NEXTera ENERGY
DUANE ARNOLD

June 8, 2012

NG-12-0232
10 CFR 50.54(f)

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Duane Arnold Energy Center
Docket No. 50-331
Renewed Op. License No. DPR-49

NextEra Energy Duane Arnold, LLC's 90 Day Response to NRC Letter, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident," dated March 12, 2012

References: 1) NRC Letter, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident," dated March 12, 2012

2) NextEra Energy Duane Arnold, LLC's 60 Day Response to NRC Letter, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident," NG-12-0200, May 11, 2012

On March 12, 2012, the NRC issued the Reference 1 letter to all NRC power reactor licensees and holders of construction permits in active or deferred status. Enclosure 5 of the referenced letter contains specific Requested Actions and Requested Information associated with Recommendation 9.3 for Emergency Preparedness (EP) programs. In accordance with 10 CFR 50.54, "Conditions of licenses," paragraph (f), addressees were requested to submit a written response to the information requests within 90 days.

In the Reference 2 letter, NextEra Energy Duane Arnold, LLC (hereafter, NextEra Energy Duane Arnold) proposed an alternative course of action for providing portions of the requested information in Reference 1. The alternative course of action included revised information due dates and the basis for those dates. As described in that alternative course of action, this letter transmits the responses

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to the following information requested in Reference 1:

- Enclosure 5, Communications request #2
- Enclosure 5, Staffing request #3
- Enclosure 5, Staffing request #4
- Enclosure 5, Staffing request #5

This letter makes no new commitments or changes to any existing commitments.

If you have any questions or require additional information, please contact Ken Putnam at 319-851-7238.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on June 8, 2012

Rob Anderson for

Peter Wells
Vice President, Duane Arnold Energy Center
NextEra Energy Duane Arnold, LLC

Enclosure

cc: NRC Regional Administrator
NRC Resident Inspector
NRC Project Manager

Communications

NRC Requested Information – Enclosure 5

Request #2: Describe any interim actions that have been taken or are planned to be taken to enhance existing communications systems power supplies until the communications assessment and the resulting actions are complete.

NextEra Energy Duane Arnold Response

In April of this year, NextEra Energy Duane Arnold installed an Uninterruptible Power Supply (UPS) to back-up the existing satellite telecommunications system at the Duane Arnold Energy Center (DAEC). The new UPS system will power the satellite phone system for at least 24 hours after a loss of the normal offsite AC power supply.

In addition, NextEra Energy Duane Arnold has ordered portable satellite phones that are independent of the above permanently-installed satellite telecommunication system. The portable satellite phones will be stationed in the various Emergency Response Organization (ERO) facilities and will allow for communications between ERO facilities, as well as with outside contacts, in the event that both normal land lines and cell phone communication are lost. The portable satellite phone system installation is being tracked in the site Corrective Action Program and is currently scheduled to be available for use by September 28, 2012.

Staffing

NRC Requested Information – Enclosure 5

Request #3: Identify how the augmented staff would be notified given degraded communications capabilities.

NextEra Energy Duane Arnold Response

The normal method of activating the DAEC ERO for staff augmentation is by an electronic call-out system that utilizes hard line phones, cell phone (voice), cell phone SMS (text), email, or pager to alert staff. This system can be activated from any phone (commercial, cell, or satellite) using access codes. The system itself is housed and maintained by a vendor at two geographically separate, redundant sites outside the state of Iowa. Therefore, the call-out system itself would be unaffected by a large-scale event in the vicinity of the DAEC.

Local cell phone towers/antennae in the nearby communities are needed to transmit signals from the system to cell phones or pagers. A significant number of cell phone towers exist within transmission distance of the areas where the DAEC ERO personnel reside. Many of these installations have alternate power sources independent of the electrical grid. A review of cell tower locations in the DAEC area shows that, even with a large-area loss of cell towers in the vicinity of DAEC (a 25 mile radius is the default evaluation distance recommended by NEI 12-01), there are a significant number of towers that would remain just outside this 25 mile zone that could provide coverage to much of the affected area.

DAEC has implemented guidance to the station ERO regarding situations where normal notification methods may be unavailable. This was done in response to a potential loss of electrical grid situations, such as those described in INPO SOER 99-01.

This guidance also serves to enable augmentation of ERO staff during other events in which communications capability was degraded or lost. The instructions provided to DAEC augmentation staff are as follows:

> "If you are on duty and become aware of a grid disturbance, take the following actions:
>
> - Monitor local radio communications for impact on the Grid structure.
> - Should the situation appear to be a major disturbance to the Grid structure, ensure your home and family are safe, then report to your emergency response facility."

While any one of the communication systems used by the ERO call-out system may be lost or degraded during a large-scale event, there is a high likelihood that enough of the system

would still function to provide notification to a significant number of DAEC ERO staff. DAEC ERO personnel reside in diverse locations in surrounding communities, thus increasing the potential that a significant number of augmented staff would be successfully notified, even with substantial impairment of local communications infrastructure.

Request #4: Identify the methods of access (e.g., roadways, navigable bodies of water and dockage, airlift, etc.) to the site that are expected to be available after a widespread large scale natural event.

NextEra Energy Duane Arnold Response

Duane Arnold Energy Center (DAEC) nuclear site is located on the west side of the Cedar River, north of Palo township in Linn County, Iowa. Access routes to the DAEC site are primarily from the north and south of the plant site. Palo Marsh Road runs north/south and is less than 1 mile west of the DAEC site. The primary site access road connects with Palo Marsh Road just south of DAEC and enters the site from the south. An alternate site access connects with Palo Marsh Road just north of DAEC and enters the site from the north.

The Cedar River is not considered to be a navigable river (i.e., usable by large watercraft). The river runs through Linn County primarily from the northwest to the southeast. It runs through Cedar Rapids (approximate population - 125,000), which lies approximately 10 miles southeast of DAEC.

The Cedar River is the most likely physical impediment to site access for a sustained period of time. A seismic event or other natural disaster could potentially impact bridges crossing the Cedar River, but it is expected that a severe flood would be the most challenging natural event.

The primary access routes to the site via Palo Marsh Road are described below in relation to the Cedar River geography.

Southern Access Routes:

1. Covington Road (Highway 94) – This route provides access from Cedar Rapids (Southeast of DAEC) to the site through the city of Palo to Palo Marsh Road. Covington Road is on the west side of the Cedar River and provides access to the site without crossing the Cedar River. In Cedar Rapids, this road accesses Interstate 380, which is a major highway running north/south and is east of DAEC. Interstate 380 has an elevated bridge that crosses the Cedar River in Cedar Rapids.

2. Blairs Ferry Road – This route also provides access from Cedar Rapids (Southeast of DAEC) to the site and connects with Palo Marsh Road just north of Palo. This

road is primarily on the east side of the Cedar River. The Blairs Ferry Road Bridge crosses the Cedar River just east of Palo, where it connects to Palo Marsh Road.

3. County Highway E36 – Covington Road becomes County Highway E36 west of Palo and provides access to the site from areas west of DAEC via Palo Marsh Road.

Northern Access Route:

1. Palo Marsh Road continues north of DAEC where it connects with Lewis Access Road running east/west. Lewis Access road crosses the Cedar River north of DAEC and connects with Interstate 380.

A review was conducted to determine where DAEC staff resides with respect to the Cedar River. The results of this study are that roughly 45% of Staff reside west of the river and 55% reside east of the river. If travel across the river were restricted, a significant portion of DAEC personnel would still be able to respond to their ERO facilities. The Emergency Operations Facility (EOF) is located east of the Cedar River, which would provide key emergency support functions if personnel were unable to cross the Cedar River from their residences and reach the DAEC. Given the advanced warning and predictability of flooding events, the potential exists for pre-staging emergency response personnel in desired locations, as well.

Operating Experience from 2008 Flood:

In June of 2008, the Cedar River in the area of Cedar Rapids and DAEC experienced a 500-year flood event. At the crest of the flood, the Blairs Ferry Road Bridge (south of DAEC) and Lewis Access Bridge (north of DAEC) were blocked by flood waters. The Interstate 380 Bridge was well above the flooded river level and provided a means to cross the river and gain access to the site via Covington Road (Highway 94). Also during the crest, the southern site access road coming from Palo Marsh Road to the site was blocked. Site personnel used the north access road for getting to and from the site. At no time during the event was the DAEC inaccessible by land.

Conclusion

Flooding is the primary threat to site access at DAEC. Given the geographic diversity of access routes to the site and operating experience from the 2008 flood, the likelihood of a flood large enough to block all access routes is extremely low. Impact from tornados is less significant, given the relatively limited geographic area affected. Other natural disasters impacting large areas such as seismic events or winter storms could impair access to the ERO facilities but they are not expected to be as challenging or as sustained in duration as a flood.

In the case of an unprecedented event that would block all access routes to the DAEC, the State of Iowa could bring support in the form of personnel and equipment to clear debris

and restore access. The State could also make available all-terrain vehicles that could navigate around obstructions or use of helicopter transport to shuttle personnel to and from the DAEC, as directed by the Iowa State Department of Public Defense, Homeland Security/Emergency Management Division.

Winter storm events have the potential to temporarily impair multiple travel routes, but they are fairly predictable events and State and Local agencies routinely prioritize restoring and maintaining primary access roads to the DAEC.

Request #5: Identify any interim actions that have been taken or are planned prior to the completion of the staffing assessment.

NextEra Energy Duane Arnold Response

NextEra Energy Duane Arnold has not identified any interim actions regarding augmented ERO staffing.