From: Bock, Curt <Curt.Bock@nexteraenergy.com>
Sent: Tuesday, March 29, 2016 8:57 AM
To: Minarik, Anthony
Subject: [External_Sender] Duane Arnold Update associated with Riverine and LIP

By letter dated March 10, 2014, NextEra Energy, LLC (NextEra) provided its Flood Hazard Reevaluation Report (FHRR) for Duane Arnold Energy Center (DAEC), in response to Enclosure 2 of the U.S. Nuclear Regulatory Commission (NRC) request for information pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.54(f) (hereafter referred to as the 50.54(f) letter) dated March 12, 2012. The NextEra response contained information related to each re-evaluated flood-causing mechanism that is currently being reviewed by the NRC.

Due to ongoing audit discussions between the NRC staff and NextEra, it is necessary to update the re-evaluated flood elevations associated with the Riverine (Streams and Rivers) flood-causing mechanism as well as provide flooding elevations discussed for the Local Intense Precipitation (LIP) flood-causing mechanism.

The re-evaluated flood elevation given in the FHRR for Riverine Flooding is a stilllwater elevation of 763.9 feet mean sea level (MSL) and a wind-wave activity affected elevation of 766.5 feet MSL (an additional 2.6 feet due to wind-wave activity). These values were based on a drainage basin area of 7,824 square miles. The drainage basin area has been revised to 6,250 square miles and this raised the stillwater elevation for Riverine Flooding (after refining the site-specific probable maximum precipitation event) to 765.2 feet MSL with a wind-wave activity affected elevation of 767.8 feet MSL. This change increased the inundation levels but did not impact the wind-wave analysis. This is because the fetch length is limited by obstacles (i.e. trees, other vegetation) and remained unaffected by the change in basin size. Further details of this change (including the wind-wave analysis) will be submitted at a later date.

During the audit discussions NextEra, provided flooding elevations associated with a LIP event. In the FHRR, only the flooding depths at the four critical door locations for the Turbine Building were given. The flood elevations (the door elevation plus the depths) as a result of LIP-caused flooding at the four critical doors are provided in the table below (NOTE: these elevations are relative to MSL and taken directly from the modeling data provided to the NRC):

Door ID	FLO-2D Cell ID	FLO-2D Cell Elevation (ft)	Max. Water Surface Elevation (ft)	Max. Water Depth (ft)
154	80692	757.39	758.00	0.61
124	80691	757.46	757.96	0.50
136	85539	757.39	758.23	0.84
137	85538	757.39	758.23	0.84

Regards,
Curt Bock
Site Fukushima Lead

Nexteraenergy – Duane Arnold