Minnesota Department of Health
RADIOACTIVE MATERIALS UNIT

# PRAIRIE ISLAND NUCLEAR GENERATING PLANT
# INDEPENDENT SPENT FUEL STORAGE INSTALLATION

## Introduction

This report provides data on radiation levels inside the Xcel Energy, Inc. (XE) Independent Spent Fuel Storage Installation (ISFSI) at the Prairie Island Nuclear Generating Plant (PINGP) for June 2016. 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 June 2016, 40 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 August 17, 2015.

## 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 0.153 mR/hr to 0.198 mR/hr. Monitor 2 readings ranged from 0.174 mR/hr to 0.214 mR/hr.

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:
http://www.health.state.mn.us/divs/eh/radiation/monitor/index.html or contact Brandon Juran at brandon.juran@state.mn.us or 651-201-4526.

**Table 1: June 2016 Data Report for Monitor 1 – North**

| Date | Maximum Reading (mR/hr) | Minimum Reading (mR/hr) | Average Reading (mR/hr) |
|---|---|---|---|
| 6/1/16 | 0.172 | 0.156 | 0.165 |
| 6/2/16 | 0.174 | 0.153 | 0.164 |
| 6/3/16 | 0.174 | 0.156 | 0.165 |
| 6/4/16 | 0.174 | 0.157 | 0.166 |
| 6/5/16 | 0.177 | 0.158 | 0.164 |
| 6/6/16 | 0.177 | 0.157 | 0.165 |
| 6/7/16 | 0.175 | 0.154 | 0.164 |
| 6/8/16 | 0.174 | 0.153 | 0.164 |
| 6/9/16 | 0.182 | 0.158 | 0.165 |
| 6/10/16 | 0.174 | 0.158 | 0.166 |
| 6/11/16 | 0.174 | 0.157 | 0.165 |
| 6/12/16 | 0.176 | 0.157 | 0.165 |
| 6/13/16 | 0.182 | 0.156 | 0.166 |
| 6/14/16 | 0.178 | 0.155 | 0.166 |
| 6/15/16 | 0.177 | 0.157 | 0.165 |
| 6/16/16 | 0.175 | 0.156 | 0.165 |
| 6/17/16 | 0.175 | 0.155 | 0.165 |
| 6/18/16 | 0.173 | 0.155 | 0.165 |
| 6/19/16 | 0.175 | 0.154 | 0.165 |
| 6/20/16 | 0.172 | 0.155 | 0.164 |
| 6/21/16 | 0.175 | 0.158 | 0.164 |
| 6/22/16 | 0.175 | 0.159 | 0.165 |
| 6/23/16 | 0.177 | 0.157 | 0.164 |
| 6/24/16 | 0.191 | 0.153 | 0.174 |
| 6/25/16 | 0.190 | 0.174 | 0.181 |
| 6/26/16 | 0.195 | 0.172 | 0.180 |
| 6/27/16 | 0.190 | 0.168 | 0.180 |
| 6/28/16 | 0.195 | 0.172 | 0.179 |
| 6/29/16 | 0.198 | 0.169 | 0.179 |
| 6/30/16 | 0.197 | 0.174 | 0.181 |

**Table 2: June 2016 Data Report for Monitor 2 – South**

| Date | Maximum Reading (mR/hr) | Minimum Reading (mR/hr) | Average Reading (mR/hr) |
|---|---|---|---|
| 6/1/2016 | 0.200 | 0.178 | 0.188 |
| 6/2/2016 | 0.197 | 0.179 | 0.187 |
| 6/3/2016 | 0.199 | 0.177 | 0.188 |
| 6/4/2016 | 0.197 | 0.181 | 0.189 |
| 6/5/2016 | 0.201 | 0.178 | 0.188 |
| 6/6/2016 | 0.193 | 0.174 | 0.186 |
| 6/7/2016 | 0.204 | 0.175 | 0.187 |
| 6/8/2016 | 0.209 | 0.178 | 0.187 |
| 6/9/2016 | 0.199 | 0.179 | 0.188 |
| 6/10/2016 | 0.214 | 0.178 | 0.188 |
| 6/11/2016 | 0.195 | 0.180 | 0.188 |
| 6/12/2016 | 0.198 | 0.177 | 0.188 |
| 6/13/2016 | 0.202 | 0.180 | 0.188 |
| 6/14/2016 | 0.198 | 0.179 | 0.189 |
| 6/15/2016 | 0.201 | 0.179 | 0.188 |
| 6/16/2016 | 0.197 | 0.178 | 0.187 |
| 6/17/2016 | 0.202 | 0.177 | 0.188 |
| 6/18/2016 | 0.200 | 0.180 | 0.188 |
| 6/19/2016 | 0.198 | 0.180 | 0.188 |
| 6/20/2016 | 0.200 | 0.177 | 0.188 |
| 6/21/2016 | 0.196 | 0.181 | 0.188 |
| 6/22/2016 | 0.197 | 0.178 | 0.187 |
| 6/23/2016 | 0.198 | 0.175 | 0.186 |
| 6/24/2016 | 0.196 | 0.174 | 0.187 |
| 6/25/2016 | 0.199 | 0.178 | 0.188 |
| 6/26/2016 | 0.202 | 0.180 | 0.187 |
| 6/27/2016 | 0.195 | 0.178 | 0.186 |
| 6/28/2016 | 0.195 | 0.174 | 0.186 |
| 6/29/2016 | 0.197 | 0.178 | 0.187 |
| 6/30/2016 | 0.203 | 0.177 | 0.188 |