

**Response to Questions
From Senator Charles E. Schumer
Dated July 28, 2021
Regarding Indian Point Decommissioning**

- 1. Will NRC commit to immediately revisiting its initial examination undertaken by staff on February 6 and enlisting the assistance of PHMSA and other pipeline safety experts in assessing the current risk profile of the AIM Project pipeline, and its proximity to the components and safe operation of Indian Point. NRC has broad responsibility and authority under the Atomic Energy Act of 1954. Following the OIG report the public has lost trust here.**

In response to the U.S. Nuclear Regulatory Commission (NRC) Inspector General's report, the NRC's Executive Director for Operations (EDO) tasked a team of NRC and external experts to review the Inspector General's findings and to prepare a report. The team members were chosen to be independent from the previous work described in the Inspector General's report and included external experts from U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA). The team's work was peer reviewed by a member of the NRC's Advisory Committee on Reactor Safeguards. The team completed its report on April 8, 2020, and found that Indian Point remains safe, but that several NRC processes need to be improved and Entergy (the nuclear power plant owner licensed to operate the plant) needs to revisit some overly optimistic assumptions it made in analyzing the pipeline (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20100F635). On April 13, 2020, the EDO tasked the NRC staff to act on each of the team's recommendations (ADAMS Accession Nos. ML20104A723 and ML20104A388).

The NRC staff does not plan to conduct another evaluation in the absence of any new information not already considered. The NRC staff has confidence based on an updated analysis that ruptures of the pipelines near Indian Point are unlikely. However, should a rupture occur, adequate equipment would be available to shut down the plant and maintain it in a safe condition.

Subsequent to the team's review, both reactors have permanently shut down and defueled, which has further reduced the potential safety risk than when the plant was operating. The NRC will continue to inspect decommissioning activities at the site to ensure that they are conducted safely

- 2. What are the NRC procedures rulemaking status?**

The NRC staff delivered the draft proposed rule to the Commission in the paper, SECY-18-0055, "Proposed Rule: Regulatory Improvements for Production and Utilization Facilities Transitioning to Decommissioning" (ADAMS Accession No. ML18012A019). Once the Commission votes and issues a staff requirements memorandum, the staff will publish the proposed rule and draft regulatory guidance documents in the *Federal Register* for a 75-day public comment period. The staff also will conduct a public meeting during the comment period to facilitate stakeholder review of these documents.

3. How frequently and does the NRC have on site inspections and how often Decommissioning trust fund--is this going to be limited?

NRC's oversight program for reactors that have ceased operations includes a variety of inspectors with the range of technical expertise needed to oversee activities specific to decommissioning, including spent fuel handling and storage. Individuals from this cadre of inspectors visit sites to observe the work being performed by licensees and their contractors. Specifically, when the licensee conducts certain decommissioning activities, inspectors observe some of those activities by visiting the site, performing "walkdowns" (visual inspections), interviewing site personnel, and reviewing procedures and records. These activities and the associated inspections are often specialized and limited in duration.

The decommissioning trust fund (DTF) is reviewed during routine decommissioning inspections as part of Inspection Procedure (IP) 71801, "Decommissioning Performance and Status Reviews at Permanently Shutdown Reactors." Inspection results are documented in inspection reports, which are made public in the NRC's official recordkeeping system (ADAMS). Additionally, NRC regulations require licensees of nuclear power plants that have ceased operation to submit decommissioning funding status reports annually. The NRC staff independently analyzes each of these reports to determine whether the agency has reasonable assurance that the licensees are maintaining sufficient funding for radiological decommissioning. Should any potential shortfall in the funds be identified, the NRC requires the licensee to supplement the DTF with additional funds to ensure that decommissioning activities can be performed as intended by the regulatory requirements.

4. Is it there normal security and is there inspection at the gate?

The Indian Point site has multiple gates. The licensee provides security and physical protection at the site, including the gates, during normal decommissioning operations in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 73, "Physical protection of plants and materials," and 10 CFR Part 37, "Physical protection of category 1 and category 2 quantities of radioactive material." NRC inspectors conduct periodic onsite inspections throughout decommissioning.

5. What's the process High burnup fuel?

NRC has approved storage of high burnup fuel. The NRC-approved dry storage systems have limits on the heat load (temperature) of spent fuel to be stored in the system. The users of dry storage systems must determine the heat load of each spent fuel assembly to ensure they are compliant with NRC requirements prior to placement in the dry storage system. The burnup is the amount of energy produced by the uranium fuel. There is no strict threshold between low and high burnup fuel; however, anything higher than a burnup of 45 gigawatt-days per metric ton of uranium has historically been considered high burnup. When high burnup spent fuel is removed from the water in a spent fuel pool and placed in a dry storage system, increased fuel temperatures and cladding changes can be more pronounced than with low burnup spent fuel. Research programs sponsored by the NRC and the U.S. Department of Energy showed that the dry storage systems and transportation packages can safely hold the fuel. The NRC staff performs inspections to ensure compliance with all applicable requirements for the storage and transportation of spent fuel, including high burnup fuel.

6. What is Holtec Schedule and produces?

Holtec Decommissioning International, LLC's (HDI's) general decommissioning schedule is outlined in the post-shutdown decommissioning activities report (PSDAR) (ADAMS Accession No. ML19354A698). The NRC staff will provide the State oversight panel and local committees focused on Indian Point decommissioning future updates on the NRC's oversight of HDI's decommissioning activities.

7. What does the NRC plan to do to restore public confidence in its important role of keeping the community safe, informed, and represented in its decisions?

The mission of the NRC is to license and regulate the Nation's civilian use of radioactive materials to provide reasonable assurance of adequate protection of public health and safety and to promote the common defense and security and to protect the environment. The NRC takes a proactive role in carrying out its mission as transparently as possible. The NRC staff aims to foster public confidence by engaging stakeholders through public meetings, such as the recent meetings on the Indian Point PSDAR. The NRC staff conducts the vast majority of interactions with licensees in full view of the public and makes publicly available its decision-making processes and documents, including inspection manual chapters (IMCs), inspection procedures, and inspection reports, through the agency's Web site and official recordkeeping system (ADAMS). In addition, the agency continues to advance the use of technology to increase public engagement and transparency.

8. What role does the NRC plan to take with respect to the Holtec's planned onsite storage of spent fuel rods in the storage casks to be constructed on site?

The NRC staff performs routine inspections during the licensee's storage campaigns when the licensee is preparing spent fuel rods to be placed into storage casks. A description of the NRC's inspection program may be found in IMC 2690, "Inspection Program for Storage of Spent Reactor Fuel and Reactor-Related Greater-than-Class C Waste at Independent Spent Fuel Storage Installations and for 10 CFR Part 71 Transportation Packagings." This IMC is available on the NRC's public Web site: <https://www.nrc.gov/reading-rm/doc-collections/insp-manual/manual-chapter/index.html>. NRC inspectors perform routine inspections during the various phases of dry runs (mockups in preparation for the transfer of spent fuel rods into dry storage casks), actual storage operations (e.g., movement of fuel, drying operations, welding, sealing), and movement of the cask systems onto the Independent Spent Fuel Storage Installation (ISFSI) pad. The relevant IPs (IP 60854, "Preoperational Testing of an Independent Spent Fuel Storage Installation"; IP 60855, "Operation of an Independent Spent Fuel Storage Installation"; and IP 60856, "Review of 10 CFR 72.212(b) Evaluations") may be found on the NRC's public Web site: <https://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. ISFSI inspections would continue as outlined in IMC 2690 until the spent fuel is moved offsite and the license is terminated.

9. Will the NRC be willing to agree to utilize an independent review board in the event a dispute arises between any of Holtec's proposed activities and the relevant state/local/federal agencies as well as other community stakeholders?

There are existing means by which Federal, State, and local agencies and community stakeholders may address concerns and disputes with HDI over its proposed activities. In

addition to engagement through public meetings and other informal means, there are methods for interested stakeholders to formally engage with the NRC and express concerns with HDI's proposed activities. For example, individuals can raise safety concerns directly to the NRC through its allegation process. A member of the public can raise an allegation by calling the NRC's Safety Hotline at 800-695-7403, sending an email to allegation@nrc.gov, or writing a letter to the NRC. More information on the NRC's allegation process can be found here: <https://www.nrc.gov/about-nrc/regulatory/allegations-resp.html>. At any time, a member of the public may submit a petition for the NRC to take enforcement action under 10 CFR 2.206 of the NRC's regulations (referred to as a "2.206 petition"). The 2.206 petition process covers NRC licensees and licensed activities. The NRC evaluates these petitions and their supporting evidence. The agency may respond to the petition by modifying, suspending, or revoking an NRC-issued license, or by taking other appropriate action. Additional information about the 2.206 petition process can be found here: <https://www.nrc.gov/about-nrc/regulatory/enforcement/petition.html>.

Further, if HDI were to request a change to its licensing authority through, for example, a license amendment request, the NRC staff would publish in the *Federal Register* a notice of an opportunity to request a hearing. The NRC's processes and regulations include various steps and requirements to assure the independence of the ultimate decisionmakers. For example, NRC regulations include requirements for separation of functions between the licensing staff and Commission adjudicatory staff.

10. Will the NRC commit to regularly updating the newly-formed IP Taskforce, as well as the local-community based taskforces, not only for routine matters but especially prior to the approval of any activities proposed by Holtec that would require Federal, State or Local approval?

The NRC Region I State Liaison Officer is in regular contact with New York Public Service Commission staff and other State officials, and the NRC staff would participate in periodic taskforce meetings and activities, if invited, and provide status updates.

11. Final comment — the community is in a very precarious position at this point in time. In addition to the economic impact and environmental risks posed by the decommissioning of IP, many feel as though the NRC has completely sidelined the questions and concerns we have had regarding the transfer of the plant from Entergy to [Holtec]. This was felt particularly acutely over the course of the last year when numerous requests to the NRC for public hearings prior to the transfer went seemingly unheeded. Moving forward, we the people are counting on your agency to do right by our community and exercise responsible and necessary oversight during the entirety of the shutdown process and beyond.

The NRC staff takes its safety mission seriously and appreciates that the public's concern has not diminished following the permanent shutdown of Indian Point. The NRC staff will continue to inspect decommissioning activities to ensure that they are conducted safely.

[Supervisor Linda D. Puglisi]
RE: Comments for the July 29, 2021 Government-to-Government meeting
and to be submitted to the Public Hearing record

I have been the elected Town Supervisor of the Town of Cortlandt for 30 years and have attended all of the hearings and key meetings the NRC has held regarding Indian Point nuclear plants throughout the years. Previously I have raised questions and concerns about safety measures at these plants and also about the NRC's role as a check and balance on the many issues pertaining to nuclear facilities and specifically in our area (Village of Buchanan/Town of Cortlandt, New York). Now, along with many other elected officials that represent our area, many citizens and from environmental groups I submit my questions, concerns and issues to the NRC regarding the decommissioning phase of Indian Point's three nuclear plants, which are now all closed as of April 30, 2021: We need assistance from the NRC to have Holtec strictly monitor the air quality and other testing around the schools in particular the BV Elementary School (only 500ft. from the Indian Point property and the gas pipeline in the Hendrick Hudson School District). These reports should be shared with the school district with the Village of Buchanan and Town of Cortlandt.

1. **We all asked the NRC to hold a public hearing on Holtec being able and approved by the NRC to function as the new owner from Entergy and as the decommissioning company of the reactors. This unfortunately did not happen, and I ask why not? Why didn't the NRC allow us to raise our questions in a public forum/public hearing prior to the decision? I had volunteered the use of one of our larger buildings for the hearing.**

The NRC staff performed extensive outreach to engage the public during the staff's review of the Indian Point License Transfer Application (LTA). While there is no requirement for the NRC staff to hold public meetings as part of the LTA review process, the staff communicated with the public and State and local officials regarding the proposed license transfer to HDI during the Indian Point Annual Assessment Meeting (AAM), which was conducted by WebEx videoconference on September 22, 2020. During that meeting, there was an opportunity for members of the public to ask questions and to provide comments concerning the LTA. A transcript of the public meeting is available in ADAMS (ADAMS Accession No. ML20289A537). The NRC staff also held a separate meeting with elected officials before the AAM to address questions on the proposed license transfer.

Additionally, the NRC staff issued a *Federal Register* notice in January 2020 to provide an opportunity for members of the public to comment on the Indian Point LTA. The NRC staff extended this written comment submission period from 30 days to 60 days. As a result of these outreach efforts, the NRC received more than 400 comments from a wide range of stakeholders on a variety of topics. The NRC staff reviewed and considered the written comment submissions received during the open comment period and outside of the comment period, as well as the oral comments received during the Indian Point AAM, as part of its evaluation of the LTA.

The Commission's decision to deny hearing requests in the Indian Point license transfer proceeding was reached in accordance with the NRC's established process for adjudicatory matters (Commission Memorandum and Order, CLI-21-01 (ADAMS Accession No. ML21015A201)).

- 2. We need assistance from the NRC to have Holtec strictly monitor the air quality and other testing around the schools in particular the BV Elementary School (only 500ft. from the Indian Point property and the gas pipeline in the Hendrick Hudson School District). These reports should be shared with the school district with the Village of Buchanan and Town of Cortlandt.**

The NRC staff will ensure that HDI performs and reports on environmental monitoring annually in accordance with its radiological environmental monitoring program. The NRC staff routinely reviews and inspects the air monitoring program, including the network of onsite and offsite monitoring stations, following IP 84750, "Radioactive Waste Treatment, and Effluent and Environmental Monitoring." This inspection procedure, as well as others, may be found on the NRC public Web site at <https://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. The NRC staff continues to find the onsite and offsite radiological monitoring network acceptable for meeting its regulations to be protective of public safety and the environment surrounding the facility. The reviews and assessments of the monitoring program and network consider the different risk factors for different segments of the population, such as children and adults. The annual radioactive environmental monitoring reports submitted to the NRC are made publicly available in ADAMS. The most recent report from HDI, dated April 30, 2021, is available at ADAMS (ADAMS Accession No. ML21168A062). The Village of Buchanan and Town of Cortland, as well as their respective school districts, may also contact HDI to inquire about obtaining delivery or direct access to the reports.

- 3. Will the NRC be an oversight entity to the gasline (Spectra now Enbridge) which is in close proximity to the schools and homeowners? Once again, reports will be needed.**

No, oversight of the natural gas transmission pipeline is outside of the NRC's statutory authority, as described in the Atomic Energy Act of 1954, as amended. The New York State (NYS) Department of Public Service conducts the inspections of interstate pipelines located within the State of New York. The NYS pipeline safety program also inspects the portions of interstate natural gas and hazardous liquid pipelines on behalf of the federal PHMSA under an Interstate Agency Agreement with the U.S. Department of Transportation.

- 4. I am requesting that the NRC monitors stay at Indian Point for the duration of the decommissioning just as they did when the nuclear plants were in operation.**

After careful consideration, the NRC staff has determined that maintaining full-time resident inspectors at Indian Point during decommissioning is not necessary to provide for the protection of public health and safety, nor is assigning a resident inspector necessarily the best method for effective regulatory oversight at the site. This is because power reactor decommissioning activities present fewer radiological and nuclear safety hazards than activities at an operating power reactor site. Spent fuel handling and storage related activities represent a higher risk that warrants more frequent NRC inspection, though such activities are usually limited in duration. Because of this, the oversight activities at the site lend themselves to continuing to utilize visiting inspectors with different areas of specialized expertise as appropriate to observe various ongoing licensee decommissioning activities.

- 5. Groundwater studies are very important. There are many (33 plus) wells on the 240 acres of Indian point. They need to be evaluated periodically by certified scientific companies and their reports also shared.**

The NRC staff agrees that groundwater studies remain important from the operation phase through decommissioning to site closure and license termination. The license, which contains the conditions under which the site must operate, was transferred from Entergy to HDI. The license contains enforceable requirements for onsite and offsite groundwater monitoring. Those requirements for the onsite groundwater monitoring wells include sampling and hydrological measurements to support dose calculations and to support groundwater protection initiatives. HDI is currently maintaining the groundwater sampling program required of Entergy and is using the same contractor as Entergy did; this contractor has many years of experience at the site for proper sampling and measurement techniques and for hydrogeological expertise in analyzing those measurement results. The NRC staff performs inspections of the groundwater monitoring program on a routine basis using the applicable inspection procedure, IP 84750. The frequency of inspections of the groundwater monitoring program is determined by a graded approach based on the identified risk to the public and environment. For example, a change in the activities at the site (e.g., excavation and removal of site components) or a change in the contractor might be factors warranting increased inspection frequency. The NRC Web site for Indian Point groundwater contamination issues, which includes links to the Annual Radioactive Effluent Release Report, can be found here: <https://www.nrc.gov/info-finder/reactors/ip/ip-groundwater-leakage.html>.

- 6. Is there and will there be enough funding available for the decommissioning process? If not, what is the procedure to add to this important funding source? We do not want the company to walk away in the middle of dismantling the plants due to a lack of funds. Will the NRC make the drawdown of this fund public and for what purposes are these monies utilized?**

The NRC staff concluded in its safety evaluation dated November 23, 2020 (ADAMS Accession No. ML20297A333), that there is reasonable assurance that there will be enough funding available for the decommissioning process at Indian Point. Based on its review of information provided by license transfer applicants Entergy and HDI, and in consideration of the staff's independent cash-flow analyses, with respect to the Indian Point DTFs, there would be significant positive balances for all three units at both the projected time of partial site release in 2033 and license termination in 2063.

At all times, the licensee has full responsibility to provide adequate funding for all NRC-required decommissioning activities. While in decommissioning, the NRC actively oversees the licensee's decommissioning, including decommissioning funding. In accordance with 10 CFR 50.82(a)(8)(v), the NRC requires power reactor licensees that have permanently ceased operations to provide to the NRC annually, by March 31, a decommissioning financial assurance status report. These reports include information on (1) the amount spent on decommissioning, both cumulative and over the previous calendar year, the remaining balance of any decommissioning funds, and the amount provided by other financial assurance methods being relied upon, (2) an estimate of the costs to complete decommissioning, reflecting any difference between actual and estimated costs for work performed during the year, and the decommissioning criteria upon which the estimate is based, (3) any modifications occurring to a licensee's current method of providing financial assurance since the last report submitted, and (4) any material changes to trust agreements or financial assurance contracts. The reports provide a regular, annual status of decommissioning spending and, hence, a status of the drawdown of the DTF balances and future funding requirements. If at any time the DTFs are not sufficient to fully cover both

radiological decommissioning and spent fuel management, NRC regulations require the licensee to include additional financial assurance to cover any shortfalls.

Licensees' annual decommissioning financial assurance status reports are publicly available. The most recent report reflecting information about the Indian Point site and DTF balances is available at ADAMS (ADAMS Accession No. ML21084A811).

7. How much is currently in this trust fund? I was recently told \$2.36 billion.

The following DTF balances, current as of December 31, 2020, were reported by then-licensee Entergy in correspondence dated March 25, 2021 (ADAMS Accession No. ML21084A811):

- Indian Point Unit 1 DTF balance: \$631,250,000
- Indian Point Unit 2 DTF balance: \$793,730,000
- Indian Point Unit 3 DTF balance: \$990,700,000

Total balances among the three DTFs equal \$2,415,680,000.

8. Security is still very critical at these plants and therefore what role will the NRC take to ensure safety and security for our community and for the workers remaining at the plants?

The licensee provides security and physical protection at the site during normal decommissioning operations in accordance with 10 CFR Part 73 and 10 CFR Part 37. NRC inspectors conduct periodic onsite inspections throughout decommissioning activities, including those related to the security of the ISFSI.

9. Will you assist the local communities with funding while the storage of the spent fuel is still located at Indian Point? This could be a security risk and therefore, local governments should receive compensation.

The NRC does not have statutory authority to provide such financial assistance to the local communities.

10. How many safety inspections will take place by the NRC during the decommissioning process and will those reports be made public? We recommend at least monthly.

At reactors that have ceased operations, such as Indian Point, NRC inspectors perform oversight of the licensees' activities and programs, such as decommissioning performance, staffing, spent fuel pool safety, spent fuel handling, transportation of radioactive materials, problem identification and resolution, occupational radiation safety, and environmental monitoring. These inspections, which will include unannounced site visits, take place at different times and with different frequency, depending on the activities occurring at the site. This oversight of the licensee's activities as it progresses through decommissioning is conducted under the provisions listed in IMC 2561, "Decommissioning Power Reactor Inspection Program." If there are periods of high activity or work that is considered risk-significant, the NRC staff can supplement its oversight program with additional inspections as needed. Inspection results are documented in inspection reports, which are made public in ADAMS.

11. I recommend that a hotline number be established by the NRC so that local officials and oversight boards can file complaints and directly raise questions (24/7).

The NRC has a hotline number that anyone can call to raise issues they consider to be safety or security concerns. The number is 800-695-7403. The NRC public Web site has additional information at <https://www.nrc.gov/about-nrc/contactus.html>.

12. The community has and still remains disturbed that the gas pipeline was allowed to be constructed/moved closer to Indian Point. I stated this over the years and continue to raise this important issue.

The NRC took the Inspector General's findings concerning the natural gas transmission pipelines near the Indian Point seriously and commissioned an independent evaluation team made up of both NRC staff and external experts, whose work was peer reviewed by a member of the NRC's Advisory Committee on Reactor Safeguards. The team members were chosen to be independent from the previous work described in the Inspector General's report and included external experts from PHMSA. The team completed its report on April 8, 2020, and found that Indian Point remains safe, but that several NRC processes need to be improved and Entergy (the nuclear power plant owner licensed to operate the plant) needs to revisit some overly optimistic assumptions it made in analyzing the pipeline (ADAMS Accession No. ML20100F635). On April 13, 2020, the EDO tasked the NRC staff to act on each of the team's recommendations (ADAMS Accession Nos. ML20104A723 and ML20104A388). The NRC staff has confidence based on an updated analysis that ruptures of the pipelines near Indian Point are unlikely. However, should a rupture occur, adequate equipment would be available to shut down the plant and maintain it in a safe condition.

Subsequent to the team's review, both reactors have permanently shut down and defueled, which has further reduced the potential safety risk than when the plant was operating. The NRC will continue to inspect decommissioning activities at the site to ensure that they are conducted safely

13. Are there plans to have the spent fuel transported out of our community in the near future? If so, where?

The NRC's role in the transportation of spent fuel is to provide for safety and security through the approval of transportation packages, the approval of transportation routes, and inspection oversight. At present, the NRC is not aware of plans from the industry or U.S. Department of Energy for movement of the Indian Point spent fuel. The NRC staff would provide oversight to ensure any transport would be done safely.

14. In conclusion, what was the criteria used to decide that Holtec met the qualifications to become the new owner of Indian Point and to be a responsible company for the decommissioning process?

Based on its review of the applicants' license transfer application, the NRC staff determined that there was reasonable assurance that HDI had an acceptable organization capable of safely conducting decommissioning activities with technically qualified resources and experience to support the safe maintenance and decommissioning of Indian Point. Specifically, the staff determined that the application provided reasonable assurance that the transferees met the relevant technical requirements of 10 CFR 50.80, "Transfer of licenses," and 10 CFR 50.34, "Contents of applications; technical information," to engage in

the proposed activities. The NRC staff also determined that the applicants provided reasonable assurance that funds will be available to the transferees to cover estimated costs for radiological decommissioning and spent fuel management activities at Indian Point Units 1, 2, and 3 and the ISFSI, in accordance with the requirements of 10 CFR 50.33(f); 10 CFR 50.33(k)(1); 10 CFR 50.75, "Reporting and recordkeeping for decommissioning planning"; 10 CFR 50.82(a); and 10 CFR 72.30, "Financial assurance and recordkeeping for decommissioning." The NRC staff's evaluation and determination are documented in the safety evaluation supporting the license transfer (ADAMS Accession No. ML20297A333).

15. We need complete answers to these questions and to those raised by others in a timely fashion not to exceed one month (by September 1, 2021).

The NRC staff appreciates the community's interest in the Indian Point decommissioning process.