



May 7, 2020

NG-20-0037

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

Correction to the 2018 Annual Radiological Environmental Operating Report

The 2018 Annual Radiological Environmental Operating Report was provided to the NRC on May 14, 2019, ADAMS Accession No. ML19134A051. That report contained a typographical error such that the table heading on page E-3 cited 2017 when it should have cited 2018. NextEra Energy Duane Arnold, LLC has determined the error to be small in accordance with Regulatory Guide 1.21, Revision 2, Section 7.1. The affected page has been corrected and a copy is enclosed. The correction is indicated with a revision bar.

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

Should you have any questions regarding this matter, please contact Michael Casey at (319) 851-7606.

A handwritten signature in blue ink, appearing to read "Dean Curtland".

Dean Curtland
Director, Site Operations
NextEra Energy Duane Arnold, LLC

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, DAEC, USNRC
Senior Resident Inspector, DAEC, USNRC

Enclosure to NG-20-0037

Duane Arnold Energy Center
Corrected Page E-3 of the
2018 Annual Radiological Environmental Operating Report

1 page follows

- 5.) The skin dose equivalent to the hypothetical maximally exposed individual from noble gases was 0.00520 mrem, at 1,760 meters towards the North.
- 6.) The hypothetical maximally exposed organ due to airborne iodines and particulates with half-lives greater than eight days (excluding carbon-14) was the lungs of a child at 974 meters towards the West-Southwest, with an estimated dose equivalent of 0.00674 mrem.
- 7.) The hypothetical maximally exposed organ due to airborne carbon-14 was the bone of a child located 4,022 meters to the West-Northwest of the site. The dose was 0.115 mrem.

Conclusion

No measurable dose due to the operation of the DAEC or the DAEC ISFSI was detected by environmental TLDs in 2018. The calculated doses are below the regulatory limits stated in Appendix I to 10CFR50, 40CFR190, and 10 CFR 72.104.

Estimated Maximum Offsite Individual Doses for 2018

Type	Age Group	Distance (meters)	Direction	Dose or Dose Equivalent (mrem)	Annual 10 CFR 50, Appendix I "Limit"
Direct Radiation (as measured by TLDs)				None	*
Liquid Releases					
Whole Body Dose	Child	D*	SE	0.0301 mrem	3 mrem
Organ Dose	Child - Liver	D*	SE	0.0301 mrem	10 mrem
Noble Gas					
Gamma Air Dose		481	SSE	0.00269 mrad	10 mrad
Beta Air Dose		2,416	N	0.00016 mrad	20 mrad
Whole Body	All	1,760	N	0.00510 mrem	5 mrem
Skin	Child	1,760	N	0.00520 mrem	15 mrem
Particulates & Iodines					
Organ Dose	Child – Lungs	974	WSW	0.00647 mrem	15 mrem
Carbon 14					
Organ Dose	Child – Bone	4,022	WNW	0.115 mrem	15 mrem

* There is no Appendix I limit for direct radiation. Compliance with 40 CFR 190 limits of 25 mrem whole body and 75 mrem thyroid is demonstrated in the Duane Arnold Energy Center 2018 Annual Radiological Environmental Operating Report, subsections "Ambient Radiation (TLDs)" and "ISFSI Facility Operations Monitoring".

D* Receptor location is aquatic pathway at Cedar River, See Offsite Dose Assessment Manual, ODAM, figure 3-2.