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20 avril 2017

## **Etats-Unis : Salem : URGENCE DECLAREE suite à la présence d'hydrazine à un niveau élevé dans l'enceinte du réacteur n° 2**

A 21 h 10 la salle de contrôle a reçu un signal de présence d'hydrazine à un niveau de 8 fois la limite autorisée qui est de 0,03 parties par million dans l'atmosphère de l'enceinte du réacteur. C'est au cours de la maintenance d'un générateur de vapeur que le rejet s'est produit. Le bâtiment a été évacué durant l'intervention pour baisser le niveau de contamination. Il n'y aurait eu aucun impact pour les personnels ni pour le réacteur qui était en situation d'arrêt ( Residual Heat Removal ou RHR). Le problème a été déclaré au titre du rejet d'un gaz toxique (\*) et inflammable. La situation d'urgence a été levée 8 h 12 après son déclenchement.

Type : PWR - Puissance : 3 459 Mth - Première divergence : 01 / 08 / 1980 -

*Available in english only*

Event Number : 52699

Facility : SALEM

State : NJ - Unit : [2] - RX Type : [2] W-4-LP

Event Date : 04/20/2017 - Event Time : 21:10 [EDT]

Emergency Class : UNUSUAL EVENT 10 CFR Section : 50.72(a) (1) (i) - EMERGENCY DECLARED

Initial PWR : 0 % Current PWR : 0 %

Event Text

**UNUSUAL EVENT DECLARED DUE TO HYDRAZINE IN CONTAINMENT**

"At 2110 EDT, Salem control room received data that supported unacceptable levels of hydrazine concentration in the U2 Containment atmosphere based on Site Protection atmospheric sampling. The high hydrazine levels were caused due to Steam Generator [S/G] venting into the Containment atmosphere in support of maintenance for the current Salem Unit 2 Refueling Outage (2R22). The NIOSH habitability limit for hydrazine is 0.03 ppm (2 hour limit). Area samples indicated concentrations as high as 0.25 ppm. Salem Unit 2 Containment has been evacuated while a mitigation plan is being developed. There were no personnel injuries as a result of this occurrence. Salem Unit 2 defueling activities were in progress during this event. All fuel assemblies have been placed in a safe condition. All Salem Unit 2 Containment activities are currently on hold. There has been no impact to the equipment in the Unit 2 Containment, no adverse impact to any equipment located in the vicinity of the high hydrazine concentration, and no operational impact to the plant including Shutdown Cooling which is currently on RHR."

The Unusual Event was declared under EAL HU3.1, Toxic/Flammable Gas Release Affecting Plant Operations.

The licensee plans to issue a press release.

The licensee notified the NRC Resident Inspector, Lower Alloways Creek Township, State of New Jersey and State of Delaware.

Notified DHS SWO, FEMA Operations Center, DHS NICC, FEMA NWC (email), DHS Nuclear SSA (email), and FEMA NRCC SASC (email).

\* \* \* UPDATED FROM JOHN COOK TO DONALD NORWOOD AT 1305 EDT ON 4/21/2017 \* \* \*

"Salem Unit 2 terminated the Unusual Event at 1258 EDT on 4/21/17. The basis for termination was no longer restricting access to the containment after getting two sets of satisfactory air sample results. With the access restored, normal plant operations can resume and EAL HU3.1 is no longer applicable.

"The details of the sample results are : Fire Protection performed satisfactory results of no detectable Hydrazine (0.01 ppm with a NIOSH limit of 0.03 ppm) completed both at 1001 EDT and 1247 EDT at the following locations :

- ▶ (3) at 130 ft. elevation
- ▶ at 78 ft. in the bioshield
- ▶ at 78 ft. outside the bioshield.

"Additional mitigating actions taken following U2 Containment evacuation were as follows :

- ▶ FME screen installed on open manways for 21/23 S/G with additional plastic covering and tape to prevent further gas release into containment.
- ▶ Modified Containment Purge in service to maximize ventilation in Containment.
- ▶ 21/24 S/G draining to support filling and draining evolutions to reduce Hydrazine concentrations in the S/G's.
- ▶ Releasing tags on the AFWST to commence filling and further support filling and draining evolutions on the U2 S/G's."

The licensee notified the NRC Resident Inspector.

Notified R1DO (Arner), NRR EO (King), and IRD (Stapleton). Notified DHS SWO, FEMA Operations Center, DHS NICC, FEMA NWC (email), DHS Nuclear SSA (email), and FEMA NRCC SASC (email).