

## IPRenewal NPEmails

---

**From:** Chris Hogan [cmhogan@gw.dec.state.ny.us]  
**Sent:** Wednesday, May 13, 2009 2:37 PM  
**To:** Dara F Gray  
**Cc:** Mark Sanza  
**Subject:** Entergy Indian Point Units 2 & 3 - Section 401 WQC - NOIA and RFI  
**Attachments:** IP WQC RFI 5-13-09.pdf

Dara - Please find attached a letter regarding Entergy's application for a Section 401 Water Quality Certificate. You may contact me if you have any questions.

**Hearing Identifier:** IndianPointUnits2and3NonPublic\_EX  
**Email Number:** 1289

**Mail Envelope Properties** (cmhogan@gw.dec.state.ny.us20090513143635)

**Subject:** Entergy Indian Point Units 2 & 3 - Section 401 WQC - NOIA and RFI  
**Sent Date:** 5/13/2009 2:36:35 PM  
**Received Date:** 5/13/2009 2:36:35 PM  
**From:** Chris Hogan

**Created By:** cmhogan@gw.dec.state.ny.us

**Recipients:**

"Mark Sanza" <mdsanza@gw.dec.state.ny.us>

Tracking Status: None

"Dara F Gray" <DGray@entergy.com>

Tracking Status: None

**Post Office:**

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	171	5/13/2009 2:36:35 PM
IP WQC RFI 5-13-09.pdf		2317730

**Options**

**Priority:** Standard

**Return Notification:** No

**Reply Requested:** No

**Sensitivity:** Normal

**Expiration Date:**

**Recipients Received:**

**New York State Department of Environmental Conservation  
Division of Environmental Permits, 4<sup>th</sup> Floor**

625 Broadway, Albany, New York 12233-1750  
Phone: (518) 402-9167 • FAX: (518) 402-9168  
Website: [www.dec.ny.gov](http://www.dec.ny.gov)



Alexander B. Grannis  
Commissioner

May 13, 2009

Ms. Dara Gray  
Entergy Nuclear Operations, Inc.  
450 Broadway, P.O. Box 308  
Buchanan, New York 10511

**Re: Notice of Incomplete Application / Request for Additional Information  
Joint Application for CWA § 401 Water Quality Certification  
NRC License Renewal – Indian Point Units 2 and 3  
DEC Nos: 3-5522-00011/00030 [IP2] and 3-5522-00105/00031 [IP3]**

Dear Ms. Gray:

The New York State Department of Environmental Conservation (Department) is in receipt of the Joint Application under § 401 of the federal Clean Water Act (CWA) for a Water Quality Certification (WQC) submitted by Entergy Nuclear Operations, Inc. (Entergy) for Indian Point Units 2 and 3. Entergy is requesting a WQC from the Department in conjunction with a pending federal relicensing proceeding in which Entergy seeks a new license from the Nuclear Regulatory Commission (NRC) for permission to operate Indian Point Units 2 and 3 for an additional 20 years beyond the expiration of the original operating licenses.

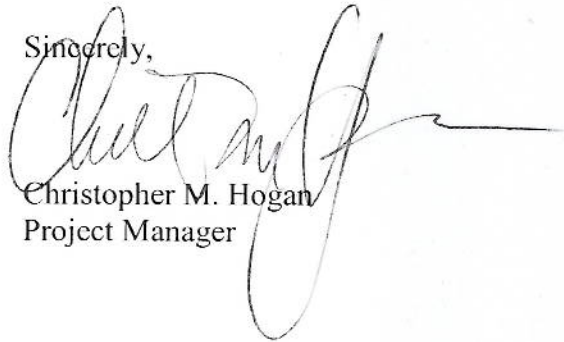
As you are aware, pursuant to the CWA, the Department has one year to take action on the WQC application. If the Department does not take action, by either issuing a WQC or denying the application, the State is deemed to have waived its right under the applicable provisions of the CWA. The Department received Entergy's Joint Application for WQC on April 6, 2009. For future reference, this will be the date the Department will consider to be the commencement of the one year timeframe provided under the CWA.

The Department has reviewed the Joint Application for WQC submitted by Entergy and, based upon this analysis, staff have determined that the application is incomplete for decision making purposes. In that regard, staff has developed the attached request for additional information in order to make all of the necessary findings or determinations required by law.

Pursuant to Environmental Conservation Law (ECL) Article 70 and 6 NYCRR Part 621 (Uniform Procedures), and except as otherwise noted in the attached, please provide the Department with a response to the attached request for information within 120 days of the date of this letter. If Entergy is unable, for any reason, to provide responses to this request for additional information within 120 days of the date of this letter, please contact me as soon as practicable to discuss setting a schedule for supplying such information to the Department. In any event, all information to be provided by Entergy in conjunction with this request for additional information MUST be submitted to the Department within nine (9) months of the date of this letter in order to allow staff an adequate opportunity to review it in a timely manner.

To expedite staff review, for future public review and comment purposes, and potential Freedom of Information Law (FOIL) requests made pursuant to the Public Officers Law concerning this WQC application, Entergy must furnish the Department with five (5) separate hard copy responses to this request for additional information to my attention here in the Department's Central Office, as well as provide two (2) additional hard copy responses to this request for information to the attention of the Regional Permit Administrator in the Department's Region 3 office in New Paltz. If you have any questions concerning the foregoing, or you would like to discuss this matter further, please contact me. Thank you.

Sincerely,



Christopher M. Hogan  
Project Manager

Attachment

- c w/ attach:
- A. Stuyvenberg – NRC
  - J. Zappieri – DOS
  - P. Eddy – DPS
  - A. Peterson – NYSERDA
  - M. Duke – R3
  - J. Parker – R3
  - C. Nieder – DFWMR
  - P. Kolakowski – DOW
  - T. Rice – DSHM
  - M. Sanza – OGC
  - W. Little – OGC
  - L. Wilkinson – OGC

EDMS#341932

**Attachment – May 2009**  
**Request for Additional Information**  
**§ 401 Water Quality Certification Application**  
**Entergy Indian Point Units 2 and 3**

1. **Name of Applicant.** The Joint Application indicates the name of the applicant is Entergy Nuclear Operations, Inc. The names of the facility/property owners are listed as Entergy Nuclear Indian Point 2, LLC and Entergy Nuclear Indian Point 3, LLC. The Department is also aware that the facility owner has been referred to as Entergy Nuclear Northeast. Please provide an organizational chart that clarifies the relationship of each of these entities as well as Entergy Corporation (a Delaware corporation), and state which entity is ultimately responsible for general compliance and if an issue of non-compliance arises should a WQC ultimately be granted.

The Department understands that the reactor inside Indian Point Unit 1 no longer generates power. However, the Department also understands that Indian Point Units 2 and 3 are tied into Indian Point Unit 1, and that they use or share various Unit 1 systems, structures, and components. Please indicate which corporate entities control and are responsible for Indian Point Unit 1.

2. **Permission To Inspect Property.** Department staff noted that Entergy modified the standard “Permission To Inspect Property” form that accompanied the Joint Application. The Department appreciates the fact that, because the subject facility is an operating nuclear power plant, Department staff may be subject to additional regulations and requirements in order to access the site. However, the “Permission To Inspect Property” form is a standard form utilized by the Department and is required to be signed, as written, by all applicants for Department approvals of this type. An unmodified “Permission To Inspect Property” form must be signed and resubmitted to the Department. If Entergy chooses to, it may submit an addendum along with the signed, unmodified “Permission To Inspect Property” form providing the additional regulations and requirements it contends Department staff may be subject to in order to access the site for purposes of its review, and the legal and regulatory bases for such requirements. Entergy’s response to this request must be provided to the Department within sixty (60) days of the date of this letter in order to allow staff an opportunity to schedule timely inspections of the property.
3. **Compliance With State Water Quality Standards.** The purpose of the WQC is to provide verification to the federal agency issuing a license, in this case the NRC, that the project meets State water quality standards. Based on a review of the supporting documentation provided with Entergy’s Joint Application, significant additional information is required to demonstrate that the proposed relicensing of Indian Point Units 2 and 3 currently meet, and will continue to meet, all applicable State water quality standards. Notably, the Joint Application is unclear as to what information Entergy is relying upon to demonstrate Indian Point Unit 2 and 3’s compliance with State water quality standards. This lack of clarity and explanation must be resolved before Department staff can undertake a meaningful review of the WQC application. This

information will also be critical at the time the Department seeks public comment on the Joint Application. Below are pertinent sections of applicable State water quality standards and a brief discussion of the information Entergy will need to provide to the Department in order to demonstrate compliance with such standards:

**A. 6 NYCRR Part 700 (Definitions, Samples and Tests).** The Joint Application must discuss and demonstrate that all samples required to be collected in order to show that Indian Point Units 2 and 3 comply with State water quality standards are/were collected in accordance with the provisions of 6 NYCRR § 700.2, and that all tests or analytical methods for measurement are/were made in accordance with the provisions of 6 NYCRR § 700.3.

**B. 6 NYCRR Part 701 (Classifications – Surface Waters and Groundwaters).** The Joint Application must discuss the classification of the Hudson River within the immediate vicinity of Indian Point Units 2 and 3, the classification of groundwater at the Indian Point site, and whether any discharge restriction categories have been assigned to the surface water or groundwater at or near the Indian Point site.

**C. 6 NYCRR Part 702 (Derivation and Use of Standards and Guidance Values).** The Joint Application must discuss and demonstrate that Indian Point Units 2 and 3 comply with all applicable standards and guidance values, including the Appendices for deriving such standards and guidance values to protect aquatic life from acute and chronic effects contained in 6 NYCRR Part 706.

**D. 6 NYCRR Part 703 (Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations).** The Joint Application does not provide any discussion or demonstration that operation of Indian Point Units 2 and 3 currently meets the standards set forth in 6 NYCRR Part 703. While the Department does not expect Entergy to resubmit previous Discharge Monitoring Reports (DMRs) for the facility, a summary of all violations and exceedances, and the reasons therefore, over the time period of the existing WQC for Indian Point Units 2 and 3 must be provided. Entergy should also submit all internal and external reports of spills (both nuclear and non-nuclear) that have occurred at the Indian Point site.

The narrative standards within 6 NYCRR § 703.2 state that no amount of toxic or deleterious substance shall be discharged to the waters of New York State that will adversely affect the taste, color or odor thereof, or impair the waters for their best usages. This includes surface waters as well as groundwater. The Department understands that leaks of radioactive material (*e.g.*, tritium, strontium-90), cesium, nickel) from the spent fuel pools, pipes, tanks, and other systems, structures, and components have occurred at Indian Point Units 1, 2, and 3. The Department further understands that the investigation of site hydrology established the extent of groundwater contamination and determined that flow of this contaminated groundwater on the Indian Point site is generally from east to west toward the Hudson River. Entergy has acknowledged that radioactive material from Indian Point has reached the Hudson River via groundwater flow from the site and continues to do so. The Department is also aware that Entergy uses a portion of the Indian Point site as a storage area for low level radiological waste. The discharge of any pollutant (including, but not limited to, radioactive liquids, radioactive solids, radioactive gases, and stormwater) offsite from the Indian Point facility to the waters of New York

State (*i.e.*, groundwater, groundwater impacting surface water, or surface water), must meet State water quality standards. Therefore, a discussion and demonstration that Indian Point has met these standards must be included in the Joint Application.

Because Entergy is seeking a 20-year extension of its federal operating license for Indian Point Units 2 and 3, the Joint Application must also discuss and demonstrate that these facilities will meet State water quality standards during the proposed 20-year extension period. The Department's concern stems from both the previous and ongoing long-running leaks from spent fuel pools and other systems, structures, and components, as well as from the groundwater contamination at the site that has been referenced in Entergy's submissions filed in conjunction with the pending NRC relicensing proceeding for Indian Point Units 2 and 3. In that regard, the Department is aware that Entergy has mapped two distinct radionuclide plumes in and around the Indian Point site. Therefore, a discussion of how these radionuclide plumes may impact surface water or groundwater at or near the Indian Point site, and otherwise comply with State water quality standards, is warranted.

**E. 6 NYCRR Part 704 (Criteria Governing Thermal Discharges).** The Joint Application must discuss and demonstrate that Indian Point Units 2 and 3 meet the thermal standards and criteria set forth in 6 NYCRR §§ 704.1, 704.2, 704.3, and 704.4. In order to demonstrate compliance with these requirements, Entergy must submit the results of a completed triaxial thermal study. The thermal study must have been completed within the last five years to ensure that the results and all analyses reflect current environmental and operating conditions for Indian Point Units 2 and 3. If a triaxial thermal study for Indian Point Units 2 and 3 has not been completed within the last five years Entergy should, within thirty (30) days of the date of this letter, submit a comprehensive thermal study protocol for undertaking the study to the Department for its review and approval.

In addition to the above thermal discharge standards, 6 NYCRR Part 704 also includes a standard for cooling water intake structures that is applicable to Indian Point Units 2 and 3. Specifically, § 704.5 states: "The location, design, construction and capacity of cooling water intake structures, in connection with point source thermal discharges, shall reflect the best technology available for minimizing adverse environmental impact." The Joint Application must discuss and demonstrate Indian Point Units 2 and 3 compliance with 6 NYCRR § 704.5.

Note: The fact that Indian Point Units 2 and 3 may operate pursuant to a State Pollutant Discharge Elimination System (SPDES) permit last issued by the Department in 1987 is not, by itself, sufficient to satisfy the requirement to demonstrate Indian Point's present and future compliance with the applicable requirements of 6 NYCRR Parts 700, 701, 702, 703, 704, or 706 for purposes of this WQC application.

4. **Compliance With Other ECL Provisions.** The Joint Application must discuss and demonstrate that Indian Point Units 2 and 3 comply with the following ECL provisions related to water quality:

A. **ECL § 17-0501 (General Prohibition Against Pollution)** – The Joint Application

must discuss and demonstrate that discharges from or at Indian Point Units 2 and 3 (including, but not limited to, radioactive liquids, radioactive solids, radioactive gases, and stormwater) do not contravene the water quality standards of ECL § 17-0301 and associated regulations.

**B. ECL § 17-0511 (Restrictions on Discharge of Sewage, Industrial Waste or Other Wastes)** – The Joint Application must discuss and demonstrate that Indian Point Units 2 and 3 do not discharge any other wastes into waters of the state (surface waters and groundwater) unless such discharge is in compliance with all standards, criteria, limitations, rules and regulations promulgated by the Department.

**C. ECL § 17-0807 (Prohibited Discharges)** – The Joint Application must discuss and demonstrate that Indian Point Units 2 and 3 comply with the prohibition against the discharge of any radiological or high-level radioactive waste (including, but not limited to, radioactive liquids, radioactive solids, radioactive gases, and stormwater) into the waters of the state (surface waters and groundwater).

Note: The fact that Indian Point Units 2 and 3 may operate pursuant to a State Pollutant Discharge Elimination System (SPDES) permit last issued by the Department in 1987 is not, by itself, sufficient to satisfy the requirement to demonstrate compliance with these provisions of law for purposes of this WQC application.

**5. Compliance With Current WQC Conditions.** The Department first issued WQCs for Indian Point Units 2 and 3 in the 1970s that are still in effect today. Entergy must discuss and demonstrate that Indian Point Units 2 and 3 have fully complied with all applicable existing WQC conditions over the relevant time period including, but not limited to, the following required items:

**A. Submission of an Implementation Plan for Minimizing Environmental Impacts on Aquatic Biota from the Operation of Once-Through Cooling Systems detailing such things as Operating Procedures, Contingency Procedures, and Modification of the Once-Through Cooling System including the Intake Structures;**

**B. Meeting Discharge Limits and Monitoring, Demonstrating Compliance with 6 NYCRR Parts 700, 701, 702, and 704, including Standards for Oil and Floating Substances; Toxic Wastes and Deleterious Substances; Suspended, Colloidal or Settleable Solids; and Estuaries or Portions of Estuaries;**

**C. Submission of Reports of Continuous Chemical, Physical, Hydraulic, Biological, Meteorological, and Thermal Monitoring Program as required by the ETSR and filed concurrently with the (former) AEC (now the NRC);**

**D. Meeting Chemical Discharge Monitoring and Analysis for such items as pH, Chromium +6 (and +3), Boron, Phosphate, Hydrazine, Cyclohexylamine, Lithium Hydroxide, Chlorine, Suspended Solids, and Dissolved Oxygen, and demonstrated Compliance with the Limitations for Chemicals listed in the WQC;**



- E. Measuring Dissolved Oxygen at the Intake Forebay and Effluent Canal;
- F. Maintenance of an Average Discharge Velocity of not less than Ten ft/sec. at the Vena Contracta of the Discharge Ports when Combined Power Level from Indian Point Units exceed 600 MW gross electric output or Whenever Discharge Canal Temperature Exceeds 90°F; and Relationships between Discharge Velocity, Open Port Area, and Canal Head above River level as Confirmed by Actual Measurement and Reports to the Department;
- G. Submission of Complete Reports on the Required Intensive Triaxial Isothermal Surveys conducted at Indian Point beginning in 1977 and Continuing to Date;
- H. Submission of Reports on all Water Treatment, Corrosion Inhibitor, Anti-Fouling, Slimicide, Biocide and Boiler Cleaning Chemicals or Compounds used in the Indian Point Units;
- I. Submission of a Report on Practices which Minimize the Impact and Use of Chlorine on Water Resources by Indian Point;
- J. Submission of a Detailed Biological Study Program for Determining the Effects of Once-Through Cooling System Operation on Aquatic Organisms, including all Required Progress and Annual Reports;
- K. Submission of Monthly Reports of Daily Operating Data as Required by the WQC including things such as Station Electrical Output in kilowatts, Water Use, Intake/Discharge Temperatures, and Daily Fish Collections of Organisms Impinged by Indian Point Operations (prior to the installation of Ristroph screens at the facility);
- L. Submission of Reports Filed Concurrently with the U.S. Environmental Protection Agency Pursuant to Sections 316(a) and 316(b) of the federal Clean Water Act;
- M. Submission of Copies of Any Other Reports for Indian Point Unit 3 Pertaining to the Environment Which was Submitted to Any Federal, State or Local Agency;
- N. Submission of Any Notifications for Requesting a Change in Indian Point's ETSR;  
and
- O. Performing a Monitoring Program of Fish Populations Until Closed Cycle Cooling is in Operation, which Program shall be Capable of Detecting a 25 Percent or Greater Change in Fish Populations in the Hudson River in the Vicinity of Indian Point.

If an existing WQC condition has not been complied with or was otherwise satisfied by Indian Point Units 2 and 3 at any time (either by Entergy or by one of its predecessors in interest), Entergy must provide the Department with a discussion of the circumstances of, and an explanation for, such noncompliance or compliance, as well as provide reasonable assurances to the Department that any such noncompliance will not, or is not likely to, reoccur in the future should a WQC ultimately be granted.

Note: The fact that Indian Point Units 2 and 3 may operate pursuant to a State Pollutant Discharge Elimination System (SPDES) permit last issued by the Department in 1987 is not, by itself, sufficient to satisfy the requirement to demonstrate compliance with the existing WQC conditions for purposes of this WQC application.