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Sent: Friday, August 23, 2024 10:26 AM
To: DresdenEnvironmental Resource; Steve Koenick
Cc: tam Tran; Angela Sabet
Subject: [External_Sender] EPA NEPA Comments - Dresden Units 2 and 3 SLR, Grundy County, Illinois
Attachments: EPA Comments - Dresden Units 2 and 3 Subsequent License Renewal Scoping (08-23-2024).pdf

Greetings,

Attached to this email are EPA's comments regarding the Notice of Intent to Conduct Scoping Process and Prepare Environmental Impact Statement for the Subsequent License Renewal of Dresden Units 2 and 3 in Grundy County.

Please do not hesitate to contact me if you have any questions or concerns regarding our correspondence. We appreciate the opportunity to be involved in the NEPA process!

Regards,
Alauna

Alauna Keeley (*she/her/hers*)
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REGION 5

CHICAGO, IL 60604

August 23, 2024

VIA ELECTRONIC MAIL ONLY

Stephen Koenick
Chief, Office of Nuclear Material, Safety, and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: EPA Comments: Notice of Intent to Conduct Scoping Process and Prepare Environmental Impact Statement—Constellation Energy Generation, LLC; Dresden Nuclear Power Station, Units 2 and 3, City of Morris, Grundy County, Illinois

Dear Mr. Koenick:

The U.S. Environmental Protection Agency (EPA) has reviewed the Notice of Intent (NOI) and request for comments (hereafter: Scoping Document) in order to prepare a Draft Environmental Impact Statement (Draft EIS) concerning a Subsequent License Renewal (SLR) at Dresden Nuclear Power Station, Units 2 and 3 (DNPS). This letter provides EPA's comments on the proposed Project, pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's (CEQ) NEPA Implementing Regulation (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

The NOI informs the public of NRC's intention to conduct environmental scoping and to provide the public an opportunity to participate in the process. The Draft EIS will address potential environmental effects associated with the SLR of DNPS for an additional 20 years beyond the period specified in the current license (hereafter: Project),¹ as well as reasonable alternatives. The NRC is gathering information necessary to prepare a plant-specific supplement² to NUREG-1437, *Generic Environmental Impact Statement for License Renewal of Nuclear Plants* (GEIS).³

DNPS is a two-unit boiler water reactor (BWR) facility⁴ and is located 23 miles southwest of Joliet, Illinois along the Illinois, Des Plaines, and Kankakee Rivers (hereafter: Rivers). NRC issued the original

¹ The current facility operating license for Unit 2 will expire December 22, 2029, and Unit 3 will expire January 12, 2031. The subsequent license renewal application seeks to extend the operating license for Unit 2 to December 22, 2049, and unit 3 to January 12, 2051.

² NRC is required by 10 CFR 51.95 to prepare a plant-specific supplement to the GEIS in connection with the renewal of an operating license.

³ The purpose of the Generic EIS is to streamline the license renewal and subsequent license renewal processes based on that premise that environmental effects of most nuclear power plant license renewals are similar, dated May 2013: <https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/index.html>.

⁴ Each unit has a net generating capacity of 2,957 megawatts thermal.

operating license for Unit 2 on February 20, 1991, and Unit 3 on January 12, 1971. The first renewed license for Units 2 and 3 was issued on October 28, 2004. Unit 1 was retired on August 31, 1984, but its major structures are still present and intact.⁵ On April 17, 2024, Constellation Energy Generation (Applicant) applied to NRC for the SLR of Renewed Facility Operating License No. DPR-19 and No. DPR-25.

EPA's enclosed comments focus on purpose and need; project alternatives; interagency coordination; nuclear waste storage; water resources; air resources; energy efficiency and environmental best practices; indirect, direct, and cumulative effects; climate change and greenhouse gas emissions; environmental justice; CEQ's NEPA Implementing Regulations Revisions; and plain language. EPA recommends NRC address these comments and recommendations before releasing the Draft EIS.

Thank you for the opportunity to provide comments during the earliest stages of project development. Please send an electronic copy of future NEPA documents to R5NEPA@epa.gov. If you have questions or would like to discuss the contents of this letter further, please contact the lead NEPA reviewer, Alauna Keeley, at keeley.alauna@epa.gov or 312-353-1909.

Sincerely,

Krystle Z. McClain, P.E.
NEPA Program Supervisor
Environmental Justice, Community Health, and
Environmental Review Division

Enclosures

EPA's Detailed Comments

Construction Emission Control Checklist

Cc (with enclosures)

Tam Tran, NRC (tam.tran@nrc.gov)

Angela Sabet, NRC (angela.sabet@nrc.gov)

⁵ Unit 1 operated commercially from 1960 through 1978 and has been placed in a safe storage condition.

EPA's Detailed Comments

Subsequent License Renewal of Dresden Nuclear Power Station, Units 2 and 3, City of Morris, Grundy County, Illinois

August 23, 2024

1. PURPOSE AND NEED / PROJECT ALTERNATIVES

- A. DNPS started operations in 1991 and 1971, respectively. The proposed Project would extend the operational license an additional 20 years for both units. The Scoping Document does not provide detailed information about DNPS, including its structural integrity, refurbishment history, and how often maintenance was performed.

Recommendations for the Draft EIS:

1. Describe the history and context of the existing plant. Provide background information on DNPS's function within Grundy and Will Counties⁶ and, more broadly, within Illinois. Describe previous plant maintenance and any retrofits that would be needed to continue power operations.
 2. If an SLR is granted, describe any subsequent infrastructure projects that would be undertaken to maintain safe and effective operations at DNPS. The Draft EIS should also disclose the environmental effects of such projects.
- B. The purpose and need for the action should be used to define the range of alternatives to be evaluated.

Recommendations for the Draft EIS:

1. Clearly describe the purpose and need for the Project.
2. Include alternatives that discuss alternate sources of power for proposed users.
3. Demonstrate how the Preferred Alternative will address identified problems or deficiencies.

2. INTERAGENCY COORDINATION

- A. Implementation of NEPA requires interagency coordination with multiple stakeholders, including Federal and state resource agencies, Tribes, local governments, and affected landowners.

Recommendations for the Draft EIS:

1. Include copies of all interagency coordination sent to, and received from, landowners, Federal and state resource agencies, Tribes, and local municipalities. This includes, but is not limited to, correspondence regarding historic and cultural resources (State and Tribal Historic Preservation Officers), wetlands and streams (U.S. Army Corps of Engineers [USACE] and Illinois Environmental Protection Agency [IEPA]), and Federal- and state-

⁶ DNPS and the Dresden Cooling Lake are located in both Grundy and Will Counties.

listed threatened and endangered species (U.S. Fish and Wildlife Service [USFWS] and Illinois Department of Natural Resources [IDNR]).⁷

2. Include a list of all Federal, state, and local permits that would be required to undertake the Preferred Alternative.

3. NUCLEAR WASTE STORAGE

- A. Liquid, gaseous, and solid radioactive waste management systems can collect and create radioactive byproducts from spent nuclear fuel if required for continued on-site storage. Due to the uncertainty regarding the future availability of a geologic repository or other away-from-reactor storage facility, on-site storage may be required for many decades, until a permanent repository is established.

Recommendations for the Draft EIS:

1. Discuss and evaluate safety concerns from potential flooding and other storm events. Large storm events are occurring with increasing frequency and intensity in the Midwest due to climate change. Describe changing climate conditions (e.g., temperatures and frequency and severity of storm events) and assess how such changes could impact the proposed Project. Consider increases in frequency and severity of storm events, flooding, and periods of high heat (e.g., more severe/frequent flooding). As part of this process, evaluate storage plans for spent nuclear fuel to prevent contamination in the event of flooding at the site.
2. Indicate if there will be any changes in the generation of waste, including low-level radioactive waste, mixed low-level radioactive waste, transuranic waste, and hazardous and Toxic Substance Control Act wastes over the life of the program.
3. Describe plans to transport spent nuclear fuel and spent fuel debris offsite for storage pending long-term disposal options outside DNPS.

4. WATER RESOURCES

- A. Regulated wetlands or Waters of the United States may be located within the Project footprint or staging area. Fill into wetlands or streams may trigger the need for a Clean Water Act (CWA) Section 404 permit from USACE, CWA Section 401 Water Quality Certification, or isolated wetlands permits from IEPA.

Recommendations for the Draft EIS:

1. Based on Figure 3.7-2,⁸ it appears that wetlands within DNPS's site boundary will not be impacted by refurbishment or construction activities. If Project plans change and result in potential impacts to wetlands, provide a wetland delineation, and discuss measures to avoid, minimize, and mitigate impacts. The delineation should be submitted and coordinated with USACE for review and any necessary permits. EPA strongly

⁷ The USFWS hosts a project planning tool to assist with the environmental review process, known as IPaC—Information for Planning and Conservation. See <https://ipac.ecosphere.fws.gov/>.

⁸ Applicant's Environmental Review (Appendix E), page 3-205.

recommends that the delineation, if applicable, be completed before and included as an appendix to the Draft EIS, along with a copy of the jurisdictional determination.

- B. The Rivers, surrounding DNPS to the north, south, and east, are all listed as impaired on the CWA Section 303(d) list of impaired water bodies. The most recent assessment (2024) specified that designated uses that are classified as impaired include Fish/Shell Consumption and Swimming/Boating.⁹

Recommendations for the Draft EIS:

1. Discuss existing water quality issues within the Rivers and how the proposed Project and all alternatives, including the No Action Alternative, may affect water quality.
 2. Describe proposed measures to capture and filter stormwater runoff from DNPS, including from refurbishment and/or maintenance that may occur.
- C. The current National Pollutant Discharge Elimination System (NPDES) permit requires monitoring to ensure that there are no point-source discharges from DNPS’s cooling systems to adjacent surface waters (e.g., the Rivers). It is important for DNPS to use relevant techniques to verify that all discharge structures are intact and able to retain nutrient-rich wastewater. Water from power plants can have a higher temperature than the receiving water body impacting aquatic organisms from heated water discharged back into the Rivers.

Recommendations for the Draft EIS:

1. Discuss the potential effects of higher surface water temperatures on aquatic organisms.
2. Include a water balance analysis for DNPS and provide additional information from past studies, if any.
3. Discuss availability of water in sufficient quantities and temperatures. If temperature-specific water is required, EPA recommends discussing the effects of climate change and any increased number of temperature variants permitted under NPDES due to warmer waters.
4. Discuss the structural integrity of any discharge structures and whether discharge structures can handle flow from changing frequency and severity of storm events.

5. AIR RESOURCES

- A. EPA acknowledges that an NRC license cannot include mitigation measures that are unrelated to nuclear safety and security, including, but not limited to, construction diesel emission reduction measures. However, it is reasonable to assume that a 53-year-old plant will undergo refurbishment and/or other facility improvements, and EPA finds that mitigation measures taken to reduce construction diesel emissions are value-added.

Recommendations for the Draft EIS:

1. If refurbishment and/or other construction activities are needed, EPA encourages the Applicant to commit to incorporating applicable mitigation measures from the enclosed Construction Emission Control Checklist, wherever possible.

⁹ See <https://mywaterway.epa.gov/community/071200050701/overview>.

2. Establish material hauling routes away from places where children live, learn, and play, the fullest extent possible. Consider the location of homes, schools, daycares, and playgrounds. In addition to air quality benefits, careful routing may protect children from vehicle-pedestrian accidents.

6. ENERGY EFFICIENCY AND ENVIRONMENTAL BEST PRACTICES

- A. The Applicant did not identify any refurbishment or construction activities during the proposed license term. However, the Environmental Review stated, “*Routine infrastructure, renovation, and maintenance projects are expected during DNPS’s continued operation.*”¹⁰ Energy efficient design and material selection for construction activities could reduce operation costs while also protecting the environment and further reducing climate change effects.

Recommendations for the Draft EIS:

1. If refurbishment and/or routine projects include new structures, EPA encourages the Applicant to commit to incorporating energy-efficient measures if it does not conflict with DNPS site and facility security. Consider the use of energy-efficient and/or sustainable building materials (e.g., south-facing skylights and windows, motion-sensor lighting). If new structures are proposed, EPA recommends the Applicant commit to Leadership in Energy and Environmental Design (LEED) standards when designing buildings.
2. Consider replacing carbon-intensive Portland cement in concrete and other applicable practices from EPA’s “Sustainable Management of Construction and Demolition Materials” webpage.¹¹
3. Consider permeable pavement or porous pavers as an alternative to asphalt or gravel to reduce runoff. If asphalt is selected, consider green stormwater management practices to filter stormwater before reaching waterbodies (e.g., bioswales). Unnecessary permanent, impervious areas are discouraged.

7. DIRECT, INDIRECT, AND CUMULATIVE EFFECTS

- A. The Applicant identified two non-DNPS projects in the DNPS region¹² (DNPS Region) (e.g., CPV Three Rivers Energy Center and Blue Sky Solar Project), as well as the presence of two NRC-licensed operating nuclear power plants (e.g., Braidwood and LaSalle County Generating Stations).¹³ Additionally, the Applicant identified the presence of a site undergoing decommissioning within 33 miles of DNPS. Federal agencies should analyze all direct, indirect, and cumulative effects of all action alternatives as well as the No Action Alternative.

1. Direct effects are caused by an action and occur at the same time and place.

¹⁰ Appendix E, page 4-18.

¹¹ Construction and Demolition (C&D) materials consist of debris generated during the construction, renovation, and demolition of buildings, roads, and bridges. See <https://www.epa.gov/smm/sustainable-management-construction-and-demolition-materials>.

¹² DNPS Project region is defined as the area within a 50-mile radius of the established station center point. See Applicant’s Environmental Review, page 3-1.

¹³ Both NRC-licensed operating nuclear power plants are within 25 miles of DNPS.

2. Indirect effects are caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable.
3. Cumulative effects are those that result from a proposed action's incremental effects when these effects are added to the effects of other past, present, and reasonably foreseeable similar future actions, including those under the control of other entities.

Recommendations for the Draft EIS:

1. Summarize existing and proposed development in the DNPS Region because sustained generation of cleaner energy would attract more business.
2. Provide an explanation of all direct, indirect, and cumulative effects of the Project.

2. CLIMATE CHANGE AND GREENHOUSE GASES

- A. Executive Order (EO) 14008: *Tackling the Climate Crisis at Home and Abroad* states, "The United States and the world face a profound climate crisis. We have a narrow moment to pursue action...to avoid the most catastrophic impacts of that crisis and to seize the opportunity that tackling climate change presents." The U.S. Global Change Research Program's National Climate Assessment provides data and scenarios that may be helpful in assessing trends in temperature, precipitation, and frequency and severity of storm events.¹⁴

Federal courts have consistently upheld that NEPA requires agencies to disclose and consider climate effects in their reviews, including effects from greenhouse gas (GHG) emissions. On January 9, 2023, the Federal Register published CEQ's *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*.¹⁵ CEQ issued this interim guidance to assist Federal agencies in assessing and disclosing climate effects during environmental reviews. The guidance responds to EO 13990: *Protecting Public Health and the Environment, and Restoring Science to Tackle the Climate Crisis*, which directed CEQ to review, revise, and update CEQ's 2016 emissions guidance. The 2023 emissions guidance is effective immediately and should be used to inform the reviews of new proposed actions.

It is important for NRC to fully quantify and adequately disclose the effects of GHG emissions from the No Action Alternative and the action alternative and discuss the implications of those emissions considering the science-based policies established to avoid the worsening effects of climate change. It is recommended NRC review EPA's final technical document, "*Report on the Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances*,"¹⁶ which explains the methodology underlying the most recent set of SC-GHG estimates. To better assist lead Federal agencies with the utilization of these updated estimates, EPA released a Microsoft Excel "*Workbook for Applying SC-GHG Estimates v.1.0.1*" spreadsheet¹⁷ designed by EPA's National Center for Environmental Economics to help analysts calculate the monetized net social costs of increases in GHG emissions using the estimates of the SC-GHGs.

¹⁴ Information changing climate conditions is available through the National Climate Assessment at <https://nca2023.globalchange.gov/>

¹⁵ <https://www.federalregister.gov/d/2023-00158>

¹⁶ https://www.epa.gov/system/files/documents/2023-12/epa_scghg_2023_report_final.pdf

¹⁷ <https://www.epa.gov/environmental-economics/scghg>

Recommendations for the Draft EIS

1. NRC should apply the interim CEQ guidance as appropriate, to ensure robust consideration of potential climate effects, mitigation, and adaptation issues. As discussed in CEQ's interim guidance, Federal agencies should consider the following when conducting a climate change analysis for NEPA reviews: (1) the potential effects of a proposed action on climate change, including the assessment of both GHG emissions and reductions from the proposed action; and (2) the effects of climate change on the proposed action and its environmental effects. Additional recommendations are as follows:
 - a. **Emissions and SC-GHG Disclosure & Analysis**
 1. Quantify estimates of all reasonably-foreseeable direct (e.g., construction) and indirect (e.g., off-site material hauling and disposal) GHG emissions from the proposed Project over its anticipated lifetime for all alternatives, including the No Action Alternative, broken out by GHG type. Include and analyze potential upstream and downstream GHG emissions, if applicable.
 2. Use SC-GHG estimates to consider the climate damages from net changes in direct and indirect emissions of CO₂ and other GHGs from the proposed Project. To do so, EPA recommends a breakdown of estimated net GHG emission changes by individual gas, rather than relying on CO₂-equivalent (CO_{2e}) estimates, and then monetize the climate effects associated with each GHG using the corresponding social cost estimate (i.e., monetize CH₄ emissions changes expected to occur with the social of methane (SC-CH₄) estimate for emissions).¹⁸
 3. When applying SC-GHG estimates, just as with tools to quantify emissions, NRC should disclose the assumptions (e.g., discount rates) and uncertainties associated with such analysis and the need for updates over time to reflect evolving science and economics of climate effects. Use comparisons of GHG emissions and SC-GHG across alternatives to inform Project decision-making.
 4. Avoid expressing the overall Project-level GHG emissions as a percentage of the state or national GHG emissions. The U.S. must reduce GHG emissions from a multitude of sources, each making relatively small individual contributions to overall GHG emissions, to meet national climate targets.
 - b. **Consistency with Climate Policy**
 1. Provide an analysis of GHG emissions in the context of state GHG reduction targets and policies, which includes GHG emission reduction goals for the State of Illinois.¹⁹ This should inform NRC's consideration of GHG mitigation measures.

¹⁸ Transforming gases into CO_{2e} using Global Warming Potential (GWP) metrics, and then multiplying the CO_{2e} tons by the SC-CO₂, is not as accurate as a direct calculation of the social costs of non-CO₂ GHGs. This is because GHGs differ not just in their potential to absorb infrared radiation over a given time frame, but also in the temporal pathway of their impact on radiative forcing and in their impacts on physical endpoints other than temperature change, both of which are relevant for estimating their social cost but not reflected in the GWP. See the Interagency Working Group on Social Cost of Greenhouse Gases' February 2021 Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990 for more discussion and the range of annual SC-CO₂, SC-CH₄, and SC-N₂O estimates currently used in Federal benefit-costs analyses.

¹⁹ Including, but not limited, to, the [State of Illinois: Priority Climate Action Plan](https://www.epa.gov/system/files/documents/2024-03/illinois-priority-climate-action-plan.pdf). See: <https://www.epa.gov/system/files/documents/2024-03/illinois-priority-climate-action-plan.pdf>

2. Include a detailed discussion of the Project's GHG emissions in the context of national and international GHG emissions reduction goals, including the U.S. 2030 Paris GHG reduction target and 2050 net-zero policy.
3. Include a complete discussion of the extent to which the estimated GHG emissions from the proposed Project and alternatives may be inconsistent with the need to take actions necessary to achieve science-based GHG reduction targets.²⁰ In addition to the Inflation Reduction Act²¹ (IRA), there are proposed EPA climate change regulatory actions and initiatives that address greenhouse emissions from transportation, oil and gas, and power sectors.

c. Resilience and Adoption

1. Describe changing climate conditions (e.g., increasing frequency and severity of storm events) and assess how such changes could impact the proposed Project and the environmental effects of the proposed Project and all alternatives.
2. Incorporate robust climate resilience and adaptation considerations into (1) Project design and engineering; (2) construction oversight; (3) commitments for protective measures related to stormwater and erosion; and (4) routine monitoring during operations. NEPA documentation should describe how NRC has addressed such considerations and provide a rationale for any reasonable alternatives to enhance resilience that were not adopted or discussed in detail.
3. Discuss how climate change could worsen long term effects/risks from the Project to communities with Environmental Justice (EJ) concerns. For any such impacts, consider mitigation and adaptation measures.

d. GHG Reductions and Mitigation

1. Identify practices to reduce and mitigate the expected GHG emissions from the Project (e.g., delivery of fuel rods and routine infrastructure, renovation, and maintenance projects). Mitigation measures should be identified and evaluated; include commitments to do so in the Draft EIS and NEPA decision document. EPA recommends the Applicant commit to practices in the enclosed Construction Emission Control Checklist.

3. ENVIRONMENTAL JUSTICE

- A. Outreach and meaningful engagement are underlying pillars of environmental justice (EJ). It is imperative that NRC determines if the SLR for DNPS will affect communities with EJ concerns. CEQ requires Lead agencies to analyze the disproportionate and adverse human health and environmental effects of a proposed action in communities with EJ concerns.²² If significant human health and environmental effects disproportionately and adversely affect communities with EJ concerns, CEQ regulations direct Lead agencies to consider incorporating mitigation measures that address or reduce those effects.²³

²⁰ See, e.g., Executive Order 14008; U.S. Nationally Determined Contribution to the Paris Agreement (April 20, 2021).

²¹ The IRA is expected to reduce dependence on fossil fuels while increasing availability for renewable energy sources.

²² 40 CFR § 1502.16(a)(13)

²³ 40 CFR § 1505.3(b)

Executive Order (EO) 14096: *Revitalizing our Nation's Commitment to Environmental Justice for All* supplements EO 12898: *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*. EO 14096 directs Federal agencies, as appropriate and consistent with applicable law, to identify, analyze, and address disproportionate and adverse human health and environmental effects (including risks) and hazards of Federal activities, including those related to climate change and cumulative effects of environmental and other burdens on communities with EJ concerns.

Section 3(b)(i) of EO 14096 also directs EPA to assess whether each agency analyzes and avoids or mitigates disproportionate human health and environmental effects on communities with EJ concerns when carrying out responsibilities under Section 309 of the Clean Air Act, 42 U.S.C. 7609. EPA's recommendations below suggest opportunities to further analyze, disclose, and reduce effects to communities with EJ concerns.²⁴

Recommendations for the Draft EIS:

1. Page 4-2 of the Environmental Review stated, *"For environmental justice, impacts would be based on disproportionately high and adverse human health and environmental effects on minority and low-income populations."* Under CEQ's NEPA Implementing Regulations²⁵ and EO 14096, environmental justice is now evaluated based simply on disproportionate and adverse effects. The Fact Sheet²⁶ accompanying EO 14096 states, *"The Executive Order [EO 14096] uses the term 'disproportionate and adverse' as a simple, modernized version of the phrase 'disproportionately high and adverse' used in Executive Order 12898. Those phrases have the same meaning but removing the word 'high' eliminates potential misunderstanding that agencies should only be considering large disproportionate effects."* EPA recommends NRC modify references to use "disproportionately and adverse" as outlined in CEQ regulations and EO 14096.
2. The Applicant's environmental justice analysis was limited to data on minority, low-income, and subsistence populations.²⁷ EPA encourages the use of EJScreen when conducting an environmental justice analysis.²⁸ This tool provides information on environmental and socioeconomic indicators as well as pollution sources, health disparities, critical service gaps, and climate change data. EJScreen identified the potential presence of communities with EJ concerns located within the DNPS region. Specifically, the tool identified an adjacent block group in the 93rd percentile for individuals over age 64 (e.g., sensitive receptors) and 80th percentile or higher for

²⁴ For purposes of NEPA review, EPA considers a project to be in an area of potential EJ concern when the area shows one or more of the thirteen EJ indices at or above 80th percentile in the nation/state on EJScreen. However, scores under the 80th percentile should not be interpreted to mean there are definitively no EJ concerns present.

²⁵ 40 CFR § 1502.16(a)(13)

²⁶ FACT SHEET: President Biden Signs Executive Order to Revitalize Our Nation's Commitment to Environmental Justice for All. See <https://www.whitehouse.gov/briefing-room/statements-releases/2023/04/21/fact-sheet-president-biden-signs-executive-order-to-revitalize-our-nations-commitment-to-environmental-justice-for-all/>.

²⁷ Appendix E, pages 3-279 through 3-322.

²⁸ <https://www.epa.gov/ejscreen>

drinking water non-compliance.²⁹ Additionally, EJScreen identified adjacent block groups within the DNPS region as disadvantaged.³⁰ EPA recommends that NRC consider the following, consistent with CEQ regulations and EO 14096.

a. Direct, Indirect, and Cumulative Effects Analysis:

1. Disclose demographic information and identify the presence of communities with EJ concerns in and near the DNPS Region that could experience environmental effects from the Proposed project.
2. Include an analysis and conclusion regarding whether the proposed Project or any action alternatives, including the No Action Alternative, may have disproportionate and adverse effects on communities with EJ concerns, as specified in CEQ's Environmental Justice Guidance.³¹
3. Consider any disproportionate, non-Project-related pollution exposures that communities of EJ concern may already be experiencing, as well as any disproportionate non-pollution stressors that may make communities more susceptible to pollution, such as health conditions, other social health determinants, and disproportionate vulnerability to climate change.
4. Identify and commit to measures that will be taken to avoid, minimize, and mitigate effects identified above.

3. EJScreen can inform environmental justice and community outreach to identify potential meeting locations and any language barriers by providing information on linguistic isolation, languages spoken, and places of community cohesion (e.g., schools, places of worship). EPA recommends NRC consider the following:

a. Meaningful Engagement and Public Participation:

1. Discuss the meaningful involvement and targeted outreach to Tribes and communities with EJ concerns undertaken by NRC in plain language and languages other than English spoken by residents in and/or near the Project region.³²
2. Utilize resources such as the Promising Practices for EJ Methodologies in NEPA Reviews Practices³³ and the Community Guide to EJ and NEPA Methods³⁴ to conduct an EJ analysis that appropriately engages in meaningful, targeted community outreach, analyzes effects, and advances EJ principles through NEPA implementation.

²⁹ The block group is directly adjacent to DNPS and scores in the 80th+ percentile for drinking water non-compliance under Supplemental Indexes, Environmental Justice Indexes, and Environmental Burden Indicators. Drinking water non-compliance highlights populations served by community water systems that have challenges complying with Safe Drinking Water Act requirements. See <https://www.epa.gov/ejscreen/ejscreen-indicators-overview-drinking-water-non-compliance>.

³⁰ EJScreen includes a layer on the EPA Inflation Reduction Act Disadvantaged Communities map that can be used to determine whether a community is disadvantaged for the purposes of implementing programs under IRA. See <https://www.epa.gov/environmentaljustice/inflation-reduction-act-disadvantaged-communities-map>.

³¹ CEQ's Environmental Justice Guidance Under the National Environmental Policy Act. See Section III, Part C-4. https://www.epa.gov/sites/default/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf

³² August 20, 2024, public meeting materials: <https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML24172A109>
https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf

³⁴ <https://www.energy.gov/sites/prod/files/2019/05/f63/NEPA%20Community%20Guide%202019.pdf>

3. Summarize input from Tribes and community members during the two public meetings held on August 20, 2024.

4. **OTHER COMMENTS**

- A. All new projects should reflect CEQ's Final Rule on NEPA Implementing Regulations, effective July 1, 2024.³⁵

Recommendations for the Draft EIS:

1. Ensure NRC uses the updated NEPA regulations for Project evaluation.
- B. The Scoping Document does not discuss how NRC will consider scoping comments.

Recommendations for the Draft EIS:

1. Create an appendix to include all comments received during the scoping period, including any comments from public meetings and all comment letters received. EPA suggests the NRC utilize an organized format to respond to agency and public comments as follows: reproduction of the original comments and corresponding NRC responses to those comments.
 2. Ensure the Draft EIS is written in plain language so that it can be understood by a reader unfamiliar with energy projects.
- C. EPA has assembled several resources to help NRC obtain environmental information when preparing the Draft EIS:

Recommendations for the Draft EIS:

1. Consider the following databases:
 - a. EnviroMapper: <https://enviro.epa.gov/envirofacts/enviromapper/search>
 - b. Envirofacts: <https://www3.epa.gov/enviro/facts/multisystem.html>
 - c. EJScreen: <https://www.epa.gov/EJSCREEN>
 - d. NEPAassist: <https://www.epa.gov/nepa/nepassist>
 - e. 303(d) Listed Impaired Waters: <https://epa.illinois.gov/topics/water-quality/watershed-management/tmdls/303d-list.html>
 - f. National Ambient Air Quality Standards (NAAQS) status: https://www3.epa.gov/airquality/greenbook/anayo_il.html

³⁵ National Environmental Policy Act Implementing Regulations Revisions Phase 2, 40 C.F.R. § 1500-1508 (2024)
<https://www.federalregister.gov/documents/2024/05/01/2024-08792/national-environmental-policy-act-implementing-regulations-revisions-phase-2>.

U.S. Environmental Protection Agency **Construction Emission Control Checklist**

Diesel emissions and fugitive dust from project construction may pose environmental and human health risks and should be minimized. In 2002, EPA classified diesel emissions as a likely human carcinogen, and in 2012 the International Agency for Research on Cancer concluded that diesel exhaust is carcinogenic to humans. Acute exposures can lead to other health problems, such as eye and nose irritation, headaches, nausea, asthma, and other respiratory system issues. Longer term exposure may worsen heart and lung disease.¹ EPA recommends NRC and the Applicant consider the following protective measures and commit to applicable measures in the Draft EIS.

Mobile and Stationary Source Diesel Controls

Purchase or solicit bids that require the use of vehicles that are equipped with zero-emission technologies or the most advanced emission control systems available. Commit to the best available emissions control technologies for project equipment in order to meet the following standards.

- On-Highway Vehicles: On-highway vehicles should meet, or exceed, the EPA exhaust emissions standards for model year 2010 and newer heavy-duty, on-highway compression-ignition engines (e.g., long-haul trucks, refuse haulers, shuttle buses, etc.).²
- Non-road Vehicles and Equipment: Non-road vehicles and equipment should meet, or exceed, the EPA Tier 4 exhaust emissions standards for heavy-duty, non-road compression-ignition engines (e.g., construction equipment, non-road trucks, etc.).³
- Locomotives: Locomotives servicing infrastructure sites should meet, or exceed, the EPA Tier 4 exhaust emissions standards for line-haul and switch locomotive engines where possible.³
- Low Emission Equipment Exemptions: The equipment specifications outlined above should be met unless: 1) a piece of specialized equipment is not available for purchase or lease within the United States; or 2) the relevant project contractor has been awarded funds to retrofit existing equipment, or purchase/lease new equipment, but the funds are not yet available.

Consider requiring the following best practices through the construction contracting or oversight process:

- Establish and enforce a clear anti-idling policy for the construction site.
- Use onsite renewable electricity generation and/or grid-based electricity rather than diesel-powered generators or other equipment.
- Use electric starting aids such as block heaters with older vehicles to warm the engine.
- Regularly maintain diesel engines to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance (e.g., blue/black smoke indicates that an engine requires servicing or tuning).
- Where possible, retrofit older-tier or Tier 0 nonroad engines with an exhaust filtration device before it enters the construction site to capture diesel particulate matter.
- Replace the engines of older vehicles and/or equipment with diesel- or alternatively-fueled engines certified to meet newer, more stringent emissions standards (e.g., plug-in hybrid-electric vehicles,

¹ Benbrahim-Tallaa, L, Baan, RA, Grosse, Y, Lauby-Secretan, B, El Ghissassi, F, Bouvard, V, Guha, N, Loomis, D, Straif, K & International Agency for Research on Cancer Monograph Working Group (2012). Carcinogenicity of diesel-engine and gasoline-engine exhausts and some nitroarenes. The Lancet. Oncology, vol. 13, no. 7, pp. 663-4. Accessed online from:

https://kclpure.kcl.ac.uk/portal/files/6492297/coverBenbrahim_Tallaa_2012_Lancet_Oncology.pdf

² <https://www.epa.gov/emission-standards-reference-guide/epa-emission-standards-heavy-duty-highway-engines-and-vehicles>

³ <https://www.epa.gov/emission-standards-reference-guide/epa-emission-standards-nonroad-engines-and-vehicles>

battery-electric vehicles, fuel cell electric vehicles, advanced technology locomotives, etc.), or with zero emissions electric systems. Retire older vehicles, given the significant contribution of vehicle emissions to the poor air quality conditions. Implement programs to encourage the voluntary removal from use and the marketplace of pre-2010 model year on-highway vehicles (e.g., scrappage rebates) and replace them with newer vehicles that meet or exceed the latest EPA exhaust emissions standards, or with zero emissions electric vehicles and/or equipment.

Fugitive Dust Source Controls

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative, where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing and phase grading operations where appropriate and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

Occupational Health

- Reduce exposure through work practices and training, such as maintaining filtration devices and training diesel-equipment operators to perform routine inspections.
- Position the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, reducing the fume concentration to which personnel are exposed.
- Use enclosed, climate-controlled cabs pressurized and equipped with high-efficiency particulate air (HEPA) filters to reduce the operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any incoming air is filtered first.
- Use respirators, which are only an interim measure to control exposure to diesel emissions. In most cases, an N95 respirator is adequate. Workers must be trained and fit-tested before they wear respirators. Depending on the type of work being conducted, and if oil is present, concentrations of particulates present will determine the efficiency and type of mask and respirator. Personnel familiar with the selection, care, and use of respirators must perform the fit testing. Respirators must bear a National Institute for Occupational Safety and Health approval number.

NEPA Documentation

- Per Executive Order 13045 on Children's Health,⁴ EPA recommends the lead agency and project proponent pay particular attention to worksite proximity to places where children live, learn, and play, such as homes, schools, and playgrounds. Construction emission reduction measures should be strictly implemented near these locations in order to be protective of children's health.
- Specify how impacts to sensitive receptors, such as children, elderly, and the infirm will be minimized. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

⁴Children may be more highly exposed to contaminants because they generally eat more food, drink more water, and have higher inhalation rates relative to their size. Also, children's normal activities, such as putting their hands in their mouths or playing on the ground, can result in higher exposures to contaminants as compared with adults. Children may be more vulnerable to the toxic effects of contaminants because their bodies and systems are not fully developed, and their growing organs are more easily harmed. EPA views childhood as a sequence of life stages, from conception through fetal development, infancy, and adolescence.