

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

INDEPENDENT SPENT FUEL STORAGE INSTALLATION

Introduction

This report provides data on radiation levels inside the Xcel Energy, Inc. Independent Spent Fuel Storage Installation (ISFSI) at the Prairie Island Nuclear Generating Plant (PINGP) for July 2019. The data contained in this report were gathered in accordance with agreements between Xcel Energy, Inc. and the Minnesota Department of Health (MDH).

At the end of July 2019, 44 casks were storing spent fuel inside the Independent Spent Fuel Storage Installation. The last cask to be moved to the Independent Spent Fuel Storage Installation was placed on May 25, 2018.

Radiation Monitoring

MDH monitored radiation levels around the ISFSI from January 1995 to July 2015 using Pressurized Ionization Chambers (PICs). The PICs were located on the north and south end of the ISFSI. The PICs were replaced with new monitors that use a dual Geiger-Mueller (GM) tube system (a high range and low range GM tube). The new monitors are located in the same locations as the PICs. The new monitors were connected on September 30, 2015 and began logging data on October 20, 2015. The monitors average radiation level data over a 15 minute period and report that average value. This report contains the daily high and low of those readings as well as the average of those readings for each monitor.

Analysis and Comments

Monitor 1 readings ranged from 0.142 mR/hr to 0.172 mR/hr. Monitor 2 readings ranged from 0.151 mR/hr to 0.347 mR/hr. Monitor 2 appears to have been giving high readings due to increased temperatures. This conclusion is based on a comparison between the monitor readings and the daily temperature fluctuations. Monitor 2 was replaced July 11, 2019 and readings returned to normal.

Additional monitoring data on radioactivity levels in other media (air, for example) are available in the annual Minnesota Department of Health "Environmental Radiation Data Report."

For more information, go to: [Environmental Monitoring](https://www.health.state.mn.us/communities/environment/radiation/monitor/index.html)
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Table 1: July 2019 Data Report for Monitor 1

Date	Maximum Reading (mR/hr)	Minimum Reading (mR/hr)	Average Reading (mR/hr)
7/1/19	0.167	0.147	0.155
7/2/19	0.165	0.147	0.154
7/3/19	0.166	0.147	0.154
7/4/19	0.164	0.144	0.154
7/5/19	0.166	0.145	0.153
7/6/19	0.163	0.146	0.153
7/7/19	0.160	0.146	0.153
7/8/19	0.166	0.146	0.154
7/9/19	0.161	0.147	0.153
7/10/19	0.162	0.145	0.153
7/11/19	0.167	0.145	0.153
7/12/19	0.163	0.145	0.153
7/13/19	0.164	0.146	0.153
7/14/19	0.166	0.147	0.154
7/15/19	0.164	0.145	0.154
7/16/19	0.162	0.146	0.154
7/17/19	0.169	0.146	0.154
7/18/19	0.163	0.146	0.154
7/19/19	0.167	0.146	0.155
7/20/19	0.165	0.145	0.154
7/21/19	0.161	0.145	0.152
7/22/19	0.162	0.143	0.152
7/23/19	0.159	0.145	0.152
7/24/19	0.166	0.146	0.153
7/25/19	0.166	0.145	0.153
7/26/19	0.168	0.143	0.154
7/27/19	0.163	0.142	0.152
7/28/19	0.164	0.147	0.153
7/29/19	0.165	0.142	0.152
7/30/19	0.162	0.145	0.152
7/31/19	0.172	0.142	0.152

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Table 2: July 2019 Data Report for Monitor 2

Date	Maximum Reading (mR/hr)	Minimum Reading (mR/hr)	Average Reading (mR/hr)
7/1/19	0.238	0.155	0.178
7/2/19	0.327	0.156	0.204
7/3/19	0.306	0.154	0.205
7/4/19	0.313	0.157	0.203
7/5/19	0.297	0.153	0.201
7/6/19	0.264	0.152	0.194
7/7/19	0.331	0.156	0.207
7/8/19	0.347	0.155	0.229
7/9/19	0.242	0.156	0.185
7/10/19	0.223	0.159	0.185
7/11/19	0.208	0.151	0.165
7/12/19	0.173	0.156	0.163
7/13/19	0.181	0.154	0.163
7/14/19	0.176	0.154	0.164
7/15/19	0.180	0.156	0.165
7/16/19	0.178	0.154	0.163
7/17/19	0.174	0.156	0.164
7/18/19	0.183	0.156	0.164
7/19/19	0.174	0.156	0.164
7/20/19	0.175	0.155	0.164
7/21/19	0.177	0.156	0.163
7/22/19	0.176	0.153	0.162
7/23/19	0.171	0.151	0.163
7/24/19	0.175	0.154	0.163
7/25/19	0.174	0.155	0.162
7/26/19	0.177	0.154	0.163
7/27/19	0.181	0.156	0.163
7/28/19	0.173	0.153	0.163
7/29/19	0.174	0.152	0.162
7/30/19	0.177	0.154	0.162
7/31/19	0.170	0.153	0.161