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Public Service Commission

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September 18, 2023

VIA EMAIL

Hon. Michelle L. Phillips Secretary to the Commission 3 Empire State Plaza Albany, NY 12223-1350

Re: Matter No. 21-01188 – In the Matter of the Indian Point Closure Task Force and Indian Point Decommissioning Oversight Board.

Dear Secretary Phillips:

Please accept for filing in the above-captioned matter, the U.S. Nuclear Regulatory Commission's responses to July 2023 Indian Point Decommissioning Oversight Board public forum questions. Should you have any questions regarding this filing, please contact me. Thank you.

Respectfully submitted,

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Tom Kaczmarek Executive Director Indian Point Closure Task Force Indian Point Decommissioning Oversight Board

July 31, 2023 Public Forum Indian Point Decommissioning Oversight Board Public Questions for U.S. Nuclear Regulatory Commission

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Water Discharge – History

- 1. What was the agreement between the federal government and New York State regarding the long term management and ownership of nuclear waste prior to June 8, 2012 the voiding of the Waste Confidence Rule?
 - Any New York State agreements on the long-term management of nuclear spent fuel would not be with the NRC. NRC responsibility is to ensure the safety and security of the spent fuel while in a licensed interim storage facility.
- 2. Has there been an environmental review and determinations regarding interim or long term storage of nuclear waste at Indian Point, pursuant to NEPA or otherwise? Please provide review and determinations.
 - Yes. Please see the Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants, Supplement 38, Regarding IP2 and IP3 published 2018 (<u>ML18107A759</u>)

Determination - The NRC staff relies on the Continued Storage Rule and its supporting GEIS (i.e., <u>NUREG-2157</u>) to provide NEPA analyses of the environmental impacts of spent fuel storage at the reactor site or at an away-from-reactor storage facility beyond the licensed life for reactor operations. By virtue of the revised 10 CFR 51.23 regulation, the impact determinations in NUREG-2157 regarding continued storage complete the analysis of the environmental impacts associated with spent fuel storage beyond the licensed life for reactor operations and are deemed incorporated into this FSEIS supplement (page 6.4).

The analysis in NUREG–2157 concludes that the potential impacts of at-reactor storage during the short-term timeframe (the first 60 years after the end of licensed life for operations of the reactor) would be SMALL (see Section 4.20 of NUREG–2157). Furthermore, the analysis in NUREG-2157 states that disposal of the spent fuel by the end of the short-term timeframe is the most likely outcome (see Section 1.2 of NUREG–2157). The onsite risk mitigation by consistent monitoring of the ISFSI by the licensee is part of the surveillance and monitoring program required by the regulations and the technical specifications.

3.

Has there been an environmental review and determinations regarding disposal of nuclear waste effluent into the Hudson River, pursuant to NEPA or otherwise? Please provide review and determinations.

The controlled release of effluent at nuclear power plants is an activity that occurs throughout the operation and decommissioning of a facility. NRC's regulations and licensing reviews for such a facility consider such releases as part of the agency's safety and environmental assessments. Any effluent releases at facilities such as Indian Point Energy Center (IPEC) are required to remain within the prescribed limits, be processed through filters, and sampled prior to any effluent being released. The NRC inspects the actions and records of its licensees to ensure that compliance with applicable environmental standards is maintained. To date, all releases from IPEC have been a small fraction of the allowable limits for such releases.

4. What is the NRC consent based nuclear waste storage rule or program?

- Question is unclear, regulations for the independent storage of spent nuclear fuel, high-level radioactive waste, and reactor-related greater than class C waste is documented in <u>10 CFR</u>
 <u>Part 72</u>. If the questioner is asking about the U.S. Department of Energy's (DOE) Consent Based Siting initiative for an interim storage facility, NRC does not play a role in the initiative. More information on DOE's initiative may be found at https://www.energy.gov/ne/consent-based-siting.
- 5. Please provide documentation that allows the NRC permission to control releases of radioactive effluent and by-products off the reactor site?
 - https://www.nrc.gov/info-finder/reactors/ip3/faq.html#1c

Water Discharges – Testing and Protocols

- 6. If Holtec is permitted to proceed with discharges, what steps will first be taken by EPA Region 2, NYS DOH, NYS DEC and other NYS agencies to outreach and educate the public about the potential hazards? What warning signs will be posted along the Hudson River? What warnings will be provided to anglers, swimmers, boaters and others who recreate on the Hudson? What warnings will be provided about fish consumption? What warnings will be provided to residents who source their water supply from the Hudson River? What communication tools will be used? How will information be made fully accessible to non-English speakers, seniors, children, health professionals, municipal officials, first responders and residents across the many impacted communities along the Hudson River from New York Harbor to the Troy Dam?
 - <u>https://www.nrc.gov/info-finder/reactors/ip3/faq.html#3c</u> This question is not directed to the NRC, but to be clear about NRC regulations, decommissioning licensees, including Holtec, are not required to notify the NRC of liquid effluent releases provided that the effluents being released are within the limits of their license. If Holtec wanted to release

effluents not approved by its license, it would need to request and receive approval from the NRC prior to the release. Notifications to other state or federal agencies are conducted in accordance with the specific permits or other requirements in place with those entities. The NRC doesn't track the licensee's notification of effluent releases to other federal or state agencies.

- 7. Please describe the medical expertise and analyses provided to the Decommissioning Oversight Board, the EPA, New York State Department of Health and other state agencies regarding the potential health effects to children, developing fetuses and women from potential exposure to radioactive contaminants and non-radiological co-pollutants in Holtec's disposal method involving discharges into the Hudson River. Ingestion and inhalation of radioactive elements into the body give very high doses to small volumes of cells. Children are 10-20 times more vulnerable to the adverse effects of radiation than adults and little girls twice that of boys. How are ingestion and inhalation pathways factored, especially for these vulnerable populations? How are cumulative effects factored, especially for these vulnerable populations?
 - NRC, EPA, NYS DEC, and NYS DOH employ health experts and health physicists who look at the regulatory limits and various risk estimates at both the state and federal level.

Regulatory limits are set based on recommendations from national or international organizations. Those values are based on results of health studies, then reduced to take into account the possibility of exposure to multiple sources and differences in sensitivity for various populations (including sex and age).

NRC has adjusted its regulatory limits when warranted. When the International Council on Radiation Protection (ICRP) issued recommendations in ICRP Publication 60 in 1990, NRC reduced the dose limit to a member of the public from 500 mrem/year to 100 mrem/year. As discussed by NRC health physics experts at several recent meetings of the DOB, NRC regularly assesses new studies and recommendations and has determined the current NRC radiation dose limits, which are based on International Council on Radiation Protection (ICRP) 26, are protective of public health. ICRP 103, which is the most recent document recommending dose limits, did not change the recommended limit for the public. A comparison of dose limits from ICRP 26, ICRP 60, ICRP 103 and NRC's regulations in 10 CFR Part 20 may be found here: https://www.nrc.gov/docs/ML0816/ML081690717.pdf.

Both historical discharges and planned discharges from Indian Point are orders of magnitude below the regulatory limits. The dose limit to a member of the public from operations at an NRC licensed radioactive materials use facility (including nuclear power plants) is 100 mrem/year. Calculated radiation dose to a member of the public from operations at Indian Point have consistently been a small fraction of 1 mrem/year.

8. According to Ken Buesseler, a marine radiochemist at the Woods Hole Oceanographic Institution, who reviewed the Pilgrim analyses, a sophisticated cleaning system will be required and probably more than one treatment. "Even if treatment removed 99% of the cesium, the resulting wastewater would still have levels 2 million times higher than what's in the ocean....It's got to go through it again and again and again. Even if you remove 99 percent of it, you might still be a million times higher than what's in the ocean...They need to demonstrate they can get more than 99 percent removal and that's not easy...And it's different for different radionuclides." What is the treatment system that Holtec plans to use to treat the radioactive wastewater? Who is evaluating that treatment system? Who is verifying the effectiveness of this treatment system? What radionuclides will the treatment system treat? What independent expert is providing analyses and verification of the effectiveness of this treatment system? What are the results of those independent findings? How many rounds of treatment are planned for each batch of wastewater? Who makes that determination? How is that determination made? What radionuclides remain untreated in addition to tritium? What agencies and by what means will those radionuclides be tracked, if discharges are permitted? Who/what agencies provide oversight for the treatment process? Describe oversight of the treatment process. Who/what agencies provide oversight of the discharge process? Describe the oversight of the discharge process.

- Please see the NRC website for effluent discharge: <u>https://www.nrc.gov/info-finder/reactors/ip3/faq.html</u>
- Additionally, the NRC posts the effluent discharge reports on the NRC website: <u>https://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-specific-reports/ip2-3.html</u>
- For additional detail on industry wide trends, see NUREG/CR-2907, "Radioactive Effluents from Nuclear Power Plant" Volume 26. <u>https://www.nrc.gov/docs/ML2316/ML23164A219.pdf</u>

Water Discharges – Tritium

- 9. What methods exists to remove tritium from heavy water? What is the cost?
 - It is the licensee's responsibility to ensure they are in compliance with NRC regulations. If there was a need to remove or dispose of tritium from heavy water the licensee would be responsible for identifying an appropriate method and paying for those costs.
- 10. What methods exists to remove tritium from light water? What is the cost?
 - It is the licensee's responsibility to ensure they are in compliance with NRC regulations. If there was a need to remove tritium from light water the licensee would be responsible for identifying an appropriate method and paying for those costs.
- 11. Is the tritium at Indian Point in light or heavy water?
 - Indian Point is a light water reactor.

Water Discharges – Krypton

- 12. Are krypton-85 and krypton-85 m by products of nuclear fission? Based on data provided in Dave Lochbaum 21% of krypton-85 was not been filtered out from the Reactor #1 effluent.
 - Krypton-85 and Krypton-85m are by products of the nuclear fission process. Krypton is an inert noble gas and is generally not in liquid effluents. The licensee will analyze samples from the liquid effluent to ensure the presence and concentrations of the residual radionuclides during the processing of the water are in accordance with the NRC approved Offsite Dose Calculation Manual (OCDM). See response to Q-13 and Q-25.

Water Discharges – Climate Change

13. Has the NRC considered what the climate change impacts of release of 21% of the krypton-85 produced by Indian Point into the atmosphere? Please provide any reports and studies on the impacts of krypton-85, krypton-85m, carbon-14 and tritium has on climate change. Has the NRC considered the IAEA did a study in 1994 showing that krypton-85 from nuclear fission enhance air ionization and interfered with the atmospheric-electrical system and the water balance of the earth's atmosphere and creates unforeseeable effects for weather and climate, as the krypton-85 content of the earth's atmosphere continues to rise. What was the average atmospheric concentration of krypton-85 is in 1976? What is it today?

The NRC could not find an IAEA "study" of Kr-85. The NRC located a citation from a 1996 conference in Chicago, IL that seemed to match the subject material on Kr-85 (regarding air ionization and global climate impacts). This citation was found on both the IAEA and U.S. Department of Energy research resources websites, which is likely the cause of the confusion. See the link below.

https://inis.iaea.org/search/search.aspx?orig_q=RN:28049164

The NRC does not have access to the book containing the topical matter and could only read a short abstract. Without a full understanding of the author's claims, the NRC can only speak in general terms.

Kr-85 is a gas and a product of the fission of nuclear fuel. The fuel rods which comprise nuclear fuel assemblies are designed to retain the fission products, including gases, in a sealed metal tube. During power reactor decommissioning, the spent fuel rods are placed into dry fuel storage, which consists of seal-welded metal containers that are placed into radiation shielded overpack containers. The Kr-85 is not released as part of reactor decommissioning.

During power reactor operation, occasional defects in the fuel rods, or small amounts of "tramp" uranium contained in the rod's metal tube may release very small amounts of Kr-85. The history of Kr-85 releases from Indian Point can be found in their Annual Radioactive Effluent Release Reports, which can be found here:

https://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-info.html

Nuclear fuel reprocessing can liberate notable quantities of Kr-85. Indian Point has not proposed or requested to conduct fuel reprocessing as part of the site decommissioning.

Kr-85 is also produced naturally in small quantities by the interaction of cosmic rays with stable krypton-84 in the atmosphere.

Site Cleanup

14. What enforcement action has taken place regarding the ongoing leaks from Indian Point into the Hudson?

 There are no known active leaks from Indian Point that have been detected. More information about the historical leaks can be found on the NRC website: <u>https://www.nrc.gov/info-finder/reactors/ip/ip-groundwater-leakage.html</u>

Dry Cask Storage

- 15. Are the Holtec spent fuel casks approved for use at Indian Point, approved to be used to transport nuclear spent fuel for transport on rail, barge or road? If so, please provide approvals.
 - No, the storage casks are not approved for use to transport spent fuel. <u>https://www.nrc.gov/waste/spent-fuel-transp.html</u>
- 16. If the Holtec spent fuel casks are not approved for transport what is the NRC's plan to transport nuclear spent fuel, when and if, a national interim or permanent waste storage is approved?
 - Before spent fuel is transported, the fuel would be required to be moved to a cask approved for transportation. The licensee or DOE is responsible for the transportation of spent fuel to a national interim or permanent waste storage facility. https://www.nrc.gov/waste/spent-fuel-transp.html
- 17. How much less radioactive would the tritium effluent be if was stored onsite for 15 years? For 30 years? For 60 years?
 - The half-life of tritium is 12.3 years. After 15 years, a little less than half the original amount will remain, after 30 years less than a quarter of the original amount will remain, and after 60 years less than one 16th of the original amount will remain.
- 18. What are the NRC regulations regarding the need to use a water jacket to reduce radiation from going through the walls of the transfer cask?
 - There is no specific NRC regulation for use of a water jacket for transfer casks. Instead, the NRC regulations limit radiation exposure, as required by <u>10 CFR 72.126</u>, "Criteria for radiological protection." For the transfer of highly radioactive materials, such as reactor internals, water is used primarily as a radiation shield. For transfer casks for irradiated components the transfer bell is the shield once the water is drained. For spent fuel transfer casks, the spent fuel transfer casks are thick metal and provide the shielding, until the spent fuel is transferred to the dry storage facility where the concrete structures provide the shielding and other protection.
- 19. Is the NRC, DOE or the nuclear industry investigating new technologies to sequester tritium from the environment? If so what and where are experimental technologies being considered to manage tritium effluent?
 - There are studies being conducted and experimental technologies being tested worldwide, especially with the tritium from the Fukushima accident. Tritium or tritiated water is naturally produced and found in the environment. If a licensee intends to employ a new technology, the NRC will evaluate the use from a safety perspective.
- 20. How much has Holtec spent to date on decommissioning?
 - The amount spent at Indian Point Units on decommissioning is reported each year in annual reports provided to NRC by Holtec. Per requirements established in <u>10 CFR 50.82</u>, Holtec Decommissioning International is required to submit reports to the U.S. Nuclear Regulatory

Commission by March 31 each year on the status of decommissioning funding, the financial assurance report, and the status of funding for managing irradiated fuel at Indian Point for the previous year. The 2021 Annual Report (ML22084A059) and 2022 Annual Report (ML23090A140) are currently available; NYS ensures these are posted at https://dps.ny.gov/indian-point-trust-fund-balance-reports as the reports are made publicly available.

- 21. Has the NRC approved Holtec's budget for decommissioning? If so, please provide the projected budget.
 - The NRC does not approve Holtec's budget for decommissioning. As noted in Q-20, NRC requires all decommissioning power reactor licensees to provide by March 31 each year, an annual report on the status of the decommissioning trust fund at the end of the previous calendar year. NRC evaluates the decommissioning trust fund to ensure there is reasonable assurance that there are adequate funds available to complete the decommissioning in accordance with the licensees plans and schedule.

Biological and Health Studies

22. Can you inform us what up- to-date predictive modeling, comprehensive data collection and river biota study you have mandated and ensured from the scientific community on the subject of non-human organisms affected by Holtec's radioactive wastewater dumping? If yes, where can we access the comprehensive studies in how tritiated water might affect such organisms?

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Based on a "pond" study by Pacific Northwest National Laboratory, tritium will accumulate in aquatic organisms and sediments when a tritiated water environment is introduced until it reaches an equilibrium level that is a significant fraction of the tritium water concentration (at most 65% when present in the environment for up to 7 months). Tritium losses from a pond occur exponentially over_time with less than 10% of the final equilibrium concentration remaining after 1 month. Similarly, a rapid loss of tritium from all biota and sediments occurs when the tritiated water is removed from the environment. Animals generally eliminate the tritium burden more rapidly than plants while sediments tended to eliminate the tritium more slowly.

In contrast to the "pond" study, effluents from power plants typically occur as "batches" into large receiving bodies of water such that any detectable tritiated water concentration exists for only a short time before becoming less than detectable due to the water body's mixing currents and other environmental actions affecting the water body such as evaporation, diffusion, etc. As such, an equilibrium condition with tritiated effluents is never achieved and tritium does not typically accumulate at detectable levels in aquatic organisms.

(Pacific Northwest Laboratories; J.A. Strand, W. L. Templeton, and P.A. Olson; "Fixation and Long-term Acumation of Tritium from Tritiated Water in an Experimental Aquatic Environment," 1975)

Additionally, it is important to understand that the water from Indian Point's spent fuel

pools is not released directly into the Hudson River. It will first be filtered and treated prior to releasing. The release must be monitored to ensure it is below strict regulatory limits established by the Nuclear Regulatory Commission and the Environmental Protection Agency to protect public health and safety. When the water is discharged in batches -- not all at once -- it is further diluted in the river. Therefore, the tritium does not pose a health or safety risk to the public or the environment.

23. What studies have been done by the NRC on health impacts of nuclear by-products, radioactive isotopes (tritium, krypton-85, krypton-85m and carbon-14) have on the biota-flora and fauna – including human health?

- NRC relies on radiation health effect studies performed by expert organizations such as the International Commission on Radiological Protection, the National Council on Radiation Protection and Measurement and the National Academy of Sciences and other international expert scientific organizations.
- 24. What studies have been done to consider the impact of dumping the radioactive effluent on the endangered Atlantic, short-nosed sturgeon nursey [sic] located 2.5 miles south of Indian Point.
 - The authority to perform studies on specific wildlife species resides with other government agencies. The Atomic Energy Act of 1954, as amended, is very specific to the NRC authority. Within that authority, NRC has issued radiation standards that are fully protective of workers, public and the environment, including requirements for the safe controlled and monitored discharge of liquid effluents from nuclear facilities.

Under the Endangered Species Act, the NRC has consulted with the National Marine Fisheries Service (NMFS) numerous times to consider the impacts of Indian Point operations and decommissioning on Atlantic and shortnose sturgeon. As a result of these consultations, NMFS issued a biological opinion in 2013 (ML13032A256). Section 7.2.2 of the opinion considers the potential discharge of radionuclides to the Hudson River. NMFS found that while Atlantic and shortnose sturgeon could be exposed to radionuclides originating from Indian Point, as well as other sources, any exposure is not likely to be at levels that would affect the health or fitness of any individual sturgeon. Therefore, NMFS concluded that such effects would be insignificant and discountable. As a result of subsequent consultations between the NRC and NMFS, NMFS issued amendments to the biological opinion in 2018 (ML18101A588) and 2020 (ML20280A271). These amendments considered new information that could affect sturgeon in a manner not previously considered. During the 2018 and 2020 consultations, NRC and NMFS identified no new information concerning exposure of sturgeon to radionuclides that would change NMFS's previous conclusions in the 2013 biological opinion.

25. What studies have been conducted to analysis the impact radioactive tritium, krypton-85, krypton-85m and carbon-14, have on the DNA of the biota- flora and animals- including human beings? What health studies have been conducted to determine the impacts of exposure to tritium on human health and biota?

As a noble gas, krypton does not generally participate in any biological processes. Nevertheless, the tissue of most concern from exposure to a cloud of krypton-85 gas is generally the skin, with most of the dose resulting from the beta particles associated with its radioactive decay (there is no gamma component). Radiation doses from inhaling or ingesting krypton are small compared to the dose from external radiation, such as could occur in a cloud of krypton gas. In contrast to most other radionuclides, lifetime cancer mortality risk coefficients have not been developed for the inhalation and ingestion of krypton isotopes. The only pathway for which cancer mortality risk coefficients have been developed is external exposure. Key reference NCRP report 44, "Krypton-85 in the Atmosphere – Accumulation, Biological, Significance, and Control Technology."

UNSCEAR 2016 Report, Sources, Effects and Risks of Ionizing Radiation, Annex C, Biological Effects of selected internal emitters – Tritium. This annex provides an overview of physical, radiological, and biochemical characteristics of tritium, human and environmental exposure, as well as environmental and occupational exposure to tritium. Appendix A to this annex also summarizes studies of occupational and environmental exposure to tritium. This annex is publicly available and can be downloaded for free at

https://www.unscear.org/unscear/uploads/documents/unscearreports/UNSCEAR_2016_Report-CORR2.pdf

The UNSCEAR Scientific Committee has periodically assessed public exposure to long-lived globally dispersed radionuclides discharged from nuclear power and reprocessing plants since 1982. The radionuclides of particular interest are 3H, 14C, 85Kr and 129I. The most recent review is contained in the UNSCEAR 2016 Report, Sources, Effects and Risks of lonizing Radiation, Annex A, Methodology for estimating public exposures due to radioactive discharges. This methodology was used to assess regional and global exposures attributable to the production of electricity in Annex B of this 2016 assessment.

26. Is the standard America man the standard relied upon for exposure by the NRC?

 No. The Standard Man is a term generally used to ensure consistency for internal dose calculation and computer modeling studies. Epidemiology studies account for population demographics, cultural and socioeconomics of the cohort being studied. The ICRP reviews worldwide cancer data for various populations. One population is the United States. NRC standards are based on ICRP, NCRP, NAS and other scientific expert organizations.

27. What is the age, race, gender, nationality and weight of the Standard American Man?

- As stated at the June 15 DOB meeting, the NRC regulations take into account gender, age and other factors. ICRP has performed studies includes specific categories, such as ethnicity and nationality and account for cultural and social economic issues.
- 28. Does exposure to ionizing radiation have a disproportionate impact on women and girls vs the standard American man standard, as a result of ionizing radiation?
 - No, the NRC dose standards take into account gender, age and other factors.
- 29. What NRC requirements are exists to notify the members Hudson River public who eats fish and mollusks, swim, boat and recreate, if and when, radioactive is released into the River. [sic]

Decommissioning licensees, including Holtec, can release liquid effluents containing radionuclides within the limits specified in their license and NRC regulations without seeking NRC approval. However, the NRC requires power reactor licensees, including those in decommissioning, to implement a radiological environmental monitoring program (REMP) in accordance with 10 CFR Parts 20 and 50 and to monitor and report measurable levels of radiation and radioactive materials in the site environs. Holtec maintains a REMP for the environment around the Indian Point site, including nearby portions of the Hudson River Estuary. Holtec is required to submit to the NRC an annual radiological environmental operating report with the results of the REMP and a radioactive effluent release report every year, both of which are publicly available on the NRC's website at: https://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-specific-reports/ip2-3.html.

Additionally, if Holtec wanted to release effluents at levels other than those specified in its license, Holtec would need to request and receive approval from the NRC prior to the release. Such a request would likely be submitted as a license amendment request, and the NRC would perform a safety and environmental review of that request. Correspondence and documents associated with that request would be publicly available, and the public may be able to attend or participate in public meetings associated with that request.

Emergency Preparedness / Pipeline

- 30. According to the 9/11 Commission, Indian Point was a target of terrorists who flew into the World Trade Center, with one plane flying over our community and the plant in the morning of 9/11/01. With its accountability over emergency preparedness by Holtec at Indian Point, can the NRC say that the casks, canisters, and structure of the ISFSI "installation" can withstand the impact of a 747 jetliner and the impact of 102 minutes of burning jet fuel, just like the World Trade Centers and there would not be a radiological release?
 - A question regarding missile tests was previously responded to and may be found in the FAQs section of the DOB website: <u>https://dps.ny.gov/dob-frequently-asked-questions</u>.
- 31. What tests has Holtec done with NRC oversight accountability on the casks, canisters, overpacks to ensure the safety of radiated rods in this kind of "non-fuel pool" incident?
 - A question regarding missile tests was previously responded to and may be found in the FAQs section of the DOB website: <u>https://dps.ny.gov/dob-frequently-asked-questions</u>.
- 32. What changes were made to the Federal Radiological Emergency Response Plan (FRERP) to account for the terrorist event of 9/11/01?
 - As a result of the September 11, 2001 event, the NRC ordered numerous security changes that were codified in regulation. NRC also had a number of studies performed to validate facility design criteria were adequate for a variety of terrorist scenarios, including the impacts of projectiles such as missiles.

- 33. The James Lee Wit Report, commissioned by New York State in the 2000s, found the 10-Mile EPZ Plan does not: 1. provide the structures and systems necessary to protect the public from radiation exposure; 2. address the impact of response of the 40-mile radius to the 10-mile radius; 3. consider the reality and impacts of spontaneous evacuation, not only orchestrated response plans. How did the NRC address the flaws in emergency planning outlined by the Witt Report?
 - The NRC provided its response in Press Release 03-0099 (ML032060172) https://www.nrc.gov/docs/ML0320/ML032060172.pdf
- 34. In 2013, the U.S. Accountability Office (GAO) issued a report pointing to flaws in the emergency planning at Indian Point in their report, "NRC Needs to Better Understand Likely Public Response to Radiological Incidents at Nuclear Power Plants." What has the NRC done to address these issues?
 - The NRC responded to this report in ML14055A524. https://www.nrc.gov/docs/ML1405/ML14055A524.pdf
- 35. In 2015, The Disaster Accountability Project found communities within 50 miles of the Indian Point Energy Center in Buchanan, N.Y., don't have emergency plans to respond to a nuclear accident — and then first responders in communities within the 10-mile EPZ radius were not prepared for an incident either because of the impact in the surrounding communities that are excluded in this zone. What does the NRC do to enforce Holtec's training, exercises and drills with first responders?
 - The current Indian Point Energy Center Emergency Plan states that it offers training support, as requested, for State and local agencies whose function is to provide assistance during an emergency at Indian Point Energy Center. Training is offered on an annual basis, or as needed.
- 36. Holtec is preparing to ask for an exemption in emergency planning which will provide them with quite a bit of savings, and therefore, profit. Would the NRC/DPS or the agency in charge of the Decommissioning Trust Fund provide an accounting of the emergency planning spending to date? Would this accounting detail the training funds, and funds to municipalities for special radiological equipment that protects our community?
 - As noted in Q-20 and Q-21, the NRC requires an annual report decommissioning on the status of the trust fund. The <u>2021 Annual Report</u> (ML22084A059) and <u>2022 Annual Report</u> (ML23090A140) are currently available; NYS ensures these are posted at <u>https://dps.ny.gov/indian-point-trust-fund-balance-reports</u> as the reports are made publicly available.
 - NYS DPS Emergency planning spending is paid out through the Decommissioning Trust Fund, but it is not specifically accounted for in the balance reports.

The plant stated earlier this year that because NRC has not approved their emergency planning exemption, they are running over their planned budget for emergency response expenses – all billed to DTF.

- 37. What is the date of the last in person critique by the NRC of a Holtec emergency response and the self-critique system by Holtec that also include representatives of FEMA?
 - December 31, 2022. <u>https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML23047A154</u>
- 38. Nuclear Independent Oversight (NIOS) would the NRC and Holtec be able to provide a record of the assessment (audit) of the emergency preparedness program?
 - Yes, the inspection report documenting the most recent emergency preparedness inspection conducted at Indian Point is located here: <u>https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML23047A154</u>
- 39. What are the results of oversight from the Onsite Safety Review Committee of: Plan and procedure revisions; drill/exercise result; and audit inspection results?
 - The inspection report documenting the most recent emergency preparedness inspection conducted at Indian Point is located here: <u>https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML23047A154</u>