

Clifford, James

NRV

From: Roberts, Darrell
Sent: Tuesday, November 24, 2009 12:14 PM
To: Brown, Frederick; Lew, David
Cc: Clifford, James; White, John; Wilson, Peter
Subject: RE: ACTION: Update on the TMI event int'l interest- so consider an INES rating

Thanks, Fred.

Is this INES rating final? Whose determination is it?

DJR

-----Original Message-----

From: Brown, Frederick
Sent: Tuesday, November 24, 2009 9:51 AM
To: Lew, David; Roberts, Darrell
Subject: Fw: ACTION: Update on the TMI event int'l interest- so consider an INES rating

FYI

----- Original Message -----

From: Sigmon, Rebecca
To: Brown, Frederick; Jones, Cynthia
Cc: Thorp, John; Cheok, Michael
Sent: Tue Nov 24 09:38:09 2009
Subject: RE: ACTION: Update on the TMI event int'l interest- so consider an INES rating

Below is a paragraph summary including updated information regarding the apparent cause as determined by the licensee.

During refueling outage activities, which included operations to replace both of the unit's steam generators, low levels of radiation activity were measured on radiation monitors installed in the reactor building. Personnel were directed to immediately leave the reactor building until the source of the activity could be identified. Monitoring devices at the reactor building steam generator replacement construction opening indicated a slight increase in activity. Levels have since returned to normal. No contamination was identified outside of the reactor building. Of 145 workers monitored for exposure to the radiation activity, about 19 were initially found to have exposures greater than 0.1 mSv (10 mrem), with the highest exposure estimated to be 0.38 mSv (38 mrem). No worker approached or exceeded any exposure limits. The licensee has concluded that the apparent cause of the event was a change in the containment ventilation lineup in conjunction with some open reactor coolant system piping penetrations. The NRC Resident Inspectors and Regional Health Physicists are

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monitoring the corrective actions put in place by the licensee to prevent recurrence. The reactor was defueled at the time of the event. This event has been rated Level 0 on the INES scale.

Rebecca Sigmon
Reactor Systems Engineer
NRR/DIRS/IOEB
Operating Experience Branch
(301) 415-4018
Rebecca.Sigmon@nrc.gov

-----Original Message-----

From: Brown, Frederick
Sent: Tuesday, November 24, 2009 8:54 AM
To: Jones, Cynthia
Cc: Leeds, Eric; Boger, Bruce; Wiggins, Jim; Dean, Bill; Sigmon, Rebecca; Thorp, John
Subject: RE: ACTION: Update on the TMI event int'l interest- so consider an INES rating

Thanks Cyndi, we'll get you the new paragraph.

-----Original Message-----

From: Jones, Cynthia
Sent: Monday, November 23, 2009 5:13 PM
To: Brown, Frederick
Cc: Leeds, Eric; Boger, Bruce; Wiggins, Jim; Dean, Bill
Subject: Re: ACTION: Update on the TMI event int'l interest- so consider an INES rating

Fred-

Thanks for the clarification and agreement to transmit info to inquiries as a Level 0- pls send me the paragraph as soon as you can tomorrow.

I think it would be a good idea for our staffs to meet on this to discuss lessons learned on this as this is exactly the type of event INES communication was intended for; those events which are not Level 2 but have major public interest. We could have simply and quickly quelled any speculation today by just issuing a Level 0 ERF to IAEA.

I look forward to our discussions, as always-

Cyndi

Cynthia G. Jones, Ph.D.

Sr. Technical Advisor for Nuclear Security,
NRC/NSIR
Sent from blackberry

----- Original Message -----

From: Brown, Frederick

To: Jones, Cynthia

Cc: Leeds, Eric; Boger, Bruce

Sent: Mon Nov 23 16:50:54 2009

Subject: RE: ACTION: Update on the TMI event int'l interest- so consider an INES rating

Cyndi,

1) I expect that OPA will reconsider their position based on all the traffic. In the mean time, I stand by my staff's assessment of a "0", and we can share an up-dated paragraph (better cause evaluation) with you tomorrow for discussion with our international peers.

2) We do not intend to make an official submittal unless OPA does reconsider, since they have the Agency lead on responding to the press at this point.

Fred

-----Original Message-----

From: Jones, Cynthia

Sent: Monday, November 23, 2009 4:29 PM

To: Brown, Frederick; Leeds, Eric

Cc: Cullingford, Michael; Zimmerman, Jacob; Cheok, Michael; Orders, William; Johnson, Michael; Burnell, Scott; Brenner, Eliot; Leach, Melvyn; McDermott, Brian; Lew, David; Roberts, Darrell; Sigmon, Rebecca; Thomas, Eric; Thorp, John; Boger, Bruce

Subject: RE: ACTION: Update on the TMI event int'l interest- so consider an INES rating

Fred-

Earlier today I have asked Rebecca for a statement from NRC/NRR that I can provide to the countries National Officers that have inquired about this.

Are you providing the authorization from NRR that we tell PAHO and other the other 7 Member States of the IAEA that this is a Level 0 under INES? Some other basic info about the event should also be provided to try and stop an end to the number of inquiries as we have received.

I appreciate the help on this- thanks
Cyndi

From: Brown, Frederick

Sent: Monday, November 23, 2009 4:27 PM

To: Leeds, Eric

Cc: Cullingford, Michael; Zimmerman, Jacob; Cheok, Michael; Orders, William; Johnson, Michael; Jones, Cynthia; Burnell, Scott; Brenner, Eliot; Leach, Melvyn; McDermott, Brian; Lew, David; Roberts, Darrell; Sigmon, Rebecca; Thomas, Eric; Thorp, John; Boger, Bruce
Subject: RE: ACTION: Update on the TMI event int'l interest- so consider an INES rating

In an effort to ensure that we would not be doing more harm than good, we coordinated with OPA and Region I prior to submitting the INES notification to the IAEA.

OPA felt strongly that making a notification at this time would be counterproductive. Based on that input, and unless something changes, we do not intend to make the notification.

The NRR Operating Experience Branch rates every EN against the INES criteria as a part of our assessment process. This event was rated at the "0" level if anyone asks.

Fred

-----Original Message-----

From: Leeds, Eric

Sent: Monday, November 23, 2009 12:56 PM

To: Boger, Bruce

Cc: Cullingford, Michael; Zimmerman, Jacob; Brown, Frederick; Cheok, Michael; Orders, William; Johnson, Michael

Subject: ACTION: Update on the TMI event int'l interest- so consider an INES rating

Importance: High

Bruce -

I think Cindy makes a good suggestion below. Who on the staff would take this for action?

Eric J. Leeds, Director

Office of Nuclear Reactor Regulation

U.S. Nuclear Regulatory Commission

301-415-1270

-----Original Message-----

From: Jones, Cynthia

Sent: Monday, November 23, 2009 9:39 AM

To: Sigmon, Rebecca

Cc: Dean, Bill; Wiggins, Jim; Leeds, Eric; Ross-Lee, MaryJane; Thorp, John

Subject: Re: Update on the TMI event int'l interest- so consider an INES rating

Importance: High

Thx Rebecca

Based on what you have given me it based on exposures its a level 0 (NRC does not have dose constraints). If you gather more info from the licensee I agree with you it could rise to a Level 1. I think it would be a good idea for NRR mgmt to decide to issue an ERF for this as a Level 1 or 0 just to help alleviate the concerns of the int'l community (I have had inquiries from Bulgaria, IAEA, Germany and the UK on this so far).

Look forward to hearing what NRR decides to do. And remind the mgmt that this would be a good example of expaining the safety signifiacne of the event via INES- esp for your international counterparts who are wondering what the INES rating would be. But try to issue a provisional ERF within a day to make NRC's point.

Cyndi

Cynthia G. Jones, Ph.D.
Sr. Technical Advisor for Nuclear Security,
NRC/NSIR
Sent from blackberry

----- Original Message -----

From: Sigmon, Rebecca
To: Jones, Cynthia
Cc: Ross-Lee, MaryJane; Rini, Brett; Thorp, John; Thomas, Eric; Brown, Michael
Sent: Mon Nov 23 08:14:05 2009
Subject: Update on the TMI event

Below is the latest update I have from Region I. Highest dose appears to be 38 mrem with about 20 people showing excess exposure - I'd call it a nominal Level 0 that could possibly be considered for upgrade to Level 1 based on the number of people involved. I don't see any indication that the criteria for consideration of a Level 2 under radiological barriers and controls were tripped. The reactor is currently defueled so there were still a substantial number of safety layers in place to prevent the maximum possible release (though pending determination of the cause a Level 1 under Defense in Depth might be warranted).

As far as submission to NEWS based on significant public interest, I can float the idea on the NRR end; more information as to the cause will hopefully be available in the next couple of hours.

Rebecca Sigmon
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NRR/DIRS/IOEB
Operating Experience Branch
(301) 415-4018

Rebecca.Sigmon@nrc.gov

-----Original Message-----

From: Bamford, Peter
Sent: Monday, November 23, 2009 5:49 AM
To: NRR_DIRS_IOEB Distribution
Subject: FW: Update on the TMI event

This is information available as of Sunday evening(11/22). I'll send an update Mon AM sometime around 0800.

Peter Bamford
NRR/DORL/LPL 1-2
Limerick & TMI-1 Project Manager
301-415-2833

-----Original Message-----

From: Bamford, Peter
Sent: Sunday, November 22, 2009 7:09 PM
To: Chernoff, Harold
Cc: Nelson, Robert; Gitter, Joseph
Subject: FW: Update on the TMI event

Harold, I participated in a conference call today (Sunday 11/22) at 4:30 PM sponsored by the Region at which they provided an update to this weekend's activities at TMI-1. Here is a summary:

Approximately at 4 PM Saturday 11/21 TMI had an event involving loss of contamination control inside containment. At the time the reactor was defueled with a hole cut in the containment wall to support the ongoing SG replacement outage. The licensee is not sure at this time what activity inside containment led to the problem. Their investigation is focusing on two activities (1) "A" piping loop decontamination activities or (2) some work on a drain line on the B" SG.

At the time of the event 175 workers were inside containment. Of these workers 151 people were selected for detailed monitoring based on nasal smears and portal monitor readings. Of the 151, about 20 people have potentially received doses greater than 10 mR. Two workers initially haven calculated doses of 183 and 202 mR. However the region feels that these estimates may be in error and are being re-evaluated. The next highest dose to a worker was 38 mR. The region appeared confident the the 38 mR person would end up being the highest exposure for this event. No site worker left the site with external contamination. Airborne contamination levels inside containment have been restored to pre-event levels and cleanup of containment surfaces is in progress. The tarp that was covering the containment opening was contaminated on its inside surface and is in the process of being replaced.

With the open equipment hatch and the SG opening there was the potential for a release outside of containment. At the time of the event a slight positive pressure existed in containment. This has now been corrected to what it should be, ie a slightly negative pressure. Based on readings from radiation monitors present at the SG opening and the duration of the positive pressure, the estimates of release levels are still less than one percent of the quarterly ODCM limit.

This event has generated a significant amount of media interest. Regional OPA and state liason officers have taken inquiries from multiple radio, print media and TV stations. They have performed a media briefing at TMI at 2 PM today and have conducted an interview with CNN. Good Morning America is also interested and requested an interview with the Chariman tomorrow (Monday) morning. The region offered them Sam Collins or possibly the EDO representing the NRC. (The Chariman's office and the acting DEDO were represented on the 4:30 pm call today.) GMA said they may decide to interview just an Exelon manager (possibly Bill Noll the Site VP) if they cannot get the Chariman. The GMA interview was left to be decided after the phone call. If it occurs, it sounded to me that it would likely take place in a Philadelphia studio with Sam representing the NRC. The region feels the local reporting has been balanced and factual with no fear-mongering.

The PA governor's office has been notified and they understand this is a low level event. They apparently have some concerns about notification timeliness. The PA state was notified about 9:30 PM last night (event time was 4 PM). Based on the PA state notification, an event report was filed with the HOO (event number 45514). This event was far below levels that would warrant an unusual event declaration.

Activities for the remainder of the evening were to sort out the GMA interview and respond to further media requests (regional OPA lead). The rest of the regional activities are going to stand down at this time.

I'll update you in the morning after the 0730 call.

Pete
