

October 20, 2011

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-III-11-014

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region III staff on this date.

Facility

Davis-Besse Nuclear Power Station
FirstEnergy Nuclear Operating Company
Oak Harbor, OH
Docket: 50-346
License: NPF-3

Licensee Emergency Classification

Notification of Unusual Event
 Alert
 Site Area Emergency
 General Emergency
 Not Applicable

SUBJECT: DAVIS-BESSE SHIELD BUILDING INDICATIONS

DESCRIPTION:

On October 1, 2011, Davis-Besse shut down for a planned maintenance outage to replace the reactor vessel closure head. The reactor vessel closure head is bolted on top of the reactor vessel which is located inside a 1.5 inch thick steel containment vessel surrounded by a 2.5 foot thick free-standing, reinforced concrete, shield building. The majority of the shield building vertical exterior has additional non-structural, architectural concrete up to 1.5 foot thick separated by grooves. The containment vessel and shield building are separated by a 4.5 foot annulus/hollow space (see attachments). In order to remove the old reactor vessel closure head and install the new one, workers planned to create an opening in the reinforced concrete shield building and the steel containment vessel. The method used for the removal of concrete to create the temporary construction opening was hydro-demolition. Hydro-demolition is a method of concrete removal that utilizes high pressure water.

On October 10, 2011, during hydro-demolition operations, the licensee identified indications of potential fracture lines in various sections of the opening in the non-structural, architectural concrete of the shield building. The licensee is currently involved in activities to characterize these indications and determine what further actions need to be taken to address this issue. Due to the annulus/hollow space that separates the reinforced shield building and the steel containment vessel, these indications do not affect the containment vessel. There are no indications present in the containment vessel.

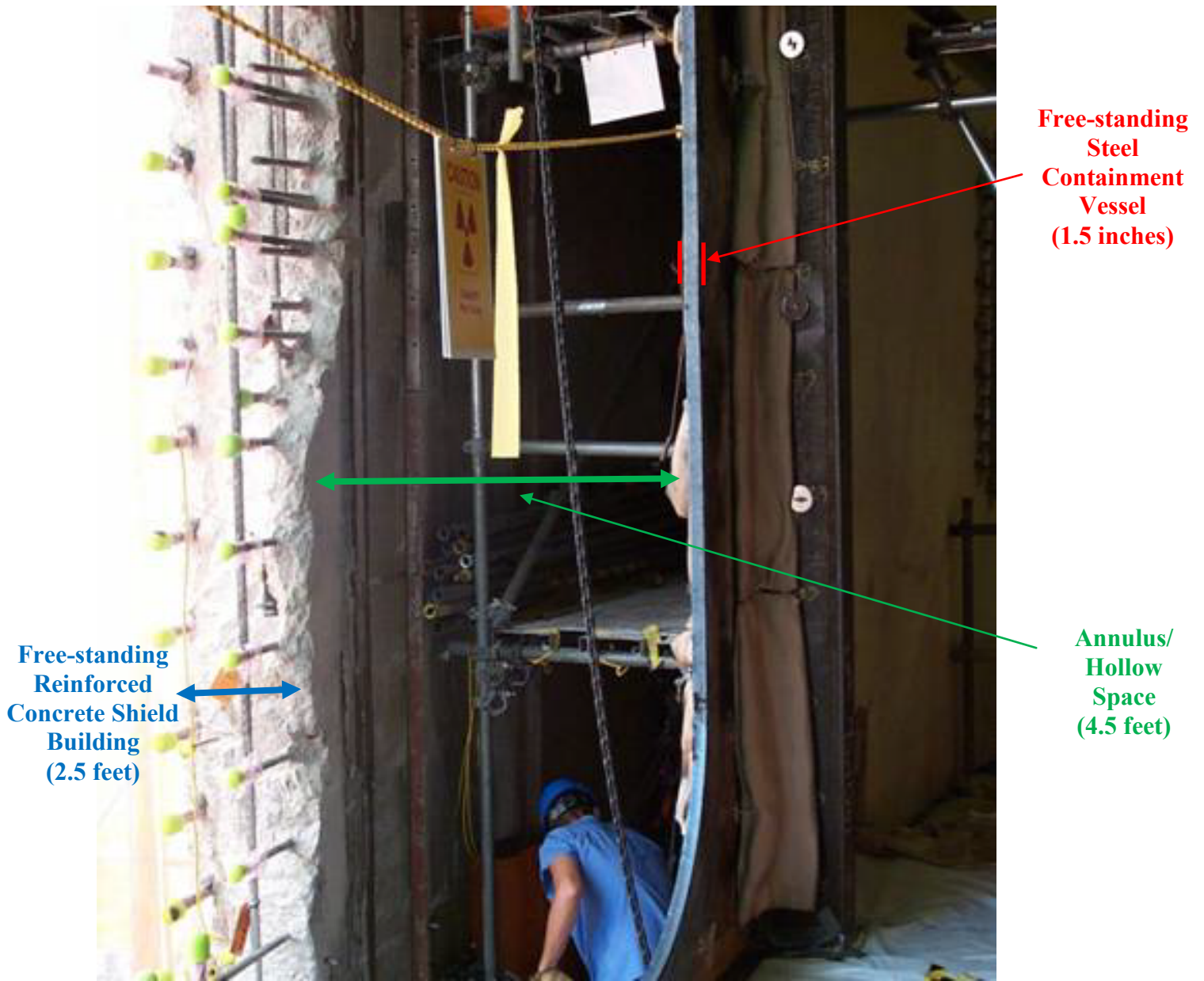
The discovery of the indications in the concrete of the shield building does not represent an immediate safety concern because the plant is currently shutdown and the reactor vessel is defueled. If there are any challenges identified to the design function of the shield building they will have to be resolved before the plant restarts.

NRC inspectors were immediately notified of the indications of potential fracture lines in the concrete on October 10, 2011, and have been closely monitoring the plant's actions and analysis. Currently, NRC inspectors are on-site reviewing and conducting their own independent inspection activities associated with the licensee's replacement of the reactor vessel closure head. The identification of potential fracture lines in the shield building was not considered a reportable event according to the NRC regulations because there was no immediate safety concern identified and the reactor is shutdown.

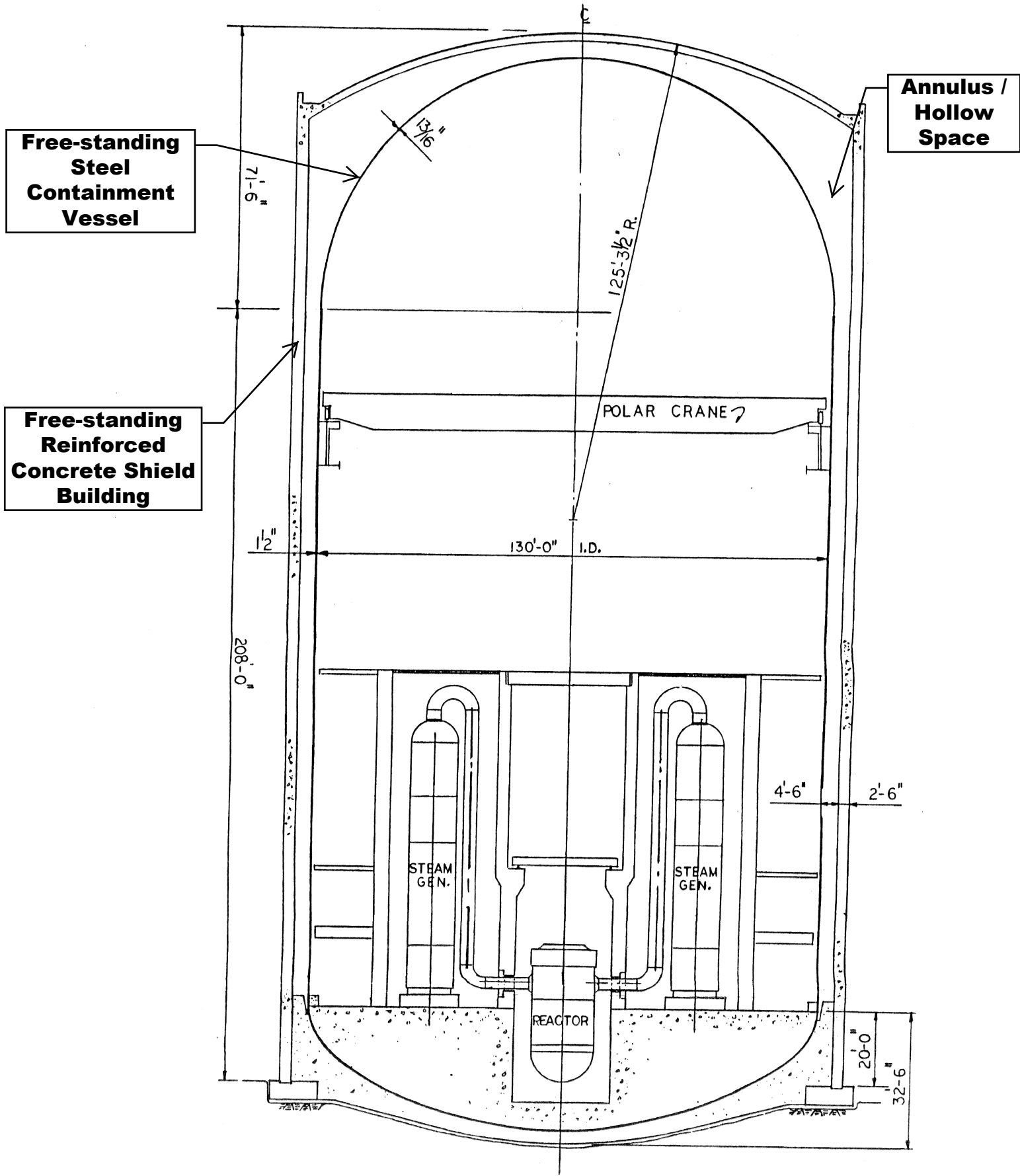
This preliminary notification is issued for information only. State officials have been informed. The information presented herein has been discussed with the licensee and is current as of October 19, 2011 at 4:30 p.m. (EDT).

ADAMS Accession Number: ML11293A092.

CONTACT:
David Hills, DRS
630/829-9733



Note: This is a picture of the opening that was performed to replace the reactor vessel closure head in 2002, and is representative of what the current opening will eventually look like. The architectural concrete is not visible in this picture.



TYPICAL SECTION

Simplified Davis-Besse Shield Building and Steel Containment Vessel Drawing