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This is Appendices D-3 through D-7 for the report:

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Figure 1. Arsenic in freshwater. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale. N represents the number of available measurements.



Figure 2a. Cadmium in freshwater. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale. N represents the number of available measurements.



Figure 2b. Cadmium in marine water. Box plots of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale. N represents the number of available measurements.



Figure 3a. Copper in freshwater. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale. Text boxes represent regional effects data. N represents the number of available measurements.



Figure 3b. Copper in marine water. Box plots of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 4a. Lead in freshwater. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 4b. Lead in marine water. Box plots of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 5a. Mercury in freshwater. Box plots of observed environmental concentrations (yellow) in surface water plotted against box plot and data point of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 5b. Mercury in marine water. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 6a. Zinc in freshwater. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale. N represents the number of available measurements.



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Figure 8a. PCBs in freshwater. Box plots of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 8b. PCBs in marine water. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 9. Dioxins in freshwater. Data points of observed environmental concentrations in surface water (yellow) plotted against box plot and/or data points of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 10a. Acenaphthene in freshwater. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.











Figure 11b. Anthracene in marine water. Datapoint of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 12. Benzo(a)pyrene in marine and freshwater. Box plot and/or data point of observed environmental concentrations (yellow) in surface water plotted against box plot and/or data point of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure13a. Fluoranthene in freshwater. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements. N represents the number of available measurements.



Figure13b. Fluoranthene in marine water. Box plot and/or data points of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available observed measurements. N represents the number of available measurements.



Figure 14. Fluorene in marine and freshwater. Box plot and/or data points of observed environmental concentrations (yellow) in surface water plotted against box plot and/or data points of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 15a. Naphthalene in freshwater. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 15b. Naphthalene in marine water. Data points of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 16a. Phenanthrene in freshwater. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations. All concentrations are presented on a log scale. N represents the number of available measurements.



Figure 16b. Phenanthrene in marine water. Data points of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 17a. Pyrene in freshwater. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 17b. Pyrene in marine water. Data points of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 18. Small dataset PAHs in fresh and marine water. Box plots and/or data points of observed environmental concentrations (yellow or green) in surface water plotted against box plot of available effects concentrations (yellow). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 19 Bis(2-Ethylhexyl) Phthalate in fresh and marine water. Box plots of observed environmental concentrations (yellow) in surface water plotted against box plot and data points of available effects concentrations (blue). All concentrations are presented on a log scale. N represents the number of available measurements. Effect data for marine waters were limited to a few mortality based effect concentrations.


Figure 20a. Nonylphenol in freshwater. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 20b. Nonylphenol in marine water. Data points of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 21. Triclopyr in freshwater. Box plot of observed environmental concentrations (yellow) in surface water plotted against box plot of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available observed measurements. Observed marine data not available.



Petroleum - Freshwater

Figure 22. Petroleum in freshwater. Box plots of observed environmental concentrations (yellow) in surface water plotted against box plots of available effects concentrations (blue). All concentrations are presented on a log scale; note scale shift on Y axis. N represents the number of available measurements.



Figure 1a. Arsenic in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL-Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 1b. Arsenic in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 2a. Cadmium in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL-Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 2b. Cadmium in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 3a. Copper in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL-Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 3b. Copper in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 4a. Lead in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL- Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 4b. Lead in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 5a. Mercury in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL- Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 5b. Mercury in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 6a. Zinc in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL- Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 6b. Zinc in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 7a. PCB Congeners and Aroclors in freshwater sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL- Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 7b. PCB Congeners and Aroclors in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 8. Dioxins and Furans (as TEQs) in freshwater and marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level. All concentrations are presented on a log scale.



Figure 9a. DDT in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 9b. DDT in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold. All concentrations are presented on a log scale.



Figure 10a. LPAH in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL-Floating Percentile Cleanup Screening Level. All concentrations are presented on a log scale.







Figure 11a. HPAHs in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL-Floating Percentile Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 11b. HPAHs in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 12a. Acenaphthene in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL- Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level. All concentrations are presented on a log scale.



Figure 12b. Acenaphthene in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.







Figure 13b. Acenaphthylene in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 14a. Anthracene in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL-Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 14b. Anthracene in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 15a. Benzo(a)anthracene in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL- Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 15b. Benzo(a)anthracene in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 16a. Benzofluoranthenes in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL- Floating Percentile Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 16b. Benzofluoranthenes in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 17a. Benzo(a)pyrene in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL- Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.


Figure 17b. Benzo(a)pyrene in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.







Figure18b. Benzo(ghi)perylene in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 19a. Chrysene in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL-Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 19b. Chrysene in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 20a. Dibenzo(a,h)anthracene in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL- Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 20b. Dibenzo(a,h)anthracene in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 21a. Fluoranthene in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL-Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 21b. Fluoranthene in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 22a. Fluorene in freshwater sediment. Box plot of observed environmental concentrations in surface sediments presented as box plots of percentiles plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL- Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 22b. Fluorene in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.







Figure 23b. Indeno(1,2,3)pyrene in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold. All concentrations are presented on a log scale.



Figure 24a. Naphthalene in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL-Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.







Figure 25a. Phenanthrene in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL-Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 25b. Phenanthrene in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 26a. Pyrene in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL-Floating Percentile Cleanup Screening Level; TEL – Threshold Effect Level, PEL – Probable Effects Level; TEC – Threshold Effects Concentration, PEC – Probable Effect Concentration. All concentrations are presented on a log scale.



Figure 26b. Pyrene in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level, PEL – Probable Effects Level; LAET – Lowest Apparent Effects Threshold, 2-LAET – Second Lowest Apparent Effects Threshold; SQS – Sediment Quality Standard, CSL- Cleanup Screening Level. All concentrations are presented on a log scale.



Figure 27a. Bis(2-Ethylhexyl) Phthalate in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. FP-SQS – Floating Percentile Sediment Quality Standard, FP-CSL- Floating Percentile Cleanup Screening Level. All concentrations are presented on a log scale.







Figure 28a. 4-Nonylphenol in freshwater sediment. Box plot of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level. All concentrations are presented on a log scale.



Figure 28b. 4-Nonylphenol in marine sediment. Box plots of observed environmental concentrations in surface sediments plotted against sediment thresholds. TEL – Threshold Effect Level. All concentrations are presented on a log scale.



Figure 1a. Boxplots of observed mercury concentrations (yellow) in freshwater fish plotted against the boxplot of available tissue residue effects concentrations (blue). All concentrations presented on a log scale. N represents the number of available measurements.



Figure 1b. Boxplots of observed mercury concentrations (yellow) in marine decapods plotted against the available tissue residue effects concentrations (blue). All concentrations presented on a log scale. N represents the number of available measurements.



Figure 2a. Boxplots of observed PCB concentrations (yellow) in freshwater non-decapod invertebrates plotted against the boxplot of available tissue residue effects concentrations (blue). All concentrations presented on a log scale. N represents the number of available measurements.



Figure 2b. Boxplots of observed PCB concentrations (yellow) in freshwater fish plotted against the boxplot of available tissue residue effects concentrations (blue). All concentrations presented on a log scale. N represents the number of available measurements.



Figure 2c Boxplots of observed PCB concentrations (yellow) in marine decapods invertebrates plotted against the boxplot of available tissue residue effects concentrations (blue). All concentrations presented on a log scale. N represents the number of available measurements.



Figure 2d. Boxplots of observed PCB concentrations (yellow) in marine non-decapod invertebrates plotted against the boxplot of available tissue residue effects concentrations (blue). All concentrations presented on a log scale. N represents the number of available measurements.



Figure 2e. Boxplots of observed PCB concentrations (yellow) in marine fish plotted against the available tissue residue effects concentrations (blue). All concentrations presented on a log scale. N represents the number of available measurements.



Figure 3a. Boxplots of observed DDT and metabolite concentrations (yellow) in freshwater non-decapod invertebrates plotted against the boxplot of available tissue residue effects concentrations (blue). All concentrations presented on a log scale. N represents the number of available measurements.



Figure 3b. Boxplots of observed DDT and metabolite concentrations (yellow) in freshwater fish plotted against the boxplot of available tissue residue effects concentrations (blue). All concentrations presented on a log scale. N represents the number of available measurements.



Figure 3c. Boxplots of observed DDT and metabolite concentrations (yellow) in marine decapod invertebrates plotted against the available tissue residue effects concentrations (blue). All concentrations presented on a log scale. N represents the number of available measurements.



Figure 3d. Boxplots of observed DDT and metabolite concentrations (yellow) in marine non-decapod invertebrates plotted against the available tissue residue effects concentrations (blue). All concentrations presented on a log scale. N represents the number of available measurements.



Figure 1a. Daily doses of mercury in great blue heron and osprey. The symbols represent literaturebased, lowest daily doses of mercury associated with effects or highest daily doses associated with no effects. The horizontal lines represent the estimated dose based on the expected exposure (via fish, sediment and water ingestion) calculated from available environmental data. Daily doses were calculated with two different sediment ingestion rates to examine sensitivity of this uncertain parameter. The X-axis represents the rank ordered count of the literature-based effect doses.



Figure 1b. Daily doses of mercury in river otter and harbor seal. The symbols represent literaturebased, lowest daily doses of mercury associated with effects or highest daily doses associated with no effects. The horizontal lines represent the estimated dose based on the expected exposure (via fish, sediment and water ingestion) calculated from available environmental data. Daily doses were calculated with two different sediment ingestion rates to examine sensitivity of this uncertain parameter. The X-axis represents the rank ordered count of the literature-based effect doses.


Figure 2a. Daily doses of PCBs in great blue heron and osprey. The symbols represent literature-based, lowest daily doses of mercury associated with effects or highest daily doses associated with no effects. The horizontal lines represent the estimated dose based on the expected exposure (via fish, sediment and water ingestion) calculated from available environmental data. Daily doses were calculated with two different sediment ingestion rates to examine sensitivity of this uncertain parameter. The X-axis represents the rank ordered count of the literature-based effect doses.



Figure 2b. Daily doses of PCBs in river otter and harbor seal. The symbols represent literature-based, lowest daily doses of mercury associated with effects or highest daily doses associated with no effects. The horizontal lines represent the estimated dose based on the expected exposure (via fish, sediment and water ingestion) calculated from available environmental data. Daily doses were calculated with two different sediment ingestion rates to examine sensitivity of this uncertain parameter. The X-axis represents the rank ordered count of the literature-based effect doses.



Figure 3a. Daily doses of dioxins/furans as TEQs in great blue heron and osprey. The symbols represent literature-based, lowest daily doses of mercury associated with effects or highest daily doses associated with no effects. The horizontal lines represent the estimated dose based on the expected exposure (via fish, sediment and water ingestion) calculated from available environmental data. Daily doses were calculated with two different sediment ingestion rates to examine sensitivity of this uncertain parameter. The X-axis represents the rank ordered count of the literature-based effect doses.



Figure 3b. Daily doses of dioxins/furans as TEQs in river otter and harbor seal. The symbols represent literature-based, lowest daily doses of mercury associated with effects or highest daily doses associated with no effects. The horizontal lines represent the estimated dose based on the expected exposure (via fish, sediment and water ingestion) calculated from available environmental data. Daily doses were calculated with two different sediment ingestion rates to examine sensitivity of this uncertain parameter. The X-axis represents the rank ordered count of the literature-based effect doses.



Figure 4a. Daily doses of DDT and metabolites in great blue heron and osprey. The symbols represent literature-based, lowest daily doses of mercury associated with effects or highest daily doses associated with no effects. The horizontal lines represent the estimated dose based on the expected exposure (via fish, sediment and water ingestion) calculated from available environmental data. Daily doses were calculated with two different sediment ingestion rates to examine sensitivity of this uncertain parameter. The X-axis represents the rank ordered count of the literature-based effect doses.



Figure 4b. Daily doses of DDT and metabolites in river otter and harbor seal. The symbols represent literature-based, lowest daily doses of mercury associated with effects or highest daily doses associated with no effects. The horizontal lines represent the estimated dose based on the expected exposure (via fish, sediment and water ingestion) calculated from available environmental data. Daily doses were calculated with two different sediment ingestion rates to examine sensitivity of this uncertain parameter. The X-axis represents the rank ordered count of the literature-based effect doses.



Figure 1a. Arsenic in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 1b. Arsenic in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 2a. Mercury in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 2b. Mercury in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 2c. Mercury in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 3a. PCB, Sum Aroclors and Congeners in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 3b. PCB, Sum Aroclors and Congeners in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 3c. PCB, Sum Aroclors and Congeners in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 4a. TCDD in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 4b. TCDD in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 4c. TCDD in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 5a. 4,4' DDD in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 5b. 4,4' DDD in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 5c. 4,4' DDD in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 6a. 4,4' DDE in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 6b. 4,4' DDE in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 6c. 4,4' DDE in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 7a. 4,4' DDT in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 7b. 4,4' DDT in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



4,4' DDT in Offshore Tissues, human health

Figure 7c. 4,4' DDT in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 8a. Anthracene in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 8b. Anthracene in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 8c. Anthracene in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 9a. Fluorene in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 9b. Fluorene in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 9c. Fluorene in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 10a. Benzo(a)pyrene in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Benzo(a)pyrene in Nearshore Tissues, human health





Figure 10c. Benzo(a)pyrene in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 11a. Benzo(b)fluoranthene in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 11b. Benzo(b)fluoranthene in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 11c. Benzo(b)fluoranthene in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 12a. Benzo(k)fluoranthene in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 12b. Benzo(k)fluoranthene in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 12c. Benzo(k)fluoranthene in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 13a. Dibenzo(a,h)anthracene in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 13b. Dibenzo(a,h)anthracene in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 13c. Dibenzo(a,h)anthracene in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 14a. Fluoranthene in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 14b. Fluoranthene in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 14c. Fluoranthene in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 15a. Indeno(1,2,3-cd)pyrene in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 15b. Indeno(1,2,3-cd)pyrene in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 15c. Indeno(1,2,3-cd)pyrene in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 16a. Pyrene in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 16b. Pyrene in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 16c. Pyrene in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 17a. Bis(2-ethylhexyl)phthalate in freshwater bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 17b. Bis(2-ethylhexyl)phthalate in nearshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.



Figure 17c. Bis(2-ethylhexyl)phthalate in offshore bivalve, fish and other invertebrate tissues compared to 5 different human consumption scenarios derived from the National Toxics Rule.