

BEFORE THE ENVIRONMENTAL APPEALS BOARD  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C.

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In re: Pilgrim Nuclear Power Station )  
Name of Permittee: Holtec Decommissioning )  
International, LLC )  
NPDES Permit No. MA0003557 )  
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**PETITION FOR REVIEW**

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## INTRODUCTION

Pursuant to 40 C.F.R. § 124.19(a), Holtec Decommissioning International, LLC (“HDI” or “Permittee”), and Holtec Pilgrim, LLC (“Holtec Pilgrim”, and together with Permittee, collectively “Holtec”), petition the Environmental Appeals Board (“Board”) for review of the conditions of the National Pollutant Discharge Elimination System (“NPDES”) and Massachusetts Clean Waters Act (“MCWA”) permit, NPDES Permit No. MA0003557 (the “New Permit”, see Attachment 1), issued on a renewed basis to Holtec on January 30, 2020, jointly by the U.S. Environmental Protection Agency, Region 1 (“EPA” or the “Region”) and the Massachusetts Department of Environmental Protection (“MassDEP” or the “Commonwealth,” and together with EPA: the “Agencies”). Holtec is joined in this petition for review by Entergy Nuclear Operations, Inc. (“ENOI”), the operating entity for the former applicant and permittee Entergy Nuclear Generation Company (“ENGCO”), 100% of the equity of which was acquired by a Holtec International subsidiary, which following an LLC conversion and the transaction closing, changed the name of ENGCO to Holtec Pilgrim, LLC.<sup>1</sup> Holtec and ENOI are collectively referred to herein as the “Petitioners”.

Notice of the New Permit’s reissuance was sent to the several Petitioners by U.S. Mail (certified, return receipt requested), postmarked on February 3, 2020, and was received by the several Petitioners on February 5, 2020.

The NPDES permit in effect prior to the reissuance (the “Current Permit”) was issued on April 29, 1991, modified on August 30, 1994, and would have expired, but for the fact that it

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<sup>1</sup> ENOI joins this appeal out of an abundance of caution due to the uncertainty created by the MassDEP’s “reservation” contained in footnote 1 of the Permit regarding the change in control over ownership of the ENGCO entity and transfer of operating authority of the Station to HDI, as well as by the Massachusetts Attorney General’s challenges to decisions made by the Nuclear Regulatory Commission (“NRC”), both in that tribunal and in federal court. MassDEP’s “reservation” places ENOI in the unreasonable position of retaining responsibility under the current NPDES Permit for a facility over which it has no ownership or operational control, and forces ENOI to assess new NPDES Permit terms that it cannot reasonably ignore. Accordingly, ENOI, due to the procedural uncertainty, and in an abundance of caution, joins this appeal of the New Permit.

was administratively continued as a matter of law as a result of the timely application of ENGCO's predecessor and then permittee Boston Edison Corp., on April 29, 1996. 40 C.F.R. § 122.6. Specifically, on September 19, 1995, Boston Edison submitted a timely and complete permit renewal application (*See* Fact Sheet at p. 6). The status of the Current Permit is important, as substantive components of it will remain in effect, given the challenges initiated herein.

The Current Permit and New Permit have governed, and will govern, operations and activities at Pilgrim Nuclear Power Station ("PNPS" or the "Station"), a facility that ceased generating electricity on May 31, 2019 ("Closure") and is currently undergoing the transition to decommissioning. *See* New Permit I.C.; *see also* Response to Comments for the National Pollutant Discharge Elimination System (NPDES) Permit No. MA0003557 – Pilgrim Nuclear Power Station (PNPS), Plymouth, MA ("Response to Comment", see Attachment 2) I. 1.0 at p. 11. With Closure, the Station ceased the operations of and the vast majority (>97%) of flows (both, intake and discharges) related to the historic circulating water system, except on a periodic or incidental basis. Post-Closure, the focus will be on nuclear-safety-grounded service water systems.<sup>2</sup> A clear and consistent understanding of these separate systems is essential for evaluating and advancing this Appeal. However, as detailed herein, the New Permit was reissued by EPA and MassDEP without an apparent understanding of the Station's post-Closure operations. This lack of fundamental understanding – and meaningful inquiry – of the systems, outfalls, and discharges Post-Closure infects, and has exacerbated several clearly erroneous conditions in, the New Permit. This unfortunate failure, i.e., to engage the former and current applicants and permittees for an authorization that the Agencies have taken more than two decades to renew, particularly when the New Permit is reissued at such an inflective moment in

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<sup>2</sup> Referred to in the New Permit as Salt Service Water system. *See* New Permit I.A.3.

the Station's history – its Closure and future decommissioning under a new corporate family – warrants stay of this Appeal pending discussion among the Agencies and the correct permittee, Holtec Pilgrim. This dynamic is exacerbated by the Agencies' decision to reissue the New Permit during the pendency of the litigation brought by the Massachusetts Attorney General's Office, a challenge that calls into question the ownership and therefore the permittee status with respect to the New Permit. Thus, and importantly, the Petitioners will be filing a separate request for a stay of this Appeal, once it is docketed and the Petitioners have an opportunity to confer with the Agencies on that issue.

The New Permit at issue in this Appeal authorizes HDI to continue to make certain discharges at the Station to Cape Cod Bay. The authorized discharges consist primarily of consistent intake and discharges of non-contact cooling water related to service water system, as well as a potential, periodic use of a single pump from the historic circulating water systems, and the non-thermal backwash water to maintain that system, intake screenwash water, stormwater, station heating system water, and cooling water from heat exchangers, from a number of separate, and sometimes sequential, authorized outfalls. The New Permit also contains numerous conditions pertaining to those discharges, including flow limitations, numerical pollutant limitations, sampling and monitoring requirements, among others.

As detailed herein consistent with the standard for petitions, Petitioners establish that certain New Permit conditions are based on clearly erroneous findings of fact and conclusions of law, and in certain cases, particularly relating to nuclear safety, involve exercises of discretion that warrant further review or are ultra vires.

Specifically, the Agencies have issued a New Permit that: (a) contains contradictory or impossible to obtain numerical effluent limitations; (b) mandates the operation of inoperable,

inapplicable, or unnecessary technology; (c) requires impractical new monitoring requirements that are wholly inappropriate and unnecessary considering the drastically reduced post-Closure effluent requirements and reduced potential for environmental impact; (d) sets numerical effluent limitations to levels to which strict compliance with such limits may lead to damage to equipment over time; (e) intrudes on NRC's primacy and authority with respect to nuclear safety; and (f) reflects numerous factual errors that have produced erroneous or nonsensical provisions that could have been readily addressed had the Agencies merely reached out to ENGC or afterward Holtec Pilgrim. In addition, the New Permit specifies particular sampling and monitoring conditions that are confusing, contradictory, or are unnecessarily specific and impractical, not to mention dangerous to perform.

Accordingly, Petitioners challenge the following New Permit conditions:

1. All conditions related to specified and unspecified limitations on pollutants discharged through Outfall Serial Number 001 to the discharge canal, which the New Permit authorizes at any greater amount or concentration in any discharge to the discharge channel, including but not limited to: Effluent Temperature, Temperature Rise, Total Residual Oxidants ("TRO"), and Effluent Boron, e.g., New Permit I.A.1;
2. All conditions related to the chlorination of intake water, e.g., New Permit I.A.1 FN 7, and New Permit I.A.3 FN 7;
3. All conditions relating to Intake Screenwash and Screen Rotating, e.g., New Permit I.A.4, New Permit I.A.20, New Permit I.C, and New Permit Attachment B;
4. All conditions relating to the frequency of monitoring discharged circulating water for Temperature, Effluent and Temperature Rise ( $\Delta T$ ) at Outfall #001, and at Outfall #010, e.g., New Permit I.A.1 and New Permit I.A.3;



5. All conditions relating to the requirement that a routine sampling program shall be developed in which samples are taken at the same location, same time and same days of the month, or which specify sampling a location or time that is unreasonably inflexible so as to require sampling at a dangerous location or time, e.g., New Permit I.A.1 FN1, New Permit I.A.2 FN1, New Permit I.A.3 FN1, New Permit I.A.4 FN1, New Permit I.A.5 FN1, New Permit I.A.6 FN1, New Permit I.A.5 FN3, New Permit I.A.6 FN3 and New Permit I.A.9 FN1;

6. All conditions relating to sampling of stormwater discharged from electrical vaults (manholes), e.g., New Permit I.A.7;

7. All conditions suggesting that MassDEP possesses authority over nuclear safety and the management of radioisotopes by federal regulators, e.g., New Permit I.H.4 and New Permit I.H.5; and

8. All conditions relating to the requirement that the Permittee report any planned physical alterations or additions to the Station, e.g., New Permit I.B.1.

### **THRESHOLD AND PROCEDURAL REQUIREMENTS**

The Petitioners satisfy the threshold requirements for filing a petition for review under 40 C.F.R. Part 124, to wit:

1. Petitioners have standing to petition for review of the New Permit. HDI is the Agency-chosen permittee and directly affected by the conditions of the New Permit. Holtec Pilgrim has standing because it was the entity with ownership and control over the Station, and the very entity to which the former and new Station owners and operators, collectively, requested that the Current Permit and the New Permit be issued. ENOI, as the prior operator of the PNPS, participated with the former ENGC (now, Holtec Pilgrim) by submitting the application and the public comments, with affidavits of leading technical experts (collectively, “Entergy’s Comments”, see Attachment 3), for the New Permit. Entergy’s Comments are hereby adopted

by the Petitioners as they relate to the arguments in this Petition and must be included by the Region in the Administrative Record. Again, HDI replaced ENGC as the named permittee in the New Permit and replaced ENOI as the current operator of the Station. *See* Response to Comment at p. 3; *see also* Response to Comment I. 2.5. Holtec Pilgrim (the renamed former ENGC) remains the owner of the Station and retained all of its rights and interests in connection with the Current Permit and New Permit, including, but not limited to, the standing to seek review via its participation during the comment period. *See* 40 C.F.R. § 124.19(a).

2. The issues raised herein by the Petitioners were raised during the public comment period, and were therefore preserved for review. *See generally* Response to Comment.

3. The filing of this Petition for Review is timely, as it was filed within 30 days of the receipt of the New Permit and service of notice of the New Permit's reissuance to the several Petitioners by EPA, per 40 C.F.R. § 124.19(a)(3), extended by three days because the several Petitioners were served by mail. *See* EAB Practice Manual at p. 42.<sup>3</sup>

4. A Notice of Appeal was also filed by the same Petitioners with MassDEP pursuant to 314 Mass. Code Regs. § 2.08 on March 2, 2020. Appeals to the MassDEP are stayed pursuant to 310 Mass. Code Regs. § 1.01(6)(h), pending the determination of the Board on this Petition for Review. In addition, however, the Petitioners have moved for a stay of those Commonwealth proceedings, a copy of which is attached here (without the NPDES Permit itself). *See* Attachment 4.

### **FACTUAL AND PROCEDURAL BACKGROUND**

The New Permit addresses and authorizes certain water discharges from the Station.

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<sup>3</sup> “When the permitting authority serves the notice by mail, service is deemed to be completed when the notice is placed in the mail, not when it is received. However, to compensate for the delay caused by mailing, the 30-day deadline for filing a petition is extended by three days if the final permit decision being appealed was served on the petitioner by mail.” EAB Practice Manual at p. 42.

PNPS was a 685 net megawatt (MW) electric generation station on the western shore of Cape Cod Bay in Plymouth, MA that began operation in December of 1972 and was shut down on May 31, 2019 by ENGC. Historic systems associated with pre-Closure operation – namely, the historic circulating water system – are no longer for the most part operable.

On April 29, 1991, the U.S. EPA and MassDEP issued the Current Permit pursuant to provisions of the Federal Clean Water Act as amended, (33 U.S.C. §§ 1251 et seq.; the “CWA”), and the Massachusetts Clean Waters Act, as amended, (M.G.L. Chap. 21, §§ 26-53). Because of the nearly three-decade delay in issuing the New Permit, it has gone through multiple transitions worth mentioning, all of which were approved by EPA and MassDEP. A timely application for renewal of the Current Permit was filed by PNPS’s prior owner, Boston Edison, and therefore administratively continued pursuant to 40 C.F.R. § 122.6. PNPS was subsequently transferred from Boston Edison to ENGC in 1999, with EPA and MassDEP approving the transfer to the former ENGC of the Current Permit and then-pending application. ENGC subsequently submitted an application update, as well as multiple or seriatim Responses to Requests for Information, all of which occurred mostly from 1999 to 2015.

On October 13, 2015, the former ENGC announced that it would shut down PNPS for economic reasons as of June 1, 2019. On May 18, 2016, EPA and MassDEP issued a draft permit for PNPS (see Attachments 5 and 6) and solicited public comment on the draft permit from July 18 through July 25, 2016, holding a public hearing on the draft permit on July 21, 2016. Multiple comments were submitted, as were Entergy’s Comments, all of which should be considered here.

On July 30, 2018, the former ENGC and related entities entered into an Agreement with Holtec and related entities for the sale of one hundred percent (100%) of the equity in ENGC to

a Holtec International subsidiary. In connection with that transaction, on August 22, 2019, NRC staff issued an order approving an application for: (1) a direct transfer of control of the NRC licensed authority (licensed operator for decommissioning) for PNPS from ENOI to HDI, and (2) an indirect transfer of control and conforming license amendment based on the name change from the former ENGC to Holtec Pilgrim, both subject to the NRC Commissioners' authority to rescind, modify, or condition. As of closing on August 26, 2019, Holtec Pilgrim continues to own PNPS, and HDI now controls PNPS's operations, including the personnel and systems supporting the Current Permit and the New Permit.<sup>4</sup>

In connection with the transaction, EPA recognized the automatic transfer of the Current Permit from ENGC to HDI, but curiously not to Holtec Pilgrim as had been requested. *See* Response to Comment IV. 1.2 at pp. 250-251. Further, MassDEP has not approved a change in control and name change for any MassDEP authorization maintained by PNPS, including the Current Permit, and has expressly refused as part of the jointly issued New Permit to "acquiesce in or accept past or future decisions and actions of the Nuclear Regulatory Commission, including those of its staff, approving the direct and indirect transfer of the Pilgrim Renewed Facility Operation License DPR-35 and the general license for the Pilgrim Independent Spent Fuel Storage Installation (ISFSI) from Entergy Nuclear Operation Inc. and Entergy Nuclear Generation Company (to be renamed Holtec Pilgrim, LLC) to Holtec International and Holtec Decommissioning International, LLC." For these reasons, and as noted in footnote 1, all Petitioners join this Appeal.

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<sup>4</sup> After the closing of the transaction, the Massachusetts Attorney General's Office ("AGO") petitioned for several hearings, objecting to the already-completed transfers, including hearings objecting to the transfer of licenses and other ancillary approvals (U.S. Court of Appeals for the D.C. Circuit (D.C. Cir. No. 19-1198)) and a petition for review of an order by the NRC Commissioners denying a stay of the NRC Staff Order approving the transaction (U.S. Court of Appeals for the D.C. Circuit (D.C. Cir. No. 20-1019)). These matters remain pending.

## ISSUES PRESENTED FOR REVIEW

Petitioners present the following issues for review.

1. Limitations on pollutants discharged through Outfall Serial Number 001. Part I.A.1 of the New Permit authorizes the Permittee to discharge circulating water through Outfall Serial Number 001 to the discharge canal, and conditions this discharge on meeting certain numerical limits on pollutants contained in the discharge. EPA and MassDEP erroneously failed to take into account that the circulating water pumps would not be operating the majority of the time after Closure of the PNPS, and thereby set limits that will likely not be attainable under normal operating conditions after Closure, due to inadequate dilution. These issues are discussed in further detail in Entergy's Comments, and are included in the Response to Comment III. 5.2 at pp. 187-191 and III. 6.0-6.3 at pp. 191-207.

2. Limitations related to chlorination of intake water. Part I.A.1 of the New Permit imposes a numerical limit on the concentration of Total Residual Oxidants of 0.1 mg/L Maximum Daily and Average Monthly at Outfall Serial Number 001. *See* New Permit I.A.1 FN7. Part I.A.3 of the New Permit imposes numerical limits on the concentration of Total Residual Oxidants of 1.0 mg/L Maximum Daily and 0.5 mg/L Average Monthly Outfall Serial Number 010 to the discharge canal. *See* New Permit I.A.3 FN7. As explained above, the limits set in the New Permit at Outfall Serial Number 001 assume sufficient dilution from the circulating water flow, and are impossible to meet when the circulation pumps are not operating. These limits are therefore erroneously set considering that the circulating water may only operate for a maximum of 48 hours per month. Petitioners contend that in order to satisfy the limitations currently required by the New Permit, they would need to under-chlorinate the Salt Service Water ("SSW"), which is contrary to nuclear safety requirements. These issues are discussed in further

detail in Entergy's Comments, and are included in the Response to Comment III. 6.0-6.2 at pp. 191-204.

3. Intake Screenwash and Screen Rotating. Parts I.A.20, I.C. and Attachment B of the New Permit collectively require the Station to utilize rotating screen technology, pursuant to 40 C.F.R. §§ 125.90 through 125.99, reportedly to prevent or limit entrainment of fish in the water intake system, and to limit impingement of fish and other sea-life that do not pass through the screen. Relatedly, Part I.A.4 of the New Permit allows discharge of water used to wash the screens and move the materials out through the fish sluiceway and includes additional conditions to that discharge. Petitioners seek review of all conditions relating to intake screenwash water discharge, requirements to operate the rotating screens, and related monitoring, because the requirements are inapplicable per 40 C.F.R. § 125.91(a)(3) while the circulating water pumps are operating, as far less than 25 percent of the total intake flow at the intake will be used for cooling purposes. When the circulating pumps are not operating (which is the typical operating condition following Closure), there is no flow velocity attributed to the circulating water system, and therefore no risk of impingement. Finally, flow rates at the intake, as calculated by EPA, with respect to the circulating water system, are expected to exceed 0.5 feet per second (fps) for a maximum of 48 hours per month (approximately 720 hours), or only 6.7% of the time. As such, the Agencies have not established in the record that 6.7% (as a monthly maximum) of current authorized impingement is material and warrants the conditions that are included in the New Permit. Furthermore, the Station may actually use less circulating water than the maximum allowed, further reducing the theoretical impingement effects. Finally, the use of a circulating water pump is expressly contemplated to be temporary. In other words, the Agencies are proposing significant NPDES permit conditions for a temporary fraction of theoretical flow,

without adequate justification in the record. These issues are discussed in further detail in Entergy's Comments, and are included in the Response to Comment III. 8.0-8.3 at pp. 209-220.

4. Frequency of monitoring discharged circulating water for Temperature, Effluent and Temperature Rise (delta T) at Outfall #001. Parts I.A.1 and I.A.3 of the New Permit require monitoring of the effluent temperature at both Outfall 001 and Outfall 010 at a frequency identified in the New Permit as "continuous." Such continuous monitoring will necessitate the installation of expensive new equipment at the Station. Petitioners contend that the more stringent monitoring requirement is clearly erroneous and/or an exercise of discretion that warrants review because EPA fails to cogently explain why "continuous" monitoring is necessary or appropriate, particularly given the extensive longstanding, comprehensive thermal assessment performed by the Station for historic thermal loading, as compared to the post-Closure loading at a trivial fraction of those historic loads. These issues are discussed in further detail in Entergy's Comments, and are included in the Response to Comment III. 5.2 at pp. 187-191.

5. Requirements to sample at the same location, same time and same days of the month. Parts I.A.1 FN1, I.A.2 FN1, I.A.3 FN1, I.A.4 FN1, I.A.5 FN1, I.A.6 FN1, and I.A.9 FN1 of the New Permit each impose a requirement that the Permittee develop a routine sampling program whereby the samples are taken at the same location, time, and days of the month. These provisions are an exercise of discretion that warrants review because the New Permit reissuance fails to cogently explain why such structure and specificity is necessary. This provision is also confusing to the extent that it is required for intermittent flows, and improper to the extent that it is so unreasonably inflexible so as to require sampling at a dangerous location or time. For each of these reasons, the New Permit's conditions in this regard reflect an abuse of agency discretion

that warrants review. These issues are discussed throughout Entergy's Comments, and are included, *generally*, in the Response to Comment.

6. Sampling of stormwater discharged from electrical vaults (manholes). Part I.A.7 of the New Permit authorizes the Permittee to discharge stormwater from electrical vaults (manholes) through internal Outfall Serial Numbers 004A (manhole MH-4), 004B (manhole MH-2), 005A (CP-4), and 005B (MH-27A) to the discharge canal. Petitioners seek review of all conditions relating to sampling of stormwater discharged from electrical vaults (manholes), because these requirements are clearly erroneous and/or an exercise of discretion that warrants review in that they are unnecessary and unduly burdensome in light of the fact that the EPA itself has acknowledged that there is virtually no risk of any contaminants having a material impact on the aquatic life water quality standard as a result of dilution in the discharge canal. These issues are discussed in further detail in Entergy's Comments and related correspondence (see Attachment 7), and are included in the Response to Comment 10.0-10.4 at pp. 228-246.

7. All conditions suggesting that MassDEP possesses authority over nuclear safety and the management of radioisotopes by federal regulators. Part I.H.4. of the New Permit provides, in part, that the Permittee shall notify MassDEP when the Annual Radioactive Effluent Release Report and the Annual Radiological Environmental Operating Report submitted to the NRC are available. Petitioners seek review of all conditions relating to this requirement, because these reporting and notification requirements infringe on NRC's exclusive jurisdiction over nuclear-reactor operations, and therefore are beyond the legal authority of MassDEP. Such conditions conflict with the federal government's exclusive jurisdiction over these subject matters and therefore are unlawful. These issues were discussed in Entergy's Comments, and are included in the Response to Comment III. 7.0 at pp. 207-209.



8. Reporting of planned physical alterations or additions to the permitted facility. Part I.B.1 of the New Permit provides, in part, that the Permittee must report any planned physical alterations or additions to the Station. Petitioners object to the language as currently written because it is overly broad, overreaching and is not reasonably related to the Agencies' authority to regulate discharges to the waters of the United States. Petitioners therefore request additional clarification regarding this condition's requirement that the Permittee report any planned physical alterations or additions to the permitted Station and requests that the New Permit's language in this respect be revised so as to not be overly burdensome on the Permittee. Specifically, Petitioners request that "physical alterations" be defined so that the reporting required by Part I.B.1 of the New Permit be limited to such physical alterations that will (1) materially change the location of an outfall, or (2) result in a significant effect on the potential for the discharge of pollutants to the waters of the United States.

## **ARGUMENT**

### **I. Standard of Review**

Section 124.19 permits review of a permit decision if the appellant demonstrates that it is *either* (i) based on a clearly erroneous finding of fact or conclusion of law, *or* (ii) involves an important matter of policy or exercise of discretion that warrants further review. 40 C.F.R. § 124.19(a)(4); *In re City of Palmdale (Palmdale Hybrid Power Project)*, 15 E.A.D. 700, 704 (EAB 2012) (Board will review permit where the "permit decision *either* is based on a clearly erroneous finding of fact or conclusion of law, *or* involves a matter of policy or exercise of discretion that warrants review.") (emphasis added). "In reviewing an exercise of discretion by the permitting authority, the Board applies an abuse of discretion standard. The Board will uphold a permitting authority's reasonable exercise of discretion if that decision is cogently explained and supported in the record." *In re Jordan Development Co., L.L.C.*, 18 E.A.D. 1, 5

(EAB 2019); *see also In re Ash Grove Cement Co.*, 7 E.A.D. 387, 397 (EAB 1997) (“[A]cts of discretion must be adequately explained and justified.”); *Motor Vehicles Mfrs. Ass’n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 48 (1983) (“We have frequently reiterated that an agency must cogently explain why it has exercised its discretion in a given manner.”).

## **II. Challenges to Specific Permit Conditions.**

1. Limitations on pollutants discharged through Outfall Serial Number 001. Petitioners seek review of all conditions related to specified and unspecified limitations on pollutants discharged through Outfall Serial Number 001 to the discharge canal, which the New Permit authorizes at any greater amount or concentration in any discharge to the discharge channel, namely Part I.A.1. of the New Permit. These conditions warrant review because they involve clearly erroneous findings of fact or conclusions of law due to the Agencies’ failure to appropriately consider changes to the use of circulating water after Closure of the Station and the resulting changes to dilution of effluent at Outfall 001 following Closure.

Part I.A.1 of the New Permit authorizes the Permittee to discharge circulating water through Outfall Serial Number 001 to the discharge canal, and conditions this discharge on meeting certain numerical limits on pollutants contained in the discharge. The New Permit specifies that the sampling of the discharge required by Part I.A.1 “shall be representative of the effluent that is discharged through Outfall 001,” and “shall also include flows from Outfalls 004, 005, 010, 011, 012, and 014 when discharging.” *See* New Permit I.A.1 FN 1. The flows discharging from Outfalls 004, 005, 010, 011, 012, and 014 into the discharge channel collectively contain numerical limits for Effluent Temperature, Temperature Rise (delta T), Total Suspended Solids (TSS), Oil and Grease (O&G), Total Residual Oxidants (TRO), and Effluent Boron that are higher than what is permitted to be discharged at Outfall 001.

When the circulating pumps are not operating, the effluent discharging from Outfall 001

will be made up exclusively of the flows discharging from Outfalls 004, 005, 010, 011, 012, and 014 and there will be no circulating water flow to dilute those prior discharges before they reach the point of sampling required in Part I.A.1 of the New Permit. In other words, even though the other outfalls will be discharging the very same levels of pollutants, the concentrations at Outfall 001 will be significantly higher when the circulating pumps are off.

The inevitable result is that the limits included in Part I.A.1 of the New Permit will likely be exceeded in the sampling performed pursuant to Part I.A.1 FN 1 of the New Permit, but only because the circulating pumps are not running, not because of an increase in actual pollutant loading to the discharge point. To achieve compliance with the numerical limits, the Permittee would be encouraged to unnecessarily run the circulating pumps, but the New Permit limits the circulating pumps to running for a maximum of 48 hours per month. Clearly, the Agencies failed to consider this inevitable circumstance in rendering its permit decision, and therefore the imposition of these limitations is clearly erroneous.

Alternatively, as Entergy argued in its comments to the draft permit, the limits in Part I.A.1 of the New Permit are improper because EPA has exceeded its authority in setting them.

...the post-shutdown use of circulating water at PNPS for dilution purposes will not be cooling water and will contain no otherwise regulated “pollutants,” as defined under the federal CWA or the MCWA. Because this is so, as a legal matter, the post-shutdown use of circulating water at PNPS consists, from EPA’s and DEP’s perspective, merely of the withdrawal and immediate release (without any legally meaningful alteration) of seawater. That activity is no different in principle from the type of water transfers that hydroelectric dams and some municipal water systems perform, for which no NPDES permit is necessary. As the Supreme Court has repeatedly acknowledged, because the scope of the NPDES program covers only “discharges of pollutants,” no permit is required for a water usage that is equivalent to merely “tak[ing] a ladle of soup from a pot, lift[ing] it above the pot, and pour[ing] it back into the pot,” without more. That analogy applies perfectly to PNPS’s post-shutdown use of circulating water, meaning that it is unnecessary for that discharge to be covered by any NPDES permit authorization at all.

Response to Comments 4.1 at pp. 171-172 (internal citations omitted). For these reasons, the New Permit's conditions on the circulating water specifically are legally erroneous and warrant review.

2. Limitations related to chlorination of intake water. Petitioners seek review of all conditions related to the chlorination of intake water, namely Parts I.A.1 FN7 and I.A.3 FN7 of the New Permit. These conditions warrant review because they involve clearly erroneous findings of fact or conclusion of law due to the Agencies' failure to appropriately consider the reduced dilution of effluent at Outfall 001 following Closure when they set the conditions regarding chlorination of intake water.

Part I.A.1 of the New Permit authorizes the Permittee to discharge circulating water through Outfall Serial Number 001 to the discharge canal and imposes a numerical limit on the concentration of Total Residual Oxidants of 0.1 mg/L Maximum Daily and Average Monthly. *See* New Permit I.A.1 FN 7. Part I.A.3 of the New Permit authorizes the Permittee to discharge non-contact cooling water from the SSW system through Outfall Serial Number 010 to the discharge canal, and imposes higher numerical limits on the concentration of Total Residual Oxidants of 1.0 mg/L Maximum Daily and 0.5 mg/L Average Monthly. *See* New Permit I.A.3 FN 7. Petitioners contend that the Agencies erroneously and improperly set the limit of 0.1 mg/L at a level that will be impossible to obtain when the circulating pumps are not operating, due to there being insufficient other sources of flow in the discharge channel. This results from the Agencies' failure to fully understand post-Closure operation of the PNPS.

The non-contact cooling water from the SSW system is "continuously chlorinated." As EPA explains in its Response to Comment:

The Final Permit prohibits chlorination at Outfall 001, but includes end-of-pipe limits for TRO at Outfall 010, which is continuously chlorinated. The

Final Permit includes a water quality-based TRO limit of 0.1 mg/L, applied at the sampling location for Outfall 001, to ensure that effluent from Outfall 010 meets water quality standards for chlorine.

Response to Comment I. 3.1 at p. 33 (internal citations omitted). The New Permit rightly authorizes this water to be discharged through Outfall Serial Number 010 to the discharge channel. The New Permit then assumes that the chlorinated water from the SSW system will commingle with the other waters in the discharge channel and be sufficiently diluted before discharging through Outfall Serial Number 001. This assumption is apparent from EPA's description of the location of the sampling point described in I.A.1 Footnote 1 of the New Permit: "This sampling point shall also include flows from Outfalls 004, 005, 010, 011, 012, and 014 when discharging." However, the circulating water pump is only permitted to operate for a maximum of 48 hours in any month, vastly reducing the volume of water that will be discharging into the discharge channel on any given day. Discharges from Outfalls 004 and 005 are to be composed of entirely stormwater, and will therefore be intermittent and weather-dependent. Discharges from Outfalls 011 and 014 are also intermittent and represent a combined maximum daily flow of only 0.12 MGD. *See* New Permit I.A.8 and New Permit I.A.9: "Maximum Daily Flow" of 0.06 MGD each. Lastly, discharges from Outfall 012 are expected to be seldom to never. *See infra* argument #3 Intake Screenwash and Rotating. Petitioners contend that up to 19.4 MGD of SSW system discharge from Outfall 010 that is chlorinated to a maximum daily TRO concentration of 1.0 mg/L will not be diluted sufficiently to meet the Outfall 001 maximum daily TRO concentration of 0.1 mg/L when the circulating water pumps are not operating. This potential ten-fold reduction of TRO concentration logically would require comingling the chlorinated discharge from Outfall 010 with a volume of non-chlorinated water at least nine

times the volume of the discharge from Outfall 010. This is almost certainly impossible when the circulating pumps are not operating.

EPA considered these arguments in its Response to Comment I. 3.4 at pp. 40-43,<sup>5</sup> but failed to appropriately set attainable end of pipe limits. Chlorination of the SSW water is a matter of nuclear safety. Petitioners contend that in order to meet the limits required in the New Permit they would need to under-chlorinate the SSW system water when the circulating pumps are not operating, which is the majority of the time, and to do so would be inconsistent with NRC nuclear-safety mandates. This error is illustrative of the overarching errors in the New Permit—that EPA failed to fully take into account the changes in operation post-Closure, and failed to appropriately incorporate such operational changes into the New Permit. The Agencies’ failure to recognize this issue and set an appropriate TRO concentration that is viable when the circulating pumps are turned off is clearly erroneous and warrants review.

3. Intake Screenwash and Screen Rotating. Petitioners seek review of all conditions relating to Intake Screenwash and Rotating, Unusual Impingement Events, and the Impingement Monitoring Program, namely Parts I.A.4, I.A.20, I.C. and Attachment B of the New Permit.

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<sup>5</sup> “As for Outfall 010, even now that PNPS has ceased operations, the SSW system still requires continuous chlorination to control biological growth in the cooling equipment serving the spent fuel pool. As such, a numeric limit at this outfall is warranted. When PNPS was operating, Outfall 001 included condenser cooling water, which was also chlorinated. Part I.A.1 of the Draft Permit included water quality-based, pre-Closure numeric TRO limits at Outfall 001 to ensure that chlorination of this outfall was consistent with water quality standards. Because the compliance point for Outfall 001 is downstream of where Outfall 010 discharges, the water quality-based numeric limit captured the comingled TRO discharge from both sources.

Since PNPS has ceased operations, the Permittee no longer chlorinates the wastewater at Outfall 001. The Final Permit prohibits chlorination of the intake water from either circulating water pump. At the same time, the effluent from Outfall 010 continues to be chlorinated and no longer has the benefit of dilution from combining with the discharge from Outfall 001. After considering comments on the Draft Permit, including Entergy’s comments regarding the need for chlorination of the salt service water as a nuclear safety measure and to meet NRC mandates, Part I.A.3 of the Final Permit establishes less stringent TRO limits at Outfall 010 than proposed in the Draft Permit. In addition, the intermittent discharges from Outfalls 011 and 014 may contain purified city water and salt service water, both of which could contain chlorine. To ensure that water quality standards continue to be met with the post-shutdown combined discharges from Outfalls 010, 011, and 014, Part I.A.1 of the Final Permit establishes a TRO limit of 0.1 mg/L at the sampling location for Outfall 001 consistent with the current permit.” Response to Comment I. 3.4 at pp. 41-42.

Review is warranted because these conditions are clearly erroneous and/or an abuse of discretion because the New Permit includes mandatory operation of technology that is neither applicable (during operation of circulating pumps) nor necessary (when circulating pumps are not operating) after Closure of the PNPS.

Part I.C of the New Permit requires operation of the traveling screens, limits the maximum through-screen velocity, and imposes daily and monthly monitoring requirements. Part I.A.20 of the New Permit requires monitoring for “unusual impingement events” (UIEs) and imposes continuous rotation of the traveling screens following a UIE. These conditions were developed pursuant to 40 C.F.R. §§ 125.90 through 125.99<sup>6</sup> to prevent or limit entrainment of fish in the water intake system, and to limit impingement of fish and other sea-life that do not pass through the screen. *See* Fact Sheet 3.0 Biological Impacts of Cooling Water Intake Structures, at pp.13-15.

Pursuant to 40 C.F.R. § 125.91(a)(3), the intake technology included in the New Permit is only applicable if “[t]wenty-five percent or more of the water the facility withdraws on an actual intake flow basis is used exclusively for cooling purposes.” Following Closure, circulating pump water is not used for cooling purposes. Therefore, the percent of the intake flow used exclusively for cooling purposes is far less than 25 percent when the circulating pumps are operating. This means that the requirements at §§ 125.94 through 125.99 are inapplicable to these flows as a matter of law, pursuant to Section 125.91(a)(3), during circulating pump operation. When the circulating pumps are not operating, even though the percent of the intake flow used exclusively for cooling purposes would thereby exceed 25 percent, the flow velocity at the intake is not expected to exceed 0.5 fps (except in unusual circumstances, as described

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<sup>6</sup> EPA maintains that the requirements relating to BTA standards for impingement mortality are established pursuant to 40 C.F.R. § 125.98(g), but that it sought to be consistent with BTA standards for impingement mortality at 40 C.F.R. § 125.94(c). Response to Comment III. 3.2 at p. 164 .

below), meaning there will be little to no legitimate risk of impingement while the circulating pumps are not operating. The Agencies clearly neglected to take this in to account when determining these conditions, and the resulting conditions regarding screen rotation in the New Permit are therefore clearly erroneous and warrant review.

In addition, the Agencies erroneously and improperly impose sampling and monitoring conditions in the New Permit that are unnecessary post-Closure and the requirements are otherwise confusing, inconsistent, and overly burdensome. EPA recognizes that the flow rate of 0.5 fps will only be exceeded when a circulating pump is operated, which is capped at 48 hours per month by Part I.C.4 of the New Permit, and have therefore only required constant operation of the screens when the circulating pumps are on. In addition, EPA acknowledges that operation of the traveling screens is unnecessary when the circulating pump is not operating unless there is an UIE.<sup>7</sup> Despite acknowledging this technicality, the Agencies impose unnecessary daily monitoring of flow rate at the intake and at Outfall Serial Numbers 012, even when the circulating pumps are off and the traveling screens are not operating. See New Permit I.A.4 and New Permit I.C.2. This is clearly unnecessary since EPA acknowledged that the intake flow velocity of 0.5 fps will not be exceeded when the circulating pumps are not operating. *See* Response to Comment I. 4.2 at p. 72.<sup>8</sup>

Lastly, in support of the New Permit conditions, EPA states that it determined that the BTA for impingement mortality is an actual through-screen velocity of no greater than 0.5 fps,

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<sup>7</sup> The New Permit requires a daily inspection of the traveling screens once every 24 hours. New Permit 1.A.20. If an unusual impingement event is observed (250 or more fish impinged within a 12-hour period), screens shall be rotated continuously until the rate drops to less than 5 fish per hour. New Permit 1.A.20.

<sup>8</sup> “After considering the points raised in the comment, EPA maintains that the BTA performance standards in the New Permit, which require PNPS to achieve a flow reduction greater than 92% as a monthly average and achieve a through-screen velocity of 0.5 fps, represent the BTA for impingement and entrainment at PNPS. This site-specific determination was made under 40 C.F.R. § 125.98(g) in consideration of the relevant factors at § 125.98(f)(2) and (3) and the impingement mortality BTA standards at § 125.94(c). As such, this determination is consistent with CWA § 316(b). PNPS must meet the BTA standards in Part I.F. on the effective date of the Final Permit.” Response to Comment I. 4.2 at p. 72.



consistent with 40 C.F.R. § 125.94(c)(3). *See* Fact Sheet Attachment D, at p. 87. EPA acknowledges that, following shutdown, the Permittee will comply with this standard under most circumstances. Response to Comment III. 3.2 at p. 165. In fact, when the circulating pumps are not operating (which is the typical operating condition following Closure), there is no flow velocity attributed to the system, and therefore no risk of impingement. Notwithstanding, the Agencies impose a requirement for continuous rotation of the screens when the circulating pumps are on, stating that the flow rate of 0.5 fps will be exceeded when a circulating pump is operated. Based on the limits set forth in Part I.C.4 of the New Permit, however, such exceedances of the 0.5 fps rates will occur no more than 48 hours each month (approximately 720 hours), or only 6.7% of the time. Furthermore, as previously noted, the Station may actually use less circulating water than the maximum allowed, further reducing the theoretical impingement effects, and the use of a circulating water pump is expressly contemplated to be temporary. For all of these reasons, the Agencies have not established in the record that 6.7% (as a monthly maximum) of current authorized impingement is material and warrants the burdensome conditions that are included in the New Permit.

4. Monitoring discharged circulating water for Temperature, Effluent and Temperature Rise (delta T) at Outfall #001 and Outfall #010. Petitioners seek review of all conditions relating to the monitoring of discharged circulating water for Temperature, Effluent and Temperature Rise (delta T) at Outfall #001, and at Outfall #010, namely Parts I.A.1 and I.A.3 of the New Permit. Review is warranted because the Agencies increase the monitoring requirements in these conditions without adequate justification, despite EPA acknowledging that the new loads during Closure represent a substantial *decrease* in the overall heat load to Cape Cod Bay, which will ensure protection of the balanced, indigenous population. *See* Response to Comment III. 5.2 at

pp. 189-191. Accordingly, the imposition of these sampling requirements is based on a clearly erroneous finding of fact or conclusion of law, and/or constitutes an abuse of the EPA's discretion.

Parts I.A.1 and I.A.3 of the New Permit require monitoring of the effluent temperature at both Outfall 001 and Outfall 010 at a required frequency of "continuous." Such continuous monitoring will necessitate the installation of expensive new equipment at the Station at a time when the plant is no longer generating electricity and is preparing to be decommissioned.

Petitioners contest two related issues with the conditions. First, that the monitoring is required continuously, and second, that the monitoring is required at *both* outfalls. Under the Current Permit, no monitoring for temperature is required at Outfall 010 and therefore there is no required frequency. The New Permit adds temperature monitoring to Outfall 010 and sets the frequency to "Continuous." EPA discusses the added temperature requirements for Outfall 010<sup>9</sup> but gives no explanation for the setting of continuous monitoring at Outfall 010.

Relatedly, thermal discharges have been prohibited entirely at Outfall 001, as discussed above, but EPA inexplicably continues to require monitoring for temperature there. EPA explains its decision to modify the conditions for Outfall 001, but to keep temperature monitoring, as follows:

Entergy has since informed EPA that the circulating water pump discharge from Outfall 001 will not be used for cooling (for the spent fuel pool or any other systems) and will not be heated. Rather, Entergy states that there is no source of heat for the discharge from the system formerly used to cool the

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<sup>9</sup> The comment [by Entergy] indicates that the proposed, post-Closure limits for service water discharges may be problematic for PNPS's post-Closure operations, although Entergy indicates that it expects that the temperature limits (including a monthly average limit of 80°F, maximum daily limit of 85°F, and a delta T of 3°F) "should be manageable under PNPS's post-shutdown regime, provided that reduced flows throughout the system do not contribute to increased effluent temperatures and delta Ts." In other words, Entergy suggests that it could potentially meet the more restrictive temperature limits proposed in the Draft Permit, but, given the scarcity of temperature data on the existing salt service water operation and Entergy's uncertainty about the post-Closure cooling needs of the spent fuel pool, Entergy requests moderate increases in the maximum daily temperature limit (from 85°F to 90°F) and delta T (from 3°F to 10°F) at Outfall 010. Response to Comment III. 5.2 at p. 190.

condenser and that this water will be used for dilution and for fire protection. See Comment III.4.1. Consequently, we have removed the temperature limits for Outfall 001 (including the delta-T limit) from the Final Permit, *meaning that the Final Permit does not authorize the discharge of heat from Outfall 001. The Final Permit continues to require reporting the temperature and delta-T at the monitoring location for Outfall 001.*

Response to Comment I. 3.1 at p. 32 (emphasis added). EPA states, “The Final Permit continues to require reporting the temperature and delta-T at the monitoring location for Outfall 001,” but gives no explanation for why. *Id.*

Absent from EPA’s response is any explanation why “continuous” monitoring is appropriate or necessary. Petitioners contend that the more stringent monitoring requirement is a clearly erroneous decision and/or an exercise of discretion that warrants review because the overall temperature is significantly lower post-Closure.<sup>10</sup> To this point, EPA acknowledges:

Entergy has requested new thermal limits that are slightly less stringent than the Draft Permit’s proposed limits, *but which are still far more stringent than the current permit and Draft Permit’s pre-shutdown limits*, which were based on a § 316(a) variance and determined to be sufficiently protective of the balanced indigenous population. Entergy’s proposed limits will still achieve a heat load reduction greater than 98%. Because the cooling requirements represent a critical nuclear safety element, and given Entergy’s professed uncertainty of the actual cooling requirements of the spent fuel pool, Part I.A.3 of the Final Permit establishes a maximum daily temperature limit of 90°F, an average monthly temperature of 80°F, and maximum delta-T of 10°F at Outfall 010. *These limits, which still represent a substantial decrease in the overall heat load to Cape Cod Bay, will ensure protection of the balanced, indigenous population.*

Response to Comment 5.2 at p. 190 (emphasis added).

Considering the greatly decreased need for cooling water at the PNPS and the similarly

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<sup>10</sup> Under the current permit limits, which reflect operating conditions for generating electricity at PNPS, the total heat load to Cape Cod Bay from the circulating water pumps is about 14,336 mmBTU/day. EPA and MassDEP determined that the proposed pre-Closure delta-T limit of 32°F, upon which the calculation is based, is protective of the balanced indigenous population. See Fact Sheet at Attachments B and C. After Closure and under the Draft Permit, temperature and flow limits for Outfall 010 (maximum daily flow of 15.6 MGD and delta-T of 3°F), the heat load to Cape Cod Bay is decreased by 99.7% to 46.8 mmBTU/day. The limits proposed by Entergy in its comments on the Draft Permit (maximum daily flow of 19.4 MGD and delta-T of 10°F) still result in a 98.6% decrease (to 194 mmBTU/day) in the heat load to Cape Cod Bay.” Response to Comment 5.2 at p.191.

decreased risk of environmental impact presented by the thermal discharge, the increased frequency of monitoring is clearly erroneous and/or an exercise of discretion that warrants review on the part of the Agencies, and the monitoring frequency should be reduced so as to not require the installation of expensive new equipment.

5. Requirements that sampling must take place at the same location, same time, and same days of the month. Petitioners seek review of all conditions relating to the requirement that a routine sampling program shall be developed in which samples are taken at the same location, same time, and same days of the month, or which specify sampling at a location or time that is unreasonably inflexible so as to require sampling at a dangerous location or time, namely Footnote 1 of Parts I.A.1, I.A.2, I.A.3, I.A.4, I.A.5, I.A.6, and I.A.9 of the New Permit. The Agencies' decision to include these provisions was clearly erroneous and/or an exercise of discretion that warrants review because such a rigid sampling structure is not required by law and the Agencies fail to cogently explain why such structure and specificity is necessary in its permit issuance. Additionally, some of the conditions purport to apply to intermittent flows of stormwater, which is impossible. They also unreasonably interfere with operations at the Station for no reason. Accordingly, the imposition of these sampling requirements is based on a clearly erroneous finding of fact or conclusion of law, and/or constitutes an abuse of the EPA's discretion.

Parts I.A.1 FN1, I.A.2 FN1, I.A.3 FN1, I.A.4 FN1, I.A.5 FN1, I.A.6 FN1, and I.A.9 FN1 of the New Permit each impose a requirement that the Permittee shall develop a routine sampling program whereby the samples are taken at the same location, time, and day of the month, with slight variation in the specific language.

The inclusion of this language in Part I.A.5 FN1 and I.A.6 FN1 of the New Permit,

relating to stormwater discharge through Outfall Serial Numbers 004, 005, 006, 007, and 013, is clearly erroneous because it would be impossible to comply with. The flows cannot be reliably sampled on the same days or times every month due to the unpredictability of rainfall. This requirement is in direct conflict with the requirement in Footnote 3 of those same Parts: “Stormwater samples shall be taken during the first flush of wet weather, defined as during the first hour of a storm event greater than 0.1 inches in magnitude and which occurs at least twenty four (24) hours from the previously measurable (greater than 0.1 inch rainfall) storm event.” *See* New Permit I.A.5 FN3 and Permit I.A.6 FN3. Petitioners contend this language should be corrected to avoid confusion.

With regard to the non-stormwater discharges, Petitioners are concerned about the impact of this unnecessary rigidity on the operations at the Station and the likelihood that the sampling requirements will be infeasible and could put personnel in danger. For example, the sampling location for Outfall Serial Number 001 is located at the end of the discharge channel where it meets Cape Cod Bay. During storm events that may coincide with prescribed sampling requirements, this sampling location is essentially unreachable without jeopardizing worker safety. While the New Permit allows deviations from the routine to be documented and reported to EPA, it appears that for certain sampling locations, deviations may effectively need to become the standard.

Nothing in 40 C.F.R. § 122.48 requires the establishment of a strict routine sampling program in which the samples are taken at the same location, day, and time, and the Agencies have not cogently explained why the New Permit requires such rigidity. Without further explanation, and for the reasons stated above, the New Permit’s conditions here reflect an abuse of agency discretion that warrants review.

6. Sampling of stormwater discharged from electrical vaults (manholes). Petitioners seek review of all conditions relating to sampling of stormwater discharged from electrical vaults (manholes), namely Parts I.A.7 and I.F of the New Permit. Review is warranted because these conditions are unnecessary and unduly burdensome and are a clear abuse of Agency discretion that warrants review in light of the fact that the EPA itself has acknowledged that there is virtually no risk of any contaminants having a material impact on the aquatic life water quality standard as a result of dilution in the discharge canal.

Part I.A.7 of the New Permit provides:

The Permittee is authorized to discharge stormwater from electrical vaults (manholes) through internal Outfall Serial Numbers 004A (manhole MH-4), 004B (manhole MH-2), 005A (CP-4), and 005B (MH-27A) to the discharge canal to Cape Cod Bay and through internal Outfall Serial Numbers 007A (MH-L) to the intake embayment, which flows out to Cape Cod Bay. Such discharges shall consist of stormwater runoff only and shall be limited and monitored by the Permittee as specified...

Also, Part I.F of the New Permit provides:

The Permittee shall conduct a one-time sampling for all of the electrical vaults which were not sampled pursuant to EPA's March 24, 2015 CWA Section 308(a) letter. The Permittee shall reference Exhibit B of its "Response to USEPA's March 24, 2015 Request for Information" submittal, which listed the twenty-five (25) electrical vaults on the property as identified by the Permittee. Since stormwater was sampled for seven (7) of these electrical vaults, this requirement shall apply for the remaining eighteen (18) electrical vaults. These samples shall be analyzed for the same parameters which were required by the 2015 308(a) letter which are listed in Permit Attachment C. The sampling results shall be submitted within 180 days of the effective date of the permit.

Yet EPA expressly states that "[t]he maximum contaminant level goal for total chromium (i.e., the level of a contaminant in drinking water below which there is no known or expected risk to health) is 100 µg/l. Therefore, the discharge of stormwater from the vault at the detected level *would not be expected to violate criteria, even before taking dilution into account.*" Response to

Comment I. 3.6 at p. 53 (emphasis added). In any event, the EPA found that substantial dilution would be expected even with only one SSW pump in operation. *Id.* (“It is reasonable to expect that a relatively small discharge from such a vault would be substantially diluted when combined with seawater or other discharges.”); *id.* at p. 54 (“[D]ischarges from the electrical vaults are relatively small volumes that generally would be subject to considerable dilution once combined with the other flows being discharged to Cape Cod Bay or the intake embayment through Outfalls 004, 005, 006, and 007. The receiving water in the intake bay (for vaults discharging via Outfalls 006 and 007) and the cooling water discharge from Outfall 010 (for vaults discharging to the discharge canal) provide additional dilution for the vault discharges.”).

There is no reasonable need to require the Permittee to conduct the requested sampling of electrical vaults when there is no legitimate risk of contamination in any event, and the Agencies have failed to provide any cogent explanation as to why these requirements would be necessary. To impose these unnecessary requirements is an abuse of EPA’s discretion that warrants review.

7. Any suggestion that MassDEP possesses authority over nuclear safety and the management of radioisotopes by federal regulators. Petitioners seek review of all conditions requiring the Permittee to notify or report to MassDEP regarding the Permittee’s reporting to the Nuclear Regulatory Commission (“NRC”) relating to nuclear safety and the management of radioisotopes, namely Parts I.H.4 and I.H.5 of the New Permit. These reporting and notification requirements infringe on NRC’s exclusive jurisdiction over nuclear-reactor operations, and therefore are beyond the legal authority of MassDEP.

Part I.H.4 of the New Permit provides:

For each year of the permit term, the permittee shall notify MassDEP when the Annual Radioactive Effluent Release Report and the Annual Radiological Environmental Operating Report submitted to the Nuclear Regulatory Commission are available, and the website at which the reports are available.

If the one or both of the reports are not made available on a website, then the permittee shall also transmit to MassDEP electronic copies of the Reports with the notification. Notification shall be sent to: David Johnston, MassDEP Southeast Regional Office, david.johnston@mass.gov and Cathy Vakalopoulos, MassDEP Surface Water Discharge Permitting Program, catherine.vakalopoulos@mass.gov, or other contact as identified.

Part I.H.5 of the New Permit provides:

The permittee shall provide a copy to MassDEP of the reports it must provide to the Nuclear Regulatory Commission regarding events described in sections 3.2.2 (p.3/4-13), 3.2.3 (p.3/4-14), and 3.5.1 (p.3/4-24) of PNPS' Offsite Dose Calculation Manual, Revision 9 (2003) (NRC Adams Accession No. ML041400430). Reports shall be sent to David Johnston, MassDEP Southeast Regional Office, david.johnston@mass.gov and Cathy Vakalopoulos, MassDEP Surface Water Discharge Permitting Program, catherine.vakalopoulos@mass.gov, or other contact as identified, at the same time that they are submitted to the NRC.

As specifically recognized by EPA, the field of “nuclear safety concerns” is exclusively regulated by the federal government:

Rather, the courts have held that the federal government has occupied *the field of “nuclear safety concerns,”* [*Pacific Gas & Electric Co. v. State Energy Resources Conservation & Development Commission*, 461 U.S. 190,] 212 [1983] (emphasis added); see also *Entergy Nuclear Vermont Yankee v. Shumlin*, 733 F.3d 393, 409 (2d Cir. 2013) (“*Radiological safety . . .* represents an arena of field preemption that Congress, acting within its proper authority, has determined must be regulated by its exclusive governance, thus precluding any regulation by the states.”) (internal quotation marks omitted); *Skull Valley Band of Goshute Indians v. Nielson*, 376 F.3d 1223, 1242 (10th Cir. 2004) (“[S]tate laws within the entire field of *nuclear safety concerns* are preempted, even if they do not directly conflict with federal law.”) (emphasis added) (internal quotation marks omitted)...In other words, the federal government has the exclusive authority to regulate for protection against radiation hazards.

Response to Comment III. 3.0, 3.1, 3.1.1, and 3.1.2, at p. 138 (emphasis in original).



By adopting the conditions set forth above, MassDEP is imposing an obligation under the New Permit to notify and submit to the state documentation relating to nuclear safety and the management of radioisotopes. Pursuant to Part I.H.3 of the New Permit, a failure to abide by these conditions is a violation of the New Permit, enforceable by MassDEP. Such conditions conflict with the federal government's exclusive jurisdiction over these subject matters and therefore are unlawful. Accordingly, this is a clearly erroneous conclusion of law that warrants review.

8. Reporting of planned physical alterations or additions to the permitted facility. Part I.B.1 of the New Permit provides:

The Permittee is authorized to discharge only in accordance with the terms and conditions of this permit and only from the outfalls listed in Parts I.A. through I.C. of this permit. Discharges of wastewater from any other point sources not authorized by this permit shall be reported in accordance with the twenty-four-hour reporting provision found in Section D.1.e.(1) of Part II (Standard Conditions) of this permit. *The Permittee must report any planned physical alterations or additions to the permitted facility* in accordance with the reporting provision found in Section D.1.a of Part II (Standard Conditions) and give advance written notice (including notice to MassDEP) of any planned changes which may result in noncompliance with permit requirements in accordance with the reporting provision found in Section D.1.b of Part II (Standard Conditions).

Petitioners object to the language as currently written because it is overly broad, overreaching and is not reasonably related to the Agencies' authority to regulate discharges to the waters of the United States. Petitioners therefore request additional clarification regarding this condition's requirement that the Permittee report any planned physical alterations or additions to the permitted Station and requests that the New Permit's language be revised so as to not be overly burdensome on the Permittee.

As the Agencies are aware, Holtec acquired the PNPS with the specific intention of decommissioning and dismantling it. Petitioners are mindful that the issues involved with the

decommissioning and dismantling of the Station are not in the record or handled by the New Permit and Petitioners do not seek to raise those issues here. Petitioners merely wish to ensure that this condition does not unreasonably restrict Holtec's ability to take the necessary steps to decommission the Station when those steps are approved by the appropriate agencies, and with due consideration of possible discharges. It is the understanding of the Petitioners that the intent of this reporting requirement is to ensure that physical alterations to the Station *that will impact permitted discharges* are reported so that they can be appropriately handled, and not that *any planned physical alterations* are reported, as it is currently worded.

Therefore, Petitioners request that "physical alterations" be defined so that the reporting required by Part I.B.1 of the New Permit be limited to such physical alterations that will (1) materially change the location of an outfall, or (2) result in a significant effect on the potential for the discharge of pollutants to the waters of the United States.

### **CONCLUSION**

Consistent with the above, Petitioners ask that the Environmental Appeals Board decide as follows.

1. Issue-Specific Relief. Petitioners ask that the Board find that the Region's and Commonwealth's permit actions were based on clearly erroneous findings of fact or conclusions of law and/or were exercises of discretion that warrant review, and hold the Region's and Commonwealth's actions to be otherwise contrary to law as the Petitioners have outlined above; reverse the Region's and Commonwealth's permit actions thereon; and remand the New Permit for further actions consistent with the Board's decision.

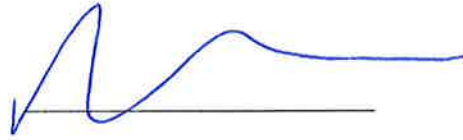
2. Stay of Permit Conditions. Consistent with 40 C.F.R. § 124.16, Petitioners ask that the Board stay all of the challenged New Permit provisions herein pending the Board's final decision on this Petition.

**STATEMENT OF COMPLIANCE WITH WORD LIMITATION**

I hereby certify that this Petition for Review, including all relevant portions, contains fewer than 14,000 words, pursuant to 40 C.F.R. § 124.19(d).

Dated: March 6, 2020

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Jed Nosal', written over a horizontal line.

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A handwritten signature in blue ink, appearing to read 'Elise Zoli', written over a horizontal line. To the right of the signature, the initials 'JMN' are circled in blue ink.

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**LIST OF ATTACHMENTS**

New Permit ..... Attachment 1

EPA Response to Comments ..... Attachment 2

Entergy’s Original Comments ..... Attachment 3

DEP Appeal and Request for Stay ..... Attachment 4

Draft Permit ..... Attachment 5

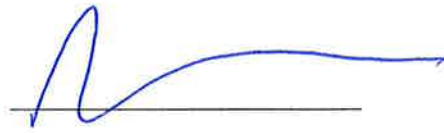
Fact Sheet ..... Attachment 6

Correspondence Relating to Electrical Vaults (Manholes) ..... Attachment 7

**CERTIFICATE OF SERVICE**

I hereby certify that copies of the foregoing Petition for Review and accompanying attachments in the matter of Pilgrim Nuclear Power Station, NPDES Permit No. MA0003557, were served by United States First Class Mail on the following persons, this 6th day of March, 2020:

Dennis Deziel, Regional Administrator  
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