

## IPRenewal NPEmails

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**From:** Gray, Dara F [DGray@entergy.com]  
**Sent:** Wednesday, September 17, 2014 4:08 PM  
**To:** Wentzel, Michael  
**Cc:** Waters, Roger M.; Dacimo, Fred R. (CAE)  
**Subject:** Yesterday's Call  
**Attachments:** Indian Point Aquatic RAIs (comments).docx

Hi Mike

It was good to talk to you yesterday, and thanks again for arranging for the call. I think it was very helpful for all to help understand the data and questions.

On yesterday's call, on Entergy's end you were talking to:

Doug Heimbuch,  
John Young,  
Mark Mattson,  
Larry Barnthouse,  
Roger Waters,  
and Dara Gray

As promised, our suggested wording changes and edits are attached.

Also, were you planning on issuing a separate letter retracting the version that was sent out previously, or noting in this version that it replaced the one erroneously issued?

Thanks again

*Dara Gray REM*

**Chemistry/Environmental  
Indian Point Energy Center  
[Dgray@entergy.com](mailto:Dgray@entergy.com)  
914-254-8414**

**Hearing Identifier:** IndianPointUnits2and3NonPublic\_EX  
**Email Number:** 4630

**Mail Envelope Properties** (DA94DFACF1201C4A91A21BD336C2520A10D3C15E)

**Subject:** Yesterday's Call  
**Sent Date:** 9/17/2014 4:07:33 PM  
**Received Date:** 9/17/2014 4:07:51 PM  
**From:** Gray, Dara F

**Created By:** DGray@entergy.com

**Recipients:**

"Waters, Roger M." <rwater1@entergy.com>  
Tracking Status: None  
"Dacimo, Fred R. (CAE)" <FDacimo@entergy.com>  
Tracking Status: None  
"Wentzel, Michael" <Michael.Wentzel@nrc.gov>  
Tracking Status: None

**Post Office:** litxmetsp004.etrsouth.corp.entergy.com

| <b>Files</b>                              | <b>Size</b> | <b>Date &amp; Time</b> |
|---|-------------|------------------------|
| MESSAGE                                   | 797         | 9/17/2014 4:07:51 PM   |
| Indian Point Aquatic RALs (comments).docx |             | 122079                 |

**Options**

**Priority:** Standard  
**Return Notification:** No  
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**Sensitivity:** Normal  
**Expiration Date:**  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

Vice President, Operations  
Entergy Nuclear Operations, Inc.  
Indian Point Energy Center  
450 Broadway, GSB  
P.O. Box 249  
Buchanan, NY 10511-0249

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE  
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3, LICENSE  
RENEWAL APPLICATION ENVIRONMENTAL REVIEW (TAC NOS. MD5411  
AND MD5412)

Dear Sir or Madam:

By letter dated April 23, 2007, Entergy Nuclear Operations, Inc. (Entergy), submitted an application and associated environmental report pursuant to Title 10 of the Code of Federal Regulations (10 CFR) Part 51 and 10 CFR Part 54, to renew the operating licenses for Indian Point Nuclear Generating Unit Nos. 2 and 3 (IP2 and IP3), for review by the U.S. Nuclear Regulatory Commission (NRC). The NRC staff documented its findings related to the environment review of Entergy's license renewal application in Supplement 38 to NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" which was issued in December 2010. In June 2013, NRC issued a supplement to the final plant-specific Supplement to the GEIS. The 2013 supplement to the final SEIS included corrections to impingement and entrainment data presented in the final SEIS and, revised conclusions regarding the SMALL potential thermal impacts based on then newly available thermal plume studies, and also an update of the status of the NRC's consultation under section 7 of the Endangered Species Act with the National Marine Fisheries Service (NMFS) regarding the shortnose sturgeon and Atlantic sturgeon.

By letter dated February 19, 2014, Entergy submitted updated-newly available information including from NMFS relevant to the NRC Staff's assessment of potential impacts from the continued operation of IP2 and IP3 during the license renewal period on various-certain aquatic species in the Hudson River. The NRC staff is reviewing the updated information and has identified, as reflected -in the attached enclosure, specific areas where additional information is needed to complete the review. Further requests for additional information may be issued in the future.

- 2 -

Items in the enclosure were discussed with Ms. Dara Gray, and a mutually agreeable date for the response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-287-9249, or via e-mail [michael.wentzel@nrc.gov](mailto:michael.wentzel@nrc.gov).

Sincerely,

Michael Wentzel, Project Manager  
Projects Branch 2  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket Nos. 50-247 and 50-286

Enclosure: As stated  
cc w/encl: Listserv

- 2 -

Items in the enclosure were discussed with Ms. Dara Gray, and a mutually agreeable date for the response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-287-9249, or via e-mail [michael.wentzel@nrc.gov](mailto:michael.wentzel@nrc.gov).

Sincerely,

Michael Wentzel, Project Manager  
Projects Branch 2  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket Nos. 50-247 and 50-286

Enclosure: As stated  
cc w/encl: Listserv

DISTRIBUTION: See next page

**ADAMS Accession No.:**

\*concurring via email

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| <b>NAME</b>   |        | MWentzel    | BWittick    | MWentzel    |
| <b>DATE</b>   |        |             |             |             |

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SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE  
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3, LICENSE  
RENEWAL APPLICATION ENVIRONMENTAL REVIEW (TAC NOS. MD5411  
AND MD5412)

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EDacus, OCA                AmiPatel, RI

REQUESTS FOR ADDITIONAL INFORMATION  
RELATED TO INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3  
LICENSE RENEWAL APPLICATION ENVIRONMENTAL REVIEW

Please provide data related to Entergy's February 19, 2014 letter transmitting updated aquatic impact information two different formats, referred to here as Format 1 and Format 2. The NRC staff request the data as CSV (comma-separated variable) files with column formats specified below. The NRC staff request the data for taxon and region codes defined in Tables 1 and 2.

**Table 1. Taxon Codes**

| Taxon | Species            |
|-------|--------------------|
| 1     | Alewife            |
| 2     | Bay Anchovy        |
| 3     | American Shad      |
| 4     | Bluefish           |
| 13    | Hogchoker          |
| 19    | Atlantic Menhaden  |
| 22    | Blueback Herring   |
| 25    | Rainbow Smelt      |
| 27    | Shortnose Sturgeon |
| 28    | Spottail Shiner    |
| 29    | Atlantic Sturgeon  |
| 30    | Striped Bass       |
| 32    | Atlantic Tomcod    |
| 34    | White Catfish      |
| 35    | White Perch        |
| 45    | Weakfish           |
| 75    | Gizzard Shad       |

**Table 2. Region Codes**

| Region | River Region                |
|--------|-----------------------------|
| 1      | YK (Mile 12- 23)            |
| 2      | TZ (Mile 24- 33)            |
| 3      | CH (Mile 34- 38)            |
| 4      | IP (Mile 39- 46)            |
| 5      | WP (Mile 47- 55)            |
| 6      | CW (Mile 56- 61)            |
| 7      | PK (Mile 62- 76)            |
| 8      | HP (Mile 77- 85)            |
| 9      | KG (Mile 86- 93)            |
| 10     | SG (Mile 94-106)            |
| 11     | CS (Mile 107-124)           |
| 12     | AL (Mile 125-152)           |
| 13     | all regions 1 - 12 combined |

**Format 1 Data:** Please provide the following data from the Fall Shoals Survey (FSS), Beach Seine Survey (BSS) and Long River Survey (LRS):

- (1) the unstandardized River Segment 4 annual densities (if AKRF calculated these as in the FSEIS as the 75<sup>th</sup> percentile of the weekly densities--if AKRF used some other measure, then please submit both that measure and the 75<sup>th</sup> percentile of the weekly densities) for each survey (FSS, BSS, and LRS);
- (2) the unstandardized River Segment 4 annual CPUE (catch per unit effort) used in the AKRF analysis for each survey (FSS and LRS);
- (3) the unstandardized Riverwide CPUE for each survey (FSS, BSS, and LRS); and
- (4) the Riverwide unstandardized abundance index (with an indication for each taxon of which sampling program was used for its construction) used by AKRF for trends analysis for each year and taxon listed in Table 1.

ENCLOSURE

Consistent with the SFEIS parlance/nomenclature, Note that the NRC staff appreciates recognizes that the updated analysis provided in the February 19 submittal used only YOY (young-of-the year) data collected during weeks 28 through 42 during the BSS, weeks 29 through 42 during the FSS, and weeks 17 through 27 for the LRS. Please provide the units for each measurement. -The NRC staff requests that the format of each of these files be supplied in the format shown in Table 3, with each taxon in Table 1 presented in an individual column and each year presented in an individual row.

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**Table 3. Format for the nine Format 1 data files.**

| Year | Alewife | Bay Anchovy | American Shad | Bluefish | ... | Gizzard Shad |
|------|---------|-------------|---------------|----------|-----|--------------|
| 1985 |         |             |               |          |     |              |
| ⋮    |         |             |               |          |     |              |
| 2011 |         |             |               |          |     |              |

**Format 2 Data:** The NRC staff requests the weekly YOY density; weekly YOY catch; weekly total catch; weekly number of samples; and weekly volume sampled, all by year, region, and taxon for each sampling program (FSS, BSS, and LRS). Please provide the units for each measurement. Note, Region 13 as used in the tables of weekly catch is the total weekly catch from regions 1 – 12 as defined in Table 2. -The format of each of these files is presented in Table 4.

**Table 4. Detailed format for nine Format 2 files.**

| For regional trend analysis based on density: |        |         |           |           |           |         |           |                |           |         |
|---|--------|---------|-----------|-----------|-----------|---------|-----------|----------------|-----------|---------|
| FSS Weekly Density                            |        |         |           |           |           |         |           |                |           |         |
| TAXON   | Region | program | lifestage | year      | startdate | Enddate | Week      | Density (#/m3) | sedensity | nsample |
| 1-75  | 1-12   | FSS     | YOY       | 1979-2011 |           |         | Each Week |                |           |         |

  

| LRS Weekly Density |        |         |           |           |           |         |           |                |           |         |
|--------------------|--------|---------|-----------|-----------|-----------|---------|-----------|----------------|-----------|---------|
| TAXON              | region | program | lifestage | year      | startdate | Enddate | Week      | Density (#/m3) | sedensity | nsample |
| 1-75               | 1-12   | LRS     | YOY       | 1979-2011 |           |         | Each Week |                |           |         |

  

| BSS Weekly Density |        |         |           |           |           |         |           |                |           |         |
|--------------------|--------|---------|-----------|-----------|-----------|---------|-----------|----------------|-----------|---------|
| TAXON              | region | program | lifestage | year      | startdate | Enddate | Week      | Density (#/m3) | sedensity | nsample |
| 1-75               | 1-12   | BSS     | YOY       | 1979-2011 |           |         | Each Week |                |           |         |

  

| For regional and riverwide trend analysis based on CPUE: |           |           |        |              |       |             |               |             |           |             |
|--|-----------|-----------|--------|--------------|-------|-------------|---------------|-------------|-----------|-------------|
| FSS Weekly Catch   |           |           |        |              |       |             |               |             |           |             |
| Program  | Year      | Week      | Region | River Region | Taxon | Common Name | Count LC1/YOY | Total Count | # Samples | Volume (m3) |
| FSS  | 1979-2011 | Each Week | 1-13   |              | 1-75  |             |               |             |           |             |



| LRS Weekly Catch |           |           |        |              |       |             |               |             |           |        |
|------------------|-----------|-----------|--------|--------------|-------|-------------|---------------|-------------|-----------|--------|
| Program          | Year      | Week      | Region | River Region | Taxon | Common Name | Count LC1/YOY | Total Count | # Samples | Volume |
| LRS              | 1979-2011 | Each Week | 1-13   |              | 1-75  |             |               |             |           |        |

| BSS Weekly Catch |           |           |        |              |       |             |               |             |           |  |
|------------------|-----------|-----------|--------|--------------|-------|-------------|---------------|-------------|-----------|--|
| Program          | Year      | Week      | Region | River Region | Taxon | Common Name | Count LC1/YOY | Total Count | # Samples |  |
| BSS              | 1979-2011 | Each Week | 1-13   |              | 1-75  |             |               |             |           |  |

**For riverwide trend analysis based on the Abundance Index:**

| FSS Abundance Index |         |           |       |       |         |
|---------------------|---------|-----------|-------|-------|---------|
| Year                | Program | Lifestage | Taxon | Index | Seindex |
| 1979-2011           | FSS     | YOY       | 1-75  |       |         |

| LRS Abundance Index |         |           |       |       |         |
|---------------------|---------|-----------|-------|-------|---------|
| Year                | Program | Lifestage | Taxon | Index | Seindex |
| 1979-2011           | LRS     | YOY       | 1-75  |       |         |

| BSS Abundance Index |         |           |       |       |         |
|---------------------|---------|-----------|-------|-------|---------|
| Year                | Program | Lifestage | Taxon | Index | Seindex |
| 1979-2011           | BSS     | YOY       | 1-75  |       |         |