From: "Timothy Rice" <tbrice@gw.dec.state.ny.us>
To: "Joseph J. Adler" <jadler@entergy.com>
Date: 05/25/2007 12:23:52 PM
Subject: NYS Comments on Normandeau Protocols

Jay,
Attached is a pdf with imbedded comments from the DEC and DOH.
Also attached are pdf's of forms recommended for consideration for use for this sampling effort.

Tim Rice

CC: <PDonahu@entergy.com>, "James Noggle" <JDN@nrc.gov>, "John White" <JRW1@nrc.gov>

B-37

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DRAFT

2007 ENTERGY INDIAN POINT SPRING FISH AND BLUE CRAB REMP SAMPLE COLLECTION

1.0 Purpose

This document provides the procedures for obtaining and processing fish and blue crab samples for radiological analysis for the 2007 Entergy Indian Point Spring Radiological Environmental Monitoring Program (REMP) from each of three Hudson River regions.

2.0 Sampling Schedule

Spring REMP samples will be collected during the period of 28 May through 20 June 2007 from each of three Hudson River regions.

3.0 Sampling Regions

3.1 Definition: Hudson River Mile. Locations along the length of the Hudson River between New York City (NY) and Albany (NY) are designated by river miles (RM) measured along the centerline of the river starting from the southern tip of Battery Park in Manhattan at RM 1 northward to Albany at RM 152.

3.2 The Entergy REMP Program Indian Point Region 4 is located in the Hudson River from Grassy Point at RM 39 northward to just above the Bear Mountain Bridge (RM 46). The Indian Point Region of the Hudson River encompasses eight (8) miles along the length of the Hudson River.

3.3 The Entergy REMP Program Poughkeepsie Region 7 starts at the Newburgh-Beacon Bridge at RM 62 and ends one mile above the Mid-Hudson Bridge at RM 76. The Poughkeepsie Region encompasses fifteen (15) miles along the length of the Hudson River.

3.4 The Entergy REMP Program Catskill Region 11 starts at North Germantown (RM 107) and ends one mile above Nutton Hook at RM 124. The Catskill Region encompasses eighteen (18) miles along the length of the Hudson River.

4.0 Numbers of Samples Scheduled for Collection by Region

4.1 Indian Point Region

Number of Samples Scheduled for Collection during the Spring Period: 28 May through 20 June 2007.

DATE	SLEDS	TUCKER TRAWLS	BEACH SEINE	TOTAL
28 May-1 Jun	8	14	0	22
4-8 Jun	8	18	0	26
11-15 Jun	8	18	3	29
18-20 Jun	8	18	0	26
TOTAL	**32**	**68**	**3**	**103**

4.2 Poughkeepsie

Number of Samples Scheduled for Collection during the Spring Period: 28 May through 20 June 2007.

DATE	SLEDS	TUCKER TRAWLS	BEACH SEINE	TOTAL
28-1 Jun	12	18	0	30
4-8 Jun	7	15	0	22
11-15 Jun	7	15	8	30
18-20 Jun	7	15	0	22
TOTAL	**33**	**63**	**8**	**104**

4.3 Catskill

Number of Samples Scheduled for Collection during the Spring Period: 28 May through 20 June 2007.

DATE	SLEDS	TUCKER TRAWLS	BEACH SEINE	TOTAL
28-1 Jun	3	3	0	6
4-8 Jun	3	3	0	6
11-15 Jun	3	3	19	25
18-20 Jun	3	3	0	6
TOTAL	**12**	**12**	**19**	**43**

5.0 Sampling Equipment

The following equipment (or equivalent) as applicable is needed:

- Appropriate sampling gear (e.g., epibenthic sled, Tucker trawl, beach seine, beam trawl, gill nets and electro-fishing equipment)
- Copy of Standard Operating Procedure

- U.S. Coast Guard approved PFD.
- Plastic bags.
- Sample labels.
- Data sheets, notebook, Chain of Custody Forms.
- Pen (waterproof ink only) or pencil.
- Weighing scales or balance.
- Cooler and ice
- Filet knife.

6.0 Fish Collections

6.1 Fish samples required for REMP collection in each region shall include striped bass, white perch, catfish (brown bullheads, white catfish or channel catfish), American eel, sunfish family (Centrachidae), carp and blue crab when available.

6.2 For each region and target species during this Spring sampling event collect sufficient numbers of fish to obtain 1600 grams of edible tissue from each fish species or group. For the larger species (striped bass, catfish and carp) collect 3200 grams.

6.3 Collect needed specimens by the gear listed in Section 5.0 or any acceptable fisheries gear/techniques if required weight quotas are not being filled. Use of sampling gear other than the gear listed in Section 5.0 must have prior approval of the Program Manager.

6.4 Complete a field data sheet (Figure 1) for each sample collection with the following pertinent information: region, task, sample number, date, time, river mile, GPS location, gear, taxon and number of retained specimens for each sample that REMP specimens are retained from.

6.5 Place retained REMP fish (separate by species in appropriate labeled containers (e.g., cooler, plastic bags, etc.).

6.6 Label each container of fish with internal and external labels with the following information region, species, task, sample number, date and time.

6.7 Return fish to the laboratory.

6.8 Upon returning to the laboratory place the retained REMP fish samples in the refrigerator or freezer.

6.9 Leave a copy of each Field data sheet that REMP fish were retained from for the Laboratory Supervisor.

2007 Indian Point Spring Fish and Blue Crab REMP Sample Collection

Region Indian Point = 4, Poughkeepsie = 7, Catskill =11

Task Ichthyo = 88, Beach Seine = 23, Other = 95

Sample Number

Date (mmddyy) **Time** (24-hr, hhmm)

River Mile

GPS Location N W

Gear 64 = epibenthic sled 65 = Tucker trawl 12 = beach seine

97 = gill net 98 = electrofishing 99 = other (**requires comment**)

Taxon (use Hudson R. codes)	**Number Retained for REMP**

Comments:

Figure 1

7.0 Laboratory Processing

7.1 Remove REMP samples from the refrigerator/freezer for thawing if frozen and sort samples by region, sample number and species.

7.2 Prior to the fish processing and between each sample the glass cutting boards, knives, blender and hands must be rinsed with tap water and lab reagent water. Rinsing cutting boards between samples may be eliminated if they are covered with heavy duty aluminum foil. Use a new piece of foil for each sample. Knife blades are rinsed with 30% HNO_3 solution prior to the tap water and lab reagent rise water.

7.3 Fillet edible tissue from each species and weigh. Do not remove the scales from the skin and the skin must remain attached to the fish carcass. Process sufficient quantities of fish until the 1600 gram weigh quota (3200 grams for larger species) for each species is filled.

7.4 The remaining fish carcass for each species is then packaged and sent to the New York State Department of Environmental Conservation for storage.

7.5 Once sufficient skinless fillets of edible tissue from each species has been obtained to fill a 1600 or 3200 gram sample place the tissue into the fish blender. Operate the blender until the sample is homogenized.

7.6 Remove the homogenized composite sample from the blender and separate the 1600 gram sample into two samples of 300 grams and one sample of 1000 grams as required by the three laboratories. The 3200 gram sample will be packaged into two samples of 600 grams and one sample of 2000 grams. Package the 3 homogenized samples by region, sample number, date and species in double plastic bags and freeze.

7.7 Label each bag of fillets with the information listed below

- Region, task, sample number, date and time.
- Species and number of individual fish each sample contains

7.8 Repeat above procedures until all samples have been processed.

8.0 Sample Delivery

8.1 When the spring sample collection period is completed contact the Entergy REMP representative to arrange for sample transfer with prior approval of the Program Manager.

8.2 All samples are transferred only after a Chain of Custody form has been completed. See Section 9.0.

8.3 Tom Burns at 914-734-5690 is the Entergy REMP contact.

9.0 CHAIN OF CUSTODY FOR INDIAN POINT SPRING REMP PROGRAM

9.1 Purpose of this Procedure

This procedure describes Normandeau Associates, Inc. (Normandeau) instructions for completing chain of custody (COC) forms (Figure 2) and the delivery of REMP samples to the Entergy Nuclear Operations Inc (Entergy).

9.1.1 One or more COC forms will accompany REMP samples collected by Normandeau and delivered to the Entergy.

9.1.2 Each COC form consists of three-part carbonless paper with an original (white) cover page, a yellow middle page, and a pink bottom page. The original (white) cover page remains with the samples at all times.

9.1.3 When the samples are passed from one individual to another, each party retains a copy of the COC form.

9.1.4 See Figure 2 Example of completed COC form.

Figure 2. Example of Completed Chain of Custody Form.

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

www.normandeau.com (603) 472-5191

Chain of Custody Form

Project Name: Entergy Indian Point REMP
Project Number: 21020.000
Originating Contact: Joan Blan
Originator Location: West Haverstraw, N.Y.
Final Destination: Indian Point Energy Center
Sampler(s): Chris Burnett, Lawson Upchurch

Page 1 of 1

Method of Shipment: Client Pick-up

Comments Below:

Sample No.	Sample Identification	Collection Date	Collection Time	Containers No.	Containers Type	Grab.	Comp.	Presv. Frozen	Parameters	Parameters	Parameters	Parameters
1	88-0120	5/1/07	1030	1	Plastic BAG		X	X				
				Total								

Relinquished by: (signature)	Received by: (signature)	Relinquished by: (signature)	Received by: (signature)	Relinquished by: (signature)	Received by: (signature)
Michael J Ricci					
Printed Name: Michael J Ricci	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Date: 6/20/07	Date:	Date:	Date:	Date:	Date:

Chain of Custody Form.doc 12/5/06

NORMANDEAU ASSOCIATES

APPENDIX A

NEW YORK STATE

GENERAL FISH COLLECTION AND HANDLING PROCEDURES

A. Following data are to be taken on each fish collected:

1. Date collected

2. Species identification (please be explicit enough to enable assigning genus and species)

3. Total length (nearest mm or smallest sub-unit on measuring instrument) and weight (nearest gram or smallest sub-unit of weight on weighing instrument). Take all measures as soon as possible with calibrated, protected instruments (e.g. from wind and upsets) and prior to freezing.

4. Method of collection (gill net, hook and line, etc.)

5. Sample location (Waterway and nearest prominent identifiable landmark).

6. Sex - fish may be cut enough to allow sexing, but do not eviscerate.

7. Tag number - (each specimen to be individually jaw tagged at time of collection with a unique number). For small fish or composite samples place the tag inside the bag with the samples.

Record length and weight as soon as possible after collection and before freezing. Other data are recorded in the field upon collection. An age determination of each fish is optional, but if done, it is recorded in the appropriate "Age" column.

The original of all collection record and continuity of evidence forms shall accompany delivery of fish to the lab. A copy shall be directed to the Project Leader or as appropriate, Larry Skinner, or Michael Kane. All necessary forms will be supplied by the Bureau of Habitat.

Please submit photocopies of topographic maps or good quality navigation charts indicating sampling locations. These records are of immense help to us (and hopefully you) in providing documented location records which are not dependent on memory and/or the same collection crew. In addition, they may be helpful for contaminant source track down and remediation/control efforts of the Department.

B. Each fish to be placed and secured in a plastic bag. If necessary, food grade bags may be procured from a suitable vendor (e.g. grocery store, ULINE).

C. Groups of fish, by species, to be placed in one large plastic bag per sampling location.

D. Do not eviscerate.

E. All fish must be kept at a temperature below 45°F immediately following data processing. As soon as possible, freeze at 0°F ± 10°F. Due to occasional freezer failures, daily freezer temperature logs are required.

F. Prior to any delivery of fish, coordinate delivery with, and send copies of the collection records, continuity of evidence forms, and freezer temperature logs, to the

Project Leader, or:

Larry Skinner or Michael Kane
Bureau of Habitat
5th Floor
625 Broadway
Albany, New York 12233-4756
Telephone: (518) 402-8969

Samples will then be directed to the analytical facility and personnel noted on specific project descriptions.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
BUREAU OF HABITAT

FISH PREPARATION PROCEDURES FOR CONTAMINANT ANALYSIS

Background

New York State Department of Environmental Conservation (DEC) conducts studies requiring chemical analysis on fish tissues. Routine monitoring and surveillance studies develop data on contaminants in fish for several reasons:

1. To identify sources of environmental contamination;

2. To identify the geographic extent of environmental contamination;

3. To identify temporal trends of contaminants in fish and wildlife;

4. To identify potential impacts to fish and their consumers; and

5. To provide information regarding human consumption advisories.

Chemical analyses of edible fish flesh have been determined to be the most appropriate analyses for satisfying all of these objectives. The following methodology has been developed in order to standardize the tissues under analysis and to adequately represent the contaminant levels of fish flesh. The methodology is slightly modified from the U.S. Food and Drug Administration procedures. The portion of edible flesh analyzed will be referred to as the standard fillet unless otherwise noted. For some species, the procedure is modified as indicated below.

Procedures for Standard Filleting

1. Remove scales from fish. Do not remove the skin.

2. Make a cut along the ventral midline of the fish from the vent to the base of the jaw.

3. Make diagonal cut from base of cranium following just behind gill to the ventral side just behind pectoral fin.

4. Remove the flesh and rib cage from one-half of the fish by cutting from the cranium along the spine and dorsal rays to the caudal fin. The ribs should remain on the fillet.

5. Score the skin and homogenize the entire fillet.

Modifications to Standard Fillet

Four modifications of the standard fillet procedure are designed to account for variations in fish size or known preferred preparation methods of the fish for human consumption. Other modifications are dependent upon the goals and objectives of a particular project and should be detailed in the specific work plan.

1. Some fish are too small to fillet by the above procedure. Fish less than approximately 6 inches long and rainbow smelt are prepared by cutting the head off from behind the pectoral fin and eviscerating the fish. Ensure that the belly flap is retained on the carcass to be analyzed. When this modification is used, it should be noted when reporting analytical results.

2. Some species are generally eaten following removal of the skin. The skin from these species is also relatively difficult to homogenize in the sample. Hence, for the following list of species, the fish is first skinned prior to filleting:

Brown bullhead	White catfish
Yellow bullhead	Channel catfish
Atlantic sturgeon	Lake sturgeon
Black bullhead	

3. American eel are analyzed by removing the head, skin, and viscera; filleting is not attempted.

4. Forage fish, young-of-year fish and organisms being evaluated for specific project needs (e.g., impacts to fish and their non-human consumers) are usually analyzed whole. The forage and young-of-year category is considered to be less than 150mm (6 inches).

APPENDIX B

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF FISH, WILDLIFE AND MARINE RESOURCES

FROM REGION_____ FOR _____TOXIC SUBSTANCE MONITORING PROGRAM

BY COLLECTOR(S)_____USING_____ COLLECTION METHOD

SPECIMENS PRESERVED BY _____METHOD

FILL IN APPROPRIATE BLANKS AS COMPLETELY AS POSSIBLE.

FOR LAB USE ONLY - LAB ENTRY NO.	COLLECTION OR TAG NO.	SPECIES	DATE TAKEN	LOCATION	AGE	SEX &/OR REPROD. CONDIT.	LENGTH ( )	WEIGHT ( )	REMARKS

Appendix C

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

I,_____, of_____collected the
(Print Name) (Print Business Address)
following on_____, 20____ from_____
(Date) (Water Body)
in the vicinity of _____
(Landmark, Village, Road, etc.)

Town of_____, in _____County.

Item(s)_____

_____

Said sample(s) were in my possession and handled according to standard procedures provided to me prior to collection. The sample(s) were placed in the custody of a representative of the New York State Department of Environmental Conservation on_____, 20_____.

I,_____, received the above mentioned same(s) on the date specified and assigned identification number(s) _____to the sample(s). I have recorded pertinent data for the sample(s) on the attached collection records. The sample(s) remained in my custody until subsequently transferred, prepared or shipped at times and dates as attested to below.

_____ _____
Signature Date

SECOND RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
THIRD RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
FOURTH RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
RECEIVED IN LABORATORY BY (Print Name)	TIME & DATE	REMARKS
SIGNATURE	UNIT	
LOGGED IN BY (Print Name)	TIME & DATE	ACCESSION NUMBERS
SIGNATURE	UNIT	

NOTICE OF WARRANTY

By signature to the chain of custody (reverse) , the signator warrants that the information provided is truthful and accurate to the best of his/her ability. The signator affirms that he/she is willing to testify to those facts provided and the circumstances surrounding same. Nothing in this warranty or chain of custody negates responsibility nor liability of the signators for the truthfulness and accuracy of the statements provided.

HANDLING INSTRUCTIONS

On day of collection, collector(s) name(s), address(es), date, geographic location of capture (attach a copy of topographic map or navigation chart), species, number kept of each species, and description of capture vicinity (proper noun, if possible) along with name of Town and County must be indicated on reverse.

Retain organisms in manila tagged plastic bags to avoid mixing capture locations. Note appropriate information on each bag's tag.

Keep samples as cool as possible. Put on ice if fish cannot be frozen within 12 hours. If fish are held more than 24 hours without freezing, they will not be retained or analyzed.

Initial recipient (either DEC or designated agent) of samples from collector(s) is responsible for obtaining and recording information on the collection record forms which will accompany the chain of custody. This person will seal the container using packing tape and writing his signature, time and date across the tape onto the container with indelible marker. Any time a seal is broken, for whatever purpose, the incident must be recorded on the Chain of Custody (reason, time and date) in the purpose of transfer block container then is resealed using new tape and rewriting signature, with time and date.