

From: pamela Glaw <greenlawpk@gmail.com>
Sent: Monday, August 31, 2020 4:32 PM
To: WEC_CFFF_EIS Resource
Subject: [External_Sender] Docket ID NRC-2015-0039 Scoping Comments for draft EIS on WEC
Attachments: NRC Scoping Comments for EIS for Westinghouse --Midlands Group final.docx

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Commission, Washington, DC 20555-0001
WEC_CFFF_EIS.resource@nrc.gov**

**From: Pamela Greenlaw
Chair of the Midlands Group of South Carolina Sierra Club
greenlawpk@gmail.com
<https://www.sierraclub.org/south-carolina/john-bachman-group-midlands-area>**

RE: Docket ID NRC-2015-0039 Scoping Comments on the U.S. Nuclear Regulatory Commission's for the Draft Environmental Impact Statement on the Westinghouse Fuel Fabrication Facility Plant in Hopkins, Richland County, South Carolina

Dear Madams and/or Sirs:

Please include the totality of this letter, attachments, etc. in the official record of the draft EIS scoping comments.

First of all, we are nonplused and confounded by NRC'S rejection of the request of ours, of organizations signing on, and of individuals for the granting of an extension of the scoping comment period for the EIS for the Westinghouse Fuel Fabrication Facility to 90 days beyond the August 31, 2020, the original deadline listed in the July 31, 2020, Federal Register announcing the EIS process for this docket.

The NRC should postpone until after the COVID-19 crisis any deadlines for the public to meet concerning input on the EIS. No industry which emits air pollutants at this time should be seeking renewed or expanded license beyond the standard state and air permits because of the cumulative effects of multiple polluting industries on human beings during COVID-19. The residents of the Lower Richland Area where WEC is located has several air polluters now impacting the health of the primarily black community.

- ◆ Please supply the criteria used by the NRC team to evaluate the comment period extension request and itemized the rationale to address each of our contentions.
- ◆ Furthermore, please supply to stakeholders the appeals process for that NRC decision.

Please include the following comments about instructions in the scoping for the draft EIS and respond.

We noted in the instructions in the Federal Register a list of odd and undefined NRC considerations in processing stakeholder comments. These seem to be hedges against reason and/or walls of inflexibility and stonewalling of the public who needs to know their environment is not going to be compromised. These considerations seem *to indicate there are significant damages and will continue to be significant damages which will not only continue but also even be added to by regardless of monitoring and mitigation.*

The considerations as follows must be defined and examples given as they pertain to the draft and final EIS of the WEC:

- *unavoidable adverse environmental effects*
- *relationship of short-term use of resources and long term productivity*
- *irreversible and irretrievable commitments of resources*

1. The NRC must select the Alternative to the Proposed Action, granting the Operating License #SNM 1107 for Ten (10) Years beyond a 12-month period of proving no significant environmental impacts. .

The NRC must reject the Proposed Action to renew the WEC-CFFF's Operating License #SNM 1107 for the next 40 years.

License extension for 40 years is not justified. If chosen, much money, many resources, workers' long-term health, valuable time in not shifting to investments energy creation through non-extractive means will all be wantonly wasted. Storage of nuclear wastes is becoming more difficult, as there are no new repositories, and expanding existing ones face substantial opposition.

The EIS cannot, despite its goal, predict environmental impacts for the next forty years. Considering the original application for the renewal license submitted was withdrawn because of contamination and non-compliance events, considering the Environmental Assessment was also found wanting because of additional events and findings which must be resolved before moving forward.

Forty year predictions even in the field of science are very difficult and tenuous. In the last 40 years technologies, materials, and global climate changes have radically changed how we live and how we humans have caused a variety of unanticipated impacts on ourselves and the environment. We are still discovering how to predict effects of climate change.

In the arena of energy production today's base load plants will give way to new designs and alternate fuels. To guarantee the making of nuclear fuel rods for today's nuclear power plant designs for forty years into the future would likely prove a waste of time and resources. There are already plans for major shifts to energy creation through hydrogen and true renewables.

There is no scientific basis for choosing forty years. In no other field are licenses issued for 40 years before renewals are required.

A forty year license unfairly and dangerously will restrict the ability of the public and government agencies to hold Westinghouse and the NRC accountable. Unpredictable events having environmental and health impacts at WEC in the past four years have occurred frequently and in rapid succession. There will continue to be occurrences at any point in time over the years, and NEPA rules envision the public be at the decision-making and monitoring table. Preventing the public from regular educational sessions and from provision of input will be to their detriment.

There is no way, humanly or otherwise, the EIS can accurately predict future environmental impacts from future human errors over the course of 1 year, let alone 40.

2. The draft EIS scoping comment period must remain open in order to include all necessary data, especially those gathered from actions under the Consent Agreement with the Department of Health and Environmental Control (DHEC).

Based upon the record of Westinghouse Fuel Fabrication Facility's from various events of criticality, of non-compliance, of equipment malfunctions from lack of proper maintenance, of the unlikelihood of controlling contamination into the future, many threats to the human and natural environment now and into the future are apparent to all of us. We request the following:

- the draft EIS remain open to include scoping comments on the **Safety E (SER)** on the physical condition of the buildings on the WEC-CFFF campus, and other items hitherto not brought forward but should have been for inclusion in the list of "Resource Areas to Be Included" stated in the Federal Register announcement to ensure all significant environmental issues are analyzed in depth;
- the draft EIS remain open for a period of 12 months during which the WEC-CFFF must demonstrate operation of the facility without any major problems which could potentially impact health and safety of workers and the environment; Conditions of attainment must be set, such as accomplishment of clean-up milestones; no new, significant, health and environmental problems, and promptly demonstrating compliance by reporting and entering any additional events into a **CA** plan;
- After the 12-month period of having no such major problems, the draft EIS should be open for public comment and revision. Only then should the NRC complete the final EIS and issue the re-named renewal license to the WEC-CFFF for a period of no more than 10 years at a time.
- The license application's title should be changed to reflect that the license is for a ten-year period.

3. The EIS must include the results of the completed Remedial Investigation Plan which should address the sources, location, amounts, and remediation plans for the groundwater contamination plumes, radiological and non-radiological.

Because the groundwater moves at different rates and not necessarily in the same directions and elements do not behave uniformly in movement or in effect on the environment, the EIS should include predictions of where each element will be if not they are able to be remediated or halted in 10, 20, 30, and 40- years' time. The average rate and general direction of that movement indicated in the AECOM's report should be referenced but other information must be included.

GROUNDWATER is a valuable natural resource and has been greatly damaged above the drinking water standards set by the EPA. Though this source is not used on the site for drinking water, it should be protected and cleaned even before decommissioning to meet the standard set by DHEC.

4. The EIS should analyze the values and effectiveness of WEC's operating an AS/SVE into the future. PCE and TCE do not move rapidly and may become a health problem when they vaporize from soils and can be inhaled.

The two nonradiological toxic plumes of the volatile organic compounds (VOC's) PCE and TCE seem to be confined to the shallow aquifer but may not remain so over the course of time. These two compounds exceeded the EPA maximum contaminant level in wells #15 and #7 of 60 wells indicated by studies in 2019. The concentrations of PCE and TCE had increased after WEC stopped using its air sparging/soil vapor extraction system (AS/SVE) in Dec. 2012.

(See the Environmental Assessment, EA, of Oct. 2019 on pp 3-18 through 3-19 :)

“1There appears to be two primary plumes and other localized areas that have been impacted.

2 One plume with elevated PCE and TCE appears to come from a source near the West II

3 Lagoon features elevated PCE concentrations in the shallow and intermediate water tables.

4 The second plume is south of the WWTP upgradient of Gator Pond, and its PCE concentrations

5 appear to be confined to the shallow aquifer. The RI Work Plan states that the source of this

6 PCE plume is unknown. (WEC 2019b). The WEC has installed four shallow and five

7 intermediate-depth wells to further monitor the evolution of the VOC plumes (WEC 2019b).

8 These additional wells could help WEC understand the behavior of the plumes and possibly

9 determine the origin.

10 VOCs at the site's existing wells (WEC 2019b). Results from early 2019 indicate that the MCLs

11 of PCE (5 µg/L) and TCE (5 µg/L) were exceeded in 15 and 7 of the 60 wells, respectively

12 (WEC 2019c). The RI Work Plan indicates that VOCs could be a potential COC for multiple

13 OUs (WEC 2019e).”

34 The VOCs contaminating the groundwater are primarily PCE and trichloroethene (TCE) with

35 some breakdown products. The WEC installed an air sparging/soil vapor extraction (AS/SVE)

36 system in 1997 and operated it until 2011. In December 2012, WEC discontinued operation of

37 the AS/SVE system because the contaminants were no longer being detected (WEC 2015a).

38 However, since the AS/SVE system has been turned off, VOC concentrations have been

39 increasing (SCDHEC/WEC 2016).

5. The EIS must find, list, and address the source(s) and the locations of tritium found in the groundwater and discuss how it will be remediated and eliminated. WEC neither creates nor exports tritium, yet in the Interim Remedial Investigation Data Summary Report created for Westinghouse by AECOM, tritium appears on pp 1 of 12 and 2 of 12 of Table A-1. Tritium is used in nuclear bombs.

The EIS must also include how tritium is transported into the plant.

6. The EIS must include the delineation and extent of the technetium plume from its source(s.) How technetium-99 came to be presents and whether additional technetium amounts are entering the plume must be definitively identified. How Tc-99 in groundwater will be remediated

The EIS must provide an analysis of the DHEC-Westinghouse CA document, "Technetium Source Investigation Work Plan" and include it in the EIS. The source of the technetium, must include both why and how it is getting into the plant site, as well as from what locations of the plant site it is getting into the groundwater.

The draft EA stated, "the likely source of the Tc-99 is the re-certification building and/or the WWTP lagoons, but the RI Work Plan identifies additional investigations to determine the source of the Tc-99 contamination."

7. The EIS must address the uranium plume in the same manner as for the tc-99.

8. The EIS must list and analyze the each and every non-radiological component in its air emissions using both onsite and offsite monitoring station data. The draft EA document categories of these constituents in a chart but with insufficient detail. The EIS should also include discussion of cumulative effects of these constituents over 40 years on human health.

The EIS must list each and every radiological components in its air emissions from the 47 stacks dedicated for these releases. The element, the amount (by weight or volume), the level of radiological activity at the point of release, and the levels of detection at onsite and offsite monitoring stations are all data which should be collected and charted. This was omitted from the EA.

EA pp 3-32 through EA 3-33 are references:

"36 The WEC monitors radiological gaseous emissions from 47 stacks for compliance with the
37 National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 61. In
38 accordance with 40 CFR Parts 50 and 61 and 10 CFR Part 20, stacks are outfitted with
39 scrubbers, high efficiency particulate air filters, or both to minimize the discharge of gaseous
40 effluents. Offsite dose is calculated based on the combined emissions concentrations. Ambient
41 air also is monitored at four onsite locations for the presence of radioactive material."

Schedules for inspection, regular cleaning, and timely replacement of updated scrubbers also need to be circumscribed in the EIS.

9. The EIS should discuss explain the event of the violation related to public health and safety were referred to in a letter to Mike Annacone Westinghouse Vice President in the WEC-CFF. What the violating activities were which may have presented danger to the public and the strategies taken for following that occurrence should be in the EIS. This can be done without compromising the common defense and security issues involved.

Whatever the violation, the public needs to know not only what occurred but also the likelihood of its reoccurrence. (See <https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML20013F322>)

In a letter to Mike Annacone, Westinghouse Vice President of Columbia Fuel Facility Operations from Eric C. Mihel, Chief Projects, Branch 2 Division of Fuel Facility Inspection
SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION INSPECTION REPORT 70-1151/ 2019-401 AND NOTICE OF VIOLATION

An inspection conducted on November 18-21, 2019, by NRC inspectors to determine whether selected activities related to public health and safety, and the common defense and security, were conducted safely and “to confirm compliance with the Commission's rules and regulations and with the conditions of your license.” Two violations were to be self-identified by Westinghouse and were not.

10. The EIS must include a table or list of tested fish and the results, including the fish species, number of each species caught, sizes (length and weight) of each fish in the species caught in Mill Creek and in the Congaree River. Testing results must show both non-radiological and radiological contaminants from 2014 through 2020. The EIS must include the effects on human health related to quantity and frequency of eating fish containing technetium-99 and uranium.

The draft EA discussed releases of radiological material to the Congaree River via Mill Creek. Testing from 2010 -2015 of samples of water and sediments from the Congaree River for radioactive material showed uranium at less than 10 pico-curies / liter. Annual river sediment samples taken from 2010 - 2018 showed uranium below 4 pCi/g. From 2008 - 2018, technetium-99 was measured in sediment ranging from 3 to 17 pCi/gram. The presence of Technetium-99 was not regularly tested. Because there are not regulatory limits for sediments, it is difficult to determine whether or not these measurements indicate the level of danger for benthic macro- or microscopic organisms on which fish feed.

Residents and visitors who fish year round in the creeks and in the Congaree River, particularly downstream from WEC, need to know which fish are contaminated, to what degree they are contaminated, and what the contaminants are. They must have this information in order to protect their own health, so the WEC must publicize their findings.

Fish in the Congaree River are caught and analyzed only once per year for radioactive contamination. The draft EA on page 3-13 states, “Fish samples collected from 2008 to 2018 have shown uranium concentrations at less than 1 pCi/g. Fish were not consistently analyzed for Technetium-99, but when they were tested, gross beta counts 7 ranged from 8 to 65 pCi/g (WEC 2019c).”

The EIS must include a table or list of tested fish and the results, including the fish species, number of each species caught, sizes (length and weight) of each fish in the species. Testing results must show both non-radiological and radiological contaminants from 2014 through 2020.

The measurements of toxicity in fish will vary, so a one-time annual assessment is not sufficient. A set of recommendations for increasing the amount of testing needs to be in the EIS.

Technetium in soils, especially one with a good deal of organic matter; however, can be taken up by plants and thus, can be ingested. Whether or not this is transferable to people who eat wild meat should be investigated. <https://www.nrc.gov/docs/ML1603/ML16032A152.pdf>

11. The draft EIS must review issues of concern pertaining to workers and staff as noted in NRC “event reports” on the fuel plant and other NRC documents must be reviewed in the draft EIS.

a. See items reported by the WISE Uranium Project (<https://www.wise-uranium.org/epusaf.html>) Individual radiation doses of workers at Westinghouse Electric Co. Columbia nuclear fuel plant still twice average - and rising

b. According to NRC's report on occupational radiation exposure at NRC-licensed facilities in 2018, the workers receiving the highest individual doses in the U.S. nuclear fuel industry are those employed at Westinghouse Electric Co.'s Columbia nuclear fuel plant. In 2018, the individual TEDE (total effective dose equivalent) annual dose of workers with measurable dose was 1.95 mSv (2017: 1.74 mSv) at this plant, while the average for all five fuel facilities covered was 0.089 mSv (2017: 0.088 mSv).

> Download: [Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities 2018, Fifty-First Annual Report](#) , NUREG-0713 Vol. 40, U.S. NRC, March 2020

12. The draft EIS must include a review of the integrity of the physical plant, as it is 47 years old and certain to show signs of wear and tear. The conditions, compositions of, coatings, linings, records of schedules and actual replacements and upgrades of these components for floors, walls, windows, roofs, etc. should be included.

13. Compliance and effects of Wes Dyne’s operation must be in the EIS. Wes Dyne, a subsidiary of Westinghouse and housed somewhere on the campus, makes TP BARS for irradiating tritium for nuclear weapons. Its contributions to waste, leaks, emissions, etc. to the environment must be accounted for. Its compliance is extremely important. Predictions into the future of the effects on the environment from all operations on the site will be nullified without this information being included. Compliance of Wes Dyne must be in the EIS.

14. The NRC must include in the draft EIS clear record of specifics of how both it and Westinghouse follow NEPA rules. Statements about communications between these two entities (NRC and Westinghouse) and the community improving are not accurate when most of the community in Lower Richland County does not know there have been any communications. Promises about doing a better job have not been kept. Community members have offered positive and practical measures that will work in this primarily, low-income area which does not have broadband internet connection and also has spotty phone service. To date of these measures have been taken. Instead, the traditional cookie-cutter methods are relied upon too heavily. The EIS needs to account for this NEPA violation

and consider the ideas: postcards to every household, announcements sent to churches for their bulletins, posters in restaurants and other businesses, etc.

15. The EIS must also include the effects of lack of stakeholder input for the next 10, 20, 30, and 40 years. To have no public meetings for an entire generation will have effects on both the human and the natural environment, and these must be determined and listed in the EIS.

We thank you for this opportunity, though limited, and look forward to viewing the draft EIS soon. We understand additional scoping comments may be made a short time after the August 31 deadline, and we may make further comment.

Sincerely,

Pamela Greenlaw
Chair, Midlands Group of South Carolina Sierra Club
803-394-5134