

Brand, Javier

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**From:** Nimitz, Ronald  
**Sent:** Friday, November 27, 2009 8:20 AM  
**To:** Nimitz, Ronald; Tift, Doug; White, John; Roberts, Darrell; Wilson, Peter  
**Cc:** McNamara, Nancy; Screnci, Diane; Sheehan, Neil; Brand, Javier; Spindler, David; Lew, David; Clifford, James; Barber, Scott; Bellamy, Ronald; Burket, Elise  
**Subject:** UPDATE - 11/27

I spoke with the site Radiation Protection Manager this morning (11/27) regarding status since Wednesday 11/25.

In summary... no additional AMS-4 alarms. AMS-4s changed out with AMS-3 units (heavy shielded). Both generators now in the mausoleum. Current activities are transferring the hot legs ("candy canes") down to the mausoleum for storage and closure of the mausoleum with the large shield blocks, and pipe end decon.

Of the original 145 personnel that alarmed the gamma sensitive portal monitors following the Nov 21 event, 60 still remain on radiological hold (no radiation work permit work, not yet final counted) to ensure they can pass the portal monitors before exiting the radiological controlled area (RCA). Of this 60, about 16 have been confirmed as unable to yet pass the portals. The remainder will be checked over the next day or so. Licensee continues to whole body count personnel, conduct outreach to workers, and it is likely that only one out of the 145 will have any dose greater than 10 millirem (~ 18 millirem as compared to a 5,000 millirem limit). Note that the licensee will engage national technical experts to formally review the body counts for adequacy of assessment. The licensee has sent off some of the samples for detailed radiological analysis to ensure all radionuclides have been incorporated into analysis. Principal nuclide is Cobalt 58, a short lived corrosion product (half-life 70.8 days). Co-58 is typically seen.

The licensee continues with its formal root cause to identify cause of airborne. No clear "smoking gun" is seen at this time but it is believed to be associated with ventilation system changes. Licensee has placed hold on ventilation to ensure no repeat and to ensure maintenance of negative pressure.

Prior to my leaving the site on 11/25. I walked down work in containment and reviewed licensee incorporation of its new "hot work permit" that was implemented to ensure potential airborne generating work is properly controlled with operable HEPA units etc. This is in addition to the RWP. I observed, in containment, the lifting of the "B" generator, and on-going pipe end decon of the "B" cold leg, and had selectively reviewed transport of the "A".

The licensee was implementing its new "60 minute courtesy notification protocol."

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**From:** Nimitz, Ronald  
**Sent:** Wednesday, November 25, 2009 7:17 AM  
**To:** Nimitz, Ronald; Tift, Doug; White, John; Roberts, Darrell; Wilson, Peter  
**Cc:** McNamara, Nancy; Screnci, Diane; Sheehan, Neil; Brand, Javier; Spindler, David; Lew, David; Clifford, James; Barber, Scott; Bellamy, Ronald; Burket, Elise  
**Subject:** Additional AMS-4 alarms -- no airborne - RE: TMI - second containment evacuation- possible media attention

Provided for information - New licensee protocol for Notification of state (60 minute) implemented  
No airborne radioactivity - TMI experienced 4 additional alarms associated with AMS-4s. Areas cleared.  
Building negative pressure.

- 1) 2219 /11/24 - One occurred on top of the B "D" ring 365 ft in Containment. Confirmatory sampling showed no airborne. Low flow alarm
- 2) 2325/11/24 - Outside personnel hatch in auxiliary building area- radon
- 3) 0445/0550/11/25- AMS alarmed (same machine) at B "D" ring 281 ft elevation. sampling showed no airborne. Initial cause attributed to lifting of B steam generator causing elevated dose rates. No airborne identified.

Licensee continuing to evaluate problems with spurious alarms on AMS-4 and attempting to resolve issue by change-out of machines with AMS-3 with higher shielding levels and other actions. Licensee continuing outreach overnite to work force to discuss issue and will continue outreach today.

Have a nice Thanksgiving....

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**From:** Nimitz, Ronald  
**Sent:** Tuesday, November 24, 2009 8:11 AM  
**To:** Tift, Doug; White, John; Roberts, Darrell; Wilson, Peter  
**Cc:** McNamara, Nancy; Screnci, Diane; Sheehan, Neil; Brand, Javier; Spindler, David; Lew, David; Clifford, James; Barber, Scott; Bellamy, Ronald; Burket, Elise  
**Subject:** RE: TMI - second containment evacuation- possible media attention

No..

Per licensee did not trip any requirement but after discussion incates will review possible courtesy call.

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**From:** Tift, Doug  
**Sent:** Tuesday, November 24, 2009 7:51 AM  
**To:** Nimitz, Ronald; White, John; Roberts, Darrell; Wilson, Peter  
**Cc:** McNamara, Nancy; Screnci, Diane; Sheehan, Neil; Brand, Javier; Spindler, David; Lew, David; Clifford, James; Barber, Scott; Bellamy, Ronald; Burket, Elise  
**Subject:** RE: TMI - second containment evacuation- possible media attention

Did the licensee notify PA?

-Doug

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**From:** Nimitz, Ronald  
**Sent:** Tuesday, November 24, 2009 7:31 AM  
**To:** White, John; Roberts, Darrell; Wilson, Peter  
**Cc:** McNamara, Nancy; Tift, Doug; Screnci, Diane; Sheehan, Neil; Brand, Javier; Spindler, David; Lew, David; Clifford, James; Barber, Scott; Bellamy, Ronald; Burket, Elise  
**Subject:** TMI - second containment evacuation- possible media attention

As of 0700 AM discussions with licensee this morning...This is preliminary information with follow-up occurring >>>> Three AMS-4 (local air monitors) alarms in containment over past 12 hours with associated local evacuations.

#### ALARM 1.

At about 2045 yesterday (11/23), TMI experienced a local AMS-4 alarm at the exit of the construction opening on the 365 ft elevation of containment. The local area was evacuated and grab samples confirmed that no airborne radioactivity was present. The licensee believes the alarm was due to power cycling causing an alarm on the local air sampler. Personnel in the area evacuated and showed no external or internal contamination. Air flow was into the building at about 109,000 cfm. The steam generator was in the process of being removed. The generator is currently outside the opening in preparation for being lowered. The generator was smear checked with about 73 smears and all were clean. Dose rates on the generator maximum are about 575 millirem/hr on contact with a drain line and 60 millirem/hr at 30 centimeters. General contact does rates on the side of the generator are about 30 millirem/hr.

#### ALARM 2 and 3

At about 0430 this morning work was occurring involving vacuuming inside the B RCP cold leg (281 ft elevation containment) at about that time an AMS 4 alarmed above the area at the 365 ft elevation of the "B" d ring. This area was evacuated and grab air samplers showed no radioactivity. Personnel evacuated form the area and showed no personnel contamination (internal or external). Shortly there after a second AMS-4 alarmed about

30 feet from the area where the vacuuming was occurring on the 281 ft elevation of containment. Work was secured in the area and this area was evacuated also. Again no air samples in the area or in containment showed any radioactivity event. This AMS-4 was seeing shine from the vacuum whose hose was reading up to 1000 millirem/hr. All personnel evacuated and cleared the personnel monitors.

Licensee has secured the potential airborne generating work and is reviewing the activity. The licensee was briefing (this morning) about 400- 500 workers to let them know what had occurred and what the radiological status was.

Discussions with radiation protection personnel indicated no plateout of airborne radioactivity (smearable contamination). Air samples continue to show no abnormal radioactivity.

#### NRC review-

The licensee is reviewing the cause of the alarms. There does not appear to have been any actual airborne radioactivity. The air samples pulled showed no airborne radioactivity. The AMS-4s have three types of alarms (power cycling, low alarm, high alarm). It appears the alarms may have been due to power cycling and elevated dose rates in the areas causing alarms. Notwithstanding, this has resulted in evacuations of the areas and potential worker concerns.

Review is still on-going associated with the previous airborne event/evacuation.

#### ADDITIONAL item..

Some workers working in the turbine building this past evening in a very a low dose area (no dose rates), noted slight increases in their dosimeter readings. Integrated dose of 0.2 millirem, They contacted radiation protection personnel, and cleared the area, Subsequent review identified that one of the workers had earlier received a Tc-99 medical isotope. He failed to notify HP of this because he was unaware he had received this medical radioisotope. The licensee is following-up.