

From: Keeley, Alauna <Keeley.Alauna@epa.gov>
Sent: Monday, July 29, 2024 12:47 PM
To: PalisadesRestartEnvironmental Resource; Daniel Barnhurst
Cc: Laura Willingham; Mary Richmond; alicia.williamson@hq.doe.gov;
todd.stribley@hq.doe.gov; kenneth.erwin@hq.doe.gov
Subject: [External_Sender] EPA NEPA Comments - Palisades Nuclear Plant
Reauthorization in Van Buren County, Michigan
Attachments: EPA Comments - Palisades Nuclear Plant Reauthorization Scoping (07-29-
2024).pdf

Greetings,

Attached to this email are EPA's comments regarding the request for comments for the Palisades Nuclear Plant Reauthorization in Van Buren 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*)
NEPA Reviewer | EJCHER Division
U.S. EPA | Region 5
77 W. Jackson Blvd. | Chicago, IL 60604
(312) 353-1909 | keeley.alauna@epa.gov

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Created By: Keeley.Alauna@epa.gov

Recipients:

"Laura Willingham" <laura.willingham@nrc.gov>
Tracking Status: None
"Mary Richmond" <Mary.Richmond@nrc.gov>
Tracking Status: None
"alicia.williamson@hq.doe.gov" <alicia.williamson@hq.doe.gov>
Tracking Status: None
"todd.stribley@hq.doe.gov" <todd.stribley@hq.doe.gov>
Tracking Status: None
"kenneth.erwin@hq.doe.gov" <kenneth.erwin@hq.doe.gov>
Tracking Status: None
"PalisadesRestartEnvironmental Resource" <PalisadesRestartEnvironmental.Resource@nrc.gov>
Tracking Status: None
"Daniel Barnhurst" <Daniel.Barnhurst@nrc.gov>
Tracking Status: None

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REGION 5

CHICAGO, IL 60604

July 29, 2024

VIA ELECTRONIC MAIL ONLY

Daniel Barnhurst
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 and Prepare Environmental Assessment—Palisades Nuclear Plant Reauthorization, Covert Township, Van Buren County, Michigan—Docket Number 05000255

Dear Mr. Barnhurst:

The U.S. Environmental Protection Agency (EPA) has reviewed the request for comments (hereafter: Scoping Document) in order to prepare a Draft Environmental Assessment (Draft EA) concerning reauthorization of power operations at Palisades Nuclear Plant (PNP). The Nuclear Regulatory Commission (NRC) is the lead Federal agency considering license reauthorization. The U.S. Department of Energy Loan Program Office (DOE LPO) is a Cooperating Agency considering the provision of a loan guarantee for the resumption of power operations at PNP. This letter provides EPA's comments on the proposed Project, pursuant to National Environmental Policy Act (NEPA), the Council on Environmental Quality's (CEQ) NEPA Implementing Regulations (40 CFR Part 1500-1508), and Section 309 of the Clean Air Act.

PNP is a single-unit pressurized water reactor that produces 800-megawatts of power located along the shores of Lake Michigan. The Atomic Energy Commission (AEC) issued PNP a provisional operating license on March 24, 1971. NRC issued a full-term operating license on February 2, 1992. NRC issued the first license renewal on January 17, 2007, expiring on March 24, 2031. Under previous owners PNP permanently ceased operations in May 2022, Holtec Decommissioning International (HDI)¹ acquired PNP to begin decommissioning of the plant. In early 2023, however, the Applicant expressed interest in returning PNP to operational status. In order to resume operational status, the Applicant submitted six licensing and regulatory requests to NRC. If approved, the requests will allow the placement of fuel into the reactor vessel to restart power operations in Unit 1 for the duration of the renewed facility operating license term.

¹ HDI is the Applicant for the proposed Project.

EPA's enclosed comments focus on purpose and need; project alternatives; interagency coordination; the Coastal Zone Management Act; nuclear waste storage; energy efficiency and environmental best practices; water resources; climate change and greenhouse gases; environmental justice; CEQ's NEPA Implementing Regulations Revisions; and plain language. EPA recommends that NRC and DOE LPO address these comments and recommendations before releasing the Draft EA.

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, Alaina Keeley, at keeley.alaina@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)

Laura Willingham, NRC (laura.willingham@nrc.gov)

Mary Richmond, NRC (mary.richmond@nrc.gov)

Alicia Williamson, DOE (alicia.williamson@hq.doe.gov)

Kenneth Erwin, DOE (kenneth.erwin@hq.doe.gov)

Todd Stribley, DOE (todd.stribley@hq.doe.gov)

EPA's Detailed Comments
Palisades Nuclear Plant Reauthorization, Covert Township,
Van Buren County, Michigan

July 29, 2024

1. PURPOSE AND NEED / PROJECT ALTERNATIVES

- A. The Scoping Document does not provide detailed information about PNP, including its structural integrity, refurbishment history, how often maintenance is required, why it was decommissioned, and the reasons for restarting operations.

Recommendations for the Draft EA:

1. Describe the history and context of the existing plant. Provide background information on PNP's function within Covert Township and, more broadly, within Michigan. Describe previous plant maintenance and any retrofits that would be needed to resume power operations.
 2. Discuss the rationale for decommissioning PNP.
 3. Discuss how the current license that allows operation through 2031 will affect restarting PNP.
- B. The purpose and need for the action should be used to define the range of alternatives to be evaluated.

Recommendations for the Draft EA:

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 EA:

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 (Michigan Department of Environment, Great Lakes, and Energy [EGLE]), and Federal- and state- listed threatened and endangered species (U.S. Fish and Wildlife Service [USFWS] and Michigan Department of Natural Resources [MDNR]).²

² 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/>.

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

3. COASTAL ZONE MANAGEMENT ACT

- A. The proposed Project is located within the boundary of Michigan's Lake Michigan Coastal Program and will require a Federal Consistency Determination under the Coastal Zone Management Act (16 USC § 1451.307).

Recommendations for the Draft EA:

1. Provide information regarding the status of coordination with EGLE regarding the request for a Federal Consistency Determination.

4. 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 EA:

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 (i.e., 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 the facility.

5. ENERGY EFFICIENCY AND ENVIRONMENTAL BEST PRACTICES

- A. The Applicant indicated a daycare, visitor center, parking garage, and training facility are proposed.³ Energy efficient design and material selection for construction of the proposed Project could reduce operation costs while also protecting the environment and further reducing climate change effects.

³ Page 23 of Environmental New and Significant Review.

Recommendations for the Draft EA:

1. Consider permeable pavement or porous pavers as an alternative to asphalt or gravel to reduce runoff from the daycare, visitor center, and training facility. If asphalt is selected, consider green stormwater management practices to filter stormwater before reaching waterbodies (e.g., bioswales).
 2. Consider replacing carbon-intensive Portland cement in concrete.
 3. Consider the use of energy-efficient and/or sustainable building materials (e.g., south-facing skylights and windows, motion-sensor lighting) for the daycare, visitor center, and training facility.
- B. 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 or other facility improvements, and EPA finds that mitigation measures taken to reduce construction diesel emissions are value-added. As referenced in Comment 5.A, the Applicant proposed the construction of a new daycare, visitor center, parking garage, and training facility.

Recommendations for the Draft EA:

1. EPA encourages the Applicant to commit to incorporating applicable mitigation measures from the enclosed Construction Emission Control Checklist, wherever possible.
2. Establish material hauling routes away from places where children live, learn, and play, to the fullest extent feasible. Consider the location of homes, schools, daycares, and playgrounds. In addition to air quality benefits, careful routing may protect children from vehicle-pedestrian accidents. Identify potential hauling material routes in the Draft EA.

6. WATER RESOURCES

- A. Restarting plant operations would include withdrawal and return of water to Lake Michigan (Lake). Water released from power plants can have a higher temperature than the receiving water body resulting in impacts on aquatic organisms from heated water discharged back into the Lake.

Recommendations for the Draft EA:

1. Discuss potential effects of higher surface water temperatures on aquatic organisms.
 2. Include a water balance analysis for the facility and provide additional information from past studies, if any.
- B. Monitoring wells at PNP detected tritium above the regulatory threshold from 2019-2022. The Applicant did not own or operate PNP during the times of threshold exceedances, however, the Applicant identified the sources of tritium leaks and plans to cap underground piping and install aboveground piping to prevent future contamination.⁴

⁴ Pages 25-26, 82-83 of Environmental New and Significant Review.

Recommendations for the Draft EA:

1. Discuss how water that might be contaminated with tritium would not be used for drinking water consumption, livestock, or irrigation if levels are above regulatory thresholds.
- C. 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, CWA Section 401 Water Quality Certification, or isolated wetlands permit from EGLE.⁵ Based on the map provided in the Scoping Document, it appears that wetlands within the Project area and to the southeast of the Project boundary will not be impacted by the construction of the daycare, visitor center, parking garage, or training facility.

Recommendations for the Draft EA:

1. 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 to and coordinated with EGLE for review and any necessary permit requirements. EPA strongly recommends that the delineation, if applicable, be completed before and included as an appendix to the Draft EA, along with a copy of the jurisdictional determination.

7. 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.⁶

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, CEQ’s *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*⁷ was published in the Federal Register. 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*

⁵ Michigan, EGLE, administers the CWA Section 404 Permit Program, approved by EPA.

⁶ Information changing climate conditions is available through the National Climate Assessment at <https://nca2023.globalchange.gov/>

⁷ <https://www.federalregister.gov/d/2023-00158>

Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances,”⁸ 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*” spreadsheet⁹ 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.

Recommendations for the Draft EA:

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).¹⁰
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.

⁸ https://www.epa.gov/system/files/documents/2023-12/epa_scghg_2023_report_final.pdf

⁹ <https://www.epa.gov/environmental-economics/scghg>

¹⁰ 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.

b. Consistency with Climate Policy

1. Provide an analysis of GHG emissions in the context of state GHG reduction targets and policies, which includes Michigan's GHG emission reduction goals.¹¹ This should inform NRC's consideration of GHG mitigation measures.
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.¹² In addition to the Inflation Reduction Act¹³ (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 (i.e., temperatures and 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 construction of the daycare, visitor center, parking garage, and training facility). Mitigation measures should be identified and evaluated; include commitments to do so in the Draft EA and NEPA decision document. EPA recommends the Applicant commit to practices in the enclosed Construction Emission Control Checklist.

8. ENVIRONMENTAL JUSTICE

- A. Outreach and meaningful engagement are underlying pillars of environmental justice (EJ). It is imperative that NRC determines if the re-authorization of power operations, construction, and

¹¹ Including, but not limited, to, the MI Healthy Climate Plan. See: <https://www.michigan.gov/egle/-/media/Project/Websites/egle/Documents/Offices/OCE/MI-Healthy-Climate-Plan.pdf?rev=d13f4adc2b1d45909bd708cafccbffa>

¹² See, e.g., Executive Order 14008; U.S. Nationally Determined Contribution to the Paris Agreement (April 20, 2021).

¹³ The IRA is expected to reduce dependence on fossil fuels while increasing availability for renewable energy sources.

maintenance of the proposed Project 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.¹⁴ 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.¹⁵

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*. 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 environmental justice 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.¹⁶

Recommendations for the Draft EA:

1. Pages 67-68 of the Applicant's Environmental New and Significant Review stated, "*The scope of review in the 2006 Palisades SEIS includes identification of impacts on minority and low-income populations, and whether these impacts are likely to be disproportionately high and adverse... the NRC staff did not identify any location-dependent disproportionately high and adverse impacts affecting these minority and low-income populations.*" Under CEQ's NEPA Implementing Regulations¹⁷ and EO 14096, environmental justice is now evaluated based simply on disproportionate and adverse effects. The Fact Sheet¹⁸ accompanying EO 14096 states, "*The Executive Order [EO 14096] uses the term 'disproportionate and adverse' as a simpler, 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 be only considering large disproportionate effects.*" EPA recommends NRC modify references to use "disproportionate and adverse" as outlined in CEQ regulations and EO 14096.
2. PNP has been decommissioning for two years. Resumption of power operations at PNP may constitute a new and direct effect in the Project area. The community composition

¹⁴ 40 CFR § 1502.16(a)(13)

¹⁵ 40 CFR § 1505.3(b)

¹⁶ 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.

¹⁷ 40 CFR § 1502.16(a)(13)

¹⁸ 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/>

may have changed from the time when the original plant was designed in 1971 to the current request for reauthorization. EJSscreen identified the potential presence of communities with EJ concerns located in or near the Project area. EJSscreen also identified Covert Township and the surrounding area as disadvantaged.¹⁹ EPA recommends that NRC consider the following, consistent with CEQ's NEPA Implementing Regulations and EO 14096:

a. Direct, Indirect, and Cumulative Effects Analysis:

1. Identify the presence of communities with EJ concerns in and near the Project area that could experience environmental effects from the Proposed project. Disclose demographic information.
 2. Describe past and future plans to engage both Tribes and communities with EJ concerns during the environmental review and planning phase, and, if the Project commences, during construction and operation. Evaluate the effects of the Proposed project on communities with EJ concerns and sensitive receptors (e.g., children, people with asthma).
 3. Summarize input from community members during the public meeting held on July 11, 2024.
 4. 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 the communities with EJ concerns, as specified in CEQ's Environmental Justice Guidance.²⁰ Identify what those effects may be and include measures that will be taken to avoid, minimize, or mitigate effects.
 5. 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 the communities more susceptible to pollution, such as health conditions, other social health determinants, and disproportionate vulnerability to climate change.
 6. Consider cumulative environmental effects on communities with EJ concerns and Indigenous peoples in the Project area in the EJ analysis and disclose conclusions on those effects.
3. EJSscreen 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). EJSscreen identified two census block groups in or near the Project area that are Limited English-speaking communities (LEP) in the 98th percentile as compared to the state of Michigan. EPA recommends NRC consider the following:

¹⁹ EJSscreen includes a layer on the Justice40 Climate and Economic Justice Screening tool to identify disadvantaged communities based on certain criteria. See <https://screeningtool.geoplatform.gov/en/methodology>.

²⁰ 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

- a. Meaningful Engagement and Public Participation:
 1. Discuss the meaningful involvement and targeted outreach undertaken by NRC in plain language and languages other than English spoken by residents in and/or near the Project area.²¹
 2. Utilize resources such as the Promising Practices for EJ Methodologies in NEPA Reviews Practices²² report and the Community Guide to EJ and NEPA Methods²³ to conduct an EJ analysis that appropriately engages in meaningful, targeted community outreach, analyzes effects, and advances environmental justice principles through NEPA implementation.

9. **OTHER COMMENTS**

- A. All new projects should reflect the CEQ Final Rule on NEPA Implementing Regulations, effective July 1, 2024.²⁴

Recommendations for Draft EA:

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 EA:

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 that NRC utilize an organized format to respond to agency and public comments as follows: reproduction of the original comment and corresponding NRC responses to those comments.
 2. Ensure the Draft EA 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 EA.

Recommendations for the Draft EA:

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://www.michigan.gov/egle/about/organization/water-resources/glwarm/integrated-report>
 - f. National Ambient Air Quality Standards (NAAQS) status: https://www3.epa.gov/airquality/greenbook/anayo_mi.html

²¹ July 11, 2024, public meeting materials: <https://www.nrc.gov/pmns/mtg?do=details&Code=20240883>

²² https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf

²³ <https://www.energy.gov/sites/prod/files/2019/05/f63/NEPA%20Community%20Guide%202019.pdf>

²⁴ National Environmental Policy Act Implementing Regulations Revisions Phase 2, 40 C.F.R. § 1500-1508 (2024) <https://www.federalregister.gov/d/2024-08792>

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 the Applicant consider the following protective measures and commit to applicable measures in the Draft EA.

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 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.⁴
- Marine Vessels: Marine vessels hauling materials for infrastructure projects should meet, or exceed, the latest EPA exhaust emissions standards for marine compression-ignition engines (e.g., Tier 4 for Category 1 & 2 vessels, and Tier 3 for Category 3 vessels).⁵
- 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, 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

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>

⁴ <https://www.epa.gov/emission-standards-reference-guide/epa-emission-standards-nonroad-engines-and-vehicles>

⁵ <https://www.epa.gov/emission-standards-reference-guide/epa-emission-standards-nonroad-engines-and-vehicles>

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,⁶ 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 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.

⁶ Children 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.