

**U.S. Nuclear Regulatory Commission
Response to the April 8, 2022,
Letter Regarding OIG Report on Diablo Canyon**

1. Did the NRC receive the same industry information in 2009 that PG&E received a notice of violation for, and if so, was action taken to increase examination of that piece of equipment identified as problematic by the industry?

RESPONSE:

To clarify a misstatement in the OIG inquiry, the NRC did not issue a notice of violation to Diablo Canyon Nuclear Power Plant (DCNPP) related to this event; rather, the staff issued a very low safety significance finding because the performance deficiency did not result in an underlying violation of NRC requirements. This was documented in an DCNPP integrated inspection report by the NRC staff (ADAMS Accession No. [ML20303A238](#)).

As reflected in this inspection report, the industry information referred to in the OIG inquiry referred to two operating experience event reports that PG&E had received from the Institute of Nuclear Power Operations (INPO) in 2009 and 2010, describing corrosion of carbon steel piping under insulation at two different nuclear power plants. INPO operating experience reports are only made available through a proprietary database. A limited number of staff at NRC headquarters have access to this database for periodic trending of equipment reliability and other data analytics purposes. However, the NRC does not use this INPO database to monitor for emergent individual significant events, as NRC regulations require licensees to directly notify the NRC of significant events. Inspectors at DCNPP did not have access to this specific operating experience information until the licensee notified them during their root cause determination into the failure. Due to the indicative nature of NRC inspections, inspectors only review significant operating experience during specific inspections. The 2009 and 2010 events in question did not reach a level of significance to merit wider dissemination by the industry or action by the NRC. However, the staff will consider whether to share this recent event involving DCNPP via appropriate operating experience avenues.

External corrosion is a failure mechanism known to the NRC, and corrosion under insulation is discussed in American Society of Mechanical Engineers (ASME) and NRC documents. Damaged metal jacketing material covering piping insulation can be a cause of this corrosion; however, superficial damage, as in this case, is not uncommon and not necessarily indicative of an underlying degraded condition. The ASME code requires licensees to perform regular inspections of carbon steel piping for external corrosion, but normally does not require the removal of insulation on carbon steel piping for routine inspections and instead directs that the surrounding areas be inspected for signs of corrosion.

2. What steps have been taken to remedy the discrepancies between NRC inspection procedure and the resident inspectors' reports to regional and headquarters management?

RESPONSE:

In its review of the OIG inquiry, the staff determined that inspection policy and COVID-19 guidance were appropriately followed. The staff did not identify any discrepancies between NRC inspection procedure and the resident inspectors' reports to regional and headquarters management. As discussed in the staff's review, rather than the five hours identified in the OIG inquiry, NRC inspectors expended nine and a half hours of direct inspection on this one sample, five of which were performed in the vicinity of the equipment. The NRC staff determined that this amount of direct inspection, taken as a percentage of the budgeted hours for the applicable inspection procedure, was not uncommon for a single baseline inspection sample. Furthermore, the NRC staff determined that the amount of time spent on physical walkdowns was consistent with guidance provided to resident inspectors at the time during the COVID-19 public health emergency, which encouraged inspectors to complete as many requirements as possible remotely and to make risk-informed decisions regarding the extent of physical walkdowns. While the staff did not identify any discrepancies between the procedure requirements and what the inspectors documented, the staff will review and consider improvements to the implementation of its existing programs and processes. The staff is recommending a review of inspection program documents to enhance clarity and understanding, and other potential improvements based on the OIG's observations. This includes IP 71111.04, "Equipment Alignment," which will be reviewed to determine if the wording in the procedure can be clarified regarding the extent of physical walkdowns required to be performed in order to consider an inspection sample as complete.

3. Does the NRC plan on reviewing all the relevant previous inspection reports, especially for key safety components?

RESPONSE:

Because the NRC staff determined that inspection policy and COVID-19 guidance were appropriately followed, the staff does not intend to perform a review of previous inspection reports based on this event. However, as discussed in the NRC staff assessment, the staff has identified opportunities to improve programs and training. The Office of Nuclear Reactor Regulation at NRC headquarters continuously appraises the regional office staff's implementation of the Reactor Oversight Process (ROP) in terms of effectiveness and uniformity. The results of ROP assessments are provided to the Commission annually ([ROP Evaluation | NRC.gov](#)). These assessments include evaluation of inspection procedure implementation.

4. What assurances do we have that aging or vital safety equipment have been properly inspected?

RESPONSE:

Despite challenges to onsite inspections during the COVID-19 public health emergency, 21 NRC staff members contributed to the baseline inspection program in 2020 at DCNPP for a total of over 1,864 direct inspection hours. DCNPP Units 1 and 2 are currently both in the licensee response column of the ROP Action Matrix, the lowest level of NRC oversight, based on having only findings of very low safety significance and Green performance indicators ([Action Matrix | NRC.gov](#)). The NRC remains confident in its inspection program and continues to have reasonable assurance that DCNPP and all other commercial plants subject to NRC regulation are operating safely.

5. What will the NRC be doing to restore public trust in the inspectors and the regulatory agency?

RESPONSE:

The NRC staff reviewed the facts and circumstances surrounding this event, and is taking several measures to be transparent with the public on its assessment and perspectives on the findings and observations outlined in the OIG inquiry. For example, we have made the results of the staff's review and the official response to the OIG publicly available (ADAMS Accession No. ML22109A179). As discussed in that response, the staff determined that inspection policy and COVID-19 guidance were appropriately followed. The staff recommends that members of the public concerned by the contents of the OIG inquiry read those documents to help gain an increased understanding of the inspection activity and the leak in the AFW system. Additionally, those documents provide insights into the purpose, processes, and scope of NRC inspections.

Members of the public can also access and view plant specific information, including NRC inspection reports, plant performance indicators, licensing documents, and other correspondence on the NRC's website ([Reactor Oversight Process \(ROP\) | NRC.gov](#)). The NRC holds annual public meetings, which are currently underway, to discuss the status of oversight at all commercial nuclear power plants in the United States. NRC staff at these meetings are available to address questions from members of the public regarding the oversight and inspection process. DCNPP's annual public meeting is planned for May 17, 2022. Interested members of the public are encouraged to attend and can find more information on the NRC's website: [Public Meeting Schedule | NRC.gov](#).

While NRC staff's determination that the inspectors at DCNPP acted reasonably and in accordance with inspection policy and COVID-19 guidance, the staff acknowledges that there are ways the staff can enhance its inspection program. The staff recommends inspector training on corrosion under insulation and refresher training on the Inspection Manual, specifically on understanding the distinction between inspection objectives,

requirements, and guidance, and also recommends a review of applicable inspector qualification training for potential improvements. The staff plans to review the inspection manual to ensure its requirements and related guidance are clear to inspectors and external stakeholders. The staff also plans to review the inspection program guidance to determine if additional direction or training should be included to ensure consistent inspection expectations for sites with multiple units.