdl
dl	0.000314	0.000534
γchlordane ★	bdl	0.00614
dl	0.000314	0.000534
heptachlor epoxide ★	0.000418	0.000721
dl	0.000314	0.000534
mirex	bdl	bdl
dl	0.000314	0.000534
o,p'-DDD ★	0.000679	0.00141
dl	0.000314	0.000534
o,p'-DDE	bdl	bdl
dl	0.000314	0.000534
o,p'-DDT ★	0.00100	0.00543
dl	0.000314	0.000534
oxychlordane ★	bdl	0.0056
dl	0.000314	0.000534
p,p'-DDD ★	0.00160	0.00562
dl	0.000314	0.000534
p,p'-DDE ★	0.0137	0.249
dl	0.000314	0.000534
p,p'-DDT ★	0.00534	0.0230
dl	0.000314	0.000534
pentachloro-anisole	bdl	bdl
dl	0.000314	0.000534
toxaphene	bdl	bdl
dl	0.00157	0.00267
trans-nonachlor ★	0.001	0.0759
dl	0.000314	0.000534

Table 5. Total chlordane values in mg/kg dry weight for soils/sediment collected in 2003 from 58 sites at Caddo Lake National Wildlife Refuge calculated using the sum of α- and γ chlordane, *cis*- and *trans*-nonachlor, oxychlordane, heptachlor, and heptachlor epoxide concentrations in mg/kg dry weight for each site (Note - bdl is below the analytical detection limit).

Site	α chlordane	γ chlordane	*cis*-nonachlor	*trans*-nonachlor	oxy-chlordane	heptachlor	heptachlor epoxide	Total chlordane
54	0.000532	bdl	bdl	bdl	bdl	bdl	bdl	**0.00053**
81	0.000500	bdl	bdl	bdl	bdl	bdl	bdl	**0.00050**
82	0.001530	bdl	0.001010	bdl	bdl	bdl	bdl	**0.00254**
83	0.000405	bdl	bdl	bdl	bdl	bdl	bdl	**0.00041**
84	bdl	bdl	bdl	0.000719	bdl	bdl	bdl	**0.00072**
85	0.000447	bdl	0.000375	bdl	bdl	bdl	bdl	**0.00082**
91	0.000680	bdl	0.000392	bdl	bdl	bdl	bdl	**0.00107**
102	bdl	bdl	bdl	0.000313	bdl	bdl	bdl	**0.00031**
108	0.000403	bdl	bdl	bdl	bdl	bdl	bdl	**0.00040**
109	bdl	bdl	bdl	0.000392	bdl	bdl	bdl	**0.00039**
113	0.000411	bdl	0.000562	bdl	bdl	bdl	bdl	**0.00097**
117	0.000318	bdl	bdl	bdl	bdl	bdl	bdl	**0.00032**
122	0.000626	bdl	bdl	0.000559	bdl	bdl	bdl	**0.00119**
128	0.000428	bdl	bdl	bdl	bdl	0.000484	bdl	**0.00091**
129	bdl	bdl	bdl	0.000367	bdl	bdl	bdl	**0.00037**
130	0.000454	bdl	bdl	bdl	bdl	bdl	bdl	**0.00045**
132	0.000459	bdl	bdl	bdl	bdl	bdl	bdl	**0.00046**
133	0.001310	0.001350	0.001690	0.004170	bdl	bdl	bdl	**0.00852**
137	0.000430	bdl	0.000336	bdl	bdl	bdl	bdl	**0.00077**
140	0.000509	bdl	bdl	bdl	bdl	bdl	bdl	**0.00051**
142	0.000486	bdl	bdl	bdl	bdl	bdl	bdl	**0.00049**
143	0.000483	bdl	bdl	bdl	bdl	bdl	bdl	**0.00048**
145	0.000456	bdl	bdl	bdl	bdl	bdl	bdl	**0.00046**
162	0.000678	bdl	bdl	0.000960	bdl	bdl	bdl	**0.00164**
165	bdl	bdl	bdl	0.000574	bdl	bdl	bdl	**0.00057**
167	0.000440	bdl	bdl	bdl	bdl	bdl	bdl	**0.00044**
168	0.001100	bdl	bdl	bdl	bdl	bdl	bdl	**0.00110**
169	0.000318	bdl	bdl	bdl	bdl	bdl	bdl	**0.00032**
175	0.002310	bdl	bdl	bdl	bdl	bdl	bdl	**0.00231**
177	0.001200	bdl	bdl	bdl	bdl	bdl	bdl	**0.00120**
179	0.000910	bdl	bdl	bdl	bdl	bdl	bdl	**0.00091**
180	bdl	bdl	bdl	0.000679	bdl	bdl	bdl	**0.00068**
181	0.001620	bdl	0.001920	0.001390	0.000554	bdl	bdl	**0.00548**
182	bdl	bdl	bdl	0.000685	bdl	bdl	bdl	**0.00069**
184	0.001050	bdl	bdl	bdl	bdl	bdl	bdl	**0.00105**
185	bdl	0.000436	bdl	0.000492	bdl	bdl	bdl	**0.00093**
186	0.004430	bdl	bdl	0.000527	bdl	bdl	bdl	**0.00496**
203	0.000566	bdl	bdl	0.000459	bdl	bdl	bdl	**0.00103**
206	bdl	bdl	0.000644	0.000703	bdl	bdl	bdl	**0.00135**
207	bdl	bdl	0.000787	0.000518	bdl	bdl	bdl	**0.00131**
208	bdl	bdl	0.000457	0.001110	bdl	bdl	bdl	**0.00157**
209	0.000360	bdl	bdl	bdl	bdl	bdl	bdl	**0.00036**
211	bdl	bdl	bdl	0.000737	bdl	bdl	bdl	**0.00074**
212	bdl	bdl	bdl	0.000376	bdl	bdl	bdl	**0.00038**
214	0.000927	0.000326	bdl	0.000357	bdl	bdl	bdl	**0.00161**
221	0.000557	bdl	0.000324	bdl	bdl	bdl	bdl	**0.00088**
223	0.000921	bdl	0.000617	bdl	bdl	bdl	bdl	**0.00154**
226	bdl	bdl	0.000496	0.000836	bdl	bdl	bdl	**0.00133**
227	0.001500	0.001500	0.003110	0.002190	bdl	bdl	bdl	**0.00830**
228	bdl	bdl	0.000475	0.001600	0.000419	bdl	bdl	**0.00249**
233	bdl	bdl	bdl	0.000399	bdl	bdl	bdl	**0.00040**
237	bdl	bdl	0.000673	0.001980	bdl	bdl	bdl	**0.00265**
240	0.000714	bdl	bdl	bdl	bdl	bdl	bdl	**0.00071**
241	bdl	bdl	bdl	0.000631	bdl	bdl	bdl	**0.00063**
246	0.000689	0.000859	0.003420	0.007240	0.000895	bdl	bdl	**0.01310**
247	0.003280	0.002170	0.008710	0.024200	0.002360	bdl	0.002510	**0.04323**
248	bdl	bdl	0.000553	0.001000	bdl	bdl	0.000418	**0.00197**
249	0.015600	0.006140	0.035000	0.075900	0.005600	bdl	0.000721	**0.13896**

Table 6. Calculated DDD (DDD_{SUM}), DDE (DDE_{SUM}), DDT (DDT_{SUM}), and Total DDT (DDT_{TOTAL}) values in mg/kg dry weight for sites at Caddo Lake National Wildlife Refuge, 2003 (Note - bdl is below the analytical detection limit; and NC is not calculated because residual DDT was not detected at the site).

Site	DDD_{SUM}	DDE_{SUM}	DDT_{SUM}	DDT_{TOTAL}
50	bdl	0.011000	bdl	NC
51	bdl	0.001990	bdl	NC
52	bdl	0.002190	bdl	NC
53	bdl	0.004790	bdl	NC
54	bdl	0.007330	bdl	NC
55	bdl	0.000845	0.000427	0.001272
56	bdl	0.000797	bdl	NC
57	bdl	0.000798	0.000496	0.001294
58	bdl	0.000394	bdl	NC
59	bdl	0.000435	bdl	NC
60	bdl	0.000479	0.000872	0.001351
61	bdl	0.000436	bdl	NC
63	bdl	0.000854	0.001007	0.001861
64	bdl	0.001907	0.001490	0.003397
66	bdl	0.000899	bdl	NC
67	bdl	0.002310	bdl	NC
68	bdl	0.000650	bdl	NC
69	bdl	0.000397	bdl	NC
71	bdl	0.001765	bdl	NC
72	bdl	0.000690	bdl	NC
73	bdl	0.002550	bdl	NC
74	bdl	0.000435	bdl	NC
75	bdl	0.000714	0.000548	0.001262
76	bdl	0.001700	0.000909	0.002609
77	bdl	0.001033	0.000372	0.001405
78	bdl	0.000626	bdl	NC
79	bdl	0.000526	0.000674	0.001200
80	bdl	0.001135	0.000333	0.001468
81	bdl	0.011300	bdl	NC
82	bdl	0.017300	0.001044	0.018344
83	bdl	0.008060	0.000752	0.008812
84	bdl	0.000898	0.000686	0.001584
85	0.000403	0.008630	0.000670	0.009703
86	bdl	0.000355	bdl	NC
87	bdl	0.000507	0.000319	0.000826
88	bdl	0.001210	0.000355	0.001565
89	bdl	0.002880	bdl	NC
90	bdl	0.000795	bdl	NC
91	0.002320	0.007950	bdl	NC
92	bdl	0.001590	bdl	NC
93	bdl	0.000426	0.000346	0.000772
94	bdl	0.000355	bdl	NC
95	bdl	0.000603	bdl	NC
96	bdl	0.001633	bdl	NC
98	bdl	0.000527	bdl	NC
99	0.000682	0.003830	bdl	NC
100	bdl	0.001160	bdl	NC
101	0.000550	0.001930	bdl	NC
102	0.000551	0.001940	bdl	NC
103	bdl	0.001270	bdl	NC
104	bdl	0.000857	bdl	NC
106	bdl	0.000931	bdl	NC
107	bdl	0.000840	0.000286	0.001126
108	0.001000	0.005770	0.000377	0.007147
109	bdl	0.001230	bdl	NC
110	bdl	0.002040	bdl	NC
111	bdl	0.000317	bdl	NC
112	bdl	0.000869	bdl	NC
113	0.000697	0.036500	0.003630	0.040827
114	bdl	0.000388	bdl	NC
115	bdl	0.000627	bdl	NC

Table 6 (continued). Calculated DDD (DDD_{SUM}), DDE (DDE_{SUM}), DDT (DDT_{SUM}), and Total DDT (DDT_{TOTAL}) values in mg/kg dry weight for sites at Caddo Lake National Wildlife Refuge, 2003 (Note - bdl is below the analytical detection limit; and NC is not calculated because no residual DDT was detected at the site).

Site	DDD_{SUM}	DDE_{SUM}	DDT_{SUM}	DDT_{TOTAL}
116	bdl	0.000588	bdl	NC
117	bdl	0.001440	bdl	NC
118	bdl	0.002960	bdl	NC
119	bdl	0.001030	bdl	NC
120	bdl	0.000862	bdl	NC
122	0.000611	0.010100	0.001210	0.011921
126	bdl	0.002160	0.000457	0.002617
127	bdl	0.000351	bdl	NC
128	bdl	0.002330	0.001150	0.003480
129	bdl	0.000952	0.000757	0.001709
130	bdl	0.003311	bdl	NC
131	bdl	0.001740	0.000371	0.002111
132	bdl	0.001110	bdl	NC
133	0.004760	0.046800	0.042160	0.093720
134	bdl	0.000349	0.000335	0.000684
135	bdl	0.001590	0.001530	0.003120
136	bdl	0.002640	0.000378	0.003018
137	bdl	0.004027	bdl	NC
138	bdl	0.008310	bdl	NC
139	bdl	0.000655	0.000547	0.001202
140	bdl	0.000781	bdl	NC
141	bdl	0.001460	0.000565	0.002025
142	bdl	0.001530	0.000609	0.002139
143	bdl	0.001210	bdl	NC
144	bdl	0.000674	0.000635	0.001309
145	bdl	0.001680	bdl	NC
146	bdl	0.000508	bdl	NC
147	bdl	0.001270	0.000456	0.001726
148	bdl	0.000528	bdl	NC
150	bdl	0.000937	bdl	NC
152	bdl	0.001170	0.000987	0.002157
154	bdl	0.001030	bdl	NC
155	bdl	0.000837	0.000383	0.001220
156	bdl	0.001210	0.001090	0.002300
157	bdl	0.000709	bdl	NC
158	bdl	0.000543	bdl	NC
159	bdl	0.000531	bdl	NC
160	0.000933	bdl	0.001280	0.002213
162	0.002678	0.004510	0.003090	0.010278
164	bdl	0.001670	bdl	NC
165	bdl	0.001220	0.001311	0.002531
166	bdl	0.004070	bdl	NC
167	bdl	0.001490	0.000375	0.001865
168	bdl	0.005720	bdl	NC
169	bdl	0.001520	bdl	NC
170	bdl	0.002050	bdl	NC
171	0.001370	0.000980	bdl	NC
172	bdl	0.000819	bdl	NC
173	bdl	0.000643	bdl	NC
174	bdl	0.001050	0.000350	0.001400
175	bdl	0.026609	0.000515	0.027124
176	bdl	0.001990	0.000758	0.002748
177	bdl	0.011400	bdl	NC
179	bdl	0.008280	bdl	NC
180	bdl	0.001810	0.001088	0.002898
181	0.000760	0.004440	0.008610	0.013810
182	0.001230	0.003890	0.001640	0.006760
183	bdl	0.000524	bdl	NC
184	0.000814	0.009801	bdl	NC
185	0.000645	0.001550	0.000451	0.002646
186	0.000632	0.085400	0.001080	0.087112
187	bdl	0.000603	bdl	NC

Table 6 (concluded). Calculated DDD (DDD_{SUM}), DDE (DDE_{SUM}), DDT (DDT_{SUM}), and Total DDT (DDT_{TOTAL}) values in mg/kg dry weight for sites at Caddo Lake National Wildlife Refuge, 2003 (Note - bdl is below the analytical detection limit; and NC is not calculated because residual DDT was not detected at the site).

Site	DDD_{SUM}	DDE_{SUM}	DDT_{SUM}	DDT_{TOTAL}
188	bdl	0.008960	0.000493	0.009453
189	bdl	0.000608	0.000400	0.001008
190	bdl	0.001590	0.000381	0.001971
191	bdl	0.001280	0.000515	0.001795
192	bdl	0.004320	bdl	NC
194	bdl	0.000655	0.000552	0.001207
195	bdl	0.001310	bdl	NC
196	bdl	0.001270	0.000356	0.001626
197	bdl	0.000888	0.000874	0.001762
198	bdl	0.001720	0.000589	0.002309
199	bdl	0.000502	bdl	NC
200	bdl	0.000592	bdl	NC
201	bdl	0.000624	bdl	NC
202	bdl	0.001520	bdl	NC
203	bdl	0.002770	0.000501	0.003271
204	bdl	0.000389	0.000543	0.000932
205	bdl	0.000362	bdl	NC
206	bdl	0.006390	bdl	NC
207	bdl	0.003430	0.000859	0.004289
208	bdl	0.002820	0.001370	0.004190
209	bdl	0.002380	bdl	NC
210	bdl	0.000545	bdl	NC
211	bdl	0.001550	bdl	NC
212	bdl	0.001330	bdl	NC
213	bdl	0.000733	bdl	NC
214	bdl	0.001140	0.000658	0.001798
216	bdl	0.000483	bdl	NC
217	bdl	0.001260	bdl	NC
218	bdl	0.000918	bdl	NC
219	bdl	0.000772	0.000386	0.001158
220	bdl	0.000460	0.000373	0.000833
221	bdl	0.002960	bdl	NC
223	bdl	0.003370	bdl	NC
224	bdl	0.000675	bdl	NC
225	bdl	0.001600	bdl	NC
226	0.000466	0.004880	0.002890	0.008236
227	0.002430	0.009300	0.003260	0.014990
228	bdl	0.003890	0.001090	0.004980
229	bdl	0.001120	bdl	NC
230	bdl	0.000648	0.000451	0.001099
231	bdl	0.001950	0.000400	0.002350
232	bdl	0.001170	0.001070	0.002240
233	bdl	0.001500	0.000822	0.002322
234	bdl	0.000720	bdl	NC
235	bdl	0.002720	0.000373	0.003093
236	0.000405	0.004350	0.004840	0.009595
237	bdl	0.002110	0.000761	0.002871
238	bdl	0.001930	0.001010	0.002940
239	bdl	0.000856	bdl	NC
240	bdl	0.003410	bdl	NC
241	bdl	0.001460	0.001643	0.003103
242	bdl	0.000501	bdl	NC
243	bdl	0.001320	0.000796	0.002116
244	bdl	0.000401	bdl	NC
246	0.007330	0.238000	0.046700	0.292030
247	bdl	0.015000	0.005990	0.020990
248	0.002279	0.013700	0.006340	0.022319
249	0.007030	0.249000	0.028430	0.284460

Table 8. Results of perchlorate analyses in µg/kg dry weight for sediment and /or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - brl is below the minimum reporting limit; and ★ is detected above the minimum reporting limit).

Site	Reported Concentration	Minimum Reporting Limit	Site	Reported Concentration	Minimum Reporting Limit
50	brl	8.00	106	brl	8.00
51	brl	8.00	107	brl	8.00
52	brl	8.00	108	brl	8.00
53 ★	122.00	8.00	109	brl	8.00
54	brl	8.00	110	brl	8.00
55	brl	8.00	111	brl	8.00
56	brl	8.00	112	brl	8.00
57	brl	8.00	113	brl	8.00
58	brl	8.00	114	brl	8.00
59	brl	8.00	115	brl	8.00
60	brl	8.00	116	brl	8.00
61	brl	8.00	117	brl	8.00
62	brl	8.00	118	brl	8.00
63	brl	8.00	119	brl	8.00
64	brl	8.00	120	brl	8.00
65	brl	8.00	121	brl	8.00
66	brl	8.00	122	brl	8.00
67	brl	8.00	123	brl	8.00
68	brl	8.00	124	brl	8.00
69	brl	8.00	125	brl	8.00
70	brl	8.00	126	brl	8.00
71	brl	8.00	127	brl	8.00
72	brl	8.00	128	brl	8.00
73	brl	8.00	129	brl	8.00
74	brl	8.00	130	brl	8.00
75	brl	8.00	131	brl	8.00
76	brl	8.00	132	brl	8.00
77	brl	8.00	133	brl	8.00
78	brl	8.00	134	brl	8.00
79	brl	8.00	135	brl	8.00
80	brl	8.00	136	brl	8.00
81	brl	8.00	137	brl	8.00
82	brl	8.00	138	brl	8.00
83	brl	8.00	139	brl	8.00
84	brl	8.00	140	brl	8.00
85	brl	8.00	141	brl	8.00
86	brl	8.00	142	brl	8.00
87	brl	8.00	143	brl	8.00
88	brl	8.00	144	brl	8.00
89	brl	8.00	145	brl	8.00
90	brl	8.00	146	brl	8.00
91	brl	8.00	147	brl	8.00
92	brl	8.00	148	brl	8.00
93	brl	8.00	149	brl	8.00
94	brl	8.00	150	brl	8.00
95	brl	8.00	151	brl	8.00
96	brl	8.00	152	brl	8.00
97	brl	8.00	153	brl	8.00
98	brl	8.00	154	brl	8.00
99	brl	8.00	155	brl	8.00
100	brl	8.00	156	brl	8.00
101	brl	8.00	157	brl	8.00
102	brl	8.00	158	brl	8.00
103	brl	8.00	159	brl	8.00
104	brl	8.00	160	brl	8.00
105	brl	8.00	161	brl	8.00

Table 8 (concluded). Results of perchlorate analyses in µg/kg dry weight for sediment and /or soil samples collected from 200 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - brl is below the minimum reporting limit; and ★ is detected above the minimum reporting limit).

Site	Reported Concentration	Minimum Reporting Limit	Site	Reported Concentration	Minimum Reporting Limit
162	brl	8.00	206	brl	8.00
163	brl	8.00	207	brl	8.00
164	brl	8.00	208	brl	8.00
165	brl	8.00	209	brl	8.00
166	brl	8.00	210	brl	8.00
167	brl	8.00	211	brl	8.00
168	brl	8.00	212	brl	8.00
169	brl	8.00	213	brl	8.00
170	brl	8.00	214	brl	8.00
171	brl	8.00	215	brl	8.00
172	brl	8.00	216	brl	8.00
173	brl	8.00	217	brl	8.00
174	brl	8.00	218	brl	8.00
175	brl	8.00	219	brl	8.00
176	brl	8.00	220	brl	8.00
177	brl	8.00	221	brl	8.00
178	brl	8.00	222	brl	8.00
179	brl	8.00	223	brl	8.00
180	brl	8.00	224	brl	8.00
181	brl	8.00	225	brl	8.00
182	brl	8.00	226	brl	8.00
183	brl	8.00	227	brl	8.00
184	brl	8.00	228	brl	8.00
185	brl	8.00	229	brl	8.00
186	brl	8.00	230	brl	8.00
187	brl	8.00	231	brl	8.00
188	brl	8.00	232	brl	8.00
189	brl	8.00	233	brl	8.00
190	brl	8.00	234	brl	8.00
191	brl	8.00	235	brl	8.00
192	brl	8.00	236	brl	8.00
193	brl	8.00	237	brl	8.00
194	brl	8.00	238	brl	8.00
195	brl	8.00	239	brl	8.00
196	brl	8.00	240	brl	8.00
197	brl	8.00	241	brl	8.00
198	brl	8.00	242	brl	8.00
199	brl	8.00	243	brl	8.00
200	brl	8.00	244	brl	8.00
201	brl	8.00	245	brl	8.00
202	brl	8.00	246	brl	8.00
203	brl	8.00	247	brl	8.00
204	brl	8.00	248	brl	8.00
205	brl	8.00	249	brl	8.00

APPENDIX C
(Analytical Results for Field Duplicates)

Results of metals analysis in mg/kg dry weight for field duplicate soil/sediment samples collected from 20 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 53D	Site 56D	Site 65D	Site 71D	Site 75D	Site 91D	Site 113D	Site131D	Site138D
Aluminum	1865.00	3457.00	9721.00	4311.00	9718.00	1212.00	3519.00	4153.00	5751.00
dl	10.80	10.60	10.80	10.50	10.50	10.80	10.00	10.50	10.50
Arsenic	3.25	1.41	4.56	1.61	4.51	2.10	1.79	1.94	1.67
dl	0.54	0.53	0.54	0.52	0.52	0.54	0.50	0.52	0.53
Barium	74.30	127.00	421.00	206.00	310.00	35.10	65.20	105.00	65.90
dl	1.08	1.06	1.08	1.05	1.05	1.08	1.00	1.05	1.05
Beryllium	0.59	0.46	1.48	14.80	1.78	bdl	0.34	0.53	0.45
dl	0.22	0.21	0.22	0.21	0.21	0.22	0.20	0.21	0.21
Boron	bdl	bdl	bdl	13.70	bdl	bdl	bdl	bdl	bdl
dl	2.15	2.11	2.16	2.10	2.10	2.15	2.01	2.09	2.11
Cadmium	bdl	bdl	0.53	14.80	bdl	bdl	bdl	0.39	bdl
dl	0.27	0.26	0.27	0.26	0.26	0.27	0.25	0.26	0.26
Chromium	6.29	7.95	12.20	5.22	12.00	3.95	12.80	7.33	13.50
dl	1.08	1.06	1.08	1.05	1.05	1.08	1.00	1.05	1.05
Copper	1.95	3.45	7.41	4.42	7.83	1.78	4.69	5.21	2.33
dl	0.54	0.53	0.54	0.52	0.52	0.54	0.50	0.52	0.53
Iron	2489.00	4706.00	15,820.00	5313.00	15,750.00	2728.00	10,210.00	8253.00	5873.00
dl	10.80	10.60	10.80	10.50	10.50	10.80	10.00	10.50	10.50
Lead	11.20	11.30	21.40	9.76	24.80	6.21	15.40	11.30	9.55
dl	2.15	2.11	2.16	2.10	2.10	2.15	2.01	2.09	2.11
Magnesium	129.00	252.00	1428.00	487.00	1358.00	95.30	345.00	713.00	324.00
dl	10.80	10.60	10.80	10.50	10.50	10.80	10.00	10.50	10.50
Manganese	493.00	695.00	2755.00	1713.00	2498.00	271.00	679.00	1327.00	504.00
dl	1.08	1.06	1.08	1.05	1.05	1.08	1.00	1.05	1.05
Mercury	0.040	0.027	0.061	0.043	0.076	0.023	0.042	0.044	0.026
dl	0.021	0.019	0.021	0.020	0.025	0.019	0.016	0.018	0.018
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.08	1.06	1.08	1.05	1.05	1.08	1.00	1.05	1.05
Nickel	2.21	4.19	24.40	11.60	16.70	1.87	4.43	8.86	6.52
dl	1.08	1.06	1.08	1.05	1.05	1.08	1.00	1.05	1.05
Selenium	bdl	bdl	bdl	bdl	bdl	bdl	0.55	bdl	bdl
dl	0.54	0.53	0.54	0.52	0.52	0.54	0.50	0.52	0.53
Silver	bdl	bdl	bdl	0.20	bdl	bdl	bdl	bdl	bdl
dl	0.19	0.19	0.19	0.19	0.19	0.19	0.18	0.20	0.19
Strontium	4.65	12.50	51.50	34.70	40.00	3.38	10.50	21.30	6.76
dl	0.54	0.53	0.54	0.52	0.52	0.54	0.50	0.52	0.53
Vanadium	9.48	12.10	21.60	9.49	21.50	6.78	23.10	13.60	15.60
dl	0.54	0.53	0.54	0.52	0.52	0.54	0.50	0.52	0.53
Zinc	7.68	14.30	49.00	26.60	43.50	bdl	16.50	64.70	13.10
dl	5.38	5.28	5.40	5.24	5.24	5.38	5.02	5.23	5.26

Results of metals analysis in mg/kg dry weight for field duplicate soil/sediment samples collected from 20 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 140D	Site 152D	Site 160D	Site 186D	Site 194D	Site 200D	Site 201D	Site209D	Site214D
Aluminum	8669.00	8120.00	3634.00	6717.00	3132.00	6373.00	5970.00	3350.00	874.00
dl	10.30	10.20	10.40	10.30	10.10	10.20	10.10	10.50	10.60
Arsenic	1.58	0.83	2.42	2.30	1.83	bdl	1.53	1.27	bdl
dl	0.52	0.51	0.52	0.51	0.51	0.51	0.51	0.53	0.53
Barium	298.00	122.00	59.60	150.00	108.00	30.50	263.00	28.70	54.60
dl	1.03	1.02	1.04	0.21	0.20	0.21	0.20	0.21	0.21
Beryllium	1.69	1.22	0.60	1.70	0.44	0.26	0.46	bdl	bdl
dl	0.21	0.21	0.21	0.21	0.20	0.21	0.20	0.21	0.21
Boron	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	2.07	2.05	2.08	2.05	2.02	2.05	2.03	2.11	2.11
Cadmium	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.26	0.26	0.26	0.26	0.25	0.26	0.25	0.26	0.26
Chromium	9.54	9.54	6.33	10.90	5.42	9.24	11.90	7.81	3.15
dl	1.03	1.02	1.04	1.03	1.01	1.02	1.01	1.05	1.06
Copper	6.14	7.20	3.41	3.41	1.10	2.36	14.70	1.00	0.60
dl	0.52	0.51	0.52	0.51	0.51	0.51	0.51	0.53	0.53
Iron	7915.00	7647.00	8880.00	12,540.00	3984.00	3837.00	5043.00	3497.00	1208.00
dl	10.30	10.20	10.40	10.30	10.10	10.20	10.10	10.50	10.60
Lead	27.80	27.20	9.36	20.50	16.50	13.20	10.00	8.10	5.19
dl	2.07	2.05	2.08	2.05	2.02	2.05	2.03	2.11	2.11
Magnesium	502.00	928.00	351.00	347.00	282.00	335.00	475.00	204.00	102.00
dl	10.30	10.20	10.40	10.30	10.10	10.20	10.10	10.50	10.60
Manganese	384.00	91.00	113.00	744.00	1279.00	20.90	62.70	151.00	261.00
dl	1.03	1.02	1.04	1.03	1.01	1.02	1.01	1.05	1.06
Mercury	0.081	0.061	0.017	0.035	0.055	0.039	0.027	bdl	0.038
dl	0.019	0.017	0.014	0.022	0.022	0.022	0.023	0.026	0.024
Molybdenum	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	1.03	1.02	1.04	1.03	1.01	1.02	1.01	1.05	1.06
Nickel	8.84	9.35	4.90	11.70	5.05	2.61	4.34	2.26	1.24
dl	1.03	1.02	1.04	1.03	1.01	1.02	1.01	1.05	1.06
Selenium	0.55	bdl	bdl	0.64	bdl	bdl	bdl	bdl	bdl
dl	0.52	0.51	0.52	0.51	0.51	0.51	0.51	0.53	0.53
Silver	bdl	bdl	bdl	0.20	bdl	bdl	bdl	bdl	bdl
dl	0.19	0.18	0.19	0.19	0.18	0.18	0.18	0.19	0.19
Strontium	12.40	24.60	8.75	7.66	10.30	9.27	14.60	3.34	9.68
dl	0.52	0.51	0.52	0.51	0.51	0.51	0.51	0.53	0.53
Vanadium	20.90	15.70	13.50	25.70	11.20	11.50	11.00	13.20	4.57
dl	0.52	0.51	0.52	0.51	0.51	0.51	0.51	0.53	0.53
Zinc	28.70	23.90	35.70	47.80	11.60	11.20	92.10	6.65	5.28
dl	5.17	5.12	5.21	5.14	5.05	5.12	5.07	5.26	5.28

Results of metals analysis in mg/kg dry weight for field duplicate soil/sediment samples collected from 20 sites at Caddo Lake National Wildlife Refuge in 2003 (Note - dl is the analytical detection limit; and bdl is below the analytical detection limit).

Analyte	Site 231D	Site 238D
Aluminum	3238.00	6960.00
dl	10.50	10.70
Arsenic	1.71	2.37
dl	0.53	0.52
Barium	243.00	81.20
dl	0.21	0.21
Beryllium	1.32	1.27
dl	0.21	0.21
Boron	bdl	bdl
dl	2.09	2.14
Cadmium	bdl	0.35
dl	0.26	0.27
Chromium	7.81	14.60
dl	1.05	1.07
Copper	3.27	3.56
dl	0.52	0.53
Iron	4889.00	11,080.00
dl	10.50	10.70
Lead	13.00	19.90
dl	2.09	2.14
Magnesium	290.00	608.00
dl	10.50	10.70
Manganese	710.00	2878.00
dl	1.05	1.07
Mercury	0.049	0.079
dl	0.020	0.022
Molybdenum	bdl	bdl
dl	1.05	1.07
Nickel	8.74	12.10
dl	1.05	1.07
Selenium	bdl	0.77
dl	0.52	0.53
Silver	bdl	bdl
dl	0.19	0.19
Strontium	17.40	14.30
dl	0.52	0.53
Vanadium	9.84	21.80
dl	0.52	0.53
Zinc	25.40	30.40
dl	5.23	5.34

Results of semi-volatile analyses in mg/kg dry weight for field duplicate sediment and/or soil samples collected from 20 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site53D	Site56D	Site65D	Site71D	Site75D	Site91D	Site113D	Site131D	Site138D	Site140D
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
1,3-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
2-methylnaphthalene ★	bdl	0.0829	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375

Results of semi-volatile analyses in mg/kg dry weight for field duplicate sediment and/or soil samples collected from 20 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★is detected above the analytical detection limit).

Analyte	Site152D	Site160D	Site186D	Site194D	Site200D	Site201D	Site209D	Site214D	Site231D	Site238D
1,2,4-trichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
1,2-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
1,3-dichlorobenzene ★	bdl	bdl	0.0385	0.0436	bdl	bdl	bdl	bdl	bdl	0.0576
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
1,4-dichlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
1-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
1-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2,3,4,6-tetrachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2,4,5-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2,4,6-trichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2,4-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2,4-dimethylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2,4-dinitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2,4-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2,6-dichlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2,6-dinitrotoluene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2-chloronaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2-chlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2-naphthylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2-picoline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
2-methylnaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
3,3'-dichlorobenzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
3-methylcholanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
3-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
4,6-dinitro-2-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341

Results of semi-volatile analyses in mg/kg dry weight for field duplicate sediment and/or soil samples collected from 20 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site53D	Site56D	Site65D	Site71D	Site75D	Site91D	Site113D	Site131D	Site138D	Site140D
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
4-nitrophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
acentophenone ★	bdl	bdl	bdl	bdl	bdl	bdl	0.0422	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
benzo(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
benzoic acid ★	bdl	bdl	bdl	bdl	bdl	bdl	0.102	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
bis(2-ethylhexyl)phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
carbazole	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
di-n-butylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
dibenz(a,h)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
dibenzofuran	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375

Results of semi-volatile analyses in mg/kg dry weight for field duplicate sediment and/or soil samples collected from 20 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site152D	Site160D	Site186D	Site194D	Site200D	Site201D	Site209D	Site214D	Site231D	Site238D
4-aminobiphenyl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
4-bromophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
4-chloro-3-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
4-chloroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
4-chlorophenyl-phenylether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
4-methylphenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
4-nitroaniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
4-nitrophenol ★	bdl	0.0581	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
7,12-dimethylbenz(a)anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
acentophenone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
aniline	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
benzidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
benzo(a)anthracene ★	bdl	1.210	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
benzoic acid	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
benzyl alcohol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
bis(2-chloroethoxy)methane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
bis(2-chloroethyl)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
bis(2-ethylhexyl)phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
bis(2chloroisopropy)ether	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
butylbenzylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
carbazole ★	bdl	0.513	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
di-n-butylphthalate ★	bdl	0.0322	0.0551	bdl	bdl	bdl	bdl	bdl	bdl	0.0347
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
di-n-octylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
dibenz(a,h)anthracene ★	bdl	0.135	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
dibenz(a,j)acridine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
dibenzofuran ★	bdl	0.0604	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
diethyl phthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
dimethylphthalate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341

Results of semi-volatile analyses in mg/kg dry weight for field duplicate sediment and/or soil samples collected from 20 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site53D	Site56D	Site65D	Site71D	Site75D	Site91D	Site113D	Site131D	Site138D	Site140D
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
hexachloroethane ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.0724	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
acenaphthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
anthracene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
benzo(a)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
benzo(b)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
benzo(g,h,i)perylene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
benzo(k)fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
chrysene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
fluoranthene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
fluorene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
indeno(1,2,3-cd)pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375

Results of semi-volatile analyses in mg/kg dry weight for field duplicate sediment and/or soil samples collected from 20 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site152D	Site160D	Site186D	Site194D	Site200D	Site201D	Site209D	Site214D	Site231D	Site238D
diphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
ethyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
hexachlorobutadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
hexachlorocyclopentadiene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
hexachloroethane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
isophorone	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
methyl methanesulfonate	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
n-nitroso-di-n-propylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
n-nitrosopiperidine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
nitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
pentachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
pentachloronitrobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
pentachlorophenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
phenacetin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
phenol	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
pronamide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
a,a-dimethylphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
acenaphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
acenaphthene ★	bdl	0.263	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
anthracene ★	bdl	0.368	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
benzo(a)pyrene ★	bdl	0.909	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
benzo(b)fluoranthene ★	bdl	1.360	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
benzo(g,h,i)perylene ★	bdl	0.405	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
benzo(k)fluoranthene ★	bdl	0.469	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
chrysene ★	bdl	0.947	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
fluoranthene ★	bdl	2.400	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
fluorene ★	bdl	0.180	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
indeno(1,2,3-cd)pyrene ★	bdl	0.152	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341

Results of semi-volatile analyses in mg/kg dry weight for field duplicate sediment and/or soil samples collected from 20 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site53D	Site56D	Site65D	Site71D	Site75D	Site91D	Site113D	Site131D	Site138D	Site140D
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
phenanthrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375
pyrene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0322	0.0313	0.0370	0.0362	0.0313	0.0369	0.0302	0.0314	0.0313	0.0375

Results of semi-volatile analyses in mg/kg dry weight for field duplicate sediment and/or soil samples collected from 20 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site152D	Site160D	Site186D	Site194D	Site200D	Site201D	Site209D	Site214D	Site231D	Site238D
n-nitrosodiphenylamine	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
naphthalene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
p-dimethylaminoazobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
phenanthrene ★	bdl	1.53	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341
pyrene ★	bdl	1.66	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.0372	0.0297	0.0349	0.0318	0.0361	0.0394	0.0316	0.0334	0.0326	0.0341

Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for field duplicate sediment and/or soil samples collected from 20 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site53D	Site56D	Site65D	Site71D	Site75D	Site91D	Site113D	Site131D	Site138D
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
1,2,4,5-tetrachlorobenzene ★	0.000631	0.000903	0.001030	0.001400	0.001810	0.001080	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
aldrin ★	bdl	0.000814	bdl	bdl	bdl	bdl	0.001610	0.000377	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
HCB	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
total PCB ★	0.00472	0.00774	0.00461	0.00571	0.00430	bdl	0.0109	0.0154	0.00328
dl	0.00162	0.00156	0.00183	0.00182	0.00178	0.00178	0.00151	0.00159	0.00157
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
αchlordane ★	bdl	bdl	bdl	bdl	bdl	bdl	0.000892	0.000867	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
cis-nonachlor ★	bdl	bdl	bdl	bdl	bdl	bdl	0.000465	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
dieldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
endosulfan II ★	bdl	0.000377	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
endrin ★	0.000400	0.000340	0.00129	0.000533	0.00120	bdl	0.000392	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
mirex ★	bdl	bdl	bdl	bdl	bdl	0.000475	bdl	bdl	0.000448
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
o,p'-DDE ★	bdl	bdl	bdl	bdl	bdl	bdl	0.0232	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
o,p'-DDT ★	bdl	bdl	bdl	bdl	0.000407	bdl	0.000690	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
p,p'-DDD ★	bdl	bdl	bdl	bdl	bdl	bdl	0.000305	0.000774	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
p,p'-DDE ★	0.000445	0.00281	0.000727	0.000723	0.000512	0.00347	0.00841	0.00215	0.000414
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
p,p'-DDT ★	bdl	0.000592	bdl	bdl	0.000626	bdl	0.00387	0.00344	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
pentachloro-anisole ★	bdl	0.00236	bdl	bdl	bdl	bdl	0.000408	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00162	0.00156	0.00183	0.00182	0.00178	0.00178	0.00151	0.00159	0.00157
trans-nonachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000324	0.000312	0.000366	0.000364	0.000356	0.000356	0.000303	0.000317	0.000314

Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for field duplicate sediment and/or soil samples collected from 20 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site140D	Site152D	Site160D	Site186D	Site194D	Site200D	Site201D	Site209D	Site214D
1,2,3,4-tetrachlorobenzene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
1,2,4,5tetrachlorobenzene★	0.00110	0.00175	0.00192	0.00547	0.000654	bdl	0.000670	0.001190	0.001370
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
aldrin	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
HCB ★	bdl	0.000424	bdl	bdl	bdl	bdl	bdl	bdl	0.000356
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
heptachlor	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
total PCB ★	0.00318	0.0134	0.00829	0.0286	0.0110	0.00321	0.0107	0.0296	0.0528
dl	0.00185	0.00186	0.00138	0.00171	0.00161	0.00198	0.00195	0.00157	0.00169
αBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
αchlordane ★	bdl	bdl	bdl	0.00158	bdl	bdl	bdl	0.000623	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
βBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
cis-nonachlor ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000488	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
δBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
dieldrin ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000524
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
endosulfan II ★	bdl	bdl	0.000278	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
endrin ★	0.00109	0.00224	0.000290	bdl	bdl	bdl	bdl	0.00285	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
γBHC	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
γchlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
heptachlor epoxide	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
mirex	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
o,p'-DDD	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
o,p'-DDE	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
o,p'-DDT ★	bdl	0.00176	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
oxychlordane	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
p,p'-DDD ★	bdl	bdl	bdl	bdl	bdl	bdl	0.00329	0.00168	bdl
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
p,p'-DDE ★	0.00138	0.000998	bdl	0.0194	0.000998	0.000730	0.000603	0.00748	0.00349
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
p,p'-DDT ★	bdl	0.000785	0.000684	0.000408	0.000575	bdl	0.000565	bdl	0.000735
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
pentachloro-anisole ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000354	0.00119
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338
toxaphene	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl	bdl
dl	0.00185	0.00186	0.00138	0.00171	0.00161	0.00198	0.00195	0.00157	0.00169
trans-nonachlor ★	bdl	bdl	bdl	bdl	bdl	bdl	bdl	0.000343	0.000990
dl	0.000370	0.000372	0.000276	0.000343	0.000321	0.000396	0.000391	0.000314	0.000338

Results of organochlorine pesticide and total PCB analyses in mg/kg dry weight for field duplicate sediment and/or soil samples collected from 20 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - dl is the analytical detection limit; bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

Analyte	Site231D	Site238D
1,2,3,4-tetrachlorobenzene	bdl	bdl
dl	0.000327	0.000345
1,2,4,5-tetrachlorobenzene ★	0.000861	bdl
dl	0.000327	0.000345
aldrin	bdl	bdl
dl	0.000327	0.000345
HCB	bdl	bdl
dl	0.000327	0.000345
heptachlor	bdl	bdl
dl	0.000327	0.000345
total PCB ★	0.00991	0.0154
dl	0.00164	0.00173
αBHC	bdl	bdl
dl	0.000327	0.000345
αchlordane	bdl	bdl
dl	0.000327	0.000345
βBHC	bdl	bdl
dl	0.000327	0.000345
cis-nonachlor	bdl	bdl
dl	0.000327	0.000345
δBHC	bdl	bdl
dl	0.000327	0.000345
dieldrin	bdl	bdl
dl	0.000327	0.000345
endosulfan II	bdl	bdl
dl	0.000327	0.000345
endrin ★	0.000352	bdl
dl	0.000327	0.000345
γBHC	bdl	bdl
dl	0.000327	0.000345
γchlordane	bdl	bdl
dl	0.000327	0.000345
heptachlor epoxide	bdl	bdl
dl	0.000327	0.000345
mirex	bdl	bdl
dl	0.000327	0.000345
o,p'-DDD	bdl	bdl
dl	0.000327	0.000345
o,p'-DDE	bdl	bdl
dl	0.000327	0.000345
o,p'-DDT	bdl	bdl
dl	0.000327	0.000345
oxychlordane	bdl	bdl
dl	0.000327	0.000345
p,p'-DDD	bdl	bdl
dl	0.000327	0.000345
p,p'-DDE ★	0.00366	0.00147
dl	0.000327	0.000345
p,p'-DDT ★	bdl	0.00202
dl	0.000327	0.000345
pentachloro-anisole ★	0.000353	bdl
dl	0.000327	0.000345
toxaphene	bdl	bdl
dl	0.00164	0.00173
trans-nonachlor	bdl	bdl
dl	0.000327	0.000345

Results of perchlorate analyses in µg/kg dry weight for field duplicate sediment and /or soil samples collected from 20 sites at Caddo Lake National Wildlife Refuge, 2003 (Note - bdl is below the analytical detection limit; and ★ is detected above the analytical detection limit).

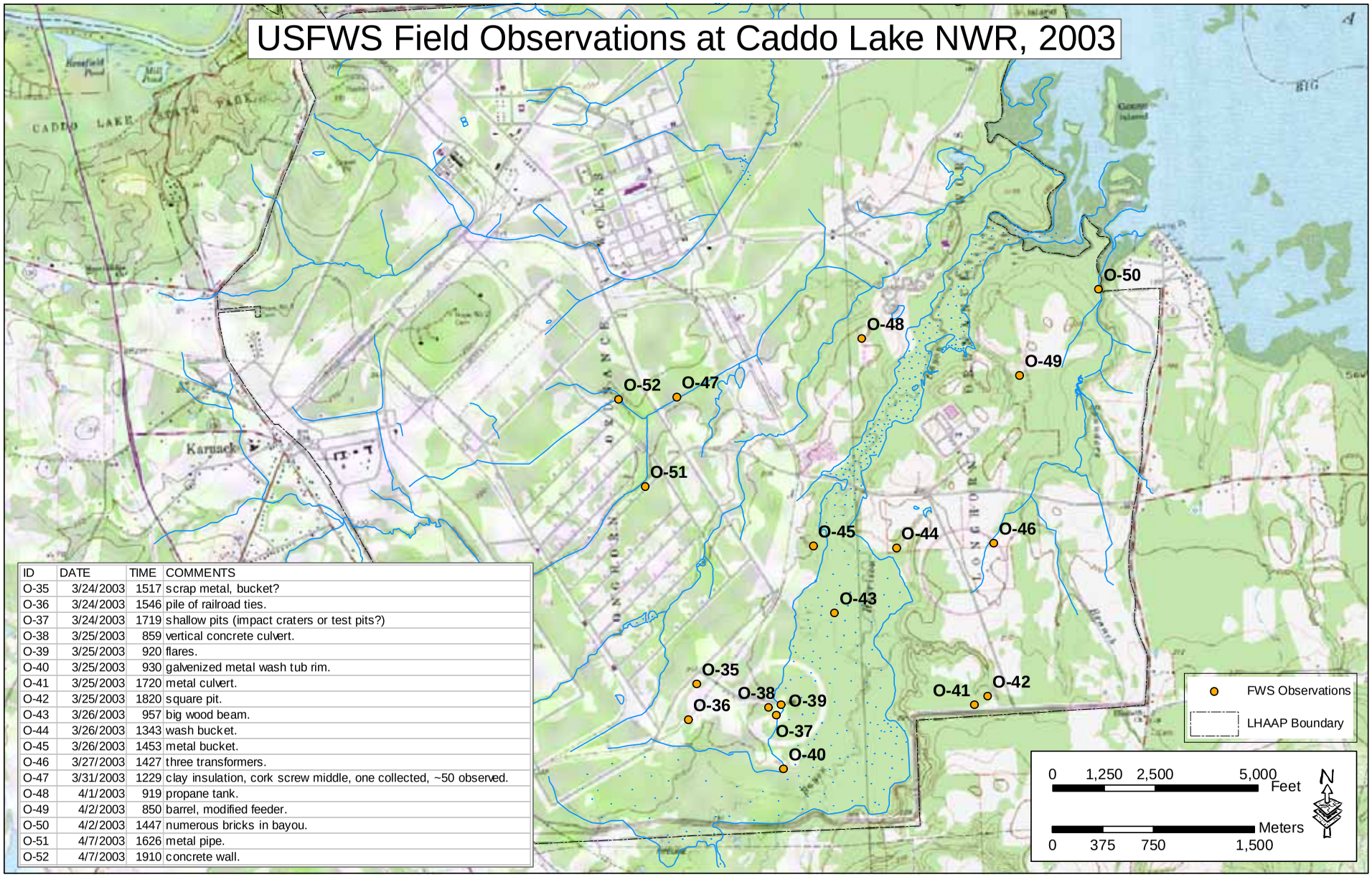
Site	Detected Concentration	Method Detection Limit	Minimum Reporting Limit
53D ★	120.00	2.00	8.00
56D	bdl	2.00	8.00
65D	bdl	2.00	8.00
71D	bdl	2.00	8.00
75D	bdl	2.00	8.00
91D	bdl	2.00	8.00
113D	bdl	2.00	8.00
131D	bdl	2.00	8.00
138D	bdl	2.00	8.00
140D	bdl	2.00	8.00
152D	bdl	2.00	8.00
160D	bdl	2.00	8.00
186D	bdl	2.00	8.00
194D	bdl	2.00	8.00
200D	bdl	2.00	8.00
201D	bdl	2.00	8.00
209D	bdl	2.00	8.00
214D	bdl	2.00	8.00
231D	bdl	2.00	8.00
238D	bdl	2.00	8.00

APPENDIX D
(FIELD OBSERVATIONS)

FIELD OBSERVATIONS

Any type of anomalies (i.e., drum, pipeline, solid waste, foundations, etc.) observed during the field sampling conducted in March and April 2003, were noted. Coordinates for these sites (O35 through O52) were entered into a geographic information system database and are presented on the map on page D2.

USFWS Field Observations at Caddo Lake NWR, 2003



ID	DATE	TIME	COMMENTS
O-35	3/24/2003	1517	scrap metal, bucket?
O-36	3/24/2003	1546	pile of railroad ties.
O-37	3/24/2003	1719	shallow pits (impact craters or test pits?)
O-38	3/25/2003	859	vertical concrete culvert.
O-39	3/25/2003	920	flares.
O-40	3/25/2003	930	galvenized metal wash tub rim.
O-41	3/25/2003	1720	metal culvert.
O-42	3/25/2003	1820	square pit.
O-43	3/26/2003	957	big wood beam.
O-44	3/26/2003	1343	wash bucket.
O-45	3/26/2003	1453	metal bucket.
O-46	3/27/2003	1427	three transformers.
O-47	3/31/2003	1229	clay insulation, cork screw middle, one collected, ~50 observed.
O-48	4/1/2003	919	propane tank.
O-49	4/2/2003	850	barrel, modified feeder.
O-50	4/2/2003	1447	numerous bricks in bayou.
O-51	4/7/2003	1626	metal pipe.
O-52	4/7/2003	1910	concrete wall.