

NorthAnnaRAIsPEm Resource

From: Buckberg, Perry
Sent: Friday, November 14, 2014 11:30 AM
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Subject: North Anna 3 COLA RAI 140-7677 (12.03-12.04 - Radiation Protection Design Features)
Attachments: NA3 COLA RAI 140 RPAC 7677.pdf

By letter dated November 26, 2007, Dominion Virginia Power (Dominion) submitted a Combined License Application for North Anna, Unit 3, pursuant to Title 10 of the *Code of Regulations*, Part 52. The U.S. Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this COLA.

The NRC staff has identified that additional information is needed to continue portions of the review and a Request for Additional Information (RAI), is enclosed. To support the review schedule, Dominion is requested to respond within 30 days of the date of this request. If the RAI response involves changes to the application documentation, Dominion is requested to include the associated revised documentation with the response.

Thanks,

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U.S. Nuclear Regulatory Commission

Office of New Reactors

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Operating Company: Dominion

Docket No. 52-017

Review Section: 12.03-12.04 - Radiation Protection Design Features

Application Section: 12.03-12.04

QUESTION 12.03-55

NAPS SUP 11.2-2 (in Section 11.2.3.2 of the NA3 COL FSAR) states that, "The radwaste effluent discharge pipeline runs underground from the Radwaste Building to the Unit 3 discharge structure and into the discharge canal. Dilution flow is provided by North Anna Units 1 and 2 circulating water system or independent dilution pump. The mixed stream flows through the discharge canal into the WHTF. A release point dilution factor of 1000 (minimum) is maintained." It further states that the buried portion of the piping is enclosed within a guard pipe and monitored for leakage while the other portion is accessible for visual inspection via a tunnel.

- 1) Provide a site drawing showing the routing of the radwaste effluent discharge pipeline from the Radwaste Building to the Unit 3 discharge structure and into the discharge canal. Specify the distance of the pipeline from the Radwaste Building to the Unit 3 discharge structure and into the discharge canal.
- 2) Specify, on the site drawing requested in 1) above, which portions of the radwaste effluent discharge pipeline are buried (and enclosed within a guard pipe and monitored for leakage) and which portions are accessible for visual inspection via a tunnel. Clarify whether the portions of the radwaste effluent discharge pipeline which are accessible for visual inspection via a tunnel are buried or not.
- 3) Specify the material used for the radwaste effluent discharge pipeline and the diameter of this pipeline.
- 4) Specify at what point in the route of the radwaste effluent discharge pipeline will the flow from the Radwaste Building be diluted by the North Anna Units 1 and 2 circulating water system or by an independent dilution pump.
- 5) NAPS SUP 11.2-2 states that the dilution flow added to the radwaste effluent discharge pipeline is provided by North Anna Units 1 and 2 circulating water system or by an independent dilution pump. Specify the criteria used to determine whether the dilution flow will be provided by the North Anna Units 1 and 2 circulating water system or by an independent dilution pump.
- 6) NAPS SUP 11.2-2 describes several design features associated with the radwaste effluent discharge pipeline that are incorporated to preclude inadvertent or unidentified leakage to the environment. Describe any additional features incorporated between the Radwaste Building and the discharge canal that are incorporated to preclude inadvertent or unidentified leakage to the environment, in accordance with the requirements of 10 CFR 20.1406.
- 7) NAP SUP 11.2-2 states the following with respect to the radwaste effluent discharge pipeline at NA3, "fittings are kept to a minimum and no in-line components (e.g., valves) are incorporated into this line outside of the power block." This description mentions valves as an example of an in-line component that will not be incorporated into the NA3 radwaste effluent discharge pipeline. There are other types of in-line components that could increase the probability of inadvertent or unidentified leakage to the environment from the discharge pipeline, such as vacuum breakers or vent valves. Clarify this portion of NAP SUP 11.2-2 by stating that the radwaste effluent discharge pipeline will also not include in-line components such as vacuum breakers or vent valves.