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**Kingston Ash Recovery Project
Non-Time-Critical Removal Action**

**River System Sampling and Analysis Plan
Task Completion Technical Memorandum
Amphibian Sampling**

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for the Tennessee Valley Authority

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Appendix A: Summary of Amphibian Collections

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List of Acronyms

COC	chain-of-custody
DQO	data quality objective
EDD	electronic data deliverable
EE/CA	Engineering Evaluation/Cost Estimate
KIF	Kingston Fossil Plant
MDL	method detection limit
mg/kg	milligram per kilogram
ND	not detected
QAPP	Quality Assurance Project Plan
QC	quality control
SAP	Sampling and Analysis Plan
SOP	Standard Operating Procedure
TM	Technical Memorandum
TVA	Tennessee Valley Authority

1. PURPOSE

The purpose of this Technical Memorandum (TM) is to summarize the completion of the 2009 and 2010 amphibian sampling. The collection of these samples is not described in the approved *Kingston Ash Recovery Project Non-Time-Critical Removal Action for the River System Sampling and Analysis Plan* (SAP), Rev. 3, May 24, 2010, Document No. EPA-AO-021; however, the use of these data is described below. This memorandum is one of a series being prepared to summarize the field work and data collection activities as SAP tasks are completed. The TM series is intended to provide interim presentations of data that will become the basis for the nature and extent of contamination section of the River System Engineering Evaluation/Cost Estimate (EE/CA) Report. No data evaluation or conclusions are presented. Those on the distribution list for these memoranda are anticipated to be principal reviewers of the EE/CA Report, so this provides the opportunity to review data summaries in advance of the complete report.

2. BACKGROUND

While amphibian biosurveys are not required in the Baseline Ecological Risk Assessment, Section 2.2.9 of the SAP discusses how these data will be used to support the overall evaluation of ecological risk within the river system. Concentrations of ash-related constituents may bioaccumulate in wildlife over time and adversely affect wildlife populations. In addition, some wildlife are a food source for higher-level predators. To estimate the potential ingestion of ash-related constituents in wildlife by ecological receptors, the concentrations of those constituents in wildlife tissues need to be determined.

When possible, risks to amphibians will be assessed primarily through comparisons of measured concentrations in whole body specimens with effects values from scientific literature in order to assess potential impacts of ash related constituents on these species. Literature values may be of limited availability for most constituents and species; therefore, body burden concentrations may be only supplemental evidence of exposure. Metal concentrations in amphibians will be compared between impacted and unimpacted sites as well as between years. Significantly elevated concentrations at impacted sites and changes in concentrations over time may indicate environmental stress and potential risk to amphibians. Concentrations in whole-body amphibians may also be used to estimate dietary exposure to predators, which can provide secondary evidence of wildlife exposure.

Amphibian sampling efforts began in 2009, approximately three months after the spill, in order to provide baseline concentrations for future site comparisons. These sampling efforts were continued in 2010. During both years of study, three species of amphibians were collected for whole body analysis of metals. Target species included: spring peepers (*Pseudacris crucifer*), upland chorus frogs (*P. feriarum*), and American toads (*Bufo americanus*). Five locations were selected to provide representative measurement of amphibians found in sites impacted by ash (West Embayment and North Embayment), sites near the Kingston Fossil Plant (KIF) not impacted by ash (Dawson's Farm and Rocky Top Farm), and a reference site at Timberlake Pond in Knox County, TN (Figure 1). The target number of samples was ten individuals of each species at each of the five locations.

3. SAMPLING AND ANALYSIS ACTIVITIES

Field activities occurred in the spring of 2009 and 2010 in accordance with Standard Operating Procedure (SOP) *Amphibian Sampling, TVA-KIF-SOP-16* (originally issued November 2009; Revision 1 issued April 2010; Revision 2 issued January 2011). Amphibian sampling was conducted from March 20 through April 9, 2009 and from March 22 through April 6, 2010. Field crews sampled three to five nights a week for three to four hours, beginning at sunset and/or at the onset of an audible chorus. Captured amphibians were held live for four to seven days in glass or plastic holding tanks in order to void

gastrointestinal contents (Figures 2a and 2b). Afterwards, specimens were placed in labeled, individual plastic sample bags, custody sealed, frozen whole, and shipped to the lab on dry ice for chemical analysis (Figure 2c). In addition to these field samples, crews collected quality control (QC) samples. Field collection activities for 2009 and 2010 are summarized in Table 1.

Table 1. Summary of Amphibian Field Activities

Summary	2009	2010
Field collection period	March 20-April 9	March 22-April 6
Number whole body samples collected ¹	76	121
Number QC samples collected	3	21
Frequency of QC sampling	Once per season ²	Once per 20 field samples
Rinsate blank materials at each equipment rinsate blank sampling event	<ul style="list-style-type: none"> – Decontaminated HDPE holding tank – Decontaminated HDPE field collection jar – Decontaminated glass holding tank 	<ul style="list-style-type: none"> – Clean plastic sample bag – Decontaminated HDPE field collection jar – Decontaminated glass holding tank

Notes:

¹See Appendix A for collection details.

²Frequency of QC sampling was not yet established for amphibian collections; therefore, only one sample was taken.

Sampling and analysis were performed in accordance with the *Quality Assurance Project Plan For The Tennessee Valley Authority Kingston Ash Recovery Project* (QAPP), except as noted in Table 1, the listed SOPs, field guides, and work package WP-1066. Table 2 identifies the applicable TVA documents and SSOPs associated with this amphibian sampling. In other cases, the target number of each species could not be obtained from each sampling location. Also, a small percentage of specimens died during the four to seven day holding period from unknown causes and were therefore frozen post mortem and sent to the lab for analysis. Additional samples were collected to replace specimens that died during holding period. Equipment rinsate blanks were collected during both years of study.

All field and QC samples were shipped to Pace Analytical Services, Inc., Green Bay, WI for analysis (see Appendix B for shipping details). Whole body field samples were analyzed for a suite of 26 metals and percent moisture. QC rinsate blanks were analyzed for the same 26 metals.

Table 2. Applicable TVA Documents and Standard Operating Procedures

Document	Document Number
TVA KIF Ash Recovery Project Quality Assurance Project Plan (QAPP)	TVA-KIF-QAPP
TVA-KIF Work Package WP-1066	WP-1066
STANDARD OPERATION PROCEDURES	
Amphibian Sampling	TVA-KIF-SOP-16
Field Documentation	TVA-KIF-SOP-06
Sample Labeling, Packing, And Shipping	TVA-KIF-SOP-07
Decontamination of Equipment	TVA-KIF-SOP-08
Field Quality Control Sampling	TVA-KIF-SOP-11
Management and Implementation of EQuIS™-Based Chain of Custody	TVA-KIF-SOP-18

4. ANALYTICAL DATA REVIEW

TVA's contracted laboratories were required to submit three types of deliverables: a limited (Level 1) data package containing sample results and batch QC sample results; a fully documented (Level 4) data package including raw data for all analyses; and electronic data deliverables (EDDs) for storage in TVA's EarthSoft EQuIS® database.

EDDs were subjected to completeness and correctness testing during loading to TVA's EQuIS database; once loaded to the EQuIS database, the data were subjected to verification. As defined in the QAPP, data verification involved comparison of the data loaded in the EQuIS database to the results reported in the Level 1 data package. In addition, data verification included review of the batch QC summary forms for compliance with the applicable methods and for data usability with respect to the project Data Quality Objectives (DQOs) and the QAPP.

Following receipt of the Level 4 data package, data were subjected to validation. As defined in the QAPP, data validation included review of raw data and associated QC summary forms for compliance with the applicable methods and for data usability with respect to the appropriate guidance documents. As stated in the QAPP: "Initially, 100% of the chemical analysis data will be reported in full documentation data packages for independent data validation. Depending on the nature and frequency of issues identified during data validation, the percentage of data undergoing full data validation may be reduced to a lesser percentage (such as 20%) or data verification may be substituted. The reduction in full data validation may be matrix specific, laboratory specific, or analyte specific. If after the percentage of full data validation has decreased, a trend in frequency of reporting issues, method non-compliances, or data usability issues is identified, data validation will be conducted for specific data points or the percentage of full data validation percentage may be increased until the issues have been minimized to their initial frequency." Data validation expands upon the completeness, correctness, and usability assessment performed during verification to include evaluation of instrumental QC analyses, review of sample preparation information, and recalculation of reported results from raw data. A summary of the data review effort is presented below in Table 3.

Table 3. Data Review Summary

# Chains of Custody	# Samples	# Equipment Blank Samples	# Analytical Results	Percentage Validated
26	197	24	5,940	100%

5. DATA QUALITY SUMMARY

Data validation was performed based on the sample results, summary QC data, and raw data provided by the laboratory. Data validation includes a review of the following QC measures (where applicable):

- Sample condition upon laboratory receipt;
- Initial calibration linearity;
- Blank analysis results greater than the method detection limit (MDL);
- Sample preparation and holding times;
- Initial calibration verification/continuing calibration verification standard recoveries;
- Inductively coupled plasma interference check standard results;
- MDLs and linear ranges;

- Internal standard recoveries;
- Percent moisture;
- Matrix spike/matrix spike duplicate ;
- Laboratory and field duplicate precision;
- Quantitation of positive results;
- Laboratory control sample/laboratory control sample duplicate recoveries and precision;
- Analytical sequence;
- Reporting limit standard recoveries;
- MDL verification standards; and
- Standard reference material recoveries.

The data met the DQOs defined for this task and are acceptable for use. Table 4 summarizes the data quality based on the review performed and as compared to the data quality measures identified in the QAPP. The text of the data validation reports for the samples included in this TM will be included in the EE/CA Report.

Table 4. Summary of Amphibian Data Quality

Analytical Results (Total Count)	Acceptable (No Qualification) ^a	Acceptable (Estimated) ^b	Blank Qualified ^c		Rejected ^d	
5,940	4,221	71%	1,273	22%	301	5%
					145 ^e	2%

Notes:

^aAcceptable, No Qualification – Qualification of data was not warranted based on a review of the applicable QC measures.

^bAcceptable, Estimated – Quantitation or detection limit is approximate due to limitations or bias identified during a review of the applicable QC measures.

^cBlank Qualified – Result is considered “not-detected” because the target analyte was detected in an associated blank at a similar level.

^dRejected – Unreliable result or detection limit; analyte may or may not be present in sample.

^eRejected results are percent moisture results qualified as unusable due to limited sample mass and/or extended frozen storage prior to moisture determination.

6. DATA SUMMARY

Summary statistics for each amphibian species are provided in Tables 5 through 28 for each location collected in 2009 and 2010. Rejected percent moisture results were due to small sample sizes and uncertainty in holding times; as a result, the data for each species are presented in wet weight until the percent moisture issues have been clarified.

Table 5. 2009 Spring Peeper Samples Collected at the West Embayment Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	24.74 / 25.15	ND	ND	ND		0 / 11	0
Antimony	mg/kg	0.09796 / 0.101	ND	ND	ND		0 / 11	0
Arsenic	mg/kg	0.09796 / 0.101	ND	ND	ND		0 / 11	0
Barium	mg/kg		10.66	10.66	28.29	03/26/2009	11 / 11	17.56
Beryllium	mg/kg	0.09796 / 0.101	ND	ND	ND		0 / 11	0
Boron	mg/kg	1.97 / 2.022	ND	ND	ND		0 / 11	0
Cadmium	mg/kg	0.09796 / 0.101	ND	ND	ND		0 / 11	0
Calcium	mg/kg		8032	8032	17430	03/26/2009	11 / 11	12520
Chromium	mg/kg	0.09936 / 2.503	ND	0.5232	0.5232	03/26/2009	1 / 11	0.5232
Cobalt	mg/kg	0.09796 / 0.101	ND	0.1296	0.138	03/26/2009	2 / 11	0.1338
Copper	mg/kg		1.952	1.952	10.73	03/26/2009	11 / 11	6.852
Iron	mg/kg		39.95	39.95	82.28	03/26/2009	11 / 11	60.25
Lead	mg/kg	0.09936 / 2.503	ND	0.1308	0.2169	03/26/2009	4 / 11	0.168
Magnesium	mg/kg		341.5	341.5	584.2	03/26/2009	11 / 11	452.2
Manganese	mg/kg		7.121	7.121	28.15	03/26/2009	11 / 11	15.55
Mercury	mg/kg	0.0197 / 0.02022	ND	0.02066	0.04108	03/26/2009	5 / 11	0.02809
Molybdenum	mg/kg	0.9796 / 1.01	ND	ND	ND		0 / 11	0
Nickel	mg/kg	0.09796 / 0.101	ND	ND	ND		0 / 11	0
Potassium	mg/kg		2095	2095	2892	03/26/2009	11 / 11	2535
Selenium	mg/kg		0.3405	0.3405	0.6624	03/26/2009	11 / 11	0.5329
Silver	mg/kg	0.04862 / 0.05136	ND	0.06867	0.1978	03/26/2009	9 / 11	0.111
Sodium	mg/kg	99.13 / 970.2	ND	1133	1717	03/26/2009	10 / 11	1354
Strontium	mg/kg		10.03	10.03	28.6	03/20/2009	11 / 11	17.22
Thallium	mg/kg	0.09796 / 0.101	ND	ND	ND		0 / 11	0
Vanadium	mg/kg	0.197 / 0.2022	ND	ND	ND		0 / 11	0
Zinc	mg/kg		26.45	26.45	38.64	03/26/2009	11 / 11	32.08

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 6. 2010 Spring Peeper Samples Collected at the West Embayment Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	7.563 / 8.306	ND	ND	ND		0 / 11	0
Antimony	mg/kg	0.02673 / 0.03124	ND	ND	ND		0 / 11	0
Arsenic	mg/kg	0.0518 / 0.05928	ND	ND	ND		0 / 11	0
Barium	mg/kg		9.79	9.79	28.02	03/22/2010	11 / 11	19.42
Beryllium	mg/kg	0.05589 / 0.125	ND	ND	ND		0 / 11	0
Boron	mg/kg	0.777 / 0.8736	ND	ND	ND		0 / 11	0
Cadmium	mg/kg	0.01434 / 0.03276	ND	0.0411	0.078	03/22/2010	3 / 11	0.0606
Calcium	mg/kg		9227	9227	15288	03/22/2010	11 / 11	12336
Chromium	mg/kg	0.2406 / 0.2739	ND	ND	ND		0 / 11	0
Cobalt	mg/kg		0.0284	0.0284	0.1397	03/22/2010	11 / 11	0.05283
Copper	mg/kg		1.632	1.632	9.918	03/22/2010	11 / 11	3.792
Iron	mg/kg	24.87 / 61.38	ND	29.76	122	03/22/2010	8 / 11	61.24
Lead	mg/kg	0.0518 / 0.09408	ND	0.1288	0.1716	03/22/2010	2 / 11	0.1502
Magnesium	mg/kg		403.3	403.3	567.2	03/22/2010	11 / 11	476.8
Manganese	mg/kg		8.272	8.272	36.5	03/22/2010	11 / 11	17.01
Mercury	mg/kg	0.02176 / 0.02411	ND	0.02848	0.0456	03/22/2010	4 / 11	0.03679
Molybdenum	mg/kg	0.06561 / 0.07458	ND	0.08736	0.1026	03/22/2010	2 / 11	0.09498
Nickel	mg/kg	0.1839 / 0.2034	ND	ND	ND		0 / 11	0
Potassium	mg/kg		1897	1897	3014	03/22/2010	11 / 11	2293
Selenium	mg/kg		0.243	0.243	0.8835	03/22/2010	11 / 11	0.4852
Silver	mg/kg	0.00544 / 0.0061	ND	0.00822	0.02122	03/22/2010	4 / 11	0.01583
Sodium	mg/kg		900.3	900.3	1542	03/22/2010	11 / 11	1143
Strontium	mg/kg		10.26	10.26	30.28	03/22/2010	11 / 11	18.85
Thallium	mg/kg	0.0259 / 0.0287	ND	ND	ND		0 / 11	0
Vanadium	mg/kg	0.08547 / 0.0959	ND	ND	ND		0 / 11	0
Zinc	mg/kg		22.26	22.26	41.18	03/22/2010	11 / 11	28.16

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 7. 2010 Spring Peeper Samples Collected at the North Embayment

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	7.341 / 8.225	ND	26.78	42.84	04/05/2010	2 / 7	34.81
Antimony	mg/kg	0.02728 / 0.03036	ND	ND	ND		0 / 7	0
Arsenic	mg/kg	0.05208 / 0.05796	ND	0.1681	0.1796	04/05/2010	2 / 7	0.1739
Barium	mg/kg		8.962	8.962	27.05	04/05/2010	7 / 7	15.71
Beryllium	mg/kg	0.05456 / 0.1229	ND	ND	ND		0 / 7	0
Boron	mg/kg	0.7688 / 0.8556	ND	ND	ND		0 / 7	0
Cadmium	mg/kg	0.0149 / 0.03312	ND	0.02827	0.02827	04/05/2010	1 / 7	0.02827
Calcium	mg/kg		8854	8854	14689	04/05/2010	7 / 7	11708
Chromium	mg/kg	0.2331 / 0.2622	ND	ND	ND		0 / 7	0
Cobalt	mg/kg	0.0248 / 0.0283	ND	0.02574	0.08022	04/05/2010	6 / 7	0.04578
Copper	mg/kg	0.2728 / 0.9272	ND	1.802	3.018	04/05/2010	6 / 7	2.643
Iron	mg/kg	22.1 / 23.03	ND	27.57	76.78	04/05/2010	6 / 7	48.75
Lead	mg/kg	0.05208 / 0.09765	ND	ND	ND		0 / 7	0
Magnesium	mg/kg		369.8	369.8	569.2	04/05/2010	7 / 7	452.2
Manganese	mg/kg		11.51	11.51	50.04	04/05/2010	7 / 7	23.01
Mercury	mg/kg	0.02133 / 0.02374	ND	ND	ND		0 / 7	0
Molybdenum	mg/kg	0.06448 / 0.07176	ND	0.09168	0.1103	04/05/2010	2 / 7	0.101
Nickel	mg/kg	0.1786 / 0.2016	ND	ND	ND		0 / 7	0
Potassium	mg/kg		1910	1910	3514	04/05/2010	7 / 7	2439
Selenium	mg/kg		0.2282	0.2282	0.4692	03/29/2010	7 / 7	0.3762
Silver	mg/kg	0.00521 / 0.00607	ND	ND	ND		0 / 7	0
Sodium	mg/kg		929.6	929.6	1604	04/05/2010	7 / 7	1120
Strontium	mg/kg		11.23	11.23	19.79	04/05/2010	7 / 7	13.27
Thallium	mg/kg	0.0248 / 0.05355	ND	ND	ND		0 / 7	0
Vanadium	mg/kg	0.08786 / 0.1877	ND	ND	ND		0 / 7	0
Zinc	mg/kg		24.89	24.89	41.68	03/29/2010	7 / 7	31.54

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 8. 2009 Spring Peeper Samples Collected at the Rockytop Farm Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	24.87 / 27.03	ND	ND	ND		0 / 10	0
Antimony	mg/kg	0.09922 / 0.1081	ND	ND	ND		0 / 10	0
Arsenic	mg/kg	0.09922 / 0.1081	ND	ND	ND		0 / 10	0
Barium	mg/kg		2.561	2.561	27.33	03/26/2009	10 / 10	12.12
Beryllium	mg/kg	0.09922 / 0.1081	ND	ND	ND		0 / 10	0
Boron	mg/kg	1.977 / 2.162	ND	ND	ND		0 / 10	0
Cadmium	mg/kg	0.09922 / 0.1081	ND	ND	ND		0 / 10	0
Calcium	mg/kg		8413	8413	15893	03/26/2009	10 / 10	11128
Chromium	mg/kg	0.09922 / 0.1507	ND	0.6776	0.6776	03/26/2009	1 / 10	0.6776
Cobalt	mg/kg	0.09922 / 0.1081	ND	ND	ND		0 / 10	0
Copper	mg/kg	0.4902 / 1.366	ND	1.677	4.066	03/26/2009	9 / 10	2.403
Iron	mg/kg		25.62	25.62	44.6	03/26/2009	10 / 10	34.81
Lead	mg/kg	0.09922 / 0.1081	ND	0.1098	0.1651	03/26/2009	2 / 10	0.1375
Magnesium	mg/kg		317.3	317.3	470.9	03/26/2009	10 / 10	384.8
Manganese	mg/kg		3.617	3.617	22.62	03/26/2009	10 / 10	8.951
Mercury	mg/kg	0.01977 / 0.02162	ND	0.02045	0.02045	03/26/2009	1 / 10	0.02045
Molybdenum	mg/kg	0.9922 / 1.081	ND	ND	ND		0 / 10	0
Nickel	mg/kg	0.09972 / 0.126	ND	ND	ND		0 / 10	0
Potassium	mg/kg		1992	1992	2321	03/26/2009	10 / 10	2142
Selenium	mg/kg		0.2451	0.2451	0.4155	03/26/2009	10 / 10	0.3234
Silver	mg/kg	0.0488 / 0.05405	ND	ND	ND		0 / 10	0
Sodium	mg/kg	99.33 / 1011	ND	1013	1123	03/26/2009	7 / 10	1082
Strontium	mg/kg		5.34	5.34	27.82	03/26/2009	10 / 10	10.99
Thallium	mg/kg	0.09922 / 0.1081	ND	ND	ND		0 / 10	0
Vanadium	mg/kg	0.1977 / 0.2162	ND	ND	ND		0 / 10	0
Zinc	mg/kg		18.17	18.17	33.15	03/26/2009	10 / 10	24.47

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 9. 2010 Spring Peeper Samples Collected at the Rockytop Farm Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	7.256 / 8.263	ND	8.722	15.98	03/26/2010	5 / 10	13.15
Antimony	mg/kg	0.0261 / 0.03036	ND	ND	ND		0 / 10	0
Arsenic	mg/kg	0.04959 / 0.05808	ND	0.05936	0.05936	03/26/2010	1 / 10	0.05936
Barium	mg/kg		8.286	8.286	30.32	03/26/2010	10 / 10	16.04
Beryllium	mg/kg	0.0522 / 0.06187	ND	ND	ND		0 / 10	0
Boron	mg/kg	0.7569 / 0.8626	ND	ND	ND		0 / 10	0
Cadmium	mg/kg	0.01383 / 0.02497	ND	0.04176	0.04176	03/26/2010	1 / 10	0.04176
Calcium	mg/kg		8822	8822	13504	03/26/2010	10 / 10	11157
Chromium	mg/kg	0.2297 / 0.2724	ND	ND	ND		0 / 10	0
Cobalt	mg/kg	0.02558 / 0.0286	ND	0.02951	0.1187	03/26/2010	9 / 10	0.05415
Copper	mg/kg		1.187	1.187	2.975	03/26/2010	10 / 10	1.852
Iron	mg/kg	21.82 / 24.87	ND	26.07	57.68	03/26/2010	8 / 10	37.39
Lead	mg/kg	0.04959 / 0.1021	ND	0.1484	0.7275	03/26/2010	3 / 10	0.3433
Magnesium	mg/kg		365.4	365.4	449.4	03/26/2010	10 / 10	407.8
Manganese	mg/kg		9.92	9.92	30.28	03/26/2010	10 / 10	18.74
Mercury	mg/kg	0.02088 / 0.02497	ND	ND	ND		0 / 10	0
Molybdenum	mg/kg	0.06264 / 0.07392	ND	ND	ND		0 / 10	0
Nickel	mg/kg	0.1775 / 0.202	ND	ND	ND		0 / 10	0
Potassium	mg/kg		1651	1651	2066	03/26/2010	10 / 10	1930
Selenium	mg/kg		0.2468	0.2468	0.3312	03/26/2010	10 / 10	0.2948
Silver	mg/kg	0.00522 / 0.00607	ND	0.00679	0.00679	03/26/2010	1 / 10	0.006786
Sodium	mg/kg		836.3	836.3	1068	03/26/2010	10 / 10	946.7
Strontium	mg/kg		9.55	9.55	21.54	03/26/2010	10 / 10	13.8
Thallium	mg/kg	0.02506 / 0.02959	ND	ND	ND		0 / 10	0
Vanadium	mg/kg	0.08352 / 0.09504	ND	ND	ND		0 / 10	0
Zinc	mg/kg		20.34	20.34	33.29	03/26/2010	10 / 10	27.68

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 10. 2009 Spring Peeper samples Collected at the Dawson's Farm Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	24.95 / 24.96	ND	ND	ND		0 / 3	0
Antimony	mg/kg	0.0988 / 0.1008	ND	ND	ND		0 / 3	0
Arsenic	mg/kg	0.0988 / 0.1008	ND	ND	ND		0 / 3	0
Barium	mg/kg		5.304	5.304	6.011	04/08/2009	3 / 3	5.698
Beryllium	mg/kg	0.0988 / 0.1008	ND	ND	ND		0 / 3	0
Boron	mg/kg	1.992 / 2.001	ND	ND	ND		0 / 3	0
Cadmium	mg/kg	0.0988 / 0.1008	ND	ND	ND		0 / 3	0
Calcium	mg/kg		7322	7322	9504	04/08/2009	3 / 3	8293
Chromium	mg/kg	0.0988 / 0.1008	ND	ND	ND		0 / 3	0
Cobalt	mg/kg	0.0988 / 0.1008	ND	ND	ND		0 / 3	0
Copper	mg/kg	0.494 / 1.435	ND	2.198	2.472	04/08/2009	2 / 3	2.335
Iron	mg/kg		27.46	27.46	41	04/08/2009	3 / 3	35.78
Lead	mg/kg	0.0988 / 0.1008	ND	ND	ND		0 / 3	0
Magnesium	mg/kg		316.2	316.2	388.8	04/08/2009	3 / 3	347.8
Manganese	mg/kg		6.6	6.6	12.79	04/08/2009	3 / 3	10.09
Mercury	mg/kg	0.01992 / 0.02001	ND	ND	ND		0 / 3	0
Molybdenum	mg/kg	0.988 / 1.008	ND	ND	ND		0 / 3	0
Nickel	mg/kg	0.0988 / 0.1008	ND	ND	ND		0 / 3	0
Potassium	mg/kg		1982	1982	2137	04/08/2009	3 / 3	2069
Selenium	mg/kg		0.336	0.336	0.494	04/08/2009	3 / 3	0.4153
Silver	mg/kg	0.0494 / 0.0504	ND	ND	ND		0 / 3	0
Sodium	mg/kg	99.79 / 965.1	ND	1097	1097	04/08/2009	1 / 3	1097
Strontium	mg/kg		4.93	4.93	7.032	04/08/2009	3 / 3	5.642
Thallium	mg/kg	0.0988 / 0.1008	ND	ND	ND		0 / 3	0
Vanadium	mg/kg	0.1992 / 0.2001	ND	ND	ND		0 / 3	0
Zinc	mg/kg		17.37	17.37	22.15	04/08/2009	3 / 3	19.18

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 11. 2010 Spring Peeper Samples Collected at the Dawson's Farm Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	7.041 / 8.225	ND	8.924	18.2	04/01/2010	3 / 15	12.45
Antimony	mg/kg	0.02519 / 0.02992	ND	ND	ND		0 / 15	0
Arsenic	mg/kg	0.0491 / 0.05808	ND	0.08554	0.08554	03/26/2010	1 / 15	0.08554
Barium	mg/kg		5.808	5.808	21.17	03/30/2010	15 / 15	9.926
Beryllium	mg/kg	0.05168 / 0.1221	ND	ND	ND		0 / 15	0
Boron	mg/kg	0.7106 / 0.8554	ND	ND	ND		0 / 15	0
Cadmium	mg/kg	0.01496 / 0.03165	ND	0.01806	0.04935	03/26/2010	3 / 15	0.03856
Calcium	mg/kg		10597	10597	20414	03/26/2010	15 / 15	13052
Chromium	mg/kg	0.2261 / 0.2684	ND	ND	ND		0 / 15	0
Cobalt	mg/kg	0.02455 / 0.02904	ND	0.02992	0.08544	03/26/2010	11 / 15	0.051
Copper	mg/kg		1.062	1.062	8.918	04/01/2010	15 / 15	2.861
Iron	mg/kg		28.82	28.82	96.12	03/26/2010	15 / 15	48.58
Lead	mg/kg	0.05328 / 0.1088	ND	0.1326	0.1326	03/26/2010	1 / 15	0.1326
Magnesium	mg/kg		349.3	349.3	814	03/26/2010	15 / 15	479.9
Manganese	mg/kg		8.507	8.507	43.43	03/26/2010	15 / 15	22.45
Mercury	mg/kg	0.02003 / 0.02372	ND	0.02132	0.02132	03/26/2010	1 / 15	0.02132
Molybdenum	mg/kg	0.06202 / 0.0726	ND	0.06395	0.1193	04/01/2010	3 / 15	0.09327
Nickel	mg/kg	0.1744 / 0.2009	ND	ND	ND		0 / 15	0
Potassium	mg/kg		1761	1761	4535	03/26/2010	15 / 15	2459
Selenium	mg/kg		0.198	0.198	0.7106	03/26/2010	15 / 15	0.4023
Silver	mg/kg	0.0051 / 0.00593	ND	0.00562	0.01647	04/01/2010	5 / 15	0.009926
Sodium	mg/kg		712.8	712.8	2164	03/26/2010	15 / 15	1082
Strontium	mg/kg		5.112	5.112	18.17	03/26/2010	15 / 15	9.719
Thallium	mg/kg	0.02455 / 0.02904	ND	ND	ND		0 / 15	0
Vanadium	mg/kg	0.07752 / 0.09438	ND	ND	ND		0 / 15	0
Zinc	mg/kg		21.2	21.2	46.93	03/30/2010	15 / 15	29.66

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 12. 2009 Spring Peeper Samples Collected at the Timberlake Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	24.75 / 28.22	ND	ND	ND		0 / 10	0
Antimony	mg/kg	0.09855 / 0.1123	ND	ND	ND		0 / 10	0
Arsenic	mg/kg	0.09855 / 0.1123	ND	0.1518	0.1518	04/09/2009	1 / 10	0.1518
Barium	mg/kg		6.601	6.601	23.59	04/09/2009	10 / 10	13.33
Beryllium	mg/kg	0.09855 / 0.1123	ND	ND	ND		0 / 10	0
Boron	mg/kg	1.982 / 2.274	ND	ND	ND		0 / 10	0
Cadmium	mg/kg	0.09855 / 0.1123	ND	ND	ND		0 / 10	0
Calcium	mg/kg		8694	8694	14125	04/09/2009	10 / 10	11103
Chromium	mg/kg	0.09855 / 0.1161	ND	ND	ND		0 / 10	0
Cobalt	mg/kg	0.09855 / 0.1123	ND	ND	ND		0 / 10	0
Copper	mg/kg		1.672	1.672	7.122	04/09/2009	10 / 10	3.578
Iron	mg/kg		28.16	28.16	97.1	04/09/2009	10 / 10	50.4
Lead	mg/kg	0.09855 / 0.1123	ND	0.117	0.1251	04/09/2009	2 / 10	0.1211
Magnesium	mg/kg		356.2	356.2	459.8	04/09/2009	10 / 10	407.2
Manganese	mg/kg		6.023	6.023	22.08	04/09/2009	10 / 10	13.31
Mercury	mg/kg	0.01982 / 0.02002	ND	0.021	0.02748	04/09/2009	4 / 10	0.02417
Molybdenum	mg/kg	0.9855 / 1.123	ND	ND	ND		0 / 10	0
Nickel	mg/kg	0.09855 / 0.1123	ND	ND	ND		0 / 10	0
Potassium	mg/kg		1779	1779	2282	04/09/2009	10 / 10	2066
Selenium	mg/kg		0.22	0.22	0.5038	04/09/2009	10 / 10	0.361
Silver	mg/kg	0.04906 / 0.05754	ND	ND	ND		0 / 10	0
Sodium	mg/kg	99.54 / 1102	ND	1082	1177	04/09/2009	6 / 10	1137
Strontium	mg/kg		7.508	7.508	12.48	04/09/2009	10 / 10	9.77
Thallium	mg/kg	0.09855 / 0.1123	ND	ND	ND		0 / 10	0
Vanadium	mg/kg	0.1982 / 0.2274	ND	ND	ND		0 / 10	0
Zinc	mg/kg		18.42	18.42	35.89	04/09/2009	10 / 10	24.69

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 13. 2010 Spring Peeper Samples Collected at the Timberlake Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	7.618 / 8.294	ND	ND	ND		0 / 10	0
Antimony	mg/kg	0.02742 / 0.03072	ND	ND	ND		0 / 10	0
Arsenic	mg/kg	0.05263 / 0.05888	ND	0.0894	0.0894	03/28/2010	1 / 10	0.0894
Barium	mg/kg		5.872	5.872	26.91	03/28/2010	10 / 10	15.95
Beryllium	mg/kg	0.1136 / 0.1239	ND	ND	ND		0 / 10	0
Boron	mg/kg	0.7756 / 0.8704	ND	ND	ND		0 / 10	0
Cadmium	mg/kg	0.0144 / 0.0267	ND	0.0277	0.0292	03/28/2010	2 / 10	0.02845
Calcium	mg/kg		8046	8046	14542	03/28/2010	10 / 10	11113
Chromium	mg/kg	0.241 / 0.2622	ND	6.81	6.81	03/28/2010	1 / 10	6.81
Cobalt	mg/kg		0.03601	0.03601	0.1431	03/28/2010	10 / 10	0.07731
Copper	mg/kg		1.333	1.333	7.504	03/28/2010	10 / 10	2.617
Iron	mg/kg		28.29	28.29	95.48	03/28/2010	10 / 10	42.45
Lead	mg/kg	0.05263 / 0.1139	ND	ND	ND		0 / 10	0
Magnesium	mg/kg		345.7	345.7	450.6	03/28/2010	10 / 10	400.6
Manganese	mg/kg		6.705	6.705	27.14	03/28/2010	10 / 10	15.3
Mercury	mg/kg	0.02188 / 0.02406	ND	ND	ND		0 / 10	0
Molybdenum	mg/kg	0.06648 / 0.07168	ND	ND	ND		0 / 10	0
Nickel	mg/kg	0.1856 / 0.2022	ND	ND	ND		0 / 10	0
Potassium	mg/kg		2023	2023	2586	03/28/2010	10 / 10	2207
Selenium	mg/kg		0.2202	0.2202	0.3796	03/28/2010	10 / 10	0.3011
Silver	mg/kg	0.00554 / 0.00601	ND	0.00759	0.01956	03/28/2010	2 / 10	0.01357
Sodium	mg/kg		903	903	1091	03/28/2010	10 / 10	993.1
Strontium	mg/kg		6.288	6.288	16.31	03/28/2010	10 / 10	10.45
Thallium	mg/kg	0.02632 / 0.02831	ND	ND	ND		0 / 10	0
Vanadium	mg/kg	0.08587 / 0.09536	ND	0.384	0.384	03/28/2010	1 / 10	0.384
Zinc	mg/kg		23.23	23.23	32.12	03/28/2010	10 / 10	25.84

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 14. 2009 Upland Chorus Frog Samples Collected at the West Embayment Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	25.04 / 25.09	ND	ND	ND		0 / 2	0
Antimony	mg/kg	0.09936 / 0.0999	ND	ND	ND		0 / 2	0
Arsenic	mg/kg	0.09936 / 0.09936	ND	0.3996	0.3996	03/26/2009	1 / 2	0.3996
Barium	mg/kg		13.62	13.62	15.59	03/26/2009	2 / 2	14.61
Beryllium	mg/kg	0.09936 / 0.0999	ND	ND	ND		0 / 2	0
Boron	mg/kg	1.998 / 2.015	ND	ND	ND		0 / 2	0
Cadmium	mg/kg	0.09936 / 0.0999	ND	ND	ND		0 / 2	0
Calcium	mg/kg		12889	12889	15385	03/26/2009	2 / 2	14137
Chromium	mg/kg	0.0999 / 0.1187	ND	ND	ND		0 / 2	0
Cobalt	mg/kg	0.09936 / 0.0999	ND	ND	ND		0 / 2	0
Copper	mg/kg		7.06	7.06	7.756	03/26/2009	2 / 2	7.408
Iron	mg/kg		34.5	34.5	47.62	03/26/2009	2 / 2	41.06
Lead	mg/kg	0.0999 / 0.1187	ND	0.3164	0.3164	03/26/2009	1 / 2	0.3164
Magnesium	mg/kg		356	356	479.5	03/26/2009	2 / 2	417.8
Manganese	mg/kg		7.592	7.592	8.087	03/26/2009	2 / 2	7.84
Mercury	mg/kg	0.01998 / 0.02015	ND	ND	ND		0 / 2	0
Molybdenum	mg/kg	0.9936 / 0.999	ND	ND	ND		0 / 2	0
Nickel	mg/kg	0.09936 / 0.0999	ND	ND	ND		0 / 2	0
Potassium	mg/kg		2352	2352	2814	03/26/2009	2 / 2	2583
Selenium	mg/kg		0.414	0.414	0.4329	03/26/2009	2 / 2	0.4235
Silver	mg/kg	0.04968 / 0.04995	ND	0.09108	0.09108	03/26/2009	1 / 2	0.09108
Sodium	mg/kg		1303	1303	1422	03/26/2009	2 / 2	1363
Strontium	mg/kg		12.45	12.45	15.48	03/26/2009	2 / 2	13.97
Thallium	mg/kg	0.09936 / 0.0999	ND	ND	ND		0 / 2	0
Vanadium	mg/kg	0.1998 / 0.2015	ND	ND	ND		0 / 2	0
Zinc	mg/kg		33.12	33.12	50.28	03/26/2009	2 / 2	41.7

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 15. 2010 Upland Chorus Frog Samples Collected at the West Embayment Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	7.027 / 8.288	ND	ND	ND		0 / 11	0
Antimony	mg/kg	0.0247 / 0.03072	ND	ND	ND		0 / 11	0
Arsenic	mg/kg	0.04935 / 0.2075	ND	ND	ND		0 / 11	0
Barium	mg/kg		9.614	9.614	24.21	03/24/2010	11 / 11	16.77
Beryllium	mg/kg	0.1058 / 0.125	ND	ND	ND		0 / 11	0
Boron	mg/kg	0.7285 / 0.867	ND	ND	ND		0 / 11	0
Cadmium	mg/kg	0.01359 / 0.03211	ND	0.03211	0.04	03/24/2010	5 / 11	0.03548
Calcium	mg/kg		9078	9078	15249	03/24/2010	11 / 11	12070
Chromium	mg/kg	0.2233 / 0.2717	ND	ND	ND		0 / 11	0
Cobalt	mg/kg	0.0247 / 0.0278	ND	0.02937	0.0988	03/24/2010	10 / 11	0.05086
Copper	mg/kg		1.03	1.03	3.525	03/24/2010	11 / 11	2.306
Iron	mg/kg	21.15 / 24.57	ND	22.7	51.75	03/24/2010	10 / 11	30.85
Lead	mg/kg	0.0494 / 0.0987	ND	0.12	0.1394	03/24/2010	2 / 11	0.1297
Magnesium	mg/kg		362.1	362.1	522.6	03/24/2010	11 / 11	431.8
Manganese	mg/kg		11.61	11.61	37	03/24/2010	11 / 11	19.03
Mercury	mg/kg	0.02021 / 0.02397	ND	0.0275	0.035	03/24/2010	3 / 11	0.03071
Molybdenum	mg/kg	0.0611 / 0.07395	ND	ND	ND		0 / 11	0
Nickel	mg/kg	0.1716 / 0.2022	ND	ND	ND		0 / 11	0
Potassium	mg/kg		1742	1742	2268	03/24/2010	11 / 11	2011
Selenium	mg/kg		0.1989	0.1989	0.575	03/24/2010	11 / 11	0.4492
Silver	mg/kg	0.00517 / 0.0059	ND	0.0065	0.00975	03/24/2010	3 / 11	0.008381
Sodium	mg/kg		980.9	980.9	1368	03/24/2010	11 / 11	1126
Strontium	mg/kg		7.982	7.982	26.92	03/24/2010	11 / 11	17.72
Thallium	mg/kg	0.0235 / 0.02816	ND	ND	ND		0 / 11	0
Vanadium	mg/kg	0.0799 / 0.095	ND	ND	ND		0 / 11	0
Zinc	mg/kg		22.07	22.07	64.86	03/24/2010	11 / 11	31.06

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 16. 2009 Upland Chorus Frog Samples Collected at the North Embayment Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	24.79 / 25.05	ND	ND	ND		0 / 9	0
Antimony	mg/kg	0.0987 / 0.1008	ND	ND	ND		0 / 9	0
Arsenic	mg/kg	0.0987 / 0.1008	ND	0.1017	0.3765	03/26/2009	5 / 9	0.2184
Barium	mg/kg		5.422	5.422	19.27	03/26/2009	9 / 9	13.63
Beryllium	mg/kg	0.0987 / 0.1008	ND	ND	ND		0 / 9	0
Boron	mg/kg	1.984 / 2.016	ND	ND	ND		0 / 9	0
Cadmium	mg/kg	0.0987 / 0.1008	ND	ND	ND		0 / 9	0
Calcium	mg/kg		10140	10140	26040	03/26/2009	9 / 9	13667
Chromium	mg/kg	0.0987 / 0.1008	ND	ND	ND		0 / 9	0
Cobalt	mg/kg	0.0987 / 0.1008	ND	ND	ND		0 / 9	0
Copper	mg/kg		1.621	1.621	6.024	03/26/2009	9 / 9	3.635
Iron	mg/kg	24.79 / 24.97	ND	26.73	47.6	03/26/2009	7 / 9	33.53
Lead	mg/kg	0.0987 / 0.1007	ND	0.1116	0.1876	03/26/2009	2 / 9	0.1496
Magnesium	mg/kg		308.7	308.7	476.2	03/26/2009	9 / 9	381.9
Manganese	mg/kg		4.931	4.931	16.3	03/26/2009	9 / 9	10.09
Mercury	mg/kg	0.01984 / 0.02016	ND	ND	ND		0 / 9	0
Molybdenum	mg/kg	0.987 / 1.008	ND	ND	ND		0 / 9	0
Nickel	mg/kg	0.0987 / 0.1008	ND	0.1482	0.1482	03/26/2009	1 / 9	0.1482
Potassium	mg/kg		1570	1570	2224	03/26/2009	9 / 9	1907
Selenium	mg/kg		0.2847	0.2847	0.472	03/26/2009	9 / 9	0.3676
Silver	mg/kg	0.0486 / 0.0513	ND	ND	ND		0 / 9	0
Sodium	mg/kg	99.14 / 918.4	ND	1001	1289	03/26/2009	7 / 9	1119
Strontium	mg/kg		6.978	6.978	16.17	03/26/2009	9 / 9	11.86
Thallium	mg/kg	0.0987 / 0.1008	ND	ND	ND		0 / 9	0
Vanadium	mg/kg	0.1984 / 0.2016	ND	ND	ND		0 / 9	0
Zinc	mg/kg		26.61	26.61	62.44	03/26/2009	9 / 9	37.87

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 17. 2010 Upland Chorus Frog Samples Collected at the North Embayment Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	7.085 / 8.213	ND	9.862	12.98	03/29/2010	3 / 11	11.66
Antimony	mg/kg	0.0246 / 0.03036	ND	ND	ND		0 / 11	0
Arsenic	mg/kg	0.0492 / 0.134	ND	0.086	0.187	03/29/2010	2 / 11	0.1365
Barium	mg/kg		7.955	7.955	21.91	03/29/2010	11 / 11	14.16
Beryllium	mg/kg	0.03144 / 0.1226	ND	ND	ND		0 / 11	0
Boron	mg/kg	0.738 / 0.86	ND	ND	ND		0 / 11	0
Cadmium	mg/kg	0.01353 / 0.03144	ND	0.01914	0.05092	03/29/2010	8 / 11	0.03469
Calcium	mg/kg		8501	8501	16310	03/29/2010	11 / 11	11786
Chromium	mg/kg	0.2239 / 0.26	ND	ND	ND		0 / 11	0
Cobalt	mg/kg	0.0246 / 0.02926	ND	0.03144	0.05712	03/29/2010	7 / 11	0.0411
Copper	mg/kg		2.336	2.336	5.794	03/29/2010	11 / 11	3.353
Iron	mg/kg	21.35 / 21.35	ND	27.72	38.35	03/29/2010	10 / 11	31.99
Lead	mg/kg	0.0528 / 0.0938	ND	ND	ND		0 / 11	0
Magnesium	mg/kg		343.2	343.2	553.5	03/29/2010	11 / 11	409.3
Manganese	mg/kg		10.17	10.17	25.37	03/24/2010	11 / 11	14.44
Mercury	mg/kg	0.02042 / 0.02385	ND	ND	ND		0 / 11	0
Molybdenum	mg/kg	0.0615 / 0.07236	ND	0.06642	0.086	03/24/2010	3 / 11	0.07563
Nickel	mg/kg	0.1722 / 0.201	ND	ND	ND		0 / 11	0
Potassium	mg/kg		1759	1759	2393	03/29/2010	11 / 11	2222
Selenium	mg/kg		0.2519	0.2519	0.6204	03/29/2010	11 / 11	0.3928
Silver	mg/kg	0.00517 / 0.00602	ND	0.01313	0.01313	03/29/2010	1 / 11	0.01313
Sodium	mg/kg		961.6	961.6	1348	03/29/2010	11 / 11	1136
Strontium	mg/kg		9.202	9.202	25.09	03/29/2010	11 / 11	14.68
Thallium	mg/kg	0.02502 / 0.1466	ND	0.0731	0.0731	03/24/2010	1 / 11	0.0731
Vanadium	mg/kg	0.0946 / 0.1855	ND	ND	ND		0 / 11	0
Zinc	mg/kg		24.01	24.01	39.76	03/29/2010	11 / 11	34.06

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 18. 2010 Upland Chorus Frog Samples Collected at the Rockytop Farm Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	7.587 / 8.186	ND	ND	ND		0 / 8	0
Antimony	mg/kg	0.027 / 0.0306	ND	ND	ND		0 / 8	0
Arsenic	mg/kg	0.054 / 0.05808	ND	0.05418	0.0728	03/31/2010	3 / 8	0.06273
Barium	mg/kg		8.62	8.62	33.92	03/31/2010	8 / 8	17.12
Beryllium	mg/kg	0.0567 / 0.0612	ND	ND	ND		0 / 8	0
Boron	mg/kg	0.783 / 0.8448	ND	ND	ND		0 / 8	0
Cadmium	mg/kg	0.01478 / 0.03668	ND	ND	ND		0 / 8	0
Calcium	mg/kg		9170	9170	14150	03/31/2010	8 / 8	12351
Chromium	mg/kg	0.2403 / 0.2587	ND	ND	ND		0 / 8	0
Cobalt	mg/kg		0.0306	0.0306	0.07936	03/31/2010	8 / 8	0.04595
Copper	mg/kg		1.426	1.426	8.359	03/31/2010	8 / 8	3.583
Iron	mg/kg	22.87 / 23.44	ND	24.54	66.22	03/31/2010	7 / 8	38.01
Lead	mg/kg	0.05418 / 0.0792	ND	0.1587	0.1987	03/31/2010	2 / 8	0.1787
Magnesium	mg/kg		364.2	364.2	459.4	03/31/2010	8 / 8	418.6
Manganese	mg/kg		8.87	8.87	16.24	03/31/2010	8 / 8	11.86
Mercury	mg/kg	0.02187 / 0.02372	ND	ND	ND		0 / 8	0
Molybdenum	mg/kg	0.0675 / 0.07192	ND	ND	ND		0 / 8	0
Nickel	mg/kg	0.1863 / 0.2006	ND	ND	ND		0 / 8	0
Potassium	mg/kg		2150	2150	2392	03/30/2010	8 / 8	2242
Selenium	mg/kg		0.2455	0.2455	0.494	03/31/2010	8 / 8	0.3422
Silver	mg/kg	0.0054 / 0.00769	ND	ND	ND		0 / 8	0
Sodium	mg/kg		1183	1183	1383	03/31/2010	8 / 8	1289
Strontium	mg/kg		10.88	10.88	22.73	03/31/2010	8 / 8	15.63
Thallium	mg/kg	0.026 / 0.02904	ND	ND	ND		0 / 8	0
Vanadium	mg/kg	0.0864 / 0.09435	ND	ND	ND		0 / 8	0
Zinc	mg/kg		25.28	25.28	71.21	03/31/2010	8 / 8	41.78

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 19. 2010 Upland Chorus Frog Samples Collected at the Dawson's Farm Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	7.808 / 8.269	ND	ND	ND		0 / 4	0
Antimony	mg/kg	0.0279 / 0.02892	ND	ND	ND		0 / 4	0
Arsenic	mg/kg	0.05453 / 0.05736	ND	0.05784	0.05784	03/30/2010	1 / 4	0.05784
Barium	mg/kg		7.074	7.074	14.56	03/30/2010	4 / 4	9.172
Beryllium	mg/kg	0.05784 / 0.1177	ND	ND	ND		0 / 4	0
Boron	mg/kg	0.8091 / 0.8604	ND	ND	ND		0 / 4	0
Cadmium	mg/kg	0.01494 / 0.03042	ND	ND	ND		0 / 4	0
Calcium	mg/kg		11411	11411	14725	03/30/2010	4 / 4	13156
Chromium	mg/kg	0.241 / 0.2629	ND	ND	ND		0 / 4	0
Cobalt	mg/kg	0.02651 / 0.02868	ND	0.04305	0.04305	04/01/2010	1 / 4	0.04305
Copper	mg/kg		1.663	1.663	3.179	03/30/2010	4 / 4	2.445
Iron	mg/kg		26.05	26.05	40.18	03/30/2010	4 / 4	34.66
Lead	mg/kg	0.05543 / 0.06417	ND	ND	ND		0 / 4	0
Magnesium	mg/kg		412.9	412.9	462.7	03/30/2010	4 / 4	441.5
Manganese	mg/kg		5.471	5.471	15.09	03/30/2010	4 / 4	10.39
Mercury	mg/kg	0.0226 / 0.0239	ND	ND	ND		0 / 4	0
Molybdenum	mg/kg	0.06888 / 0.0717	ND	ND	ND		0 / 4	0
Nickel	mg/kg	0.1897 / 0.2008	ND	ND	ND		0 / 4	0
Potassium	mg/kg		2273	2273	2522	03/30/2010	4 / 4	2423
Selenium	mg/kg		0.226	0.226	0.2755	04/01/2010	4 / 4	0.2436
Silver	mg/kg	0.00554 / 0.00598	ND	ND	ND		0 / 4	0
Sodium	mg/kg		1185	1185	1342	03/30/2010	4 / 4	1262
Strontium	mg/kg		7.462	7.462	13.48	03/30/2010	4 / 4	10.3
Thallium	mg/kg	0.02651 / 0.02868	ND	ND	ND		0 / 4	0
Vanadium	mg/kg	0.08897 / 0.09321	ND	ND	ND		0 / 4	0
Zinc	mg/kg		31.55	31.55	46.78	04/01/2010	4 / 4	37.7

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 20. 2010 Upland Chorus Frog Samples Collected at the Timberlake Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg		50.18	50.18	50.18	03/28/2010	1 / 1	50.18
Antimony	mg/kg	0.02999 / 0.02999	ND	ND	ND		0 / 1	0
Arsenic	mg/kg		0.06426	0.06426	0.06426	03/28/2010	1 / 1	0.06426
Barium	mg/kg		8.905	8.905	8.905	03/28/2010	1 / 1	8.905
Beryllium	mg/kg	0.1224 / 0.1224	ND	ND	ND		0 / 1	0
Boron	mg/kg	0.8568 / 0.8568	ND	ND	ND		0 / 1	0
Cadmium	mg/kg	0.02662 / 0.02662	ND	ND	ND		0 / 1	0
Calcium	mg/kg		15300	15300	15300	03/28/2010	1 / 1	15300
Chromium	mg/kg	0.2632 / 0.2632	ND	ND	ND		0 / 1	0
Cobalt	mg/kg		0.1499	0.1499	0.1499	03/28/2010	1 / 1	0.1499
Copper	mg/kg		10.62	10.62	10.62	03/28/2010	1 / 1	10.62
Iron	mg/kg		69.77	69.77	69.77	03/28/2010	1 / 1	69.77
Lead	mg/kg		0.1775	0.1775	0.1775	03/28/2010	1 / 1	0.1775
Magnesium	mg/kg		495.7	495.7	495.7	03/28/2010	1 / 1	495.7
Manganese	mg/kg		11.35	11.35	11.35	03/28/2010	1 / 1	11.35
Mercury	mg/kg	0.02387 / 0.02387	ND	ND	ND		0 / 1	0
Molybdenum	mg/kg	0.07344 / 0.07344	ND	ND	ND		0 / 1	0
Nickel	mg/kg	0.202 / 0.202	ND	ND	ND		0 / 1	0
Potassium	mg/kg		2179	2179	2179	03/28/2010	1 / 1	2179
Selenium	mg/kg		0.3366	0.3366	0.3366	03/28/2010	1 / 1	0.3366
Silver	mg/kg		0.01377	0.01377	0.01377	03/28/2010	1 / 1	0.01377
Sodium	mg/kg		1218	1218	1218	03/28/2010	1 / 1	1218
Strontium	mg/kg		6.763	6.763	6.763	03/28/2010	1 / 1	6.763
Thallium	mg/kg	0.02846 / 0.02846	ND	ND	ND		0 / 1	0
Vanadium	mg/kg	0.09486 / 0.09486	ND	ND	ND		0 / 1	0
Zinc	mg/kg		39.47	39.47	39.47	03/28/2010	1 / 1	39.47

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 21. 2009 American Toad Samples Collected at the West Embayment Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	24.79 / 25.02	ND	28.92	94.5	03/26/2009	6 / 11	54.77
Antimony	mg/kg	0.09906 / 0.1009	ND	ND	ND		0 / 11	0
Arsenic	mg/kg	0.09906 / 0.1009	ND	ND	ND		0 / 11	0
Barium	mg/kg		3.21	3.21	30.11	03/26/2009	11 / 11	19.24
Beryllium	mg/kg	0.09906 / 0.1009	ND	ND	ND		0 / 11	0
Boron	mg/kg	1.98 / 2.013	ND	ND	ND		0 / 11	0
Cadmium	mg/kg	0.09906 / 0.1009	ND	ND	ND		0 / 11	0
Calcium	mg/kg		3346	3346	27588	03/26/2009	11 / 11	13421
Chromium	mg/kg	0.09917 / 0.1778	ND	0.16	2.055	03/26/2009	4 / 11	0.7051
Cobalt	mg/kg	0.09906 / 0.1009	ND	0.1275	0.1275	03/26/2009	1 / 11	0.1275
Copper	mg/kg	0.4876 / 1.255	ND	1.688	2.438	03/26/2009	10 / 11	1.941
Iron	mg/kg	24.79 / 25.02	ND	25.34	100	03/26/2009	9 / 11	60.45
Lead	mg/kg	0.09917 / 0.1009	ND	0.1219	0.4788	03/26/2009	6 / 11	0.215
Magnesium	mg/kg		160.5	160.5	1604	03/26/2009	11 / 11	468.5
Manganese	mg/kg		6.854	6.854	43.33	03/26/2009	11 / 11	22.02
Mercury	mg/kg	0.01978 / 0.02016	ND	0.02108	0.03816	03/20/2009	6 / 11	0.02713
Molybdenum	mg/kg	0.9906 / 1.009	ND	ND	ND		0 / 11	0
Nickel	mg/kg	0.09906 / 0.1009	ND	0.1168	3.131	03/26/2009	6 / 11	0.671
Potassium	mg/kg		892.2	892.2	2162	03/20/2009	11 / 11	1764
Selenium	mg/kg		0.2693	0.2693	0.6996	03/20/2009	11 / 11	0.4443
Silver	mg/kg	0.04876 / 0.0508	ND	ND	ND		0 / 11	0
Sodium	mg/kg	99.16 / 913.9	ND	1035	1457	03/26/2009	9 / 11	1265
Strontium	mg/kg		6.392	6.392	50.68	03/26/2009	11 / 11	26.08
Thallium	mg/kg	0.09906 / 0.1009	ND	ND	ND		0 / 11	0
Vanadium	mg/kg	0.1983 / 0.204	ND	ND	ND		0 / 11	0
Zinc	mg/kg		21.9	21.9	31.69	03/26/2009	11 / 11	27.06

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 22. 2010 American Toad Samples Collected at the West Embayment Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	7.615 / 8.322	ND	8.554	40.32	03/24/2010	7 / 10	24.7
Antimony	mg/kg	0.02664 / 0.03055	ND	ND	ND		0 / 10	0
Arsenic	mg/kg	0.05328 / 0.05858	ND	0.0552	0.1456	03/24/2010	6 / 10	0.08053
Barium	mg/kg		10.19	10.19	26.09	03/24/2010	10 / 10	16.62
Beryllium	mg/kg	0.0555 / 0.0611	ND	ND	ND		0 / 10	0
Boron	mg/kg	0.7992 / 0.8686	ND	ND	ND		0 / 10	0
Cadmium	mg/kg	0.01443 / 0.02712	ND	0.03525	0.06345	03/24/2010	5 / 10	0.0463
Calcium	mg/kg		7716	7716	25990	03/24/2010	10 / 10	12907
Chromium	mg/kg	0.2442 / 0.2712	ND	ND	ND		0 / 10	0
Cobalt	mg/kg		0.03664	0.03664	0.113	03/24/2010	10 / 10	0.06401
Copper	mg/kg	0.2664 / 0.759	ND	1.221	2.786	03/24/2010	9 / 10	1.701
Iron	mg/kg	23.77 / 67.84	ND	159.1	159.1	03/24/2010	1 / 10	159.1
Lead	mg/kg	0.05328 / 0.06526	ND	0.09102	0.345	03/24/2010	7 / 10	0.1824
Magnesium	mg/kg		290.8	290.8	577.3	03/24/2010	10 / 10	373.1
Manganese	mg/kg		4.42	4.42	39.79	03/24/2010	10 / 10	16.94
Mercury	mg/kg	0.01978 / 0.02016	ND	0.03055	0.03584	03/24/2010	2 / 10	0.0332
Molybdenum	mg/kg	0.0666 / 0.07328	ND	ND	ND		0 / 10	0
Nickel	mg/kg	0.1865 / 0.202	ND	ND	ND		0 / 10	0
Potassium	mg/kg		1899	1899	2141	03/24/2010	10 / 10	2006
Selenium	mg/kg		0.3164	0.3164	0.687	03/24/2010	10 / 10	0.4868
Silver	mg/kg	0.00555 / 0.00606	ND	0.00784	0.01203	03/24/2010	4 / 10	0.009481
Sodium	mg/kg		1106	1106	1525	03/24/2010	10 / 10	1274
Strontium	mg/kg		9.515	9.515	55.43	03/24/2010	10 / 10	25.17
Thallium	mg/kg	0.02664 / 0.02938	ND	ND	ND		0 / 10	0
Vanadium	mg/kg	0.08658 / 0.09494	ND	ND	ND		0 / 10	0
Zinc	mg/kg		17.23	17.23	33.54	03/24/2010	10 / 10	24.58

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 23. 2009 American Toad Samples Collected at the North Embayment Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	24.83 / 25.13	ND	ND	ND		0 / 10	0
Antimony	mg/kg	0.0984 / 0.1008	ND	ND	ND		0 / 10	0
Arsenic	mg/kg	0.0984 / 0.1008	ND	ND	ND		0 / 10	0
Barium	mg/kg		8.82	8.82	29.86	03/26/2009	10 / 10	15.91
Beryllium	mg/kg	0.0984 / 0.1008	ND	ND	ND		0 / 10	0
Boron	mg/kg	1.978 / 2.016	ND	ND	ND		0 / 10	0
Cadmium	mg/kg	0.0984 / 0.1008	ND	ND	ND		0 / 10	0
Calcium	mg/kg		10136	10136	25530	03/26/2009	10 / 10	16854
Chromium	mg/kg	0.0987 / 0.2044	ND	ND	ND		0 / 10	0
Cobalt	mg/kg	0.0984 / 0.1008	ND	ND	ND		0 / 10	0
Copper	mg/kg	0.4883 / 1.456	ND	1.659	2.434	03/26/2009	3 / 10	2.17
Iron	mg/kg	24.83 / 24.92	ND	28.44	62.4	03/26/2009	7 / 10	37.9
Lead	mg/kg	0.0984 / 0.1008	ND	0.1109	0.264	03/26/2009	4 / 10	0.1864
Magnesium	mg/kg		277.2	277.2	598	03/26/2009	10 / 10	406.6
Manganese	mg/kg		4.312	4.312	27.26	03/26/2009	10 / 10	12.38
Mercury	mg/kg	0.01978 / 0.02016	ND	0.02066	0.02574	03/26/2009	5 / 10	0.02233
Molybdenum	mg/kg	0.984 / 1.008	ND	ND	ND		0 / 10	0
Nickel	mg/kg	0.0984 / 0.1232	ND	ND	ND		0 / 10	0
Potassium	mg/kg		1731	1731	2114	03/26/2009	10 / 10	1902
Selenium	mg/kg		0.2256	0.2256	0.4899	03/26/2009	10 / 10	0.3348
Silver	mg/kg	0.04883 / 0.05124	ND	ND	ND		0 / 10	0
Sodium	mg/kg	99.07 / 1022	ND	1127	1534	03/26/2009	8 / 10	1291
Strontium	mg/kg		11.07	11.07	28.33	03/26/2009	10 / 10	19.32
Thallium	mg/kg	0.0984 / 0.1008	ND	ND	ND		0 / 10	0
Vanadium	mg/kg	0.1978 / 0.2016	ND	ND	ND		0 / 10	0
Zinc	mg/kg		22.4	22.4	33.6	03/26/2009	10 / 10	27.07

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 24. 2010 American Toad Samples Collected at the North Embayment Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	7.448 / 8.289	ND	8.652	390.1	03/24/2010	5 / 10	117.9
Antimony	mg/kg	0.02676 / 0.03038	ND	0.1162	0.1162	03/24/2010	1 / 10	0.1162
Arsenic	mg/kg		0.06021	0.06021	5.102	03/24/2010	10 / 10	0.709
Barium	mg/kg		7.314	7.314	39.73	03/24/2010	10 / 10	22.54
Beryllium	mg/kg	0.1115 / 0.1237	ND	ND	ND		0 / 10	0
Boron	mg/kg	0.7805 / 0.868	ND	ND	ND		0 / 10	0
Cadmium	mg/kg	0.01438 / 0.0282	ND	0.04557	0.07946	03/24/2010	5 / 10	0.05865
Calcium	mg/kg		6411	6411	20488	03/24/2010	10 / 10	14001
Chromium	mg/kg	0.2364 / 0.2736	ND	0.274	4.649	03/24/2010	2 / 10	2.462
Cobalt	mg/kg		0.03122	0.03122	0.4334	03/24/2010	10 / 10	0.1028
Copper	mg/kg	0.2676 / 0.9331	ND	0.9259	3.588	03/24/2010	9 / 10	1.603
Iron	mg/kg		27.53	27.53	3664	03/24/2010	10 / 10	414.4
Lead	mg/kg	0.05129 / 0.1003	ND	0.1324	1.95	03/24/2010	8 / 10	0.4508
Magnesium	mg/kg		268.4	268.4	520.1	03/24/2010	10 / 10	403.2
Manganese	mg/kg		6.71	6.71	96.33	03/24/2010	10 / 10	28.22
Mercury	mg/kg	0.01978 / 0.02016	ND	0.0248	0.0248	03/24/2010	1 / 10	0.0248
Molybdenum	mg/kg	0.06467 / 0.07378	ND	0.197	0.197	03/24/2010	1 / 10	0.197
Nickel	mg/kg	0.1829 / 0.2068	ND	0.2561	0.2561	03/24/2010	1 / 10	0.2561
Potassium	mg/kg		1904	1904	2554	03/24/2010	10 / 10	2173
Selenium	mg/kg		0.2052	0.2052	0.7946	03/24/2010	10 / 10	0.4554
Silver	mg/kg	0.00535 / 0.00608	ND	0.00583	0.01117	03/24/2010	2 / 10	0.008499
Sodium	mg/kg		1118	1118	1525	03/24/2010	10 / 10	1303
Strontium	mg/kg		13.14	13.14	38.19	03/24/2010	10 / 10	24.83
Thallium	mg/kg	0.02561 / 0.02964	ND	ND	ND		0 / 10	0
Vanadium	mg/kg	0.08474 / 0.09548	ND	0.196	7.171	03/24/2010	3 / 10	2.536
Zinc	mg/kg		21.73	21.73	32.85	03/24/2010	10 / 10	25.38

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 25. 2009 American Toad Samples Collected at the Rockytop Farm Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	24.75 / 25.07	ND	27.17	360.4	03/26/2009	6 / 10	106.1
Antimony	mg/kg	0.09823 / 0.1005	ND	ND	ND		0 / 10	0
Arsenic	mg/kg		0.1789	0.1789	1.484	03/26/2009	10 / 10	0.5498
Barium	mg/kg		11.24	11.24	29.04	03/26/2009	10 / 10	20.49
Beryllium	mg/kg	0.09823 / 0.1005	ND	ND	ND		0 / 10	0
Boron	mg/kg	1.975 / 2.018	ND	ND	ND		0 / 10	0
Cadmium	mg/kg	0.09823 / 0.1005	ND	0.1023	0.1023	03/26/2009	1 / 10	0.1023
Calcium	mg/kg		9223	9223	21036	03/26/2009	10 / 10	15875
Chromium	mg/kg	0.09828 / 0.2856	ND	4.637	4.637	03/26/2009	1 / 10	4.637
Cobalt	mg/kg	0.09823 / 0.1005	ND	0.1452	0.1537	03/26/2009	2 / 10	0.1495
Copper	mg/kg	0.4925 / 1.587	ND	1.832	2.822	03/26/2009	6 / 10	2.255
Iron	mg/kg		39.27	39.27	370.4	03/26/2009	10 / 10	104.1
Lead	mg/kg	0.09823 / 0.09936	ND	0.1291	0.4452	03/26/2009	9 / 10	0.2525
Magnesium	mg/kg		362.5	362.5	602.3	03/26/2009	10 / 10	437
Manganese	mg/kg		11.12	11.12	28.96	03/26/2009	10 / 10	19.71
Mercury	mg/kg	0.01978 / 0.02016	ND	0.02728	0.02728	03/26/2009	1 / 10	0.02728
Molybdenum	mg/kg	0.9823 / 1.005	ND	ND	ND		0 / 10	0
Nickel	mg/kg	0.09828 / 0.1706	ND	0.2167	2.192	03/26/2009	3 / 10	0.8759
Potassium	mg/kg		1948	1948	2291	03/26/2009	10 / 10	2113
Selenium	mg/kg		0.2044	0.2044	0.5208	03/26/2009	10 / 10	0.4005
Silver	mg/kg	0.04925 / 0.05111	ND	ND	ND		0 / 10	0
Sodium	mg/kg		1154	1154	1495	03/26/2009	10 / 10	1310
Strontium	mg/kg		16.55	16.55	39.51	03/26/2009	10 / 10	24.36
Thallium	mg/kg	0.09823 / 0.1005	ND	ND	ND		0 / 10	0
Vanadium	mg/kg	0.197 / 0.2018	ND	0.2364	0.3528	03/26/2009	3 / 10	0.2916
Zinc	mg/kg		22.26	22.26	30.7	03/26/2009	10 / 10	25.84

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 26. 2010 American Toad Samples Collected at the Rockytop Farm Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	8.208 / 8.208	ND	ND	ND		0 / 1	0
Antimony	mg/kg	0.0286 / 0.0286	ND	ND	ND		0 / 1	0
Arsenic	mg/kg		0.08008	0.08008	0.08008	03/31/2010	1 / 1	0.08008
Barium	mg/kg		23.51	23.51	23.51	03/31/2010	1 / 1	23.51
Beryllium	mg/kg	0.06006 / 0.06006	ND	ND	ND		0 / 1	0
Boron	mg/kg	0.858 / 0.858	ND	ND	ND		0 / 1	0
Cadmium	mg/kg	0.01773 / 0.01773	ND	ND	ND		0 / 1	0
Calcium	mg/kg		13413	13413	13413	03/31/2010	1 / 1	13413
Chromium	mg/kg	0.2603 / 0.2603	ND	ND	ND		0 / 1	0
Cobalt	mg/kg		0.04576	0.04576	0.04576	03/31/2010	1 / 1	0.04576
Copper	mg/kg		1.087	1.087	1.087	03/31/2010	1 / 1	1.087
Iron	mg/kg		33.75	33.75	33.75	03/31/2010	1 / 1	33.75
Lead	mg/kg	0.09438 / 0.09438	ND	ND	ND		0 / 1	0
Magnesium	mg/kg		549.1	549.1	549.1	03/31/2010	1 / 1	549.1
Manganese	mg/kg		21.51	21.51	21.51	03/31/2010	1 / 1	21.51
Mercury	mg/kg	0.01978 / 0.02016	ND	ND	ND		0 / 1	0
Molybdenum	mg/kg	0.0715 / 0.0715	ND	ND	ND		0 / 1	0
Nickel	mg/kg	0.2002 / 0.2002	ND	ND	ND		0 / 1	0
Potassium	mg/kg		1876	1876	1876	03/31/2010	1 / 1	1876
Selenium	mg/kg		0.5148	0.5148	0.5148	03/31/2010	1 / 1	0.5148
Silver	mg/kg	0.00601 / 0.00601	ND	ND	ND		0 / 1	0
Sodium	mg/kg		1244	1244	1244	03/31/2010	1 / 1	1244
Strontium	mg/kg		19.76	19.76	19.76	03/31/2010	1 / 1	19.76
Thallium	mg/kg	0.02831 / 0.02831	ND	ND	ND		0 / 1	0
Vanadium	mg/kg	0.09438 / 0.09438	ND	ND	ND		0 / 1	0
Zinc	mg/kg		58.34	58.34	58.34	03/31/2010	1 / 1	58.34

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 27. 2010 American Toad Samples Collected at the Dawson's Farm Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg	7.277 / 8.311	ND	73.63	489.1	04/01/2010	3 / 10	214.3
Antimony	mg/kg	0.02574 / 0.03038	ND	ND	ND		0 / 10	0
Arsenic	mg/kg	0.05148 / 0.05771	ND	0.07488	0.2299	04/01/2010	4 / 10	0.153
Barium	mg/kg		9.526	9.526	25.99	04/01/2010	10 / 10	13.7
Beryllium	mg/kg	0.1076 / 0.1237	ND	ND	ND		0 / 10	0
Boron	mg/kg	0.7488 / 0.868	ND	ND	ND		0 / 10	0
Cadmium	mg/kg	0.01498 / 0.0287	ND	0.03276	0.04991	04/01/2010	2 / 10	0.04134
Calcium	mg/kg		7273	7273	19937	04/01/2010	10 / 10	10951
Chromium	mg/kg	0.226 / 0.2604	ND	1.087	1.087	04/01/2010	1 / 10	1.087
Cobalt	mg/kg	0.02496 / 0.02786	ND	0.03042	0.2717	04/01/2010	8 / 10	0.07866
Copper	mg/kg	0.2574 / 0.7812	ND	0.9594	1.989	04/01/2010	8 / 10	1.314
Iron	mg/kg		29.08	29.08	369.9	04/01/2010	10 / 10	77.6
Lead	mg/kg	0.05198 / 0.1085	ND	0.1237	0.6479	04/01/2010	7 / 10	0.2523
Magnesium	mg/kg		266.2	266.2	545.2	04/01/2010	10 / 10	354.6
Manganese	mg/kg		8.072	8.072	47.44	04/01/2010	10 / 10	18.56
Mercury	mg/kg	0.01978 / 0.02016	ND	ND	ND		0 / 10	0
Molybdenum	mg/kg	0.06318 / 0.07378	ND	ND	ND		0 / 10	0
Nickel	mg/kg	0.1778 / 0.204	ND	0.5016	0.5016	04/01/2010	1 / 10	0.5016
Potassium	mg/kg		1747	1747	2340	04/01/2010	10 / 10	2033
Selenium	mg/kg		0.2486	0.2486	0.4446	04/01/2010	10 / 10	0.3319
Silver	mg/kg	0.00515 / 0.00608	ND	ND	ND		0 / 10	0
Sodium	mg/kg		823.7	823.7	1458	04/01/2010	10 / 10	1113
Strontium	mg/kg		7.148	7.148	28.31	04/01/2010	10 / 10	12.73
Thallium	mg/kg	0.02486 / 0.02821	ND	ND	ND		0 / 10	0
Vanadium	mg/kg	0.0819 / 0.09984	ND	0.7942	0.7942	04/01/2010	1 / 10	0.7942
Zinc	mg/kg		22.26	22.26	37.62	04/01/2010	10 / 10	27.08

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Table 28. 2010 American Toad Samples Collected at the Timberlake Location

Analyte	Units	Detection Limit Range	Minimum	Minimum Detected Result	Maximum Detected Result	Date of Maximum Detected Result	Number of Detections / Samples	Mean of Detections
Aluminum	mg/kg		18.02	18.02	58.76	04/06/2010	2 / 2	38.39
Antimony	mg/kg	0.02739 / 0.03094	ND	ND	ND		0 / 2	0
Arsenic	mg/kg	0.05229 / 0.05712	ND	0.07221	0.07221	04/06/2010	1 / 2	0.07221
Barium	mg/kg		22.49	22.49	30.63	04/06/2010	2 / 2	26.56
Beryllium	mg/kg	0.1121 / 0.1238	ND	ND	ND		0 / 2	0
Boron	mg/kg	0.7719 / 0.8568	ND	ND	ND		0 / 2	0
Cadmium	mg/kg		0.05229	0.05229	0.06664	04/06/2010	2 / 2	0.05947
Calcium	mg/kg		15446	15446	20792	04/06/2010	2 / 2	18119
Chromium	mg/kg	0.239 / 0.2618	ND	ND	ND		0 / 2	0
Cobalt	mg/kg		0.1142	0.1142	0.1195	04/06/2010	2 / 2	0.1169
Copper	mg/kg		1.166	1.166	1.793	04/06/2010	2 / 2	1.48
Iron	mg/kg		57.83	57.83	85.16	04/06/2010	2 / 2	71.5
Lead	mg/kg	0.119 / 0.5478	ND	ND	ND		0 / 2	0
Magnesium	mg/kg		373.7	373.7	592.6	04/06/2010	2 / 2	483.2
Manganese	mg/kg		32.84	32.84	40.34	04/06/2010	2 / 2	36.59
Mercury	mg/kg	0.01978 / 0.02016	ND	0.02988	0.02988	04/06/2010	1 / 2	0.02988
Molybdenum	mg/kg	0.06723 / 0.07378	ND	ND	ND		0 / 2	0
Nickel	mg/kg	0.1843 / 0.2023	ND	ND	ND		0 / 2	0
Potassium	mg/kg		2194	2194	2216	04/06/2010	2 / 2	2205
Selenium	mg/kg		0.357	0.357	0.4482	04/06/2010	2 / 2	0.4026
Silver	mg/kg		0.00595	0.00595	0.00722	04/06/2010	2 / 2	0.006586
Sodium	mg/kg		1185	1185	1389	04/06/2010	2 / 2	1287
Strontium	mg/kg		20.52	20.52	29.63	04/06/2010	2 / 2	25.08
Thallium	mg/kg	0.0249 / 0.02856	ND	ND	ND		0 / 2	0
Vanadium	mg/kg	0.08466 / 0.0952	ND	ND	ND		0 / 2	0
Zinc	mg/kg		28.32	28.32	46.31	04/06/2010	2 / 2	37.32

Notes:

Data are presented in wet weight.

For definitions, see the Acronyms section.

Figures

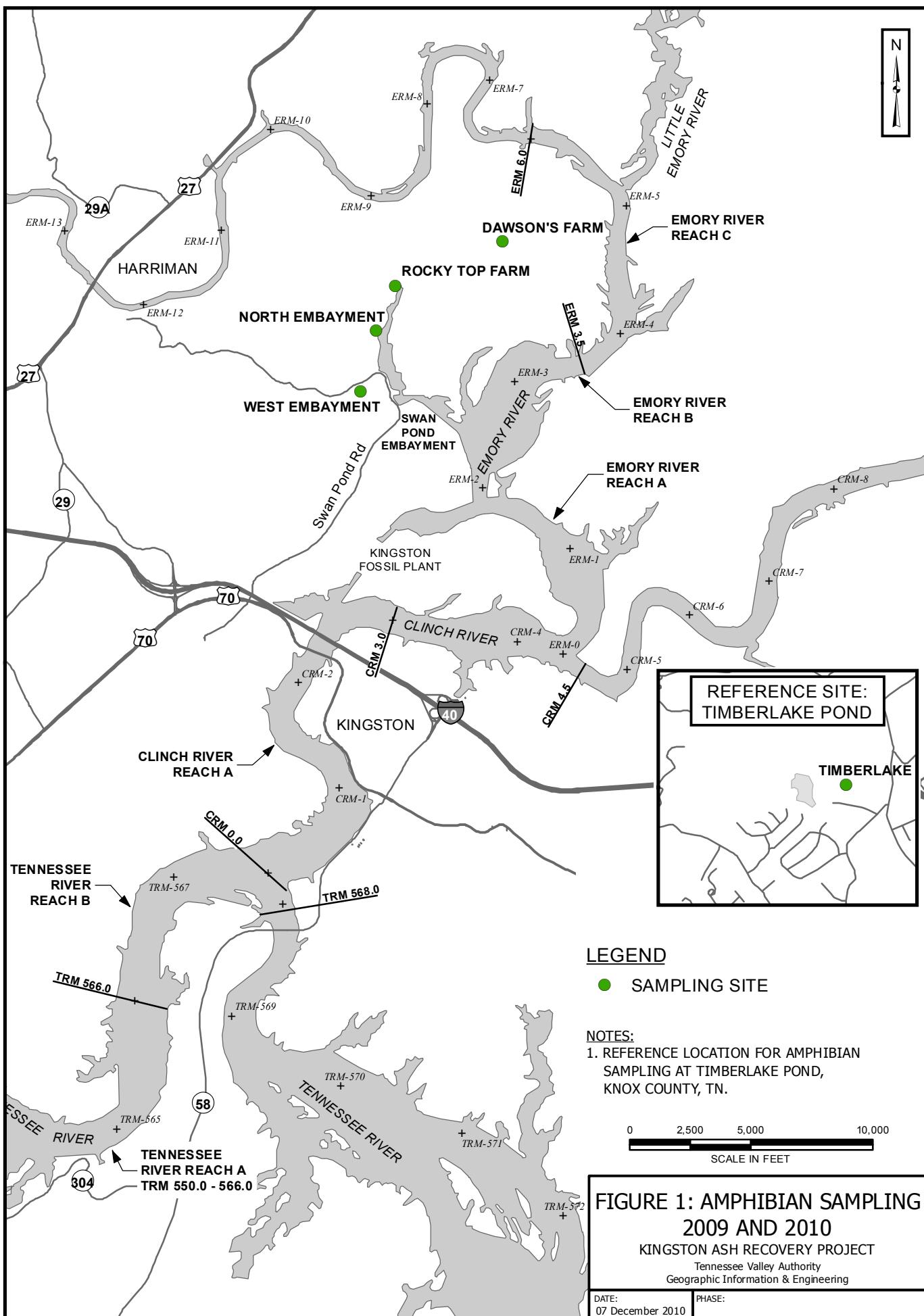


Figure 2a. Holding tanks used for amphibian collections

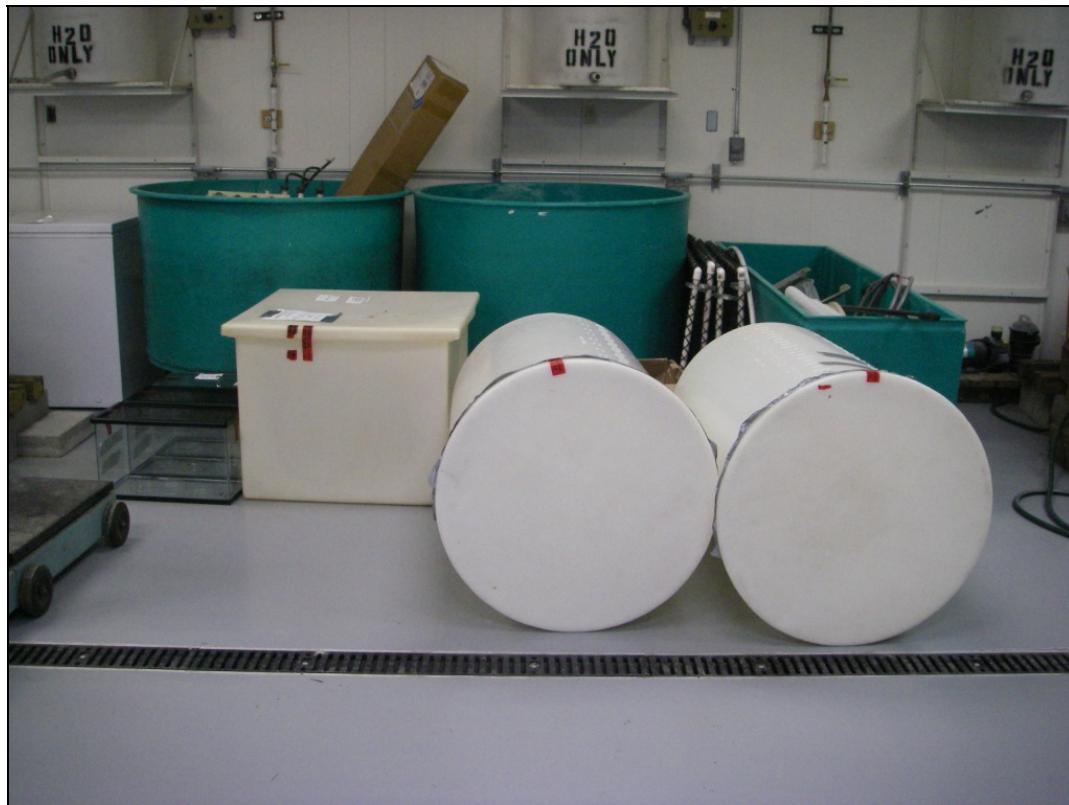
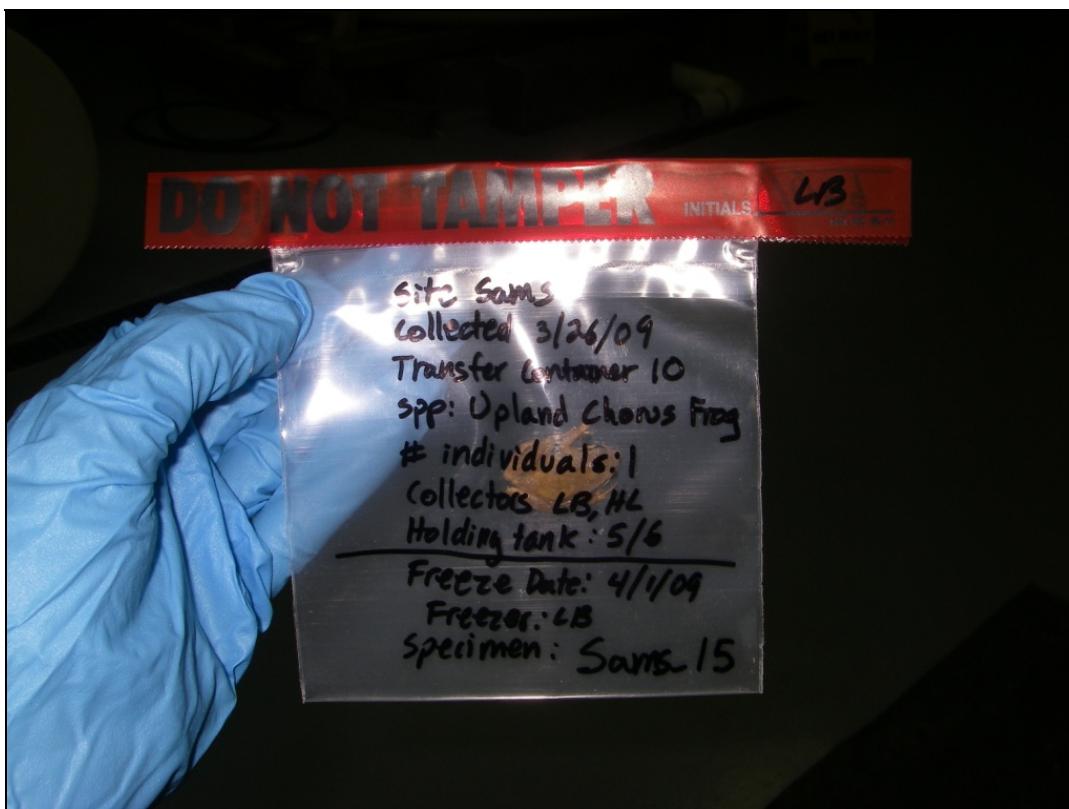


Figure 2b. Amphibians held for four to seven days in holding tanks in order to void gut content



Figure 2c. Sample collection bag with specimen



Appendix A
Summary of Amphibian Collections

Table A-1: Summary of Amphibian Collections, 2009

Location		Species		
Site Name	Type	Upland Chorus Frog	Spring Peeper	American Toad
Timberlake Pond	Reference Site	0	10	0
Dawson's Farm	Unaffected Sites	0	3	0
Rocky Top Farm		0	10	10
North Embayment	Potentially Affected Sites	9	0	10
West Embayment		2	11	11
Total	All	11	34	31

Table A-2: Summary of Amphibian Collections, 2010

Location		Species		
Site Name	Type	Upland Chorus Frog	Spring Peeper	American Toad
Timberlake Pond	Reference Site	1	10	2
Dawson's Farm	Unaffected Sites	4	15	10
Rocky Top Farm		8	10	1
North Embayment	Potentially Affected Sites	11	7	10
West Embayment		11	11	10
Total	All	35	53	33

Appendix B
Sample Shipment Summaries

Table B-1: Sample Shipment Summary, 2009

Shipment Date	COCs Shipped	Sample Type		Total Samples per COC	Shipment Sample Total
		Whole Body ¹	QC		
09-Apr-09	BIO_MP_090408		3	-	3
01-May-09	BIO_MP_090320a	3	-	-	76
	BIO_MP_090326a	20	-	-	
	BIO_MP_090326b	20	-	-	
	BIO_MP_090326c	20	-	-	
	BIO_MP_090408b	3	-	-	
	BIO_MP_090409a	10	-	-	
Total Samples		76	3	-	79

Notes:

¹Number indicates spring peepers, chorus frogs, and American toads, combined.

For definitions, see the Acronyms section.

Table B-2: Sample Shipment Summary, 2010

Shipment Date	COCs Shipped	Sample Type		Total Samples per COC	Shipment Sample Total
		Whole body ¹	QC		
01-Apr-10	BIOMP0322Y10A	8	-	8	69
	BIOMP0324Y10A	13	-	13	
	BIOMP0324Y10B	11	-	11	
	BIOMP0324Y10C	11	-	11	
	BIOMP0326Y10A	20	-	20	
	BIOMP0329Y10A	-	3	3	
	BIOMP0331Y10A	-	3	3	
09-Apr-10	BIOMP0328Y10A	11	-	11	62
	BIOMP0329Y10B	14	-	14	
	BIOMP0330Y10A	7	-	7	
	BIOMP0331Y10B	8	-	8	
	BIOMP0401Y10A	13	-	13	
	BIOMP0402Y10A	-	3	3	
	BIOMP0405Y10A	-	3	3	
	BIOMP0408Y10A	-	3	3	
15-Apr-10	BIOMP0405Y10B	3	-	3	11
	BIOMP0406Y10B	2	-	2	
	BIOMP0409Y10A	-	3	3	
	BIOMP0412Y10A	-	3	3	
Total Samples		121	21	142	142

Notes:

¹Number indicates spring peepers, chorus frogs, and American toads, combined.

For definitions, see the Acronyms section.