



TOMÁS J. ARAGÓN, M.D., Dr.P.H.
Director and State Public Health Officer

State of California—Health and Human Services Agency
California Department of Public Health



GAVIN NEWSOM
Governor

San Onofre Nuclear Generating Station Independent Spent Nuclear Fuel Storage Installation

Report period: February 2022

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 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. The Holtec system houses 73 canisters of spent nuclear fuel.

Radiation Monitoring

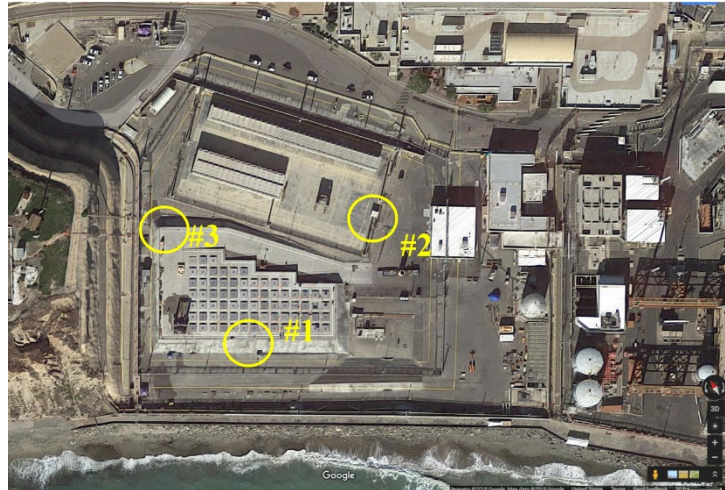
Radiation level measurements around the ISFSI were initiated before fuel was placed in the NUHOMS system to determine background levels. Radiation measurements using sensitive Thermoluminescent Dosimeters (TLDs) have been made at locations around the ISFSI since then and reported to the Nuclear Regulatory 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 low-level waste shipments offsite that impacted the radiation measurements by the ISFSI Radiation Monitoring System during February 2022.

Other

On February 4, 2022 radiation monitors for Locations #1 and #3 were replaced for scheduled calibration. There was no data loss during the replacement of the radiation monitors.

Table 1: Daily Results for February 2022 (in millirem per hour) for Location #1

Day	Average Dose Rate	Maximum Dose Rate	Minimum Dose Rate
1-Feb	0.023	0.032	0.018
2-Feb	0.023	0.030	0.017
3-Feb	0.023	0.032	0.018
4-Feb	0.022	0.029	0.017
5-Feb	0.022	0.030	0.015
6-Feb	0.021	0.029	0.016
7-Feb	0.022	0.029	0.016
8-Feb	0.021	0.028	0.016
9-Feb	0.022	0.031	0.016
10-Feb	0.022	0.030	0.015
11-Feb	0.022	0.029	0.016
12-Feb	0.022	0.029	0.016
13-Feb	0.021	0.030	0.016
14-Feb	0.022	0.030	0.015
15-Feb	0.021	0.029	0.016
16-Feb	0.021	0.029	0.016
17-Feb	0.021	0.028	0.015
18-Feb	0.022	0.028	0.017
19-Feb	0.022	0.027	0.017
20-Feb	0.022	0.028	0.017
21-Feb	0.022	0.029	0.014
22-Feb	0.021	0.028	0.015
23-Feb	0.022	0.030	0.015
24-Feb	0.021	0.029	0.015
25-Feb	0.021	0.029	0.014
26-Feb	0.021	0.029	0.015
27-Feb	0.021	0.028	0.016
28-Feb	0.022	0.029	0.017

Table 2: Daily Results for February 2022 (in millirem per hour) for Location #2

Day	Average Dose Rate	Maximum Dose Rate	Minimum Dose Rate
1-Feb	0.011	0.015	0.007
2-Feb	0.011	0.016	0.007
3-Feb	0.010	0.014	0.007
4-Feb	0.010	0.014	0.007
5-Feb	0.010	0.014	0.007
6-Feb	0.010	0.015	0.008
7-Feb	0.010	0.014	0.007
8-Feb	0.011	0.014	0.007
9-Feb	0.011	0.014	0.007
10-Feb	0.010	0.014	0.008
11-Feb	0.010	0.014	0.007
12-Feb	0.010	0.014	0.007
13-Feb	0.010	0.013	0.007
14-Feb	0.010	0.014	0.007
15-Feb	0.010	0.015	0.007
16-Feb	0.010	0.014	0.007
17-Feb	0.011	0.015	0.008
18-Feb	0.010	0.014	0.007
19-Feb	0.010	0.014	0.007
20-Feb	0.010	0.015	0.008
21-Feb	0.011	0.014	0.006
22-Feb	0.010	0.014	0.007
23-Feb	0.010	0.015	0.007
24-Feb	0.010	0.014	0.008
25-Feb	0.010	0.014	0.007
26-Feb	0.010	0.014	0.007
27-Feb	0.011	0.016	0.007
28-Feb	0.010	0.015	0.007

Table 3: Daily Results for February 2022 (in millirem per hour) for Location #3

Day	Average Dose Rate	Maximum Dose Rate	Minimum Dose Rate
1-Feb	0.015	0.021	0.011
2-Feb	0.015	0.020	0.011
3-Feb	0.015	0.021	0.011
4-Feb	0.014	0.027	0.010
5-Feb	0.014	0.019	0.010
6-Feb	0.014	0.018	0.010
7-Feb	0.014	0.019	0.010
8-Feb	0.014	0.020	0.010
9-Feb	0.014	0.020	0.010
10-Feb	0.014	0.019	0.011
11-Feb	0.014	0.019	0.010
12-Feb	0.014	0.018	0.010
13-Feb	0.014	0.021	0.010
14-Feb	0.014	0.019	0.010
15-Feb	0.014	0.020	0.010
16-Feb	0.014	0.019	0.010
17-Feb	0.014	0.018	0.010
18-Feb	0.014	0.020	0.010
19-Feb	0.014	0.019	0.010
20-Feb	0.014	0.019	0.010
21-Feb	0.014	0.019	0.010
22-Feb	0.014	0.020	0.010
23-Feb	0.014	0.020	0.010
24-Feb	0.014	0.019	0.010
25-Feb	0.014	0.020	0.010
26-Feb	0.014	0.018	0.010
27-Feb	0.014	0.019	0.010
28-Feb	0.014	0.020	0.010

Table 4: Daily Results for February 2022 (in millirem per hour) for Location #4 (Control)

Day	Average Dose Rate	Maximum Dose Rate	Minimum Dose Rate
1-Feb	0.008	0.012	0.005
2-Feb	0.008	0.012	0.006
3-Feb	0.008	0.012	0.004
4-Feb	0.008	0.011	0.006
5-Feb	0.007	0.011	0.005
6-Feb	0.007	0.011	0.005
7-Feb	0.008	0.011	0.005
8-Feb	0.008	0.011	0.005
9-Feb	0.008	0.012	0.005
10-Feb	0.008	0.011	0.005
11-Feb	0.008	0.011	0.005
12-Feb	0.008	0.011	0.005
13-Feb	0.008	0.011	0.005
14-Feb	0.008	0.011	0.005
15-Feb	0.008	0.011	0.006
16-Feb	0.008	0.011	0.005
17-Feb	0.008	0.011	0.005
18-Feb	0.008	0.012	0.005
19-Feb	0.008	0.010	0.005
20-Feb	0.008	0.011	0.006
21-Feb	0.008	0.010	0.005
22-Feb	0.008	0.011	0.005
23-Feb	0.008	0.012	0.005
24-Feb	0.008	0.012	0.006
25-Feb	0.008	0.011	0.005
26-Feb	0.008	0.011	0.005
27-Feb	0.008	0.011	0.005
28-Feb	0.008	0.012	0.006