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Shellfish Tissue Monitoring in Piscataqua Region Estuaries 2013

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A Final Report to

Piscataqua Region Estuaries Partnership
University of New Hampshire
Durham, New Hampshire

Submitted by

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December 23, 2013



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Introduction

Originally conducted by the Gulf of Maine Council on the Marine Environment from 1993 to 2011, the Gulfwatch Program examined trends in the water quality of the Gulf of Maine by monitoring toxic contaminant concentrations in the tissues of shellfish. Starting in 2012 the Piscataqua Region Estuaries Partnership (PREP) continued this program in the Piscataqua Region. Each year, PREP collects blue mussels at three sites: Dover Point, NH (NHDP), Clark Cove on Seavey Island, ME (MECC), and Hampton-Seabrook Harbor (NHHS). The mussel tissue is analyzed to determine the concentrations of toxic contaminants including heavy metals, chlorinated pesticides, polychlorinated biphenyls (PCBs), and polycyclic aromatic hydrocarbons (PAHs).

Project Goals and Objectives

The goal of this project was to provide data for two PREP indicators of estuarine condition: TOX1 and TOX3. These two indicators report on “Shellfish tissue concentrations relative to FDA standards” and “Trends in shellfish tissue contaminant concentrations”, respectively. Both of these indicators depend on data from the Gulfwatch Program. In particular, TOX3 requires annual data at benchmark sites to assess trends. In 2013, PREP supported the collection and analysis of tissue samples from benchmark mussel sites in Hampton-Seabrook Harbor, Portsmouth Harbor and Dover Point.

Methods

Blue mussel samples for the NH Gulfwatch Program were collected from three locations on September 10, 2013. The station visits and field data have been documented in an interim report (Appendix A).

All field sampling was conducted as outlined in Sowles et al. (1997). Collection times were set to avoid collecting during or shortly after periods when stormwater runoff and wave resuspension of bottom sediment could result in enhanced uptake and accumulation of sediment in the mussel gut. At each site, mussels were collected from three discrete areas within a segment of the shoreline that was representative of local water quality. Using a ruler to measure length, a composite sample of 60 mussels of 50-60 mm shell length was collected from each area. The composite sample of mussels from the station was created by combining 20 mussels from each of the three replicate areas. The mussels were cleaned of all sediment, epibiota, and other accretions in clean seawater from the collection site, placed in clean containers, and then transported to the lab in coolers with ice. Prior to shucking, residual seawater was drained from the shells.

In the laboratory, individual mussel lengths, widths and heights (as defined by Seed, 1968) were determined to the nearest 0.1 mm using calipers. Using plastic or stainless steel wedges, mussels were shucked directly into appropriately prepared glass jars for metal and organic analysis, respectively (for details see Sowles et al., 1997). Each sample (20 mussels/sample/station) was capped, labeled and stored at -15 degrees Celsius.

The sets of samples to be analyzed for metal and organic contaminants were delivered to the Battelle Marine Sciences Laboratory in Duxbury, Massachusetts. Battelle analyzed the samples for organic compounds and sub-contracted the analysis for metal cotaminants with ALS Environmental. Table 1 contains a summary of the trace metal (inorganic) and organic compounds measured in the shellfish tissue.

The data were quality assured by the laboratory. When appropriate to the method, method blank were conducted with each analytical test. Additional quality control analyses conducted include: Laboratory Duplicate (DUP), Matrix Spike (MS), and Laboratory Control Sample (LCS). In addition, DES conducted three quality assurance tests on the data:

1. Relative percent differences (RPD) were calculated between routine samples and lab duplicates. An acceptance criteria of $RPD < 25\%$ was used to flag results for additional review.
2. Summary statistics (mean and maximum) of the concentrations for each parameter measured in 2013 were compared to the same statistics for the 1993-2012 dataset. The RPD between the mean value for 2013 and the mean value for 1993-2012 was calculated. The ratio of the maximum value for 2013 and the maximum value for 1993-2012 was calculated. Acceptance criteria include maximum value in current year $<$ maximum value in full dataset, $RPD < 50\%$, or a ratio of the maximum values < 1.5 were used to flag results for additional review.
3. Trend plots for each parameter at each station were generated to identify any outliers or unusual trends.

For all quality assurance tests, censored results were included in the analyses. The results were assigned a value of the reporting detection level. Gulfwatch procedures for aggregating congeners, testing for normality, and calculating descriptive statistics were followed (Chase et al., 2001).

Table 1: Target analytes for tissue analysis

| METAL | | PESTICIDE | |
|-----------------|------------------------------|--------------------|----------|
| | C1-Fluorenes | | C13(29) |
| ALUMINUM | C1-Naphthalenes | 2,4'-DDD | C14(44) |
| CADMIUM | C1-Phenanthrenes/Anthracenes | 2,4'-DDE | C14(50) |
| CHROMIUM | C2-Chrysenes | 2,4'-DDT | C14(52) |
| COPPER | C2-Dibenzothiophenes | 4,4'-DDD | C14(53) |
| IRON | C2-Fluoranthenes/Pyrenes | 4,4'-DDE | C14(66) |
| LEAD | C2-Fluorenes | 4,4'-DDT | C14(77) |
| MERCURY | C2-Naphthalenes | a-BHC | C15(87) |
| NICKEL | C2-Phenanthrenes/Anthracenes | aldrin | C15(95) |
| SILVER | C3-Chrysenes | dieldrin | C15(101) |
| ZINC | C3-Dibenzothiophenes | endosulfan I | C15(105) |
| PHYSICAL | C3-Fluorenes | endosulfan II | C15(118) |
| LIPID CONTENT | C3-Naphthalenes | endrin | C15(126) |
| PERCENT SOLIDS | C3-Phenanthrenes/Anthracenes | g-chlordane | C16(128) |
| PAH | C4-Chrysenes | heptachlor | C16(138) |
| Acenaphthene | C4-Naphthalenes | heptachlor epoxide | C16(153) |
| Acenaphthylene | C4-Phenanthrenes/Anthracenes | Hexachlorobenzene | C16(169) |

| | | | |
|--------------------------|------------------------|-----------------|-----------|
| Anthracene | Chrysene | Lindane | Cl7(170) |
| Benzo(a)anthracene | Dibenz(a,h)anthracene | methoxychlor | Cl7(180) |
| Benzo(a)pyrene | Dibenzothiophene | Mirex | Cl7(187) |
| Benzo(b)fluoranthene | Fluoranthene | trans-nonachlor | Cl8(195) |
| Benzo(e)pyrene | Fluorene | Total DDT | Cl9(206) |
| Benzo(g,h,i)perylene | Indeno(1,2,3-cd)pyrene | PCB | Cl9(208) |
| Benzo(k)fluoranthene | Naphthalene | Cl2(5) | Cl10(209) |
| Biphenyl | Perylene | Cl2(8) | SUM PCBS |
| Cl-Chrysenes | Phenanthrene | Cl2(15) | |
| Cl-Dibenzothiophenes | Pyrene | Cl3(18) | |
| Cl-Fluoranthenes/Pyrenes | TOTAL PAHS | Cl3(28) | |

Results

Quality Assurance Test #1

Laboratory duplicate analyses for metals were performed for MECC COMP (mussels). Out of nine duplicate pairs, none had a RPD value greater than 25%.

Quality Assurance Test #2

The mean and maximum values for each parameter in the 2013 dataset were compared to the same statistics for the 1993-2012 databases. If the maximum value in 2013 was greater than the maximum value from the 1993-2012 dataset, the RPD between the means was greater than 50%, or the maximum value in 2013 was more than 50% greater than the maximum value from 1993-2012 the parameter was flagged for additional review. All of the parameters in the 2013 dataset met the acceptance criteria.

Quality Assurance Test #3

The results for each parameter at each station were plotted against year starting in 1993. The 2013 results were visually compared to the 1993-2012 trends to identify outliers or unusual results. There were no issues identified during the analysis.

Quality Assurance Conclusions

The quality assurance tests did not identify any anomalous data. Therefore, all of the data from the 2013 Gulfwatch sampling in New Hampshire were considered valid.

Quality Assured Data

The laboratory results for the samples are provided in Appendix B. The data from 2013 have been incorporated into the DES Gulfwatch database.

Conclusions and Recommendations

Conclusions about the condition of the estuaries based on these data will be drawn in the next PREP Environmental Indicators Report.

References

Chase, M., S. Jones, P. Hennigar, J. Sowles, G. Harding, K. Freeman, P. Wells, C. Krahforst, R. Crawford, J. Pederson, and D. Taylor. 2001. *Gulfwatch: Monitoring Spatial and Temporal Patterns of Trace Metal and Organic Contaminants in the Gulf of Maine (1991-1997) with the Blue Mussel, Mytilus edulis L.*

Seed, R., 1968. *Factors influencing shell shape in the mussel Mytilus edulis.* J. Mar. Biol. Ass. U.K. 48: 561-584/

Sowles, J., R. Crawford, P. Hennigar, G. Harding, S. Jones, M.E. Chase, W. Robinson, J. Pederson, K. Coombs, D. Taylor, and K. Freeman, 1997. *Gulfwatch project standard procedures: field and laboratory Gulfwatch implementation period 1993-2001.* Gulf of Maine Council on the Marine Environment, State Planning Office, Augusta, ME.

Appendix A: Sampling Summary Report for 2013

MEMORANDUM

TO: Dr. Stephen Jones, UNH
 FROM: Matthew A. Wood, DES
 RE: 2013 Gulfwatch Samples
 DATE: September 11, 2013

The purpose of this memorandum is to document the sample collection activities for Gulfwatch 2013.

On September 10, 2013, DES managed the collection of mussel samples from three sites. These sites are summarized in the following table. Maps showing the location of each site are provided in Appendix A.

| Date / Start Time | Station | Latitude (Decimal degrees) | Longitude (Decimal degrees) | Water Temperature (deg C) | Water Salinity (ppt) | Personnel |
|-------------------|---|----------------------------|-----------------------------|---------------------------|----------------------|--|
| 9/10/13 8:45 | MECC – Clarks Cove, Kittery, ME | 43.0773 | -70.7241 | 15.2 | 28.1 | P. Trowbridge I. Trefray |
| 9/10/13 9:10 | NHHS - Hampton/Seabrook Harbor, Hampton, NH | 42.8975 | -70.8163 | 16.1 | 28.5 | M. Wood K. Edwardson J. Marcoux |
| 9/10/13 10:40 | NHDP – Dover Point, Dover, NH | 43.1196 | -70.8271 | 18.1 | 25.8 | M. Wood K. Edwardson J. Marcoux P. Trowbridge |

Sample collection and processing was conducted following NH Gulfwatch SOPs (Appendix B). Samples were processed and frozen at the DES Limnology Center within 8 hours of collection.

Physical data on the mussels were transferred from hard copy datasheets to Excel spreadsheets. Data entry was checked twice for transcription errors following DES protocols. The physical data for the samples is provided in Appendix C. The field data for the samples are provided in Appendix D. The original datasheets will be kept on file at DES. It should be noted that it was difficult to collect the composite sample of 60 mussels at NHHS - Hampton/Seabrook Harbor. Additionally, there were some dense areas of mussel spat although few adult mussels, and there were an excessive amount of young green crabs (approximately 4-5 under every rock) at NHHS. Construction of a new state pier was ongoing during sampling at NHHS (approximately 200 feet upstream). It should also be noted that there were many young oysters present and red tunicates on the mussels and rocks at MECC – Clarks Cove.

If you have any questions about this report, please contact me at (603) 271-8868 or Matthew.Wood@des.nh.gov

Sampling Summary Report for 2013: Appendix A

Maps of Sampling Sites

GULFWATCH STATION INFORMATION



GULFWATCH STATION INFORMATION



GULFWATCH STATION INFORMATION



Sampling Summary Report for 2013: Appendix B

NH Gulfwatch SOPs

Standard Operating Procedures for Gulfwatch

Revised: 9/3/2013

Prep Work SOP

1. Print and fill out field sheets
2. Print lab sheets (2 sets)
3. Print maps of stations and SOPs
4. Label bait bags/baskets.
5. Label jars (4 oz. jars for mussels, 12 oz. jars for clams or oysters).

The labels will have three lines:

- Line one should include “NH Gulfwatch” and the year.
- Line two should include the species being collected.
- Line three should be in **Bold** and include the station ID, “-”, the replicate number followed by the letter N, “-”, and the collection date in YYMMDD format. For example, NHDP replicate 1 collected on 9/02/11, the label would be “NHDP-1N-110902”. For the composite sample, the replicate number should be replaced with “COMP”. The destination of the sample (e.g., “Metals Lab”, “Organics Archive”, etc.) should follow the sample ID in parentheses. There will be one set of jars for organics analysis, which will be covered by aluminum foil, and another set of jars for metals analysis, which will be covered by plastic wrap. Place the jars back into the box in order. Use a mail merge to generate the labels as shown below.

NH Gulfwatch 2013

Mussel Tissue

MECC-COMP-130910 (Metals Lab)

6. Weigh jars for organics analysis. Jars for metals analysis will be weighed during the shucking process. Use a scale to weigh the jars without lids. Record the value in the “Jar Weight” column of the appropriate lab data sheet. Note there are separate data sheets for metals and organics for each replicate. Make sure the weights of the jars for organics are recorded on the lab data sheets for organics.
7. Put field materials into coolers and distribute to team leaders. Use checklist.
8. Make sure that DES soaks the knives in advance of the shucking.
9. Make sure DHHS cleans the jars.
10. Check calibration of YSI-30 meters with 10,000 $\mu\text{S}/\text{cm}$ standard.
11. Contact Portsmouth Naval Shipyard 2 weeks in advance. Select a field crew with valid US passports. Verify that the vehicle has registration and insurance information. Arrange for the Installation Restoration Manager to meet the crew at the gate. Have the IRM’s number on the field paperwork.

Mussel Field Collection SOP

1. Navigate to station
2. In the general location of the station, identify 3 replicate mussel bed sites within a 50 m section of shoreline (low intertidal zone).
3. Complete field data sheet including measuring the latitude and longitude of each replicate site with a GPS unit.

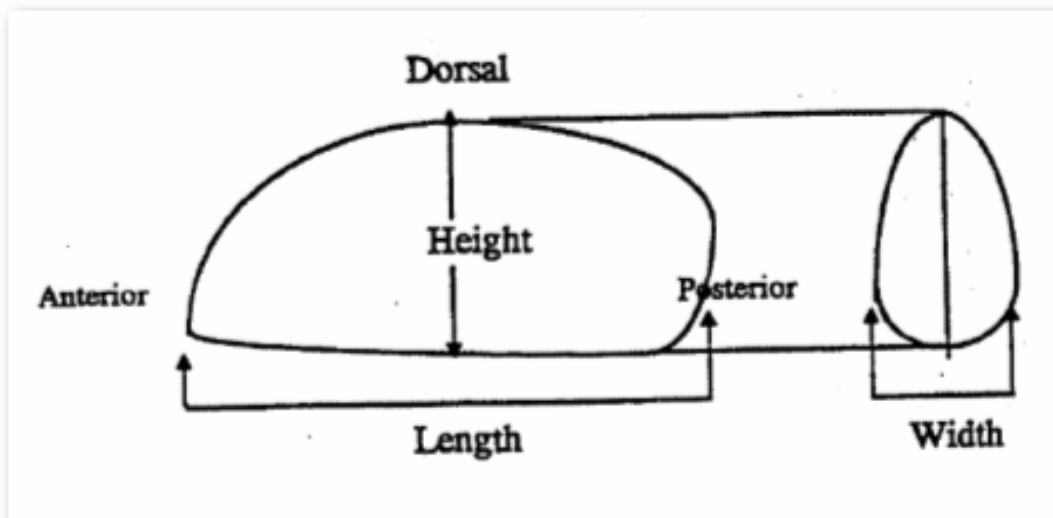
4. Measure water temperature and salinity with YSI-30 meter and record values on field data sheet
5. Select the bait bags or plastic baskets which are pre-labeled with the site name and replicate number (e.g., “NHDP-1” = station NHDP, replicate #1).
6. Collect at least 20 mussels from each replicate site (must be 50-60 mm in length). Use the gauge or ruler to measure the mussels. Place the mussels from each replicate site in a bait bag or plastic basket.
7. Count out exactly 60 mussels from the bait bags or baskets onto a clean surface (spread out a plastic garbage bag if needed), verifying that each mussel is not full of mud by trying to separate the two shells.
8. Return any extra mussels to the intertidal zone at the site
9. Collect wash water in a large basin.
10. Use a toothbrush and the wash water to clean the outside shell of attachments (seaweed or barnacles) for all 60 mussels collected, placing all of the mussels back into the bait bag or basket labeled as “COMP” after they are cleaned. Do not pour all of the mussels into the cleaning basin. Dunk and clean each mussel separately.
11. Place the bait bag or basket of clean mussels upright in the cooler on ice.
12. Verify that field sheet is complete and that the bait bags or baskets are correctly labeled.
13. Transport cooler to laboratory.

Clam / Oyster collection SOP

1. Navigate to station
2. In the general location of the station, identify 2 replicate sites 10 to 50 m apart.
3. Complete field data sheet including measuring the latitude and longitude of each replicate site with a GPS unit.
4. Measure water temperature and salinity and record it on field data sheet
5. Select the plastic baskets which are labeled with the site name and replicate number (e.g., NHDP-1, station NHDP, replicate #1).
6. Collect at least 50 shellfish from each replicate site (must be 50-100 mm in length for clams, 50-125 mm in length for oysters). Use the gauge or ruler to measure the shellfish. Place the shellfish from each replicate site in the correct bait bag or plastic basket.
7. Count out exactly 50 shellfish from the bait bag or basket onto a clean surface (spread out a plastic garbage bag if needed), verifying that each clam/oyster is not full of mud by trying to separate the two shells.
8. Collect wash water in a large basin.
9. Use a toothbrush and the wash water to clean the outside shell of the 50 clams/oysters collected, placing each clam/oyster back into the correct bait bag or basket after it is cleaned. Do not pour all of the clams/oysters into the cleaning basin. Dunk and clean each clam/oyster separately.
10. Place the bait bags or baskets of clean clams/oysters upright in the cooler on ice.
11. Verify that field sheet is complete and that the baskets are correctly labeled.
12. Transport cooler to laboratory.

Mussel Measurement SOP

1. Bring the coolers into the laboratory.
2. Set up measuring stations, each with a caliper, the lab data sheets for one station, the mussels from one station.
3. Assign two to three people to each measuring station.
4. Each team will take 20 mussels from “COMP” sample. One team will work on the metals while the other team works on the organics. Each team will place 20 mussels from the “COMP” sample into rows of 10 on the lab bench, using the pre-made grids. There should be ~20 left over mussels in each bait bag or baskets. Leave the extra mussels in the bait bag or baskets and return the bait bags or baskets to the cooler.
5. Each team will measure the length, height and width of the mussels in the tray and record the information on the lab data sheet. Be sure to record the measurements of the mussels for metals and organics analysis on the correct sheets (there are separate sheets for metals and organics analysis). The mussels are in the same order on the lab bench as on the sheet. The top left mussel is number 1. The bottom left is 10. The top right is number 11. The bottom right is 20. The height and width (and later weight) measurements are done for mussels number 11 through 20. Record the length, height and width to the nearest tenth of a millimeter. Do not report values for cells that are filled in with gray.



Mussel Shucking SOP - Organics

1. Set up shucking stations for organics analysis. Each station will have two metal knives, a beaker of DI water and the corresponding jar (from the jars for organics analysis). One of the scales should be placed on a separate table so that the full jars can be weighed easily.
2. Assign two people to each shucking station.
3. Clean all of the metal knives in solvents. Put out 100 ml of **methanol**, **toluene**, and **hexane** in 150 ml beakers under the fume hood. Swish each metal knife in the 3 solutions (in order) three times. Clean the knives in this way before each new tray of mussels.
4. Open and scrape the meat from the mussels into the jar using the following procedure.
 - a. Swish the knife tip in DI water.
 - b. Select one of the mussels marked for organics analysis.
 - c. Turn the mussel upside down so that the byssus is facing up.
 - d. Tear off the byssus.
 - e. Insert the tip of knife between the shells where the byssus was formerly and twist the knife to open the shell slightly.
 - f. Shake the mussel over the waste bin for 10-20 seconds to remove water from the shell.
 - g. Run the knife blade around the mussel between the two shells to cut the adductor muscle and then separate the two shells.
 - h. Place the two shells on the table, meat side up.
 - i. Scrape the meat out of one of the shells into the jar.
 - j. Discard the empty shell into the waste bin.
 - k. Scrape the meat from the second shell into the jar.
 - l. Discard the empty shell.
 - m. Swish the knife in DI water to clean it.
 - n. If there are more mussels left on the tray for organics analysis, repeat steps b-m.
5. When all 20 mussels have been shucked, weigh the jar and record the value on the lab data sheet, cover the top with a piece of **aluminum foil** (dull side down), screw on the lid, and place the jar in the freezer. Then, clean the knives in the solvents under the hood using the same procedure from Step 3.

Mussel Shucking SOP - **Metals**

1. Set up shucking stations for metals analysis. Each station will have a scale, a waste bucket, DI water, one acid-washed plastic wedge and three acid-washed plastic knives.
2. Assign 2 people to each station.
3. Clean all of the knives and wedges in **nitric acid** solution. Put out 100 ml of 4 N nitric acid in a 150 ml beaker under the fume hood. Swish each knife and wedge in the solution. Clean the knives and wedges in this way before each new batch of mussels.
4. Open and scrape the meat from the mussels #11 through #20 into the jar using the following procedure. Mussel #11 will be the mussel at the top of the right hand row for metals analysis. Mussel #20 will be the mussel at the bottom of the right hand row for metals analysis. Each person in the group does a different task. The person with the plastic wedge does steps c-i. Two people with plastic knives do steps j-m. The person with the scale and lab sheets does steps a and o.
 - a. Tare the scale, then place the correct jar on the scale.
 - b. Swish the knives in DI water.
 - c. Select mussel #11 marked for metals analysis.
 - d. Turn the mussel upside down so that the byssus is facing up.
 - e. Tear off the byssus.
 - f. Insert the tip of plastic wedge between the shells where the byssus was formerly and twist the plastic wedge to open the shell slightly.
 - g. Shake the mussel over the waste bin for 10-20 seconds to remove some water from the shell.
 - h. Run the plastic wedge or plastic knife around the mussel between the two shells to cut the adductor muscle and then separate the two shells.
 - i. Place the two shells on the table, meat side up.
 - j. Scrape the meat out of one of the shells into the jar.
 - k. Discard the empty shell into the waste bin.
 - l. Scrape the meat from the second shell into the jar.
 - m. Discard the empty shell.
 - n. Swish the knives in DI water to clean them.
 - o. Record the total weight of the jar and the mussel meat on the lab data sheet in the location for mussel #11.
 - p. Repeat steps for mussels #12 through #20. When complete, leave the jar on the scale and go to Step 5.
5. Open and scrape the meat from mussels #1 through #10 into the jar using the same procedure as for Step 4 except: (1) Weight does not need to be recorded after each mussel (step o), only at the end; (2) the person who recorded the weights should use a plastic knife to help with steps j-m.
6. When all 20 mussels from the tray have been shucked, weigh the jar (without the cap) and record the value on the lab data sheet, cover the top with a piece of **saran wrap**, screw on the lid, and place the jar in the freezer. Then, clean the knives in the nitric acid solution under the hood using the same procedure from Step 3.

Cleanup SOP

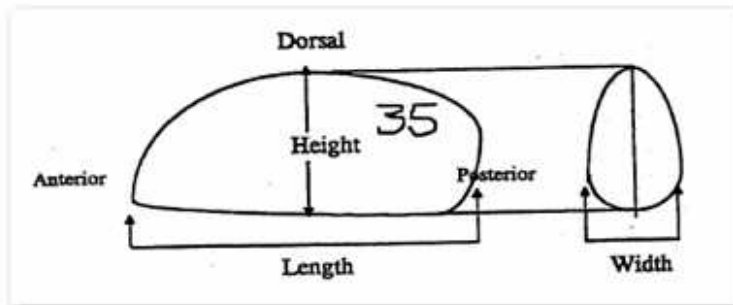
1. Wash all knives in hot water and soap.
2. Wash all DI containers.
3. Wash all tubs.
4. Discard shells and unused mussels.
5. Collect bait bags for storage at DES.
6. Return bottles, rulers and other equipment to lab.
7. Wipe down scales and counters.

Sampling Summary Report for 2013: Appendix C

Physical Data for Mussels

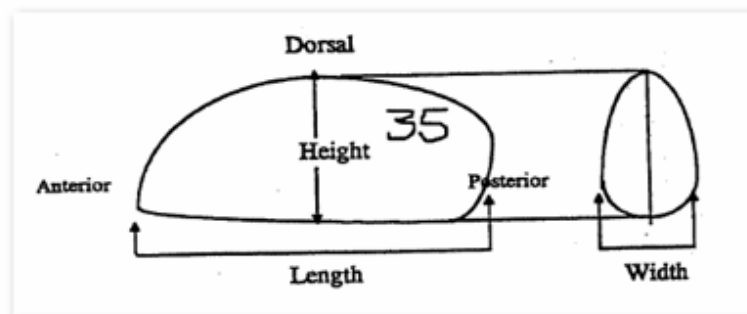
| ME CC 2013 (INDIGENOUS MUSSELS) | | | | METALS | | | *calculated field | *Weight of jar and mussel meat | |
|---------------------------------|----|-------------|----|-------------|-------------|------------|-------------------|--------------------------------|----------------|
| Site | # | Length (mm) | # | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Cumulative wet weight (g)* | Jar weight (g) |
| MECC-COMP | 1 | 59.0 | 11 | 60.0 | 27.3 | 23.5 | 7.11 | 204.08 | 196.97 |
| MECC-COMP | 2 | 58.5 | 12 | 59.5 | 30.2 | 28.7 | 12.35 | 216.43 | |
| MECC-COMP | 3 | 59.2 | 13 | 58.6 | 29.7 | 26.4 | 9.99 | 226.42 | |
| MECC-COMP | 4 | 59.2 | 14 | 58.8 | 30.4 | 22.7 | 9.38 | 235.80 | |
| MECC-COMP | 5 | 54.2 | 15 | 59.8 | 30.0 | 25.8 | 8.74 | 244.54 | |
| MECC-COMP | 6 | 58.8 | 16 | 57.7 | 28.5 | 22.5 | 6.22 | 250.76 | |
| MECC-COMP | 7 | 59.3 | 17 | 57.1 | 27.2 | 28.8 | 9.66 | 260.42 | |
| MECC-COMP | 8 | 59.0 | 18 | 59.4 | 30.9 | 23.4 | 7.13 | 267.55 | |
| MECC-COMP | 9 | 59.2 | 19 | 55.1 | 28.0 | 22.9 | 6.84 | 274.39 | |
| MECC-COMP | 10 | 57.5 | 20 | 55.5 | 31.5 | 23.0 | 6.16 | 280.55 | |
| 1-20 total | | | | | | | 153.92 | 350.89 | |

| ME CC 2013 (INDIGENOUS MUSSELS) | | | | ORGANICS | | | *calculated field | *Weight of jar and mussel meat | |
|---------------------------------|----|-------------|----|-------------|-------------|------------|-------------------|--------------------------------|----------------|
| Site | # | Length (mm) | # | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Cumulative wet weight (g)* | Jar weight (g) |
| MECC-COMP | 1 | 58.1 | 11 | 56.0 | | | | | 197.57 |
| MECC-COMP | 2 | 58.6 | 12 | 59.5 | | | | | |
| MECC-COMP | 3 | 56.2 | 13 | 57.6 | | | | | |
| MECC-COMP | 4 | 52.5 | 14 | 59.1 | | | | | |
| MECC-COMP | 5 | 59.8 | 15 | 59.4 | | | | | |
| MECC-COMP | 6 | 55.9 | 16 | 56.5 | | | | | |
| MECC-COMP | 7 | 58.6 | 17 | 59.9 | | | | | |
| MECC-COMP | 8 | 56.2 | 18 | 57.0 | | | | | |
| MECC-COMP | 9 | 58.6 | 19 | 52.2 | | | | | |
| MECC-COMP | 10 | 55.2 | 20 | 52.4 | | | | | |
| 1-20 total | | | | | | | 137.23 | 334.80 | |



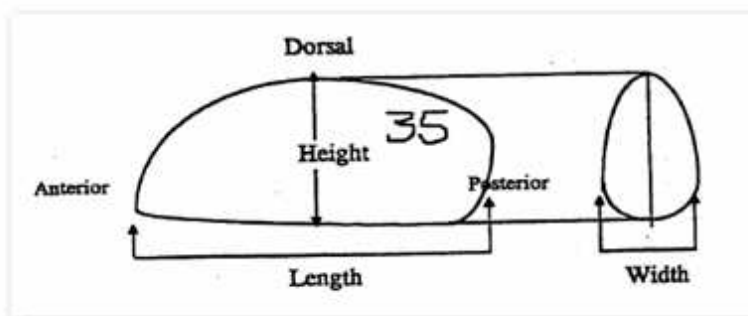
| NHHS 2013 (INDIGENOUS MUSSELS) | | | | | METALS | | *calculated field | *Weight of jar and mussel meat | |
|--------------------------------|----|-------------|----|-------------|-------------|------------|-------------------|--------------------------------|----------------|
| Site | # | Length (mm) | # | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Cumulative wet weight (g)* | Jar weight (g) |
| NHHS-COMP | 1 | 52.2 | 11 | 54.1 | 27.8 | 26.3 | 7.42 | 204.81 | 197.39 |
| NHHS-COMP | 2 | 50.1 | 12 | 58.9 | 30.8 | 28.9 | 13.90 | 218.71 | |
| NHHS-COMP | 3 | 50.8 | 13 | 55.5 | 32.8 | 28.3 | 9.26 | 227.97 | |
| NHHS-COMP | 4 | 52.6 | 14 | 51.6 | 28.5 | 25.0 | 5.35 | 233.32 | |
| NHHS-COMP | 5 | 50.4 | 15 | 55.4 | 30.7 | 25.3 | 7.76 | 241.08 | |
| NHHS-COMP | 6 | 50.6 | 16 | 50.7 | 28.9 | 26.3 | 7.65 | 248.73 | |
| NHHS-COMP | 7 | 53.6 | 17 | 53.3 | 27.5 | 26.7 | 6.94 | 255.67 | |
| NHHS-COMP | 8 | 57.9 | 18 | 50.6 | 27.1 | 26.0 | 6.36 | 262.03 | |
| NHHS-COMP | 9 | 54.7 | 19 | 58.1 | 29.0 | 30.8 | 9.84 | 271.87 | |
| NHHS-COMP | 10 | 52.9 | 20 | 52.8 | 27.3 | 26.9 | 6.34 | 278.21 | |
| 1-20 total | | | | | | | 144.38 | 341.77 | |

| NHHS 2013 (INDIGENOUS MUSSELS) | | | | | ORGANICS | | *calculated field | *Weight of jar and mussel meat | |
|--------------------------------|----|-------------|----|-------------|-------------|------------|-------------------|--------------------------------|----------------|
| Site | # | Length (mm) | # | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Cumulative wet weight (g)* | Jar weight (g) |
| NHHS-COMP | 1 | 57.3 | 11 | 55.9 | | | | | 200.43 |
| NHHS-COMP | 2 | 56.4 | 12 | 54.0 | | | | | |
| NHHS-COMP | 3 | 54.8 | 13 | 52.0 | | | | | |
| NHHS-COMP | 4 | 50.9 | 14 | 52.1 | | | | | |
| NHHS-COMP | 5 | 50.3 | 15 | 56.7 | | | | | |
| NHHS-COMP | 6 | 52.8 | 16 | 51.4 | | | | | |
| NHHS-COMP | 7 | 50.2 | 17 | 50.8 | | | | | |
| NHHS-COMP | 8 | 54.1 | 18 | 51.5 | | | | | |
| NHHS-COMP | 9 | 50.5 | 19 | 52.1 | | | | | |
| NHHS-COMP | 10 | 53.6 | 20 | 52.7 | | | | | |
| 1-20 total | | | | | | | 145.18 | 345.61 | |



| NHDP 2013 (INDIGE NOUS MUSSELS) | | | | METALS | | | *calculated field | *Weight of jar and mussel meat | |
|---------------------------------|----|-------------|----|-------------|-------------|------------|-------------------|--------------------------------|----------------|
| Site | # | Length (mm) | # | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Cumulative wet weight (g)* | Jar weight (g) |
| NHDP-COMP | 1 | 53.1 | 11 | 57.5 | 29.2 | 24.5 | 7.28 | 204.32 | 197.04 |
| NHDP-COMP | 2 | 57.6 | 12 | 55.8 | 27.0 | 23.5 | 6.78 | 211.10 | |
| NHDP-COMP | 3 | 59.0 | 13 | 56.1 | 26.4 | 24.2 | 6.83 | 217.93 | |
| NHDP-COMP | 4 | 59.6 | 14 | 54.6 | 26.2 | 23.4 | 4.97 | 222.90 | |
| NHDP-COMP | 5 | 51.7 | 15 | 56.1 | 25.1 | 23.5 | 6.69 | 229.59 | |
| NHDP-COMP | 6 | 56.5 | 16 | 58.0 | 29.7 | 24.6 | 6.81 | 236.40 | |
| NHDP-COMP | 7 | 56.4 | 17 | 54.4 | 25.0 | 23.2 | 6.08 | 242.48 | |
| NHDP-COMP | 8 | 59.3 | 18 | 55.5 | 26.8 | 22.9 | 5.64 | 248.12 | |
| NHDP-COMP | 9 | 59.0 | 19 | 56.7 | 28.7 | 24.4 | 7.38 | 255.50 | |
| NHDP-COMP | 10 | 59.2 | 20 | 56.4 | 28.0 | 21.1 | 5.12 | 260.62 | |
| 1-20 total | | | | | | | 128.83 | 325.87 | |

| NHDP 2013 (INDIGE NOUS MUSSELS) | | | | ORGANICS | | | *calculated field | *Weight of jar and mussel meat | |
|---------------------------------|----|-------------|----|-------------|-------------|------------|-------------------|--------------------------------|----------------|
| Site | # | Length (mm) | | Length (mm) | Height (mm) | Width (mm) | Wet weight (g) | Cumulative wet weight (g)* | Jar weight (g) |
| NHDP-COMP | 1 | 53.0 | 11 | 54.6 | | | | | 197.18 |
| NHDP-COMP | 2 | 58.5 | 12 | 55.4 | | | | | |
| NHDP-COMP | 3 | 53.1 | 13 | 56.4 | | | | | |
| NHDP-COMP | 4 | 59.7 | 14 | 58.6 | | | | | |
| NHDP-COMP | 5 | 58.2 | 15 | 57.3 | | | | | |
| NHDP-COMP | 6 | 57.7 | 16 | 54.2 | | | | | |
| NHDP-COMP | 7 | 59.2 | 17 | 54.4 | | | | | |
| NHDP-COMP | 8 | 57.9 | 18 | 52.1 | | | | | |
| NHDP-COMP | 9 | 58.1 | 19 | 55.6 | | | | | |
| NHDP-COMP | 10 | 57.4 | 20 | 58.3 | | | | | |
| 1-20 total | | | | | | | 130.37 | 327.55 | |



| NH Gulfwatch 2013 Sample Jar Data Summary | | | TARE WEIGHT | | TOTAL WEIGHT | | TISSUE WEIGHT | | LENGTH | |
|---|-----------|------------------|-------------|--------|--------------|--------|---------------|--------|--------|-------|
| Site | Site # | Jar label | ORGANICS | METALS | ORGANICS | METALS | ORGANICS | METALS | MIN | MAX |
| Indigenous Mussels | | | | | | | | | | |
| Harbor, Maine | MECC-COMP | MECC-COMP-130910 | 197.57 | 196.97 | 334.80 | 350.89 | 137.23 | 153.92 | 52.20 | 60.00 |
| New Hampshire | NHHS-COMP | NHHS-COMP-130910 | 200.43 | 197.39 | 345.61 | 341.77 | 145.18 | 144.38 | 50.10 | 58.90 |
| New Hampshire | NHDP-COMP | NHDP-COMP-130910 | 197.18 | 197.04 | 327.55 | 325.87 | 130.37 | 128.83 | 51.70 | 59.70 |
| Summary Statistics | | | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Min |
| Mussels | | | 198.39 | 197.13 | 335.99 | 339.51 | 137.59 | 142.38 | 50.10 | 60.00 |

Appendix B: NH Gulfwatch Data for 2013

| StationID | SampNo | StartDate | Medium | Category | ParmType | Parameter | Result | ResultUnits |
|-----------|--------|-----------|---------------|----------------|----------|----------------------|---------|-------------|
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | LAB DUPLICATE | METAL | ALUMINUM | 90.00 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | LAB DUPLICATE | METAL | CADMIUM | 1.81 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | LAB DUPLICATE | METAL | CHROMIUM | 1.15 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | LAB DUPLICATE | METAL | COPPER | 6.48 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | LAB DUPLICATE | METAL | IRON | 274.40 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | LAB DUPLICATE | METAL | LEAD | 2.10 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | LAB DUPLICATE | METAL | NICKEL | 1.01 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | LAB DUPLICATE | METAL | SILVER | 0.06 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | LAB DUPLICATE | METAL | ZINC | 82.03 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | LAB DUPLICATE | PHYSICAL | PERCENT SOLIDS | 15.80 | % |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | ALUMINUM | 79.70 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | CADMIUM | 1.67 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | CHROMIUM | 1.05 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | COPPER | 6.38 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | IRON | 249.00 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | LEAD | 2.08 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | MERCURY | 0.21 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | NICKEL | 0.96 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | SILVER | 0.05 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | ZINC | 80.60 | MG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | ACENAPHTHENE | 4.44 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | ACENAPHTHYLENE | 2.18 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | ANTHRACENE | 3.07 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(A)ANTHRACENE | 3.96 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(A)PYRENE | 1.98 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(B)FLUORANTHENE | 5.53 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(E)PYRENE | 9.15 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(GH)PERYLENE | < 0.341 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(K)FLUORANTHENE | 5.39 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BIPHENYL | 0.41 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-CHRYSENE | 3.14 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-DIBENZOTHIOPHENE | 1.09 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-FLUORANTHENE | 10.10 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-FLUORENE | 1.71 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-NAPHTHALENE | 2.94 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-PHENANTHRENE | 6.28 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-CHRYSENE | 4.30 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-DIBENZOTHIOPHENE | < 1.024 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-FLUORANTHENE | 4.85 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-FLUORENE | 3.89 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-NAPHTHALENE | 3.34 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-PHENANTHRENE | 10.03 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-CHRYSENE | < 0.478 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-DIBENZOTHIOPHENE | 3.14 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-FLUORENE | < 2.457 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-NAPHTHALENE | 4.10 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-PHENANTHRENE | 5.39 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C4-CHRYSENE | < 0.478 | UG/KG-dw |

| StationID | SampNo | StartDate | Medium | Category | ParmType | Parameter | Result | ResultUnits |
|-----------|--------|-----------|---------------|----------------|-----------|-----------------------|---------|-------------|
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C4-NAPHTHALENE | 3.48 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C4-PHENANTHRENE | 3.07 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | CHRYSENE | 6.76 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | DIBENZO(AH)ANTHRACENE | < 0.205 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | DIBENZOTHIOPHENE | 0.48 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | FLUORANTHENE | 21.43 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | FLUORENE | 1.91 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | INDENO(123CD)PYRENE | < 0.41 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | NAPHTHALENE | 3.00 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | PERYLENE | 4.91 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | PHENANTHRENE | 6.48 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | PYRENE | 20.00 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | TOTAL PAHS | 117.27 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 105 ; | 1.50 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 118 ; | 3.21 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 126 ; | < 0.205 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 128 ; | 1.16 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 138 ; | 5.19 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 169 ; | < 0.205 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 180 ; | 1.09 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 187 ; | 3.48 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 206 ; | < 0.205 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 209 ; | < 0.068 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 28 ; | < 0.137 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 29 ; | < 0.137 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 44 ; | 0.82 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 50 ; | < 0.137 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 52 ; | 0.75 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 77 ; | < 0.205 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 87 ; | 0.61 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | SUM PCBS | 33.72 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 5 ; | < 0.137 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 8 ; | < 0.137 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 15 ; | < 0.205 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 18 ; | < 0.137 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 53 ; | < 0.137 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 66 ; | 0.96 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 95 ; | 1.77 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 101 ; | 3.41 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 153 ; | 9.22 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 170 ; | 0.41 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 195 ; | < 0.137 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 208 ; | < 0.137 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 190 ; | 0.14 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | A_BHC (ALPHA LINDANE) | < 0.341 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | A-ENDOSULFAN | < 0.273 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | ALDRIN | < 0.137 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | B-ENDOSULFAN | < 0.41 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | DIELDRIN | 0.61 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | ENDRIN | < 0.273 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | G-CHLORDANE | < 0.137 | UG/KG-dw |

| StationID | SampNo | StartDate | Medium | Category | ParmType | Parameter | Result | ResultUnits |
|-----------|--------|-----------|---------------|----------------|-----------|----------------------|---------|-------------|
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | HEPTACHLOR | < 0.205 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | HEPTACHLOR EPOXIDE | < 0.205 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | HEXACHLOROBENZENE | < 0.205 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | LINDANE (G-HCH) | < 0.205 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | METHOXYCHLOR | < 0.341 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | MIREX | < 0.205 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | O,P'-DDD | 0.55 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | O,P'-DDE | < 0.137 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | O,P'-DDT | < 0.273 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | P,P'-DDD | 1.77 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | P,P'-DDE | 3.69 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | P,P'-DDT | < 0.273 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | TOTAL DDT | 6.01 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | TRANSONACHLOR | 0.61 | UG/KG-dw |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PHYSICAL | LIPID CONTENT | 7.03 | % |
| MECC | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PHYSICAL | PERCENT SOLIDS | 15.70 | % |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | ALUMINUM | 60.70 | MG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | CADMIUM | 1.40 | MG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | CHROMIUM | 1.06 | MG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | COPPER | 7.37 | MG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | IRON | 168.00 | MG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | LEAD | 0.83 | MG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | MERCURY | 0.19 | MG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | NICKEL | 0.86 | MG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | SILVER | 0.03 | MG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | ZINC | 75.10 | MG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | ACENAPHTHENE | 6.32 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | ACENAPHTHYLENE | 3.42 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | ANTHRACENE | 4.54 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(A)ANTHRACENE | 8.36 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(A)PYRENE | 3.95 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(B)FLUORANTHENE | 12.37 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(E)PYRENE | 18.16 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(GH)PERYLENE | < 0.329 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(K)FLUORANTHENE | 12.70 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BIPHENYL | 0.39 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-CHRYSENE | 7.96 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-DIBENZOTHIOPHENE | 1.64 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-FLUORANTHENE | 21.71 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-FLUORENE | 1.97 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-NAPHTHALENE | 2.37 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-PHENANTHRENE | 8.29 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-CHRYSENE | 6.91 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-DIBENZOTHIOPHENE | 10.33 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-FLUORANTHENE | 10.92 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-FLUORENE | 5.00 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-NAPHTHALENE | 3.22 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-PHENANTHRENE | 12.43 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-CHRYSENE | < 0.461 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-DIBENZOTHIOPHENE | 6.71 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-FLUORENE | 22.83 | UG/KG-dw |

| StationID | SampNo | StartDate | Medium | Category | ParmType | Parameter | Result | ResultUnits |
|-----------|--------|-----------|---------------|----------------|-----------|-----------------------|---------|-------------|
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-NAPHTHALENE | 4.47 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-PHENANTHRENE | 10.13 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C4-CHRYSENE | < 0.461 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C4-NAPHTHALENE | 4.41 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C4-PHENANTHRENE | 6.12 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | CHRYSENE | 12.89 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | DIBENZO(AH)ANTHRACENE | < 0.197 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | DIBENZO(THIOPHENE) | 0.59 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | FLUORANTHENE | 32.43 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | FLUORENE | 1.97 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | INDENO(123CD)PYRENE | < 0.395 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | NAPHTHALENE | 2.96 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | PERYLENE | 9.74 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | PHENANTHRENE | 7.11 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | PYRENE | 38.29 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | TOTAL PAHS | 193.95 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 105 ; | 1.25 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 118 ; | 4.41 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 126 ; | < 0.197 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 128 ; | 1.25 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 138 ; | 5.72 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 169 ; | < 0.197 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 180 ; | 1.12 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 187 ; | 3.75 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 206 ; | < 0.197 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 209 ; | < 0.066 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 28 ; | < 0.132 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 29 ; | < 0.132 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 44 ; | 0.72 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 50 ; | < 0.132 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 52 ; | 0.92 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 77 ; | < 0.197 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 87 ; | 0.72 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | SUM PCBS | 39.47 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 5 ; | < 0.132 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 8 ; | < 0.132 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 15 ; | < 0.197 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 18 ; | < 0.132 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 53 ; | < 0.132 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 66 ; | 1.05 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 95 ; | 2.17 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 101 ; | 4.80 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 153 ; | 10.99 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 170 ; | 0.39 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 195 ; | < 0.132 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 208 ; | < 0.132 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 190 ; | 0.20 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | A_BHC (ALPHA LINDANE) | < 0.329 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | A-ENDOSULFAN | < 0.263 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | ALDRIN | < 0.132 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | B-ENDOSULFAN | < 0.395 | UG/KG-dw |

| StationID | SampNo | StartDate | Medium | Category | ParmType | Parameter | Result | ResultUnits |
|-----------|--------|-----------|---------------|----------------|-----------|----------------------|---------|-------------|
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | DIELDRIN | 0.72 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | ENDRIN | < 0.263 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | G-CHLORDANE | < 0.132 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | HEPTACHLOR | < 0.197 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | HEPTACHLOR EPOXIDE | < 0.197 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | HEXACHLORO BENZENE | < 0.197 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | LINDANE (G-HCH) | < 0.197 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | METHOXYCHLOR | < 0.329 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | MIREX | < 0.197 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | O,P'-DDD | 0.86 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | O,P'-DDE | < 0.132 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | O,P'-DDT | < 0.263 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | P,P'-DDD | 2.24 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | P,P'-DDE | 6.38 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | P,P'-DDT | < 0.263 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | TOTAL DDT | 9.47 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | TRANSONACHLOR | 0.86 | UG/KG-dw |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PHYSICAL | LIPID CONTENT | 6.05 | % |
| NHDP | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PHYSICAL | PERCENT SOLIDS | 16.80 | % |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | ALUMINUM | 31.00 | MG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | CADMIUM | 2.04 | MG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | CHROMIUM | 0.42 | MG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | COPPER | 6.19 | MG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | IRON | 109.00 | MG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | LEAD | 0.90 | MG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | MERCURY | 0.08 | MG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | NICKEL | 0.54 | MG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | SILVER | 0.03 | MG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | METAL | ZINC | 80.30 | MG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | ACENAPHTHENE | 3.42 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | ACENAPHTHYLENE | 0.66 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | ANTHRACENE | 1.10 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(A)ANTHRACENE | 1.38 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(A)PYRENE | < 0.331 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(B)FLUORANTHENE | 1.43 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(E)PYRENE | 2.43 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(GHI)PERYLENE | < 0.276 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BENZO(K)FLUORANTHENE | 1.38 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | BIPHENYL | < 0.827 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-CHRYSENE | 0.83 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-DIBENZOTHIOPHENE | 0.72 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-FLUORANTHENE | 4.13 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-FLUORENE | 1.54 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-NAPHTHALENE | 2.76 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C1-PHENANTHRENE | 4.08 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-CHRYSENE | 2.65 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-DIBENZOTHIOPHENE | 2.15 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-FLUORANTHENE | 2.37 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-FLUORENE | 5.68 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-NAPHTHALENE | 3.09 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C2-PHENANTHRENE | 5.79 | UG/KG-dw |

| StationID | SampNo | StartDate | Medium | Category | ParmType | Parameter | Result | ResultUnits |
|-----------|--------|-----------|---------------|----------------|-----------|-----------------------|---------|-------------|
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-CHRYSENE | < 0.386 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-DIBENZOTHIOPHENE | 1.82 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-FLUORENE | < 1.985 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-NAPHTHALENE | 4.24 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C3-PHENANTHRENE | 4.91 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C4-CHRYSENE | < 0.386 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C4-NAPHTHALENE | 3.42 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | C4-PHENANTHRENE | 2.37 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | CHRYSENE | 3.58 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | DIBENZO(AH)ANTHRACENE | < 0.165 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | DIBENZOTHIOPHENE | 0.33 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | FLUORANTHENE | 12.35 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | FLUORENE | 1.38 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | INDENO(123CD)PYRENE | < 0.331 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | NAPHTHALENE | 2.48 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | PERYLENE | < 0.386 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | PHENANTHRENE | 5.40 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | PYRENE | 8.27 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PAH | TOTAL PAHS | 59.43 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 105 ; | 0.72 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 118 ; | 1.10 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 126 ; | < 0.165 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 128 ; | 0.55 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 138 ; | 1.60 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 169 ; | < 0.165 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 180 ; | 0.44 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 187 ; | 0.94 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 206 ; | < 0.165 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 209 ; | < 0.055 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 28 ; | < 0.11 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 29 ; | < 0.11 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 44 ; | < 0.055 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 50 ; | < 0.11 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 52 ; | 0.39 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 77 ; | < 0.165 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 87 ; | 0.06 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | SUM PCBS | 10.36 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 5 ; | < 0.11 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 8 ; | < 0.11 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 15 ; | < 0.165 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 18 ; | < 0.11 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 53 ; | < 0.11 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 66 ; | 0.39 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 95 ; | 0.50 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 101 ; | 1.05 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 153 ; | 2.65 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 170 ; | < 0.11 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 195 ; | < 0.11 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 208 ; | < 0.11 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PCB | 190 ; | < 0.055 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | A_BHC (ALPHA LINDANE) | < 0.276 | UG/KG-dw |

| StationID | SampNo | StartDate | Medium | Category | ParmType | Parameter | Result | ResultUnits |
|-----------|--------|-----------|---------------|----------------|-----------|--------------------|---------|-------------|
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | A-ENDOSULFAN | < 0.221 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | ALDRIN | < 0.11 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | B-ENDOSULFAN | < 0.331 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | DIELDRIN | 0.61 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | ENDRIN | < 0.221 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | G-CHLORDANE | < 0.11 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | HEPTACHLOR | < 0.165 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | HEPTACHLOR EPOXIDE | < 0.165 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | HEXACHLOROBENZENE | < 0.165 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | LINDANE (G-HCH) | < 0.165 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | METHOXYCHLOR | < 0.276 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | MIREX | < 0.165 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | O,P'-DDD | 0.55 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | O,P'-DDE | < 0.11 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | O,P'-DDT | < 0.221 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | P,P'-DDD | 1.38 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | P,P'-DDE | 2.32 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | P,P'-DDT | < 0.221 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | TOTAL DDT | 4.24 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PESTICIDE | TRANSONACHLOR | 0.50 | UG/KG-dw |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PHYSICAL | LIPID CONTENT | 5.73 | % |
| NHHS | COMP | 09/10/13 | MUSSEL TISSUE | ROUTINE SAMPLE | PHYSICAL | PERCENT SOLIDS | 19.00 | % |