



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

December 22, 2022

Billie Pirner Garde
Clifford & Garde, LLP
815 Black Lives Matter Plaza, N.W.
Suite 4082
Washington, D.C. 20006
(202) 280-6117
bpgarde@cliffordgarde.com

SUBJECT: RESPONSE TO LETTER, DATED NOVEMBER 22, 2022, REGARDING
WATTS BAR INTEGRATED INSPECTION REPORT

Dear Ms. Garde,

Thank you for your letter of November 22 regarding the Nuclear Regulatory Commission's (NRC's) third quarter integrated inspection report for the Watts Bar Nuclear plant (WBN), and for your interest in the safety conscious work environment (SCWE) at WBN. NRC recognizes the importance of a healthy SCWE, and we appreciate the opportunity to respond to your questions and observations.

Please find our responses to your questions and observations in the enclosure to this letter. We have provided comprehensive responses to most questions, however in some cases, we were unable to provide fully detailed responses, as doing so may unintentionally identify specific individuals involved in our safety culture assessment. Withholding such information is consistent with the agency's identity protection guidance as found in IP 93100, "Safety-Conscious Work Environment Issue of Concern Follow-up." In preparing this response, it has become evident to us that we could have and should have been more precise and complete in conveying the technical details associated with this inspection, and more disciplined in a few of the administrative tasks associated with the report's publication. Rest assured that we are applying the lessons that we have learned from this effort to improve our communications and processing.

We have placed your letter into the Agencywide Documents Access and Management System (ADAMS). You can find it at ADAMS accession number, [ML22334A142](#).

If you have any further questions or concerns regarding this matter, please contact me at (404) 997-4545, or at Louis.McKown@nrc.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Lou McKown".

Signed by McKown, Louis
on 12/22/22

Lou McKown (he/him), Chief
Reactor Projects Branch 5
Division of Reactor Projects

SUBJECT: RESPONSE TO LETTER, DATED NOVEMBER 22, 2022, REGARDING WATTS BAR INTEGRATED INSPECTION REPORT Dated December 22, 2022

DISTRIBUTION:

- L. Dudes, RII
- D. Pelton, RII
- M. Miller, RII
- L. McKown, RII
- L. Jarriel, OE
- W. Deschaine, RII
- L. Suggs, RII
- M. Franke, RII
- M. Lombard, OE
- S. Price, RII
- M. Keefe-Forsyth, NRR
- D. Willis, OE

ADAMS ACCESSION NUMBER: ML22354A190

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	NRR/DRO	OE/AT	RII/RC	RII/DRP	
NAME	M. Keefe-Forsyth	D. Willis	S. Price	L. McKown	
DATE	12/22/2022	12/20/2022	12/21/2022	12/22/2022	

OFFICIAL RECORD COPY

Staff response to concerns identified in letter from Billie Pirner Garde dated November 22, 2022, regarding "11/14/2022 Watts Bar Integrated Inspection Report."

CONCERN 1 (Page 1 paragraph 1):

"We cannot locate the Report on the NRC's website, in ADAMS, or anywhere else available to the public, but received a copy of it from someone at the site."

RESPONSE:

Due to an administrative error when entering the WBN Integrated Inspection Report 05000390/2022003 and 05000391/2022003 into ADAMS, it was not coded as publicly available. Though in ADAMS, this error prevented public viewing of the inspection report. As a result of your observation, the staff conducted an extent of condition review and identified similar public accessibility errors in our review of other reports. Having corrected these errors, staff captured the lessons learned to improve processes and training. The public can now view the Watts Bar Nuclear Plant Integrated Inspection Report 05000390/2022003 and 05000391/2022003 at ADAMS accession number location, [ML22318A007](#), as well as on the Reactor Oversight Process Inspection Report page on the NRC public website.

CONCERN 2 (Page 1 paragraph 2):

"The section of the Report addressing the findings and actions regarding a chilled work environment identified in the Chemistry Department is of extreme concern to us, and we want to better understand what was identified. Frankly, the explanations given are incomprehensible and make it appear that the NRC has virtually twisted itself into a pretzel trying to find a way NOT to take the necessary and appropriate enforcement action against TVA."

RESPONSE:

Prior to the staff's inspection, the Tennessee Valley Authority (TVA) had identified concerns and established corrective actions based upon safety culture survey results from the Chemistry department. During our inspection, the NRC staff confirmed TVA's conclusion, based upon interviews of licensee employees and reviews of licensee safety culture assessments, that a chilled work environment existed within the Chemistry department. Individuals did not feel that they could raise nuclear safety concerns without fear of retaliation and reported having had negative interactions when they did raise concerns at Watts Bar.

Whenever NRC staff identifies a chilled work environment, we evaluate the appropriate enforcement actions available, including the use of a chilling effect letter (CEL) as discussed in the NRC Enforcement Manual (ADAMS Accession No. [ML22056A177](#)) and NRC Allegation Manual (ADAMS Accession No. [ML17003A227](#)). This guidance ensures that our staff considers the many factors contributing to the licensee's environment for raising safety concerns when evaluating enforcement action. Specifically, when the licensee recognizes that an environment is chilled and applies corrective actions, NRC

guidance advises staff not to intervene, but rather to allow the licensee's actions time to take effect. Historically, the NRC has observed faster resolutions to chilled work environments when licensees take ownership of the situations, with NRC providing independent oversight.

Though our safety culture inspectors observed gaps in the effectiveness of some of TVA's corrective actions, others were undertaken too recently to determine their effectiveness. Furthermore, the licensee has created additional actions based upon the assessment of our team. We plan to perform a follow-up focused safety culture assessment in early 2023 with additional review during the scheduled 2023 WBN biennial problem identification and resolution (PI&R) inspection in August. In the meantime, our resident inspectors, sensitive to SCWE concerns, will continue to monitor and provide insight on licensee performance. At these planned inspection touchpoints and through continuous observation by our resident inspectors, the NRC will have the input required to evaluate and implement the use of the available enforcement tools including, but not limited to, a CEL. However, at this time, NRC has concluded that a CEL is not necessary.

CONCERN 3 (Page 1 paragraph 3):

"However, your cover letter to TVA enclosing the Report, is misleading in that it states 'no findings or violations of more than minor significance were identified during this inspection.'"

RESPONSE:

The NRC's [Final Safety Culture Policy Statement](#) applies to all NRC licensees, applicants, and vendors. This policy establishes the expectations for a healthy nuclear safety culture and the traits of a positive safety culture, including the importance of maintaining an environment for raising concerns. This policy provides the foundation for the safety culture inspections performed under IP 93100, "Safety-Conscious Work Environment Issue of Concern Followup." The NRC has not codified this policy as a regulatory requirement that can, on its own, result in an enforceable finding or violation. Accordingly, the statement that you identified in our cover letter was accurate. Had the safety culture assessment captured within 2022 WBN third quarter inspection report resulted in a CEL, the inspection report cover letter would have referenced it and the chilled working environment.

CONCERN 4 (Page 2 paragraph 1):

"If TVA already failed to take effective corrective action, and the Chemistry and Radiation Protection department personnel continue to be fearful of raising concerns, what is the NRC waiting for to take action to ensure that these employees feel free to raise concerns without fear of reprisal?"

RESPONSE:

As a result of your question, the inspectors involved in the safety culture assessment identified an opportunity to clarify the assessment results documented in the inspection report and the staff intends to revise the WBN third quarter 2022 inspection report to include the following:

The chemistry and radiation protection departments are two separate entities, with different work functions and organizational hierarchies (different supervisors and managers). The radiation protection department is not the subject of the current concerns regarding safety conscious work environment. The team did not identify similar issues with the work environment in radiation protection. All interviewed employees within the radiation protection department stated they would raise nuclear safety issues without fear of retaliation and are encouraged and rewarded when they do. The corrective actions put in place to correct previously identified work environment issues in this department have been effective.

Additionally, as recommended in IP 93100, Section 03.03, "Interviews and Focus Groups," the safety culture inspectors provided their contact information to everyone interviewed, regardless of their position on reporting safety concerns. The team also reinforced the availability of resident inspectors as a resource to discuss safety concerns, and the team informed participants of the "Report a Safety Concern" feature readily accessible on the NRC's public website.

As discussed in response to Concern 2, prior to the staff's inspection in September 2022, TVA had identified concerns and established corrective actions based upon safety culture survey results from the Chemistry department. Our safety culture inspectors confirmed the chilled work environment in the Chemistry department and concluded that it is too early to determine effectiveness of all of TVA's existing and recent corrective actions. TVA has created additional actions based upon the assessment of our team. In the meantime, our resident inspectors will continue to monitor safety culture on site and our inspection staff will perform follow-up safety culture inspections in 2023.

CONCERN 5 (Page 2 paragraph 2):

"Who performed that assessment? There are no NRC "SCWE" staff listed on the report?"

RESPONSE:

When issuing the subject inspection report, our staff omitted the safety culture inspectors due to human error. We will list the safety culture inspectors when we issue a revision to the report. The safety culture assessment team was comprised of:

- Dori Willis, Team Leader, Headquarters Allegation Team, Office of Enforcement
- Molly Keefe-Forsyth, Safety Culture Program Manager, Reactor Assessment Branch, Office of Nuclear Reactor Regulation
- Judith Weaver, Allegations & Enforcement Specialist (Safety Culture Assessor trainee), Region II

Ms. Willis and Ms. Keefe-Forsyth have completed the Safety Culture Assessor and Safety Culture Assessor Training and Qualifications in accordance with IMC 1245, Appendix C12 and are also qualified inspectors in accordance with IMC 1245 Appendix A and B. Ms. Weaver participated in a training capacity.

CONCERN 6 (Page 2 paragraph 3):

“Regardless of who performed the assessment, the team noted that some employees in the RadPro and Chemistry department, ‘will not use the ECP; some are hesitant to talk to the NRC, and while they are sometimes willing to write condition reports (CRs), they have an overall perception that nothing will be done with the CRs once they write them.’ The team also ‘heard that the amount of turnover and churn among the staff and supervisors is causing tremendous strain on the organization.’ Which department are these comments coming from?”

RESPONSE:

The statements quoted above are all attributed to the chemistry department. As we stated in our response to Concern 4, a revision to the inspection report will include language to clarify the distinction between the two departments.

CONCERN 7 (Page 2 paragraph 4):

“When were the GLINT and USA surveys done? And, if they identified the Chemistry Department as a troubled area, what did TVA do at the time of these findings? What is it doing differently now? There is no Condition Report identified in the Inspection Report either, so where are the TVA corrective actions identified?”

RESPONSE:

TVA conducted an employee engagement survey, known as the GLINT Survey, at Watts Bar in September 2021. TVA performed the USA Alliance Watts Bar Nuclear Safety Culture Assessment in February 2022. TVA documented the results of their safety culture assessments (to include the GLINT and USA Alliance reports) under Condition Reports (CRs) 1659255, 1750872, and 1749249. The team reviewed TVA’s responses to the GLINT assessment, the USA Alliance nuclear safety culture assessment and determined that corrective actions were new and had not yet been effective at fixing the identified work environment issues within the Chemistry Department. Further strengthening their response, TVA captured the IP 93100 inspection team’s assessment under CR 1805670 and established additional corrective actions to restore a healthy safety culture within the Chemistry department. The NRC staff will include these condition report numbers when revising the report. Due to the nature of the actions undertaken and the agency’s identity protection policy, we are unable to provide any additional details.

CONCERN 8 (Page 3 paragraph 1):

“In the face of years of an embedded chilling effect in [Radiation Protection and Chemistry] departments, why isn’t the NRC doing anything to address it?”

RESPONSE:

The NRC has long recognized the importance of the development and maintenance of a positive safety culture. Our agency expects that employees feel free to raise safety concerns, both within their own organization and with our staff, as discussed in our [Final Safety Culture Policy Statement](#). Historically, when necessary, the NRC has taken direct and comprehensive actions to address chilled workplace environment issues at Watts Bar. "Closure Of Chilling Effect Letter - Chilled Work Environment For Raising And Addressing Safety Concerns At The Watts Bar Nuclear Plant" (ADAMS Accession No. [ML21048A200](#)) documents the conditions observed and actions taken including:

- On March 23, 2016, the NRC issued a CEL (ADAMS Accession No. [ML16083A479](#)) regarding chilled work environment issues at WBN. The NRC staff concluded that a chilled work environment existed in the operations department, as indicated by a perception among operators that they did not feel free to raise safety concerns without fear of retaliation.
- On April 22, 2016, TVA provided a response to the CEL, which included a description of the immediate actions taken and the corrective actions planned to address the chilled work environment (ADAMS Accession No. [ML16113A228](#)). On April 12, 2017, TVA provided an update on the status of the corrective actions (ADAMS Accession No. [ML17102B658](#)).
- In 2018, following increased allegations received from Watts Bar personnel, the NRC performed a SCWE follow-up inspection at WBN and concluded that a chilled work environment existed in the radiation protection (RP) department. On August 31, 2018, NRC staff communicated that TVA could not close the 2016 CEL based upon these new conditions (ADAMS Accession No. [ML18242A458](#)). The NRC also opened a SCWE cross-cutting issue (CCI) due to the age of the CEL. The letter notifying TVA of the CCI also established criteria for closing both the CEL and the CCI. As a result, TVA made multiple organizational changes that resulted in an improved safety culture.
- On February 17, 2021, the NRC issued a letter closing the CEL (ADAMS Accession No. [ML21048A200](#)) upon verification of TVA meeting established closure criteria.

As discussed in the response to Concern 4, the chemistry and radiation protection departments are separate and distinct. Our inspectors found that the actions put in place to correct previously identified work environment issues in the radiation protection department have been effective. Our inspectors also found that the actions undertaken by TVA to address the chilling effect in the Chemistry department are new and have not yet been effective. However, our staff determined that a CEL was not appropriate at this time given TVA's identification of and acceptance of responsibility for the chilled work environment in addition to their established corrective actions. Therefore, we will perform follow-up inspections in 2023 when the corrective actions have matured. In the meantime, our resident inspectors will provide continuous monitoring as discussed in response to Concern 2.

CONCERN 9 (Page 3 paragraph 2):

“We have learned of other issues that the NRC has not addressed in any of its Reports. For example, on August 26, 2022, the NRC completed a PI&R Inspection at TVA’s Browns Ferry Nuclear Plant. During that Inspection they interviewed several employees who were not aware of the TVA ECP and that the ECP was an option for raising safety concerns. Although that information was provided to TVA by the NRC, it was not captured in writing by the NRC in any public report, only in a Condition Report generated by TVA after receiving the information from the NRC. TVA tried to excuse the fact because the interviewees were ‘mainly recent new hires.’ Why is that an adequate response? Did the NRC attempt to validate that finding?”

RESPONSE:

The 2022 Browns Ferry Nuclear Plant (BFN) PI&R inspection team did observe that a small population of the TVA employees interviewed were not aware that they could raise safety concerns through TVA ECP. However, given the small size of the population, the inspectors determined that this was not a safety culture concern as these TVA employees were aware of and willing to use multiple other avenues for raising safety concerns. Upon confirming their lack of awareness, the inspectors informed the impacted interviewees of the availability of TVA ECP for raising safety concerns.

The NRC inspectors provided this observation to TVA BFN who captured it in condition report CR 1798172. TVA showed the inspectors that as an immediate corrective action TVA sent a message to their staff with pictures of the ECP program owners for each site as well as information on how they can be used to raise safety concerns. Given the lack of SCWE or performance deficiencies, and consistent with IMC 0611, Power Reactor Inspection Reports, and IP 71152, Problem Identification and Resolution, the inspectors chose not to document this observation. The inspectors did capture the condition report number under documents reviewed ([Browns Ferry Nuclear Plant Biennial Problem Identification And Resolution Inspection Report 05000259 2022012, 05000260 2022012 and 05000296 2022012\(ML22262A060\)](#)).

CONCERN 10 (Page 3 paragraph 4):

“Finally, we are aware the TVA OIG completed an organizational effectiveness review of the Browns Ferry Radiation Protection department (TVA OIG Evaluation 2021-17252, dated May 25, 2022), in which the OIG found ‘multiple negative behavioral facts were expressed, including:

- Concerns regarding interactions between BFN RP groups;
- Concerns regarding management interactions;
- Perceptions of unethical and non-inclusive behaviors by certain managers;
- Perceptions that BFN RP personnel cannot stop work and plant operations are placed before radiation safety; and
- Perceptions of negative relationships with some plant and corporate nuclear personnel.

“(The OIG interviews occurred between June 14 and September 15, 2021; and November 10, 2021, and included 59 employees, 10 supervisors, 4 superintendents and a senior manager.)

“The [TVA] OIG Report found that 8 out of 59 employees expressed concerns related to the BFN ECP. Some indicated when concerns were brought to BFN ECP they either disappear or no action is even taken. A few also indicated they or others were reluctant to bring up concerns to ECP. A few individuals stated that certain BFN RP management is informed when employees report a concern to BFN ECP, and another individual indicated a general fear that BFN RP management will find out if a concern is reported to BFN ECP.’ These are serious findings. But it does not appear that the NRC has considered these issues at all.”

RESPONSE:

The NRC staff was aware of, and reviewed, the TVA Office of Inspector General (OIG) report regarding the BFN radiation protection department and used it as input to the development of interview questions of TVA BFN staff during the 2022 BFN PI&R inspection. As stated in response to Concern 9, the inspection team did not identify any SCWE concerns as a result of their inspection.

CONCERN 11 (Page 4 question 1):

“Who were the ‘NRC qualified safety culture assessors’ that performed the ‘limited assessment’? It does not appear from the list of Inspectors listed on the report that any have SCWE experience or were SCWE assessment qualified;”

RESPONSE:

Please see our response to concern 5.

CONCERN 12 (Page 4 question 2):

“When was the ‘assessment’ conducted? The report merely lists dates of July 1-September 30, 2022.”

RESPONSE:

The safety culture inspectors performed IP 93100, “Safety-Conscious Work Environment Issue of Concern Followup,” the week of September 26, 2022.

CONCERN 13 (Page 4 question 3):

“If the ‘assessors’ determined ‘the corrective actions are not comprehensive enough to address the work environment issues within the [Chemistry/Radiation Protection] department,’ why are you now allowing TVA more time to address this rather than issuing a CEL letter and requiring a different response that has a chance to be effective?”

RESPONSE:

As discussed in response to Concern 2, the issuance of a CEL is one of the many regulatory tools available to respond to a chilled work environment. Our safety culture inspectors confirmed the chilled work environment in the Chemistry department and concluded that it is too early to determine the effectiveness of all of TVA's existing and recent corrective actions. As stated above, historically, the NRC has observed faster resolutions to chilled work environments when licensees take ownership of the situations, with NRC providing independent oversight. In the meantime, our resident inspectors will continue to monitor safety culture on site and our inspection staff will perform follow-up safety culture inspections in 2023.

CONCERN 14 (Page 4 question 4):

"In the meantime, what actions is the Agency taking to ensure that all of those employees have the direct contact information to the NRC in the event of a nuclear safety issue?"

RESPONSE:

As recommended in IP 93100, Section 03.03, "Interviews and Focus Groups," the safety culture inspectors provided their contact information to everyone interviewed, regardless of their position on reporting safety concerns. The team also reinforced the availability of the onsite resident inspectors as a resource to discuss safety concerns, and informed participants of the "Report a Safety Concern" feature readily accessible on the NRC's public website. Finally, 10 CFR 19.11(e)(1) requires that NRC Form 3 be posted prominently at each licensed facility. The form includes information on how to raise a safety concern directly to NRC and discusses protections afforded to those that raise safety concerns.

CONCERN 15 (Page 4 question 5):

"Did TVA write a Condition Report to capture this issue, and ensure different corrective actions are taken, mitigation actions are taken, and what is the resolution? As we have seen in the example of the BFN PI&R Inspection conducted in August 2022, TVA wrote a corrective action based on the exit interview findings. Why didn't they do so in this instance and why wasn't that CR written on the NRC's list of documents reviewed?"

RESPONSE:

The licensee captured NRC's observations associated with IP 93100 inspection under CR 1805670. The licensee captured the results of their safety culture assessments (to include the GLINT and USA Alliance reports) under CR 1659255, CR 1750872, and CR 1749249. Due to the nature of the actions undertaken and the agency's identity protection policy, we are unable to provide any additional details.

The condition report numbers provided above should have been included in the report for clarity and transparency. The NRC intends to issue a revision to the inspection report that includes this information.

CONCERN 16 (Page 4 question 5):

“Finally, the Report states ‘The NRC has requested the licensee respond to the NRC’s assessment results and implement appropriate corrective actions.’ By when? Obviously, these matters were discussed with TVA in the exit interview held in October. How much longer is the NRC going to allow TVA to fail to address this serious issue before it intervenes? What is expected of the Licensee, and by when?”

RESPONSE:

The report’s use of language that appeared to request a TVA response was an error by our staff. The statement should have stated that TVA had captured the NRC safety culture assessment within their corrective action program and provided the associated condition report number. This will be corrected in a revision to the report.

As discussed in response to Concern 2, prior to the staff’s inspection in September 2022, TVA had identified concerns and established corrective actions based upon safety culture survey results from the Chemistry department. Our safety culture inspectors confirmed the chilled work environment in the Chemistry department. These inspectors concluded that it is too early to determine effectiveness of all of TVA’s existing and recent corrective actions. Follow-up safety culture assessments will determine effectiveness in 2023. In the meantime, our resident inspectors will continue to monitor safety culture on site.