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21 août 2016

Etats-Unis : Saint-Lucie : urgence déclarée suite à la perte des alimentations électriques extérieures du réacteur n°1

Avec le réacteur à 35 % de sa puissance, la perte d'alimentation a engendré l'arrêt du réacteur. Les deux groupes diesels de secours ont démarrés et alimenté leurs bus électrique. Pendant l'arrêt tous les systèmes de sécurité ont fonctionné correctement. Les soupapes de sécurité se sont ouvertes. Le réacteur est refroidi par la circulation de l'eau en thermosiphon.

Mise à jour le 21 8 2016 à 21 h 40 : l'urgence a été levée à 21 h 25 suite au rétablissement du courant extérieur.

Mise à jour le 21 8 2016 à 23 h 15 : le 21 août à 19 h 26 le réacteur a été mis hors tension suite à la mise à l'arrêt intempestive du disjoncteur principal. La cause du problème est en cours de recherche. Suite à la perte de courant, les 4 pompes principales de refroidissement se sont immédiatement arrêtées.

Mise à jour le 22 8 2016 à 0 h 48 :deux pompes de circulation ont été activées à 23 h 30 afin d'établir une élimination forcée de la chaleur du cœur.

► Type : PWR - Puissance : 2 700 MWth - Première divergence : 04 / 1976 -

Available in english only

Event Number : 52191

Facility : SAINT LUCIE

State : FL - Unit : [1] - RX Type : [1] CE

Event Date : 08/21/2016 - Event Time : 19:37 [EDT]

Emergency Class : UNUSUAL EVENT 10 CFR Section : 50.72(a) (1) (i) - EMERGENCY DECLARED
50.72(b)(2)(iv)(B) - RPS ACTUATION - CRITICAL 50.72(b)(3)(iv)(A) - VALID SPECIF SYS ACTUATION

Unit SCRAM Code RX CRIT Initial PWR Initial RX Mode Current PWR Current RX Mode 1 A/R Y 35 Power
Operation 0 Hot Standby

Event Text

UNUSUAL EVENT - LOSS OF OFFSITE POWER

At 35 percent power, a main generator lockout caused the main generator to trip, resulting in a reactor trip of Unit 1. Because of the lockout, power did not transfer to the startup transformers. Both emergency diesel generators started and aligned to the emergency busses.

During the trip all control rods fully inserted and no safety or relief valves lifted. The plant is in Mode 3 steaming through the atmospheric relief valves and feeding the steam generators using auxiliary feedwater. There is no reported primary to secondary leakage. Primary coolant is being moved using natural circulation cooling.

The trip of Unit 1 had no effect on Unit 2. The licensee notified the NRC Resident Inspector.

Notified DHS SWO, FEMA, DHS NICC, and Nuclear SSA (via e-mail).

* * * UPDATE AT 2140 EDT ON 08/21/2016 FROM GREG KRAUTZ TO MARK ABRAMOVITZ * * *

The Unusual Event was terminated at 2125 EDT after the plant restored normal offsite power.

The licensee notified the NRC Resident Inspector.

Notified the R2DO (Sandal), IRD (Gott), NRR EO (Miller), DHS SWO, FEMA, DHS NICC, and Nuclear SSA (via e-mail).

* * * UPDATE AT 2315 EDT ON 08/21/2016 FROM ANDREW TEREZAKIS TO MARK ABRAMOVITZ * * *

"On August 21, 2016 at 1926 EDT, St. Lucie Unit 1 experienced a reactor trip and a loss of offsite power due to a main generator inadvertent Energization Lockout Relay actuation. The cause of the lockout is currently under investigation. Coincident with the loss of offsite power, the four reactor coolant pumps deenergized. Both the 1A and 1B Emergency Diesel Generators started on demand and powered the safety related AC buses. All CEAs [Control Element Assemblies] fully inserted into the core. Offsite power to the switchyard remained available during the event, and at 2036, restoration of offsite power to St. Lucie Unit 1 was completed. Decay heat removal is being accomplished through natural circulation with stable conditions from Auxiliary Feedwater and Atmospheric Dump Valves. Currently maintaining pressurizer pressure at 1850 psia and Reactor Coolant System temperature at 532 degrees F.

"St. Lucie Unit 2 was unaffected and remains in Mode 1 at 100% power.

"This report is submitted in accordance with 10 CFR 50.72(b)(2)(iv)(B) for the reactor trip and 10 CFR 50.72(b)(3)(iv)(A) for the Specified System Actuation."

The licensee notified the NRC Resident Inspector.

Notified the R2DO (Sandal).

*** UPDATE AT 0048 EDT ON 08/22/2016 FROM ANDREW TEREZAKIS TO DANIEL MILLS ***

"On August 21, 2016 at 2330 EDT, St. Lucie Unit 1 started two Reactor Coolant Pumps to establish Forced Circulation in order to enhance Decay Heat removal. Plant conditions remain stable with Auxiliary Feedwater and Atmospheric Dump Valves in service.

"This report is submitted in accordance with 10 CFR 50.72(c)(2)(ii) as a follow up notification of protective measures taken."

The licensee notified the NRC Resident Inspector.

Notified the R2DO (Sandal).

<https://www.nrc.gov/reading-rm/doc-collections/event-status/event/2016/20160823en.html#en52191>