

TVA RESTRICTED INFORMATION



Memorandum from the Office of the Inspector General

April 27, 2022

Don Moul

██████████
██████████ CORROSION MONITORING SERVICES
SABOTAGE AND FRAUD
OIG FILE NO. 7D-16628

We have completed our investigation into allegations that Tennessee Valley Authority (TVA) vendor Corrosion Monitoring Services (CMS) intentionally damaged property at TVA's former Paradise Fossil Plant (PAF) in order to receive a contract to repair the damage. Subsequent to our investigation of alleged sabotage and fraud, ██████████ CMS, ██████████, pleaded guilty, in the Western District of Kentucky, to three felony charges related to these allegations and was sentenced to home incarceration, supervised probation, and ordered to pay restitution to TVA. The Office of the Inspector General (OIG) believes that the facts of this case demonstrate that CMS is not a presently responsible vendor and that it is in the government's interest to refrain from doing future business with CMS.

The PAF coal-fired units included large devices called recuperative tubular air pre-heaters (APH). These devices are used to heat air prior to the air being introduced into boiler furnaces for combustion. APHs, among other things, increase the thermal efficiency of combustion boilers by reducing heat loss (which directly impacts the financial operating cost of the plant), and they allow control over the temperature of combustion by-product gases – hot flue gas – which eventually leaves the plant through exhaust stacks, which aids in meeting environmental emissions regulations. See Appendix A.

The PAF Unit 3 APH consists of bundles of straight, vertical metal tubes connected to horizontal metal sheets, all of which is enclosed in a steel casing. This casing serves as an enclosure for air to flow over hot flue gas filled tubes and become heated air. More specifically, ambient air is forced by a fan, through ducting, into the casing while hot flue gas flows through the inside of the tubes within the casing. As the ambient air passes around the outside of the tubes, the hot flue gas flowing through the inside of the tubes heats the ambient air that is flowing on the outside of the tubes. The now-heated ambient air is then carried to the boiler furnace for use in combustion. There are approximately ██████████ tubes in the PAF Unit 3 APH, which range from ██████████ in diameter, ██████████ in thickness, and are approximately ██████████ long. See Appendix B.

CMS is an Illinois-based company that specializes in the inspection and repair of tubular air heaters and heat exchangers. CMS is ██████████ ██████████. Since 2006, CMS has performed a variety of services related to tubular air heaters for TVA. In August 2012, TVA entered into a ██████████ contract with CMS, TVA contract number 5836, with a maximum spend limit of ██████████. The contract was for CMS to provide inspections, testing, materials, and repair and replacement services for APHs at PAF.

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On May 16, 2016, the OIG received information from PAF management regarding potential sabotage or vandalism to the Unit 3 APH. In response to a whistleblower tip, PAF engineers inspected the Unit 3 APH and found approximately 600 metal tubes with holes that appeared not to have resulted from natural deterioration processes, but rather appeared to have been mechanically created. See Appendix C. PAF engineers were concerned about that type of damage because those type of holes accelerate corrosion on the tubes throughout the surrounding area. Punctured tubes promote an acidic corrosion environment and accelerate deterioration throughout the APH. In addition, punctured tubes create pathways for combustion air to short circuit the combustion process and add additional loading to the induced draft fans. This additional tax on the fans reduces capacity and therefore overall unit capacity. While the holes were small in size, holes of that size and that quantity vastly affect unit performance in a negative manner.

The OIG initiated an investigation into the damage at PAF immediately after receiving the complaint from PAF management. The investigation revealed that [REDACTED] and another CMS employee at [REDACTED] direction, intentionally damaged metal tubes in the PAF Unit 3 APH using a fireman's axe (a forcible entry tool used by firefighters), while conducting visual inspections of the APH, in order to receive a \$6 million contract to replace approximately 15,000 tubes within the unit. [REDACTED] repeatedly pressured PAF engineers to make the repairs, warning of dire consequences if the work was not done. The engineers were suspicious of CMS's various inspection findings and [REDACTED] "hard sell" tactics, and the engineers were suspicious of the sharp increase in tube degradation in the APH in a short period of time rather than, as expected, degradation occurring slowly over a long period of time. Therefore, PAF declined to replace the tubes pursuant to [REDACTED] repeated recommendations. Shortly thereafter, PAF received the aforementioned whistleblower's tip, found the nearly 600 tubes with suspicious holes, contacted the OIG, and made temporary repairs to all of the punctured tubes.

In addition to the damage done at TVA, the OIG investigation identified additional intentional damage done, by CMS, to power facilities at three private sector companies: the Ingredion-Argo plant in Bedford Park, Illinois, operated by Ingredion Incorporated (Ingredion), the NRG-New Castle Plant in New Castle, Pennsylvania, operated by the NRG Energy corporation, and the AECI-Thomas Hill Plant in Springfield, Missouri, operated by the Associated Electric Cooperative Incorporated.

The investigation also revealed that [REDACTED] who is currently the [REDACTED], attempted to influence a grand jury witness with false information during a time when CMS knew it was under criminal investigation by the OIG and knew that a federal grand jury was involved in the matter. More specifically, [REDACTED], and another CMS management-level employee, succeeded in convincing that witness to provide materially false information to the witness's employer (Ingredion) while the OIG was conducting investigative acts at the Ingredion-Argo plant¹. That false information was then provided to the OIG (unknowingly to Ingredion management at the time) in response to an OIG request for documents in furtherance of the investigation. However, this act was not charged in the indictment – the individual who provided the false information recanted and was [REDACTED].

The investigation further revealed that [REDACTED], who had been the [REDACTED], accepted gifts from CMS in 2012 which may have constituted illegal

¹ Ingredion Incorporated is an American multinational ingredient provider based in Westchester, Illinois, producing mainly starch, modified starches and starch sugars as glucose syrup and high fructose syrup. The Utilities Division at the Ingredion-Argo plant in Bedford, Illinois, is a power producing facility that produces and provides power and steam to the Argo plant for its manufacturing processes. CMS provided inspection and repair services for the APHS at the Argo plant.

gratuities pursuant to 18 U.S.C. §201. This ██████ initially provided false information to the OIG during the early stages of the investigation, but eventually became a cooperating witness for the United States. The acceptance of the gifts was not charged in the indictment due to falling outside of the statute of limitations. This individual is no longer employed by TVA.

In November 2019, a seven-count felony indictment was returned against ██████ by a grand jury in the Western District of Kentucky, charging him with Conspiracy to Damage Power Facilities (the PAF, Argo, New Castle and Thomas Hill plants), Wire Fraud, Obstruction of Justice and Witness Tampering. The Obstruction of Justice and Witness Tampering charges stemmed from CMS engaging in attempts to impede the OIG investigation by threatening witnesses and retaliating against witnesses during the course of the investigation. For example, in a phone call that was monitored and recorded by the OIG, ██████ told ██████ to PAF, he (██████) would publicly reveal evidence of the witness's marital infidelity if the witness did not recant information he provided to the OIG. Specifically, ██████ sent the witness a sample of the evidence of infidelity and then told the witness that he (██████) would not publicize that evidence if the witness would "call the [expletive] office of the inspector general and tell them that you - that you made [expletive] up. That's what you can do for me."

Ingredion filed a civil lawsuit against CMS based upon information it gleaned from the OIG's investigative acts that occurred at the Ingredion-Argo plant. Ingredion alleged a loss in excess of \$1 million due to damage done to one of its APHs by CMS which resulted in a catastrophic failure that shut down one of its operating units. In its lawsuit, Ingredion alleged that CMS deliberately damaged APH tubes at the Ingredion-Argo plant so that the boiler would fail and CMS would be hired to repair the damaged tubes, and that CMS succeeded in that effort. Among the evidence uncovered during the OIG investigation at the Ingredion-Argo plant, the OIG discovered that CMS intentionally punctured a hole in an APH tube at the Argo plant using a crowbar, documented the damage via photograph, included the photograph in an official CMS inspection report to the Ingredion corporation but stated in the report that the tube damage resulted from naturally-occurring dew point corrosion.

██████ pleaded guilty on July 22, 2021, to a superseding three-count felony Information charging him with one felony count of Misprision of a Felony, one felony count of Obstruction of Justice and one felony count of Witness Tampering. On November 1, 2021, ██████ was sentenced to six months of home incarceration and 12 months of supervised probation, and was ordered to pay \$247,427 in restitution to TVA, \$150,000 in fines, and \$300 court costs. During the sentencing hearing, ██████ defense counsel advised the court that ██████ still travels the country conducting APH inspections for CMS and asked the court to add a provision in the six-month home incarceration sentence that would allow ██████ to leave his home for work outside his city of residence. The court denied the request.

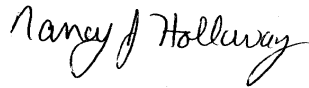
The OIG concludes from its extensive, four-year long investigation into CMS's activities that, in addition to having plead guilty to committing criminal offenses in connection with performing a public contract, CMS has demonstrated a pattern and practice of falsifying inspection reports, inspection findings and other materially relevant information, corruptly influencing individuals to engage in mendacity and unethical practices, and concealing its financial status. The employees at CMS who have been involved in all of the aforementioned activities are still employed by CMS. The OIG therefore recommends that CMS be debarred from performing work for the United States until such a time as it can demonstrate the present responsibility to do so. Additional facts and evidence uncovered during the OIG investigation that support this conclusion, but which are not disclosed in this report, may be considered for disclosure upon request.

The OIG received valuable assistance in conducting certain aspects of this investigation from TVA Police, the Illinois State Police, and local law enforcement partners in Illinois.

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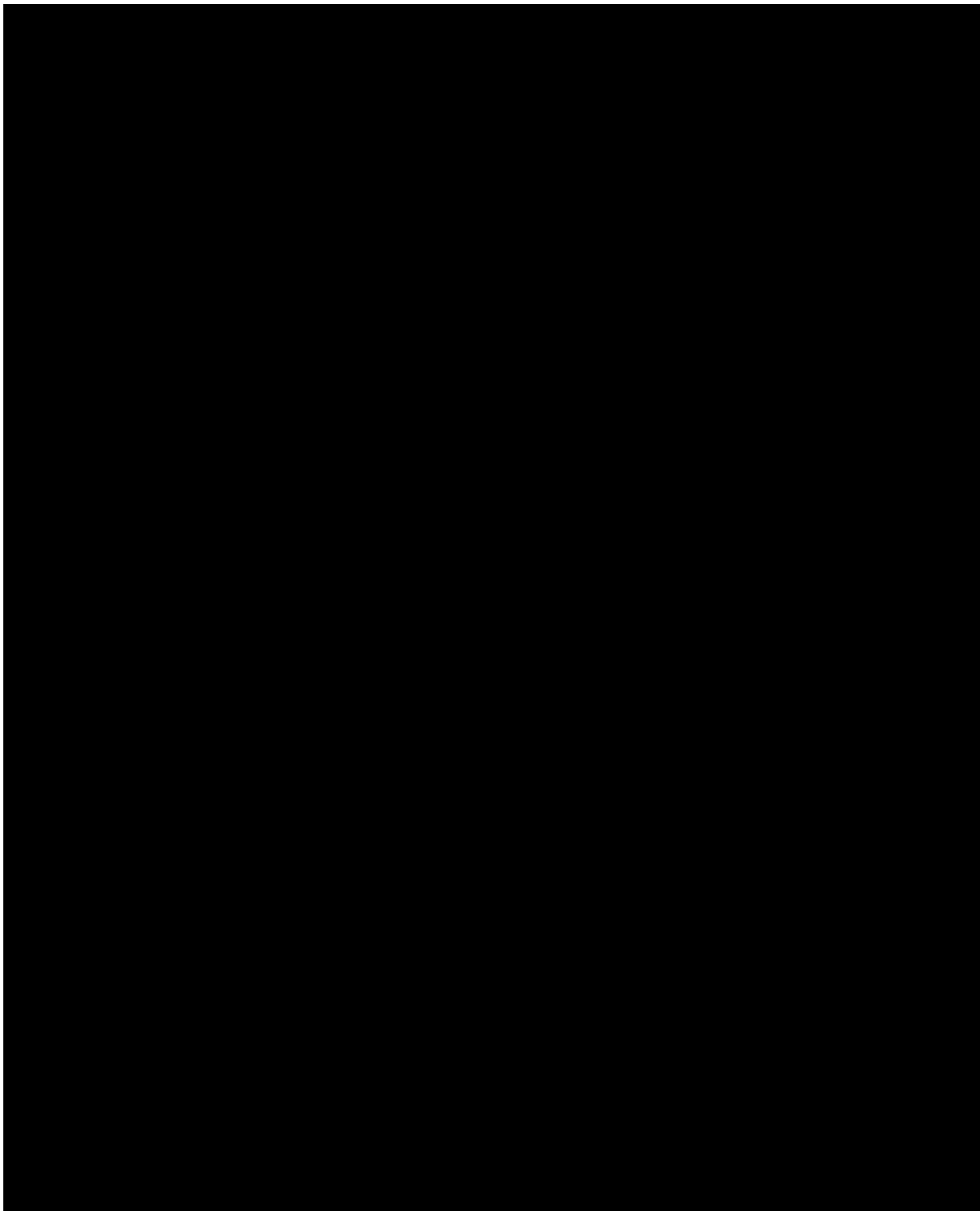
We would appreciate being informed within 30 days of your determination and of any action taken as a result of this memorandum. In addition, if you decide to take documented action, we would appreciate your sending a copy of the relevant information to this office for our file.

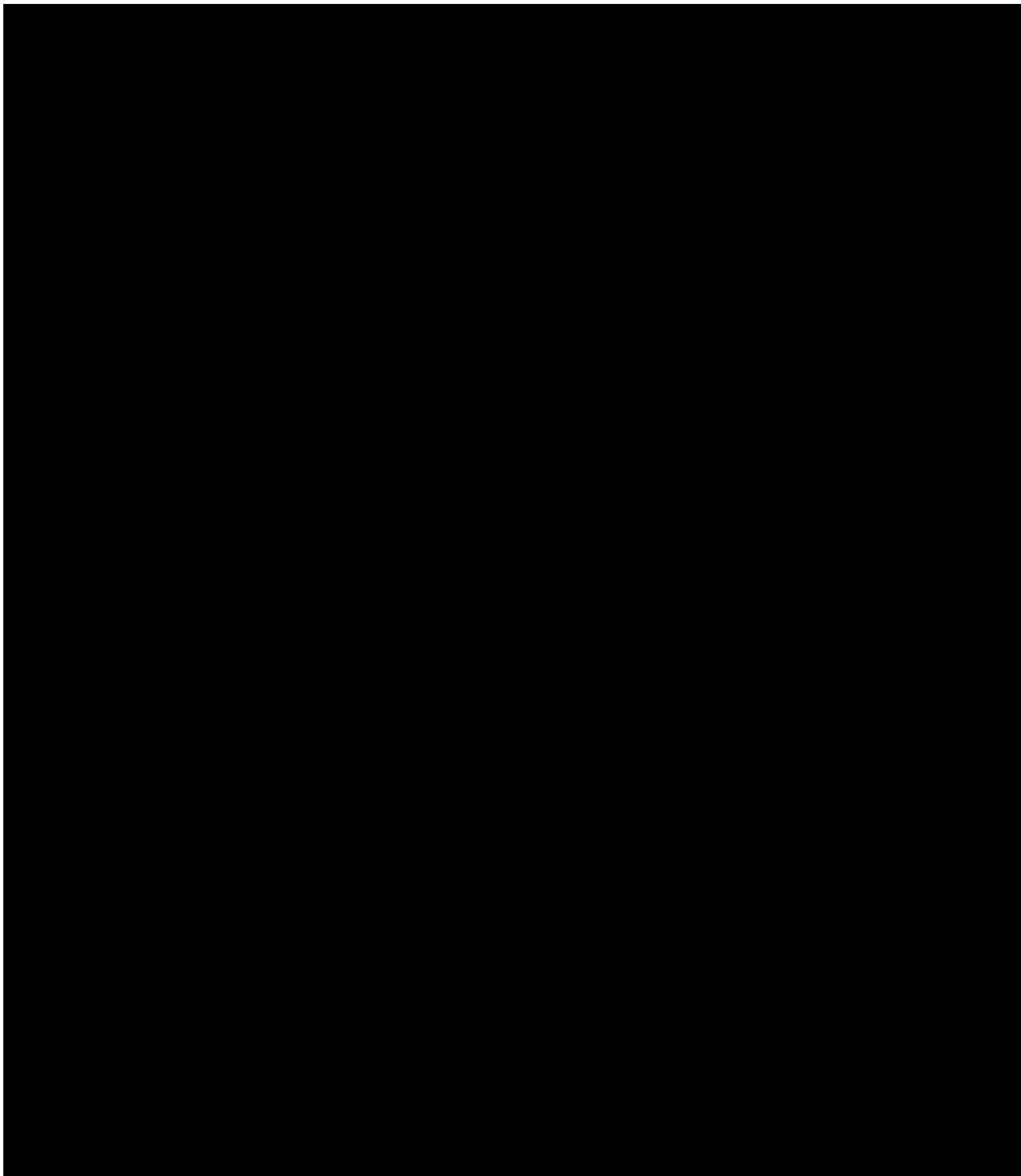
This memorandum has been designated "TVA Restricted" in accordance with TVA-SPP-12.002, TVA Information Management Policy. Accordingly, it should not be disclosed further without the prior approval of the Inspector General or their designee. In addition, no redacted version of this memorandum should be distributed without notification to the Inspector General of the redactions that have been made.

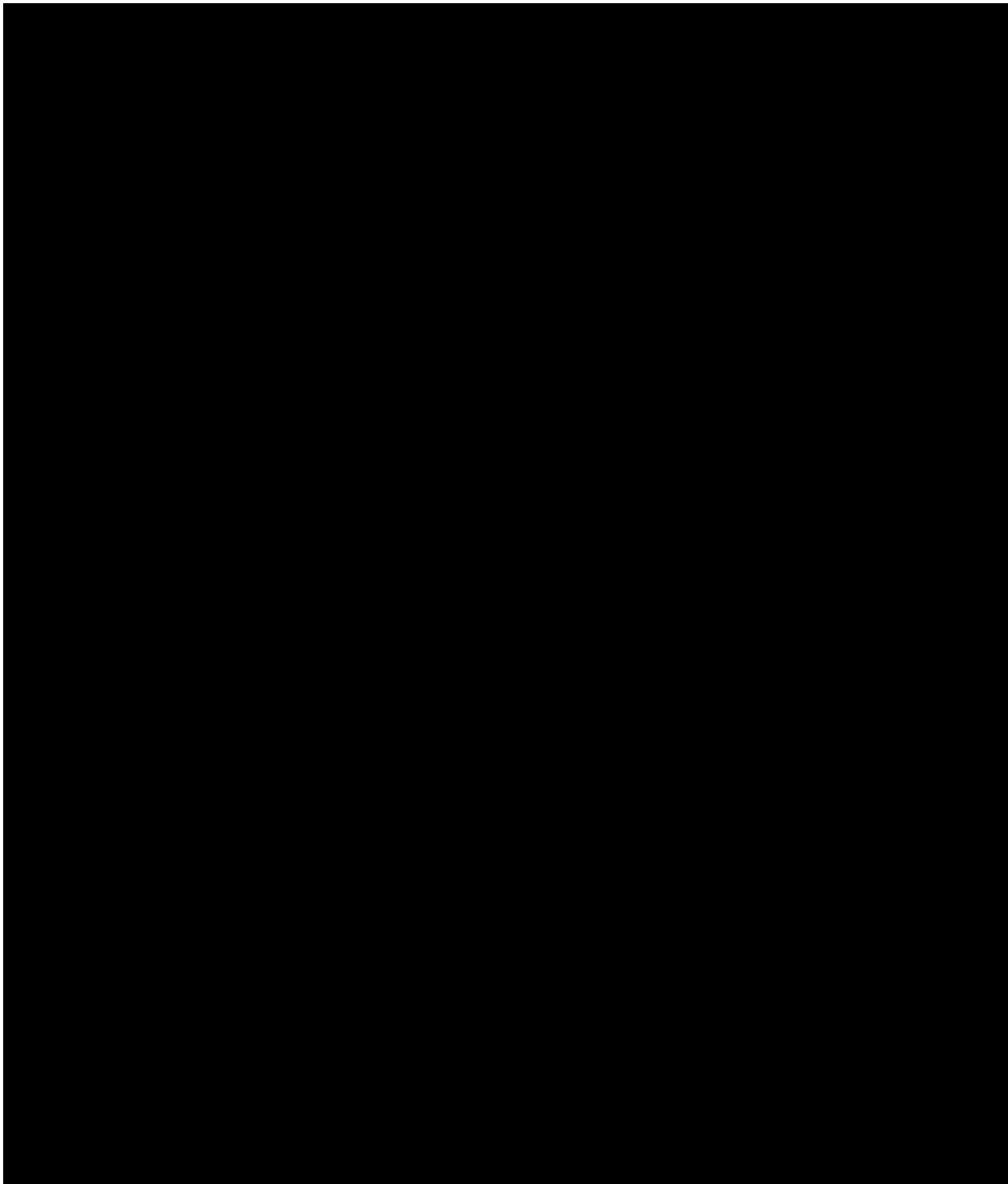


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APPENDIX C

Sample Pictures of Holes in PAF Uint 3 APH Tubes Discovered by PAF Engineers



