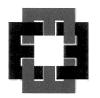
#### **Attachment A**

### **Threatened and Endangered Species Correspondence**

- J. A. Thomas, Enercon Services, Inc., to D. Stillwell, Field Supervisor, U.S. Fish and Wildlife Service, November 22, 2006.
- J. A. Thomas, Enercon Services, Inc., to D. VanLuven, Director, New York Natural Heritage Program, November 22, 2006.
- J. A. Thomas, Enercon Services, Inc., to M. Colligan, Assistant Regional Administrator for Protected Resources, National Marine Fisheries Service, November 22, 2006.
- R. A. Niver, U.S. Fish and Wildlife Service, to J. A. Thomas, Enercon Services, Inc., December 6, 2006.
- N. B. Conrad, New York Natural Heritage Program, to J. A. Thomas, Enercon Services, Inc., December 22, 2006 [Redacted].
- M. Colligan, Assistant Regional Administrator for Protected Resources, National Marine Fisheries Service, to J. A. Thomas, Enercon Services, Inc., January 23, 2007.
- M. Colligan, Assistant Regional Administrator for Protected Resources, National Marine Fisheries Service, to J. A. Thomas, Enercon Services, Inc., March 19, 2007.



ENERCON SERVICES, INC.

An Employee Owned Company 5100 E. Skelly Drive, Suite 450 Tulsa, OK 74135 (918) 665-7693 (918) 665-7232 - Fax

November 22, 2006

Mr. David Stillwell Field Supervisor U.S. Fish and Wildlife Service New York Field Office 3817 Luker Road Cortland, NY 13045

RE:

Entergy Nuclear Indian Point Indian Point Units 2 and 3

Dear Mr. Stillwell:

Entergy Nuclear Indian Point 2, LLC and Entergy Nuclear Indian Point 3, LLC (hereafter referred to as "Entergy"), the owner of Indian Point Units 2 and 3 (Indian Point) is in the process of completing an application to be filed with the Nuclear Regulatory Commission (NRC) for a potential 20 year renewal of Indian Point's operating licenses. Enercon is gathering information on Entergy's behalf relative to this potential license renewal.

Indian Point is located on the eastern bank of the Hudson River at Indian Point in the Village of Buchanan in upper Westchester County, New York. The exact location of the site is latitude 41°16′11" and longitude 73°57′8". The entire site is owned by Entergy and contains approximately 239 acres, bounded on the north, south, and east by privately owned land and on the west by the Hudson River.

The NRC requires that Entergy's application for license renewal at Indian Point, "assess the impact of the proposed action." In an effort to ascertain any potential concerns that could arise as a result of license renewal at Indian Point, Enercon is requesting any information you may have regarding potential impacts to threatened or endangered species, or other species of interest in the vicinity of Indian Point (see attached map and photos).

In the event of license renewal at Indian Point, it is not anticipated there would be any alterations to current plant operations and maintenance activities would be limited to previously disturbed areas on site. License renewal at Indian Point would not require the expansion of existing facilities or additional land disturbances.

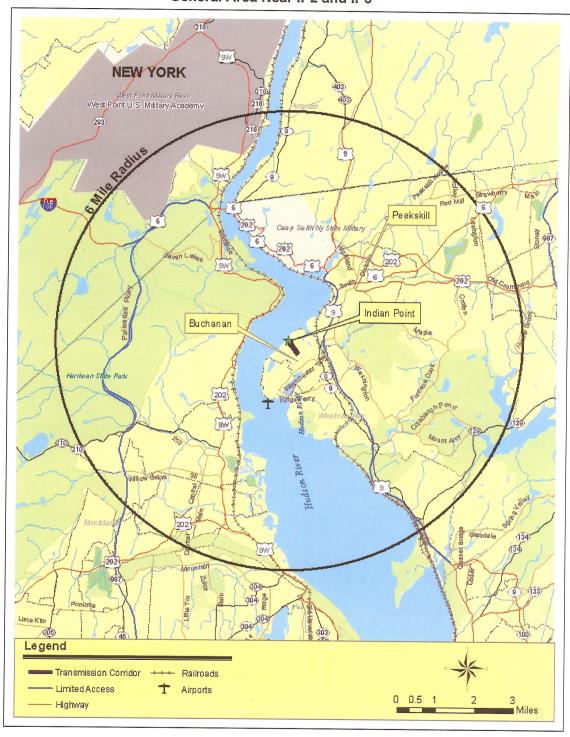
If you have any questions, please contact me at (918) 665-7693 or through my email address, jthomas@enercon.com.

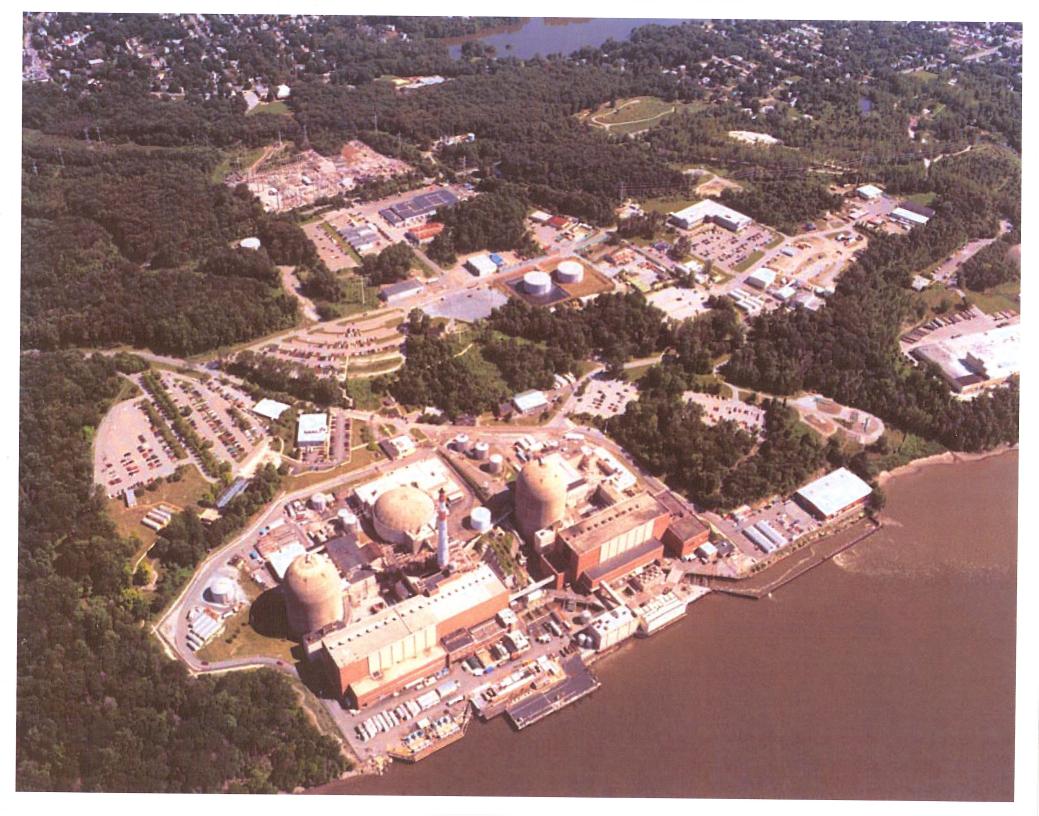
Sincerely, Homes A Thomas

James A. Thomas

Client Services Manager

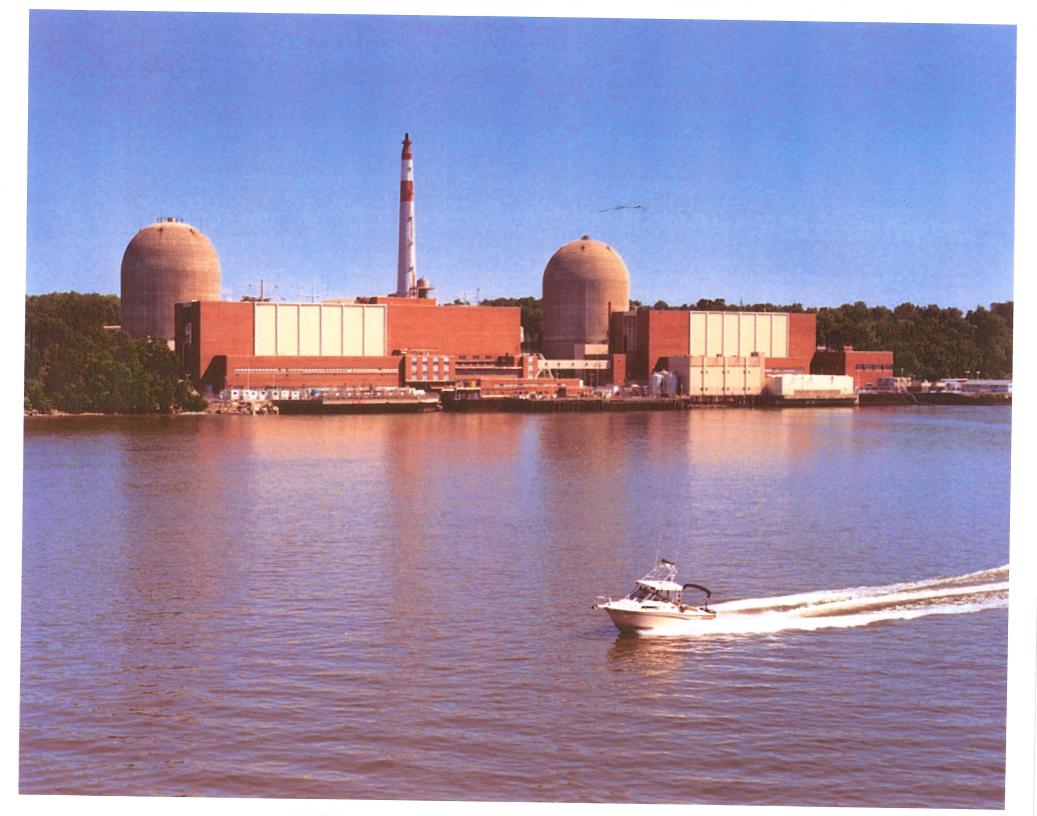
Figure 2-2 General Area Near IP2 and IP3

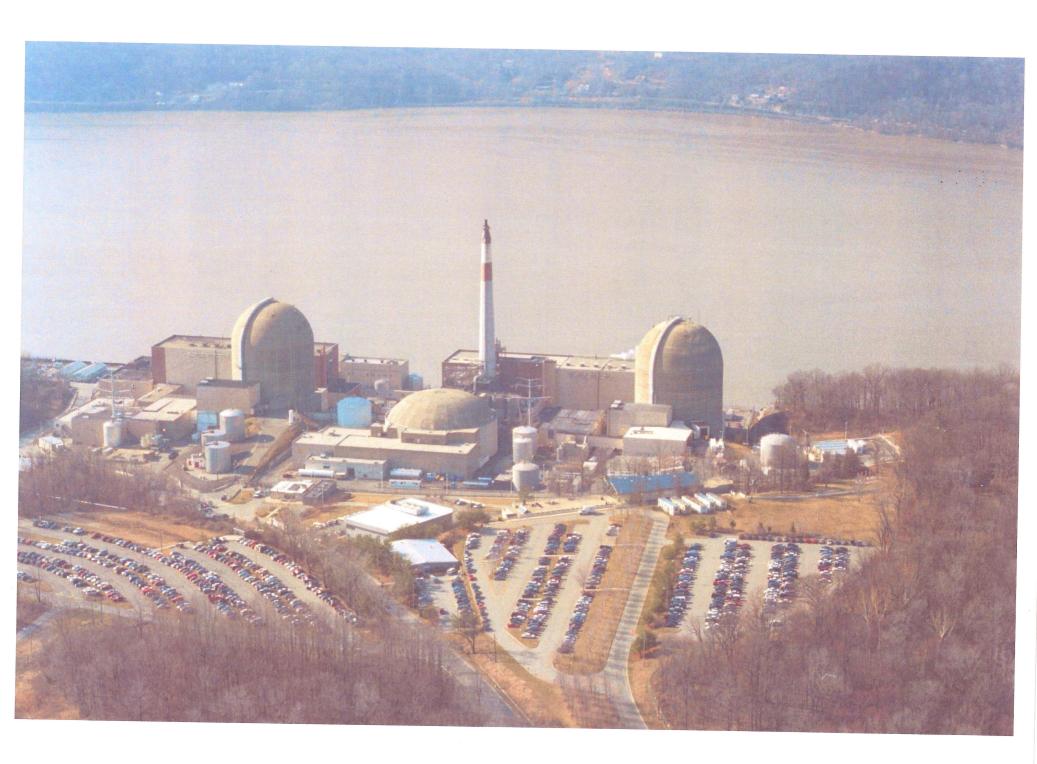


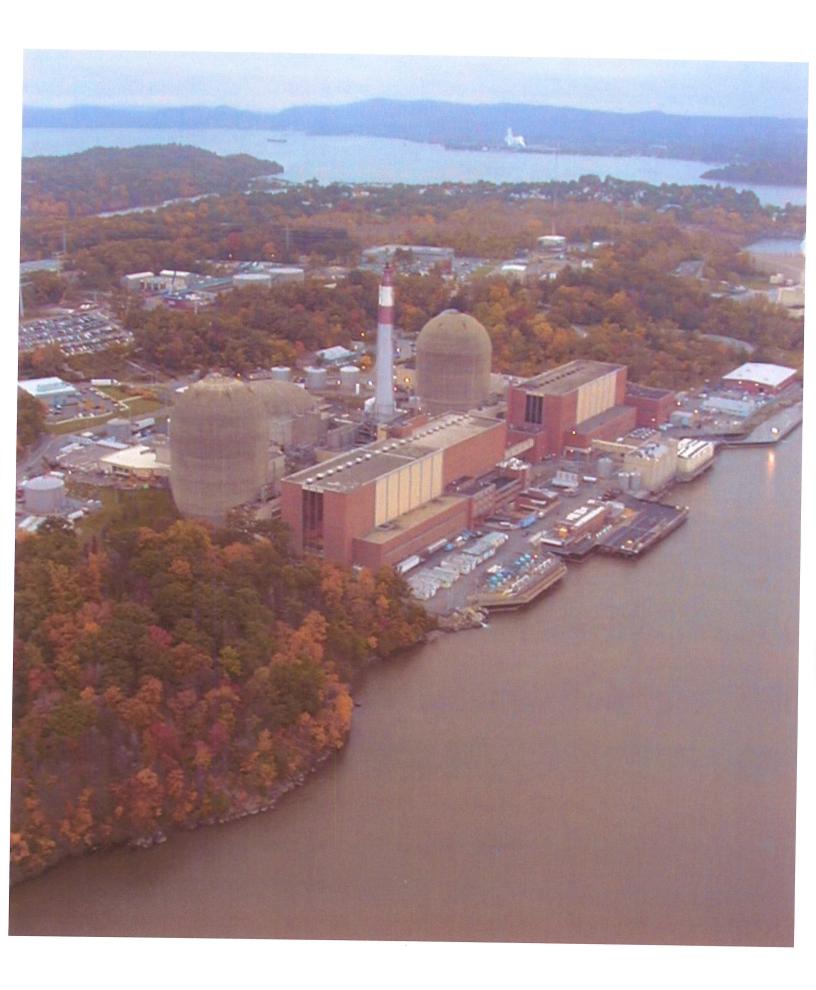


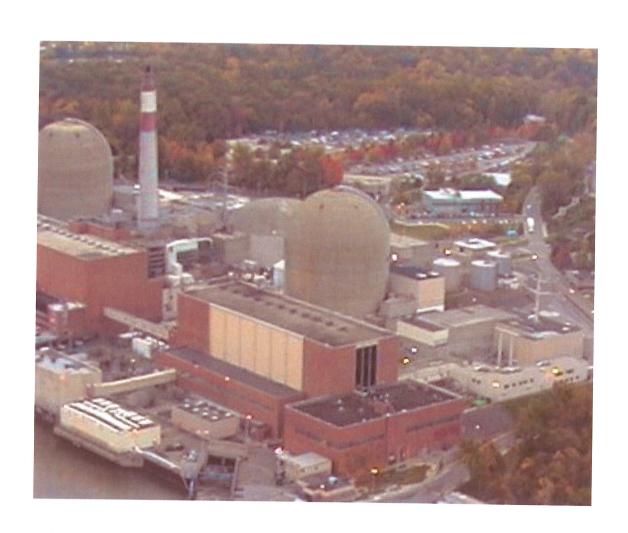
















ENERCON SERVICES, INC. An Employee Owned Company 5100 E. Skelly Drive, Suite 450 Tulsa, OK 74135 (918) 665-7693

November 22, 2006

Mr. David VanLuven, Director New York Natural Heritage Program 625 Broadway, 5<sup>th</sup> Floor Albany, NY 12233-4757

RE:

Entergy Nuclear Indian Point Indian Point Units 2 and 3

Dear Mr. VanLuven:

Entergy Nuclear Indian Point 2, LLC and Entergy Nuclear Indian Point 3, LLC (hereafter referred to as "Entergy"), the owner of Indian Point Units 2 and 3 (Indian Point) is in the process of completing an application to be filed with the Nuclear Regulatory Commission (NRC) for a potential 20 year renewal of Indian Point's operating licenses. Enercon is gathering information on Entergy's behalf relative to this potential license renewal.

Indian Point is located on the eastern bank of the Hudson River at Indian Point in the Village of Buchanan in upper Westchester County, New York. The exact location of the site is latitude 41°16'11" and longitude 73°57'8". The entire site is owned by Entergy and contains approximately 239 acres, bounded on the north, south, and east by privately owned land and on the west by the Hudson River.

The NRC requires that Entergy's application for license renewal at Indian Point, "assess the impact of the proposed action." In an effort to ascertain any potential concerns that could arise as a result of license renewal at Indian Point, Enercon is requesting any information you may have regarding potential impacts to threatened or endangered flora. fauna, or natural communities in the vicinity of the Station (see attached map and photos).

In the event of license renewal at Indian Point, it is not anticipated there would be any alterations to current plant operations and maintenance activities would be limited to previously disturbed areas on site. License renewal at Indian Point would not require the expansion of existing facilities or additional land disturbances.

If you have any questions, please contact me at (918) 665-7693 or through my email address, jthomas@enercon.com.

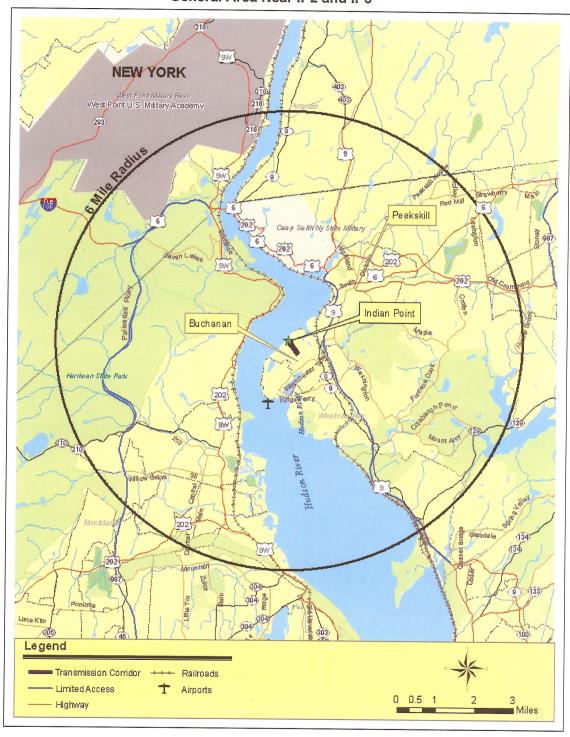
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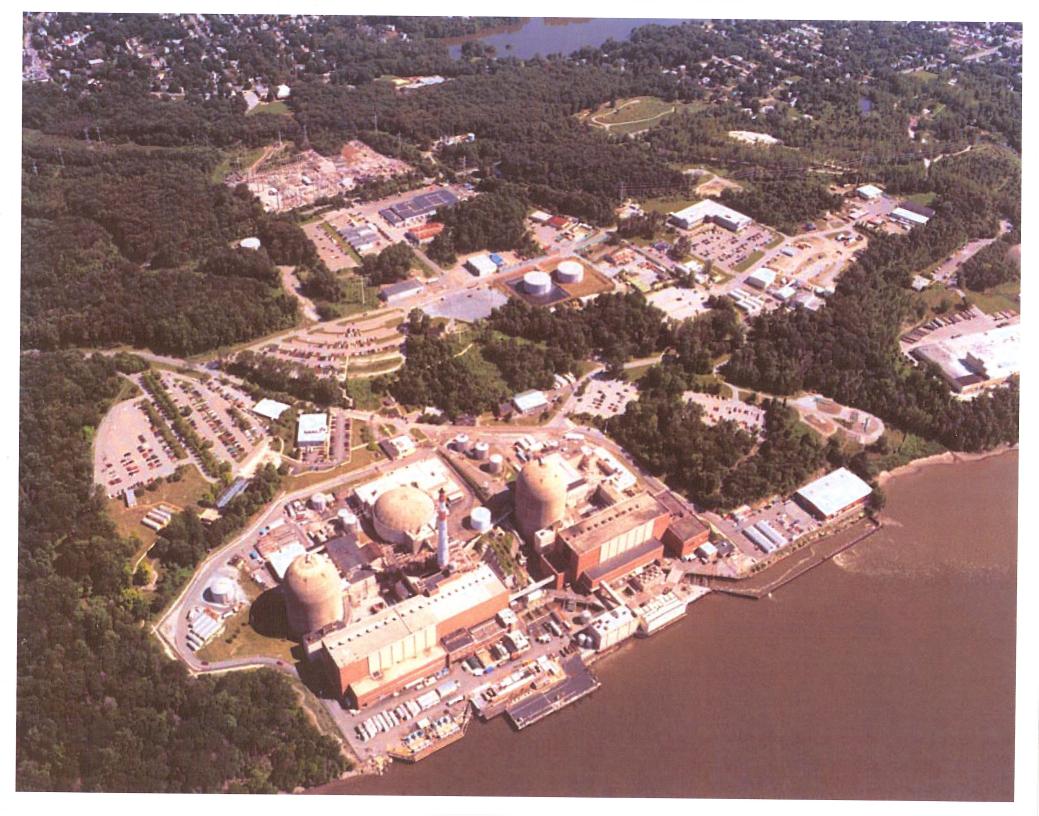
James A. Thomas

Client Services Manager

James A Thomas

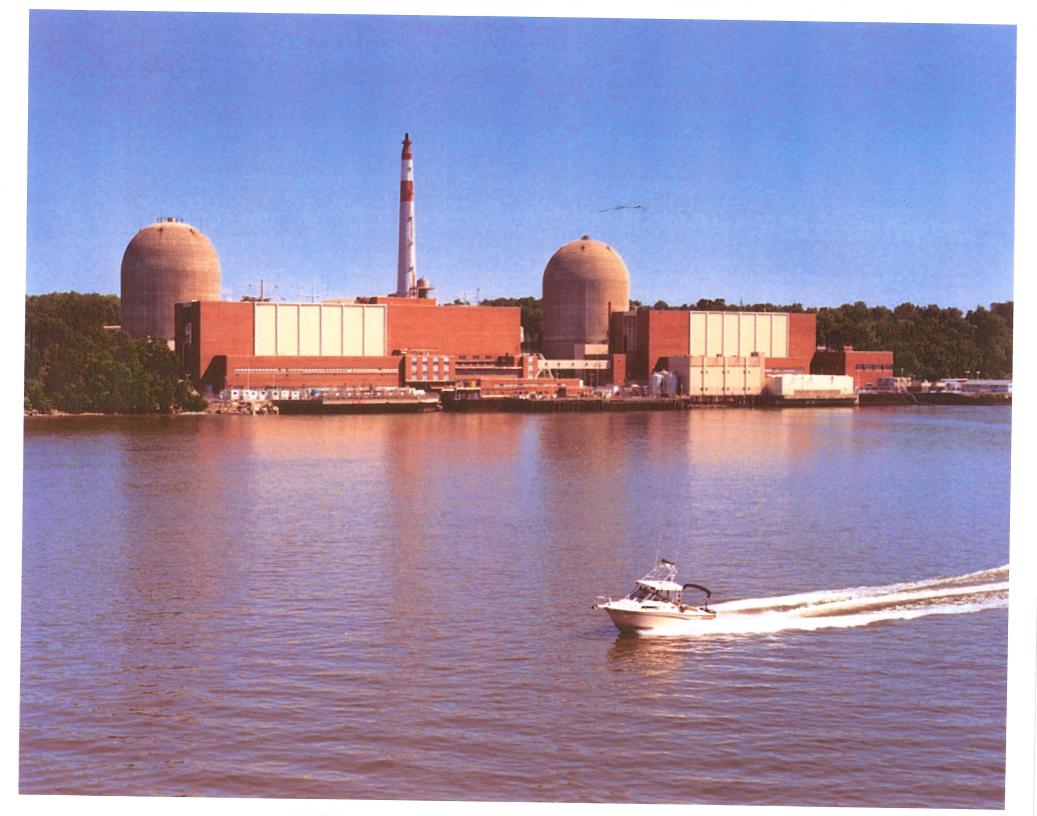
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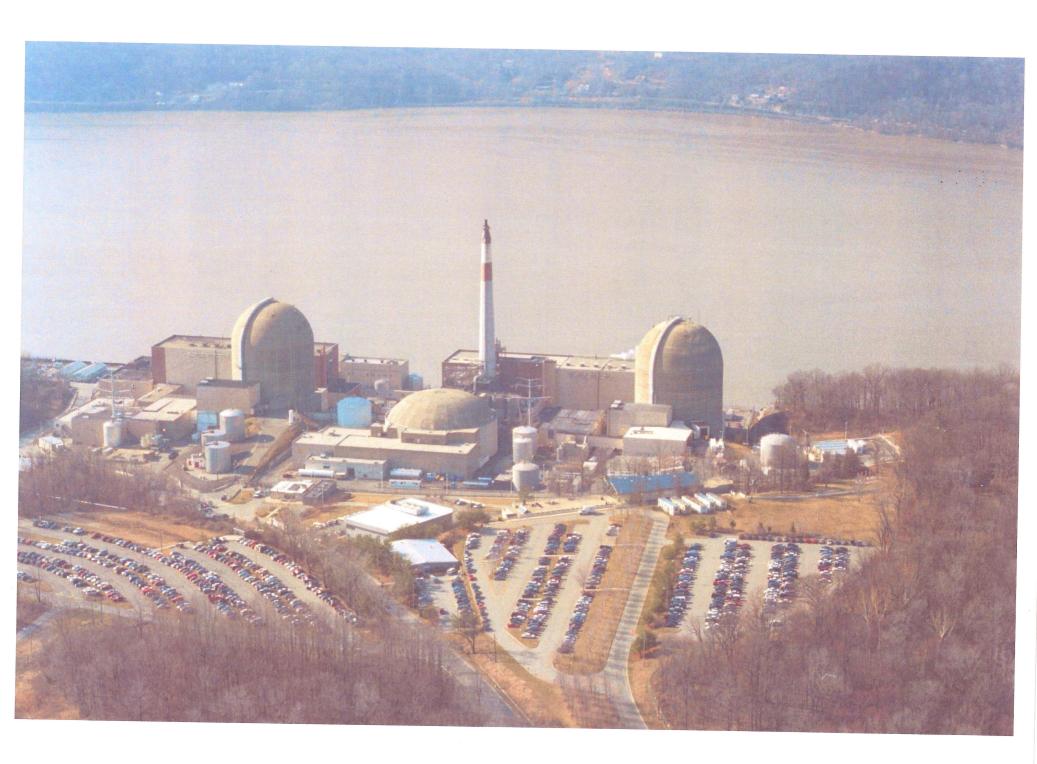


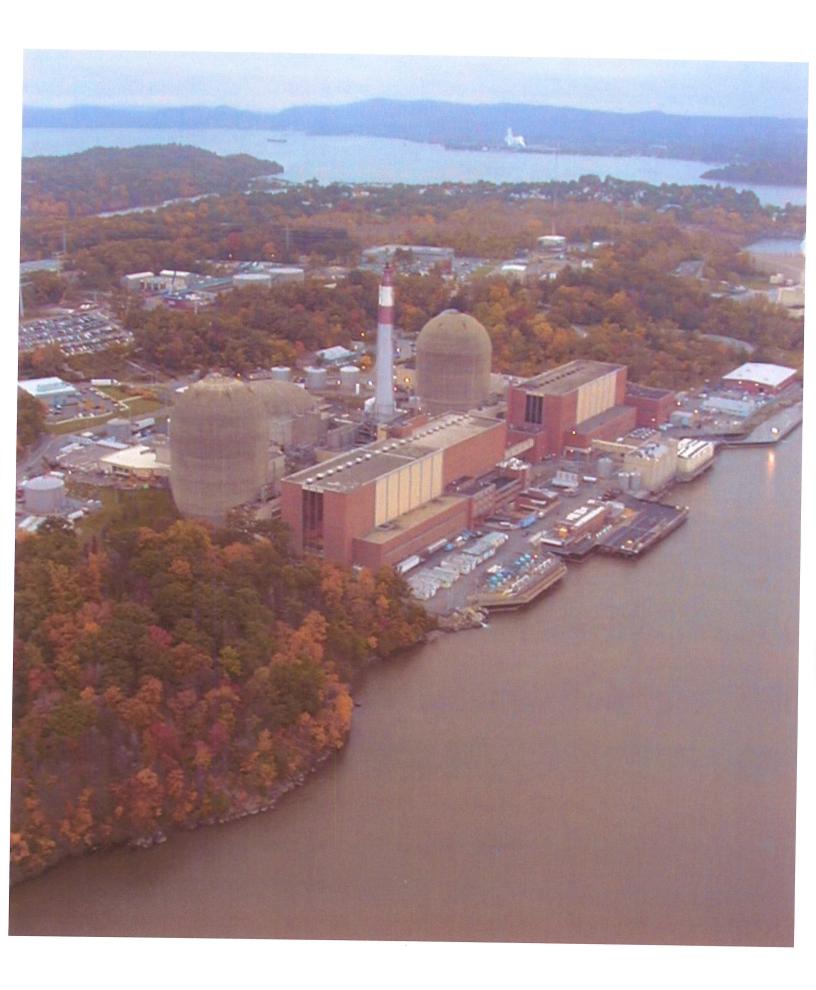


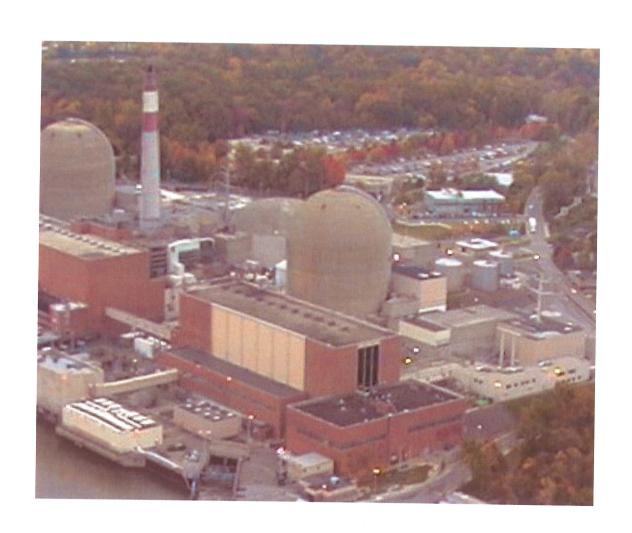
















November 22, 2006

Ms. Mary Colligan Assistant Regional Administrator for Protected Resources National Marine Fisheries Service Northeast Regional Office One Blackburn Drive Gloucester, MA 01930-2298

RE: Entergy Nuclear Indian Point Indian Point Units 2 and 3

Dear Ms. Colligan:

Entergy Nuclear Indian Point 2, LLC and Entergy Nuclear Indian Point 3, LLC (hereafter referred to as "Entergy"), the owner of Indian Point Units 2 and 3 (Indian Point) is in the process of completing an application to be filed with the Nuclear Regulatory Commission (NRC) for a potential 20 year renewal of Indian Point's operating licenses. Enercon is gathering information on Entergy's behalf relative to this potential license renewal.

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The NRC requires that Entergy's application for license renewal at Indian Point, "assess the impact of the proposed action." In an effort to ascertain any potential concerns that could arise as a result of license renewal at Indian Point, Enercon is requesting any information you may have regarding potential impacts to threatened or endangered species, or other species of interest in the vicinity of Indian Point (see attached map and photos).

In the event of license renewal at Indian Point, it is not anticipated there would be any alterations to current plant operations and maintenance activities would be limited to previously disturbed areas on site. License renewal at Indian Point would not require the expansion of existing facilities or additional land disturbances.

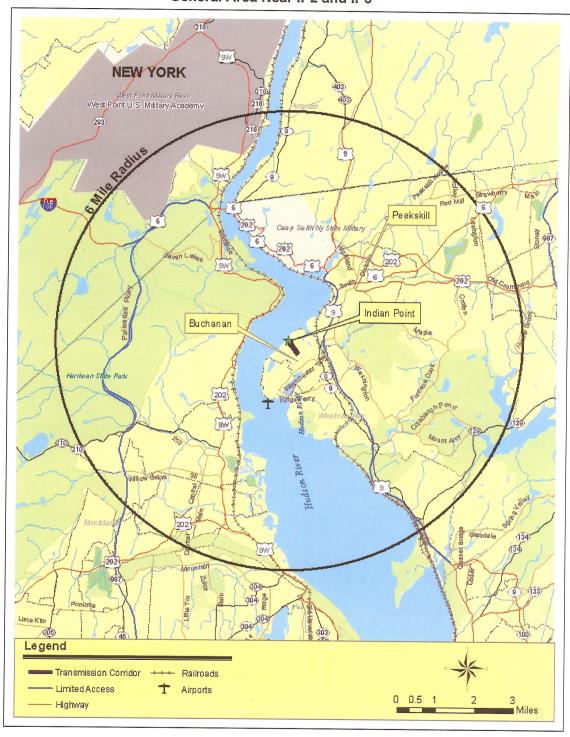
If you have any questions, please contact me at (918) 665-7693 or through my email address, jthomas@enercon.com.

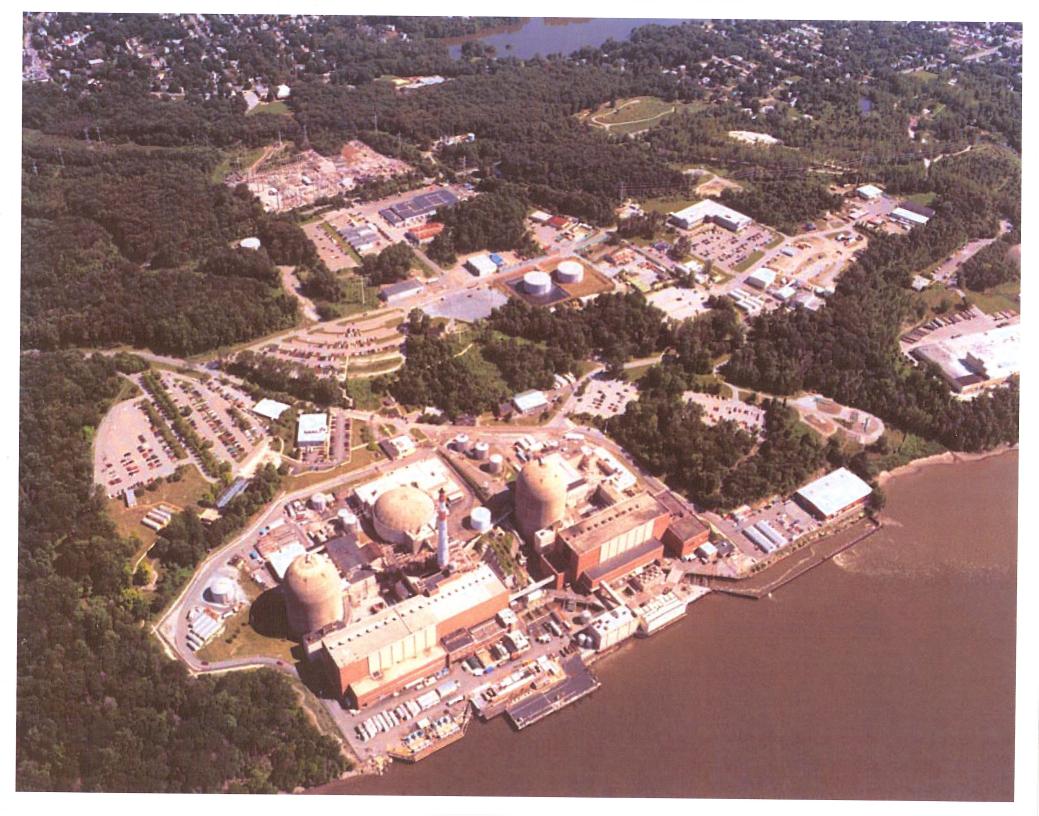
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James A. Thomas

Client Services Manager

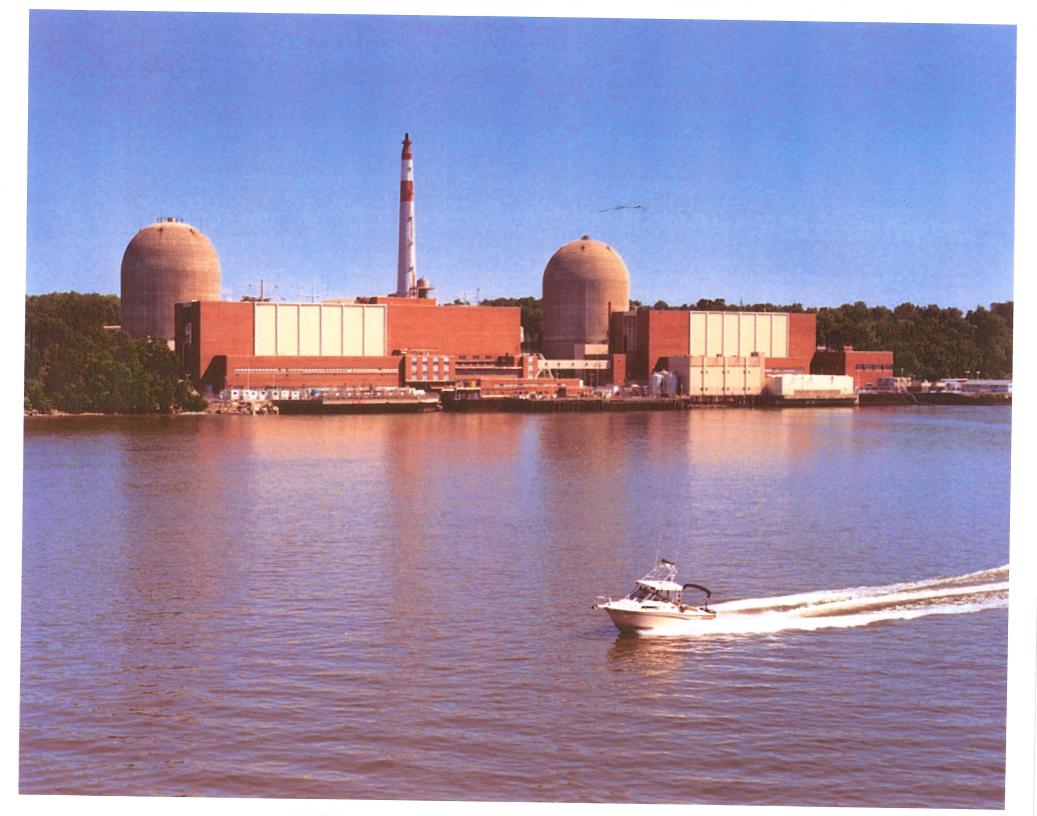
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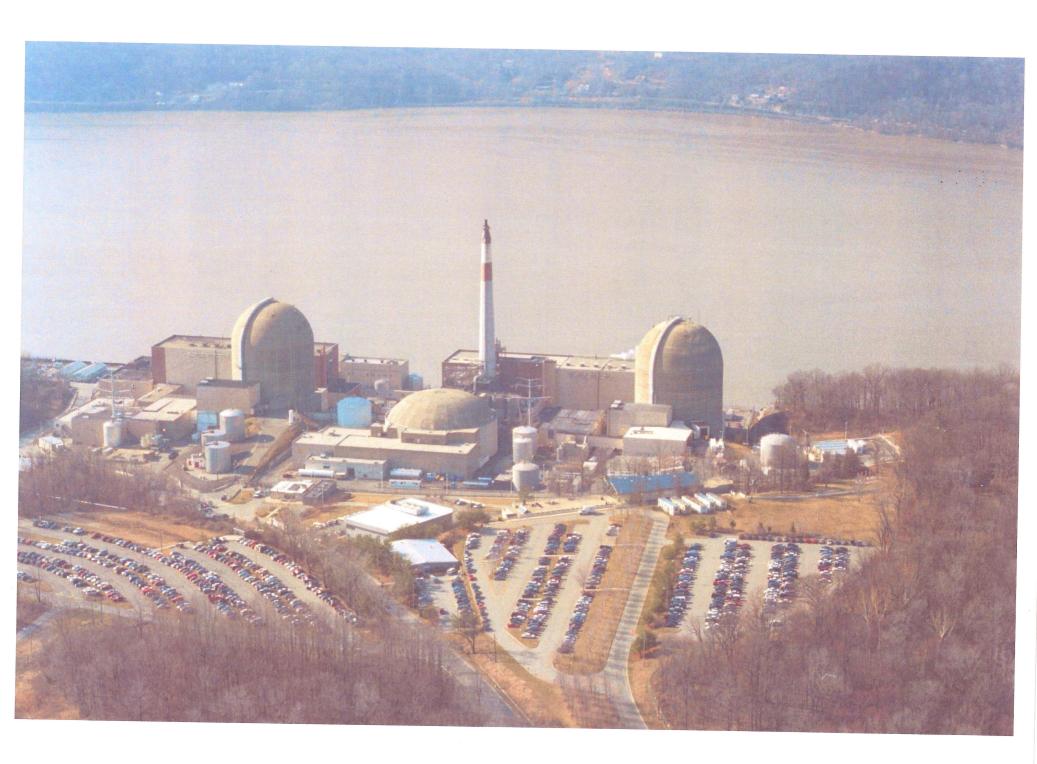


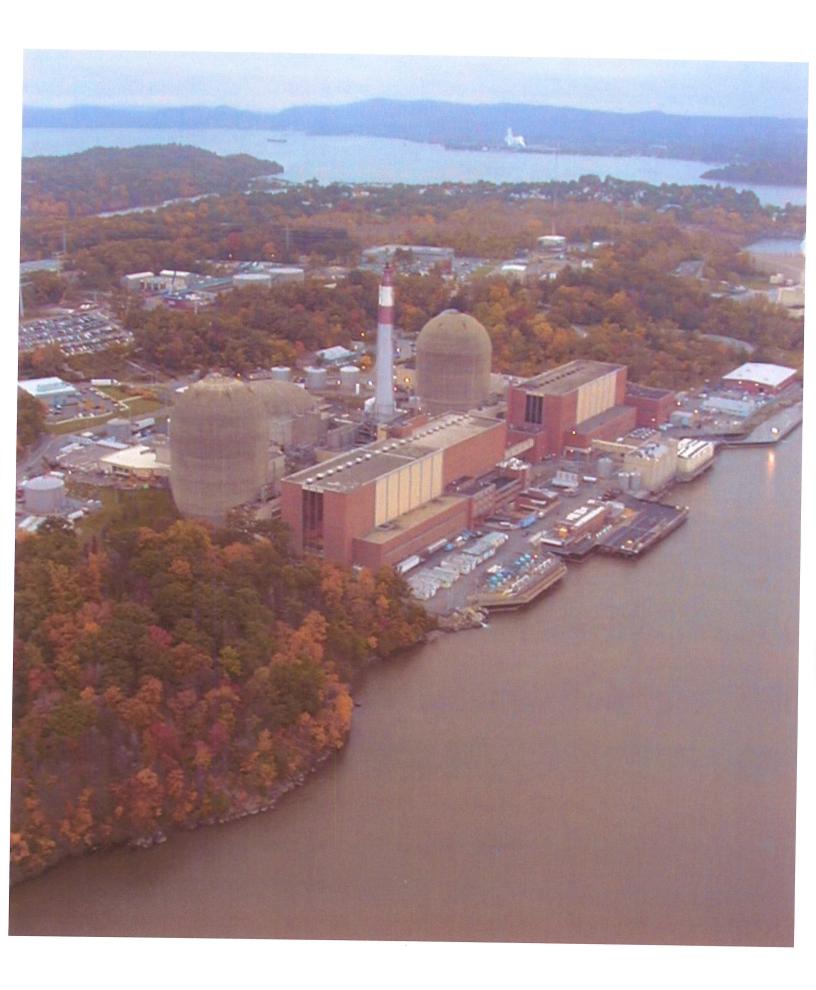


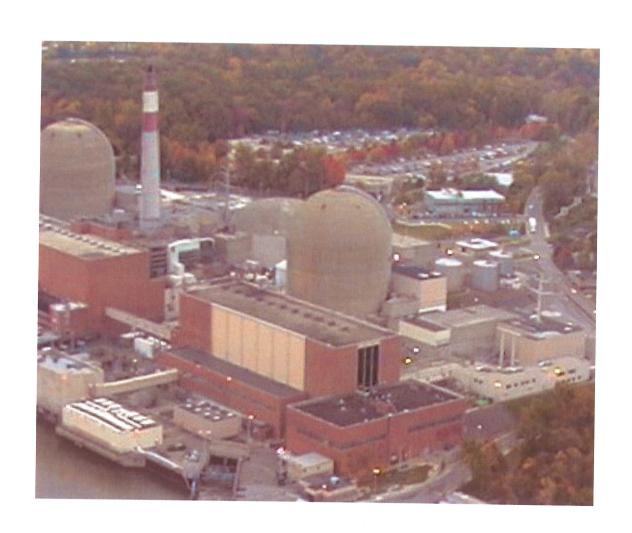
















# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

New York Field Office 3817 Luker Road Cortland, NY 13045

Phone: (607) 753-9334 Fax: (607) 753-9699 http://www.fws.gov/northeast/nyfo



Project Number:	70193	http://wwv
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To: James Homas	
Recording Onteray Tuclear Ind	ian Point
Regarding: Entergy Nuclear Ind Town/County: Villege of Buchana	n/ Stestchester
U V	1. CF-1

We have received your request for information regarding occurrences of Foderally-listed threatened and endangered species within the vicinity of the above-referenced project/property. Due to increasing workload and reduction of staff, we are no longer able to reply to endangered species list requests in a timely manner. In an effort to streamline project reviews, we are shifting the majority of species list requests to our website at <a href="http://www.fws.gov/northeast/nyfo/es/section7.htm">http://www.fws.gov/northeast/nyfo/es/section7.htm</a>. Please go to our website and print the appropriate portions of our county list of endangered, threatened, proposed, and candidate species, and the official list request response. Step-by-step instructions are found on our website.

As a reminder, Section 9 of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) prohibits unauthorized taking\* of listed species and applies to Federal and non-Federal activities. Additionally, endangered species and their habitats are protected by Section 7(a)(2) of the ESA, which requires Federal agencies, in consultation with the U.S. Fish and Wildlife Service (Service), to ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. An assessment of the potential direct, indirect, and cumulative impacts is required for all Federal actions that may affect listed species. For projects not authorized, funded, or carried out by a Federal agency, consultation with the Service pursuant to Section 7(a)(2) of the ESA is not required. However, no person is authorized to "take"\* any listed species without appropriate authorizations from the Service. Therefore, we provide technical assistance to individuals and agencies to assist with project planning to avoid the potential for "take," or when appropriate, to provide assistance with their application for an incidental take permit pursuant to Section 10(a)(1)(B) of the ESA.

Project construction or implementation should not commence until all requirements of the ESA have been fulfilled. If you have any questions or require further assistance regarding threatened or endangered species, please contact the Endangered Species Program at (607) 753-9334. Please refer to the above document control number in any future correspondence.

Endangered Species Biologist:Robyn A. Niv	er KAN
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\*Under the Act and regulations, it is illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import or export, ship in interstate or foreign commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any endangered fish or wildlife species and most threatened fish and wildlife species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken Illegally. "Harm" includes any act which actually kills or injures fish or wildlife, and case law has clarified that such acts may include significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife.

## New York State Department of Environmental Conservation Division of Fish, Wildlife & Marine Resources

**New York Natural Heritage Program** 

625 Broadway, 5th floor, Albany, New York 12233-4757

Phone: (518) 402-8935 • FAX: (518) 402-8925

Website: www.dec.state.ny.

December 22, 2006

Denise M. Sheehan Commissioner

James A Thomas Enercon Services, Inc. 5100 E. Skelly Dr., Suite 450 Tulsa, OK 74135

Dear Mr. Thomas:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the proposed Application for License Renewal at the Entergy Nuclear Indian Point Facility, area as indicated on the map you provided, including a 6-mile radius, located in the Village of Buchanan, Westchester County.

Enclosed is a report of rare or state-listed animals and plants, significant natural communities, and other significant habitats, which our databases indicate occur, or may occur, on your site or in the immediate vicinity of your site. The information contained in this report is considered sensitive and should not be released to the public without permission from the New York Natural Heritage Program.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement on presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

Sincerely,

Nicholas B. Conrad, Information Services

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Enc. cc:

this report is considered apparity; and should not be released to the public without Reg. 3; Wildlife Mgr., a the promotion are produced by both and the promotion of the construction of

Reg. 3, Fisheries Mgr. vale person associate Appropriate supported Peter Nye, Endangered Species Unit, Albany Shaun Keeler, Bureau of Fisheries, Albany



UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration NATIONAL MARINE FISHERIES SERVICE NORTHEAST REGION One Blackburn Drive Gloucester, MA 01930-2298

JAN 2 3 2007

James A. Thomas Enercon Services, Inc. 5100 E. Skelly Drive, Suite 450 Tulsa, Oklahoma 74135

Dear Mr. Thomas,

This in response to your letter dated November 22, 2006 requesting information on the presence of any listed species in the vicinity of Entergy's Indian Point power plant, located along the Hudson River in Buchanan, New York. Entergy announced in November 2006 that they are in the process of completing an application to be filed with the U.S. Nuclear Regulatory Commission (NRC) for a potential 20 year renewal of Indian Point's operating licenses. The operating license for Unit 2 expires on September 28, 2013 and the license for Unit 3 expires on December 12, 2015.

A population of federally endangered shortnose sturgeon (Acipenser brevirostrum) occurs in the Hudson River. Shortnose sturgeon have been documented to occur in the Hudson River from the northern end of Staten Island in New York Harbor (RM-3) to the Troy Dam (RM 151). From late fall to early spring, adult shortnose sturgeon concentrate in a few overwintering areas. Spawning adults concentrate near Kingston (RM 94) while one group of non-spawning adults concentrates near Kingston and another group of non-spawners concentrates near Haverstraw Bay (RM 33-40). When water temperatures reach 8°C, typically in early to mid-April, reproductively active adults begin a rapid, directed migration upstream to the spawning grounds that extend from below the Federal Dam at Troy to about Coxsackie (RM 151-125). Spawning typically occurs until water temperatures reach 15°C (generally from late April through May) after which adults disperse quickly down river into their summer range. The broad summer range occupied by adult shortnose sturgeon extends from approximately RM 27 to RM 112. Similar to non-spawning adults, most juveniles occupy the broad region of Haverstraw Bay (RM 33-40) by late fall and early winter. Juveniles are distributed throughout the mid-river region during the summer (RM 27-112) and concentrate in the Haverstraw Bay region during the late fall. In recent years (since 2000), individual shortnose sturgeon have been documented as far downriver as Upper New York Harbor in January, March, April, November and December.

Atlantic sturgeon (Acipenser oxyrinchus oxyrinchus) are also present in the Hudson River. Atlantic sturgeon are considered a Candidate Species as NMFS has initiated a status review for this species to determine if listing as threatened or endangered under the ESA is warranted. If it is determined that listing is warranted, a final rule listing the species could be published within a year from the date of publication of the listing determination or proposed rule. Sturgeon yolk sac larvae (YSL) and post yolk sac larvae (PYSL) have been documented in the vicinity of Indian

Point. Given that two distinct distributions of YSL and PYSL have been identified in the river (above RM 120 and RM 48 to 110), it is assumed that the larvae in the lower river grouping are Atlantic sturgeon. As such, entrainment is a significant concern for Atlantic sturgeon in this area of the river.

NMFS has several concerns regarding the potential for the authorized withdrawals and discharges to affect sturgeon. NMFS' primary concern is the likelihood of impingement of sturgeon on screens or racks at plant intakes. Information provided in the application by Dynegy for an Endangered Species Act (ESA) Section 10(a)(1)(B) permit for their Roseton and Danskammer plants indicated that from 1972-1998, 37 shortnose sturgeon were impinged at Indian Point Unit 2 and from 1976-1998, 26 shortnose sturgeon were impinged at Indian Point Unit 3. NMFS has no information on likely impingement since 1998; however, we have no information that suggests it no longer occurs. Shortnose sturgeon impinged on intake screens or racks experience high levels of injury and/or mortality. This information suggests that unauthorized take has occurred in the past at these plants and may continue to occur. Additionally, Atlantic sturgeon eggs and/or larvae are likely to be present in this region of the river and may be subject to entrainment in the facility's intakes. Both shortnose and Atlantic sturgeon may also be affected by the discharge of heated effluent, chlorine, and other pollutants or antifouling agents.

It is the understanding of NMFS that Indian Point is currently operating pursuant to a New York State Pollutant Discharge Elimination System (NYPDES) permit issued in 1987. This permit expired in 1992 and has been administratively extended each year since. Currently, the facility operates with Ristroph modified traveling screens, a fish handling and return system, and variable speed pumps. These intake modifications are intended to reduce the potential for impingement and entrainment at the facility. According to Entergy, this design, along with required seasonal flow reductions and generation outages, attains an estimated 77% reduction in impingement mortality and a 35% reduction in entrainment mortality (ASA 2003). NMFS does not currently have any information on how this system may affect the impingement or entrainment of sturgeon.

In 2004, the New York Department of Environmental Conservation (NY DEC) issued a draft permit which would require Indian Point to use the Best Technology Available (BTA) to minimize the adverse environmental impact of the facility (i.e., impingement and entrainment). According to the NY DEC, each year Indian Point Units 2 and 3 causes the mortality of more than a billion fish from entrainment of various life stages of fishes through the plant and impingement of fishes on intake screens. NY DEC has determined that the BTA for Indian Point is the construction of a closed cycle cooling system to replace the existing once through cooling system. The closed cycle cooling system would dramatically decrease the amount of water withdrawn from the Hudson River and, as such, is likely to greatly decrease the number of organisms impinged and entrained at the facility's intakes. The potential of closed-cycle cooling for minimizing environmental impacts is substantial, with greater than a 98% reduction in fish mortality (ASA 2003). It is NMFS understanding that the NRC must review and approve the use of closed-cycle cooling at Indian Point and that this may become a condition of a renewed operating license for the facility. Due to administrative and legal challenges, a final NYPDES permit has not been issued by NY DEC.

While closed-cycle cooling is likely to minimize the potential for impingement and entrainment of sturgeon, NMFS will need additional information to determine whether any effects to these species are likely under the terms of a new NYPDES permit and renewed NRC license (e.g., volume of water to be withdrawn, intake velocity, screen size, pollutants to be discharged). Additionally, NMFS remains concerned about the impacts of the facility's current operations (i.e., with once-through cooling). As such, NMFS requests that Entergy provide NMFS with the best available information on impacts of the facility on sturgeon species. As noted above, NMFS has some information prior to 1998 but has no information on likely rates of impingement or entrainment since then. NMFS looks forward to working cooperatively with Entergy, the NY DEC and the NRC during the relicensing process to minimize the effects of Indian Point on sturgeon in the Hudson River. My staff would be interested in meeting with Entergy and/or NRC staff to further discuss this issue. Should you have any questions regarding this correspondence or to arrange a meeting to discuss the effects of Indian Point on sturgeon in the Hudson River, please contact Julie Crocker of my staff at (978)281-9300 x6530.

Sincerely,

Mary A Colligan

Assistant Regional Administrator for Protected Resources

Cc: Rusanowsky - F/NER4
Knutson - EPA NY
Jacobson, Wilson - NY DEC

Kuo - NRC Lindow - F

Scida, Hartley, Damon-Randall - F/NER3

File Code: Sec 7 NRC Indian Point renewal of Operating License

PCTS: T/NER/2006/07100



UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration NATIONAL MARINE FISHERIES SERVICE NORTHEAST REGION One Blackburn Drive

James A. Thomas Enercon Services, Inc. 5100 E. Skelly Drive, Suite 450 Tulsa, Oklahoma 74135

Dear Mr. Thomas,

This in response to a conference call held on February 20, 2007 between my staff and staff from Enercon Services and Entergy's Indian Point facility. The purpose of the call was to discuss the Nuclear Regulatory Commission's (NRC) relicensing process and a letter sent by NMFS to Enercon in January 2007 regarding potential effects of the continued operation of the facility on Atlantic and shortnose sturgeon in the Hudson River. The purpose of this letter is to summarize that call.

One of the main concerns raised by NMFS in our January 2007 letter was the lack of recent information on the impingement and entrainment of sturgeon species at the facility. In that letter NMFS had requested that Enercon and/or Entergy provide us with all available information on the effects of the facility on these species. On the February 20 call, Enercon and Entergy indicated that no studies have been conducted since 1998. As such, no newer information is available for Entergy to provide to NMFS. Less of the notificity of the control of the factor as the

સામેરીનું કુલાલાએક જો કહ્યું કે તું કરવાજ કરવાનું કુલાક હોય છે. જે જે જે માને કરવા લાકે હતા કે કુલાક કરવા કરે ક During the call. Entergy and Enercon staff discussed the measures that are currently employed at the facility to reduce levels of impingement and entrainment of aquatic life. It is NMFS understanding that the screening and fish return system were designed to minimize entrainment and reduce the levels of injury and mortality associated with impingement. However, no studies have been conducted to demonstrate the effectives of these systems for sturgeon.

Based on the available information, NMFS remains concerned that some level of impingement and/or entrainment of sturgeon may continue to occur at the facility. As was explained on the call, section 9 of the ESA defines "take" to mean "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." As such, even if listed sturgeon are returned to the Hudson River following an interaction with the facility's intakes without being handled by a person, a take has occurred. Any take of a listed species that occurs without special exemption (e.g., an Incidental Take Statement) is illegal pursuant to the prohibitions on take contained in section 9 of the Endangered Species Act (ESA) of 1973, as amended. Therefore, NMFS recommends that Entergy pursue an exemption for the incidental take of listed species that may occur as a result of the continued operation of the Indian Point facilitys: ကုန္ကေရး ရောက္ခဲ့နေျခတဲ့နဲ့ ဝင္တာက ဗေဝရိုမ်ခွာေျချာမေျကို ၂၇၂၉၈ အခု အမည္ကို အခု အမည္ကနေျပည္သည္။ ၁၄

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Secretary, insure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Any discretionary federal action that may affect a listed species must undergo section 7 consultation. The relicensing of Indian Point by the NRC is a federal action that will require section 7 consultation. If it is determined through consultation between the NRC and NMFS that the action is likely to adversely affect any listed species (i.e., if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effects are not: discountable, insignificant, or beneficial) then a formal consultation, resulting in the issuance of a Biological Opinion and accompanying Incidental Take Statement would be required.

Additionally, Section 10(a)(1)(B) provides a means for permits to be issued exempting the take of species incidental to an otherwise lawful activity. Such a permit must be accompanied by a Conservation Plan, also referred to as a Habitat Conservation Plan. This type of permit has been obtained for the operation of Dynegy's Danskammer and Roseton Plants on the Hudson River. More information on the Section 10 permitting process can be found at <a href="http://www.nmfs.noaa.gov/pr/permits/esa\_permits.htm#listed">http://www.nmfs.noaa.gov/pr/permits/esa\_permits.htm#listed</a>.

NMFS looks forward to working cooperatively with Entergy, the NY DEC and the NRC during the relicensing process to minimize the effects of Indian Point on sturgeon in the Hudson River. Thank you for the opportunity to discuss our concerns on the February 20 conference call. Should you have any questions regarding this correspondence, please contact Julie Crocker of my staff at (978)281-9300 x6530.

Sincerely,

Mary A. Colligan

Assistant Regional Administrator for Protected Resources

Cc: Rusanowsky - F/NER4
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Kuo - NRC
Lindow - F

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