NOT YET SCHEDULED FOR ORAL ARGUMENT

No. 20-1026

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

FRIENDS OF THE EARTH, NATURAL RESOURCES DEFENSE COUNCIL, INC., AND MIAMI WATERKEEPER,
Petitioners,

v.

UNITED STATES NUCLEAR REGULATORY COMMISSION AND UNITED STATES OF AMERICA,
Respondents.

Petition for Review of a Final Order of the
United States Nuclear Regulatory Commission

INITIAL BRIEF OF PETITIONERS

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

In accordance with D.C. Cir. Rule 28(a)(1), Petitioners submit this certificate of parties, rulings, and related cases.

A. Parties and Amici.

Petitioners: Friends of the Earth, Natural Resources Defense Council, and Miami Waterkeeper.

Respondent: Nuclear Regulatory Commission and United States of America.

Intervenor: Florida Power & Light Co.

Amici Curiae: None.

Rule 26.1 Disclosure Statement

Friends of the Earth, Natural Resources Defense Council, and Miami Waterkeeper are non-profit organizations who have no parent companies, and there are no companies that have a 10 percent or greater ownership interest in them.

B. Rulings Under Review.

1. Record of Decision for the Subsequent License Renewal Application for Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Dec. 4, 2019) (Rec._No._191) [JA-___].

2. Turkey Point Nuclear Generating, Unit No. 3, Renewed Facility Operating License No. DPR-31 (Dec. 4, 2019) (Rec._No._192) [JA-___].

3. Turkey Point Nuclear Generating, Unit No. 4, Subsequent Renewed Facility Operating License No. DPR-41 (Dec. 4, 2019) (Rec._No._193) [JA-___].

C. Related Cases.

This case has not previously been before this Court or any other court. The undersigned counsel are not aware of any other cases related to this one within the meaning of D.C. Cir. Rule 28(a)(1)(C).

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GLOSSARY

APA	The Administrative Procedure Act
Board	The Atomic Safety and Licensing Board
Bureau	The U.S. Bureau of Reclamation
Commission	The five-member board of Commissioners for the Nuclear Regulatory Commission
Draft SEIS	Draft Supplemental Environmental Impact Statement
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FERC	The Federal Energy Regulatory Commission
FPL	Florida Power & Light Company
Final SEIS	Final Supplemental Environmental Impact Statement
GEIS	Generic Environmental Impact Statement
Initial license renewal	The first 20-year operating license renewal following an original 40-year operating license
NEPA	The National Environmental Policy Act
NRC	The federal agency known as the Nuclear Regulatory Commission
NRC Staff	The Nuclear Regulatory Commission Staff
NRDC	Natural Resources Defense Council
Environmental Organizations	Petitioners Friends of the Earth, Natural Resources Defense Council, and Miami Waterkeeper
PSU	Practical Salinity Units
Subsequent license renewal	The second 20-year operating license renewal subsequent to the original 40-year operating license and one 20-year initial license renewal
Turkey Point	Turkey Point Nuclear Generating Station, Units 3 and 4

JURISDICTIONAL STATEMENT

Petitioners Friends of the Earth, Natural Resources Defense Council (NRDC), and Miami Waterkeeper (together "Environmental Organizations") seek review of the Nuclear Regulatory Commission's[1] failure to comply with the National Environmental Policy Act (NEPA) for two renewed operating licenses issued to Intervenor Florida Power & Light Company (FPL) for Turkey Point Nuclear Generating station, Units 3 and 4 (Turkey Point). The NRC moved to dismiss the petition for lack of jurisdiction.[2] After reviewing the parties' briefing, the Court referred the jurisdictional issue to this merits panel for further presentation of arguments and directed the parties to address whether the Petition is "incurably premature." *Cf. Flat Wireless, LLC v. FCC*, 944 F.3d 927, 933 (D.C. Cir. 2019). Environmental Organizations will therefore: (1) address the requirements of Fed. R. App. P. 28(a)(4)(A)–(C); (2) pursuant to Fed. R. App. P. 28(a)(4)(D), demonstrate that the renewed licenses are "final orders" under the Hobbs Act; and (3) demonstrate that Environmental Organizations' compliance

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[1] Hereinafter "NRC" when referring to the federal agency, "Commission" when referring to the five-member Commission, and "NRC Staff" when referring to NRC Staff.

[2] FPL later joined the NRC's Motion.

with the NRC's exhaustion regulations does not render the Petition "incurably premature." As will be shown below, this Court has jurisdiction.

I. Fed. R. App. P. 28(a)(4)(A) – (C).

Section 103c of the Atomic Energy Act grants the NRC subject matter jurisdiction to renew commercial power reactor licenses for a maximum of 20 years. 42 U.S.C. § 2133(c); 10 C.F.R. § 54.31. The Hobbs Act vests this Court with subject matter jurisdiction over "final orders" of the NRC made reviewable by 42 U.S.C. § 2239 (Section 189 of the Atomic Energy Act), including NRC orders granting or amending any license. 28 U.S.C. § 2342(4); 42 U.S.C. § 2239(a)–(b). Under the Hobbs Act, a "party aggrieved" by the final order must file a petition for review in the court of appeals wherein venue lies within 60 days. 28 U.S.C. § 2344; *see also id.* § 2343 (providing venue in this Court).

On January 30, 2018, FPL applied to the NRC for a subsequent license renewal for Turkey Point.[3] *Florida Power and Light Company; Turkey Point Nuclear Generating, Unit Nos. 3 and 4*, 83 Fed. Reg. 19,304 (May 2, 2018)

[3] After the original 40-year operating license, the first 20-year license renewal is referred to as the "initial" license renewal, and the second 20-year renewal is the "subsequent" license renewal.

(Rec._No._1) [JA-___].[4] On August 1, 2018, Environmental Organizations sought to intervene in the licensing proceeding by requesting a hearing before the Atomic Safety and Licensing Board (Board) and submitting "contentions" based on FPL's environmental report. Request for Hearing and Petition to Intervene Submitted by [Environmental Organizations] (Aug. 1, 2018) (Rec._No._13) [JA-___]. On March 7, 2019, the Board granted Environmental Organizations' request and referred a ruling to the Commission on the applicability of 10 C.F.R. § 51.53(c)(3) to subsequent license renewals. *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Station Units 3 and 4), LBP-19-3, 2245 (Mar. 7, 2019) (hereinafter "Board Order") (Rec._No._116) [JA-___]. In March 2019, the NRC issued the Draft Supplemental Environmental Impact Statement (Draft SEIS) for the renewed license. *Draft Supplemental Environmental Impact Statement; Request for Comment, Fla. Power & Light Co.; Turkey Point Nuclear Generating Unit Nos. 3 and 4*, 84 Fed. Reg. 13,322 (Apr. 4, 2019) (Rec._No._191)[5] [JA-___]. On June 24,

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[4] Rec._No._ references indicate the NRC's Record Number provided in its March 23, 2020 Certified Record Index.

[5] Parties agree that any materials cited within documents listed in the certified index can be cited by the parties in the joint appendix. The environmental documents—environmental reports, draft and final supplemental impact

2019, Environmental Organizations submitted new and amended contentions based on the Draft SEIS. [Environmental Organizations'] Motion to Migrate Contentions & Admit New Contentions in Response to NRC Staff's [Draft SEIS] (June 24, 2019) (Rec._No._144) [JA-___]. On July 8, 2019, the Board dismissed Environmental Organizations' admitted contentions on the environmental report as moot. *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Units 3&4), LBP-19-06, 90 NRC 17 (July 8, 2019) (Rec._No._160) [JA-___]. On August 9, 2019, pursuant to the NRC's exhaustion requirements, Environmental Organizations appealed the March 7, 2019 and July 8, 2019 Board decisions to the Commission. [Environmental Organizations'] Petition for Review of the [Board's] Rulings in LBP-19-3 and LBP-19-06 (Aug. 9, 2019) (Rec._No._174) [JA-___]. On October 24, 2019, the Board denied Environmental Organizations new and amended contentions based on the Draft SEIS and terminated the proceeding. *Fla. Power & Light Co*. (Turkey Point Nuclear Generating Units 3&4), LBP-19-08, 90 NRC 139 (Oct. 24, 2019) (Rec._No._185) [JA-___]. On October 28, 2019, the NRC issued the Final SEIS for the license renewals. Generic Environmental

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statements, and generic impact statements—are encompassed in the Record of Decision (Rec._No._191).

Impact Statement for License Renewal of Nuclear Plants, Supplement 5, Second Renewal, Regarding Subsequent License Renewal for Turkey Point Nuclear Generating Unit Nos. 3 and 4, Final Report (NUREG-1437) (Oct. 2019) (hereinafter "Final SEIS") (Rec._No._191) [JA-___]. On November 18, 2019, Environmental Organizations appealed the October 24, 2019 Board decision to the Commission. [Environmental Organizations'] Petition for Review of the [Board's] Ruling in LBP-19-08 (Nov. 18, 2019) (Rec._No._187) [JA-___].

On December 4, 2019, the NRC issued a Record of Decision pursuant to NEPA and the two renewed licenses at issue without addressing Environmental Organizations' administrative appeals.[6] Subsequent License Renewal and Record of Decision, 84 Fed. Reg. 67,482 (Dec. 10, 2019) (Rec._No._191) [JA-___]. The licenses were made effective immediately upon their issuance. *See, e.g.*, Turkey Point Nuclear Generating, Unit No. 3, Renewed Facility Operating License No. DPR-31 at 8 (Dec. 4, 2019) (Rec._No._192) [JA-___]; 10 C.F.R. § 54.31(c). Environmental Organizations timely sought judicial review within 60 days. Pet.

[6] The Director, Office of Nuclear Reactor Regulation issued the licenses under authority delegated to him by the NRC. 10 C.F.R. § 2.340(b)(2)(i).

for Review, Jan. 31, 2020, ECF No. 1827095. As shown below, the licenses are "final orders" for purposes of judicial review.

II. The Licenses are "Final Orders" Subject to Immediate Judicial Review.

The Turkey Point renewed licenses are reviewable final orders because the "order granting or denying the license [] is ordinarily the final order." *City of Benton v. NRC*, 136 F.3d 824, 825 (D.C. Cir 1998); *see also NRDC v. NRC*, 680 F.2d 810, 815–16 (D.C. Cir. 1982) ("[A]n agency order in certain circumstances may be 'final' even if it is not the last that may be entered . . . .") (internal quotations omitted). The NRC has itself taken this position in other licensing proceedings and before this Court. Fed. Respondents' Mot. to Dismiss for Lack of Jurisdiction, *NRDC v. NRC*, No. 13-1311 (D.C. Cir. Feb. 10, 2014), ECF. No. 1479284. Yet here, the NRC is trying to block judicial review of the licenses while they remain in effect. This Court rejected similar efforts by the Federal Energy Regulatory Commission (FERC) in *Allegheny Def. Project v. FERC*, No. 17-1098, 2020 WL 3525547, at *3 (D.C. Cir. June 30, 2020) (en banc). There, FERC authorized a pipeline under the Natural Gas Act. *Id.* When the petitioners applied for reconsideration, FERC issued a tolling order that in FERC's view indefinitely extended its time to act on the request. *Id.* at 3–4. During the tolling period, the pipeline company successfully argued in a separate proceeding that the license was

final and ultimately took private property by eminent domain and constructed the pipeline. *Id*. at 4–5. This Court rejected FERC's use of the tolling order, which "split the atom of finality" by making the license final for eminent domain but not final for judicial review. *Id*. at 7. The Court should reject the NRC's similar actions here.

The NRC may not issue effective licenses and then prevent judicial review of those licenses. The Hobbs Act vests this Court with jurisdiction over "final orders" of the NRC, and the Atomic Energy Act makes applicable the Administrative Procedure Act (APA) concept of finality. 42 U.S.C. § 2231 (chapters 5 and 7 of the APA "shall apply to all agency action taken under [the Atomic Energy Act."]). The APA states that an "otherwise final" action is final for the purpose of judicial review *unless* "the agency otherwise requires by rule and provides that the action meanwhile is inoperative, for an appeal to superior agency authority." 5 U.S.C. § 704. Congress sought to avoid the "fundamental inconsistency in requiring a person to continue 'exhausting' administrative processes after administrative action has become, and while it remains, effective." *Darby v. Cisneros*, 509 U.S. 137, 148 (1993) (citing S. Rep. No. 79-752 at 213 (1945)). In the absence of §704, an agency could escape judicial review by "subject[ing] the party to the agency action and to repetitious administrative

process[es] without recourse." *Id.* Thus, the Supreme Court found that an agency may elude finality *only* if it both: (1) adopts a rule that a petitioner must submit an appeal to the agency before seeking judicial review, and (2) renders the decision "inoperative" while the administrative appeal is pending. *Darby*, 504 U.S. at 152–54; *see also Marine Mammal Conservancy v. Dep't of Agric.*, 134 F.3d 409, 411 (D.C. Cir. 1998) (requiring exhaustion where agency regulations were consistent with §704 and *Darby*).

Here, the Turkey Point licenses are subject to judicial review under §704 and *Darby*. The licenses are "otherwise final" because NRC regulations make them "effective immediately upon [their] issuance." 10 C.F.R. § 54.31(c). Both licenses confirm they are "effective as of the date of issuance," Subsequent Renewed Facility Operating License No. DPR-31 and DPR-41 at 8 (Dec. 4, 2019) (Rec._Nos._192, 193) [JA-___ and ___], and the Record of Decision states it is "the NRC's *final decision* . . . ." Record of Decision, Docket Nos. 50-250 and 50-251 at 5 (Dec. 4, 2019) (emphasis added) (Rec._ No._191) [JA-___].[7] And while

[7] FPL has already used its new license expiration dates to book $71 million in savings by depreciating the costs of decommissioning Units 3 and 4 over its newly extended operational lifetime. Florida Power & Light Co., Annual Report (Form 10-K 104 (Feb. 14, 2020).

NRC regulations require a party to file an administrative appeal before seeking judicial review of the licensing decision, 10 C.F.R. §§ 2.341(b)(1), 2.1212, the regulations do not *also* render the licenses inoperative during the administrative appeal.

Environmental Organizations faced the same problem as in *Allegheny*—the NRC can run out the clock on meaningful judicial review while real-world momentum forecloses reasonable alternatives to operating Turkey Point as proposed by FPL through mid-century. *See Oglala Sioux Tribe v. NRC*, 896 F.3d 520, 532 (D.C. Cir. 2018) (failure to comply with NEPA before authorizing a project "runs the risk 'that important effects will . . . be overlooked or underestimated only to be discovered after . . . the die [has been] cast.'") (citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)). Here, a key issue is whether Turkey Point's groundwater pollution warrants an alternative to its 5,900-acre cooling canal system such as cooling towers.[8] As FPL acknowledged in recent Clean Water Act litigation involving Turkey Point, the

[8] These systems are necessary for discharging excess heat from the reactors. Final SEIS at 3-3 to 3-4 (Rec._No._191) [JA-___]. Turkey Point's cooling system discharges heated water into the cooling canal system, whereas a cooling tower system discharges heat directly into the atmosphere. *See id.*

design, permitting, and construction of a cooling tower alternative could take nearly a decade. Def.'s Mot. to Exclude, Ex. 2, Expert Report of Ron Seagraves at 3, *S. All. for Clean Energy v. Fla. Power & Light Co.*, No. 1:16-cv-23017 (S.D. Fla. Oct. 17, 2018), ECF No. 184-34. If the NRC were able to defer judicial review of the licenses it would effectively foreclose the option of conditioning the granting of the subsequent renewed licenses on replacing the cooling canal system with cooling towers. It is therefore necessary to complete the "hard look" demanded by NEPA in time to avoid foreclosing reasonable alternatives.

Section 704 and *Darby* make clear that the potential for future actions by the Commission does not render the licenses any less final for purposes of judicial review. *See also Sierra Club*, 862 F.2d at 224–25 (Board decision was reviewable as a final order, even though the Commission retained power to act *sua sponte* to review the decision when judicial review sought); *Nat'l Envtl. Dev. Assoc.'s Clean Air Project v. EPA*, 752 F.3d 999, 1006–07 (D.C. Cir. 2014) ("agency action may be final even if the agency's position is 'subject to change' in the future"). Any attempt by the Commission to cure its NEPA review now would be mere *post hoc* rationalization because NEPA does not "permit an agency to act first and comply later." *Oglala Sioux Tribe*, 896 F.3d at 523. The Commission could also vacate the licenses and remand the NEPA issues to the Board to address the issues

Environmental Organizations have raised; but it would not alter the fact that the NRC has already taken the action requiring an environmental impact statement (EIS). No administrative action could ever be considered final if the *possibility* of future action were held to render an action non-final.[9]

III. The "Incurably Premature" Doctrine Does Not Countenance the NRC's Manipulation of its Administrative Appeal Process to Avoid Meaningful Judicial Review.

The Turkey Point licenses are subject to judicial review now. Whereas *Flat Wireless* and its antecedents apply when a petitioner has a choice of seeking agency reconsideration or judicial review and chooses both,[10] here Environmental

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[9] Even if the Court were to find the licenses are not "final orders," jurisdiction also exists under this circuit's "immediate effectiveness doctrine." *See Blue Ridge Envtl. Def. League v. NRC*, 668 F.3d 747, 757 (D.C. Cir. 2012) ("In the context of NRC actions, an order issued during ongoing administrative proceedings is reviewable . . . if, for example, it authorizes a plant operator to operate at full power pending further review by the Commission.").

[10] *See TeleSTAR, Inc. v. FCC*, 888 F.2d 132, 134 (D.C. Cir. 1989) ("Our action today only applies to situations where a party must *choose* between rehearing before the agency or immediate court review.") (emphasis added); *United Transp. Union v. ICC*, 871 F.2d 1114, 1118 (D.C. Cir. 1989) (where "'[p]etitioners have the *option* of proceeding directly to the court of appeals, or giving the agency another chance . . . we can see no justification for allowing a petitioner to apply to both . . . at the same time.'" (quoting *West Penn Power Co. v. EPA*, 860 F.2d 581, 586 (3d. Cir. 1988)) (emphasis added); *City of New Orleans v. SEC*, 137 F.3d 638, 639 (D.C. Cir. 1998) (per curiam) (a "party must *choose* between administrative

Organizations had no such choice. This case is distinguishable because NRC regulations *required* Environmental Organizations to seek further Commission review of Board decisions *before* the NRC issued effective licenses that ripened the claims and provided this Court with jurisdiction. NRC regulations expressly require a "party to an NRC proceeding [to] file a petition for Commission review before seeking judicial review of an agency action." 10 C.F.R. §§ 2.341(b)(1), 2.1212. Environmental Organizations complied with these regulations and petitioned the Commission for review of the Board decisions *before* the licenses issued. [Environmental Organizations'] Petition for Review of the [Board's] Rulings in LBP-19-3 and LBP-19-06 (Aug. 9, 2019) (Rec._No._174) [JA-___]; [Environmental Organizations'] Petition for Review of the [Board's] Ruling in LBP-19-08 (Nov. 18, 2019) (Rec._No._187) [JA-___]. The Commission could have ruled on the petitions before the licenses issued, or it could have rendered the

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relief and judicial relief.") (emphasis added); *Tenn. Gas Pipeline Co. v. FERC*, 9 F.3d 980, 981 (D.C. Cir. 1993) (petitioner "*chose* between rehearing before the agency or immediate court review.") (emphasis added) (internal quotations omitted). *But see United Transp. Union*, 871 F.2d at 1117 (if filing for administrative reconsideration appeal tolls Hobbs Act 60-day window, it should also toll judicial review) (citing *ICC v. Brotherhood of Locomotive Eng'rs*, 482 U.S. 270 (1987)).

licenses "inoperative" to avoid immediate judicial review.[11] But it did neither. Precluding judicial review in this instance would allow an agency to manipulate its administrative appeal process to avoid meaningful judicial review despite §704 of the APA and *Darby's* command. The concept of an "incurably premature" judicial appeal thus does not apply here since Environmental Organizations are not seeking some advantage by choosing to appeal in two forums. Environmental Organizations were compelled by NRC regulations and long-established case law (cited above) that the grant or denial of the license is the final, appealable action.

STATEMENT OF ISSUES

1. Does 10 C.F.R. § 51.53(c)(3) allow the NRC to extend Turkey Point's operational life from a total of 60 to 80 years without completing a full analysis of environmental impacts of that decision?

2. Did the NRC fail to take a "hard look" at Turkey Point's groundwater impacts under NEPA by hoping that oversight by state and local regulators will

[11] The Commission, on its own accord, has authority to issue a stay. 10 C.F.R. § 2.341(b)(1); *see also Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-19-11, __ NRC __, (slip. Op. 6) (Dec. 17, 2019), https://www.nrc.gov/docs/ML1935/ML19351D695.pdf.

ensure full remediation of existing groundwater contamination and that it will remain negligible thereafter through mid-century?

STATEMENT OF THE CASE

The NRC issued subsequent license renewals that extend the Turkey Point nuclear generating station's operations by another twenty years—doubling the plant's original operating time and extending it into the 2050s. The plant sits in the middle of a fragile ecosystem between two national treasures, Biscayne Bay and the Everglades, and atop the Biscayne aquifer, the "major public water supply" for Miami-Dade County and the Florida Keys. Final SEIS at 1-8 to 1-9, 3-70 (Rec._No_191) [JA-___]. The NRC initially extended Turkey Point's operational life in 2002—extending the expiration of the operating licenses for the two reactors from 2012 and 2013 to 2032 and 2033. *Notice of Issuance of Renewed Facility Operating Licenses Nos. DPR–31 and DPR–41 for an Additional 20-Year Period*, 67 Fed. Reg. 40,754 (June 13, 2002) [JA-___]. Since then it has become apparent that Turkey Point's largest feature, the 5,900-acre unlined "cooling canal system," is contaminating the Biscayne aquifer. Final SEIS at 3-7 (Rec._No_191) [JA-___]; Consent Order, *State of Fla. Dep. of Envtl. Prot. v. Fla. Power & Light, Co.*, OGC File No. 16-0241 (Jun. 20, 2016) (hereinafter "Consent Order") (Rec._No_144) [JA-___].

When the NRC extended Turkey Point's licenses in 2002, it concluded Turkey Point would have no measurable impact on groundwater resources through the early 2030s based on an NRC "generic" evaluation of the effects of operating nuclear reactors on nearby groundwater. Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 5, Regarding Turkey Point Units 3 and 4, Final Report (NUREG-1437) (Jan. 2002) at 4-29 to 4-32 [JA-___].

In 2015, Miami-Dade County issued a Notice of Violation to FPL for violating applicable water quality standards beyond the boundary of the plant. Final SEIS at 3-89 (Rec._No_191) [JA-___]. The Florida Department of Environmental Protection followed in 2016 with a Notice of Violation identifying the cooling canal system as the "major contributing cause" to the "impair[ment of] the reasonable and beneficial use of adjacent [potable] groundwater" in the area. Consent Order at ¶ 14 (Rec._No_144) [JA-___]. These actions stem from the discovery of a hypersaline plume emanating from the cooling canals that extends about 3 miles west of the canals towards a public water supply wellfield. Final SEIS at 3-76 (Rec._No_191) [JA-___]. FPL subsequently entered into consent agreements with state and county regulators to address its water quality violations. *Id.* at 3-89 to 3-91. Despite the state and county's intervention, the plume remains

a major pollution problem. FPL's attempt to remediate the plume and control salinity problems has not achieved the anticipated results. *Id.* at 3-59.

FPL's salinity management plan has two main components: (1) "freshening" the canals by diluting them with over 12 million of gallons per day of low-salinity water, and (2) retracting the hypersaline plume using groundwater extraction wells. *Id.* at 3-91. The "successful remediation of the hypersaline plume," however, is "predicated on effective salinity management within the [cooling canal system]." *Id.* at 4-28. While FPL's modeling predicted that the "freshening" effort would reduce salinities to the required levels within "less than a year" of operation, the accuracy of the predictions, and the plan's success, depends on factors such as climatic conditions (e.g., temperature and precipitation) and the availability of sufficient quantities of low-salinity water for dilution. *Id.* at 3-58 to 3-59. FPL initiated the freshening plan in 2016 but has not met the annual salinity level ultimately required by the Consent Order. *Id.* at 3-59. If FPL cannot manage salinity in the cooling canals, their operation will "likely to result in continued degradation of groundwater quality." *Id.* at A-89. Cooling towers are an alternative to the cooling canals system that replace the cooling canals. The residual temperatures and salinity in the canals would be reduced and further groundwater impacts greatly minimized. *Id.* at 4-43 to 4-44. FPL has a license to

construct two new reactor units at Turkey Point that would use cooling towers. *See, e.g.*, *id.* at 2-13.

In 2018 Turkey Point became the first nuclear plant in the country to apply for a subsequent license renewal. *Fla. Power and Light Co.; Turkey Point Nuclear Generating, Unit Nos. 3 and 4*, 83 Fed. Reg. 19,304 (May 2, 2018) (Rec._No._1) [JA-___]. The NRC was again charged with evaluating the environmental consequences of license renewal under NEPA, this time for extending operations through mid-century. Environmental Organizations sought to intervene in the license renewal process by submitting contentions identifying NEPA-related deficiencies in FPL's environmental report, and later in the NRC's Draft SEIS.[12] Relevant here, Environmental Organizations' filed contentions raising the requisite scope of environmental review for subsequent license renewal under NRC regulation 10 C.F.R. § 51.53(c)(3); and identifying flaws in the analysis of groundwater impacts. Request for Hearing and Petition to Intervene Submitted by [Environmental Organizations] (Aug. 1, 2018) (Rec._No._13) [JA-___];

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[12] NRC regulations and internal case law require intervenors to raise contentions at the earliest possible stage, which in license renewal proceedings means the environmental report. Failure to raise an issue at this stage (or a later stage) can prevent intervenors from addressing the same or a substantially similar issue in later stages of the license renewal proceeding, *i.e.*, the draft EIS stage.

[Environmental Organizations'] Motion to Migrate Contentions & Admit New Contentions in Response to NRC Staff's [Draft SEIS] (June 24, 2019) (Rec._No._144) [JA-____]. Although the reviewing Board ultimately rejected Environmental Organizations' contentions, the dissenting opinion disputed the majority's view that §51.53(c)(3) applies to subsequent license renewals. Board Order, 89 NRC at 303–315 (Abreu Dissent) (Rec._No._116) [JA-___].

NRC regulations require that "a party to an NRC proceeding must file a petition for Commission review before seeking judicial review of an agency action." 10 C.F.R. §§ 2.341(b)(1), 2.1212. Environmental Organizations therefore timely filed for Commission review of the Board decisions. [Environmental Organizations'] Petition for Review of the [Board's] Rulings in LBP-19-3 and LBP-19-06 (Aug. 9, 2019) (Rec._No._174) [JA-___]; [Environmental Organizations'] Petition for Review of the [Board's] Ruling in LBP-19-08 (Nov. 18, 2019) (Rec._No._187) [JA-___]. Less than a month later, on December 5, 2019, without addressing Environmental Organizations' appeals, the NRC issued its Record of Decision incorporating its Final SEIS and issued FPL the subsequent renewed licenses. Record of Decision for the Subsequent License Renewal Application for Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Dec. 4, 2019) (Rec._No._191) [JA-___]. The licenses became effective immediately. *See, e.g.*,

Turkey Point Nuclear Generating, Unit No. 3, Renewed Facility Operating License No. DPR-31 at 8 (Dec. 4, 2019) (Rec._No._192) [JA-___]; 10 C.F.R. § 54.31(c). Environmental Organizations sought review of the licenses in this Court.

STATUTES AND REGULATIONS

The pertinent statutes and regulations are set forth in the Addendum.

SUMMARY OF ARGUMENT

First, rather than examine the environmental impacts of operating Turkey Point beyond the early 2030s, FPL and the NRC substituted, for an entire category of impacts, the findings contained in a generic environmental review adopted for the initial wave of license renewals.[13] However, the language of the NRC's regulation is clear—the use of that generic analysis is limited to applicants for an "initial" license renewal. The NRC's attempt to eliminate the limiting term "initial" from its regulation without a notice and comment rulemaking violates the APA. Moreover, it violates NEPA's instruction that agencies must take a "hard

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[13] The GEIS generically evaluates 78 of 92 identified potential environmental impacts of initial license renewal. *Final Rule, Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses*, 78 Fed. Reg. 37,282 (June 20, 2013) (hereinafter "2013 Final Rule") [JA-___]. For example, the GEIS exempts from site-specific consideration in initial license renewals: radiation exposure, nuclear waste management, decommissioning, and most impacts to surface and groundwater. 10 C.F.R. Part 51, Subpart A, Appendix B.

look" at environmental impacts of a proposed federal action. During the rulemaking adopting the generic approach and throughout the generic review itself, the NRC repeatedly stated that the generic analysis was conducted for the initial 20-year license renewal term and did not purport to look further into the future. By relying on these generic conclusions without any additional site-specific analysis in the Final SEIS, the NRC has extended Turkey Point's life to 80 years without a complete NEPA review.

Second, the NRC's analysis on groundwater impacts from Turkey Point's cooling canal system was wholly inadequate. The NRC flouted its NEPA responsibilities to evaluate environmental risks by relying on state and county oversight to assure the mitigation of groundwater impacts at Turkey Point. Relying on state and county oversight to ensure mitigation has already proven to be inadequate; NRC's hope that regulatory oversight will ensure future environmental protection is wishful thinking that does not satisfy the "hard look" required by NEPA. Furthermore, the NRC's magical thinking stems from endorsing the results of a skewed model. That model's foundation underestimates the extent of remedial efforts needed, and its long-term outlook ignores considerations the anticipated hotter and drier climate change. The NRC's expectation that state and county

oversight will ensure environmental protection of South Florida is a mere pipedream not grounded in science.

As a consequence of these failures of the NRC to fulfill its duties under NEPA and the APA, the licenses must be vacated, and the matter must be remanded to the NRC.

STANDING

Environmental Organizations have Article III standing based upon their members' concrete injuries. *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 572 (1992); *Hunt v. Wash. State Apple Advert. Comm'n*, 432 U.S. 333, 343 (1977).

Friends of the Earth is an environmental organization with a mission to defend the environment and create a more healthy and just world, including engaging in efforts to improve the environmental, health, and safety conditions at civil nuclear facilities licensed by the NRC. In the United States, Friends of the Earth has more than 100,000 members in all 50 states, 4,800 of those members are in Florida. *See* Declaration of Peter Stocker, July 31, 2018 [JA-___].

NRDC is a national non-profit environmental organization. As relevant here, NRDC seeks to improve environmental, health, and safety conditions at nuclear power plants, including Turkey Point. NRDC has a nationwide membership of approximately 375,200 members, with at least 1,477 members

living within 50 miles of the Turkey Point Nuclear Generating Stations and at least 54 members living within 10 miles of the facility. *See* Declaration of Gina Trujillo, Mar. 3, 2020 [JA-___].

Miami Waterkeeper is a Florida non-profit organization with a mission to defend, protect, and preserve the waters of South Florida. It is a member of the Waterkeeper Alliance, an international organization uniting more than 300 Waterkeeper organizations and affiliates across the globe. Miami Waterkeeper has approximately 75 members. *See* Declaration of Rachel Silverstein, Mar. 5, 2020 [JA-___].

Environmental Organizations each have members that live in close proximity to Turkey Point and rely on the environmental resources it impacts. They will suffer procedural harm from the NRC's failure to address the environmental impacts of Turkey Point in accordance with NEPA and NRC regulations and are reasonably concerned that their water resources (including their source of drinking water), health and safety, property value, and use and enjoyment of the environment near Turkey Point will be negatively affected.[14] Accordingly,

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[14] *See* declarations submitted to this Court with Petitioners' Docketing Statement on March 6, 2020: Declaration of Silverstein ¶¶ 4–9 Mar. 5, 2020 [JA-___];

as the Board ruled, and the Commission, NRC Staff, and FPL did not contest, Petitioner Organizations have Article III standing. Board Order, 89 NRC at 285-86 (Rec._No._116) [JA-___].

ARGUMENT

I. The Legal Framework for Environmental Organizations' Argument.

The Atomic Energy Act authorizes the NRC to issue an original operating license of 40 years to nuclear power plants. 42 U.S.C. § 2133(c). The NRC may renew operating licenses for 20-year periods, and NRC regulations do not limit the number of times a license can be renewed. 10 C.F.R. § 54.31. License renewal is a major federal action that requires review under NEPA. *NRDC v. NRC*, 823 F.3d 641, 643 (D.C. Cir. 2016).

A. The National Environmental Policy Act and the Administrative Procedure Act.

NEPA requires agencies to prepare an EIS for all major federal actions significantly affecting the quality of the human environment. 42 U.S.C. §

Declaration of Parobok ¶¶ 3–7, Mar. 5, 2020 [JA-___]; Declaration of Trujillo ¶ 4, Mar. 3, 2020 [JA-___]; Declaration of Stoddard ¶¶ 4–14, Mar. 4, 2020 [JA-___]; Declaration of Thomas ¶¶ 4–8, Mar. 4, 2020 [JA-___]; Declaration of Feuer ¶¶ 4–13, June 29, 2018 [JA-___]; Declaration of Bauman ¶¶ 4–12, July 20, 2018 [JA-___]; Declaration of McGee-Absten ¶¶ 4–12, July 30, 2018 [JA-___]; Declaration of Wynn ¶¶ 4–11, July 31, 2018 [JA-___]; Declaration of Lester Fried ¶¶ 4–13, July 31, 2018 [JA-___].

4332(2)(C). An EIS "forces the agency to take a 'hard look' at the environmental consequences of its actions, including alternatives to its proposed course." *Sierra Club v. FERC*, 867 F.3d 1357, 1367 (D.C. Cir. 2017). An EIS also ensures environmental impacts are disclosed publicly and that the public has an opportunity to weigh in. *Id.* "The agency must comply with principles of reasoned decisionmaking, NEPA's policy of public scrutiny, and [the Council on Environmental Quality's] regulations." *Del. Riverkeeper Network v. FERC*, 753 F.3d 1304, 1313 (D.C. Cir. 2014) (internal quotations omitted). NEPA "obligates every federal agency to prepare an adequate [EIS] *before* taking any major action. . . ." *Oglala Sioux Tribe v. NRC*, 896 F.3d 520, 523 (D.C. Cir. 2018) (emphasis in original). It does not "permit an agency to act first and comply later." *Id.*

The APA governs judicial review of an agency's compliance with NEPA and requires this Court to "hold an agency's action unlawful if it is 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.'" *Id*. at 530 (quoting 5 U.S.C. § 706(2)(A)). Reviewing courts must independently evaluate the record to confirm that the agency made a reasoned decision based on its analysis of the evidence before it. *See Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 378 (1989); 5 U.S.C. § 706 (the court must "review the whole record or those parts of it cited by a party. . . ."). "An EIS is deficient, and the agency action it

undergirds is arbitrary and capricious, if the EIS does not contain 'sufficient discussion of the relevant issues and opposing viewpoints,' or if it does not demonstrate 'reasoned decisionmaking[.]'" *Sierra Club v. FERC*, 867 F.3d at 1368 (citations omitted) (internal quotation marks omitted). The court "ask[s] whether the agency 'examine[d] the relevant data and articulate[d] a satisfactory explanation for its action[,] including a rational connection between the facts found and the choice made.'" *Birckhead v. FERC*, 925 F.3d 510, 515 (D.C. Cir. 2019) (citing *Motor Vehicle Mfrs. Ass'n, Inc. v. State Farm Mutual Automobile Ins. Co.*, 463 U.S. 29, 43 (1983)).

This Court "owes no deference" to the NRC's interpretation of NEPA. *See Grand Canyon Trust v. FAA*, 290 F.3d 339, 342 (D.C. Cir. 2002) ("because NEPA is addressed to all federal agencies and Congress did not entrust administration of NEPA to the [Federal Aviation Administration] alone."). While courts give agencies deference on technical matters, a court's independent and searching review of the record ensures that deference is actually due. *See New York v. NRC*, 681 F.3d 471, 481 (D.C. Cir. 2012) (NRC "failed to conduct a thorough enough analysis here to merit our deference.").

B. The NRC Regulations.

The NRC's NEPA regulations for license renewal appear in 10 C.F.R. Part 51. They require the license applicant to produce an environmental report "to aid the Commission in complying with section 102(2) of NEPA." 10 C.F.R. § 51.14. The NRC then publishes a draft and final EIS prepared by the NRC Staff. 10 C.F.R. §§ 51.71, 51.95.

In 1996, the NRC produced a Generic Environmental Impact Statement (GEIS) for initial license renewals. *See Final Rule, Environmental Review for Renewal of Nuclear Power Plant Operating Licenses*, 61 Fed. Reg. 28,467, 28,468 (June 5, 1996) (hereinafter "1996 Final Rule") [JA-___]. In 2013, the NRC revised the GEIS but did not change its temporal scope. *2013 Final Rule*, 78 Fed. Reg. 37,282 [JA-___]. The GEIS was designed to allow applicants for initial license renewals and the NRC Staff to bypass site-specific analysis of a categorical set of issues codified in Part 51. 10 C.F.R. Part 51, Subpart A, Appendix B (hereinafter "Appendix B"). Of 78 environmental issues considered in the 2013 GEIS, the NRC identified 61 issues for which it would not require additional site-specific review. *2013 Final Rule*, 78 Fed. Reg. 37,282 [JA-___].

10 C.F.R. § 51.53(c)(3) allows only "initial" license renewal applicants to rely on the GEIS and Appendix B.

> For those applicants seeking an *initial renewed license* . . . , [t]he environmental report for the operating license renewal stage is not required to contain analyses of the environmental impacts of the license renewal issues identified as [generic] issues in [Appendix B].

(emphasis added).

II. The NRC Acted Arbitrarily and Capriciously In Granting the Turkey Point Renewed Licenses.

The NRC acted arbitrarily and capriciously by failing to take the requisite "hard look" at all impacts by: (A) granting a subsequent license renewal without analyzing major issues regarding the environmental consequences of operating aging nuclear reactors for 80 years; and (B) arbitrarily concluding Turkey Point's impacts on groundwater will be "small" over the next three decades.

A. The Commission Erred by Issuing the Turkey Point Licenses Without First Reviewing All of the Plant's Impacts for the 20-Year Subsequent License Renewal Term.

The NRC extended the operational life of Turkey Point to 80 years without a hard look at a large category of environmental impacts. Under NRC regulations, applicants for subsequent license renewals must submit an environmental report addressing all environmental issues on a site-specific basis. *See* 10 C.F.R. § 51.53(c)(3). Further, the GEIS analyzes the environmental impacts of a nuclear reactor operating only 20 years beyond the original 40-year license, and so provides no evaluation of the environmental impacts of a subsequent license

renewal. Against the plain language of its own regulation and NEPA's requirement for a hard look at environmental impacts, the NRC here erroneously allowed FPL to rely on the GEIS and its findings codified in Appendix B.

In this case, the first to consider a subsequent renewed license, FPL submitted an environmental report relying on the GEIS rather than conduct site-specific analysis of all environmental impacts. Applicant's Environmental Report, Subsequent Operating License Renewal Stage, Turkey Point Nuclear Plant Units 3 and 4 (Jan. 2018) (Rec._No_191) [JA-___]. The NRC accepted the environmental report as if its regulation at 10 C.F.R. § 51.53(c)(3) did not limit reliance on the GEIS to "applicants seeking an *initial renewed license*." The NRC's Record of Decision and Final SEIS also relied almost exclusively on the GEIS for issues Appendix B categorizes as "generic" as if the scope of the GEIS includes the subsequent license renewal timeframe. Record of Decision for the Subsequent License Renewal Application for Turkey Point Nuclear Generating Unit Nos. 3 and 4 at 3 (Dec. 4, 2019) (Rec._No._191) [JA-___]; Final SEIS at xvii (Rec._No._191) [JA-___]. As a result, the NRC issued the renewed licenses without reviewing all of the potential environmental impacts from continued operation of Turkey Point in violation of NRC regulations and NEPA.

The majority opinions of the Board and Commission proposed to accept this regulatory sleight of hand to avoid the plain regulatory meaning.[15] At both levels, however, vehement dissents unmasked the pretense. The dissenting Board member wrote that, NRC's "tortuous approach to determining the regulation's applicability wipes away the plain meaning and the original regulatory intent." Board Order, 89 NRC at 313 (Abreu dissent) (Rec._No._116) [JA-___]. And the dissenting Commissioner explained that the majority "adopts an unreasonable interpretation of 10 C.F.R. § 51.53(c)(3) and mischaracterizes the scope of the agency's [GEIS]." Commission Order (slip op. Baran dissent at 18) (Apr. 23, 2020) [JA-___].

A court determines *de novo* whether the plain meaning of a regulation is ambiguous. *Elec. Power Coop., Inc. v. FERC*, 924 F.2d 1132, 1136 (D.C. Cir.

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[15] Because the Commission Order (*Fla. Power & Light Co.* (Turkey Point Nuclear Generating Station Units 3&4), CLI-20-03, __ NRC __ (slip op.) (Apr. 23, 2020) (hereinafter "Commission Order ") [JA-___]) was published after the licenses, the Commission Order is not part of the administrative record but only serves as *pos hoc* supplemental authority. *See Dep't of Homeland Sec. v. Regents of the Univ. of California*, 140 S. Ct. 1891, 1907 (2020) (citing *Michigan v. EPA*, 135 S. Ct. 2699, 2710 (2015)) ("It is a 'foundational principle of administrative law' that judicial review of agency action is limited to 'the grounds that the agency invoked when it took the action.'). The NRC provided this Court with notice of this supplemental authority pursuant to Fed. R. App. P. 28(j). Notice of Suppl. Authority at 1, ECF No. 1839720.

1991). As explained below, the plain meaning of §51.53(c)(3) is unambiguous, so the Court should grant the NRC's interpretation no deference and find that the regulation does not apply to subsequent license renewals, rendering the Turkey Point environmental analysis inadequate.

1. The Plain Language of §51.53(c)(3) Is Unambiguous—an Applicant for Subsequent License Renewal Must Submit an Environmental Report Addressing All Impacts on a Site-Specific Basis.

There is no dispute that, "[i]n considering [Environmental Organizations'] assertion that [§]51.53(c)(3) does not apply to [subsequent license renewals], [the] starting point is the regulatory language." Board Order, 89 NRC at 264-65 (Rec._No._116) [JA-___]; *see also Conn. Nat. Bank v. Germain*, 503 U.S. 249, 253–54 (1992) (applying the "one, cardinal canon before all others," *i.e.*, considering the language of the law for its plain meaning). If the language on its face is unambiguous and "uncertainty does not exist, ... The regulation then just means what it means—and the court must give it effect, as the court would any law." *Kisor v. Wilkie*, 139 S. Ct. 2400, 2415 (2009). "When the words of a statute are unambiguous, then, this first canon is also the last: judicial inquiry is complete." *Conn. Nat. Bank*, 503 U.S. at 254 (internal quotations omitted); *see also Bostock v. Clayton Cty., Ga.*, 140 S. Ct. 1731, 1743 (2020) (internal citations

omitted) (explaining that the plain terms of a law "should be the end of the analysis").

The language of 10 C.F.R. § 51.53(c) is clear and unequivocal. In §51.53(c), subsection (1) explains that an environmental report is required from "*[e]ach* applicant for renewal of a license" (emphasis added) and subsection (2) specifics what this "report must contain." Subsection (3) then provides "conditions and considerations" for a specific category of license renewal applicants, "those applicants seeking an *initial* renewed license."[16] The conditions listed in §51.53(c)(3) unambiguously only apply to *initial* renewed licenses and not every license renewal.

a. The word "initial" and the clausal structure of §51.53 must be given meaning.

A plain reading of §51.53 must take into account every word and clause of the regulation. *See Sierra Club*, 536 F.3d 673, 680 (D.C. Cir. 2008) (citing *U. S. v. Menasche*, 348 U.S. at 538–39, and *Nat'l Ass'n of Home Builders v. Defenders of Wildlife*, 551 U.S. 644, 669 (2007)) ("It is a court's duty to give effect, if possible,

[16] Section 51.53(c)(3) further limits the subsection to those applicants "holding an operating license, construction permit, or combined license as of June 30, 1995," thereby prohibiting a second category of license renewal applicant from utilizing Appendix B and the GEIS.

to *every clause and word* of a statute . . . . The same is true for regulations.") (emphasis added) (internal citations omitted); *see also Platt v. Union Pac. R.R. Co.*, 99 U.S. 48, 58 (1878) (a law is "presumed to have used no superfluous words").

Thus, an accurate interpretation of §51.53(c)(3) cannot overlook the words "initial license extension" in the regulation. The use of "initial" in subsection (c)(3) must mean the subsection applies to a limited category of license renewals, something the Board in fact acknowledged. Board Order, 89 NRC at 264 ("51.53(c)(3) thus identifies a *particular category* of license renewal applicants (i.e. those seeking an 'initial renewed license')") (emphasis added) (Rec._No._116) [JA-___].[17] The inclusion of "initial" in §51.53(c)(3) is not an oversight. The NRC has had multiple opportunities to change it, yet the term has remained. *See id.* at 306 n.24 (Abreu dissent) (listing revisions the NRC has made to Part 51, including to §51.53(c)(3), without removing "initial"); *see also Proposed Rule, Environmental Review for Renewal of Operating Licenses*, 56 Fed. Reg. 47,016, 47,027 (Sept. 17, 1991) (hereinafter "1991 Proposed Rule") [JA-___]; *1996 Final*

[17] The canon *expressio unius est exclusio alterius* (the mention of one thing is the exclusion of the other), applied here means the inclusion of "initial" to define the license renewals excludes all other license renewals.

Rule, 61 Fed. Reg. at 28,487; *Proposed Rule, Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses*, 74 Fed. Reg. 38,117 (July 31, 2009) [JA-___]; and *2013 Final Rule*, 78 Fed. Reg. at 37,316 [JA-___].

An accurate interpretation of §51.53(c)(3) also cannot overlook the separate, specific clause for initial license renewals as distinct from the general clause for an applicant's environmental report. If subsection (c)(3) applied to every license renewal, then there would be no purpose to subsection (c)(3) being separated from subsection (c)(2); the only purpose of subsection (c)(3) is to specify the category of license renewals to which the conditions it lists apply. The NRC would have put subheadings from (c)(3) under subsection (c)(2) if they had intended these subheadings to apply to all future license renewals. Instead the NRC wrote subheading (c)(3) to clarify and limit the application of the subsection to "those applicants seeking an *initial* renewed license."

b. The NRC cannot negate the plain language of its regulation in an attempt to circumvent notice and comment rulemaking.

An agency may not construe a regulation "in a way that negates its plain text," but that is exactly what the NRC attempted to do when it granted the licenses without first requiring a compliant environmental report from FPL. *Honeycutt v. U. S.*, 137 S. Ct. 1626, 1635 n.2 (2017); *see also Nat'l Ass'n of Home Builders*, 551 U.S. at 668–69 (court cannot interpret a regulation to render part of it

surplusage); *Gardebring v. Jenkins*, 485 U.S. 415, 430 (1988) (court should reject agency's interpretation of its own regulation in favor of an alternative if that alternative "is compelled by the regulation's plain language"). The Board dismissively attempts to read the specificity of the regulation against it, asserting that the regulation "(1) is silent as to [subsequent license renewal] applicants; and (2) imposes no restrictions on the Commission's authority to allow [subsequent license renewal] applicants to utilize these regulatory prescriptions when preparing ERs." Board Order, 89 NRC at 265 (Rec._No._116) [JA-___]. The NRC's strained interpretation violates longstanding principles of statutory and regulatory construction by rendering the term "initial" meaningless "surplusage." If the NRC wants to expand the scope of §51.53(c)(3) beyond initial license renewal applicants, it cannot do so through contorted interpretations made during adjudication but only through APA notice and comment rulemaking.

The NRC would read the limiting term "initial" out of the regulation, expanding the scope of the regulation to any type of renewed license, including initial or subsequent. This interpretation would rewrite the plain meaning of §51.53(c)(3) without undergoing notice and comment rulemaking. There are two classes of license renewal applicants that the regulation prohibits from relying on generic determinations: those seeking a subsequent renewed license and those not

holding a license as of June 30, 1995. By merging all license renewal applicants into one category, the NRC would not only delete "initial" from the regulation, it would also strike this June 30, 1995 category (another fifteen words). The resulting regulation would read:

> For those applicants seeking ~~**an initial**~~ renewed license ~~**and holding an operating license, construction permit, or combined license as of June 30, 1995**~~, the environmental report shall include the information required in paragraph (c)(2) of this section . . . .

See Board Order, 89 NRC at 314 (Abreu dissent) (Rec._No._116) [JA-___] ("[I]f the agency can change the meaning of 'initial,' what is to stop it from changing the June 30, 1995, limitation in section 51.53(c)(3) without notice and comment?").

Agencies may not read the plain language out of a regulation in order to invent new regulations. *See Nat'l Ass'n of Home Builders*, 551 U.S. at 668–69 (rejecting interpretation that "would render the regulation entirely superfluous."); *Bostock*, 140 S. Ct. at 1738 ("If judges could add to, remodel, update, or detract from old statutory terms inspired only by extratextual sources and our own imaginations, we would risk amending statutes outside the legislative process . . . . And we would deny the people the right to continue relying on the original meaning of the law they have counted on . . . ."). Under the APA, only notice and comment rulemaking can change the plain text of regulations approved through notice and comment rulemaking. 5 U.S.C. § 553 (APA notice and comment

rulemaking); *see, e.g., Perez v. Mortg. Bankers Ass'n*, 135 S. Ct. 1199, 1206 (2015) ("agencies [must] use the same procedures when they amend or repeal a rule as they used to issue the rule in the first instance."). "Looking to current intent while trying to explain away the expressed original intent of the regulation is a bridge too far." Board Order, 89 NRC at 313 (Abreu dissent) (Rec._No._116) [JA-___]. Simply, without notice and comment rulemaking, the NRC cannot change the plain text of §51.53(c)(3) by reading the word "initial" out of the regulation.

c. A "holistic" review is unnecessary, given the unambiguous plain meaning of §51.53(c)(3); but if undertaken, it would not change the result.

Because the plain meaning of §51.53(c)(3) is unambiguous, the review need go no further. *See Bostock,* 140 S. Ct. at 1737 ("When the express terms of a statute give us one answer and extratextual considerations suggest another, it's no contest. Only the written word is the law, and all persons are entitled to its benefit."). Lacking support from the plain language of §51.53(c)(3), the majority opinions of the Board and Commission took refuge in what they called "holistic" analysis. While the NRC relied on two cases to justify its "holistic review," s*ee* Board Order, 89 NRC at 265 (Rec._No._116) [JA-___] (relying on *Fed. Express Corp. v. Holowecki*, 552 U.S. 389 (2008)) and Commission Order, CLI-20-30 (slip op. at 10) [JA-___] (relying on *United Sav. Ass'n of Tex. v. Timbers of Inwood*

Forest Assocs., 484 U.S. 365, 371 (1988)), both cases are distinct from the matter at hand because both set out how a court addresses *ambiguous* regulatory language, and, as discussed, §51.53(c)(3) is not ambiguous. The NRC "delves too deeply to find [the] answer." Board Order, 89 NRC at 313 (Abreu dissent) (Rec._No._116) [JA-___]. A "holistic" review is just another name for using "extratextual considerations" to amend the plain words of its regulation, contrary to the instructions of the Supreme Court.

Even if a holistic review were undertaken (which is unnecessary), understanding that the plain meaning of §51.53(c)(3) is limited to initial license renewals should have caused no concern. The regulatory purpose of the environmental report is "to aid the Commission in complying with section 102(2) of NEPA." 10 C.F.R. § 51.14. "[T]he [NRC] has recognized [its] continuing duty to take a 'hard look' at new and significant information for each 'major federal action' to be taken." Board Order, 89 NRC at 307 (Abreu dissent) (citing *Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), CLI-13-7, 78 NRC 199, 216 (2013) (quoting *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 374 (1989))) (internal citations omitted) (Rec._No._116) [JA-___]. As the Board dissent explains, "the agency reasonably could have determined that after a certain point—here, following the term of the initial license plus twenty years—the

environmental impacts of license renewal should be considered afresh in the environmental report." *Id*.

2. The NRC's Generic EIS for License Renewal Did Not Analyze Environmental Impacts Beyond the Initial 20-Year Renewal Term.

The inclusion of the word "initial" in §51.53(c)(3) was no fluke; rather the GEIS and Appendix B were never intended to apply to—and moreover, do not analyze the impacts of—subsequent license renewals. As the dissenting Commissioner stated, "[t]he regulatory direction to rely on the GEIS can only apply to the extent that the GEIS actually evaluated the environmental impacts of subsequent license renewal." Commission Order, CLI-20-03 (slip op. Baran dissent at 5) (finding neither the 1996 nor 2013 GEIS did so) [JA-___]; *see also Potomac All. v. NRC*, 682 F.2d 1030, 1035 (D.C. Cir. 1982) (rejecting EIS that only reviewed impacts until 2011 even though there was evidence the impacts would continue beyond that year). But the GEIS only analyzes the initial license renewal timeframe—the additional 20 years beyond the original 40-year operating license—and does not analyze the additional 20 years of a subsequent license renewal at issue. *Id*. (slip op. at 6).

Nowhere in the regulatory history or the GEIS documents themselves is there anything that widens the temporal scope of the GEIS beyond the 20 years past the original 40-year license. *Id*. (slip op. at 6-10). The NRC therefore failed

to take a hard look at all the environmental impacts of extending Turkey Point's operation to mid-century.

a. The regulatory history confirms that the NRC did not intend to analyze beyond the initial license renewal in the Generic EIS.

In 1991, the NRC proposed a rulemaking to address license renewals. The proposal defined the scope of the rulemaking as "*one renewal* of the initial license for up to 20 years beyond the expiration of the initial license." *1991 Proposed Rule*, 56 Fed. Reg. at 47,017 (emphasis added) [JA-___]. The limited 20-year scope of the proposed rule is referenced throughout the notice. *Id*. at 47,019 ("The Commission concludes that the adverse environmental impacts of license renewal are minor . . . *for up to an additional 20 years beyond the initial license period*.") (emphasis added); *id.* at 47,020 ("The analytical approach to assessing environmental impacts in this GEIS involves four stages: . . . (4) Combine these separate analyses to fully characterize the nature and magnitude of impacts . . . and *the potential environmental impacts of operating plants for 20 years beyond their current 40-year licensing limit*.") (emphasis added).

The final rule in 1996 remained "consistent with the generic approach and scope of the proposed" rule. *1996 Final Rule*, 61 Fed. Reg. at 28,468 [JA-___]. Indeed, the final rule notice states throughout that it only applies to the first 20

years after the original 40-year license. *See, e.g.*, *id.* at 28,496 ("Decommissioning after either the initial operating period or after a 20-year license renewal period is not expected to have any direct ecological impacts."); *id*. at 28,482 ("The analysis in the GEIS for license renewal examines the physical requirements and attendant effects of decommissioning after a 20-year license renewal compared with decommissioning at the end of 40 years of operation and finds little difference in effects.").

b. Both the original 1996 GEIS and the updated 2013 GEIS analyzed only the initial 20-year renewal term.

In the 1996 GEIS, the NRC analyzed only the 20-year period beyond the original 40-year license term. *See* Generic Environmental Impact Statement for License Renewal of Nuclear Plants (NUREG-1437) at 2-1 (May 1996) ("This GEIS examines how these plants and their interactions with the environment would change if such plants were allowed to operate . . . *for a maximum of 20 years past the term of the original plant license of 40 years*.") (emphasis added) (hereinafter "1996 GEIS") [JA-___]. Throughout the analysis itself, the GEIS defines the temporal scope of review as the "initial" license renewal. *See, e.g., id*. at 4-59 ("The concerns addressed by this section involve the extent to which license renewal and up to an additional 20 years of plant operation will preclude alternative uses of the transmission line corridor."); *id*. at 4-85 ("The potential

license renewal term is an additional 20 years; thus, the effective midlife [of the facility operating life] is 30 years."); *id. at* 7-1 to 7-17 ("This section summarizes the quantities and types of radioactive waste and emissions generated in decommissioning after 40 and 60 years of operation, respectively.").

The NRC did not expand the temporal scope of the GEIS when it revised the 1996 GEIS in 2013. *See e.g.,* Generic Environmental Impact Statement for License Renewal of Nuclear Plants (NUREG-1437, Revision 1) (June 2013) at E-2 (hereinafter "2013 GEIS") ("This revision considers how these developments would affect the conclusions in the 1996 GEIS and provides comparative data where appropriate. . . . *In addition, the revision only covers one initial license renewal period for each plant (as did the 1996 GEIS*)."") (Rec._No._191) [JA-___]. As in the 1996 GEIS, throughout the 2013 GEIS, the analysis makes clear that "[t]he time frame for future actions is the 20-year license renewal term *after the end of the original license term*." *Id*. at 4-244 (emphasis added). The 2013 GEIS thus provides environmental impact analysis for a time frame totaling 60 years, with a baseline of 40 years. For example, regarding occupational radiation exposure, the 2013 GEIS states, "If the reactor *operates for 60 years*, the cumulative increase in fatal cancer to an individual worker is estimated to be . . . a 50 percent increase over the *baseline of 40 years* of operations." *Id*. at 4-138 to 4-

139 (emphasis added). And regarding public radiation doses, the 2013 GEIS states, "[i]f the reactor *operates for 60 years*, it is estimated that the increase in fatal cancer risk . . . would [be] a 50 percent increase over *the baseline of 40 years* of operation." *Id*. at 4-145 (emphasis added). The few "isolated cases of ambiguous text [in the 2013 GEIS] are clearly outweighed by the numerous definitive statements in the GEIS that the document only examined the environmental impacts of a single, twenty-year license renewal." Commission Order, CLI-20-03 (slip op. Baran dissent at 9) [JA-___]. Thus, no GEIS has analyzed environmental impacts of keeping a nuclear reactor operational for 80 years.

c. The NRC cannot ignore NEPA and the APA to retroactively expand the scope of Part 51.

The NRC has attempted to change its policy without updating the GEIS and its rules to match; and the agency has not just proposed a small change. As the dissenting Commissioner pointed out, the NRC's "retroactive expansion of the scope of the GEIS is essentially unlimited," such that "the GEIS could be referenced to definitively address every [so-called generic] issue for a license renewal from 80 to 100 years, from 100 to 120 years, or even from 200 to 220 years," regardless of the plain language of §51.53(c)(3) or the lack of actual analysis in the GEIS. Commission Order, CLI 20-03 (slip op. Baran dissent at 9)

[JA-___]. But this Court has rejected agencies' EIS as deficient for failing to discuss actions beyond a set time frame if the impacts of the proposed action may go beyond that time. *See Potomac All.*, 682 F.2d at 1035 (rejecting the NRC's review for failing to analyze beyond 2011 even though impacts may continue beyond then); *Concerned About Trident v. Rumsfeld*, 555 F.2d 817, 829 (D.C. Cir. 1976) (finding EIS deficient for not discussing past a certain year in the future even though the project may have different impacts then). The NRC cannot here continue to rely on a GEIS that analyzes impacts in a set time frame for reactor licenses that will extend beyond that timeframe.

Further, as discussed above, no change, especially not such an expansive one, can be made to an agency's duly-adopted regulation without notice and comment rulemaking. *See, e.g., Perez*, 135 S. Ct. at 1206 ("agencies [must] use the same procedures when they amend or repeal a rule as they used to issue the rule in the first instance."); *see also* Board Order, 89 NRC at 314 (Abreu dissent) ("An agency may not create a situation that is inconsistent with an existing regulation and then use that disparity as an excuse to make a de facto amendment without notice and comment.") (Rec._No._116) [JA-___]. Moreover "if the agency now finds this policy objectionable or inefficient, we [the adjudicatory bodies] are not the ones to provide a remedy in this adjudication." Board Order, 89

NRC at 310 (Abreu dissent) (Rec._No._116) [JA-___]; *see also Bostock*, 140 S. Ct. at 1753 ("Gone here is any pretense of statutory interpretation; all that's left is a suggestion we should proceed without the law's guidance to do as we think best. But that's an invitation no court should ever take up."); *Int'l Bhd. of Teamsters v ICC*, 801 F.2d 1423, 1430 (D.C. Cir 1986) ("And the hard fact remains that it is not the judiciary's assigned task to sit as a modernday [sic] Council of Revision . . . and to *cy pres* statutory provisions that may not be in full keeping with the spirit that has more recently animated Congress.").

To make the findings of the GEIS binding on subsequent license renewals, NRC would have to do two things. First, it would have to update the scope of the GEIS—that means issuing a scoping notice, draft GEIS, and then Final GEIS all using a 60-year operating time as the baseline and analyzing the environmental impacts for an additional 20 years. Second, the NRC would have to do a rulemaking amending §51.53 and Appendix B. Because it has not taken these actions, the scope of §51.53(c)(3) and the GEIS remains applicable to initial license renewals only, not the subsequent license renewal at issue here.

B. The NRC Failed to take a "Hard Look" at Groundwater Impacts from Turkey Point's Cooling Canal System.

The parties do not dispute that the cooling canal system used by Turkey Point has created a serious water pollution problem. Hypersaline water from the

unlined canals has infiltrated the Biscayne aquifer, which is used as, *inter alia*, drinking water for Miami-Dade County and the Florida Keys. *See, e.g.*, Final SEIS at 3-67 to 3-70 (Rec._No._191) [JA-___]. In 2016, FPL settled an enforcement action over the hypersaline plume, issued by the Florida Department of Environmental Protection, by signing a consent order that specified actions the company would take in an attempt to dilute the salinity in the canals and "retract" the hypersaline plume back to the plant grounds. Consent Order (Rec._No._144) [JA-___]. The Consent Order requires FPL to undertake a "freshening" program and to drill groundwater wells to "retract" the hypersaline plume from surrounding groundwater. Final SEIS at 3-91 to 3-95 (Rec._No._191) [JA-___]. The reduction targets, however, are not binding, and no penalties or limitations on Turkey Point's operation result from failure to meet them. Consent Order (Rec._No._144) [JA-___]. The NRC's Final SEIS nevertheless assumed success in achieving salinity goals and, accordingly, concluded the environmental effects of the plume will be "small." Final SEIS at 4-28 (Rec._No._191) [JA-_]. The company's program, however, has not achieved the anticipated salinity reduction called for in the Consent Order. *Id.* at 3-59. Meanwhile climatic conditions are increasing the challenge of achieving the goals of the Consent Order. *Id.* at 4-132 to 4-133.

1. The NRC Violated NEPA by Relying on State and County Oversight to Ensure Groundwater Impacts Will Be Negligible Through Mid-Century.

The NRC's reliance on state and county regulators to cure Turkey Point's groundwater contamination does not satisfy the agency's NEPA obligation to evaluate environmental impacts. An agency fails to take a "hard look" under NEPA when it "defer[s] to the scrutiny of others" (*Idaho v. ICC*, 35 F.3d 585, 595–96 (D.C. Cir. 1994)) or simply "rel[ies] on another agency's conclusions about a federal action's impacts on the environment." *North Carolina v. FAA*, 957 F.2d 1125, 1129–30 (4th Cir. 1992); *see also Ill. Commerce Comm'n v. Interstate Commerce Comm'n*, 848 F.2d 1246, 1258 (D.C. Cir. 1988) (an agency "may not delegate to parties and intervenors its own responsibility to independently investigate and assess the environmental impact of the proposal before it."). Relying on "on duty" regulators to prevent or mitigate impacts does not constitute the "hard look" that NEPA demands. *New York v. NRC*, 681 F.3d 471, 481 (D.C. Cir. 2012).

Here, the NRC assumed the success of "continued actions by FPL and regulatory oversight by the [Florida Department of Environmental Protection to] provide assurance that the [cooling canal system] should reach the required [salinity] levels within or close to the designated period." Final SEIS at 3-60

(Rec._No._191) [JA-___]. The NRC was forced to rely on regulatory oversight to support its minimalist conclusion because FPL's "freshening" efforts have not achieved the anticipated results. *See id.* at 3-59. Nor is there any evidence in the record that they will—particularly, as discussed below, in light of the NRC's acknowledgment that hotter and drier weather will prevail during the subsequent license renewal term. *Id.* at 4-132. Even the NRC acknowledges the uncertainty whether the plan will ultimately succeed. *Id.* at A-89.

NEPA does not permit the NRC to rely on another agency's "oversight" to support a conclusion that environmental impacts will be minimal. But even if it did, the Florida Department of Environmental Protection's Order that governs FPL's salinity mitigation plans does not provide any assurance that salinity will in fact be controlled. It requires that FPL *implement* a salinity management plan, but it does not presume the plan will actually work. Consent Order at 8 (Rec._No._144) [JA-___]. Instead, it requires FPL to develop *another* plan to control salinity if its current plan fails. *Id.* Nor does the Consent Order fine FPL

or limit operation of the plant in any way if those targets are not met.[18] What the NRC termed "assurance" is little more than speculation.

This Court rejected this kind of wishful thinking in another NRC case. There, the NRC authorized the storage of spent nuclear fuel in on-site pools for sixty years after the plant ceases operations. *New York v. NRC*, 681 F.3d at 475. The NRC concluded that environmental impacts from leaks would be negligible in part because of various improvements to spent-fuel pools that the NRC had addressed or was in the process of addressing. *Id.* at 481. This Court rejected the NRC's conclusion because the improvements were "untested" and provided the court "no way of deferring" to the NRC's conclusion. *Id.* The NRC also argued its "monitoring and regulatory compliance program" would prevent pools from leaking. *Id.* But this Court found the argument "even less availing because it amount[ed] to a conclusion that leaks will not occur because the NRC is 'on duty.'" *Id.* This Court held that "merely pointing to the compliance program is in no way sufficient to support a scientific finding" that significant impacts will not occur. *Id.* at 481. Here too, the NRC is relying on "untested" efforts and "on

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[18] The Order subjects FPL to potential fines for violating the terms of the Order, however, the failure to meet the salinity targets is not a violation of any term. *See* Consent Order at 20 ¶ 40 (Rec._No._144) [JA-___].

duty" regulators to conclude that groundwater impacts will be negligible in the future. *See, e.g.*, Final SEIS at 3-60 (Rec._No._191) [JA-___]. The NRC's conclusions here are no more convincing than they were in *New York* and should be rejected.

2. The NRC's Unwillingness to Credit, and Actually Analyze, the Real Prospect that FPL will be Unable to Control its Groundwater Contamination is Arbitrary and Capricious.

The NRC ignored significant evidence in the record indicating FPL's current mitigation efforts will not control Turkey Point's groundwater contamination. First, the modeling basis for FPL's freshening plan produced "skewed" results that overpredicted the plan's effectiveness. Tr. of Proceedings at 428, *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Station Units 3&4) (50-250-SLR and 50-251-SLR) (NRC Sep. 9, 2019) (Rec._No._180) [JA-___]. Second, FPL's implementation of the plan has not come close to meeting the state's required salinity targets after several years of operation. Final SEIS at 3-59 (Rec._No._191) [JA-___]. Third, the NRC acknowledged that hotter and drier conditions have prevented FPL from meeting the salinity target. *See id.* at A-103 to 104. Fourth, the NRC acknowledges hotter and drier conditions will prevail during the license renewal term. *Id.* at 4-132. In addition, Environmental Organizations submitted their own expert's analysis of FPL's mitigation plans demonstrating that "meeting

the 2016 consent order [salinity targets] is not achievable with the number of wells and pumping volumes proposed." E.J. Wexler, Decl. in Supp. of Pet'rs, at 5 (Jun. 28, 2019) (Rec._No._54) [JA-___].

Like Environmental Organizations, the U.S. Environmental Protection Agency (EPA) expressed little confidence that FPL's mitigation efforts will succeed. In its comments on the Draft SEIS, the EPA stated "there is much unknown regarding the hypersalinity plume . . . and it is uncertain that [FPL's plan] will provide the long-term results as modeled." Final SEIS at A-90 (Rec._No._190) [JA-_]. In light of the uncertainty, the EPA recommended the NRC include a "reopening term and/or condition in the license should the corrective measures . . . not be met." *Id.* at A-88. The NRC did not include such a term or condition. *Id.* at A-89.

But while the NRC acknowledged there is "uncertainty in the . . . ultimate effectiveness of the mitigative actions," its Final SEIS nevertheless concluded unequivocally that Turkey Point's impact on water quality will be "small," *id.* at 4-28, arbitrarily refusing to discount this prediction for the many indications that the mitigation program has a low probability of succeeding. Instead, the NRC simply presumed that "regulatory oversight" and a "water quality monitoring program" will control the plant's water pollution problem. *Id.* at A-89. Scientific studies

predicting the mitigation plan will actually work are notably absent from the Final SEIS. While the Final SEIS cites numerous studies that attempt to *understand* the salinity issues in greater detail, only the "skewed" model predicts actual success. The record demonstrates that the NRC's unequivocal conclusion that groundwater impacts will be small through the license renewal term is arbitrary and capricious. *Am. Rivers v. FERC*, 895 F.3d 32, 54 (D.C. Cir. 2018) (it was "irrational" for the agency to "cast [known] significant environmental impacts aside in reliance on some sort of mitigation measures, which the [agency] was content to leave as 'TBD.'"). Assuming the success of a speculative remedy for FPL's hypersalinity problem "is no substitute for an overarching examination of environmental problems at the time the licensing decision is made." *Idaho v. ICC*, 35 F.3d at 596. This magical thinking mocks NEPA's "hard look" standard.

a. FPL's freshening plan was based on "skewed" model results.

FPL's salinity management plan consists of two parts: (1) "freshening" the cooling canal system, and (2) retracting the hypersaline plume using groundwater extraction wells. Final SEIS at 3-91 to 3-92 (Rec._No._191) [JA-___]. But FPL's ability to retract the hypersaline plume is "predicated" on the effectiveness of its "freshening" plan. *Id.* at 4-28. If the freshening plan does not succeed, "operation

of the [cooling canal system] is likely to result in continued degradation of groundwater quality." *Id.* at A-89.

FPL commissioned modelers to determine how much water would be needed to dilute the cooling canals in order to reach the required salinity level, 34 Practical Salinity Units (PSU). The model, identified as "Tetra Tech 2014a," predicted that adding 14 million gallons of low-salinity water each day would achieve the required level in "less than a year." *Id.* at 3-59; P.F. Anderson & J.L. Ross, *Evaluation of Required Floridian Water for Salinity Reduction in the Cooling Canal System*, (May 9, 2014) (hereinafter "Tetra Tech 2014a") (Rec._No._191) [JA-___]. But while FPL began the "freshening" operation in November 2016, it has never met the 34 PSU annual salinity target. Final SEIS at 3-59 (Rec._No._191) [JA-___]. The two most recent annual salinity levels in the record were 61.9 and 50.9 PSU. *Id*. at 3-59.

During the Board proceedings, FPL admitted the "Tetra Tech 2014a" model was based on a "particularly wet" year of weather data that "skewed" the results and "had to dispel any notion" that this model "really is still even relevant." Tr. of Proceedings at 428–49, *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Station Units 3&4) (50-250-SLR and 50-251-SLR) (NRC Sep. 9, 2019)

(Rec._No._180) [JA-___].[19] Rather than, *inter alia*, use accurate weather data in a new modeling run, or explain why it couldn't, the NRC swept the problem under the rug. The Final SEIS stated in general terms that the "modelers anticipate that under more average meteorological conditions (e.g., less severe dry seasons) the [freshening] should help to reduce . . . water salinities to [the target level]." Final SEIS at 3-59 (Rec._No._191) [JA-___]. And further, if "drier conditions were to prevail, more freshening water and longer timeframes may be needed to mitigate elevated [] salinities." *Id.* at A-103 to 104. These explanations, however, merely acknowledge the serious, and seemingly insurmountable, headwinds facing FPL's efforts, but in no way constitute the "hard look" and thorough examination required by NEPA.

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[19] FPL stated that it "updated" the "Tetra Tech 2014a" model, but this "updated" model is not in the record. Tr. of Proceedings at 428–49, *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Station Units 3 & 4) (50-250-SLR and 50-251-SLR) (NRC Sep. 9, 2019) (Rec._No._180) [JA-___]. It was therefore never subject to public scrutiny that NEPA demands. 40 C.F.R § 1502.24 (requiring agencies "identify any methodologies used and . . . make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the [EIS].").

b. FPL's freshening plan is not achieving the necessary salinity reductions and forecasted climate conditions will only make matters worse.

As noted above, the NRC acknowledged that more time and freshening water will be needed "if drier conditions . . . prevail." Final SEIS at A-103 to 104 (Rec._No._191) [JA-___]. But therein lies the problem. The Final SEIS explained elsewhere that drier and hotter conditions *will* prevail. Average annual temperatures in south Florida are forecasted to rise by 3.5°F by 2050 along with a slight decrease in annual precipitation. *Id.* at 4-132. Rather than "un-skew" the model results with this data, the NRC just acknowledged "uncertainty" in modeling and relied on the possibility that a Plan B might work. *Id.* at A-89. But NEPA requires more.

NEPA requires agencies to make an "overarching examination of environmental problems at the time the licensing decision is made," *Idaho v. ICC*, 35 F.3d at 596, including "reasonable forecasting" based on "educated assumptions about an uncertain future." *Sierra Club v. FERC*, 867 F.3d 1357, 1374 (D.C. Cir. 2017). An agency's forecast should include "quantitative estimates" of future impacts or a detailed explanation if such estimates are not feasible. *Id.* at 1374–75; *see also* 40 C.F.R. § 1502.24 (an agency must ensure the accuracy and scientific

integrity of the analyses contained in its environmental impact statements).[20] Here, without any rational explanation, the NRC set aside considerable evidence adverse to the success of FPL's mitigation plans in favor of "on duty" regulators.

The NRC's lack of "reasonable forecasting" here is particularly troubling in light of its specific—and unsupported—claim that "the [cooling canal system] should reach the required [salinity] levels within the 13-year period prior to the beginning of the subsequent license renewal period." Final SEIS at 3-57 (Rec._No._191) [JA-___]. Again, the record evidence and the NRC's own admissions do not support this conclusion. The NRC admitted to "uncertainty in the timing and the ultimate effectiveness of [FPL's] mitigative actions." *Id.* at A-89. It also admitted that future climate conditions that will increase salinity in the cooling canals while having "adverse cumulative impacts on groundwater resources in the vicinity of Turkey Point." *Id.* at 4-132 to 4-133. By not reconciling these inconsistencies, the NRC has not "considered the relevant factors

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[20] The Council on Environmental Quality updated its NEPA regulations on July 16, 2020. *Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act*, 85 Fed. Reg. 43,304 (Jul. 16, 2020). The effective date for the new regulations is September 14, 2020. *Id.* at 43,304.

and articulated a rational connection between the facts found and the choice made." *Baltimore Gas and Elec. Co. v. NRDC*, 103 S.Ct. 2246, 2256 (1983).

The NRC also failed to explain why it did not model anticipated climate conditions in its analysis of groundwater impacts when it was able to model them for a different set of reactor units at Turkey Point in 2016. In that EIS, the NRC collaborated with the Pacific Northwest National Laboratory to model "[p]redicted future change in sea levels and its effect on interactions between the [groundwater wells that would provide cooling water to Units 6 & 7] and the hypersaline plume." Environmental Impact Statement for Combined Licenses (COLs) for Turkey Point Nuclear Plant Units 6 and 7, Final Report at 5-19 (Oct. 2016) (Rec._No._191) [JA-___]; *see also* M. Oostrom & L. Vail, *Review Team Focused Modeling Analysis of Radial Collector Well Operation on the Hypersaline Groundwater Plume beneath the Turkey Point Site near Homestead, Fla.* (2016) (Rec._No._191) [JA-___].[21] There, FPL planned to use cooling towers to dissipate heat from projected Units 6

[21] Rising sea levels also impact groundwater salinity and the potential effectiveness of FPL's salinity management efforts. *See* Final SEIS at 4-132 (Rec._No._191) [JA-___]. As sea levels rise due to rising global temperatures, it pushes saltwater further inland thereby displacing freshwater resources. This phenomenon is known as saltwater intrusion and has an adverse impact on groundwater resources and will reduce the availability of freshwater in south Florida while demand for freshwater is projected to increase significantly. *Id.* at 4-133.

and 7 rather than the 5,900-acre cooling canal system at issue here. *Id.* at xxxi. Thus, the NRC appears willing to model groundwater impacts under climate change conditions, but only when it does not implicate the cooling canal system.

Far less constituted reversible error in an analogous case. In *AquAlliance v. U.S. Bureau of Reclamation*, the U.S. Bureau of Reclamation (Bureau) prepared an EIS for a major water transfer project in California, another water-starved part of the country. 287 F.Supp.3d 969 (E.D. Cal. 2018). The Bureau recognized its duty under NEPA to evaluate the project under anticipated climate change conditions. *Id.* at 1028. When the Bureau established the environmental baseline for its analysis, however, it relied on modeled historical data that was "no longer a reasonable guide to the future for water management" instead of a climate model that predicted a significant decline in water availability. *Id.* The court held the Bureau did not justify its decision to rely on the historical data and therefore "ignore[d] a critical aspect of the impact in question." *Id.* at 1029.

3. The NRC's Arbitrary Conclusion on Groundwater Undermines its Evaluation of Reasonable Alternatives to the License Renewal.

The NRC's analysis of alternatives is sullied by the agency's unqualified conclusion that FPL's salinity management program will reduce the effects of the hypersaline plume to "small." *See, e.g.*, Final SEIS at 2-23, Table 2-2 (Rec._No.__191) [JA-___]. Without a realistic assessment of FPL's remediation

plan for the cooling canal system under anticipated climatic conditions, the agency's analysis of alternatives, which "forms the heart" of an EIS, 40 C.F.R. § 1502.14, is accordingly tainted. The NRC's comparison of the "cooling tower" alternative, which would eliminate Turkey Point's use of the canal system for cooling the reactors, would be significantly affected. Final SEIS at 2-13 (cooling towers would avoid impacts of utilizing the cooling canal system) (Rec._No._191) [JA-___]. Thus, NEPA requires that the NRC reevaluate alternatives once it takes a "hard look" at groundwater impacts.

CONCLUSION

For the foregoing reasons, Environmental Organizations respectfully request that this Court vacate the Turkey Point renewed licenses, remand this matter to the NRC, and enjoin the NRC from issuing renewed licenses unless and until it complies with NEPA: (1) by providing a full analysis of the environmental impacts of operating the two reactors until after mid-century, and (2) by assessing realistically and scientifically the options for eliminating the impact of the current hypersaline plume.

Respectfully Submitted,

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CERTIFICATE OF COMPLIANCE

1. This brief complies with the typeface and type style requirements of Fed. R. App. P. 32(a)(5) and 32(a)(6) because it has been prepared in 14-point Times New Roman, a proportionally spaced font.

2. This brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because it contains 12,883 words, excluding the parts of the brief excluded by Circuit Rule 32(e)(1) and Fed. R. App. P. 32(f).

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CERTIFICATE OF SERVICE

I certify that on July 27, 2020 I electronically filed the foregoing Initial Brief of Petitioners and the Addendum with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit using the appellate CM/ECF system.

I certify that all participants in this case are registered CM/ECF users and service will be accomplished by the CM/ECF system.

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