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Event Initial Report

Rapport initial d'événement

Bruce Power

Bruce Power

**Transformer Fire and Mineral Oil Leak at
Unit 8 of Bruce B Nuclear Generating
Station**

**Incendie à un transformateur électrique et
fuite d'huile minérale à la tranche 8 de la
centrale nucléaire de Bruce-B**

Commission Meeting

Réunion de la Commission

December 13, 2018

Le 13 décembre 2018

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EVENT INITIAL REPORT (EIR)

EIR: Bruce B Unit 8 Station Service Transformer Fire and Mineral Oil Leak	
Prepared by: Directorate of Power Reactor Regulation, Bruce Regulatory Program Division	
Licensee: Bruce Power	Location: Bruce B Unit 8
Date Event was Discovered: December 6, 2018	Have Regulatory Reporting Requirements been met? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Proactive Disclosure: Licensee: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> CNSC: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Overview	
Reporting Criteria: A declaration of an emergency, within the nuclear facility, where personnel or resources are mobilized by the licensee in response to an unexpected occurrence that creates a hazard to the safe operation of the nuclear facility, to the environment, to the health and safety of persons.	
Description: At 19:17 hrs on December 6, 2018, the CNSC duty officer (DO) was informed by Bruce Power of a fire at the Unit 8 station service transformer (SST or TSS8) outside of the Bruce B Power House Building. Unit 8 had been shut down for a scheduled maintenance outage several weeks prior and was in Over Poison Guaranteed Shutdown State (OPGSS). The automatic deluge fire suppression system activated per design and the Bruce Power onsite fire brigade was deployed to the scene. Bruce Power also activated their Emergency Management Centre to provide additional support to the Bruce B response. The transformer casing cracked and mineral oil, mixed with firefighting water and foam, escaped from the retention basin around the transformer and onto the Bruce site. A containment boundary was set-up by Bruce Power to mitigate the impact to the environment from possible run-off of mineral oil from this site (the mineral oil does not contain PCBs). The fire was brought under control and extinguished after several hours, but the transformer continued to smolder and required ongoing water spray. Bruce Power promptly began containment and removal of mineral oil, water and foam from the site and monitoring the lake for impact. Bruce Power reported that there was no obvious impact on the lake (i.e. no sheen on water surface observed). Bruce Power notified the Ministry of Environment, who inspected the site on December 7 and reported they were satisfied with Bruce Power's containment actions. The transformer continued to smolder and required ongoing water spray until fully extinguished on December 9. There was no impact on nuclear systems and there were no radiological releases as a result of the fire. There was no impact on the public as a result of this event. Cause(s): The cause of the fire has yet to be determined.	
Impact of the Event	
On People: How many workers have been (or may be) affected? one How many members of the public have been (or may be) affected by the event? none How were they affected? A Bruce Power firefighter was treated for heat stress during the event.	
On the Environment: It appears that most of the mineral oil was contained on the Bruce site, however there is a potential that some mineral oil may have reached the lake. Bruce Power will continue to monitor the lake.	
Other Implications: The return to service of Unit 8 is being delayed by approximately 2 days from the original plan.	
Licensee Actions	
Taken or in Progress: Bruce Power is performing remediation work to collect oil from the site and monitoring the impact on the environment. An investigation of the cause and extent of condition review are underway.	
Planned: Bruce Power will initiate a root cause investigation. The date for the completion of this is still to be determined.	

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CNSC Actions

Taken or in Progress: The CNSC Duty Officer followed CNSC procedures and informed the CNSC Bruce Regulatory Program Director who contacted the Bruce B station for up to date information. CNSC staff remained in contact with the licensee, and deployed a senior site inspector to the Bruce Power Emergency Management Centre (EMC) at approximately 22:00 on December 6 to monitor the Bruce Power response. CNSC staff are satisfied that appropriate actions were taken during the course of the event. The appropriate notifications to provincial authorities were made, and the public was informed of the event.

Planned: CNSC staff will continue to monitor Bruce Power's recovery activities and will assess Bruce Power's root cause investigation and corrective action plans.

Additional reporting to the Commission Members anticipated:

Yes

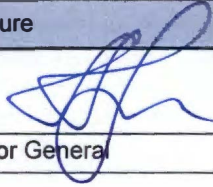
No

If Yes, provide method of reporting: Details of the root cause analysis will be reported in a future Status Report on Power Reactors.

Name and Title

Signature

G. Frappier



Directorate of Power Reactor Regulation

Director General

11 December 2011
Date

EVENT INITIAL REPORT (EIR)

Figure 1: Location of the Bruce B Unit 8 Station Service Transformer (SST) involved in the Fire

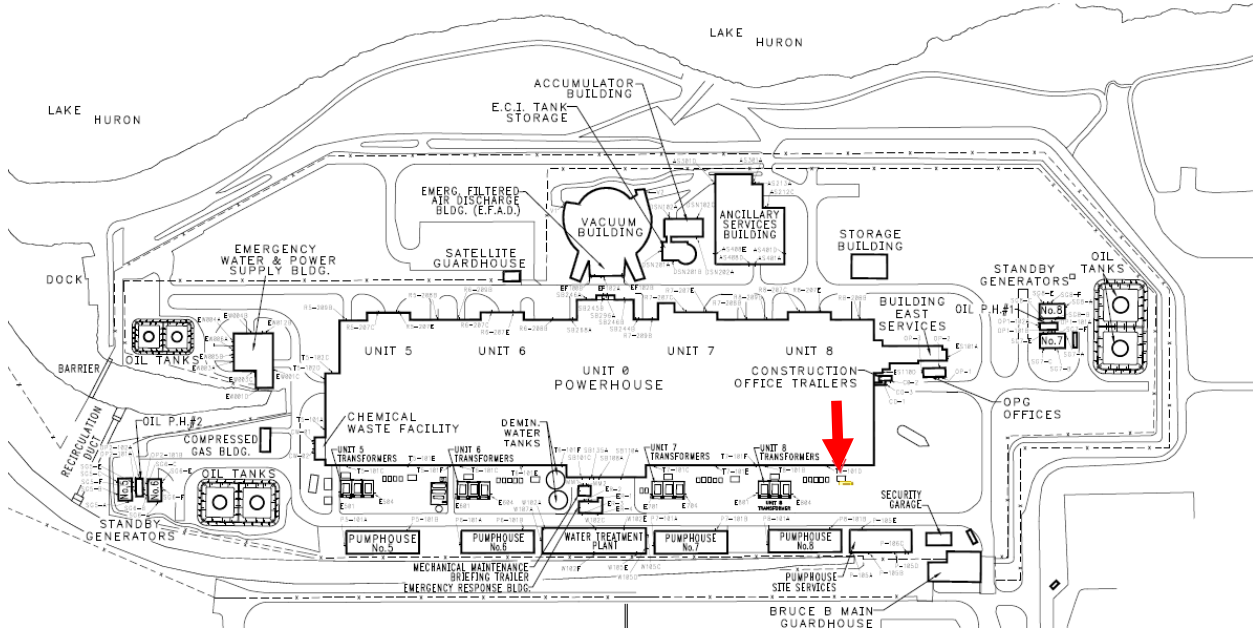


Figure 2: Photograph of Bruce B Showing the Location of the Unit 8 SST Fire



EVENT INITIAL REPORT (EIR)

Figure 3: Photograph of a Station Service Transformer at the Bruce site



Figure 4: Photograph of Transformer and Powerhouse Wall on Dec. 7, 2018 after the Fire was Extinguished

