



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: January 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**

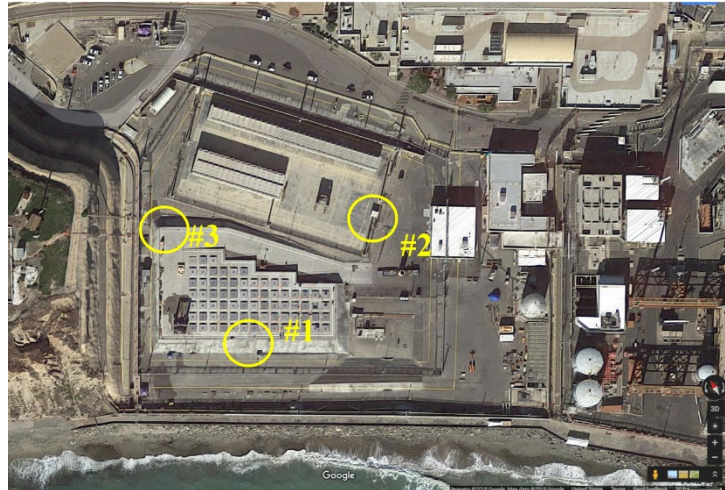
Radiation level measurements around the ISFSI were initiated before fuel was placed in the NUHOMS system to determine background levels. Radiation measurements using sensitive Thermoluminescent Dosimeters (TLDs) have been made at locations around the ISFSI since then and reported to the Nuclear Regulatory 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 January 2022.

### **Other**

There were no other relevant activities (i.e. temporary power outage, radiation monitor maintenance, etc.) during January 2022.

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

<b>Day</b>	<b>Average Dose Rate</b>	<b>Maximum Dose Rate</b>	<b>Minimum Dose Rate</b>
1-Jan	0.023	0.030	0.017
2-Jan	0.023	0.034	0.017
3-Jan	0.023	0.030	0.017
4-Jan	0.023	0.030	0.018
5-Jan	0.023	0.032	0.018
6-Jan	0.023	0.031	0.017
7-Jan	0.023	0.031	0.017
8-Jan	0.023	0.029	0.017
9-Jan	0.023	0.031	0.017
10-Jan	0.023	0.030	0.017
11-Jan	0.023	0.030	0.016
12-Jan	0.023	0.030	0.017
13-Jan	0.023	0.031	0.017
14-Jan	0.023	0.031	0.017
15-Jan	0.023	0.031	0.018
16-Jan	0.023	0.033	0.016
17-Jan	0.023	0.030	0.016
18-Jan	0.023	0.030	0.017
19-Jan	0.023	0.031	0.017
20-Jan	0.023	0.031	0.018
21-Jan	0.023	0.030	0.017
22-Jan	0.023	0.030	0.017
23-Jan	0.023	0.032	0.018
24-Jan	0.023	0.030	0.018
25-Jan	0.023	0.029	0.017
26-Jan	0.023	0.029	0.018
27-Jan	0.023	0.031	0.017
28-Jan	0.023	0.031	0.017
29-Jan	0.023	0.030	0.016
30-Jan	0.023	0.029	0.018
31-Jan	0.023	0.031	0.018

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

<b>Day</b>	<b>Average Dose Rate</b>	<b>Maximum Dose Rate</b>	<b>Minimum Dose Rate</b>
1-Jan	0.010	0.015	0.007
2-Jan	0.010	0.014	0.007
3-Jan	0.010	0.014	0.007
4-Jan	0.010	0.014	0.007
5-Jan	0.010	0.015	0.007
6-Jan	0.010	0.015	0.007
7-Jan	0.010	0.014	0.007
8-Jan	0.010	0.013	0.007
9-Jan	0.010	0.014	0.007
10-Jan	0.010	0.014	0.007
11-Jan	0.010	0.014	0.006
12-Jan	0.010	0.014	0.007
13-Jan	0.011	0.014	0.007
14-Jan	0.011	0.014	0.008
15-Jan	0.011	0.014	0.008
16-Jan	0.011	0.015	0.007
17-Jan	0.010	0.014	0.007
18-Jan	0.010	0.015	0.008
19-Jan	0.011	0.015	0.007
20-Jan	0.010	0.014	0.007
21-Jan	0.011	0.014	0.007
22-Jan	0.011	0.016	0.007
23-Jan	0.011	0.015	0.008
24-Jan	0.011	0.015	0.008
25-Jan	0.011	0.015	0.008
26-Jan	0.010	0.014	0.007
27-Jan	0.010	0.014	0.007
28-Jan	0.010	0.015	0.007
29-Jan	0.011	0.016	0.007
30-Jan	0.010	0.017	0.007
31-Jan	0.011	0.015	0.007

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

<b>Day</b>	<b>Average Dose Rate</b>	<b>Maximum Dose Rate</b>	<b>Minimum Dose Rate</b>
1-Jan	0.015	0.020	0.011
2-Jan	0.015	0.021	0.011
3-Jan	0.015	0.021	0.011
4-Jan	0.015	0.020	0.010
5-Jan	0.015	0.021	0.011
6-Jan	0.015	0.021	0.011
7-Jan	0.015	0.020	0.011
8-Jan	0.015	0.020	0.011
9-Jan	0.015	0.020	0.011
10-Jan	0.015	0.021	0.011
11-Jan	0.015	0.020	0.011
12-Jan	0.015	0.021	0.011
13-Jan	0.015	0.021	0.011
14-Jan	0.015	0.021	0.011
15-Jan	0.015	0.021	0.011
16-Jan	0.015	0.020	0.011
17-Jan	0.015	0.021	0.010
18-Jan	0.015	0.019	0.011
19-Jan	0.015	0.019	0.011
20-Jan	0.015	0.020	0.012
21-Jan	0.015	0.021	0.011
22-Jan	0.015	0.020	0.010
23-Jan	0.015	0.019	0.010
24-Jan	0.015	0.020	0.010
25-Jan	0.015	0.019	0.011
26-Jan	0.015	0.020	0.011
27-Jan	0.015	0.020	0.010
28-Jan	0.015	0.019	0.011
29-Jan	0.015	0.021	0.011
30-Jan	0.015	0.021	0.011
31-Jan	0.015	0.021	0.011

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

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