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To: WEC_CFFF_EIS Resource
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Attachments: Westinghouse 2021 EIS Comments.docx

Dear Nuclear Regulatory Commission,
I submit the attached comments on the Draft Environmental Impact Statement for the license renewal of Westinghouse Electric Corporation's Commercial Fuel Fabrication Facility.

Sincerely,
John Grego, President

Federal Register Notice: 86FR43277
Comment Number: 11

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RE: NUREG-2248, Docket ID NRC-2015-0039

Dear Nuclear Regulatory Commission,

Friends of Congaree Swamp would like to offer the following comments on the draft Environmental Impact Statement for Westinghouse Electric Company LLC/Columbia Fuel Fabrication Facility (WEC). We will note WEC's poor record of notification and compliance and do not feel that their actions under the previous permit warrant a 40-year extension; we request reconsideration of postponement, the no-action alternative or a 20-year extension instead.

Completion of Consent Agreement. In many respects, the relicensing decision feels premature. Again and again, the Draft EIS (Draft Environmental Impact Statement) refers to the Consent Agreement between SCDHEC (SC Department of Health and Environmental Control) and WEC, and it is clear that important decisions to remediate pollution onsite await information from ongoing studies under the SCDHEC Consent Agreement.

Outcomes that await the consent agreement include:

- **Technetium Source Investigation Work Plan.** Technetium-99 (Tc-99), a man-made radionuclide, is present in groundwater and the East Lagoon, a wastewater storage site with an aging, 1980's era liner that is being retired. The East Lagoon was initially believed to be the source of Technetium-99 contamination, but a work plan was set up to identify alternative sources, as well as the extent of Tc-99 contamination. Tc-99 was tested at a variety of potential sources in two different phases, and neither phase has conclusively established a source. The Phase I study identified Tc-99 in the sediments of the East Lagoon and Alligator Pond and in groundwater, but not in soil or surface water samples, and could not

identify a source for the contamination. Additional process sites were sampled in Phase II to understand the extent of contamination and identify its source. Results in the Final Interim Remedial Investigation Summary Report were inconclusive, though contour plots of Tc-99 concentration strongly suggest the East Lagoon as a source. The Draft EIS suggests there are no active sources, and concludes that the presence of Tc-99 must be due to past surface releases. The Draft EIS acknowledges that Technetium-99 pollution appears chronic rather than acute, suggesting the source of Technetium-99 pollution is an ongoing problem, rather than a single legacy event. With the source yet unidentified, it is absolutely critical that the Tc-99 source investigation continue.

- Groundwater sampling. The groundwater sampling system now comprises over 100 wells, with many added as part of the consent agreement, including several placed in the floodplain for the first time. Groundwater contamination by fluoride, nitrates, Chlorinated Volatile Organic Compounds (CVOC's), and radionuclides has been well-documented for years. Three different contaminant plumes have been identified for CVOC's: a western groundwater "area of concern", a main contaminant plume, and an eastern plume. Alarming, some of the floodplain wells detected CVOC's including a couple that were placed on the opposite side of Mill Creek and the Sunset Lakes from the plant. Westinghouse argued that there was evidence that floodplain soils were degrading the CVOC's, but SCDHEC and NRC have been skeptical of this mechanism. SCDHEC is particularly troubled by the presence of any CVOC's at all at wells downgradient of Mill Creek and the Sunset lakes, since there was no obvious explanation of how a contaminant plume could pass under the lakes. Though groundwater models have been refined at part of a conceptual site plan, more needs to be learned about the surficial aquifers at the site and groundwater transport.
- Surface water sampling had been intermittent in the past, but sampling conducted as part of the Remedial Investigation found Fluoride in all samples, nitrate in several, and CVOC's in two. Sampling includes drainage ditches, Gator Pond and Upper and Lower Sunset Lakes. Uranium was detected in all samples, though an order of magnitude below the MCL (Maximum contaminant level); no Technetium-99 was discovered in the water samples. A better understanding of the interaction between groundwater and surface water needs to be completed.
- Sediment sampling and the Sediment Transect Sampling Work Plan. Detection of uranium in sediment/sludge samples from stormwater ditches, wastewater treatment plant lagoons, and both Sunset lakes precipitated further study. Sediment sampling included the East lagoon and sanitary lagoon as well as waterbodies in the floodplain. Sediment sampling in Upper and Lower Sunset Lake and the channel of Mill Creek was required under the Consent Agreement, and results from the sampling were troubling. Fluoride and Nitrate were detected in many of the samples, and Uranium was detected in the wastewater treatment lagoon and four samples from the Sunset lakes. As SCDHEC noted in its comments on the Draft Interim Remedial Investigation report, the presence of uranium in the Sunset lakes was unexplained. Westinghouse speculated the uranium may have resulted from a 1971 spill of 1 to 1.5 million gallons of wastewater, while SCDHEC noted that information from the spill had not been

shared in Westinghouse's reporting since 1977. We request that additional investigation of the 1971 incident be required, and that a source study for uranium in the Sunset lakes be conducted rather than accepting Westinghouse's explanation at face value.

The Draft EIS presupposes favorable outcomes. The Draft EIS often assumes the best possible outcome under the Consent Agreement, which is naïve for several reasons. First there is the long history of incidents onsite. We discussed these incidents in our August 25, 2020 comments on the EIS Scoping document, but will re-emphasize troubling patterns here. Recall that the EIS has been issued because WEC's poor handling of accidents and issues came to light after NRC had issued a draft EA and FONSI in June 2018. Less than a month after issuing the draft Environmental Assessment and FONSI in June 2018, a leak at Hydrofluoric Acid Spiking Station #2 released uranyl nitrate and hydrofluoric acid into the soil, an incident that further raised concerns about WEC's environmental and safety record. WEC's initial response to the report of this incident also raised alarms; they planned to monitor any COPC (Constituents of Potential Concern) migration using an existing monitoring well 190 feet away from the site; at typical rates of groundwater flow, contamination would not be detected for over a year. Fortunately, SCDHEC requested a more aggressive sampling plan.

Leaks including radionuclides from a contaminated wastewater line in 2008 and 2011 were not reported at the time they occurred, and only came to light in 2019. The 2011 incident is particularly concerning because WEC at that time was petitioning SCDHEC to decommission air sparging and soil vapor extraction onsite and was granted relief; would they have received permission remediation efforts if the leaks and 2008 and 2011 had been properly reported to NRC and SCDHEC?

Another incident from 2019 raised management questions as well. During a May 2019 inspection, SCDHEC found numerous intermodal containers containing storage barrels that had not been previously reported. Some of these intermodal containers and the barrels stored therein were not well maintained, and contamination was found on-site. Further, these containers, designed only for temporary storage, had been used for storage for up to 14 years. Though this incident appeared in the original Environmental Assessment, WEC's failure to disclose the site and existing contamination showed lack of attention to proper site management and disclosure. Further, the Environmental Assessment made no mention of the accidental nature of the discovery of this problem.

We find it disingenuous to assume that remedial measures will be effective with no notion what measures might be taken, or whether any will be recommended at all. NRC needs to take a more active role in ensuring that existing problems onsite are resolved before issuing a license.

NRC needs to require stronger permit conditions. NRC has attached a couple conditions to the license, but they are weak to the point of irrelevancy; a simple reporting requirement for groundwater and surface water exceedances, and NRC approval of WEC's environmental monitoring and sampling program. Neither of these conditions

require WEC to actively address existing sources of contamination onsite. Rather than relying on SCDHEC's enforcement efforts through its Consent Agreement, NRC should take a more active role in ensuring that existing pollution problems on-site are addressed by including more stringent permit conditions.

Off-site migration is an arbitrary standard. We are greatly concerned by the extent to which an arbitrary standard of "off-site" migration has been used to judge whether impacts of groundwater and surface water pollution are judged small, moderate or severe. "Off-site" would be a very strict standard for a facility located on a small parcel of land, or a facility that is not centrally located on a large parcel. On the other hand, it is an unduly permissive standard for a facility such as WEC located on a substantial parcel of land. Further, if off-site migration appeared imminent, WEC could simply acquire adjacent land and hence forestall scrutiny under this standard. NRC should instead be studying whether groundwater pollution is substantial and whether migration is active. Under both criteria, several pollutant problems at WEC are worse than NRC indicates.

Further, NRC does not require sufficient measures to prevent off-site migration, It notes, for instance, that onsite water body contamination is possible, but suggests that it has low potential to move offsite because of "implementation of activities and programs". But these activities include only spill prevention controls, environmental sampling and monitoring, and Federal and State permitting requirements. Since none of these controls have precluded pollution problems at the site, nor the potential for off-site migration, more active approaches should be used to ensure pollution is under control.

Assessment of impacts ignores recent history. The burgeoning groundwater monitoring network confirms a large impact, not a small to moderate (or moderate) impact from CVOC (Chlorinated Volatile Organic Compounds) groundwater pollution. Regulators likely anticipated that surface water sources at the edge of the floodplain could provide some impediment to the advancing groundwater plume, but the installation of a monitoring network downgradient of the surface water features (Mill Creek, Upper Sunset Lake and Lower Sunset Lake) suggest that the contaminant plume is advancing in unanticipated ways. Surely the persistence of the plumes, their continued advance, and their intrusion into sensitive floodplain soils constitute a serious groundwater pollution problem, and not one that can be set aside as small to moderate or moderate. A recent passive soil gas survey identified a couple legacy sites as likely sources for one of the plumes. Given migration of the contaminant plumes, it was a mistake to end remediation efforts in 2011. Under the circumstances, NRC should require WEC to resume air sparging and soil vapor extraction for groundwater pollutant remediation as a license condition.


Cultural Resources. We provided comments on possible cultural resources in our EIS Scoping letter in August 2020, focusing on mills on Mill Creek. We strongly support the Cultural Resource Survey WEC has proposed to SHPO (State Historic Preservation Office) and request that the survey be made a license condition.

Fish tissue studies. As part of the Consent Agreement, Westinghouse tested for uranium and fluoride near its outflow on the Congaree River, as well as two locations far downstream (centered at US 601) and far upstream (centered at the Thomas Newman boat landing) from the out-take. Westinghouse has a permit for the outflow to discharge process wastewater, contaminated wastewater, and sanitary wastewater; the first two may include uranium. Results from the study indicated that fish at the discharge were in slightly poorer condition and had higher concentrations of fluoride than fish from the control sites, though no differences in uranium concentration were found. Westinghouse tried to argue away the results for fluoride by citing possible alternative explanations for the fluoride results, none of which were explicitly tested. To be clear, the test was designed to identify differences in CPOC's in fish tissues between the out-take and control sites, and differences were in fact detected. In the draft EIS, NRC noted that a single fish was sampled each year from the Congaree River near WEC's discharge. We consider that testing to be insufficient, and we recommend that additional testing take place at the discharge site, as well as Mill Creek and the Sunset Lakes; additional species such as freshwater mussels and macroinvertebrates should be sampled as well.

Discussion of alternatives. Some of the discussion of alternatives (40-year license—the preferred alternative, 20-year license, no action alternative) is disingenuous. Future impacts are often minimized, since existing conditions would not change, but simply occur later (or end sooner). The NRC repeatedly uses the phrase “only the timeline would change”, but that statement minimizes the impact of living with detrimental impacts for another generation or two of Richland County residents. The NRC stretches credulity when it concludes that the no-action alternative would result in environmental costs to society that would exceed these costs for the proposed action since the site would need to be cleaned up after decommissioning. Environmental benefits to the preferred alternative are exaggerated when NRC claims that the environment would benefit from new reporting conditions under the license-- as noted earlier, the new reporting conditions are weak and reactive. Discussion of accident scenarios and environmental justice claims these impacts are small. These impacts should be considered at least moderate, not small, given WEC's record of concealing incidents at the plant.

As a final observation, note that existing issues at the plant required WEC to enter into a Voluntary Clean-up Contract with SCDHEC in August 2016. As new problems arose, the VCC needed to be superseded by a Consent Agreement with SCDHEC in February 2019, and NRC itself had to set aside its draft Environmental Assessment and Finding of No Significant Impact (FONSI) in June 2018. This cascading series of actions by regulatory agencies in response to problems at WEC points to a plant with a troubled history. With several issues in the Consent Agreement left unresolved, NRC's license renewal is premature. We strongly recommend either postponement, decommissioning, or a shorter renewal period.

Sincerely,



John M. Grego, President