



Monticello Nuclear Generating Plant
2807 W County Road 75
Monticello, MN 55362

June 4, 2010

L-MT-10-038
Technical Specification 5.5.1

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Monticello Nuclear Generating Plant
Docket 50-263
Renewed License No.: DPR-22

Supplemental Information to Required 30-Day Offsite Dose Calculation Manual Report dated October 12, 2009 for the Monticello Nuclear Generating Plant

On October 12, 2009 pursuant to and in accordance with the requirements of Monticello Technical Specification 5.5.1, the Northern States Power Company, a Minnesota corporation (NSPM) provided to the NRC a 30-day special report as required by the NEI Enhanced Groundwater Protection Initiative (L-MT-09-096). The purpose of this letter is to provide supplemental information to the event reported in the October 12, 2009 letter.

Summary of Commitments:

This letter makes no new commitments or changes any existing commitments.



Timothy J. O'Connor
Site Vice President, Monticello Nuclear Generating Plant
Northern States Power Company - Minnesota

Enclosure (1)

cc: Regional Administrator Region III, USNRC
Project Manager, Monticello, USNRC
Sr. Resident Inspector, Monticello, USNRC

Enclosure 1
Supplemental information to NEI Enhanced Groundwater Protection Initiative
Correspondence dated October 12, 2009

The Monticello Nuclear Generating Plant (MNGP) is providing this supplemental information to the NRC in relation to the discovery of tritium in the ground water around the MNGP that was first reported to the NRC on October 12, 2009. As explained in that prior report, water had previously been discovered leaking from an electrical conduit penetration in the RCIC room in the basement of the Reactor Building. The water was sampled and contained tritium at a concentration of 3.81 E+06 Pico-curies/liter. An investigation into the cause of the tritium contamination was subsequently initiated. Because samples taken in September of 2009 at a new well MW-09 showed tritium levels of 21,727 Pico-curies/liter, notifications were submitted to the NRC as part of the NEI Enhanced Groundwater Protection Initiative, and the station continued its investigation and characterization of the groundwater plume and source of tritium. The Minnesota Pollution Control Agency and local governmental authorities were also notified in accordance with NEI 07-07 "Industry Ground Water Protection Initiative – Final Guidance Document" of the results of this sample.

As part of this ongoing groundwater investigation five ground water monitoring wells were installed around the site. In addition, six temporary wells were installed for the purpose of collecting continuous soil samples from the surface to bedrock immediately down-gradient of the reactor and turbine buildings to determine the geologic conditions at depth. MNGP now has 16 on-site monitoring wells used to characterize the ground water hydrology around the station. The well network addresses down-gradient and side gradient water quality for both the reactor and turbine building areas and condensate storage tanks.

As a result of the groundwater investigation that was undertaken, it appears that the tritium plume is localized to shallow water (within the upper 10 feet of the water table aquifer) and the source of the plume appears to be in close proximity to the plant building foot print. It also appears that the groundwater plume may extend a short distance laterally to the northwest. The placement of additional monitoring wells may help further define the lateral extent of the plume.

Tritium concentrations in well M-9 (adjacent to the plant building) have exceeded 20,000 Pico-curies/liter on two separate occasions. The first time was 21,727 Pico-curies/liter on September 11, 2009 the second time was April 20, 2010 at 21,127 Pico-curies/liter. The lowest activity in well M-9 was measured at 173 Pico-curies/liter on November 17, 2009.

The remaining 15 monitoring wells have been substantially below the EPA's drinking water standard of 20,000 Pico-curies/liter. Monticello continues to investigate the source and extent of the groundwater contamination. Data at this time does not conclusively allow determination of whether or not the groundwater plume has intercepted or will intercept the river. Therefore additional investigation is warranted and will be undertaken by the MNGP.

The specific sources of the elevated tritium in the ground water are still unknown at this time. The source investigation and groundwater characterization is on-going. MNGP will notify the NRC when the source is determined and when the groundwater plume is more fully characterized, and will also notify the NRC if any remedial action or source control is initiated.