San Onofre Nuclear Generating Station
Independent Spent Nuclear Fuel Storage Installation

Report period: June 2024

This report provides radiation data at the San Onofre Nuclear Generating Station (SONGS) Independent Spent Fuel Storage Installation (ISFSI). The information was gathered according to an agreement between SONGS and the California Department of Public Health Radiologic Health Branch (RHB).

Dry Storage at SONGS

The first used fuel assemblies were transferred from wet (pool) storage to the dry cask storage units in the TN-NUHOMS system in October 2003. In total, 1,187 fuel assemblies are stored in the TN-NUHOMS system in 50 canisters. The Holtec HI-STORM UMAX dry storage system was constructed between April 2016 and the end of 2017, with the transferring of fuel assemblies taking place from January 2018 to August 2020. In total, 2,668 fuel assemblies are stored in the HI-STORM UMAX system in 73 canisters.

The first greater-than-class-c (GTCC) waste canister was transferred to the TN-NUHOMS dry cask storage system in September 2004. As part of deocomissioining and distmantlement of Units 2 and 3 Fuel Handling Buildings and Containment Buildings, additional GTCC was trasnfered to the TN-NUHOMS ISFSI from April 2022 to May 2024. In total, the TN-NUHOMS system contains 13 canisters of GTCC waste (one canisfer form Unit 1 and 12 from Units 2 and 3).

Radiation Monitoring

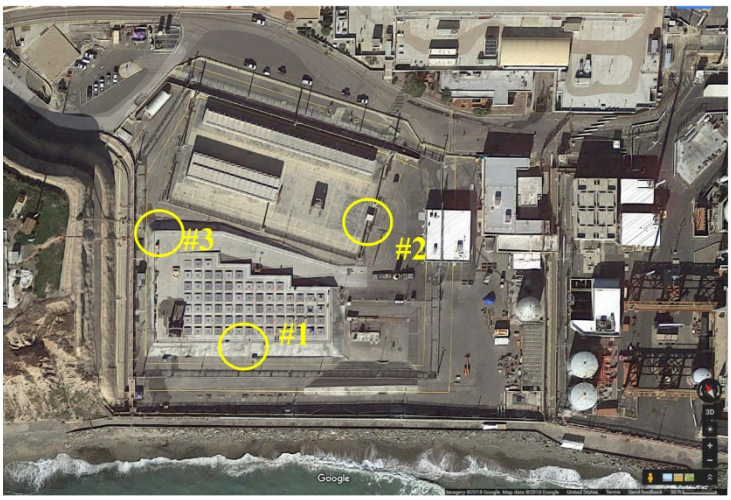
Radiation level measurements around the ISFSI were initiated before fuel was placed in the NUHOMS system to determine background levels. Radiation measurements using sensitive Thermoluminescent Dosimeters (TLDs) have been made at locations around the ISFSI since then and reported to the Nuclear Regulatory Commission in SONGS Annual Radiological Environmental Operating Reports. These reports (through 2015) are available at U.S. NRC Radioactive Effluent and Environmental Reports, or in the NRC public Document System (ADAMS). Reports beginning in 2016 are available at SONGS Environmental Monitoring.

Additional TLDs were placed around the Holtec ISFSI in 2016 as it was constructed and before operation and have been in place since the first fuel canister was placed in 2018. Gamma-sensitive radiation monitors were added in 2019 at three locations in the ISFSI area and one additional monitor in a control location. The data are summarized in tables with daily averages, maxima, and minima. Those data tables are attached, one for each of the four locations.

More information on radiation monitoring is available at SONGS Dry Fuel Storage Radiation Monitoring.

Locations

There are three radiation monitors in the ISFSI at locations depicted on the image below:



A fourth radiation monitor, at a control location, is located at the edge of the parking lot north of the ISFSI such that it measures background radiation in an unaffected reference area similar to the ISFSI.

Low-Level Waste Shipments Offsite as Part of SONGS Dismantlement

SONGS is in the process of dismantlement with rail shipments of low-level radioactive waste periodically leaving the site for disposal.

There were no offsite waste shipments that impacted the radiation measurements by the ISFSI Radiation Monitoring System during June 2024.

Other

On June 14, 2024 from approximately 8AM-10AM, maintenance was performed on the IRMS Server. During this time data transmitted by the radiation monitors was not collected or stored by the server.

Table 1: Daily Results for June 2024 (in millirem per hour) for Location #1

Day	Average Dose Rate	Maximum Dose Rate	Minimum Dose Rate
1-Jun	0.022	0.029	0.016
2-Jun	0.021	0.029	0.016
3-Jun	0.022	0.029	0.016
4-Jun	0.022	0.029	0.017
5-Jun	0.022	0.030	0.015
6-Jun	0.022	0.030	0.017
7-Jun	0.022	0.030	0.016
8-Jun	0.022	0.029	0.015
9-Jun	0.022	0.029	0.016
10-Jun	0.022	0.029	0.016
11-Jun	0.022	0.028	0.016
12-Jun	0.022	0.028	0.016
13-Jun	0.022	0.029	0.016
14-Jun	0.022	0.029	0.016
15-Jun	0.022	0.029	0.016
16-Jun	0.022	0.030	0.016
17-Jun	0.022	0.029	0.016
18-Jun	0.022	0.028	0.017
19-Jun	0.022	0.029	0.016
20-Jun	0.022	0.029	0.016
21-Jun	0.022	0.031	0.017
22-Jun	0.022	0.029	0.015
23-Jun	0.022	0.031	0.015
24-Jun	0.022	0.029	0.016
25-Jun	0.022	0.029	0.017
26-Jun	0.022	0.029	0.017
27-Jun	0.022	0.028	0.016
28-Jun	0.022	0.031	0.017
29-Jun	0.022	0.028	0.017
30-Jun	0.022	0.028	0.016

Table 2: Daily Results for June 2024 (in millirem per hour) for Location #2

Day	Average Dose Rate	Maximum Dose Rate	Minimum Dose Rate
1-Jun	0.011	0.015	0.008
2-Jun	0.010	0.014	0.007
3-Jun	0.011	0.014	0.008
4-Jun	0.011	0.014	0.008
5-Jun	0.011	0.016	0.008
6-Jun	0.012	0.015	0.008
7-Jun	0.012	0.016	0.008
8-Jun	0.012	0.016	0.009
9-Jun	0.012	0.018	0.008
10-Jun	0.012	0.015	0.009
11-Jun	0.012	0.016	0.008
12-Jun	0.012	0.016	0.009
13-Jun	0.012	0.016	0.008
14-Jun	0.012	0.017	0.009
15-Jun	0.012	0.016	0.009
16-Jun	0.012	0.016	0.009
17-Jun	0.012	0.015	0.008
18-Jun	0.012	0.016	0.009
19-Jun	0.012	0.016	0.009
20-Jun	0.012	0.016	0.009
21-Jun	0.012	0.017	0.008
22-Jun	0.012	0.017	0.009
23-Jun	0.012	0.016	0.008
24-Jun	0.012	0.017	0.008
25-Jun	0.012	0.016	0.009
26-Jun	0.012	0.016	0.009
27-Jun	0.011	0.018	0.007
28-Jun	0.011	0.015	0.007
29-Jun	0.011	0.016	0.008
30-Jun	0.011	0.015	0.008

Table 3: Daily Results for June 2024 (in millirem per hour) for Location #3

Day	Average Dose Rate	Maximum Dose Rate	Minimum Dose Rate
1-Jun	0.014	0.018	0.009
2-Jun	0.014	0.019	0.010
3-Jun	0.014	0.019	0.010
4-Jun	0.014	0.021	0.009
5-Jun	0.014	0.019	0.010
6-Jun	0.014	0.019	0.010
7-Jun	0.014	0.018	0.010
8-Jun	0.014	0.019	0.010
9-Jun	0.014	0.018	0.011
10-Jun	0.014	0.019	0.010
11-Jun	0.014	0.019	0.010
12-Jun	0.014	0.019	0.010
13-Jun	0.014	0.019	0.010
14-Jun	0.014	0.019	0.009
15-Jun	0.014	0.018	0.010
16-Jun	0.014	0.020	0.009
17-Jun	0.014	0.018	0.010
18-Jun	0.014	0.019	0.010
19-Jun	0.014	0.020	0.010
20-Jun	0.014	0.019	0.010
21-Jun	0.014	0.019	0.010
22-Jun	0.014	0.020	0.010
23-Jun	0.014	0.018	0.011
24-Jun	0.014	0.021	0.010
25-Jun	0.014	0.019	0.010
26-Jun	0.014	0.024	0.010
27-Jun	0.014	0.019	0.010
28-Jun	0.014	0.019	0.009
29-Jun	0.014	0.019	0.010
30-Jun	0.014	0.018	0.010

Table 4: Daily Results for June 2024 (in millirem per hour) for Location #4 (Control)

Day	Average Dose Rate	Maximum Dose Rate	Minimum Dose Rate
1-Jun	0.008	0.012	0.006
2-Jun	0.008	0.011	0.005
3-Jun	0.008	0.011	0.006
4-Jun	0.008	0.012	0.006
5-Jun	0.009	0.011	0.006
6-Jun	0.009	0.011	0.006
7-Jun	0.008	0.013	0.005
8-Jun	0.008	0.011	0.005
9-Jun	0.009	0.013	0.006
10-Jun	0.008	0.012	0.006
11-Jun	0.008	0.013	0.005
12-Jun	0.009	0.013	0.006
13-Jun	0.008	0.012	0.005
14-Jun	0.008	0.012	0.006
15-Jun	0.008	0.012	0.005
16-Jun	0.008	0.011	0.006
17-Jun	0.008	0.011	0.006
18-Jun	0.008	0.012	0.006
19-Jun	0.009	0.012	0.006
20-Jun	0.009	0.012	0.006
21-Jun	0.009	0.014	0.006
22-Jun	0.009	0.012	0.006
23-Jun	0.008	0.012	0.006
24-Jun	0.008	0.012	0.006
25-Jun	0.009	0.012	0.006
26-Jun	0.008	0.012	0.006
27-Jun	0.008	0.011	0.006
28-Jun	0.008	0.012	0.006
29-Jun	0.008	0.011	0.006
30-Jun	0.008	0.011	0.005