



TEXAS
Health and Human
Services

Texas Department of State
Health Services

Radiation Inspection Branch Environmental Monitoring Summary for 2021

NOTE: Items within these environmental summaries have been removed due to confidential homeland security information under The Texas Public Information Act and House Bill 9, Gov. § code 418.

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Introduction

The document consists of the data collected for each monitoring point at each facility. The data is presented in the same manner as in the past. Limits of detection were not included with the data in an effort to reduce the space required for data entry. A listing of expected limits of detection for various media, geometries, and radionuclides is found in the appendices. Maps of the facilities are included, but some details have been omitted. Specific information about individual facilities can be found in the license files. Redacted copies of this and previous annual reports can be found at: <https://www.dshs.state.tx.us/radiation/ram/environmental-monitoring.aspx>

All analyses of environmental media, i.e., soil, air, water, vegetation, and sewage are performed by the Texas Department of State Health Services (DHS), Laboratory Services Section. The Laboratory Services Section operates a highly capable radio-chemistry program. Currently, the Environmental Sciences Branch participates in a program sponsored by the United States Department of Energy (USDOE), referred to as Department of Energy Laboratory Accreditation Program. It was developed by the USDOE in order to provide quality assurance and control for USDOE contractors. The most recent results of the Laboratory Services Section's performance in these "cross checks" can be found in the appendices to this document.

Landauer, Inc. performs Optically Stimulated Luminescence (OSL) readings for the facilities that have neutron sources. Approximately 200 OSLs are exchanged and read each calendar quarter. Background is subtracted from all station readings except for Comanche Peak Nuclear Power Plant, South Texas Project, and Pantex. Background is not subtracted from these three locations because the readings identify ambient doses.

Analysis of sample data from the monitored facilities indicated no release of radioactive material to the environment that exceeded the regulatory or license limits of the DHS or any other agency such as the United States Nuclear Regulatory Commission or the USDOE. Some of the OSL readings at a few of the monitored facilities exceeded to 100mrem for the year. All licensed facilities are required by rule to document that exposures from conducting operations do not cause doses in excess of the regulatory limits to employees or individual members of the general public. The documentation is maintained for inspection by the Radiation Branch. Licensees are allowed to use mitigating factors, such as occupancy times and distance to the nearest occupied areas, in demonstrating compliance with those limits. Taking into account occupancy factors, all facilities monitored during the 2021 calendar year were found to be in compliance with radiation dose limits.

Any questions should be directed to Robert E. Free at 737-218-7082 or Robert.free@dshs.texas.gov

Robert Free Digitally signed by Robert Free
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Robert E. Free

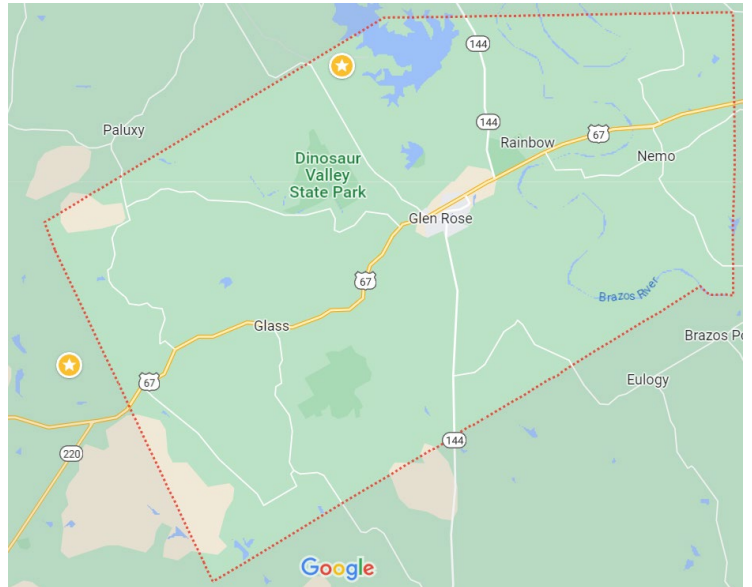
Fixed Nuclear Facilities

Comanche Peak Nuclear Power Plant

Radiation Branch Site No. 031

Comanche Peak Nuclear Power Plant (CPNPP) is a two-unit nuclear-fueled power plant owned and operated by Luminant Power. The plant is located in Somervell County four and one-half miles northwest of Glen Rose and approximately 80 miles southwest of downtown Dallas.

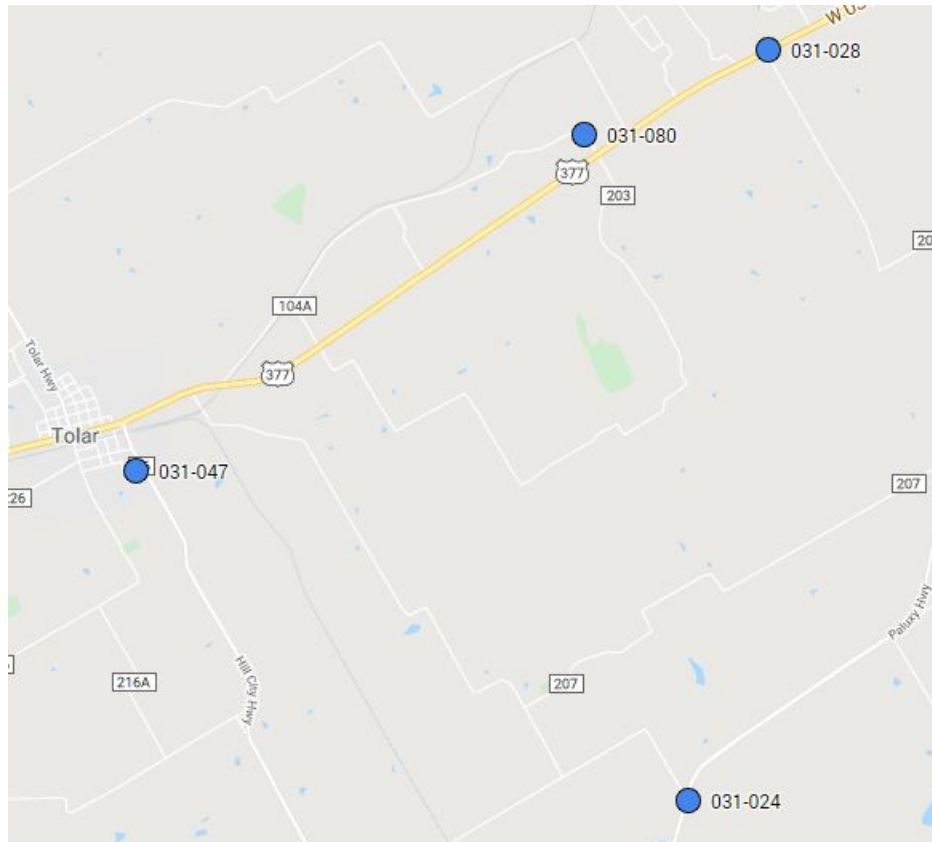
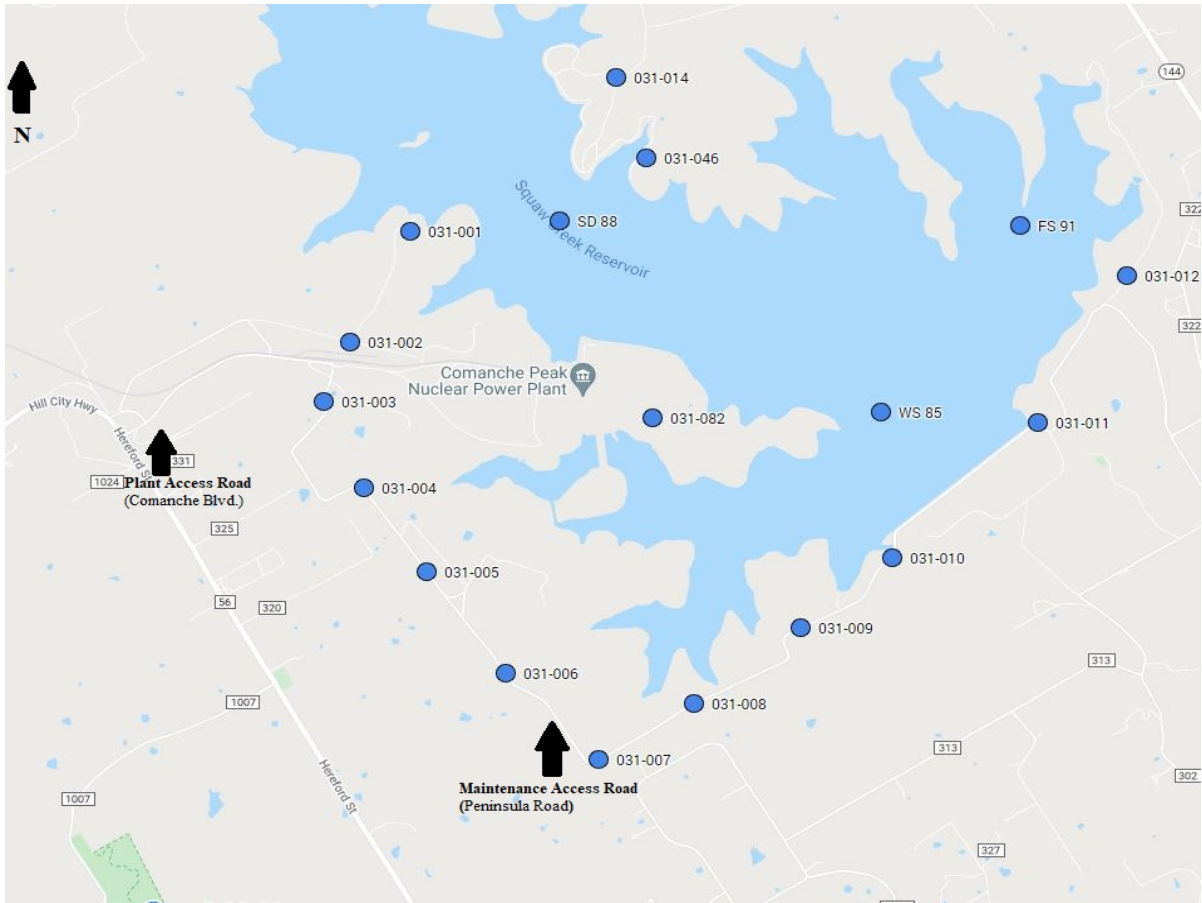
CPNPP, Luminant Power's sole nuclear power plant, with an operating capacity of 2,500 megawatts [two Westinghouse 1,250 megawatt (electric) pressurized water reactor units], began operation in 1990, although fuel had been received on-site in 1982-1983. The plant has approximately 1,300 employees. The Radiation Branch Surveillance Program consists of OSL monitoring and sampling air, fish, food products, sediment, vegetation, and water.



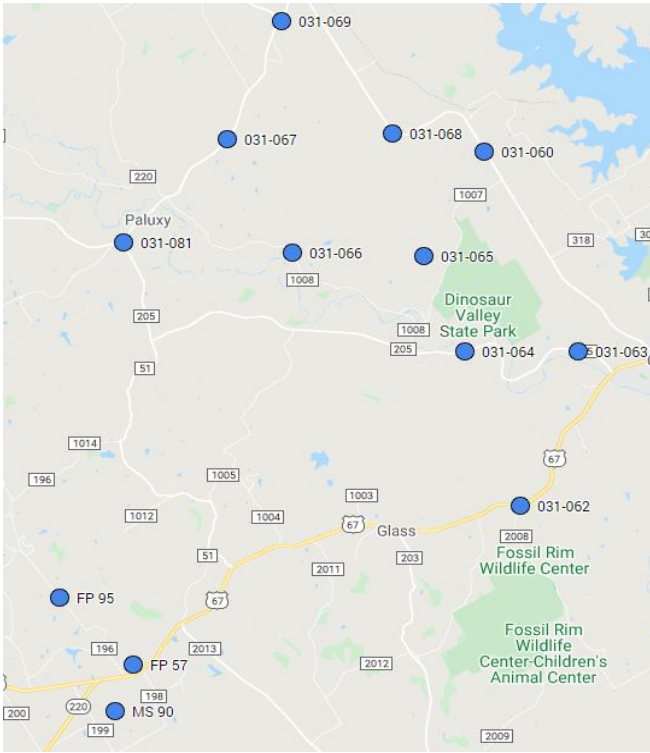
Shaded area indicates location of Somervell County



Comanche Peak Nuclear Power Plant Monitoring Station Locations



Comanche Peak Nuclear Power Plant Monitoring Station Locations



Comanche Peak Nuclear Power Plant Environmental Sample Results

Optically Stimulated Luminescent Dosimeter (OSL) Monitoring Results (quarterly and annual readings are in mrem)

OSL Stations	Q1	Q2	Q3	Q4	Annual Dose	Notes
1	27	29	26	27	109	
2	29	30	25	27	111	
3	27	28	24	23	102	
4	30	30	28	25	113	
5	27	30	25	25	107	
6	27	29	28	25	109	
7	28	28	25	24	105	
8	29	28	26	25	108	
9	29	31	26	24	110	
10	28	29	27	26	110	
11	26	26	25	25	102	
12	30	30	30	26	116	
14	28	28	27	27	110	
24	28	28	28	26	110	
28	0	30	26	26	82	QTR 1 OSL Not Found
30	30	30	27	26	113	
39	28	30	26	26	110	
46	28	32	27	25	112	
47	28	28	26	26	108	
49	28	31	27	25	111	
60	28	29	26	26	109	
61	26	28	25	24	103	
62	27	30	29	26	112	
63	0	32	30	28	90	QTR 1 OSL Not Found
64	29	29	27	25	110	
65	27	27	22	25	101	
66	26	28	27	26	107	
67	27	29	26	24	106	
68	27	28	24	25	104	
69	26	28	27	23	104	
70	27	32	26	25	110	
71	27	32	0	25	84	QTR 3 OSL Not Found
72	28	32	28	25	113	
73	28	31	26	27	112	
74	28	30	27	25	110	
75	27	28	25	25	105	
76	28	29	26	25	108	
77	27	29	25	23	104	
78	27	30	26	26	109	
79	28	28	27	24	107	
80	0	30	28	25	83	QTR 1 OSL Not Found
81	28	29	27	27	111	
82	27	28	27	24	106	

NOTE: ¹Background is not subtracted from the data

²An occupancy factor of 1/16 may be applied to this number to obtain radiation dose to members of the public.

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Air Composite Samples					
7/8/2021	AF60804	031	Ba-140	<3.8e-6	µCi/mL
			Be-7	3.11e-4	µCi/mL
			Co-58	<1.2e-6	µCi/mL
			Co-60	<1.7e-6	µCi/mL
			Cs-134	<1.4e-6	µCi/mL
			Cs-137	<1.4e-6	µCi/mL
			Fe-59	<2.8e-6	µCi/mL
			I-131	<1.2e-6	µCi/mL
			K-40	3.2e-5	µCi/mL
			La-140	<1.9e-6	µCi/mL
			Mn-54	<1.4e-6	µCi/mL
			Nb-95	<1.3e-6	µCi/mL
			Zn-65	<3.4e-6	µCi/mL
			Zr-95	<2.3e-6	µCi/mL
7/8/2021	AF60805	057	Ba-140	<8.1e-6	µCi/mL
			Be-7	3.35e-4	µCi/mL
			Co-58	<2.4e-6	µCi/mL
			Co-60	<2.9e-6	µCi/mL
			Cs-134	<2.5e-6	µCi/mL
			Cs-137	<2.3e-6	µCi/mL
			Fe-59	<4.8e-6	µCi/mL
			I-131	<2.3e-6	µCi/mL
			La-140	<3.3e-6	µCi/mL
			Mn-54	<2.3e-6	µCi/mL
			Nb-95	<2.3e-6	µCi/mL
			Zn-65	<5.6e-6	µCi/mL
			Zr-95	<4.2e-6	µCi/mL
			11/8/2021	AF72742	001
Be-7	2.25e-4	µCi/mL			
Co-58	<2.5e-6	µCi/mL			
Co-60	<3.1e-6	µCi/mL			
Cs-134	<2.4e-6	µCi/mL			
Cs-137	<2.9e-6	µCi/mL			
Fe-59	<4.7e-6	µCi/mL			
I-131	<2.6e-6	µCi/mL			
La-140	<3.2e-6	µCi/mL			
Mn-54	<2.9e-6	µCi/mL			
Nb-95	<2.8e-6	µCi/mL			
Zn-65	<5.5e-6	µCi/mL			
Zr-95	<5.0e-6	µCi/mL			

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Air Composite Samples					
11/8/2021	AF72743	057	Ba-140	<8.3e-6	µCi/mL
			Be-7	2.01e-4	µCi/mL
			Co-58	<2.2e-6	µCi/mL
			Co-60	<2.6e-6	µCi/mL
			Cs-134	<2.4e-6	µCi/mL
			Cs-137	<2.6e-6	µCi/mL
			Fe-59	<4.5e-6	µCi/mL
			I-131	<2.1e-6	µCi/mL
			La-140	<2.8e-6	µCi/mL
			Mn-54	<2.3e-6	µCi/mL
			Nb-95	<2.2e-6	µCi/mL
			Zn-65	<5.4e-6	µCi/mL
			Zr-95	<4.0e-6	µCi/mL

Date	Lab	Station	Analyte	Result	Units
Air Iodine Samples					
1/5/2021	AF38276	057	I-131	<3.8e-15	µCi/mL
			K-40	2.16e-13	µCi/mL
1/5/2021	AF38278	001	I-131	<2.3e-15	µCi/mL
			K-40	2.72e-13	µCi/mL
1/12/2021	AF39285	001	I-131	<5.6e-15	µCi/mL
			K-40	1.82e-13	µCi/mL
1/12/2021	AF39287	057	I-131	<5.7e-15	µCi/mL
			K-40	2.36e-13	µCi/mL
1/19/2021	AF39906	001	I-131	<5.6e-15	µCi/mL
			K-40	2.34e-13	µCi/mL
1/19/2021	AF39908	057	I-131	<5.9e-15	µCi/mL
			K-40	2.30e-13	µCi/mL
1/26/2021	AF41202	001	I-131	<5.5e-15	µCi/mL
			K-40	2.16e-13	µCi/mL
1/26/2021	AF41204	057	I-131	<5.4e-15	µCi/mL
			K-40	1.97e-13	µCi/mL
2/2/2021	AF42345	001	I-131	<5.7e-15	µCi/mL
			K-40	2.33e-13	µCi/mL
2/2/2021	AF42347	057	I-131	<5.6e-15	µCi/mL
			K-40	2.39e-13	µCi/mL
2/9/2021	AF43585	001	I-131	<5.4e-15	µCi/mL
			K-40	1.99e-13	µCi/mL
2/9/2021	AF43587	057	I-131	<5.7e-15	µCi/mL
			K-40	2.38e-13	µCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Air Iodine Samples					
2/16/2021	AF43832	001	I-131	<8.2e-15	μCi/mL
			K-40	2.46e-13	μCi/mL
2/16/2021	AF43834	057	I-131	<9.1e-15	μCi/mL
			K-40	2.71e-13	μCi/mL
2/23/2021	AF44494	001	I-131	<8.1e-15	μCi/mL
			K-40	2.54e-13	μCi/mL
2/23/2021	AF44496	057	I-131	<8.6e-15	μCi/mL
			K-40	3.06e-13	μCi/mL
3/2/2021	AF45230	001	I-131	<5.3e-15	μCi/mL
			K-40	2.61e-13	μCi/mL
3/2/2021	AF45232	057	I-131	<5.0e-13	μCi/mL
			K-40	2.05e-11	μCi/mL
3/9/2021	AF46193	001	I-131	<5.2e-15	μCi/mL
			K-40	1.99e-13	μCi/mL
3/9/2021	AF46198	057	I-131	<5.5e-15	μCi/mL
			K-40	2.80e-13	μCi/mL
3/16/2021	AF47132	001	I-131	<5.6e-15	μCi/mL
			K-40	2.09e-13	μCi/mL
3/16/2021	AF47134	057	I-131	<5.7e-15	μCi/mL
			K-40	2.09e-13	μCi/mL
3/23/2021	AF48398	001	I-131	<8.8e-15	μCi/mL
			K-40	2.69e-13	μCi/mL
3/23/2021	AF48400	057	I-131	<9.0e-15	μCi/mL
			K-40	2.21e-13	μCi/mL
1/5/2021	AF38276	057	I-132	<3.8e-16	μCi/mL
			K-41	2.16e-14	μCi/mL
4/6/2021	AF49437	001	I-131	<6.0e-15	μCi/mL
			K-40	2.10e-13	μCi/mL
4/6/2021	AF49439	057	I-131	<5.9e-15	μCi/mL
			K-40	2.68e-13	μCi/mL
4/13/2021	AF50024	001	I-131	<5.7e-15	μCi/mL
			K-40	2.26e-13	μCi/mL
4/13/2021	AF50026	057	I-131	<5.4e-15	μCi/mL
			K-40	2.19e-13	μCi/mL
4/20/2021	AF50783	001	I-131	<5.3e-15	μCi/mL
			K-40	2.62e-13	μCi/mL
4/20/2021	AF50785	057	I-131	<5.6e-15	μCi/mL
			K-40	2.26e-13	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Air Iodine Samples					
4/27/2021	AF51549	001	I-131	<5.4e-15	μCi/mL
			K-40	2.29e-13	μCi/mL
4/27/2021	AF51551	057	I-131	<5.6e-15	μCi/mL
			K-40	1.92e-13	μCi/mL
5/4/2021	AF52473	001	I-131	<5.9e-15	μCi/mL
			K-40	2.89e-13	μCi/mL
5/4/2021	AF52475	057	I-131	<5.3e-15	μCi/mL
			K-40	2.05e-13	μCi/mL
5/11/2021	AF53101	001	I-131	<5.0e-15	μCi/mL
			K-40	2.51e-13	μCi/mL
5/11/2021	AF53103	057	I-131	<5.0e-14	μCi/mL
			K-40	2.08e-13	μCi/mL
5/18/2021	AF54476	001	I-131	<5.2e-15	μCi/mL
			K-40	2.29e-13	μCi/mL
5/18/2021	AF54478	057	I-131	<5.5e-15	μCi/mL
			K-40	2.20e-13	μCi/mL
5/25/2021	AF55460	001	I-131	<5.1e-15	μCi/mL
			K-40	2.32e-13	μCi/mL
5/25/2021	AF55462	057	I-131	<5.5e-15	μCi/mL
			K-40	2.51e-13	μCi/mL
6/1/2021	AF56130	001	I-131	<5.3e-15	μCi/mL
			K-40	2.17e-13	μCi/mL
6/1/2021	AF56132	057	I-131	<5.4e-15	μCi/mL
			K-40	2.09e-13	μCi/mL
6/8/2021	AF57096	001	I-131	<5.3e-15	μCi/mL
			K-40	2.07e-13	μCi/mL
6/8/2021	AF57098	057	I-131	<5.4e-15	μCi/mL
			K-40	1.97e-13	μCi/mL
6/15/2021	AF58297	001	I-131	<7.5e-15	μCi/mL
			K-40	3.11e-13	μCi/mL
6/15/2021	AF58299	057	I-131	<5.3e-15	μCi/mL
			K-40	2.09e-13	μCi/mL
6/22/2021	AF59178	057	I-131	<5.3e-15	μCi/mL
			K-40	2.35e-13	μCi/mL
6/29/2021	AF60504	001	I-131	<5.7e-15	μCi/mL
			K-40	1.96e-13	μCi/mL
6/29/2021	AF60506	057	I-131	<6.0e-15	μCi/mL
			K-40	2.26e-13	μCi/mL
7/6/2021	AF60813	001	I-131	<5.3e-15	μCi/mL
			K-40	2.60e-13	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Air Iodine Samples					
7/6/2021	AF60815	057	I-131	<5.9e-15	μCi/mL
			K-40	2.15e-13	μCi/mL
7/13/2021	AF61820	001	I-131	<5.5e-15	μCi/mL
			K-40	2.15e-13	μCi/mL
7/13/2021	AF61822	057	I-131	<5.7e-15	μCi/mL
			K-40	2.69e-13	μCi/mL
7/19/2021	AF62967	001	I-131	<6.9e-15	μCi/mL
			K-40	3.05e-13	μCi/mL
7/19/2021	AF62969	057	I-131	<6.8e-15	μCi/mL
			K-40	2.40e-13	μCi/mL
7/27/2021	AF63628	001	I-131	<4.6e-15	μCi/mL
			K-40	1.78e-13	μCi/mL
7/27/2021	AF63630	057	I-131	<5.0e-15	μCi/mL
			K-40	1.84e-13	μCi/mL
8/3/2021	AF65143	057	I-131	<7.3e-15	μCi/mL
			K-40	2.63e-13	μCi/mL
8/3/2021	AF65144	001	I-131	<7.7e-15	μCi/mL
			K-40	2.76e-13	μCi/mL
8/10/2021	AF66184	001	I-131	<7.8e-15	μCi/mL
			K-40	2.71e-13	μCi/mL
8/10/2021	AF66186	057	I-131	<8.1e-15	μCi/mL
			K-40	2.88e-13	μCi/mL
8/17/2021	AF66784	001	I-131	<5.9e-15	μCi/mL
			K-40	2.22e-13	μCi/mL
8/17/2021	AF66786	057	I-131	<5.9e-15	μCi/mL
			K-40	2.09e-13	μCi/mL
8/24/2021	AF67984	001	I-131	<5.5e-15	μCi/mL
			K-40	2.40e-13	μCi/mL
8/24/2021	AF67986	057	I-131	<5.5e-15	μCi/mL
			K-40	2.40e-13	μCi/mL
8/31/2021	AF68468	001	I-131	<5.7e-15	μCi/mL
			K-40	2.51e-13	μCi/mL
8/31/2021	AF68470	057	I-131	<5.5e-15	μCi/mL
			K-40	2.39e-13	μCi/mL
9/7/2021	AF69376	001	I-131	<5.6e-15	μCi/mL
			K-40	2.75e-13	μCi/mL
9/7/2021	AF69378	057	I-131	<5.9e-15	μCi/mL
			K-40	3.32e-13	μCi/mL
9/14/2021	AF70061	001	I-131	<5.6e-15	μCi/mL
			K-40	3.17e-13	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Air Iodine Samples					
9/14/2021	AF70063	057	I-131	<5.8e-15	μCi/mL
			K-40	2.61e-13	μCi/mL
9/21/2021	AF72965	001	I-131	<2.9e-14	μCi/mL
			K-40	2.27e-13	μCi/mL
9/21/2021	AF72967	057	I-131	<3.0e-14	μCi/mL
			K-40	2.17e-13	μCi/mL
9/28/2021	AF72007	001	I-131	<6.1e-15	μCi/mL
			K-40	2.92e-13	μCi/mL
9/28/2021	AF72009	057	I-131	<6.0e-15	μCi/mL
			K-40	2.05e-13	μCi/mL
10/5/2021	AF72519	001	I-131	<5.6e-15	μCi/mL
			K-40	2.39e-13	μCi/mL
10/5/2021	AF72521	057	I-131	<5.5e-15	μCi/mL
			K-40	2.72e-13	μCi/mL
10/12/2021	AF73402	001	I-131	<5.5e-15	μCi/mL
			K-40	2.29e-13	μCi/mL
10/12/2021	AF73404	057	I-131	<5.6e-15	μCi/mL
			K-40	2.82e-13	μCi/mL
10/19/2021	AF74029	001	I-131	<5.7e-15	μCi/mL
			K-40	2.44e-13	μCi/mL
10/19/2021	AF74031	057	I-131	<5.4e-15	μCi/mL
			K-40	2.91e-13	μCi/mL
10/26/2021	AF74779	001	I-131	<5.4e-15	μCi/mL
			K-40	2.66e-13	μCi/mL
10/26/2021	AF74781	057	I-131	<5.7e-15	μCi/mL
			K-40	2.71e-13	μCi/mL
11/2/2021	AF75643	001	I-131	<5.6e-15	μCi/mL
			K-40	2.66e-13	μCi/mL
11/2/2021	AF75645	057	I-131	<5.6e-15	μCi/mL
			K-40	2.37e-13	μCi/mL
11/9/2021	AF76047	001	I-131	<5.0e-15	μCi/mL
			K-40	2.25e-13	μCi/mL
11/9/2021	AF76049	057	I-131	<5.2e-15	μCi/mL
			K-40	2.04e-13	μCi/mL
11/16/2021	AF76873	057	I-131	<5.5e-15	μCi/mL
			K-40	2.02e-13	μCi/mL
11/16/2021	AF76875	001	I-131	<5.5e-15	μCi/mL
			K-40	2.35e-13	μCi/mL
11/23/2021	AF77304	001	I-131	<7.7e-15	μCi/mL
			K-40	1.96e-13	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Air Iodine Samples					
11/23/2021	AF77306	057	I-131	<7.9e-15	μCi/mL
			K-40	2.30e-13	μCi/mL
11/30/2021	AF77590	001	I-131	<5.1e-15	μCi/mL
			K-40	2.22e-13	μCi/mL
11/30/2021	AF77592	057	I-131	<5.1e-15	μCi/mL
			K-40	2.26e-13	μCi/mL
12/7/2021	AF78231	001	I-131	<5.7e-15	μCi/mL
			K-40	2.70e-13	μCi/mL
12/7/2021	AF78233	057	I-131	<5.0e-15	μCi/mL
			K-40	2.27e-13	μCi/mL
12/14/2021	AF78899	001	I-131	<5.7e-15	μCi/mL
			K-40	2.49e-13	μCi/mL
12/14/2021	AF78901	057	I-131	<5.8e-15	μCi/mL
			K-40	2.41e-13	μCi/mL
12/21/2021	AF79296	057	I-131	<3.4e-15	μCi/mL
			K-40	1.90e-13	μCi/mL
12/21/2021	AF79298	001	I-131	<2.2e-15	μCi/mL
			K-40	2.58e-13	μCi/mL
12/28/2021	AF79314	001	I-131	<5.8e-15	μCi/mL
			K-40	2.38e-13	μCi/mL
12/28/2021	AF79315	057	I-131	<5.7e-15	μCi/mL
			K-40	1.92e-13	μCi/mL

Date	Lab	Station	Analyte	Result	Units
Air Particulate Samples					
1/5/2021	AF38275	057	Gross Beta	3.01e-14	μCi/mL
1/5/2021	AF38277	001	Gross Beta	3.42e-14	μCi/mL
1/12/2021	AF39284	001	Gross Beta	3.36e-14	μCi/mL
1/12/2021	AF39286	057	Gross Beta	2.75e-14	μCi/mL
1/19/2021	AF39905	001	Gross Beta	3.27e-14	μCi/mL
1/19/2021	AF39907	057	Gross Beta	2.55e-14	μCi/mL
1/26/2021	AF41201	001	Gross Beta	2.89e-14	μCi/mL
1/26/2021	AF41203	057	Gross Beta	2.21e-14	μCi/mL
2/2/2021	AF42344	001	Gross Beta	4.50e-14	μCi/mL
2/2/2021	AF42346	057	Gross Beta	3.87e-14	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Air Particulate Samples					
2/9/2021	AF42008	001	Ba-140	<9.2e-6	μCi/mL
			Be-7	3.63e-4	μCi/mL
			Co-58	<2.5e-6	μCi/mL
			Co-60	<3.0e-6	μCi/mL
			Cs-134	<2.5e-6	μCi/mL
			Cs-137	<3.0e-6	μCi/mL
			Fe-59	<5.2e-6	μCi/mL
			I-131	<2.8e-6	μCi/mL
			La-140	<3.2e-6	μCi/mL
			Mn-54	<2.8e-6	μCi/mL
			Nb-95	<2.8e-6	μCi/mL
			Zn-65	<5.7e-6	μCi/mL
			Zr-95	<4.7e-6	μCi/mL
2/9/2021	AF42009	057	Ba-140	<9.8e-6	μCi/mL
			Be-7	3.21e-4	μCi/mL
			Co-58	<2.8e-6	μCi/mL
			Co-60	<2.8e-6	μCi/mL
			Cs-134	<2.6e-6	μCi/mL
			Cs-137	<3.2e-6	μCi/mL
			Fe-59	<4.5e-6	μCi/mL
			I-131	<2.8e-6	μCi/mL
			La-140	<3.3e-6	μCi/mL
			Mn-54	<2.6e-6	μCi/mL
			Nb-95	<2.6e-6	μCi/mL
			Zn-65	<5.7e-6	μCi/mL
			Zr-95	<4.8e-6	μCi/mL
2/9/2021	AF43584	001	Gross Beta	3.57e-14	μCi/mL
2/9/2021	AF43586	057	Gross Beta	2.92e-14	μCi/mL
2/16/2021	AF43831	001	Gross Beta	4.42e-14	μCi/mL
2/16/2021	AF43833	057	Gross Beta	3.57e-14	μCi/mL
2/23/2021	AF44493	001	Gross Beta	5.98e-14	μCi/mL
2/23/2021	AF44495	057	Gross Beta	4.27e-14	μCi/mL
3/2/2021	AF45229	001	Gross Beta	2.68e-14	μCi/mL
3/2/2021	AF45231	057	Gross Beta	<5.4e-13	μCi/mL
3/9/2021	AF46191	001	Gross Beta	3.30e-14	μCi/mL
3/9/2021	AF46197	057	Gross Beta	2.39e-14	μCi/mL
3/16/2021	AF47131	001	Gross Beta	2.22e-14	μCi/mL
3/16/2021	AF47133	057	Gross Beta	1.77e-14	μCi/mL
3/23/2021	AF48397	001	Gross Beta	2.50e-14	μCi/mL
3/23/2021	AF48399	057	Gross Beta	1.92e-14	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Air Particulate Samples					
3/30/2021	AF48583	001	Gross Beta	2.56e-14	μCi/mL
3/30/2021	AF48585	057	Gross Beta	2.06e-14	μCi/mL
4/6/2021	AF49436	001	Gross Beta	2.85e-14	μCi/mL
4/6/2021	AF49438	057	Gross Beta	2.25e-14	μCi/mL
4/13/2021	AF50023	001	Gross Beta	2.67e-14	μCi/mL
4/13/2021	AF50025	057	Gross Beta	2.13e-14	μCi/mL
4/20/2021	AF50782	001	Gross Beta	2.25e-14	μCi/mL
4/20/2021	AF50784	057	Gross Beta	1.69e-14	μCi/mL
4/27/2021	AF51548	001	Gross Beta	2.55e-14	μCi/mL
4/27/2021	AF51550	057	Gross Beta	2.11e-14	μCi/mL
5/4/2021	AF52472	001	Gross Beta	2.55e-14	μCi/mL
5/4/2021	AF52474	057	Gross Beta	1.58e-14	μCi/mL
5/11/2021	AF53100	001	Gross Beta	2.24e-14	μCi/mL
5/11/2021	AF53102	057	Gross Beta	1.83e-14	μCi/mL
5/18/2021	AF54475	001	Gross Beta	1.85e-14	μCi/mL
5/18/2021	AF54477	057	Gross Beta	1.60e-14	μCi/mL
5/25/2021	AF49266	001	Ba-140	<8.9e-6	μCi/mL
			Be-7	3.52e-4	μCi/mL
			Co-58	<2.3e-6	μCi/mL
			Co-60	<2.5e-6	μCi/mL
			Cs-134	<2.4e-6	μCi/mL
			Cs-137	<3.0e-6	μCi/mL
			Fe-59	<4.9e-6	μCi/mL
			I-131	<2.6e-6	μCi/mL
			La-140	<3.0e-6	μCi/mL
			Mn-54	<2.7e-6	μCi/mL
			Nb-95	<2.8e-6	μCi/mL
			Zn-65	<5.1e-6	μCi/mL
			Zr-95	<4.6e-6	μCi/mL
5/25/2021	AF49267	057	Ba-140	<9.2e-6	μCi/mL
			Be-7	2.62e-4	μCi/mL
			Co-58	<2.4e-6	μCi/mL
			Co-60	<3.0e-6	μCi/mL
			Cs-134	<2.4e-6	μCi/mL
			Cs-137	<3.1e-6	μCi/mL
			Fe-59	<4.8e-6	μCi/mL
			I-131	<2.8e-6	μCi/mL
			La-140	<3.1e-6	μCi/mL
			Mn-54	<2.7e-6	μCi/mL
			Nb-95	<2.8e-6	μCi/mL
			Zn-65	<5.4e-6	μCi/mL
			Zr-95	<4.3e-6	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Air Particulate Samples					
5/25/2021	AF55459	001	Gross Beta	1.60e-14	μCi/mL
5/25/2021	AF55461	057	Gross Beta	1.42e-14	μCi/mL
6/1/2021	AF56129	001	Gross Beta	1.64e-14	μCi/mL
6/1/2021	AF56131	057	Gross Beta	1.49e-14	μCi/mL
6/8/2021	AF57095	001	Gross Beta	1.80e-14	μCi/mL
6/8/2021	AF57097	057	Gross Beta	1.51e-14	μCi/mL
6/15/2021	AF58296	001	Gross Beta	1.92e-14	μCi/mL
6/15/2021	AF58298	057	Gross Beta	1.71e-14	μCi/mL
6/22/2021	AF59177	057	Gross Beta	2.74e-14	μCi/mL
6/29/2021	AF60503	001	Gross Beta	1.83e-14	μCi/mL
6/29/2021	AF60505	057	Gross Beta	1.74e-14	μCi/mL
7/6/2021	AF60812	001	Gross Beta	1.28e-14	μCi/mL
7/6/2021	AF60814	057	Gross Beta	1.14e-14	μCi/mL
7/13/2021	AF61819	001	Gross Beta	1.56e-14	μCi/mL
7/13/2021	AF61821	057	Gross Beta	1.46e-14	μCi/mL
7/19/2021	AF62966	001	Gross Beta	2.34e-14	μCi/mL
7/19/2021	AF62968	057	Gross Beta	2.13e-14	μCi/mL
7/27/2021	AF63627	001	Gross Beta	2.54e-14	μCi/mL
7/27/2021	AF63629	057	Gross Beta	2.29e-14	μCi/mL
8/3/2021	AF65142	057	Gross Beta	2.60e-14	μCi/mL
8/3/2021	AF65145	001	Gross Beta	2.83e-14	μCi/mL
8/10/2021	AF66183	001	Gross Beta	2.89e-14	μCi/mL
8/10/2021	AF66185	057	Gross Beta	2.43e-14	μCi/mL
8/17/2021	AF66783	001	Gross Beta	1.48e-14	μCi/mL
8/17/2021	AF66785	057	Gross Beta	1.49e-14	μCi/mL
8/24/2021	AF67983	001	Gross Beta	1.90e-14	μCi/mL
8/24/2021	AF67985	057	Gross Beta	1.71e-14	μCi/mL
8/31/2021	AF68467	001	Gross Beta	2.15e-14	μCi/mL
8/31/2021	AF68469	057	Gross Beta	1.97e-14	μCi/mL
9/7/2021	AF69375	001	Gross Beta	2.71e-14	μCi/mL
9/7/2021	AF69377	057	Gross Beta	2.30e-14	μCi/mL
9/14/2021	AF70060	001	Gross Beta	3.48e-14	μCi/mL
9/14/2021	AF70062	057	Gross Beta	3.04e-14	μCi/mL
9/21/2021	AF72964	001	Gross Beta	2.04e-14	μCi/mL
9/21/2021	AF72966	057	Gross Beta	1.73e-14	μCi/mL
9/28/2021	AF72006	001	Gross Beta	2.83e-14	μCi/mL
9/28/2021	AF72008	057	Gross Beta	2.64e-14	μCi/mL
10/5/2021	AF72518	001	Gross Beta	2.41e-14	μCi/mL
10/5/2021	AF72520	057	Gross Beta	2.10e-14	μCi/mL
10/12/2021	AF73401	001	Gross Beta	4.23e-14	μCi/mL
10/12/2021	AF73403	057	Gross Beta	3.93e-14	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Air Particulate Samples					
10/19/2021	AF74028	001	Gross Beta	2.48e-14	μCi/mL
10/19/2021	AF74030	057	Gross Beta	2.37e-14	μCi/mL
10/26/2021	AF74778	001	Gross Beta	3.22e-14	μCi/mL
10/26/2021	AF74780	057	Gross Beta	2.84e-14	μCi/mL
11/2/2021	AF75642	001	Gross Beta	1.91e-14	μCi/mL
11/2/2021	AF75644	057	Gross Beta	1.66e-14	μCi/mL
11/9/2021	AF76048	052	Gross Beta	2.92e-14	μCi/mL
11/16/2021	AF76872	057	Gross Beta	3.17e-14	μCi/mL
11/16/2021	AF76874	001	Gross Beta	3.17e-14	μCi/mL
11/19/2021	AF76046	001	Gross Beta	3.20e-14	μCi/mL
11/23/2021	AF77303	001	Gross Beta	3.01e-14	μCi/mL
11/23/2021	AF77305	057	Gross Beta	2.98e-14	μCi/mL
11/30/2021	AF77589	001	Gross Beta	3.81e-14	μCi/mL
11/30/2021	AF77591	057	Gross Beta	3.91e-14	μCi/mL
12/7/2021	AF78230	001	Gross Beta	4.39e-14	μCi/mL
12/7/2021	AF78232	057	Gross Beta	4.13e-14	μCi/mL
12/14/2021	AF78898	001	Gross Beta	3.49e-14	μCi/mL
12/14/2021	AF78900	057	Gross Beta	3.37e-14	μCi/mL
12/21/2021	AF79295	057	Gross Beta	3.13e-14	μCi/mL
12/21/2021	AF79297	001	Gross Beta	3.25e-14	μCi/mL
12/28/2021	AF79316	057	Gross Beta	3.90e-14	μCi/mL
12/28/2021	AF79317	001	Gross Beta	3.89e-14	μCi/mL

Date	Lab	Station	Analyte	Result	Units
Food Product Samples					
7/6/2021	AF60816	094	Ba-140	<1.8e-8	μCi/g
			Co-58	<4.2e-9	μCi/g
			Co-60	<5.1e-9	μCi/g
			Cs-134	<4.4e-9	μCi/g
			Cs-137	<4.7e-9	μCi/g
			Fe-59	<1.1e-8	μCi/g
			I-131	<4.7e-9	μCi/g
			K-40	1.96e-6	μCi/g
			La-140	<4.7e-9	μCi/g
			Mn-54	<4.5e-9	μCi/g
			Nb-95	<4.6e-9	μCi/g
			Zn-65	<1.2e-8	μCi/g
			Zr-95	<7.9e-9	μCi/g

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Food Product Samples					
12/7/2021	AF78236	093	Ba-140	<4.6e-8	μCi/g
			Co-58	<1.2e-8	μCi/g
			Co-60	<1.4e-8	μCi/g
			Cs-134	<1.3e-8	μCi/g
			Cs-137	<1.3e-8	μCi/g
			Fe-59	<2.6e-8	μCi/g
			I-131	<1.4e-8	μCi/g
			K-40	3.45e-6	μCi/g
			La-140	<1.5e-8	μCi/g
			Mn-54	<1.3e-8	μCi/g
			Nb-95	<1.3e-8	μCi/g
			Zn-65	<3.1e-8	μCi/g
			Zr-95	<2.0e-8	μCi/g

Date	Lab	Station	Analyte	Result	Units
Fish Samples					
5/11/2021	AF53104	091	Ba-140	<4.1e-8	μCi/g
			Co-58	<1.1e-8	μCi/g
			Co-60	<1.2e-8	μCi/g
			Cs-134	<1.1e-8	μCi/g
			Cs-137	<1.2e-8	μCi/g
			Fe-59	<2.4e-8	μCi/g
			I-131	<1.3e-8	μCi/g
			K-40	2.48e-6	μCi/g
			La-140	<1.4e-8	μCi/g
			Mn-54	<1.2e-8	μCi/g
			Nb-95	<1.1e-8	μCi/g
			Zn-65	<2.6e-8	μCi/g
			Zr-95	<1.9e-8	μCi/g
5/11/2021	AF53105	092	Ba-140	<2.6e-8	μCi/g
			Co-58	<6.7e-9	μCi/g
			Co-60	<8.4e-9	μCi/g
			Cs-134	<7.3e-9	μCi/g
			Cs-137	<7.5e-9	μCi/g
			Fe-59	<1.7e-8	μCi/g
			I-131	<7.8e-9	μCi/g
			K-40	4.09e-6	μCi/g
			La-140	<8.1e-9	μCi/g
			Mn-54	<7.1e-9	μCi/g
			Nb-95	<7.0e-9	μCi/g
			Zn-65	<1.8e-8	μCi/g
			Zr-95	<1.2e-8	μCi/g

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Fish Samples					
5/11/2021	AF53106	091	Ba-140	<4.6e-8	μCi/g
			Co-58	<1.2e-8	μCi/g
			Co-60	<1.3e-8	μCi/g
			Cs-134	<1.2e-8	μCi/g
			Cs-137	<1.3e-8	μCi/g
			Fe-59	<2.2e-8	μCi/g
			I-131	<1.5e-8	μCi/g
			K-40	2.26e-6	μCi/g
			La-140	<1.3e-8	μCi/g
			Mn-54	<1.2e-8	μCi/g
			Nb-95	<1.3e-8	μCi/g
			Zn-65	<2.4e-8	μCi/g
			Zr-95	<2.1e-8	μCi/g
12/7/2021	AF78234	091	Ba-140	<5.6e-8	μCi/g
			Co-58	<1.4e-8	μCi/g
			Co-60	<1.5e-8	μCi/g
			Cs-134	<1.4e-8	μCi/g
			Cs-137	<1.7e-8	μCi/g
			Fe-59	<2.7e-8	μCi/g
			I-131	<1.9e-8	μCi/g
			K-40	3.19e-6	μCi/g
			La-140	<1.7e-8	μCi/g
			Mn-54	<1.5e-8	μCi/g
			Nb-95	<1.6e-8	μCi/g
			Zn-65	<3.1e-8	μCi/g
			Zr-95	<2.6e-8	μCi/g
12/7/2021	AF78235	091	Ba-140	<2.8e-8	μCi/g
			Co-58	<7.3e-9	μCi/g
			Co-60	<9.0e-9	μCi/g
			Cs-134	<8.2e-9	μCi/g
			Cs-137	<7.9e-9	μCi/g
			Fe-59	<1.7e-8	μCi/g
			I-131	<8.4e-9	μCi/g
			K-40	3.91e-6	μCi/g
			La-140	<9.1e-9	μCi/g
			Mn-54	<7.4e-9	μCi/g
			Nb-95	<7.8e-9	μCi/g
			Zn-65	<2.0e-8	μCi/g
			Zr-95	<1.4e-8	μCi/g

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Milk Samples					
3/30/2021	AF48590	090	Ba-140	<1.2e-7	μCi/g
			Be-7	1.27e-5	μCi/g
			Co-58	<2.6e-8	μCi/g
			Co-60	<2.8e-8	μCi/g
			Cs-134	<2.5e-8	μCi/g
			Cs-137	<2.6e-8	μCi/g
			Fe-59	<5.0e-8	μCi/g
			I-131	<4.3e-8	μCi/g
			K-40	2.16e-6	μCi/g
			La-140	<3.8e-8	μCi/g
			Mn-54	<2.5e-8	μCi/g
			Nb-95	<2.7e-8	μCi/g
			Zn-65	<5.2e-8	μCi/g
			Zr-95	<4.5e-8	μCi/g
12/28/2021	AF79318	090	Ba-140	<1.3e-7	μCi/g
			Be-7	4.52e-6	μCi/g
			Co-58	<2.8e-8	μCi/g
			Co-60	<2.9e-8	μCi/g
			Cs-134	<2.9e-8	μCi/g
			Cs-137	<2.9e-8	μCi/g
			Fe-59	<6.2e-8	μCi/g
			I-131	<4.6e-8	μCi/g
			K-40	3.54e-6	μCi/g
			La-140	<4.6e-8	μCi/g
			Mn-54	<2.6e-8	μCi/g
			Nb-95	<3.0e-8	μCi/g
			Zn-65	<6.1e-8	μCi/g
			Zr-95	<4.6e-8	μCi/g

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Sediment Samples					
1/12/2021	AF39288	088	Ba-140	<1.9e-7	μCi/g
			Co-58	<4.1e-8	μCi/g
			Co-60	<5.3e-8	μCi/g
			Cs-134	<6.0e-8	μCi/g
			Cs-137	1.29e-7	μCi/g
			Fe-59	<1.1e-7	μCi/g
			I-131	<5.7e-8	μCi/g
			K-40	6.81e-6	μCi/g
			La-140	<6.5e-8	μCi/g
			Mn-54	<5.1e-8	μCi/g
			Nb-95	<5.4e-8	μCi/g
			Pb-212	5.5e-7	μCi/g
			Pb-214	4.40e-7	μCi/g
			Tl-208	1.97e-7	μCi/g
			Zn-65	<1.6e-7	μCi/g
			Zr-95	<8.9e-8	μCi/g
7/6/2021	AF60817	088	Ba-140	<1.5e-7	μCi/g
			Be-7	7.6e-7	μCi/g
			Co-58	<4.4e-8	μCi/g
			Co-60	<5.2e-8	μCi/g
			Cs-134	<5.3e-8	μCi/g
			Cs-137	<5.1e-8	μCi/g
			Fe-59	<8.8e-8	μCi/g
			I-131	<5.1e-8	μCi/g
			K-40	8.00e-6	μCi/g
			La-140	<5.3e-8	μCi/g
			Mn-54	<4.0e-8	μCi/g
			Nb-95	<5.3e-8	μCi/g
			Pb-212	4.73e-7	μCi/g
			Tl-208	1.57e-7	μCi/g
			Zn-65	<1.4e-7	μCi/g
			Zr-95	<7.3e-8	μCi/g

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Vegetation for Milk Samples					
1/26/2021	AF41205	014	Ba-140	<1.3e-7	μCi/g
			Be-7	6.84e-6	μCi/g
			Co-58	<2.8e-8	μCi/g
			Co-60	<2.4e-8	μCi/g
			Cs-134	<2.8e-8	μCi/g
			Cs-137	<2.8e-8	μCi/g
			Fe-59	<6.0e-8	μCi/g
			I-131	<4.6e-8	μCi/g
			K-40	2.42e-6	μCi/g
			La-140	<4.2e-8	μCi/g
			Mn-54	<2.5e-8	μCi/g
			Nb-95	<3.1e-8	μCi/g
			Zn-65	<5.6e-8	μCi/g
			Zr-95	<4.3e-8	μCi/g
2/23/2021	AF44499	014	Ba-140	<2.4e-7	μCi/g
			Be-7	5.13e-6	μCi/g
			Co-58	<4.2e-8	μCi/g
			Co-60	<6.1e-8	μCi/g
			Cs-134	<4.4e-8	μCi/g
			Cs-137	<4.8e-8	μCi/g
			Fe-59	<1.1e-7	μCi/g
			I-131	<8.8e-8	μCi/g
			K-40	3.37e-6	μCi/g
			La-140	<7.7e-8	μCi/g
			Mn-54	<4.4e-8	μCi/g
			Nb-95	<5.2e-8	μCi/g
			Zn-65	<1.1e-7	μCi/g
			Zr-95	<6.1e-8	μCi/g
3/30/2021	AF48589	014	Ba-140	<6.3e-8	μCi/g
			Be-7	7.02e-6	μCi/g
			Co-58	<1.4e-8	μCi/g
			Co-60	<1.3e-8	μCi/g
			Cs-134	<1.4e-8	μCi/g
			Cs-137	<1.4e-8	μCi/g
			Fe-59	<3.0e-8	μCi/g
			I-131	<2.3e-8	μCi/g
			K-40	3.17e-6	μCi/g
			La-140	<2.0e-8	μCi/g
			Mn-54	<1.4e-8	μCi/g
			Nb-95	<1.5e-8	μCi/g
			Pb-212	2.9e-8	μCi/g
			Zn-65	<3.4e-8	μCi/g
			Zr-95	<2.4e-8	μCi/g

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Vegetation for Milk Samples					
4/27/2021	AF51552	014	Ba-140	<1.0e-7	μCi/g
			Be-7	1.307e-5	μCi/g
			Co-58	<2.4e-8	μCi/g
			Co-60	<2.4e-8	μCi/g
			Cs-134	<2.4e-8	μCi/g
			Cs-137	<2.4e-8	μCi/g
			Fe-59	<5.0e-8	μCi/g
			I-131	<3.8e-8	μCi/g
			K-40	6.15e-6	μCi/g
			La-140	<3.4e-8	μCi/g
			Mn-54	<2.4e-8	μCi/g
			Nb-95	<2.4e-8	μCi/g
			Zn-65	<5.4e-8	μCi/g
			Zr-95	<3.9e-8	μCi/g
5/25/2021	AF55465	014	Ba-140	<4.4e-8	μCi/g
			Be-7	6.88e-6	μCi/g
			Co-58	<7.7e-9	μCi/g
			Co-60	<8.6e-9	μCi/g
			Cs-134	<8.5e-9	μCi/g
			Cs-137	<8.9e-9	μCi/g
			Fe-59	<1.8e-8	μCi/g
			I-131	<2.0e-8	μCi/g
			K-40	4.52e-7	μCi/g
			La-140	<1.5e-8	μCi/g
			Mn-54	<7.9e-9	μCi/g
			Nb-95	<8.7e-9	μCi/g
			Zn-65	<1.9e-8	μCi/g
			Zr-95	<1.4e-8	μCi/g
6/29/2021	AF60509	090	Ba-140	<7.7e-8	μCi/g
			Be-7	6.45e-6	μCi/g
			Co-58	<1.7e-8	μCi/g
			Co-60	<2.0e-8	μCi/g
			Cs-134	<1.7e-8	μCi/g
			Cs-137	<1.8e-8	μCi/g
			Fe-59	<3.7e-8	μCi/g
			I-131	<2.9e-8	μCi/g
			K-40	4.18e-6	μCi/g
			La-140	<2.4e-8	μCi/g
			Mn-54	<1.8e-8	μCi/g
			Nb-95	<1.8e-8	μCi/g
			Zn-65	<4.1e-8	μCi/g
			Zr-95	<2.9e-8	μCi/g

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Vegetation for Milk Samples					
6/29/2021	AF60510	014	Ba-140	<9.2e-8	μCi/g
			Be-7	3.79e-6	μCi/g
			Co-58	<2.2e-8	μCi/g
			Co-60	<2.5e-8	μCi/g
			Cs-134	<2.1e-8	μCi/g
			Cs-137	<2.1e-8	μCi/g
			Fe-59	<5.2e-8	μCi/g
			I-131	<3.1e-8	μCi/g
			K-40	1.460e-5	μCi/g
			La-140	<2.8e-8	μCi/g
			Mn-54	<2.1e-8	μCi/g
			Nb-95	<2.2e-8	μCi/g
			Zn-65	<5.3e-8	μCi/g
			Zr-95	<3.7e-8	μCi/g
7/27/2021	AF63633	014	Ba-140	<1.4e-7	μCi/g
			Be-7	6.99e-6	μCi/g
			Co-58	<3.2e-8	μCi/g
			Co-60	<3.1e-8	μCi/g
			Cs-134	<3.1e-8	μCi/g
			Cs-137	<3.0e-8	μCi/g
			Fe-59	<6.6e-8	μCi/g
			I-131	<5.2e-8	μCi/g
			K-40	9.90e-6	μCi/g
			La-140	<4.8e-8	μCi/g
			Mn-54	<3.0e-8	μCi/g
			Nb-95	<3.3e-8	μCi/g
			Zn-65	<7.8e-8	μCi/g
			Zr-95	<5.5e-8	μCi/g
8/31/2021	AF68473	014	Ba-140	<1.9e-7	μCi/g
			Be-7	4.68e-6	μCi/g
			Co-58	<3.7e-8	μCi/g
			Co-60	<4.2e-8	μCi/g
			Cs-134	<3.8e-8	μCi/g
			Cs-137	<4.0e-8	μCi/g
			Fe-59	<9.3e-8	μCi/g
			I-131	<6.8e-8	μCi/g
			K-40	1.47e-5	μCi/g
			La-140	<5.2e-8	μCi/g
			Mn-54	<3.8e-8	μCi/g
			Nb-95	<4.1e-8	μCi/g
			Zn-65	<9.7e-8	μCi/g
			Zr-95	<6.5e-8	μCi/g

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Vegetation for Milk Samples					
9/28/2021	AF72004	090	Ba-140	<1.2e-7	µCi/g
			Be-7	1.90e-6	µCi/g
			Co-58	<2.4e-8	µCi/g
			Co-60	<2.4e-8	µCi/g
			Cs-134	<2.3e-8	µCi/g
			Cs-137	<2.4e-8	µCi/g
			Fe-59	<5.4e-8	µCi/g
			I-131	<3.8e-8	µCi/g
			K-40	6.54e-6	µCi/g
			La-140	<3.1e-8	µCi/g
			Mn-54	<2.3e-8	µCi/g
			Nb-95	<2.4e-8	µCi/g
			Pb-212	4.6e-8	µCi/g
			Zn-65	<5.8e-8	µCi/g
			Zr-95	<4.3e-8	µCi/g
9/28/2021	AF72005	014	Ba-140	<1.6e-7	µCi/g
			Be-7	3.09e-6	µCi/g
			Co-58	<3.3e-8	µCi/g
			Co-60	<3.5e-8	µCi/g
			Cs-134	<3.3e-8	µCi/g
			Cs-137	<3.1e-8	µCi/g
			Fe-59	<7.0e-8	µCi/g
			I-131	<5.1e-8	µCi/g
			K-40	9.90e-6	µCi/g
			La-140	<5.2e-8	µCi/g
			Mn-54	<3.2e-8	µCi/g
			Nb-95	<3.4e-8	µCi/g
			Pb-212	8.9e-8	µCi/g
			Zn-65	<7.7e-8	µCi/g
			Zr-95	<5.4e-8	µCi/g
10/26/2021	AF74782	014	Ba-140	<1.5e-7	µCi/g
			Be-7	5.09e-6	µCi/g
			Co-58	<2.9e-8	µCi/g
			Co-60	<3.1e-8	µCi/g
			Cs-134	<3.1e-8	µCi/g
			Cs-137	<3.2e-8	µCi/g
			Fe-59	<6.3e-8	µCi/g
			I-131	<5.1e-8	µCi/g
			K-40	5.48e-6	µCi/g
			La-140	<4.2e-8	µCi/g
			Mn-54	<3.0e-8	µCi/g
			Nb-95	<3.1e-8	µCi/g
			Zn-65	<7.1e-8	µCi/g
			Zr-95	<5.5e-8	µCi/g

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Vegetation for Milk Samples					
11/30/2021	AF77593	014	Ba-140	<7.6e-8	μCi/g
			Be-7	4.73e-6	μCi/g
			Co-58	<1.7e-8	μCi/g
			Co-60	<1.9e-8	μCi/g
			Cs-134	<1.8e-8	μCi/g
			Cs-137	<1.8e-8	μCi/g
			Fe-59	<3.7e-8	μCi/g
			I-131	<2.7e-8	μCi/g
			K-40	2.44e-6	μCi/g
			La-140	<2.6e-8	μCi/g
			Mn-54	<1.7e-8	μCi/g
			Nb-95	<1.8e-8	μCi/g
			Zn-65	<4.0e-8	μCi/g
			Zr-95	<2.9e-8	μCi/g
12/28/2021	AF79319	014	Ba-140	<1.7e-7	μCi/g
			Be-7	2.69e-6	μCi/g
			Co-58	<3.1e-8	μCi/g
			Co-60	<3.4e-8	μCi/g
			Cs-134	<3.3e-8	μCi/g
			Cs-137	<3.5e-8	μCi/g
			Fe-59	<7.0e-8	μCi/g
			I-131	<5.7e-8	μCi/g
			K-40	4.95e-6	μCi/g
			La-140	<4.8e-8	μCi/g
			Mn-54	<3.6e-8	μCi/g
			Nb-95	<3.6e-8	μCi/g
			Zn-65	<8.1e-8	μCi/g
			Zr-95	<5.9e-8	μCi/g

Date	Lab	Station	Analyte	Result	Units
Water Composite Samples					
7/8/2021	AF60810	085	H-3	1.220e-5	μCi/mL
7/8/2021	AF60811	086	H-3	<1.0e-6	μCi/mL
10/27/2021	AF72738	054	H-3	<1.0e-6	μCi/mL
10/27/2021	AF72739	052	H-3	<1.0e-6	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
1/26/2021	AF41206	085	Ba-140	<6.7e-9	μCi/mL
			Co-58	<1.7e-9	μCi/mL
			Co-60	<1.8e-9	μCi/mL
			Cs-134	<1.7e-9	μCi/mL
			Cs-137	<1.8e-9	μCi/mL
			Fe-59	<3.3e-9	μCi/mL
			Gross Beta	1.87e-8	μCi/mL
			I-131	<2.1e-9	μCi/mL
			La-140	<2.4e-9	μCi/mL
			Mn-54	<1.6e-9	μCi/mL
			Nb-95	<1.6e-9	μCi/mL
			Zn-65	<3.4e-9	μCi/mL
			Zr-95	<2.7e-9	μCi/mL
1/26/2021	AF41207	086	Ba-140	<8.4e-9	μCi/mL
			Co-58	<2.0e-9	μCi/mL
			Co-60	<2.1e-9	μCi/mL
			Cs-134	<2.1e-9	μCi/mL
			Cs-137	<2.0e-9	μCi/mL
			Fe-59	<4.1e-9	μCi/mL
			Gross Beta	7.6e-9	μCi/mL
			I-131	<2.7e-9	μCi/mL
			La-140	<3.1e-9	μCi/mL
			Mn-54	<2.0e-9	μCi/mL
			Nb-95	<2.1e-9	μCi/mL
			Zn-65	<4.1e-9	μCi/mL
			Zr-95	<3.2e-9	μCi/mL
2/23/2021	AF42014	085	H-3	1.360e-5	μCi/mL
2/23/2021	AF42015	086	H-3	<1.0e-6	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
2/23/2021	AF44497	085	Ba-140	<9.7e-9	μCi/mL
			Co-58	<2.0e-9	μCi/mL
			Co-60	<2.1e-9	μCi/mL
			Cs-134	<2.1e-9	μCi/mL
			Cs-137	<2.2e-9	μCi/mL
			Fe-59	<4.2e-9	μCi/mL
			Gross Beta	1.37e-8	μCi/mL
			I-131	<3.5e-9	μCi/mL
			La-140	<3.2e-9	μCi/mL
			Mn-54	<2.0e-9	μCi/mL
			Nb-95	<2.1e-9	μCi/mL
			Zn-65	<4.6e-9	μCi/mL
			Zr-95	<3.3e-9	μCi/mL
2/23/2021	AF44498	086	Ba-140	<8.1e-9	μCi/mL
			Co-58	<1.7e-9	μCi/mL
			Co-60	<1.8e-9	μCi/mL
			Cs-134	<1.8e-9	μCi/mL
			Cs-137	<1.8e-9	μCi/mL
			Fe-59	<3.6e-9	μCi/mL
			Gross Beta	6.9e-9	μCi/mL
			I-131	<2.8e-9	μCi/mL
			La-140	<3.0e-9	μCi/mL
			Mn-54	<1.7e-9	μCi/mL
			Nb-95	<1.9e-9	μCi/mL
			Pb-212	1.60e-8	μCi/mL
			Tl-208	6.0e-9	μCi/mL
			Zn-65	<3.7e-9	μCi/mL
Zr-95	<2.8e-9	μCi/mL			
3/30/2021	AF48587	086	Ba-140	<6.2e-9	μCi/mL
			Co-58	<1.6e-9	μCi/mL
			Co-60	<1.7e-9	μCi/mL
			Cs-134	<1.7e-9	μCi/mL
			Cs-137	<1.7e-9	μCi/mL
			Fe-59	<3.0e-9	μCi/mL
			Gross Beta	7.3e-9	μCi/mL
			I-131	<1.9e-9	μCi/mL
			La-140	<2.2e-9	μCi/mL
			Mn-54	<1.6e-9	μCi/mL
			Nb-95	<1.6e-9	μCi/mL
			Zn-65	<3.5e-9	μCi/mL
			Zr-95	<2.8e-9	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
3/30/2021	AF48588	085	Ba-140	<7.9e-9	μCi/mL
			Co-58	<1.9e-9	μCi/mL
			Co-60	<2.2e-9	μCi/mL
			Cs-134	<1.9e-9	μCi/mL
			Cs-137	<2.1e-9	μCi/mL
			Fe-59	<4.1e-9	μCi/mL
			Gross Beta	1.67e-8	μCi/mL
			I-131	<2.6e-9	μCi/mL
			La-140	<2.6e-9	μCi/mL
			Mn-54	<2.1e-9	μCi/mL
			Nb-95	<2.1e-9	μCi/mL
			Zn-65	<4.4e-9	μCi/mL
			Zr-95	<3.2e-9	μCi/mL
4/8/2021	AF49272	085	H-3	1.350e-5	μCi/mL
4/8/2021	AF49273	086	H-3	<1.0e-6	μCi/mL
4/27/2021	AF51553	086	Ba-140	<6.4e-9	μCi/mL
			Co-58	<1.6e-9	μCi/mL
			Co-60	<1.7e-9	μCi/mL
			Cs-134	<1.7e-9	μCi/mL
			Cs-137	<1.8e-9	μCi/mL
			Fe-59	<3.3e-9	μCi/mL
			Gross Beta	9.3e-9	μCi/mL
			I-131	<2.0e-9	μCi/mL
			La-140	<2.2e-9	μCi/mL
			Mn-54	<1.7e-9	μCi/mL
			Nb-95	<1.7e-9	μCi/mL
			Zn-65	<3.5e-9	μCi/mL
			Zr-95	<2.7e-9	μCi/mL
4/27/2021	AF51554	085	Ba-140	<8.3e-9	μCi/mL
			Co-58	<1.8e-9	μCi/mL
			Co-60	<2.2e-9	μCi/mL
			Cs-134	<1.9e-9	μCi/mL
			Cs-137	<2.2e-9	μCi/mL
			Fe-59	<4.1e-9	μCi/mL
			Gross Beta	1.55e-8	μCi/mL
			I-131	<2.6e-9	μCi/mL
			La-140	<2.8e-9	μCi/mL
			Mn-54	<2.0e-9	μCi/mL
			Nb-95	<2.1e-9	μCi/mL
			Zn-65	<4.2e-9	μCi/mL
			Zr-95	<3.3e-9	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
5/25/2021	AF55463	085	Ba-140	<8.2e-9	μCi/mL
			Co-58	<2.0e-9	μCi/mL
			Co-60	<2.0e-9	μCi/mL
			Cs-134	<2.0e-9	μCi/mL
			Cs-137	<2.1e-9	μCi/mL
			Fe-59	<3.8e-9	μCi/mL
			Gross Beta	1.49e-8	μCi/mL
			I-131	<2.4e-9	μCi/mL
			La-140	<2.4e-9	μCi/mL
			Mn-54	<1.9e-9	μCi/mL
			Nb-95	<2.0e-9	μCi/mL
			Zn-65	<4.2e-9	μCi/mL
			Zr-95	<3.4e-9	μCi/mL
5/25/2021	AF55464	086	Ba-140	<1.1e-8	μCi/mL
			Co-58	<2.0e-9	μCi/mL
			Co-60	<2.0e-9	μCi/mL
			Cs-134	<1.9e-9	μCi/mL
			Cs-137	<2.1e-9	μCi/mL
			Fe-59	<4.2e-9	μCi/mL
			Gross Beta	5.3e-9	μCi/mL
			I-131	<4.0e-9	μCi/mL
			La-140	<3.4e-9	μCi/mL
			Mn-54	<2.0e-9	μCi/mL
			Nb-95	<2.2e-9	μCi/mL
			Zn-65	<4.3e-9	μCi/mL
			Zr-95	<3.3e-9	μCi/mL
6/29/2021	AF60507	085	Ba-140	<8.1e-9	μCi/mL
			Co-58	<1.9e-9	μCi/mL
			Co-60	<2.1e-9	μCi/mL
			Cs-134	<2.1e-9	μCi/mL
			Cs-137	<2.0e-9	μCi/mL
			Fe-59	<4.0e-9	μCi/mL
			Gross Beta	1.28e-8	μCi/mL
			I-131	<2.7e-9	μCi/mL
			La-140	<2.8e-9	μCi/mL
			Mn-54	<2.1e-9	μCi/mL
			Nb-95	<2.1e-9	μCi/mL
			Zn-65	<4.2e-9	μCi/mL
			Zr-95	<3.5e-9	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
6/29/2021	AF60508	086	Ba-140	<6.5e-9	μCi/mL
			Co-58	<1.7e-9	μCi/mL
			Co-60	<1.8e-9	μCi/mL
			Cs-134	<1.6e-9	μCi/mL
			Cs-137	<1.7e-9	μCi/mL
			Fe-59	<3.4e-9	μCi/mL
			Gross Beta	7.8e-9	μCi/mL
			I-131	<2.1e-9	μCi/mL
			K-40	3.7e-8	μCi/mL
			La-140	<2.5e-9	μCi/mL
			Mn-54	<1.7e-9	μCi/mL
			Nb-95	<1.6e-9	μCi/mL
			Zn-65	<3.2e-9	μCi/mL
			Zr-95	<2.6e-9	μCi/mL
7/27/2021	AF63631	085	Ba-140	<6.6e-9	μCi/mL
			Co-58	<1.7e-9	μCi/mL
			Co-60	<1.8e-9	μCi/mL
			Cs-134	<1.7e-9	μCi/mL
			Cs-137	<1.8e-9	μCi/mL
			Fe-59	<3.4e-9	μCi/mL
			Gross Beta	1.18e-8	μCi/mL
			I-131	<2.1e-9	μCi/mL
			La-140	<2.5e-9	μCi/mL
			Mn-54	<1.6e-9	μCi/mL
			Nb-95	<1.7e-9	μCi/mL
			Zn-65	<3.6e-9	μCi/mL
			Zr-95	<2.9e-9	μCi/mL
7/27/2021	AF63632	086	Ba-140	<7.4e-9	μCi/mL
			Co-58	<1.9e-9	μCi/mL
			Co-60	<2.0e-9	μCi/mL
			Cs-134	<2.1e-9	μCi/mL
			Cs-137	<2.2e-9	μCi/mL
			Fe-59	<3.9e-9	μCi/mL
			Gross Beta	7.1e-9	μCi/mL
			I-131	<2.4e-9	μCi/mL
			La-140	<2.6e-9	μCi/mL
			Mn-54	<2.0e-9	μCi/mL
			Nb-95	<2.0e-9	μCi/mL
			Zn-65	<4.0e-9	μCi/mL
			Zr-95	<3.2e-9	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
8/31/2021	AF68471	085	Ba-140	<6.1e-9	μCi/mL
			Co-58	<1.5e-9	μCi/mL
			Co-60	<1.8e-9	μCi/mL
			Cs-134	<1.6e-9	μCi/mL
			Cs-137	<1.6e-9	μCi/mL
			Fe-59	<3.1e-9	μCi/mL
			Gross Beta	1.63e-8	μCi/mL
			I-131	<1.9e-9	μCi/mL
			K-40	4.1e-8	μCi/mL
			La-140	<2.3e-9	μCi/mL
			Mn-54	<1.6e-9	μCi/mL
			Nb-95	<1.5e-9	μCi/mL
			Pb-212	3.8e-9	μCi/mL
			Zn-65	<3.3e-9	μCi/mL
			Zr-95	<2.7e-9	μCi/mL
8/31/2021	AF68472	086	Ba-140	<7.7e-9	μCi/mL
			Co-58	<1.9e-9	μCi/mL
			Co-60	<2.0e-9	μCi/mL
			Cs-134	<2.0e-9	μCi/mL
			Cs-137	<2.1e-9	μCi/mL
			Fe-59	<3.9e-9	μCi/mL
			Gross Beta	6.7e-9	μCi/mL
			I-131	<2.5e-9	μCi/mL
			La-140	<2.5e-9	μCi/mL
			Mn-54	<1.8e-9	μCi/mL
			Nb-95	<2.0e-9	μCi/mL
			Pb-212	5.1e-9	μCi/mL
			Zn-65	<4.0e-9	μCi/mL
			Zr-95	<3.4e-9	μCi/mL
9/28/2021	AF72002	085	Ba-140	<6.5e-9	μCi/mL
			Co-58	<1.6e-9	μCi/mL
			Co-60	<1.7e-9	μCi/mL
			Cs-134	<1.6e-9	μCi/mL
			Cs-137	<1.7e-9	μCi/mL
			Fe-59	<3.4e-9	μCi/mL
			Gross Beta	1.47e-8	μCi/mL
			I-131	<2.1e-9	μCi/mL
			La-140	<2.5e-9	μCi/mL
			Mn-54	<1.6e-9	μCi/mL
			Nb-95	<1.7e-9	μCi/mL
			Pb-212	5.3e-9	μCi/mL
			Zn-65	<3.5e-9	μCi/mL
			Zr-95	<2.7e-9	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
9/28/2021	AF72003	086	Ba-140	<7.8e-9	μCi/mL
			Co-58	<1.9e-9	μCi/mL
			Co-60	<2.0e-9	μCi/mL
			Cs-134	<2.0e-9	μCi/mL
			Cs-137	<2.1e-9	μCi/mL
			Fe-59	<3.8e-9	μCi/mL
			Gross Beta	8.1e-9	μCi/mL
			I-131	<2.7e-9	μCi/mL
			La-140	<2.6e-9	μCi/mL
			Mn-54	<1.8e-9	μCi/mL
			Nb-95	<1.9e-9	μCi/mL
			Pb-212	3.6e-9	μCi/mL
			Zn-65	<4.0e-9	μCi/mL
			Zr-95	<3.1e-9	μCi/mL
10/26/2021	AF74783	085	Ba-140	<5.9e-9	μCi/mL
			Co-58	<1.6e-9	μCi/mL
			Co-60	<1.8e-9	μCi/mL
			Cs-134	<1.6e-9	μCi/mL
			Cs-137	<1.7e-9	μCi/mL
			Fe-59	<3.1e-9	μCi/mL
			Gross Beta	1.58e-8	μCi/mL
			I-131	<1.9e-9	μCi/mL
			La-140	<2.2e-9	μCi/mL
			Mn-54	<1.7e-9	μCi/mL
			Nb-95	<1.6e-9	μCi/mL
			Zn-65	<3.6e-9	μCi/mL
			Zr-95	<2.7e-9	μCi/mL
10/26/2021	AF74784	086	Ba-140	<7.8e-9	μCi/mL
			Co-58	<1.9e-9	μCi/mL
			Co-60	<2.1e-9	μCi/mL
			Cs-134	<2.0e-9	μCi/mL
			Cs-137	<2.0e-9	μCi/mL
			Fe-59	<3.9e-9	μCi/mL
			Gross Beta	8.1e-9	μCi/mL
			I-131	<2.4e-9	μCi/mL
			La-140	<2.5e-9	μCi/mL
			Mn-54	<2.0e-9	μCi/mL
			Nb-95	<1.9e-9	μCi/mL
			Zn-65	<4.5e-9	μCi/mL
			Zr-95	<3.3e-9	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
11/30/2021	AF77594	085	Ba-140	<5.9e-9	μCi/mL
			Co-58	<1.6e-9	μCi/mL
			Co-60	<1.7e-9	μCi/mL
			Cs-134	<1.6e-9	μCi/mL
			Cs-137	<1.7e-9	μCi/mL
			Fe-59	<3.2e-9	μCi/mL
			Gross Beta	1.41e-8	μCi/mL
			I-131	<1.7e-9	μCi/mL
			La-140	<2.0e-9	μCi/mL
			Mn-54	<1.6e-9	μCi/mL
			Nb-95	<1.6e-9	μCi/mL
			Zn-65	<3.4e-9	μCi/mL
			Zr-95	<2.6e-9	μCi/mL
11/30/2021	AF77595	086	Ba-140	<7.4e-9	μCi/mL
			Co-58	<1.9e-9	μCi/mL
			Co-60	<2.0e-9	μCi/mL
			Cs-134	<2.0e-9	μCi/mL
			Cs-137	<2.0e-9	μCi/mL
			Fe-59	<3.8e-9	μCi/mL
			Gross Beta	7.6e-9	μCi/mL
			I-131	<2.3e-9	μCi/mL
			La-140	<2.4e-9	μCi/mL
			Mn-54	<1.8e-9	μCi/mL
			Nb-95	<1.9e-9	μCi/mL
			Zn-65	<3.9e-9	μCi/mL
			Zr-95	<3.3e-9	μCi/mL
12/28/2021	AF79320	086	Ba-140	<8.3e-9	μCi/mL
			Co-58	<2.0e-9	μCi/mL
			Co-60	<2.1e-9	μCi/mL
			Cs-134	<2.0e-9	μCi/mL
			Cs-137	<2.2e-9	μCi/mL
			Fe-59	<4.1e-9	μCi/mL
			Gross Beta	7.1e-9	μCi/mL
			I-131	<2.7e-9	μCi/mL
			La-140	<2.7e-9	μCi/mL
			Mn-54	<1.9e-9	μCi/mL
			Nb-95	<1.9e-9	μCi/mL
			Zn-65	<4.1e-9	μCi/mL
			Zr-95	<3.3e-9	μCi/mL

**Comanche Peak Nuclear Power Plant
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
12/28/2021	AF79321	085	Ba-140	<7.0e-9	μCi/mL
			Co-58	<1.6e-9	μCi/mL
			Co-60	<1.7e-9	μCi/mL
			Cs-134	<1.6e-9	μCi/mL
			Cs-137	<1.6e-9	μCi/mL
			Fe-59	<3.6e-9	μCi/mL
			Gross Beta	1.51e-8	μCi/mL
			I-131	<2.1e-9	μCi/mL
			La-140	<2.3e-9	μCi/mL
			Mn-54	<1.6e-9	μCi/mL
			Nb-95	<1.7e-9	μCi/mL
			Zn-65	<3.6e-9	μCi/mL
			Zr-95	<2.6e-9	μCi/mL

*NOTE: * Indicates the analysis was by alpha spectrometry, or Ra-226, analysis by radon emanation.*

***Indicates the tritium (H-3) analysis for food product, sediment, and vegetation is reported in μCi/mL*

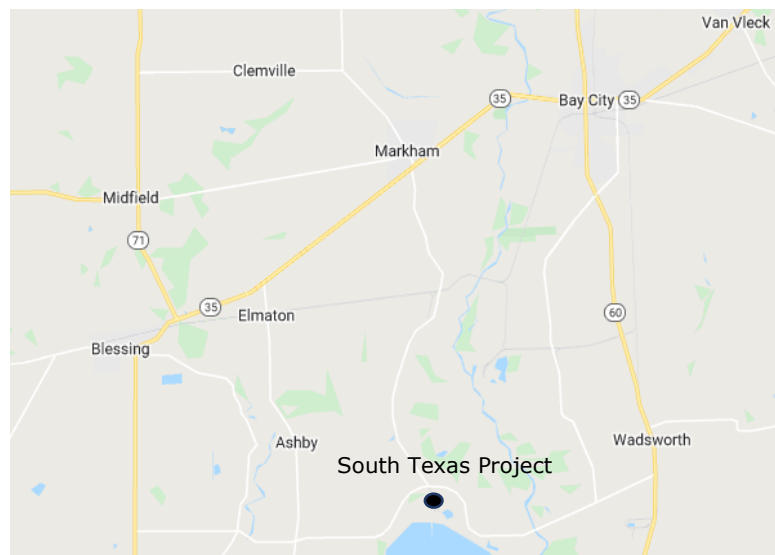
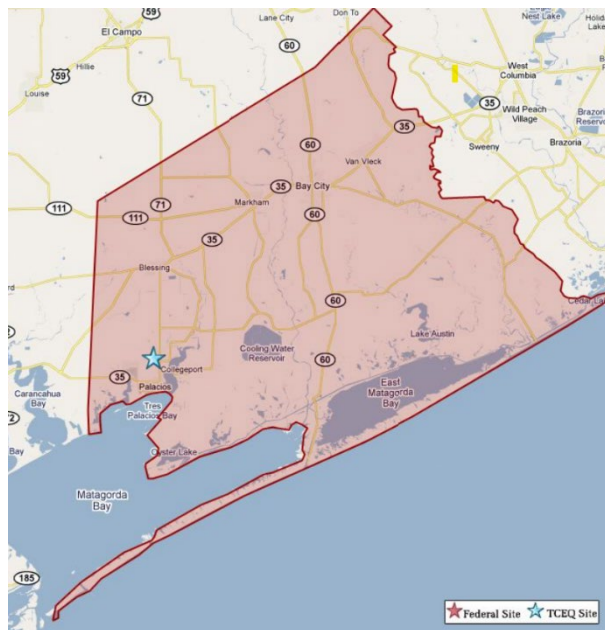
South Texas Project Radiation Branch Site No. 012

The South Texas Project (STP) is a commercial nuclear power plant operated by STP Nuclear Operating Company and is located 89 miles southwest of Houston and 14 miles south-southwest of Bay City. Two 1250 megawatt (electric) Westinghouse pressurized water nuclear reactors are in operation at the site. Unit 1 became operational in August of 1988 and Unit 2 in June of 1989.

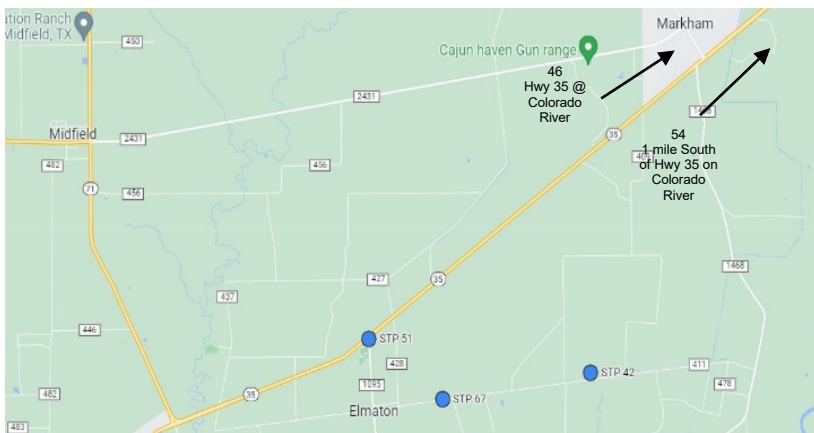
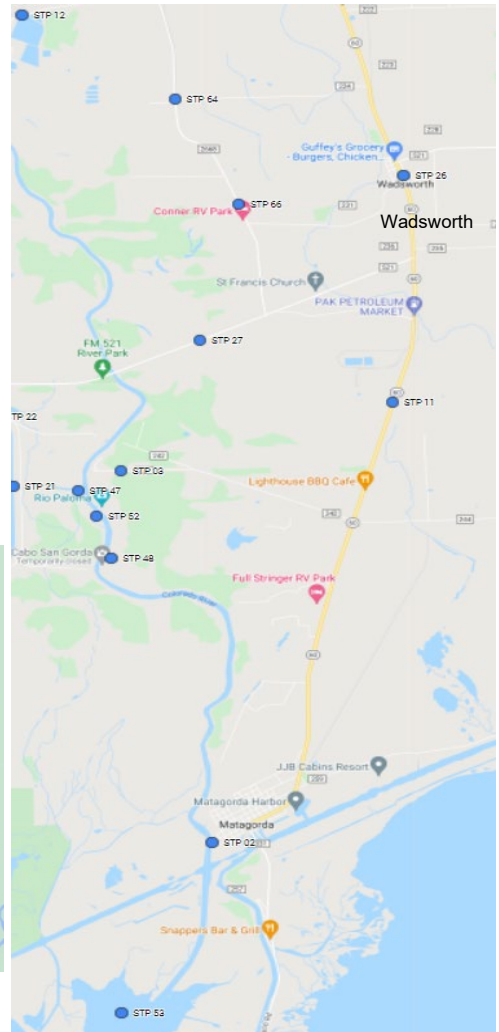
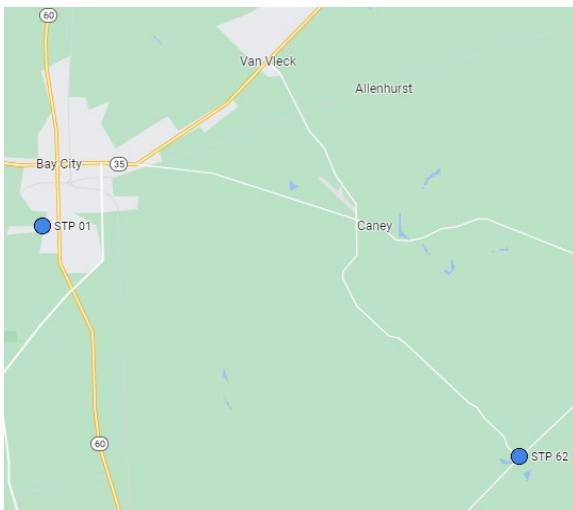
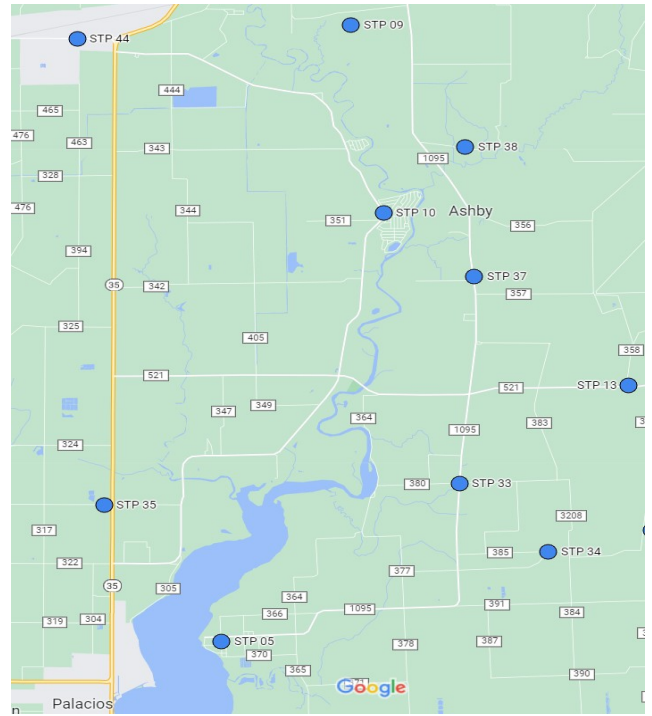
STP Nuclear Operating Company is owned by NRG Energy, Austin Energy, and City Public Service of San Antonio. STP Nuclear Operating Company manages and operates the plant for its owners, who share its energy in proportion to their ownership interest. The Radiation Branch Surveillance Program consists of OSL monitoring and sampling air, fish, food products, sediment, vegetation, and water.



Shaded area indicates location of Matagorda County



South Texas Project Monitoring Station Locations



South Texas Project Environmental Sample Results

Optically Stimulated Luminescent Dosimeter (OSL) Monitoring Results (quarterly and annual readings are in mrem)

OSL Stations	Q1	Q2	Q3	Q4	Annual Dose	Notes
1	29	31	28	27	115	
2	27	30	26	26	109	
3	27	28	26	25	106	
4	29	32	28	27	116	
5	27	30	27	26	110	
9	28	30	28	26	112	
10	28	31	28	27	114	
11	29	30	26	26	111	
12	29	29	29	26	113	
13	29	32	28	27	116	
18	26	30	29	25	110	
19	29	28	27	26	110	
20	28	30	28	26	112	
21	28	30	28	26	112	
22	28	30	27	26	111	
23	26	28	25	22	101	
24	30	31	28	28	117	
26	28	30	25	23	106	
27	30	31	30	25	116	
28	30	33	28	27	118	
29	30	32	28	29	119	
30	31	31	29	26	117	
31	31	32	31	30	124	
33	29	29	29	27	114	
34	29	31	30	28	118	
35	30	31	30	26	117	
37	31	32	31	27	121	
38	28	30	30	26	114	
40	31	30	28	24	113	
42	31	36	33	31	131	
44	27	30	25	23	105	
50	32	35	32	31	130	
51	31	31	29	27	118	
57	28	30	27	25	110	
58	28	30	30	27	115	
59	30	32	29	27	118	
60	30	29	28	28	115	
61	28	29	25	25	107	
62	31	33	32	29	125	
63	30	32	29	27	118	
64	31	30	28	27	116	
65	29	32	31	29	121	
66	28	32	29	27	116	
67	29	32	28	27	116	

NOTE: ¹Background is not subtracted from the data

²An occupancy factor of 1/16 may be applied to this number to obtain radiation dose to members of the public.

**South Texas Project
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Air Composite Samples					
7/8/2021	AF60806	030	Ba-140	<9.2e-6	μCi/mL
			Be-7	3.40e-4	μCi/mL
			Co-58	<2.8e-6	μCi/mL
			Co-60	<2.8e-6	μCi/mL
			Cs-134	<2.4e-6	μCi/mL
			Cs-137	<3.2e-6	μCi/mL
			Fe-59	<5.5e-6	μCi/mL
			I-131	<2.6e-6	μCi/mL
			La-140	<3.7e-6	μCi/mL
			Mn-54	<2.7e-6	μCi/mL
			Nb-95	<2.7e-6	μCi/mL
			Zn-65	<5.2e-6	μCi/mL
			Zr-95	<4.6e-6	μCi/mL
8/3/2021	AF60807	035	Ba-140	<8.5e-6	μCi/mL
			Be-7	3.26e-4	μCi/mL
			Co-58	<2.6e-6	μCi/mL
			Co-60	<2.9e-6	μCi/mL
			Cs-134	<2.5e-6	μCi/mL
			Cs-137	<3.2e-6	μCi/mL
			Fe-59	<4.8e-6	μCi/mL
			I-131	<2.7e-6	μCi/mL
			La-140	<3.3e-6	μCi/mL
			Mn-54	<2.8e-6	μCi/mL
			Nb-95	<2.8e-6	μCi/mL
			Zn-65	<5.6e-6	μCi/mL
			Zr-95	<4.9e-6	μCi/mL
11/8/2021	AF72744	030	Ba-140	<6.5e-6	μCi/mL
			Be-7	2.80e-4	μCi/mL
			Co-58	<2.0e-6	μCi/mL
			Co-60	<2.3e-6	μCi/mL
			Cs-134	<2.1e-6	μCi/mL
			Cs-137	<2.0e-6	μCi/mL
			Fe-59	<4.3e-6	μCi/mL
			I-131	<1.7e-6	μCi/mL
			La-140	<2.7e-6	μCi/mL
			Mn-54	<2.1e-6	μCi/mL
			Nb-95	<2.0e-6	μCi/mL
			Zn-65	<4.9e-6	μCi/mL
			Zr-95	<3.2e-6	μCi/mL

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Air Composite Samples					
07/08/2021	AF60806	030	Ba-140	<9.2e-6	μCi/mL
			Be-7	3.40e-4	μCi/mL
			Co-58	<2.8e-6	μCi/mL
			Co-60	<2.8e-6	μCi/mL
			Cs-134	<2.4e-6	μCi/mL
			Cs-137	<3.2e-6	μCi/mL
			Fe-59	<5.5e-6	μCi/mL
			I-131	<2.6e-6	μCi/mL
			La-140	<3.7e-6	μCi/mL
			Mn-54	<2.7e-6	μCi/mL
			Nb-95	<2.7e-6	μCi/mL
			Zn-65	<5.2e-6	μCi/mL
			Zr-95	<4.6e-6	μCi/mL
8/3/2021	AF60807	035	Ba-140	<8.5e-6	μCi/mL
			Be-7	3.26e-4	μCi/mL
			Co-58	<2.6e-6	μCi/mL
			Co-60	<2.9e-6	μCi/mL
			Cs-134	<2.5e-6	μCi/mL
			Cs-137	<3.2e-6	μCi/mL
			Fe-59	<4.8e-6	μCi/mL
			I-131	<2.7e-6	μCi/mL
			La-140	<3.3e-6	μCi/mL
			Mn-54	<2.8e-6	μCi/mL
			Nb-95	<2.8e-6	μCi/mL
			Zn-65	<5.6e-6	μCi/mL
			Zr-95	<4.9e-6	μCi/mL
11/8/2021	AF72744	030	Ba-140	<6.5e-6	μCi/mL
			Be-7	2.80e-4	μCi/mL
			Co-58	<2.0e-6	μCi/mL
			Co-60	<2.3e-6	μCi/mL
			Cs-134	<2.1e-6	μCi/mL
			Cs-137	<2.0e-6	μCi/mL
			Fe-59	<4.3e-6	μCi/mL
			I-131	<1.7e-6	μCi/mL
			La-140	<2.7e-6	μCi/mL
			Mn-54	<2.1e-6	μCi/mL
			Nb-95	<2.0e-6	μCi/mL
			Zn-65	<4.9e-6	μCi/mL
			Zr-95	<3.2e-6	μCi/mL

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Air Composite Samples					
11/8/2021	AF72745	035	Ba-140	<3.8e-6	μCi/mL
			Be-7	2.83e-4	μCi/mL
			Co-58	<1.2e-6	μCi/mL
			Co-60	<1.7e-6	μCi/mL
			Cs-134	<1.3e-6	μCi/mL
			Cs-137	<1.4e-6	μCi/mL
			Fe-59	<2.7e-6	μCi/mL
			I-131	<1.1e-6	μCi/mL
			La-140	<1.8e-6	μCi/mL
			Mn-54	<1.3e-6	μCi/mL
			Nb-95	<1.3e-6	μCi/mL
			Zn-65	<3.6e-6	μCi/mL
			Zr-95	<2.1e-6	μCi/mL

Date	Lab	Station	Analyte	Result	Units
Air Iodine Samples					
1/5/2021	AF38268	035	I-131	<5.4e-15	μCi/mL
			K-40	1.58e-13	μCi/mL
1/5/2021	AF38270	030	I-131	<5.4e-15	μCi/mL
			K-40	2.22e-13	μCi/mL
1/11/2021	AF38625	035	I-131	<5.7e-15	μCi/mL
			K-40	2.30e-13	μCi/mL
1/11/2021	AF38627	030	I-131	<6.0e-15	μCi/mL
			K-40	2.55e-13	μCi/mL
1/19/2021	AF39902	035	I-131	<4.3e-15	μCi/mL
			K-40	1.68e-13	μCi/mL
1/19/2021	AF39904	030	I-131	<4.4e-15	μCi/mL
			K-40	1.63e-13	μCi/mL
1/26/2021	AF41198	035	I-131	<4.8e-15	μCi/mL
			K-40	2.38e-13	μCi/mL
1/26/2021	AF41200	030	I-131	<5.5e-15	μCi/mL
			K-40	2.20e-13	μCi/mL
			Pb-212	1.26e-14	μCi/mL
2/2/2021	AF42793	035	I-131	<7.7e-15	μCi/mL
			K-40	1.39e-13	μCi/mL
2/2/2021	AF42795	030	I-131	<7.5e-15	μCi/mL
			K-40	2.16e-13	μCi/mL
2/9/2021	AF43795	035	I-131	<1.5e-14	μCi/mL
			K-40	2.18e-13	μCi/mL

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Air Iodine Samples					
2/9/2021	AF43797	030	I-131	<1.4e-14	μCi/mL
			K-40	1.79e-13	μCi/mL
2/16/2021	AF44046	035	I-131	<9.3e-15	μCi/mL
			K-40	1.50e-13	μCi/mL
2/16/2021	AF44048	030	I-131	<6.1e-15	μCi/mL
			K-40	2.17e-13	μCi/mL
2/23/2021	AF44042	035	I-131	<4.9e-15	μCi/mL
			K-40	1.57e-13	μCi/mL
2/23/2021	AF44044	030	I-131	<5.1e-15	μCi/mL
			K-40	2.00e-13	μCi/mL
3/2/2021	AF44961	035	I-131	<5.2e-15	μCi/mL
			K-40	2.24e-13	μCi/mL
			Pb-212	1.76e-14	μCi/mL
			Tl-208	6.0e-15	μCi/mL
3/2/2021	AF44963	030	I-131	<5.3e-15	μCi/mL
			K-40	2.60e-13	μCi/mL
3/9/2021	AF46376	035	I-131	<5.8e-15	μCi/mL
			K-40	1.69e-13	μCi/mL
3/9/2021	AF46378	030	I-131	<6.0e-15	μCi/mL
			K-40	1.63e-13	μCi/mL
3/16/2021	AF47126	035	I-131	<5.4e-15	μCi/mL
			K-40	1.62e-13	μCi/mL
3/16/2021	AF47128	030	I-131	<2.1e-15	μCi/mL
			K-40	2.39e-13	μCi/mL
3/23/2021	AF48032	035	I-131	<6.0e-15	μCi/mL
			K-40	1.76e-13	μCi/mL
			Pb-212	1.96e-14	μCi/mL
3/23/2021	AF48034	030	I-131	<5.4e-15	μCi/mL
			K-40	1.77e-13	μCi/mL
3/30/2021	AF48576	035	I-131	<3.3e-15	μCi/mL
			K-40	2.21e-13	μCi/mL
3/30/2021	AF48578	030	I-131	<2.2e-15	μCi/mL
			K-40	2.38e-13	μCi/mL
4/6/2021	AF49263	035	I-131	<4.9e-15	μCi/mL
			K-40	2.03e-13	μCi/mL
4/6/2021	AF49265	030	I-131	<5.2e-15	μCi/mL
			K-40	1.99e-13	μCi/mL
4/13/2021	AF50028	035	I-131	<5.9e-15	μCi/mL
			K-40	2.13e-13	μCi/mL
			Pb-212	1.07e-14	μCi/mL

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Date	Lab	Station	Analyte	Result	Units
Air Iodine Samples					
4/13/2021	AF50030	030	I-131	<2.3e-15	μCi/mL
			K-40	2.41e-13	μCi/mL
4/20/2021	AF50787	035	I-131	<5.4e-15	μCi/mL
			K-40	1.90e-13	μCi/mL
4/20/2021	AF50789	030	I-131	<2.2e-15	μCi/mL
			K-40	2.19e-13	μCi/mL
4/27/2021	AF51775	035	I-131	<5.7e-15	μCi/mL
			K-40	1.83e-13	μCi/mL
4/27/2021	AF51777	030	I-131	<7.7e-15	μCi/mL
			K-40	1.85e-13	μCi/mL
5/4/2021	AF52409	035	I-131	<4.9e-15	μCi/mL
			K-40	1.85e-13	μCi/mL
5/4/2021	AF52411	030	I-131	<5.4e-15	μCi/mL
			K-40	2.35e-13	μCi/mL
5/11/2021	AF53375	035	I-131	<5.2e-15	μCi/mL
			K-40	1.59e-13	μCi/mL
5/11/2021	AF53377	030	I-131	<2.2e-15	μCi/mL
			K-40	2.33e-13	μCi/mL
5/18/2021	AF54441	035	I-131	<4.8e-15	μCi/mL
			K-40	2.05e-13	μCi/mL
5/18/2021	AF54443	030	I-131	<5.3e-15	μCi/mL
			K-40	1.95e-13	μCi/mL
5/25/2021	AF55648	035	I-131	<5.5e-15	μCi/mL
			K-40	1.93e-13	μCi/mL
5/25/2021	AF55650	030	I-131	<2.2e-15	μCi/mL
			K-40	2.29e-13	μCi/mL
6/2/2021	AF56349	035	I-131	<4.7e-15	μCi/mL
			K-40	1.66e-13	μCi/mL
6/2/2021	AF56351	030	I-131	<1.8e-15	μCi/mL
			K-40	2.18e-13	μCi/mL
6/8/2021	AF57092	035	I-131	<5.5e-15	μCi/mL
			K-40	2.63e-13	μCi/mL
6/8/2021	AF57094	030	I-131	<6.4e-15	μCi/mL
			K-40	2.55e-13	μCi/mL
6/15/2021	AF58176	035	I-131	<4.8e-15	μCi/mL
			K-40	1.56e-13	μCi/mL
6/15/2021	AF58178	030	I-131	<5.2e-15	μCi/mL
			K-40	1.51e-13	μCi/mL
6/22/2021	AF59533	035	I-131	<5.5e-15	μCi/mL
			K-40	1.93e-13	μCi/mL

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Date	Lab	Station	Analyte	Result	Units
Air Iodine Samples					
6/22/2021	AF59535	030	I-131	<5.8e-15	μCi/mL
			K-40	1.64e-13	μCi/mL
6/29/2021	AF60245	035	I-131	<5.5e-15	μCi/mL
			K-40	1.90e-13	μCi/mL
6/29/2021	AF60247	030	I-131	<5.7e-15	μCi/mL
			K-40	1.65e-13	μCi/mL
7/6/2021	AF61233	035	I-131	<5.7e-15	μCi/mL
			K-40	2.10e-13	μCi/mL
7/6/2021	AF61235	030	I-131	<5.8e-15	μCi/mL
			K-40	1.69e-13	μCi/mL
7/13/2021	AF62006	035	I-131	<6.5e-15	μCi/mL
			K-40	2.12e-13	μCi/mL
7/13/2021	AF62008	030	I-131	<2.3e-15	μCi/mL
			K-40	2.62e-13	μCi/mL
7/20/2021	AF62971	035	I-131	<5.5e-15	μCi/mL
			K-40	1.67e-13	μCi/mL
7/20/2021	AF62973	030	I-131	<2.3e-15	μCi/mL
			K-40	2.22e-13	μCi/mL
7/27/2021	AF63950	035	I-131	<7.5e-15	μCi/mL
			K-40	2.47e-13	μCi/mL
7/27/2021	AF63952	030	I-131	<7.6e-15	μCi/mL
			K-40	1.80e-13	μCi/mL
8/3/2021	AF64904	035	I-131	<5.8e-15	μCi/mL
			K-40	1.49e-13	μCi/mL
8/3/2021	AF64906	030	I-131	<6.0e-15	μCi/mL
			K-40	2.00e-13	μCi/mL
8/10/2021	AF65929	035	I-131	<5.1e-15	μCi/mL
			K-40	1.99e-13	μCi/mL
8/10/2021	AF65931	030	I-131	<5.6e-15	μCi/mL
			K-40	2.34e-13	μCi/mL
8/17/2021	AF67028	035	I-131	<6.2e-15	μCi/mL
			K-40	1.96e-13	μCi/mL
8/17/2021	AF67030	030	I-131	<2.5e-15	μCi/mL
			K-40	1.94e-13	μCi/mL
8/24/2021	AF67998	035	I-131	<5.8e-15	μCi/mL
			K-40	2.08e-13	μCi/mL
8/24/2021	AF68000	030	I-131	<6.2e-15	μCi/mL
			K-40	1.51e-13	μCi/mL

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Date	Lab	Station	Analyte	Result	Units
Air Iodine Samples					
8/31/2021	AF68657	035	I-131	<5.6e-15	μCi/mL
			K-40	2.26e-13	μCi/mL
8/31/2021	AF68659	030	I-131	<4.3e-15	μCi/mL
			K-40	2.43e-13	μCi/mL
9/7/2021	AF69196	035	I-131	<5.4e-15	μCi/mL
			K-40	2.23e-13	μCi/mL
9/7/2021	AF69198	030	I-131	<5.5e-15	μCi/mL
			K-40	2.12e-13	μCi/mL
9/15/2021	AF70704	035	I-131	<7.2e-15	μCi/mL
			K-40	2.29e-13	μCi/mL
9/15/2021	AF70706	030	I-131	<7.9e-15	μCi/mL
			K-40	1.72e-13	μCi/mL
9/21/2021	AF70898	035	I-131	<6.1e-15	μCi/mL
			K-40	2.27e-13	μCi/mL
9/21/2021	AF70900	030	I-131	<6.7e-15	μCi/mL
			K-40	2.30e-13	μCi/mL
9/28/2021	AF71759	035	I-131	<5.2e-15	μCi/mL
			K-40	1.78e-13	μCi/mL
9/28/2021	AF71761	030	I-131	<5.5e-15	μCi/mL
			K-40	1.44e-13	μCi/mL
10/5/2021	AF72523	035	I-131	<5.7e-15	μCi/mL
			K-40	1.90e-13	μCi/mL
10/5/2021	AF72525	030	I-131	<2.2e-15	μCi/mL
			K-40	2.38e-13	μCi/mL
10/12/2021	AF73406	035	I-131	<5.5e-15	μCi/mL
			K-40	2.02e-13	μCi/mL
10/12/2021	AF73408	030	I-131	<2.2e-15	μCi/mL
			K-40	2.71e-13	μCi/mL
10/19/2021	AF74241	035	I-131	<5.4e-15	μCi/mL
			K-40	2.06e-13	μCi/mL
10/19/2021	AF74243	030	I-131	<2.3e-15	μCi/mL
			K-40	2.31e-13	μCi/mL
10/26/2021	AF74947	035	I-131	<2.3e-15	μCi/mL
			K-40	2.34e-13	μCi/mL
10/26/2021	AF74949	030	I-131	<5.9e-15	μCi/mL
			K-40	2.51e-13	μCi/mL
11/2/2021	AF75854	035	I-131	<5.7e-15	μCi/mL
			K-40	1.77e-13	μCi/mL
11/2/2021	AF75856	030	I-131	<5.6e-15	μCi/mL
			K-40	2.41e-13	μCi/mL

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Date	Lab	Station	Analyte	Result	Units
Air Iodine Samples					
11/9/2021	AF76494	035	I-131	<6.0e-15	μCi/mL
			K-40	2.26e-13	μCi/mL
11/9/2021	AF76496	030	I-131	<5.7e-15	μCi/mL
			K-40	2.26e-13	μCi/mL
11/17/2021	AF77251	035	I-131	<4.2e-15	μCi/mL
			K-40	2.03e-13	μCi/mL
11/17/2021	AF77253	030	I-131	<5.7e-15	μCi/mL
			K-40	2.25e-13	μCi/mL
11/24/2021	AF77598	035	I-131	<8.8e-15	μCi/mL
			K-40	2.59e-13	μCi/mL
11/24/2021	AF77600	030	I-131	<3.3e-15	μCi/mL
			K-40	2.41e-13	μCi/mL
11/30/2021	AF77714	035	I-131	<6.0e-15	μCi/mL
			K-40	3.08e-13	μCi/mL
11/30/2021	AF77716	030	I-131	<6.2e-15	μCi/mL
			K-40	2.39e-13	μCi/mL
12/8/2021	AF78758	035	I-131	<7.9e-15	μCi/mL
			K-40	1.93e-13	μCi/mL
12/8/2021	AF78760	030	I-131	<7.8e-15	μCi/mL
			K-40	2.16e-13	μCi/mL
12/14/2021	AF78895	035	I-131	<6.4e-15	μCi/mL
			K-40	2.17e-13	μCi/mL
12/14/2021	AF78897	030	I-131	<2.7e-15	μCi/mL
			K-40	3.12e-13	μCi/mL
12/20/2021	AF79212	035	I-131	<7.0e-15	μCi/mL
			K-40	2.08e-13	μCi/mL
12/20/2021	AF79214	030	I-131	<7.0e-15	μCi/mL
			K-40	1.91e-13	μCi/mL
12/27/2021	AF79326	035	I-131	<8.0e-15	μCi/mL
			K-40	1.56e-13	μCi/mL
12/27/2021	AF79328	030	I-131	<8.3e-15	μCi/mL
			K-40	2.28e-13	μCi/mL

Date	Lab	Station	Analyte	Result	Units
Air Particulate Samples					
1/5/2021	AF38267	035	Gross Beta	1.46e-14	μCi/mL
1/5/2021	AF38269	030	Gross Beta	1.38e-14	μCi/mL
1/11/2021	AF38624	035	Gross Beta	2.41e-14	μCi/mL
1/11/2021	AF38626	030	Gross Beta	2.47e-14	μCi/mL
1/19/2021	AF39901	035	Gross Beta	2.33e-14	μCi/mL
1/19/2021	AF39903	030	Gross Beta	2.48e-14	μCi/mL

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Date	Lab	Station	Analyte	Result	Units
Air Particulate Samples					
1/26/2021	AF41197	035	Gross Beta	2.02e-14	µCi/mL
1/26/2021	AF41199	030	Gross Beta	2.19e-14	µCi/mL
2/2/2021	AF42792	035	Gross Beta	2.93e-14	µCi/mL
2/2/2021	AF42794	030	Gross Beta	3.04e-14	µCi/mL
2/9/2021	AF42010	030	Ba-140	<8.8e-6	µCi/mL
			Be-7	3.13e-4	µCi/mL
			Co-58	<2.8e-6	µCi/mL
			Co-60	<3.1e-6	µCi/mL
			Cs-134	<2.5e-6	µCi/mL
			Cs-137	<3.1e-6	µCi/mL
			Fe-59	<5.7e-6	µCi/mL
			I-131	<3.0e-6	µCi/mL
			La-140	<3.4e-6	µCi/mL
			Mn-54	<2.9e-6	µCi/mL
			Nb-95	<2.7e-6	µCi/mL
			Zn-65	<5.5e-6	µCi/mL
			Zr-95	<4.2e-6	µCi/mL
2/9/2021	AF42011	035	Ba-140	<1.0e-5	µCi/mL
			Be-7	2.99e-4	µCi/mL
			Co-58	<2.6e-6	µCi/mL
			Co-60	<2.9e-6	µCi/mL
			Cs-134	<2.5e-6	µCi/mL
			Cs-137	<3.1e-6	µCi/mL
			Fe-59	<5.3e-6	µCi/mL
			I-131	<3.1e-6	µCi/mL
			La-140	<2.7e-6	µCi/mL
			Mn-54	<2.6e-6	µCi/mL
			Nb-95	<2.8e-6	µCi/mL
			Zn-65	<5.6e-6	µCi/mL
			Zr-95	<4.3e-6	µCi/mL
2/9/2021	AF43794	035	Gross Beta	3.21e-14	µCi/mL
2/9/2021	AF43796	030	Gross Beta	2.92e-14	µCi/mL
2/16/2021	AF44045	035	Gross Beta	2.89e-14	µCi/mL
2/16/2021	AF44047	030	Gross Beta	2.76e-14	µCi/mL
2/23/2021	AF44041	035	Gross Beta	3.76e-14	µCi/mL
2/23/2021	AF44043	030	Gross Beta	3.62e-14	µCi/mL
3/2/2021	AF44960	035	Gross Beta	1.54e-14	µCi/mL
3/2/2021	AF44962	030	Gross Beta	1.59e-14	µCi/mL
3/9/2021	AF46375	035	Gross Beta	2.13e-14	µCi/mL
3/9/2021	AF46377	030	Gross Beta	2.41e-14	µCi/mL
3/16/2021	AF47125	035	Gross Beta	1.48e-14	µCi/mL
3/16/2021	AF47127	030	Gross Beta	1.40e-14	µCi/mL
3/23/2021	AF48031	035	Gross Beta	1.78e-14	µCi/mL
3/23/2021	AF48033	030	Gross Beta	1.79e-14	µCi/mL

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Date	Lab	Station	Analyte	Result	Units
Air Particulate Samples					
3/29/2021	AF48401	035	Ba-140	<2.9e-8	μCi/g
			Be-7	1.36e-6	μCi/g
			Bi-212	1.41e-7	μCi/g
			Co-58	<8.1e-9	μCi/g
			Co-60	<8.7e-9	μCi/g
			Cs-134	<8.2e-9	μCi/g
			Cs-137	<8.4e-9	μCi/g
			Fe-59	<1.8e-8	μCi/g
			I-131	<8.2e-9	μCi/g
			K-40	5.08e-6	μCi/g
			La-140	<9.3e-9	μCi/g
			Mn-54	<8.3e-9	μCi/g
			Nb-95	<7.7e-9	μCi/g
			Pb-212	1.17e-7	μCi/g
			Tl-208	4.00e-8	μCi/g
			Zn-65	<2.0e-8	μCi/g
			Zr-95	<1.4e-8	μCi/g
3/29/2021	AF48402	004	Ba-140	<3.9e-8	μCi/g
			Be-7	2.23e-6	μCi/g
			Co-58	<1.1e-8	μCi/g
			Co-60	<1.2e-8	μCi/g
			Cs-134	<1.1e-8	μCi/g
			Cs-137	<1.2e-8	μCi/g
			Fe-59	<2.5e-8	μCi/g
			I-131	<1.2e-8	μCi/g
			K-40	4.35e-6	μCi/g
			La-140	<1.3e-8	μCi/g
			Mn-54	<1.1e-8	μCi/g
			Nb-95	<1.1e-8	μCi/g
			Pb-212	1.82e-7	μCi/g
			Tl-208	6.23e-8	μCi/g
			Zn-65	<2.7e-8	μCi/g
			Zr-95	<1.8e-8	μCi/g
3/30/2021	AF48575	035	Gross Beta	2.32e-14	μCi/mL
3/30/2021	AF48577	030	Gross Beta	2.20e-14	μCi/mL
4/6/2021	AF49262	035	Gross Beta	2.23e-14	μCi/mL
4/6/2021	AF49264	030	Gross Beta	2.24e-14	μCi/mL
4/13/2021	AF50027	035	Gross Beta	2.33e-14	μCi/mL
4/13/2021	AF50029	030	Gross Beta	2.09e-14	μCi/mL
4/20/2021	AF50786	035	Gross Beta	1.72e-14	μCi/mL
4/20/2021	AF50788	030	Gross Beta	1.59e-14	μCi/mL
4/27/2021	AF51774	035	Gross Beta	2.41e-14	μCi/mL
4/27/2021	AF51776	030	Gross Beta	2.17e-14	μCi/mL
5/4/2021	AF52408	035	Gross Beta	1.69e-14	μCi/mL
5/4/2021	AF52410	030	Gross Beta	1.70e-14	μCi/mL

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Date	Lab	Station	Analyte	Result	Units
Air Particulate Samples					
5/11/2021	AF53374	035	Gross Beta	1.94e-14	μCi/mL
5/11/2021	AF53376	030	Gross Beta	1.90e-14	μCi/mL
5/18/2021	AF54440	035	Gross Beta	1.49e-14	μCi/mL
5/18/2021	AF54442	030	Gross Beta	1.57e-14	μCi/mL
5/25/2021	AF49268	030	Ba-140	<8.7e-6	μCi/mL
			Be-7	3.20e-4	μCi/mL
			Co-58	<2.7e-6	μCi/mL
			Co-60	<2.9e-6	μCi/mL
			Cs-134	<2.4e-6	μCi/mL
			Cs-137	<3.1e-6	μCi/mL
			Fe-59	<4.5e-6	μCi/mL
			I-131	<2.8e-6	μCi/mL
			La-140	<3.2e-6	μCi/mL
			Mn-54	<2.5e-6	μCi/mL
			Nb-95	<2.7e-6	μCi/mL
			Zn-65	<5.0e-6	μCi/mL
			Zr-95	<4.9e-6	μCi/mL
5/25/2021	AF49269	035	Ba-140	<9.5e-6	μCi/mL
			Be-7	2.84e-4	μCi/mL
			Co-58	<2.3e-6	μCi/mL
			Co-60	<3.2e-6	μCi/mL
			Cs-134	<2.4e-6	μCi/mL
			Cs-137	<3.2e-6	μCi/mL
			Fe-59	<5.7e-6	μCi/mL
			I-131	<2.8e-6	μCi/mL
			La-140	<3.3e-6	μCi/mL
			Mn-54	<2.5e-6	μCi/mL
			Nb-95	<2.7e-6	μCi/mL
			Zn-65	<5.7e-6	μCi/mL
			Zr-95	<4.8e-6	μCi/mL
5/25/2021	AF55647	035	Gross Beta	1.41e-14	μCi/mL
5/25/2021	AF55649	030	Gross Beta	1.39e-14	μCi/mL
6/2/2021	AF56348	035	Gross Beta	1.53e-14	μCi/mL
6/2/2021	AF56350	030	Gross Beta	1.62e-14	μCi/mL
6/7/2021	AF56786	035	Ba-140	<4.1e-8	μCi/g
			Be-7	1.87e-6	μCi/g
			Co-58	<1.1e-8	μCi/g
			Co-60	<1.3e-8	μCi/g
			Cs-134	<1.2e-8	μCi/g
			Cs-137	<1.1e-8	μCi/g
			Fe-59	<2.3e-8	μCi/g
			I-131	<1.2e-8	μCi/g
			K-40	3.77e-6	μCi/g
			La-140	<1.3e-8	μCi/g
			Mn-54	<1.2e-8	μCi/g
			Nb-95	<1.1e-8	μCi/g
			Zn-65	<2.7e-8	μCi/g
			Zr-95	<1.9e-8	μCi/g

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Date	Lab	Station	Analyte	Result	Units
Air Particulate Samples					
6/7/2021	AF56787	063	Ba-140	<2.9e-8	μCi/g
			Be-7	2.18e-6	μCi/g
			Co-58	<7.2e-9	μCi/g
			Co-60	<8.5e-9	μCi/g
			Cs-134	<7.2e-9	μCi/g
			Cs-137	<7.6e-9	μCi/g
			Fe-59	<1.8e-8	μCi/g
			I-131	<8.3e-9	μCi/g
			K-40	4.00e-6	μCi/g
			La-140	<8.7e-9	μCi/g
			Mn-54	<7.8e-9	μCi/g
			Nb-95	<7.3e-9	μCi/g
			Pb-212	1.89e-8	μCi/g
			Zn-65	<2.0e-8	μCi/g
			Zr-95	<1.3e-8	μCi/g
6/8/2021	AF57091	035	Gross Beta	1.42e-14	μCi/mL
6/8/2021	AF57093	030	Gross Beta	1.46e-14	μCi/mL
6/15/2021	AF58175	035	Gross Beta	1.32e-14	μCi/mL
6/15/2021	AF58177	030	Gross Beta	1.30e-14	μCi/mL
6/22/2021	AF59532	035	Gross Beta	1.91e-14	μCi/mL
6/22/2021	AF59534	030	Gross Beta	2.11e-14	μCi/mL
6/29/2021	AF60244	035	Gross Beta	1.47e-14	μCi/mL
6/29/2021	AF60246	030	Gross Beta	1.48e-14	μCi/mL
7/6/2021	AF61232	035	Gross Beta	9.51e-15	μCi/mL
7/6/2021	AF61234	030	Gross Beta	9.23e-15	μCi/mL
7/13/2021	AF62005	035	Gross Beta	1.96e-14	μCi/mL
7/13/2021	AF62007	030	Gross Beta	1.70e-14	μCi/mL
7/20/2021	AF62970	035	Gross Beta	1.67e-14	μCi/mL
7/20/2021	AF62972	030	Gross Beta	1.50e-14	μCi/mL
7/27/2021	AF63951	030	Gross Beta	1.78e-14	μCi/mL
7/29/2021	AF63949	035	Gross Beta	2.24e-14	μCi/mL
8/2/2021	AF64588	035	Ba-140	<5.8e-8	μCi/g
			Be-7	1.20e-6	μCi/g
			Co-58	<1.5e-8	μCi/g
			Co-60	<1.6e-8	μCi/g
			Cs-134	<1.6e-8	μCi/g
			Cs-137	<1.8e-8	μCi/g
			Fe-59	<3.3e-8	μCi/g
			I-131	<1.8e-8	μCi/g
			K-40	3.96e-6	μCi/g
			La-140	<2.1e-8	μCi/g
			Mn-54	<1.6e-8	μCi/g
			Nb-95	<1.6e-8	μCi/g
			Pb-212	7.7e-8	μCi/g
			Zn-65	<3.8e-8	μCi/g
			Zr-95	<2.6e-8	μCi/g

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Air Particulate Samples					
8/2/2021	AF64589	004	Ba-140	<5.6e-8	μCi/g
			Be-7	6.87e-7	μCi/g
			Co-58	<1.3e-8	μCi/g
			Co-60	<1.5e-8	μCi/g
			Cs-134	<1.4e-8	μCi/g
			Cs-137	<1.5e-8	μCi/g
			Fe-59	<3.2e-8	μCi/g
			I-131	<1.6e-8	μCi/g
			K-40	4.84e-6	μCi/g
			La-140	<1.6e-8	μCi/g
			Mn-54	<1.4e-8	μCi/g
			Nb-95	<1.3e-8	μCi/g
			Tl-208	2.10e-8	μCi/g
			Zn-65	<3.6e-8	μCi/g
			Zr-95	<2.2e-8	μCi/g
8/3/2021	AF64903	035	Gross Beta	1.87e-14	μCi/mL
8/8/2021	AF64905	030	Gross Beta	1.65e-14	μCi/mL
8/10/2021	AF65928	035	Gross Beta	1.63e-14	μCi/mL
8/10/2021	AF65930	030	Gross Beta	1.77e-14	μCi/mL
8/17/2021	AF67027	035	Gross Beta	1.20e-14	μCi/mL
8/17/2021	AF67029	030	Gross Beta	1.080e-14	μCi/mL
8/24/2021	AF67997	035	Gross Beta	2.08e-14	μCi/mL
8/24/2021	AF67999	030	Gross Beta	1.97e-14	μCi/mL
8/31/2021	AF68656	035	Gross Beta	1.85e-14	μCi/mL
8/31/2021	AF68658	030	Gross Beta	1.69e-14	μCi/mL
9/7/2021	AF69195	035	Gross Beta	2.72e-14	μCi/mL
9/7/2021	AF69197	030	Gross Beta	2.67e-14	μCi/mL
9/15/2021	AF70703	035	Gross Beta	3.03e-14	μCi/mL
9/15/2021	AF70705	030	Gross Beta	3.18e-14	μCi/mL
9/21/2021	AF70897	035	Gross Beta	1.58e-14	μCi/mL
9/21/2021	AF70899	030	Gross Beta	1.59e-14	μCi/mL
9/28/2021	AF71758	035	Gross Beta	2.40e-14	μCi/mL
9/28/2021	AF71760	030	Gross Beta	2.49e-14	μCi/mL
10/5/2021	AF72522	035	Gross Beta	1.65e-14	μCi/mL
10/5/2021	AF72524	030	Gross Beta	1.50e-14	μCi/mL
10/12/2021	AF73405	035	Gross Beta	3.59e-14	μCi/mL
10/12/2021	AF73407	030	Gross Beta	3.22e-14	μCi/mL
10/19/2021	AF74240	035	Gross Beta	2.34e-14	μCi/mL
10/19/2021	AF74242	030	Gross Beta	2.36e-14	μCi/mL
10/26/2021	AF74946	035	Gross Beta	2.03e-14	μCi/mL
10/26/2021	AF74948	030	Gross Beta	1.99e-14	μCi/mL

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Air Particulate Samples					
11/2/2021	AF75857	035	Ba-140	<7.5e-8	μCi/g
			Be-7	9.2e-7	μCi/g
			Co-58	<1.5e-8	μCi/g
			Co-60	<1.9e-8	μCi/g
			Cs-134	<1.6e-8	μCi/g
			Cs-137	<1.7e-8	μCi/g
			Fe-59	<3.7e-8	μCi/g
			I-131	<2.6e-8	μCi/g
			K-40	4.06e-7	μCi/g
			La-140	<2.4e-8	μCi/g
			Mn-54	<1.6e-8	μCi/g
			Nb-95	<1.6e-8	μCi/g
			Zn-65	<3.9e-8	μCi/g
			Zr-95	<2.8e-8	μCi/g
11/2/2021	AF75858	030	Ba-140	<5.7e-8	μCi/g
			Be-7	8.5e-7	μCi/g
			Co-58	<1.3e-8	μCi/g
			Co-60	<1.4e-8	μCi/g
			Cs-134	<1.3e-8	μCi/g
			Cs-137	<1.3e-8	μCi/g
			Fe-59	<3.0e-8	μCi/g
			I-131	<2.0e-8	μCi/g
			K-40	4.24e-6	μCi/g
			La-140	<1.8e-8	μCi/g
			Mn-54	<1.4e-8	μCi/g
			Nb-95	<1.4e-8	μCi/g
			Zn-65	<3.2e-8	μCi/g
			Zr-95	<2.1e-8	μCi/g
11/2/2021	AF75853	035	Gross Beta	1.60e-14	μCi/mL
11/2/2021	AF75855	030	Gross Beta	1.57e-14	μCi/mL
11/9/2021	AF76493	035	Gross Beta	2.84e-14	μCi/mL
11/9/2021	AF76495	030	Gross Beta	2.92e-14	μCi/mL
11/17/2021	AF77250	035	Gross Beta	2.68e-14	μCi/mL
11/17/2021	AF77252	030	Gross Beta	2.70e-14	μCi/mL
11/24/2021	AF77597	035	Gross Beta	3.07e-14	μCi/mL
11/24/2021	AF77599	030	Gross Beta	2.99e-14	μCi/mL
11/30/2021	AF77713	035	Gross Beta	3.12e-14	μCi/mL
12/2/2021	AF77715	030	Gross Beta	3.37e-14	μCi/mL
12/8/2021	AF78757	035	Gross Beta	2.97e-14	μCi/mL
12/8/2021	AF78759	030	Gross Beta	3.02e-14	μCi/mL
12/14/2021	AF78894	035	Gross Beta	2.32e-14	μCi/mL
12/14/2021	AF78896	030	Gross Beta	2.17e-14	μCi/mL
12/20/2021	AF79211	035	Gross Beta	2.25e-14	μCi/mL
12/20/2021	AF79213	030	Gross Beta	2.18e-14	μCi/mL
12/27/2021	AF79325	035	Gross Beta	2.78e-14	μCi/mL
12/27/2021	AF79327	030	Gross Beta	2.79e-14	μCi/mL

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Fish Samples					
4/6/2021	AF50022	053	Ba-140	<8.0e-8	µCi/g
			Co-58	<1.4e-8	µCi/g
			Co-60	<1.5e-8	µCi/g
			Cs-134	<1.5e-8	µCi/g
			Cs-137	<1.5e-8	µCi/g
			Fe-59	<3.0e-8	µCi/g
			I-131	<3.0e-8	µCi/g
			K-40	1.20e-6	µCi/g
			La-140	<2.5e-8	µCi/g
			Mn-54	<1.4e-8	µCi/g
			Nb-95	<1.5e-8	µCi/g
			Pb-212	3.4e-8	µCi/g
			Zn-65	<3.2e-8	µCi/g
			Zr-95	<2.4e-8	µCi/g
11/17/2021	AF77249	053	Ba-140	<3.4e-8	µCi/g
			Co-58	<7.0e-9	µCi/g
			Co-60	<8.8e-9	µCi/g
			Cs-134	<8.2e-9	µCi/g
			Cs-137	<8.0e-9	µCi/g
			Fe-59	<1.7e-8	µCi/g
			I-131	<1.3e-8	µCi/g
			K-40	1.16e-6	µCi/g
			La-140	<1.3e-8	µCi/g
			Mn-54	<7.6e-9	µCi/g
			Nb-95	<8.3e-9	µCi/g
			Zn-65	<1.9e-8	µCi/g
			Zr-95	<1.4e-8	µCi/g
			Sediment Samples		
4/7/2021	AF50021	052	Ba-140	<2.8e-7	µCi/g
			Bi-214	7.32e-7	µCi/g
			Co-58	<4.7e-8	µCi/g
			Co-60	<6.0e-8	µCi/g
			Cs-134	<6.2e-8	µCi/g
			Cs-137	<5.8e-8	µCi/g
			Fe-59	<1.2e-7	µCi/g
			I-131	<1.0e-7	µCi/g
			K-40	1.38e-5	µCi/g
			La-140	<8.2e-8	µCi/g
			Mn-54	<5.2e-8	µCi/g
			Nb-95	<6.5e-8	µCi/g
			Pb-212	6.5e-7	µCi/g
			Pb-214	6.85e-7	µCi/g
			Tl-208	2.74e-7	µCi/g
Zn-65	<1.7e-7	µCi/g			
Zr-95	<8.8e-8	µCi/g			

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Vegetation for Milk Sample					
1/25/2021	AF40913	004	Ba-140	<2.5e-8	μCi/g
			Be-7	3.23e-7	μCi/g
			Co-58	<6.8e-9	μCi/g
			Co-60	<7.7e-9	μCi/g
			Cs-134	<6.8e-9	μCi/g
			Cs-137	<6.9e-9	μCi/g
			Fe-59	<1.6e-8	μCi/g
			I-131	<7.9e-9	μCi/g
			K-40	3.57e-6	μCi/g
			La-140	<8.1e-9	μCi/g
			Mn-54	<6.7e-9	μCi/g
			Nb-95	<6.8e-9	μCi/g
			Zn-65	<1.8e-8	μCi/g
			Zr-95	<1.2e-8	μCi/g
2/10/2021	AF43789	030	Ba-140	<6.0e-8	μCi/g
			Be-7	1.68e-7	μCi/g
			Co-58	<1.1e-8	μCi/g
			Co-60	<1.2e-8	μCi/g
			Cs-134	<8.8e-9	μCi/g
			Cs-137	<9.6e-9	μCi/g
			Fe-59	<2.7e-8	μCi/g
			I-131	<2.4e-8	μCi/g
			K-40	5.77e-6	μCi/g
			La-140	<1.8e-8	μCi/g
			Mn-54	<9.8e-9	μCi/g
			Nb-95	<1.3e-8	μCi/g
			Zn-65	<2.8e-8	μCi/g
			Zr-95	<1.7e-8	μCi/g
4/19/2021	AF50790	030	Ba-140	<4.0e-8	μCi/g
			Be-7	2.33e-7	μCi/g
			Co-58	<8.9e-9	μCi/g
			Co-60	<9.5e-9	μCi/g
			Cs-134	<8.5e-9	μCi/g
			Cs-137	<8.4e-9	μCi/g
			Fe-59	<2.1e-8	μCi/g
			I-131	<1.4e-8	μCi/g
			K-40	4.96e-6	μCi/g
			La-140	<1.3e-8	μCi/g
			Mn-54	<8.7e-9	μCi/g
			Nb-95	<8.8e-9	μCi/g
			Zn-65	<2.2e-8	μCi/g
			Zr-95	<1.5e-8	μCi/g

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Vegetation for Milk Sample					
5/17/2021	AF54236	004	Ba-140	<3.6e-8	μCi/g
			Be-7	5.30e-7	μCi/g
			Co-58	<9.2e-9	μCi/g
			Co-60	<1.2e-8	μCi/g
			Cs-134	<9.4e-9	μCi/g
			Cs-137	<9.9e-9	μCi/g
			Fe-59	<2.3e-8	μCi/g
			I-131	<9.7e-9	μCi/g
			K-40	6.05e-6	μCi/g
			La-140	<9.4e-9	μCi/g
			Mn-54	<1.1e-8	μCi/g
			Nb-95	<9.1e-9	μCi/g
			Zn-65	<2.5e-8	μCi/g
			Zr-95	<1.7e-8	μCi/g
6/23/2021	AF59333	004	Ba-140	<3.9e-8	μCi/g
			Be-7	2.59e-7	μCi/g
			Co-58	<9.9e-9	μCi/g
			Co-60	<1.4e-8	μCi/g
			Cs-134	<1.1e-8	μCi/g
			Cs-137	<1.2e-8	μCi/g
			Fe-59	<2.7e-8	μCi/g
			I-131	<1.1e-8	μCi/g
			K-40	6.48e-6	μCi/g
			La-140	<1.1e-8	μCi/g
			Mn-54	<1.2e-8	μCi/g
			Nb-95	<1.1e-8	μCi/g
			Pb-212	5.3e-8	μCi/g
			Tl-208	2.54e-8	μCi/g
			Zn-65	<2.9e-8	μCi/g
			Zr-95	<1.7e-8	μCi/g
7/12/2021	AF61499	063	Ba-140	<3.2e-8	μCi/g
			Be-7	8.64e-7	μCi/g
			Co-58	<9.3e-9	μCi/g
			Co-60	<9.8e-9	μCi/g
			Cs-134	<8.5e-9	μCi/g
			Cs-137	<9.2e-9	μCi/g
			Fe-59	<2.2e-8	μCi/g
			I-131	<9.1e-9	μCi/g
			K-40	5.47e-6	μCi/g
			La-140	<9.2e-9	μCi/g
			Mn-54	<8.9e-9	μCi/g
			Nb-95	<9.3e-9	μCi/g
			Zn-65	<2.5e-8	μCi/g
			Zr-95	<1.5e-8	μCi/g

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Vegetation for Milk Sample					
8/23/2021	AF67657	030	Ba-140	<4.9e-8	μCi/g
			Be-7	5.39e-7	μCi/g
			Co-58	<1.2e-8	μCi/g
			Co-60	<1.5e-8	μCi/g
			Cs-134	<1.3e-8	μCi/g
			Cs-137	<1.4e-8	μCi/g
			Fe-59	<2.8e-8	μCi/g
			I-131	<1.5e-8	μCi/g
			K-40	6.03e-6	μCi/g
			La-140	<1.4e-8	μCi/g
			Mn-54	<1.3e-8	μCi/g
			Nb-95	<1.3e-8	μCi/g
			Zn-65	<3.2e-8	μCi/g
			Zr-95	<2.2e-8	μCi/g
9/27/2021	AF71762	063	Ba-140	<4.5e-8	μCi/g
			Be-7	3.24e-7	μCi/g
			Co-58	<1.2e-8	μCi/g
			Co-60	<1.4e-8	μCi/g
			Cs-134	<1.2e-8	μCi/g
			Cs-137	<1.3e-8	μCi/g
			Fe-59	<2.6e-8	μCi/g
			I-131	<1.4e-8	μCi/g
			K-40	5.46e-6	μCi/g
			La-140	<1.4e-8	μCi/g
			Mn-54	<1.2e-8	μCi/g
			Nb-95	<1.2e-8	μCi/g
			Zn-65	<3.0e-8	μCi/g
			Zr-95	<2.0e-8	μCi/g
10/18/2021	AF74027	004	Ba-140	<4.1e-8	μCi/g
			Be-7	7.28e-7	μCi/g
			Co-58	<9.6e-9	μCi/g
			Co-60	<1.2e-8	μCi/g
			Cs-134	<9.9e-9	μCi/g
			Cs-137	<1.1e-8	μCi/g
			Fe-59	<2.5e-8	μCi/g
			I-131	<1.3e-8	μCi/g
			K-40	6.50e-6	μCi/g
			La-140	<1.2e-8	μCi/g
			Mn-54	<1.1e-8	μCi/g
			Nb-95	<1.1e-8	μCi/g
			Zn-65	<2.7e-8	μCi/g
			Zr-95	<1.8e-8	μCi/g

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Vegetation for Milk Sample					
11/22/2021	AF77254	063	Ba-140	<6.1e-8	μCi/g
			Be-7	1.15e-6	μCi/g
			Co-58	<1.1e-8	μCi/g
			Co-60	<1.3e-8	μCi/g
			Cs-134	<1.2e-8	μCi/g
			Cs-137	<1.2e-8	μCi/g
			Fe-59	<2.7e-8	μCi/g
			I-131	<2.1e-8	μCi/g
			K-40	3.82e-6	μCi/g
			La-140	<1.6e-8	μCi/g
			Mn-54	<1.1e-8	μCi/g
			Nb-95	<1.3e-8	μCi/g
			Zn-65	<2.8e-8	μCi/g
			Zr-95	<2.0e-8	μCi/g
12/14/2021	AF78893	063	Ba-140	<3.4e-8	μCi/g
			Be-7	6.42e-7	μCi/g
			Co-58	<9.2e-9	μCi/g
			Co-60	<1.1e-8	μCi/g
			Cs-134	<8.8e-9	μCi/g
			Cs-137	<9.5e-9	μCi/g
			Fe-59	<2.2e-8	μCi/g
			I-131	<9.8e-9	μCi/g
			K-40	4.55e-6	μCi/g
			La-140	<1.1e-8	μCi/g
			Mn-54	<8.7e-9	μCi/g
			Nb-95	<9.0e-9	μCi/g
			Zn-65	<2.3e-8	μCi/g
			Zr-95	<1.5e-8	μCi/g

Date	Lab	Station	Analyte	Result	Units
Water Composite Samples					
7/8/2021	AF60808	054	H-3	<1.0e-6	μCi/mL
7/8/2021	AF60809	052	H-3	<1.0e-6	μCi/mL
10/27/2021	AF72740	085	H-3	1.110e-5	μCi/mL
10/27/2021	AF72741	086	H-3	<1.0e-6	μCi/mL

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
1/14/2021	AF39897	052	Ba-140	<9.7e-9	μCi/mL
			Co-58	<2.0e-9	μCi/mL
			Co-60	<2.2e-9	μCi/mL
			Cs-134	<2.1e-9	μCi/mL
			Cs-137	<2.2e-9	μCi/mL
			Fe-59	<4.2e-9	μCi/mL
			Gross Beta	5.6e-8	μCi/mL
			I-131	<3.4e-9	μCi/mL
			K-40	4.7e-8	μCi/mL
			La-140	<3.4e-9	μCi/mL
			Mn-54	<2.0e-9	μCi/mL
			Nb-95	<2.1e-9	μCi/mL
			Zn-65	<4.3e-9	μCi/mL
			Zr-95	<3.6e-9	μCi/mL
1/14/2021	AF39898	046	Ba-140	<7.9e-9	μCi/mL
			Co-58	<1.8e-9	μCi/mL
			Co-60	<1.7e-9	μCi/mL
			Cs-134	<1.7e-9	μCi/mL
			Cs-137	<1.7e-9	μCi/mL
			Fe-59	<3.4e-9	μCi/mL
			Gross Beta	8.4e-9	μCi/mL
			I-131	<2.7e-9	μCi/mL
			La-140	<2.7e-9	μCi/mL
			Mn-54	<1.6e-9	μCi/mL
			Nb-95	<1.6e-9	μCi/mL
			Zn-65	<3.5e-9	μCi/mL
			Zr-95	<2.9e-9	μCi/mL
2/10/2021	AF44039	046	Ba-140	<1.4e-8	μCi/mL
			Co-58	<1.7e-9	μCi/mL
			Co-60	<1.7e-9	μCi/mL
			Cs-134	<1.7e-9	μCi/mL
			Cs-137	<1.8e-9	μCi/mL
			Fe-59	<4.0e-9	μCi/mL
			Gross Beta	5.37e-8	μCi/mL
			I-131	<5.8e-9	μCi/mL
			K-40	5.5e-8	μCi/mL
			La-140	<4.5e-9	μCi/mL
			Mn-54	<1.6e-9	μCi/mL
			Nb-95	<2.1e-9	μCi/mL
			Zn-65	<3.8e-9	μCi/mL
			Zr-95	<3.2e-9	μCi/mL

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
2/10/2021	AF44040	052	Ba-140	<1.6e-8	μCi/mL
			Co-58	<2.2e-9	μCi/mL
			Co-60	<2.2e-9	μCi/mL
			Cs-134	<2.0e-9	μCi/mL
			Cs-137	<2.2e-9	μCi/mL
			Fe-59	<4.9e-9	μCi/mL
			Gross Beta	6.0e-9	μCi/mL
			I-131	<7.3e-9	μCi/mL
			La-140	<5.5e-9	μCi/mL
			Mn-54	<2.0e-9	μCi/mL
			Nb-95	<2.5e-9	μCi/mL
			Zn-65	<4.4e-9	μCi/mL
			Zr-95	<3.8e-9	μCi/mL
2/23/2021	AF42012	046	H-3	<1.0e-6	μCi/mL
2/23/2021	AF42013	052	H-3	<1.0e-6	μCi/mL
3/10/2021	AF46379	052	Ba-140	<6.2e-9	μCi/mL
			Co-58	<1.6e-9	μCi/mL
			Co-60	<1.8e-9	μCi/mL
			Cs-134	<1.7e-9	μCi/mL
			Cs-137	<1.7e-9	μCi/mL
			Fe-59	<3.4e-9	μCi/mL
			Gross Beta	4.72e-8	μCi/mL
			I-131	<1.9e-9	μCi/mL
			K-40	4.2e-8	μCi/mL
			La-140	<2.2e-9	μCi/mL
			Mn-54	<1.7e-9	μCi/mL
			Nb-95	<1.7e-9	μCi/mL
			Zn-65	<3.5e-9	μCi/mL
			Zr-95	<2.7e-9	μCi/mL
3/10/2021	AF46380	054	Ba-140	<7.9e-9	μCi/mL
			Co-58	<1.9e-9	μCi/mL
			Co-60	<2.1e-9	μCi/mL
			Cs-134	<1.9e-9	μCi/mL
			Cs-137	<2.2e-9	μCi/mL
			Fe-59	<3.8e-9	μCi/mL
			Gross Beta	7.0e-9	μCi/mL
			I-131	<2.4e-9	μCi/mL
			La-140	<2.5e-9	μCi/mL
			Mn-54	<2.0e-9	μCi/mL
			Nb-95	<2.0e-9	μCi/mL
			Zn-65	<4.5e-9	μCi/mL
			Zr-95	<3.3e-9	μCi/mL
4/8/2021	AF49270	046	H-3	<1.0e-6	μCi/mL
4/8/2021	AF49271	052	H-3	<1.0e-6	μCi/mL

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
4/12/2021	AF50019	052	Ba-140	<6.4e-9	µCi/mL
			Co-58	<1.6e-9	µCi/mL
			Co-60	<1.7e-9	µCi/mL
			Cs-134	<1.7e-9	µCi/mL
			Cs-137	<1.7e-9	µCi/mL
			Fe-59	<3.2e-9	µCi/mL
			Gross Beta	7.7e-8	µCi/mL
			I-131	<1.9e-9	µCi/mL
			K-40	8.1e-8	µCi/mL
			La-140	<2.2e-9	µCi/mL
			Mn-54	<1.6e-9	µCi/mL
			Nb-95	<1.6e-9	µCi/mL
			Zn-65	<3.6e-9	µCi/mL
			Zr-95	<2.7e-9	µCi/mL
4/12/2021	AF50020	054	Ba-140	<7.8e-9	µCi/mL
			Co-58	<1.9e-9	µCi/mL
			Co-60	<2.1e-9	µCi/mL
			Cs-134	<2.1e-9	µCi/mL
			Cs-137	<2.1e-9	µCi/mL
			Fe-59	<3.8e-9	µCi/mL
			Gross Beta	8.5e-9	µCi/mL
			I-131	<2.5e-9	µCi/mL
			La-140	<2.7e-9	µCi/mL
			Mn-54	<2.0e-9	µCi/mL
			Nb-95	<2.0e-9	µCi/mL
			Zn-65	<4.3e-9	µCi/mL
			Zr-95	<3.4e-9	µCi/mL
			5/10/2021	AF53372	052
Co-58	<1.9e-9	µCi/mL			
Co-60	<2.2e-9	µCi/mL			
Cs-134	<2.0e-9	µCi/mL			
Cs-137	<2.1e-9	µCi/mL			
Fe-59	<4.1e-9	µCi/mL			
Gross Beta	7.1e-8	µCi/mL			
I-131	<2.4e-9	µCi/mL			
K-40	6.9e-8	µCi/mL			
La-140	<2.7e-9	µCi/mL			
Mn-54	<2.1e-9	µCi/mL			
Nb-95	<2.0e-9	µCi/mL			
Zn-65	<4.2e-9	µCi/mL			
Zr-95	<3.5e-9	µCi/mL			

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
5/10/2021	AF53373	054	Ba-140	<6.6e-9	μCi/mL
			Co-58	<1.6e-9	μCi/mL
			Co-60	<1.7e-9	μCi/mL
			Cs-134	<1.7e-9	μCi/mL
			Cs-137	<1.7e-9	μCi/mL
			Fe-59	<3.2e-9	μCi/mL
			Gross Beta	7.3e-9	μCi/mL
			I-131	<1.9e-9	μCi/mL
			La-140	<2.3e-9	μCi/mL
			Mn-54	<1.6e-9	μCi/mL
			Nb-95	<1.6e-9	μCi/mL
			Zn-65	<3.4e-9	μCi/mL
			Zr-95	<2.7e-9	μCi/mL
6/9/2021	AF57298	052	Ba-140	<6.1e-9	μCi/mL
			Co-58	<1.6e-9	μCi/mL
			Co-60	<1.8e-9	μCi/mL
			Cs-134	<1.7e-9	μCi/mL
			Cs-137	<1.8e-9	μCi/mL
			Fe-59	<3.2e-9	μCi/mL
			Gross Beta	1.80e-8	μCi/mL
			I-131	<1.8e-9	μCi/mL
			La-140	<2.2e-9	μCi/mL
			Mn-54	<1.6e-9	μCi/mL
			Nb-95	<1.6e-9	μCi/mL
			Zn-65	<3.5e-9	μCi/mL
			Zr-95	<2.8e-9	μCi/mL
6/9/2021	AF57299	054	Ba-140	<8.8e-9	μCi/mL
			Co-58	<2.1e-9	μCi/mL
			Co-60	<2.2e-9	μCi/mL
			Cs-134	<2.4e-9	μCi/mL
			Cs-137	<2.3e-9	μCi/mL
			Fe-59	<4.0e-9	μCi/mL
			Gross Beta	1.366e-7	μCi/mL
			I-131	<2.7e-9	μCi/mL
			K-40	1.59e-7	μCi/mL
			La-140	<2.9e-9	μCi/mL
			Mn-54	<2.2e-9	μCi/mL
			Nb-95	<2.3e-9	μCi/mL
			Pb-212	1.33e-8	μCi/mL
			Tl-208	5.3e-9	μCi/mL
			Zn-65	<5.0e-9	μCi/mL
			Zr-95	<3.6e-9	μCi/mL

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
7/14/2021	AF62301	052	Ba-140	<1.0e-8	μCi/mL
			Co-58	<2.0e-9	μCi/mL
			Co-60	<2.0e-9	μCi/mL
			Cs-134	<2.0e-9	μCi/mL
			Cs-137	<2.2e-9	μCi/mL
			Fe-59	<4.2e-9	μCi/mL
			Gross Beta	1.94e-8	μCi/mL
			I-131	<3.5e-9	μCi/mL
			La-140	<3.2e-9	μCi/mL
			Mn-54	<2.0e-9	μCi/mL
			Nb-95	<2.1e-9	μCi/mL
			Zn-65	<4.5e-9	μCi/mL
			Zr-95	<3.4e-9	μCi/mL
			7/14/2021	AF62533	054
Co-58	<1.9e-9	μCi/mL			
Co-60	<2.0e-9	μCi/mL			
Cs-134	<2.0e-9	μCi/mL			
Cs-137	<2.3e-9	μCi/mL			
Fe-59	<4.4e-9	μCi/mL			
Gross Beta	4.7e-8	μCi/mL			
I-131	<3.6e-9	μCi/mL			
K-40	3.2e-8	μCi/mL			
La-140	<3.5e-9	μCi/mL			
Mn-54	<1.9e-9	μCi/mL			
Nb-95	<2.2e-9	μCi/mL			
Pb-212	8.0e-9	μCi/mL			
Zn-65	<4.3e-9	μCi/mL			
Zr-95	<3.6e-9	μCi/mL			
8/9/2021	AF65706	052	Ba-140	<7.9e-9	μCi/mL
			Co-58	<1.8e-9	μCi/mL
			Co-60	<2.1e-9	μCi/mL
			Cs-134	<2.0e-9	μCi/mL
			Cs-137	<2.1e-9	μCi/mL
			Fe-59	<3.9e-9	μCi/mL
			Gross Beta	6.2e-9	μCi/mL
			I-131	<2.6e-9	μCi/mL
			La-140	<2.7e-9	μCi/mL
			Mn-54	<1.9e-9	μCi/mL
			Nb-95	<2.0e-9	μCi/mL
			Zn-65	<4.0e-9	μCi/mL
			Zr-95	<3.4e-9	μCi/mL

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
8/9/2021	AF65707	054	Ba-140	<8.0e-9	μCi/mL
			Co-58	<1.9e-9	μCi/mL
			Co-60	<2.0e-9	μCi/mL
			Cs-134	<2.0e-9	μCi/mL
			Cs-137	<2.1e9	μCi/mL
			Fe-59	<4.0e-9	μCi/mL
			Gross Beta	5.5e-9	μCi/mL
			I-131	<2.7e9	μCi/mL
			La-140	<2.6e-9	μCi/mL
			Mn-54	<1.8e-9	μCi/mL
			Nb-95	<2.1e-9	μCi/mL
			Zn-65	<4.0e-9	μCi/mL
			Zr-95	<3.0e-9	μCi/mL
9/8/2021	AF69379	052	Ba-140	<7.6e-9	μCi/mL
			Co-58	<1.9e-9	μCi/mL
			Co-60	<2.1e-9	μCi/mL
			Cs-134	<2.0e-9	μCi/mL
			Cs-137	<2.2e-9	μCi/mL
			Fe-59	<3.9e-9	μCi/mL
			Gross Beta	7.16e-8	μCi/mL
			I-131	<2.4e-9	μCi/mL
			K-40	9.2e-8	μCi/mL
			La-140	<2.7e-9	μCi/mL
			Mn-54	<1.9e-9	μCi/mL
			Nb-95	<2.1e-9	μCi/mL
			Zn-65	<4.1e-9	μCi/mL
			Zr-95	<3.2e-9	μCi/mL
9/8/2021	AF69380	054	Ba-140	<9.5e-9	μCi/mL
			Co-58	<1.8e-9	μCi/mL
			Co-60	<2.1e-9	μCi/mL
			Cs-134	<1.9e-9	μCi/mL
			Cs-137	<2.1e-9	μCi/mL
			Fe-59	<4.0e-9	μCi/mL
			Gross Beta	6.2e-9	μCi/mL
			I-131	<3.2e-9	μCi/mL
			La-140	<3.2e-9	μCi/mL
			Mn-54	<1.9e-9	μCi/mL
			Nb-95	<2.0e-9	μCi/mL
			Zn-65	<4.0e-9	μCi/mL
			Zr-95	<3.3e-9	μCi/mL

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
10/13/2021	AF74025	052	Ba-140	<1.1e-8	μCi/mL
			Co-58	<2.0e-9	μCi/mL
			Co-60	<2.0e-9	μCi/mL
			Cs-134	<2.0e-9	μCi/mL
			Cs-137	<2.1e-9	μCi/mL
			Fe-59	<4.3e-9	μCi/mL
			Gross Beta	2.53e-8	μCi/mL
			I-131	<3.8e-9	μCi/mL
			K-40	5.3e-8	μCi/mL
			La-140	<3.5e-9	μCi/mL
			Mn-54	<1.9e-9	μCi/mL
			Nb-95	<2.1e-9	μCi/mL
			Zn-65	<4.5e-9	μCi/mL
			Zr-95	<3.5e-9	μCi/mL
10/13/2021	AF74026	054	Ba-140	<8.0e-9	μCi/mL
			Co-58	<1.7e-9	μCi/mL
			Co-60	<1.7e-9	μCi/mL
			Cs-134	<1.7e-9	μCi/mL
			Cs-137	<1.7e-9	μCi/mL
			Fe-59	<3.4e-9	μCi/mL
			Gross Beta	6.7e-9	μCi/mL
			I-131	<3.0e-9	μCi/mL
			La-140	<2.8e-9	μCi/mL
			Mn-54	<1.7e-9	μCi/mL
			Nb-95	<1.8e-9	μCi/mL
			Zn-65	<3.5e-9	μCi/mL
			Zr-95	<2.7e-9	μCi/mL
11/9/2021	AF76497	052	Ba-140	<8.1e-9	μCi/mL
			Co-58	<1.7e-9	μCi/mL
			Co-60	<2.1e-9	μCi/mL
			Cs-134	<2.0e-9	μCi/mL
			Cs-137	<2.1e-9	μCi/mL
			Fe-59	<4.0e-9	μCi/mL
			Gross Beta	2.08e-8	μCi/mL
			I-131	<2.7e-9	μCi/mL
			La-140	<2.7e-9	μCi/mL
			Mn-54	<1.9e-9	μCi/mL
			Nb-95	<2.0e-9	μCi/mL
			Zn-65	<4.0e-9	μCi/mL
			Zr-95	<3.2e-9	μCi/mL

South Texas Project Environmental Sample Results

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
11/9/2021	AF76498	054	Ba-140	<6.7e-9	µCi/mL
			Co-58	<1.7e-9	µCi/mL
			Co-60	<1.7e-9	µCi/mL
			Cs-134	<1.6e-9	µCi/mL
			Cs-137	<1.8e-9	µCi/mL
			Fe-59	<3.2e-9	µCi/mL
			Gross Beta	9.6e-9	µCi/mL
			I-131	<2.1e-9	µCi/mL
			La-140	<2.5e-9	µCi/mL
			Mn-54	<1.6e-9	µCi/mL
			Nb-95	<1.6e-9	µCi/mL
			Zn-65	<3.7e-9	µCi/mL
			Zr-95	<2.8e-9	µCi/mL
12/8/2021	AF78539	052	Ba-140	<5.9e-9	µCi/mL
			Co-58	<1.5e-9	µCi/mL
			Co-60	<1.7e-9	µCi/mL
			Cs-134	<1.6e-9	µCi/mL
			Cs-137	<1.8e-9	µCi/mL
			Fe-59	<3.4e-9	µCi/mL
			Gross Beta	2.79e-8	µCi/mL
			I-131	<2.0e-9	µCi/mL
			K-40	2.7e-8	µCi/mL
			La-140	<2.3e-9	µCi/mL
			Mn-54	<1.6e-9	µCi/mL
			Nb-95	<1.6e-9	µCi/mL
			Zn-65	<3.8e-9	µCi/mL
			Zr-95	<2.7e-9	µCi/mL
12/8/2021	AF78540	054	Ba-140	<6.8e-9	µCi/mL
			Co-58	<1.6e-9	µCi/mL
			Co-60	<1.7e-9	µCi/mL
			Cs-134	<1.6e-9	µCi/mL
			Cs-137	<1.7e-9	µCi/mL
			Fe-59	<3.5e-9	µCi/mL
			Gross Beta	9.1e-9	µCi/mL
			I-131	<2.1e-9	µCi/mL
			La-140	<2.4e-9	µCi/mL
			Mn-54	<1.6e-9	µCi/mL
			Nb-95	<1.6e-9	µCi/mL
			Zn-65	<3.6e-9	µCi/mL
			Zr-95	<2.8e-9	µCi/mL

NOTE: * Indicates the analysis was by alpha spectrometry, or Ra-226, analysis by radon emanation.
 **Indicates the tritium (H-3) analysis for food product, sediment, and vegetation is reported in UCI/ml

Research Reactors

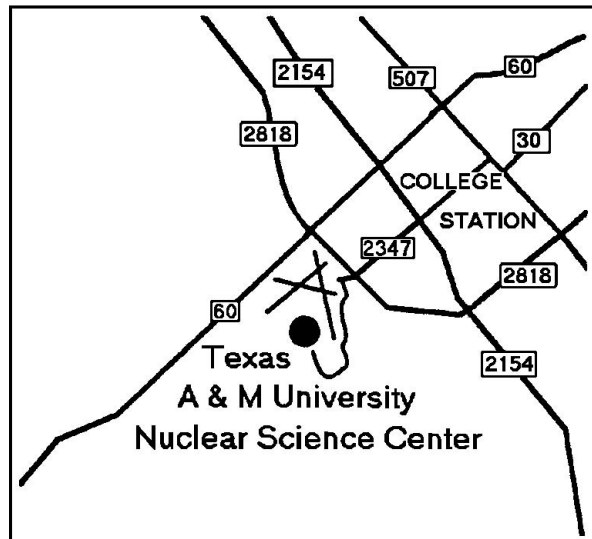
Texas A & M University Nuclear Science Center

Radiation Branch Site No. 001

Texas A&M Nuclear Science Center (NSC) is located seven miles south of downtown Bryan just south of Easterwood Airport. NSC houses a one-megawatt TRIGA (Testing, Research, Isotope Production, General Atomics) research reactor that came online in 1961. The Radiation Branch Surveillance Program consists of OSL monitoring.



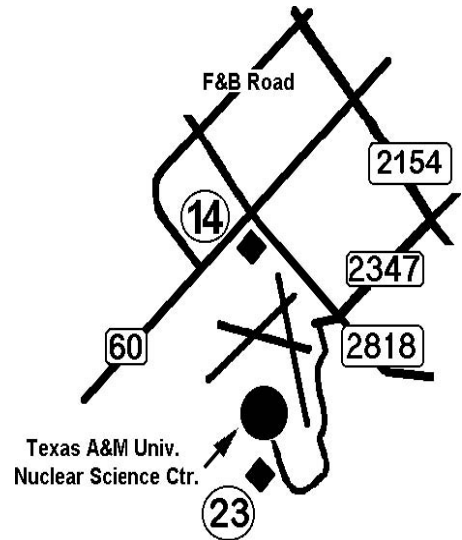
Shaded area indicates location of Brazos County



Texas A & M University Nuclear Science Center Monitoring Station Locations



Homeland Security -Diagram Removed



Texas A & M Nuclear Science Center Optically Stimulated Luminescent Dosimeter (OSL) Monitoring Results¹ (quarterly and annual readings are in mrem)

Site 001 OSL Stations	Q1	Q2	Q3	Q4	Annual Dose	Notes
2	32	36	34	34	136	
3	33	33	31	31	128	
4	35	38	34	37	144	
5	31	27	30	29	117	
10	34	31	33	31	129	
11	31	28	30	30	119	
14*	32	27	32	27	118	
18	31	29	32	29	121	
19	29	26	27	26	108	
23*	30	26	28	26	110	
24	59	82	77	77	295	

NOTE: ¹Background is not subtracted from the data

²An occupancy factor of 1/16 may be applied to this number to obtain radiation dose to members of the public.

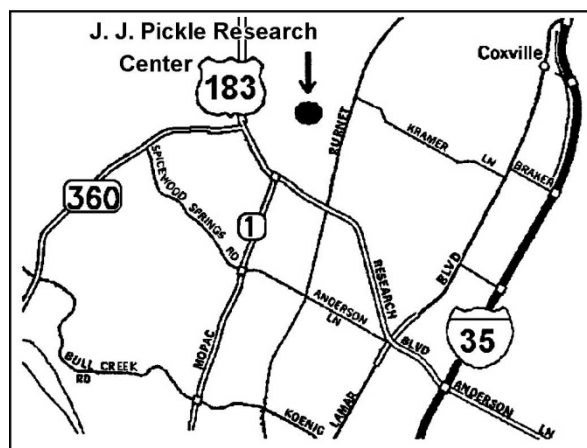
University of Texas Nuclear Engineering Teaching Laboratory

Radiation Branch Site No. 003

University of Texas Nuclear Engineering Teaching Laboratory (NETL) is located at the J. J. Pickle Research Center, approximately five miles north of the Texas Department of State Health Services main campus. NETL houses an above-ground, fixed-core 1.1 megawatt TRIGA (Testing, Research, Isotope Production, General Atomics) research reactor that came online in 1992. The Radiation Branch Surveillance Program consists of sampling sewage and water and OSL monitoring.



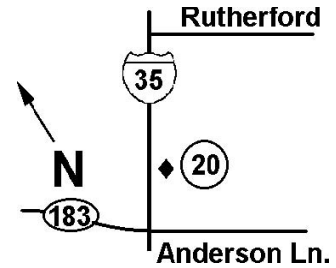
Shaded area indicates location of Travis County



University of Texas Nuclear Engineering Teaching Laboratory Monitoring Station Locations

◆ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security -Diagram Removed



University of Texas Nuclear Engineering Teaching Laboratory

Optically Stimulated Luminescent Dosimeter (OSL) Monitoring Results¹ (quarterly and annual readings are in mrem)

Site 003 OSL Stations	Q1	Q2	Q3	Q4	Annual Dose	Notes
1	27	25	29	24	105	
2	29	26	30	27	112	
3	28	25	29	24	106	
4	32	28	33	27	120	
5	29	26	31	25	111	
20*	27	25	28	23	103	

NOTE: ¹Background is not subtracted from the data

²An occupancy factor of 1/16 may be applied to this number to obtain radiation dose to members of the public.

Other Facilities

Gammatron, Inc.

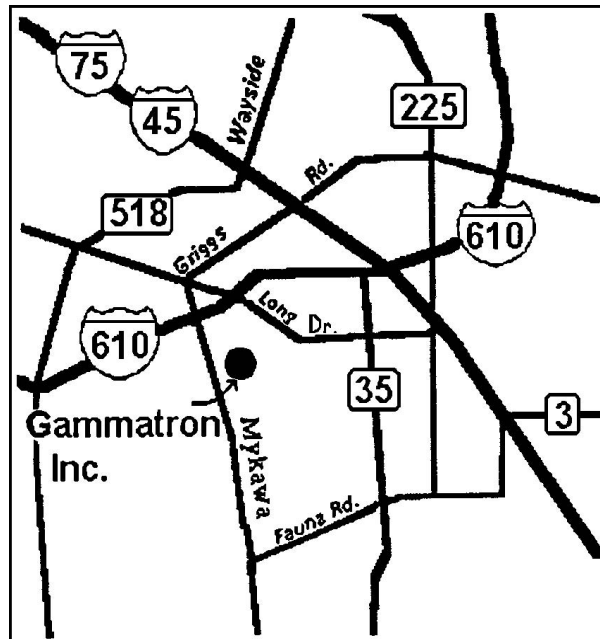
Radiation Branch Site No. 018

Gammatron, Inc. is a manufacturer of sealed radioactive sources. The facility is located in an industrial area of Houston approximately four miles northwest of William P. Hobby Airport. The Radiation Branch Surveillance Program consists OSL monitoring.



Shaded area indicates location of Harris County

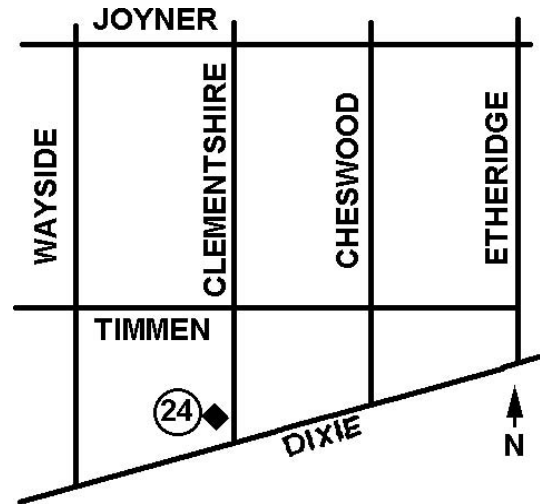
Harris County



**Gammatron, Inc.
Monitoring Station Locations**

◆ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security -Diagram Removed



Gammatron, Inc.

**Optically Stimulated Luminescence (OSL) Monitoring Results
(quarterly and annual readings are in mrem)**

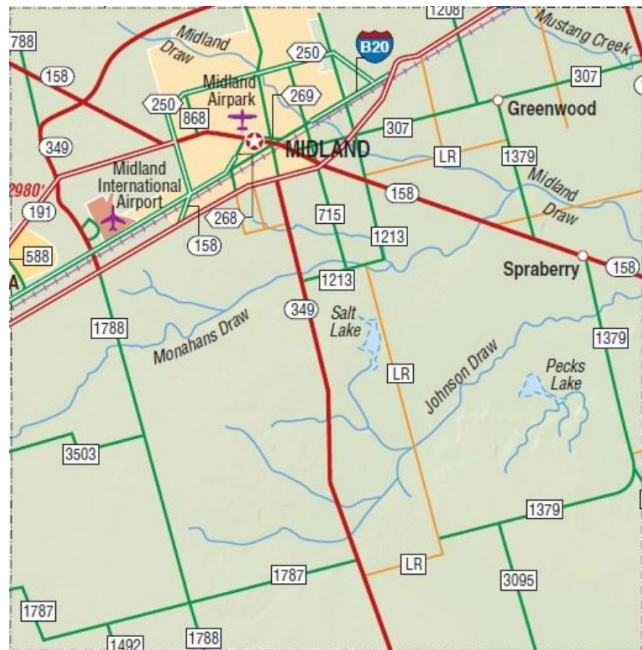
Site 018 OSL Stations	Q1	Q2	Q3	Q4	Annual Dose	Notes
3	15	126	82	84	307	
5	609	752	431	502	2294	
8	250	183	129	312	874	
27*	28	25	0	25	78	
30	50	52	59	92	253	
31	46	54	51	126	277	
34	148	157	160	95	560	
40	80	86	96	115	377	

NOTE: ¹Background is not subtracted from the data

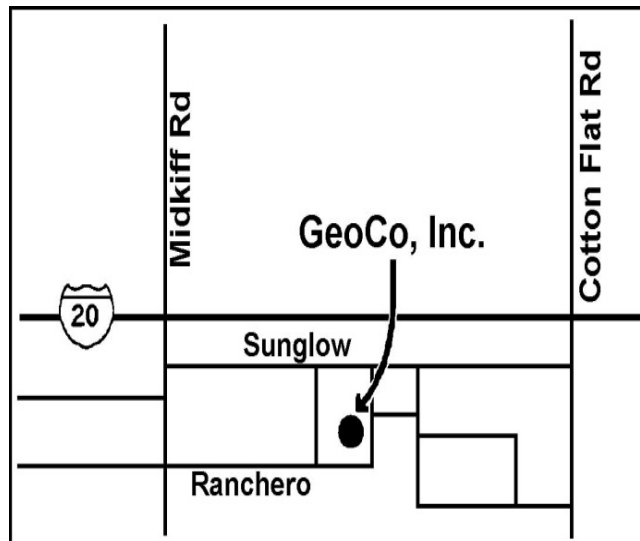
²An occupancy factor of 1/16 may be applied to this number to obtain radiation dose to members of the public.

GeoCo, Inc.
Radiation Branch Site No. 051

GeoCo, Inc. is a tracer studies company specializing in oil and gas wells. The facility is located in Midland approximately six miles east of Midland-Odessa International Airport. The Radiation Branch Surveillance Program consists of OSL monitoring



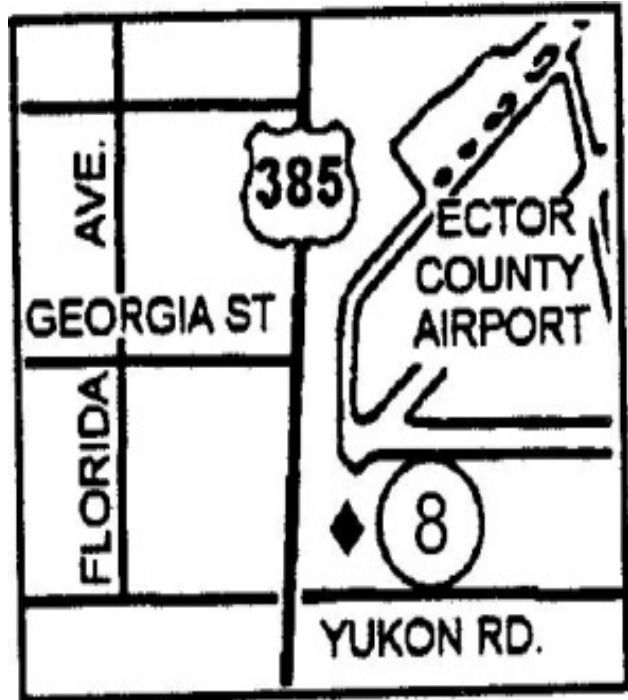
Shaded area indicates location of Midland County



GeoCo, Inc.
Monitoring Station Locations

◆ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security -Diagram Removed



GeoCo, Inc.

Optically Stimulated Luminescence (OSL) Monitoring Results
 (quarterly and annual readings are in mrem)

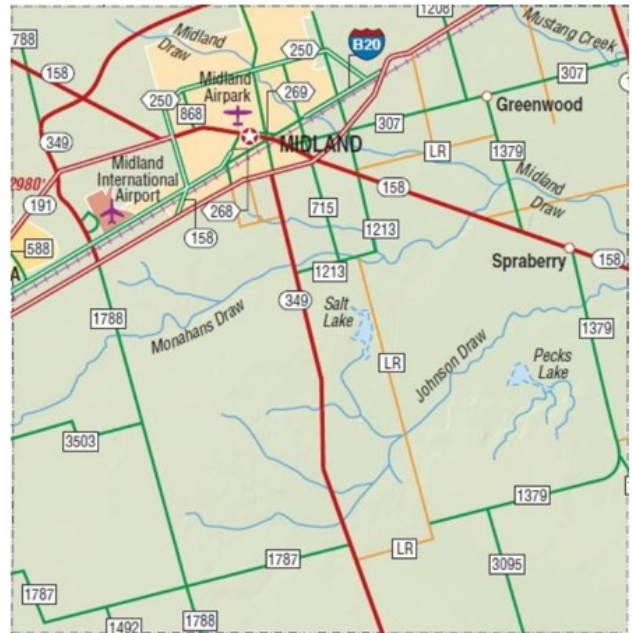
Site 051 OSL Stations	Q1	Q2	Q3	Q4	Annual Dose	Notes
1	35	32	32	33	132	
8	33	28	51	30	142	

NOTE: ¹Background is not subtracted from the data

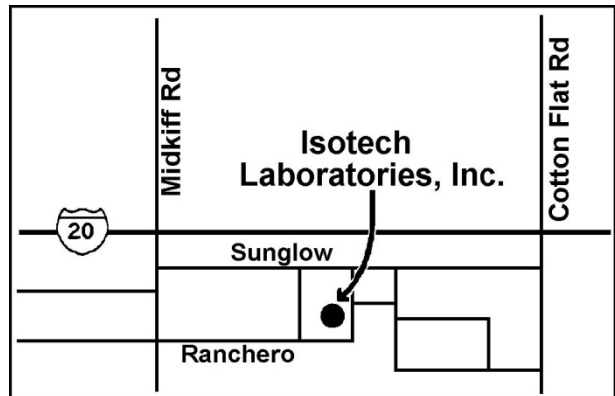
²An occupancy factor of 1/16 may be applied to this number to obtain radiation dose to members of the public.

Isotech Laboratories, Inc.
Radiation Branch Site No. 008

Isotech Laboratories, Inc. manufactures tracer material for the oil and gas industry, calibrates radiation detection instruments, and provides radiation safety training for well-logging and tracer services. The facility is located in Midland approximately six miles east of Midland-Odessa International Airport. The Radiation Branch Surveillance Program consists of OSL monitoring.



Shaded area indicates location of Midland County



Isotech Laboratories, Inc. Monitoring Station Locations

◆ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security -Diagram Removed



Isotech Laboratories, Inc.

Optically Stimulated Luminescence (OSL) Monitoring Results (quarterly and annual readings are in mrem)

Site 008 OSL Stations	Q1	Q2	Q3	Q4	Annual Dose	Notes
1	35	28	34	32	129	
2	51	43	43	49	186	
3	40	36	39	41	156	
4	41	43	43	40	167	
6	52	44	41	40	177	
8*	35	29	31	33	128	

NOTE: ¹Background is not subtracted from the data

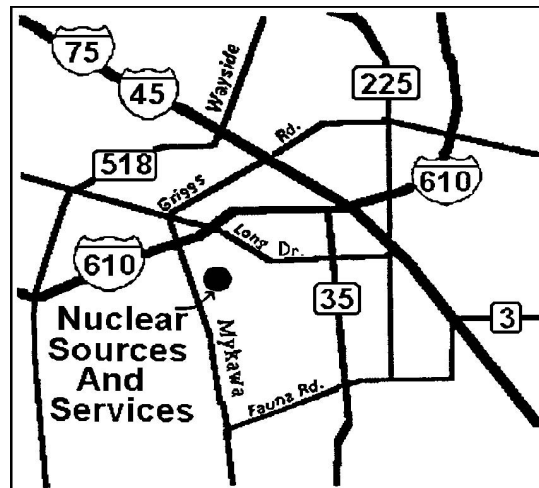
²An occupancy factor of 1/16 may be applied to this number to obtain radiation dose to members of the public.

Nuclear Sources and Services, Inc.

Radiation Branch Site No. 023

The Nuclear Sources and Services, Inc. (NSSI) facility occupies approximately five acres in a light industrial area of Southeast Houston approximately four miles northwest of William P. Hobby Airport. The primary activities of NSSI currently are waste treatment, storage, and disposal of radioactive and chemical hazardous materials. NSSI receives wastes from a variety of off-site generators both inside and outside of Texas. At the conclusion of treatment or storage, the residues are shipped to permitted off-site facilities for disposal. The Radiation Branch Surveillance Program consists of soil sampling and OSL monitoring.

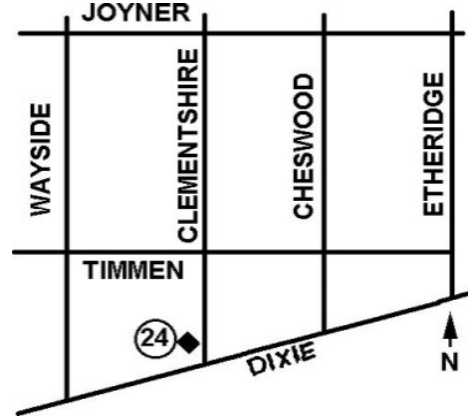
Shaded area indicates location of Harris County



**Nuclear Sources and Services, Inc.
Monitoring Station Locations**

◆ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security -Diagram Removed



Nuclear Sources and Services, Inc.

**Optically Stimulated Luminescence (OSL) Monitoring Results
(quarterly and annual readings are in mrem)**

Site 023 OSL Stations	Q1	Q2	Q3	Q4	Annual Dose	Notes
3	126	147	85	147	505	
4	37	35	36	36	144	
6	34	35	41	35	145	
7	185	50	54	68	357	
11	33	30	31	31	125	
12	76	91	50	104	321	
16	59	33	35	38	165	
18	43	43	49	41	176	
19	70	40	44	76	230	
20	46	47	46	41	180	
21	520	377	231	210	1338	
22	28	26	27	56	137	
23	30	27	30	28	115	
24*	28	25	25	25	103	
25	34	34	36	36	140	
41	100	92	54	127	373	

NOTE: ¹Background is not subtracted from the data

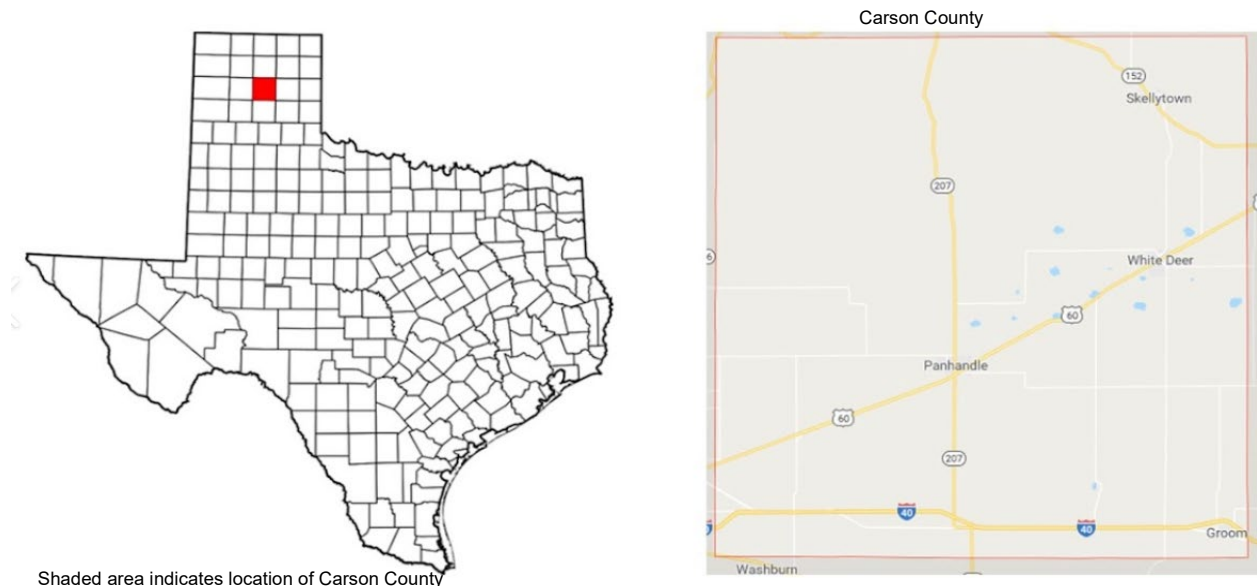
²An occupancy factor of 1/16 may be applied to this number to obtain radiation dose to members of the public.

Pantex

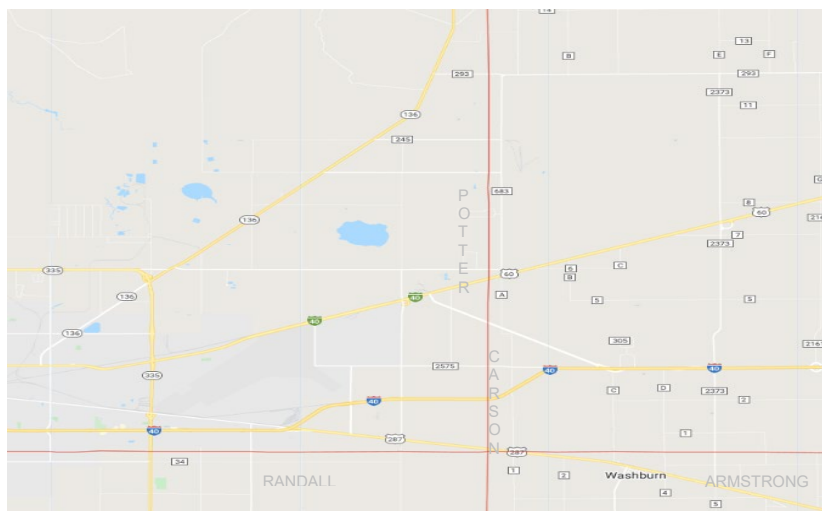
Radiation Branch Site No. 005

The Pantex plant site is located in Carson County in the Texas Panhandle, north of U.S. Highway 60. The plant is located 17 miles (27 kilometers) northeast of downtown Amarillo. It is centered on a 18,000-acre site. The Pantex facility consists of 11,703 acres of United States Department of Energy (USDOE) owned land and 5,800 acres of land leased from Texas Tech University used as a safety and security buffer zone. The buffer area is managed by Texas Tech Research Farm and is used as rangeland and farmland. An additional 1,080 acres northwest of the plant is called Pantex Lake. Pantex Lake was formally used as the receiving area for treated wastewater discharges and is now managed by Texas Tech University. An additional 7,926 acres to the east of the plant is USDOE-owned and is used for agricultural purposes through a cooperative agreement.

The Radiation Branch Surveillance Program consists of OSL monitoring and sampling air, food products, sediment, soil, vegetation, and water. Analysis of samples is performed to determine the presence of any special nuclear material.

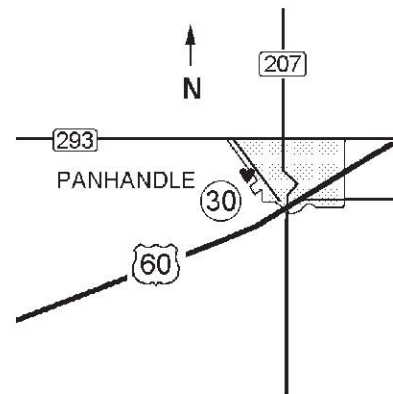
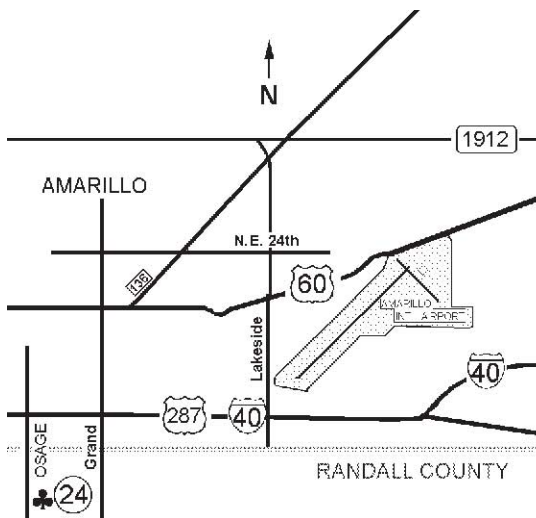
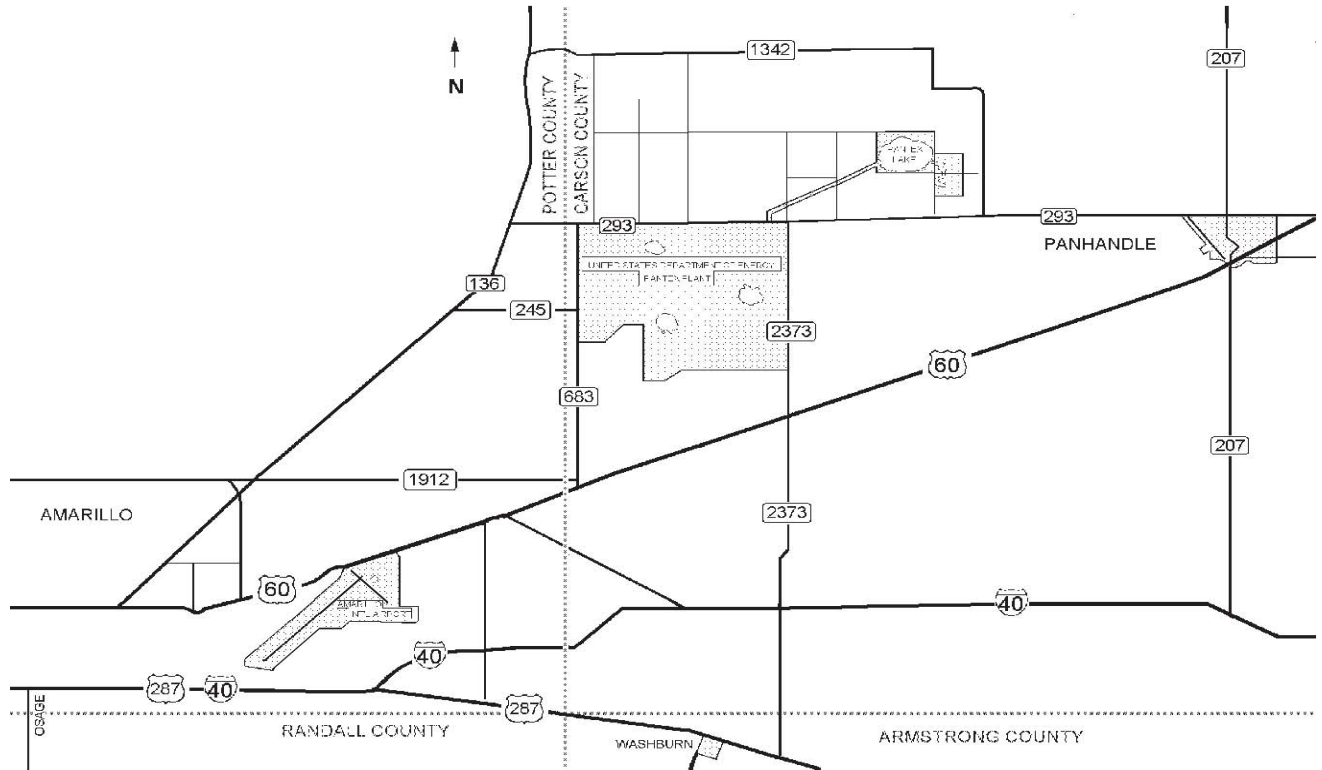


Shaded area indicates location of Carson County



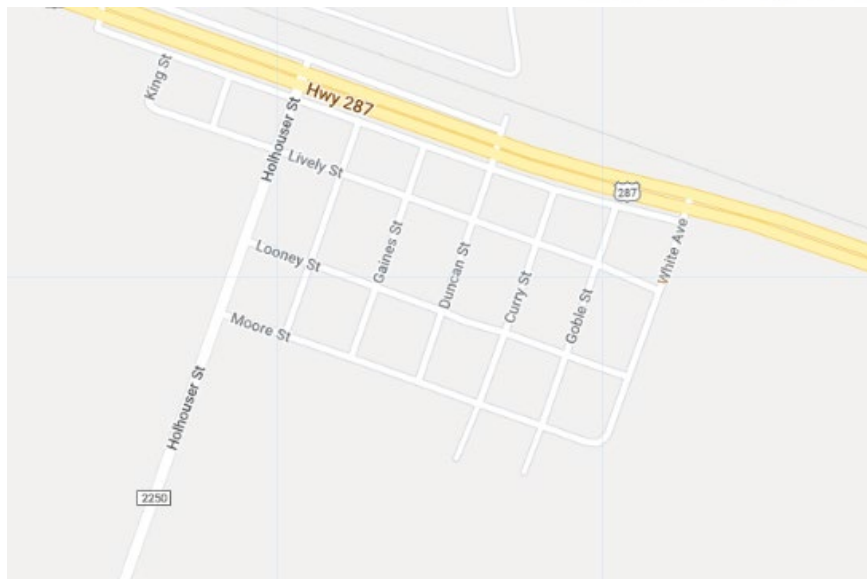
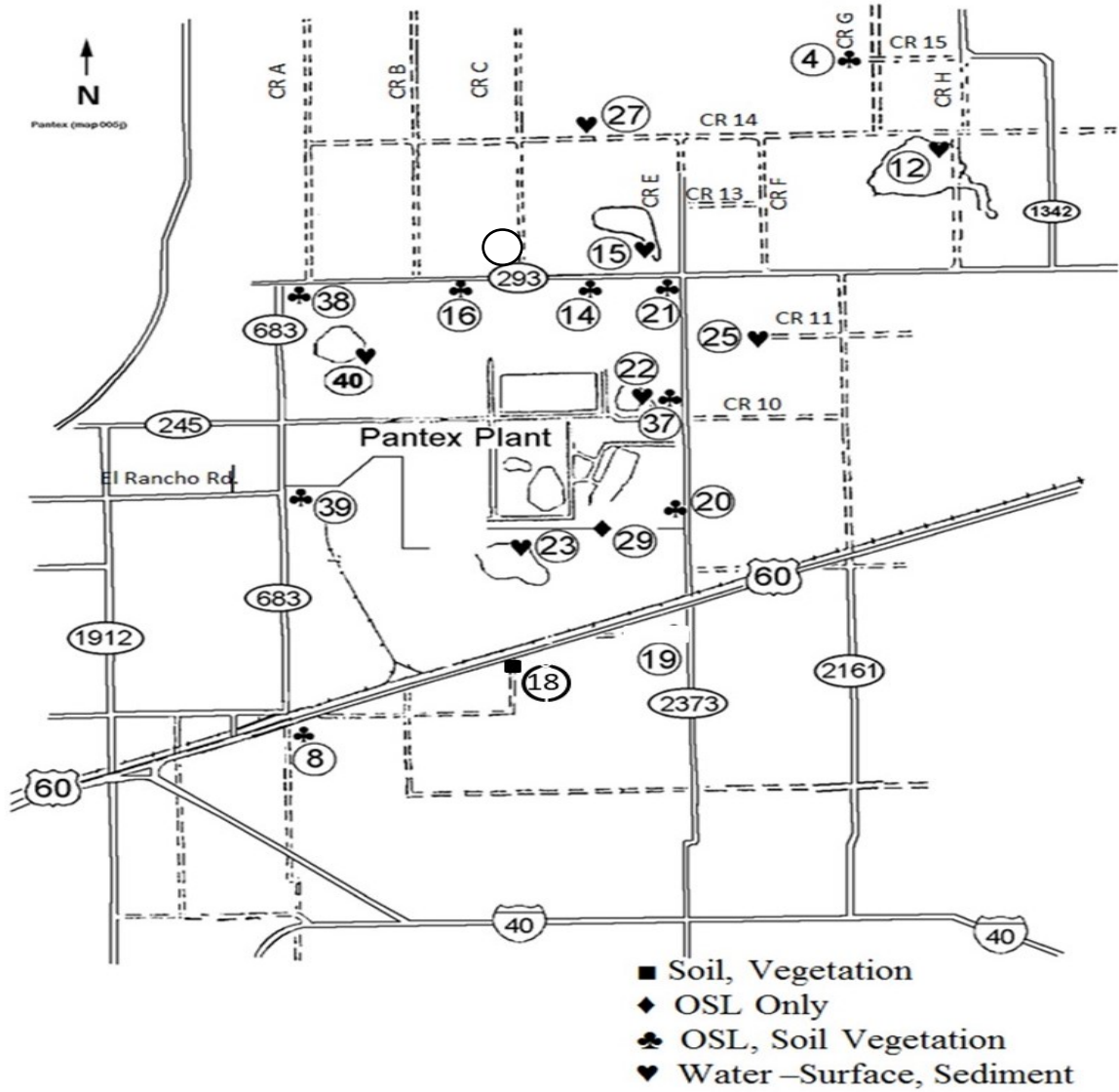
Pantex Monitoring Station Locations

◆ TLD Station
♥ Sample Station
♣ TLD & Sample Station



Pantex Monitoring Station Locations

Homeland Security -Diagram Removed



**Pantex
Environmental Sample Results**

**Optically Stimulated Luminescence (OSL) Monitoring Results
(quarterly and annual readings are in mrem)**

Site 005 OSL Stations	Q1	Q2	Q3	Q4	Annual Dose	Notes
4	44	39	43	37	163	
8	39	38	42	38	157	
14	45	39	42	39	165	
16	41	42	41	38	162	
19	44	42	40	39	165	
20	2	42	41	38	123	
21	41	39	37	35	152	
24*	39	34	39	35	147	
29	0	0	61	36	97	OSL number 29 was not picked up until 3rd QTR due to Covid-19
37	44	43	41	39	167	
38	43	38	41	36	158	
39	41	38	43	36	158	
41	250	41	226	251	768	
42	88	41	39	35	203	

NOTE: ¹Background is not subtracted from the data

²An occupancy factor of 1/16 may be applied to this number to obtain radiation dose to members of the public.

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Food Product Samples					
7/14/2021	AF62022	025	Be-7	2.53e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	3.66e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
10/13/2021	AF73423	025	Be-7	1.10e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	1.12e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g

Date	Lab	Station	Analyte	Result	Units
Sediment Samples					
1/20/2021	AF40498	022	K-40	1.50e-5	μCi/g
			Pb-212	8.4e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	4.04e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
4/14/2021	AF50595	015	Bi-212	1.30e-6	μCi/g
			Bi-214	6.17e-7	μCi/g
			K-40	1.70e-5	μCi/g
			Pb-212	9.0e-7	μCi/g
			Pb-214	5.80e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	3.54e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Sediment Samples					
10/13/2021	AF73415	040	Cs-137	2.40e-7	μCi/g
			K-40	1.71e-5	μCi/g
			Pb-212	1.58e-6	μCi/g
			Pb-214	9.1e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	3.83e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
			Cs-137	1.82e-7	μCi/g
10/13/2021	AF73416	023	K-40	2.16e-5	μCi/g
			Pb-212	1.37e-6	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	6.06e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Soil Samples					
1/20/2021	AF40493	014	K-40	1.49e-5	μCi/g
			Pb-212	8.3e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	3.45e-7	μCi/g
			Total Uranium Activity	2.21e-6	μCi/g
			Uranium-234	1.05e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	1.16e-6	μCi/g
1/20/2021	AF40494	018	K-40	1.79e-5	μCi/g
			Pb-212	1.76e-6	μCi/g
			Pb-214	9.2e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	4.28e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	1.08e-6	μCi/g
1/20/2021	AF40495	020	K-40	1.80e-5	μCi/g
			Pb-212	1.08e-6	μCi/g
			Pb-214	9.1e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	4.98e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	1.03e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
1/20/2021	AF40496	037	K-40	1.58e-5	μCi/g
			Pb-212	1.02e-6	μCi/g
			Pb-214	8.8e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	4.34e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Soil Samples					
1/20/2021	AF40497	039	K-40	1.46e-5	μCi/g
			Pb-212	1.39e-6	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	3.6e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
4/14/2021	AF50589	004	Cs-137	1.70e-7	μCi/g
			K-40	1.84e-5	μCi/g
			Pb-212	9.8e-7	μCi/g
			Pb-214	1.06e-6	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	4.06e-7	μCi/g
			Total Uranium Activity	2.03e-6	μCi/g
			Uranium-234	1.13e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
4/14/2021	AF50590	008	K-40	1.39e-5	μCi/g
			Pb-212	1.03e-6	μCi/g
			Pb-214	6.8e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	2.86e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
4/14/2021	AF50591	016	K-40	1.75e-5	μCi/g
			Pb-212	1.12e-6	μCi/g
			Pb-214	9.9e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	5.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	1.00e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Soil Samples					
4/14/2021	AF50592	019	K-40	1.60e-5	μCi/g
			Pb-212	1.39e-6	μCi/g
			Pb-214	8.0e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	3.85e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
4/14/2021	AF50593	021	K-40	1.21e-5	μCi/g
			Pb-212	5.6e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	2.34e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
4/14/2021	AF50594	038	Cs-137	3.71e-7	μCi/g
			K-40	1.75e-5	μCi/g
			Pb-212	1.25e-6	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	4.16e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	1.04e-6	μCi/g
7/14/2021	AF62009	014	K-40	1.69e-5	μCi/g
			Pb-212	1.03e-6	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	3.24e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Soil Samples					
7/14/2021	AF62010	018	Bi-212	1.38e-6	μCi/g
			Bi-214	7.51e-7	μCi/g
			K-40	1.78e-5	μCi/g
			Pb-212	1.300e-6	μCi/g
			Pb-214	9.22e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	3.65e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
7/14/2021	AF62011	020	K-40	1.54e-5	μCi/g
			Pb-212	1.10e-6	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	4.34e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
7/14/2021	AF62012	037	K-40	1.83e-5	μCi/g
			Pb-212	1.28e-6	μCi/g
			Pb-214	9.3e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	4.96e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
7/14/2021	AF62013	039	Cs-137	3.56e-7	μCi/g
			K-40	1.65e-5	μCi/g
			Pb-212	1.13e-6	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	3.60e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Soil Samples					
10/13/2021	AF73409	004	Cs-137	1.19e-7	µCi/g
			K-40	1.67e-5	µCi/g
			Pb-212	1.07e-6	µCi/g
			Plutonium-239	<4.0e-7	µCi/g
			Tl-208	4.31e-7	µCi/g
			Total Uranium Activity	<2.0e-6	µCi/g
			Uranium-234	<1.0e-6	µCi/g
			Uranium-235	<1.0e-6	µCi/g
			Uranium-238	<1.0e-6	µCi/g
10/13/2021	AF73410	008	K-40	1.45e-5	µCi/g
			Pb-212	1.28e-6	µCi/g
			Pb-214	7.4e-7	µCi/g
			Plutonium-239	<4.0e-7	µCi/g
			Tl-208	3.40e-7	µCi/g
			Total Uranium Activity	<2.0e-6	µCi/g
			Uranium-234	<1.0e-6	µCi/g
			Uranium-235	<1.0e-6	µCi/g
			Uranium-238	<1.0e-6	µCi/g
10/13/2021	AF73411	016	K-40	1.57e-5	µCi/g
			Pb-212	1.18e-6	µCi/g
			Pb-214	8.4e-7	µCi/g
			Plutonium-239	<4.0e-7	µCi/g
			Tl-208	4.12e-7	µCi/g
			Total Uranium Activity	<2.0e-6	µCi/g
			Uranium-234	<1.0e-6	µCi/g
			Uranium-235	<1.0e-6	µCi/g
			Uranium-238	<1.0e-6	µCi/g
10/13/2021	AF73412	019	K-40	1.70e-5	µCi/g
			Pb-212	1.15e-6	µCi/g
			Pb-214	9.3e-7	µCi/g
			Plutonium-239	<4.0e-7	µCi/g
			Tl-208	4.29e-7	µCi/g
			Total Uranium Activity	<2.0e-6	µCi/g
			Uranium-234	<1.0e-6	µCi/g
			Uranium-235	<1.0e-6	µCi/g
			Uranium-238	<1.0e-6	µCi/g

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Soil Samples					
10/13/2021	AF73413	021	K-40	1.43e-5	μCi/g
			Pb-212	8.0e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	3.29e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
10/13/2021	AF73414	038	K-40	1.98e-5	μCi/g
			Pb-212	1.25e-6	μCi/g
			Pb-214	8.8e-7	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Tl-208	4.7e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	1.04e-6	μCi/g

Date	Lab	Station	Analyte	Result	Units
Vegetation Samples					
1/20/2021	AF40499	014	Be-7	8.03e-6	μCi/g
			K-40	3.49e-6	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
1/20/2021	AF40500	018	Be-7	4.11e-6	μCi/g
			K-40	4.20e-6	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Vegetation Samples					
1/20/2021	AF40501	020	Be-7	5.98e-6	μCi/g
			K-40	6.08e-6	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
1/20/2021	AF40502	037	Be-7	7.31e-6	μCi/g
			K-40	4.75e-6	μCi/g
			Pb-212	5.2e-8	μCi/g
			Pb-214	8.7e-8	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
1/20/2021	AF40503	039	Be-7	4.34e-6	μCi/g
			K-40	7.19e-6	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
4/14/2021	AF50596	004	Be-7	7.31e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	1.73e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Vegetation Samples					
4/14/2021	AF50597	008	Be-7	2.35e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	3.20e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
4/14/2021	AF50598	016	Be-7	2.39e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	3.78e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
4/14/2021	AF50599	019	Be-7	2.85e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	4.89e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
4/14/2021	AF50600	021	Be-7	2.99e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	4.06e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Vegetation Samples					
4/14/2021	AF50601	038	Be-7	2.16e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	2.47e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
7/14/2021	AF62014	014	Be-7	2.62e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	2.09e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
7/14/2021	AF62015	018	Be-7	3.66e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	3.96e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
7/14/2021	AF62016	020	Be-7	2.87e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	1.98e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Vegetation Samples					
7/14/2021	AF62017	037	Be-7	2.23e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	2.31e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
7/14/2021	AF62018	039	Be-7	6.80e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	1.64e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
10/13/2021	AF73417	004	Be-7	2.56e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	1.47e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
10/13/2021	AF73418	008	Be-7	7.65e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	1.45e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
10/13/2021	AF73419	016	Be-7	5.91e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	3.92e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Vegetation Samples					
10/13/2021	AF73420	019	Be-7	3.66e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	2.97e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
10/13/2021	AF73421	021	Be-7	5.08e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	3.06e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g
10/13/2021	AF73422	038	Be-7	7.79e-6	μCi/g
			H-3	<1.0e-6	μCi/mL
			K-40	3.89e-5	μCi/g
			Plutonium-239	<4.0e-7	μCi/g
			Total Uranium Activity	<2.0e-6	μCi/g
			Uranium-234	<1.0e-6	μCi/g
			Uranium-235	<1.0e-6	μCi/g
			Uranium-238	<1.0e-6	μCi/g

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Water-Surface Samples					
1/20/2021	AF40504	022	Gamma	Not detected	μCi/mL
			H-3	<1.0e-6	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Total Uranium Activity	2.5e-9	μCi/mL
			Uranium-234	1.69e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	<1.0e-9	μCi/mL
1/20/2021	AF40505	024	H-3	<1.0e-6	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Tl-208	1.63e-9	μCi/mL
			Total Uranium Activity	6.8e-9	μCi/mL
			Uranium-234	4.5e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	2.20e-9	μCi/mL
4/14/2021	AF50602	015	H-3	<1.0e-6	μCi/mL
			K-40	5.8e-8	μCi/mL
			Pb-212	8.1e-9	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Total Uranium Activity	<2.0e-9	μCi/mL
			Uranium-234	<1.0e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	<1.0e-9	μCi/mL
4/14/2021	AF50603	024	Gamma	Not detected	μCi/mL
			H-3	<1.0e-6	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Total Uranium Activity	6.1e-9	μCi/mL
			Uranium-234	4.3e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	1.68e-9	μCi/mL
7/14/2021	AF62019	024	Gamma	Not detected	μCi/mL
			H-3	<1.0e-6	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Total Uranium Activity	4.7e-9	μCi/mL
			Uranium-234	3.45e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	1.21e-9	μCi/mL

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Water Surface Samples					
10/13/2021	AF73424	024	Gamma	Not detected	μCi/mL
			H-3	<1.0e-6	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Total Uranium Activity	5.6e-9	μCi/mL
			Uranium-234	3.85e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	1.65e-9	μCi/mL

Date	Lab	Station	Analyte	Result	Units
Water-Ground Samples					
1/20/2021	AF40506	027	Gamma	Not detected	μCi/mL
			H-3	<1.0e-6	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Total Uranium Activity	4.1e-9	μCi/mL
			Uranium-234	2.89e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	1.16e-9	μCi/mL
1/20/2021	AF40507	030	H-3	<1.0e-6	μCi/mL
			Pb-214	8.0e-9	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Total Uranium Activity	7.2e-9	μCi/mL
			Uranium-234	4.7e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	2.46e-9	μCi/mL

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Water Ground Samples					
4/14/2021	AF50604	027	Gamma	Not detected	μCi/mL
			H-3	<1.0e-6	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Total Uranium Activity	4.6e-9	μCi/mL
			Uranium-234	2.84e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	1.70e-9	μCi/mL
4/14/2021	AF50605	030	Gamma	Not detected	μCi/mL
			H-3	<1.0e-6	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Total Uranium Activity	7.6e-9	μCi/mL
			Uranium-234	5.1e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	2.25e-9	μCi/mL
7/14/2021	AF62020	027	Bi-214	6.15e-8	μCi/mL
			H-3	<1.0e-6	μCi/mL
			K-40	2.6e-8	μCi/mL
			Pb-214	5.89e-8	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Total Uranium Activity	4.1e-9	μCi/mL
			Uranium-234	2.80e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	1.22e-9	μCi/mL

**Pantex
Environmental Sample Results**

Date	Lab	Station	Analyte	Result	Units
Water Ground Samples					
7/14/2021	AF62021	030	H-3	<1.0e-6	μCi/mL
			Pb-214	2.04e-8	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Total Uranium Activity	6.7e-9	μCi/mL
			Uranium-234	4.6e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	2.00e-9	μCi/mL
10/13/2021	AF73425	027	Bi-214	5.07e-8	μCi/mL
			H-3	<1.0e-6	μCi/mL
			Pb-214	5.16e-8	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Total Uranium Activity	6.4e-9	μCi/mL
			Uranium-234	4.27e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	1.91e-9	μCi/mL
10/13/2021	AF73426	030	H-3	<1.0e-6	μCi/mL
			Pb-214	1.40e-8	μCi/mL
			Plutonium-239	<4.0e-10	μCi/mL
			Total Uranium Activity	7.8e-9	μCi/mL
			Uranium-234	5.1e-9	μCi/mL
			Uranium-235	<1.0e-9	μCi/mL
			Uranium-238	2.57e-9	μCi/mL

NOTE: * indicates the analysis was by alpha spectrometry, or Ra-226, analysis by radon emanation.

**Indicates the tritium (H-3) analysis for food product, sediment, and vegetation is reported in UCi/ml

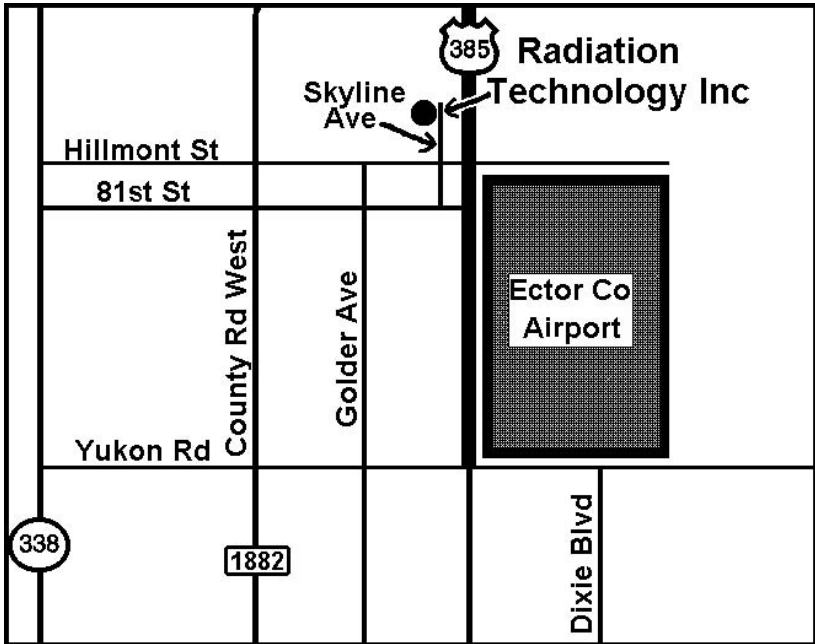
Radiation Technology, Inc. Radiation Branch Site No. 050

Radiation Technology, Inc. (RTI), located six miles north of downtown Odessa, provides installation, repair, and maintenance of nuclear gauging devices and services for loading and unloading radioactive sources in nuclear gauges. The Radiation Branch Surveillance Program consists of OSL monitoring.



indicates location of Ector County

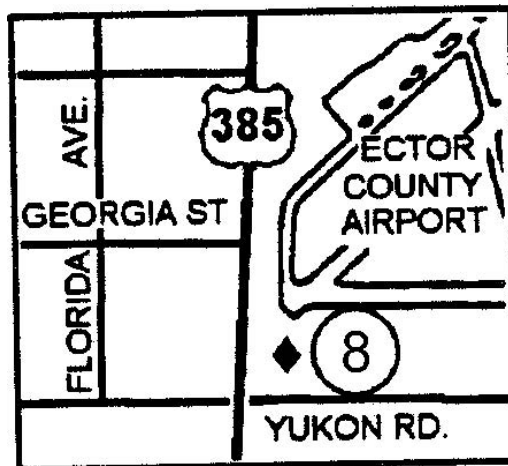
Shaded area



Radiation Technology, Inc. Monitoring Station Locations

◆ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security -Diagram Removed



Radiation Technology, Inc.

Optically Stimulated Luminescence (OSL) Monitoring Results (quarterly and annual readings are in mrem)

Site 050 OSL Stations	Q1	Q2	Q3	Q4	Annual Dose	Notes
1	35	30	32	30	127	
2	47	40	55	110	252	
3	44	39	43	39	165	
4	35	30	32	32	129	
8*	33	28	51	30	142	

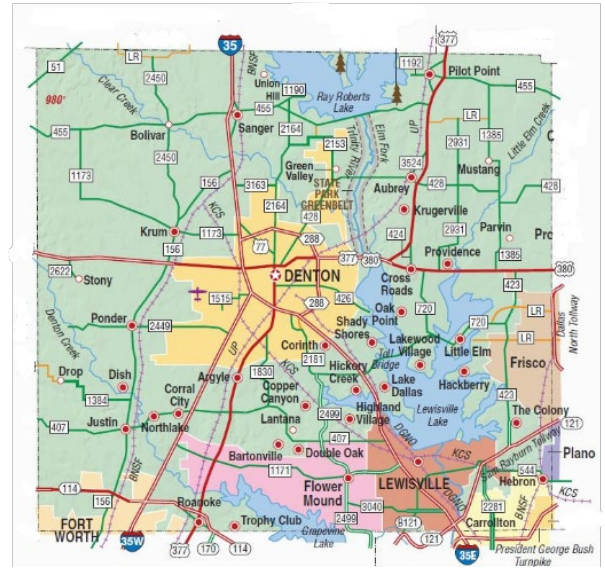
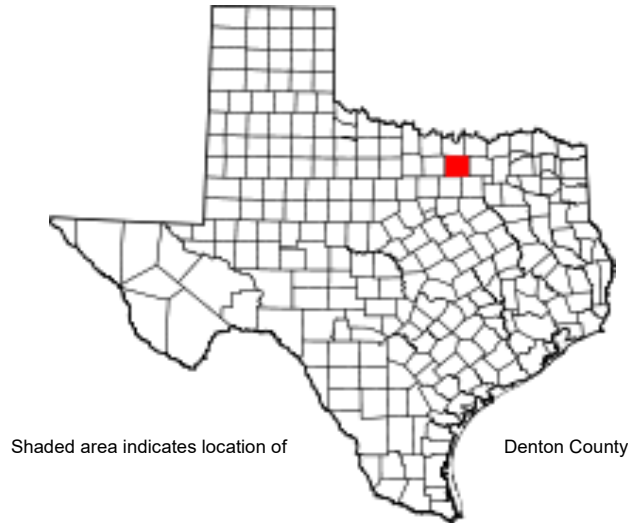
NOTE: ¹Background is not subtracted from the data

²An occupancy factor of 1/16 may be applied to this number to obtain radiation dose to members of the public.

Trace Life Sciences

Radiation Branch Site No. 055 & 056

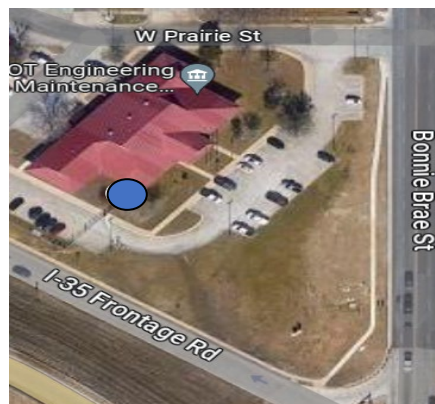
U.S. Radiopharmaceuticals, formerly Trace Life Sciences, has two sites located in Denton Texas, which consists of a medical radioisotope production facility which also stores contaminated accelerator parts. The Radiation Branch surveillance program consists of OSL monitoring.



Trace Life Sciences Monitoring Station Locations

◆ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security -Diagram
Removed



Trace Life Sciences Optically Stimulated Luminescence (OSL) Monitoring Results and Environmental Sampling Results (quarterly and annual readings are in mrem)

Site 55 OSL Stations	Q1	Q2	Q3	Q4	Annual Dose	Notes
1	29	26	28	26	109	
2	29	27	27	26	109	
3	30	25	28	25	108	
4	30	27	28	27	112	
6*	32	29	29	28	118	

Site 56 OSL Stations	Q1	Q2	Q3	Q4	Annual Dose	Notes
1	30	27	30	29	116	
2	32	30	32	28	122	
3	28	27	28	26	109	

NOTE: ¹Background is not subtracted from the data

²An occupancy factor of 1/16 may be applied to this number to obtain radiation dose to members of the public.

Appendices

Laboratory Results For MAPEP Series 26
 (TDHL01) Texas Department of State Health Services Laboratory
 1100 W 49th Street
 Austin, TX 78756

MAPEP-12-MaS26: Radiological and inorganic combined soil standard

Inorganic							Units: (mg/kg)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Arsenic	NR	48.2				33.7 - 62.7		
Barium	NR	655				459 - 852		
Beryllium	NR	47.5				33.3 - 61.8		
Cadmium	NR	10.6				7.4 - 13.8		
Chromium	NR	89.3				62.5 - 116.1		
Cobalt	NR	113				79 - 147		
Copper	NR	206				144 - 268		
Lead	NR	74.4				52.1 - 96.7		
Mercury	NR	0.0733				0.0513 - 0.0953		
Nickel	NR	186				130 - 242		
Selenium	NR	14.2				9.9 - 18.5		
Silver	NR	85.5				59.9 - 111.2		
Technetium-99	NR	0.000596				0.000417 - 0.000775		
Thallium	NR	14.4				10.1 - 18.7		
Uranium-235	NR	0.0653				0.0457 - 0.0849		
Uranium-238	NR	26.5				18.6 - 34.5		
Uranium-Total	NR	26.5				18.6 - 34.5		
Vanadium	NR	104				73 - 135		
Zinc	NR	286				200 - 372		

Radiological							Units: (Bq/kg)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	145	159	A		-8.8	111 - 207	9	
Cesium-134	748	828	A		-9.7	580 - 1076	10	L
Cesium-137	2.15		A			False Positive Test	2.15	
Cobalt-57	1160	1179	A		-1.6	825 - 1533	20	L
Cobalt-60	0.93	1.56	A	(17)		Sensitivity Evaluation	0.93	
Iron-55	NR	1370				959 - 1781		
Manganese-54	578	558	A		3.6	391 - 725	14	L
Nickel-63	NR	862				603 - 1121		
Plutonium-238	128	136	A		-5.9	95 - 177	12	
Plutonium-239/240	59.0	65.8	A		-10.3	46.1 - 85.5	6.5	
Potassium-40	1520	1491	A		1.9	1044 - 1938	40	L
Strontium-90	414	392	A		5.6	274 - 510	20	
Technetium-99	NR	374				262 - 486		

Radiological							Units: (Bq/kg)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-234/233	61.8	68.1	A		-9.3	47.7 - 88.5	5.2	
Uranium-238	326	329	A		-0.9	230 - 428	23	
Zinc-65	682	642	A		6.2	449 - 835	17	L

Radiological Reference Date: February 1, 2012

MAPEP-12-MaW26: Radiological and inorganic combined water standard								
Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	2.71				1.90 - 3.52		
Arsenic	NR	<0.01				False Positive Test		
Barium	NR	0.808				0.566 - 1.050		
Beryllium	NR	0.808				0.566 - 1.050		
Cadmium	NR	0.418				0.293 - 0.543		
Chromium	NR	1.73				1.21 - 2.25		
Cobalt	NR	1.45				1.02 - 1.89		
Copper	NR	0.929				0.650 - 1.208		
Lead	NR	0.779				0.545 - 1.013		
Mercury	NR	3.75E-3				0.00263 - 0.00488		
Nickel	NR	<0.01				False Positive Test		
Selenium	NR	0.223				0.156 - 0.290		
Technetium-99	NR	4.45E-5				0.00003 - 0.00006		
Thallium	NR	0.846				0.592 - 1.100		
Uranium-235	NR	4.50E-4				0.00032 - 0.00059		
Uranium-238	NR	0.222				0.155 - 0.289		
Uranium-Total	NR	0.222				0.155 - 0.289		
Vanadium	NR	1.44				1.01 - 1.87		
Zinc	NR	2.28				1.60 - 2.96		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	1.62	1.63	A		-0.6	1.14 - 2.12	0.10	
Cesium-134	-0.20		A			False Positive Test	0.20	
Cesium-137	42.0	39.9	A		5.3	27.9 - 51.9	1.2	L
Cobalt-57	33.8	32.9	A		2.7	23.0 - 42.8	0.8	L
Cobalt-60	24.9	23.72	A		5.0	16.60 - 30.84	0.5	L
Hydrogen-3	441	437	A		0.9	306 - 568	11	L
Iron-55	NR	81.9				57.3 - 106.5		
Manganese-54	33.4	31.8	A		5.0	22.3 - 41.3	0.9	L
Nickel-63	NR	60.0				42.0 - 78.0		
Plutonium-238	0.581	0.629	A		-7.6	0.440 - 0.818	0.058	
Plutonium-239/240	1.14	1.34	A		-14.9	0.94 - 1.74	0.10	
Potassium-40	151	142	A		6.3	99 - 185	5	

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	-0.012		A			False Positive Test	0.036	
Technetium-99	NR	27.9				19.5 - 36.3		
Uranium-234/233	0.371	0.392	A		-5.4	0.274 - 0.510	.039	
Uranium-238	2.95	2.76	A		6.9	1.93 - 3.59	0.21	
Zinc-65	-0.170		A			False Positive Test	0.170	

Radiological Reference Date: February 1, 2012

MAPEP-12-GrW26: Gross alpha/beta water							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.70	2.14	A		-20.6	0.64 - 3.64	0.07	
Gross beta	6.12	6.36	A		-3.8	3.18 - 9.54	0.12	L

Radiological Reference Date: February 1, 2012

MAPEP-12-RdF26: Radiological air filter							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.0187				0.0131 - 0.0243		
Uranium-238	NR	10.0				7.0 - 13.0		
Uranium-Total	NR	10.0				7.0 - 13.0		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.073	0.073	A		0.0	0.051 - 0.095	0.007	
Cesium-134	2.14	2.38	A		-10.1	1.67 - 3.09	0.04	L
Cesium-137	1.94	1.79	A		8.4	1.25 - 2.33	0.08	
Cobalt-57	0.027		A			False Positive Test	0.027	
Cobalt-60	2.25	2.182	A		3.1	1.527 - 2.837	0.06	L
Manganese-54	3.51	3.24	A		8.3	2.27 - 4.21	0.10	L
Plutonium-238	0.001	0.0015	A	(17)		Sensitivity Evaluation	0.001	
Plutonium-239/240	0.104	0.097	A		7.2	0.068 - 0.126	0.012	
Strontium-90	0.013		A			False Positive Test	0.008	
Uranium-234/233	0.019	0.0188	A		1.1	0.0132 - 0.0244	0.004	H
Uranium-238	0.131	0.124	A		5.6	0.087 - 0.161	0.013	
Zinc-65	3.19	2.99	A		6.7	2.09 - 3.89	0.13	

Radiological Reference Date: February 1, 2012

MAPEP-12-GrF26: Gross alpha/beta air filter

Radiological		Units: (Bq/sample)						
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.759	1.2	A		-36.8	0.4 - 2.0	0.024	
Gross beta	2.25	2.4	A		-6.3	1.2 - 3.6	0.03	L

Radiological Reference Date: February 1, 2012

MAPEP-12-RdV26: Radiological vegetation

Inorganic		Units: (ug/sample)						
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.0434				0.0304 - 0.0564		
Uranium-238	NR	22.4				15.7 - 29.1		
Uranium-Total	NR	22.4				15.7 - 29.1		

Radiological		Units: (Bq/sample)						
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.007		N	(1)		False Positive Test	0.002	
Cesium-134	9.84	8.43	A		16.7	5.90 - 10.96	0.17	L
Cesium-137	-0.064		A			False Positive Test	0.064	
Cobalt-57	15.4	12.0	W		28.3	8.4 - 15.6	0.4	L
Cobalt-60	6.69	6.05	A		10.6	4.24 - 7.87	0.17	L
Manganese-54	0.009		A			False Positive Test	0.009	
Plutonium-238	0.179	0.219	A		-18.3	0.153 - 0.285	0.021	
Plutonium-239/240	0.148	0.152	A		-2.6	0.106 - 0.198	0.018	
Strontium-90	1.98	2.11	A		-6.2	1.48 - 2.74	0.04	L
Uranium-234/233	0.086	0.0411	N		109.2	0.0288 - 0.0534	0.011	
Uranium-238	0.307	0.278	A		10.4	0.195 - 0.361	0.026	
Zinc-65	9.60	8.90	A		7.9	6.23 - 11.57	0.42	

Radiological Reference Date: February 1, 2012

Notes:

- (1) = False Positive
- (17) = NOT DETECTED - reported a statistically zero result

Laboratory Results For MAPEP Series 27
 (TDHL01) Texas Department of State Health Services Laboratory
 1100 W 49th Street
 Austin, TX 78756

MAPEP-12-MaS27: Radiological and inorganic combined soil standard

Inorganic						Units: (mg/kg)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	111.5				78.1 - 145.0		
Arsenic	NR	55.7				39.0 - 72.4		
Barium	NR	896				627 - 1165		
Beryllium	NR	47.0				32.9 - 61.1		
Cadmium	NR	15.4				10.8 - 20.0		
Chromium	NR	99.0				69.3 - 128.7		
Cobalt	NR	127				89 - 165		
Copper	NR	204				143 - 265		
Lead	NR	97.6				68.3 - 126.9		
Mercury	NR	0.172				0.120 - 0.224		
Nickel	NR	300				210 - 390		
Selenium	NR	17.7				12.4 - 23.0		
Silver	NR	95.5				66.9 - 124.2		
Technetium-99	NR	0.000748				0.000524 - 0.000972		
Thallium	NR	91.0				63.7 - 118.3		
Uranium-235	NR	0.0533				0.0373 - 0.0693		
Uranium-238	NR	21.1				14.8 - 27.4		
Uranium-Total	NR	21.2				14.8 - 27.6		
Vanadium	NR	271				190 - 352		
Zinc	NR	549				384 - 714		

Radiological						Units: (Bq/kg)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	106	111	A		-4.5	78 - 144	8	
Cesium-134	896	939	A		-4.6	657 - 1221	11	L
Cesium-137	1106	1150	A		-3.8	805 - 1495	31	L
Cobalt-57	1246	1316	A		-5.3	921 - 1711	26	L
Cobalt-60	520	531	A		-2.1	372 - 690	9	L
Iron-55	NR	508				356 - 660		
Manganese-54	911	920	A		-1.0	644 - 1196	22	L
Nickel-63	NR	406				284 - 528		
Plutonium-238	91.3	105.8	A		-13.7	74.1 - 137.5	8.7	
Plutonium-239/240	117	134	A		-12.7	94 - 174	11	
Potassium-40	625	632	A		-1.1	442 - 822	19	
Strontium-90	565	508	A		11.2	356 - 660	21	

Radiological							Units: (Bq/kg)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Technetium-99	NR	469				328 - 610		
Uranium-234/233	59	60.3	A		-2.2	42.2 - 78.4	5	
Uranium-238	248	263	A		-5.7	184 - 342	17	
Zinc-65	625	606	A		3.1	424 - 788	15	L

Radiological Reference Date: August 1, 2012

MAPEP-12-MaW27: Radiological and inorganic combined water standard							Units: (mg/L)	
Inorganic								
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	3.38				2.37 - 4.39		
Arsenic	NR	1.13				0.79 - 1.47		
Barium	NR	4.00				2.80 - 5.20		
Beryllium	NR					False Positive Test		
Cadmium	NR	0.506				0.354 - 0.658		
Chromium	NR	0.561				0.393 - 0.729		
Cobalt	NR	3.11				2.18 - 4.04		
Copper	NR					False Positive Test		
Lead	NR	2.06				1.44 - 2.68		
Mercury	NR	0.00349				0.00244 - 0.00454		
Nickel	NR	3.99				2.79 - 5.19		
Selenium	NR					False Positive Test		
Technetium-99	NR	7.30E-06				0.000005 - 0.000009		
Thallium	NR	2.47				1.73 - 3.21		
Uranium-235	NR	0.00052				0.00036 - 0.00068		
Uranium-238	NR	0.268				0.188 - 0.348		
Uranium-Total	NR	0.268				0.188 - 0.348		
Vanadium	NR	1.59				1.11 - 2.07		
Zinc	NR	3.27				2.29 - 4.25		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	1.02	1.06	A		-3.8	0.74 - 1.38	0.08	
Cesium-134	22.5	23.2	A		-3.0	16.2 - 30.2	0.3	L
Cesium-137	17.9	16.7	A		7.2	11.7 - 21.7	0.5	L
Cobalt-57	31.2	29.3	A		6.5	20.5 - 38.1	0.7	L
Cobalt-60	0.21		A			False Positive Test	0.10	
Hydrogen-3	333	334	A		-0.3	234 - 434	5	L
Iron-55	NR	89.3				62.5 - 116.1		
Manganese-54	19.3	17.8	A		8.4	12.5 - 23.1	0.5	L
Nickel-63	NR	66.3				46.4 - 86.2		
Plutonium-238	0.024	0.013	A	(17)		Sensitivity Evaluation	0.009	
Plutonium-239/240	1.30	1.61	A		-19.3	1.13 - 2.09	0.12	

Radiological

Units: (Bq/L)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Potassium-40	146	134	A		9.0	94 - 174	5	
Strontium-90	11.8	12.2	A		-3.3	8.5 - 15.9	0.2	L
Technetium-99	NR	4.58				3.21 - 5.95		
Uranium-234/233	0.426	0.451	A		-5.5	0.316 - 0.586	0.041	
Uranium-238	2.99	3.33	A		-10.2	2.33 - 4.33	0.21	
Zinc-65	29.2	25.9	A		12.7	18.1 - 33.7	0.8	L

Radiological Reference Date: August 1, 2012

MAPEP-12-GrW27: Gross alpha/beta water

Radiological

Units: (Bq/L)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.94	1.79	A		8.4	0.54 - 3.04	0.07	
Gross beta	9.40	9.1	A		3.3	4.6 - 13.7	0.14	L

Radiological Reference Date: August 1, 2012

MAPEP-12-RdF27: Radiological air filter

Inorganic

Units: (ug/sample)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.0148				0.0104 - 0.0192		
Uranium-238	NR	8.0				5.6 - 10.4		
Uranium-Total	NR	8.1				5.7 - 10.5		

Radiological

Units: (Bq/sample)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.080	0.0780	A		2.6	0.0546 - 0.1014	0.008	
Cesium-134	2.44	2.74	A		-10.9	1.92 - 3.56	0.05	L
Cesium-137	0.023		A			False Positive Test	0.012	
Cobalt-57	1.98	1.91	A		3.7	1.34 - 2.48	0.06	
Cobalt-60	1.79	1.728	A		3.6	1.210 - 2.246	0.05	L
Manganese-54	2.56	2.36	A		8.5	1.65 - 3.07	0.08	
Plutonium-238	0.053	0.0625	A		-15.2	0.0438 - 0.0813	0.007	
Plutonium-239/240	0.001	0.00081	A	(17)		Sensitivity Evaluation	0.001	
Strontium-90	1.11	1.03	A		7.8	0.72 - 1.34	0.03	L
Uranium-234/233	0.014	0.0141	A		-0.7	0.0099 - 0.0183	0.003	H
Uranium-238	0.093	0.100	A		-7.0	0.070 - 0.130	0.010	
Zinc-65	-0.006		A			False Positive Test	0.003	

Radiological Reference Date: August 1, 2012

MAPEP-12-GrF27: Gross alpha/beta air filter

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.873	0.97	A		-10.0	0.29 - 1.65	0.026	L
Gross beta	1.88	1.92	A		-2.1	0.96 - 2.88	0.03	L

Radiological Reference Date: August 1, 2012

MAPEP-12-RdV27: Radiological vegetation

Inorganic							Units: (ug/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.0240				0.0168 - 0.0312		
Uranium-238	NR	12.7				8.9 - 16.5		
Uranium-Total	NR	12.7				8.9 - 16.5		

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.168	0.163	A		3.1	0.114 - 0.212	0.017	
Cesium-134	6.79	6.51	A		4.3	4.56 - 8.46	0.17	L
Cesium-137	4.85	4.38	A		10.7	3.07 - 5.69	0.20	
Cobalt-57	6.71	5.66	A		18.6	3.96 - 7.36	0.21	
Cobalt-60	5.34	5.12	A		4.3	3.58 - 6.66	0.15	L
Manganese-54	3.43	3.27	A		4.9	2.29 - 4.25	0.15	
Plutonium-238	0.201	0.187	A		7.5	0.131 - 0.243	0.025	
Plutonium-239/240	0.149	0.123	W		21.1	0.086 - 0.160	0.020	
Strontium-90	0.064		N	(1)		False Positive Test	0.014	
Uranium-234/233	0.093	0.0257	N		261.9	0.0180 - 0.0334	0.013	
Uranium-238	0.256	0.158	N		62.0	0.111 - 0.205	0.026	
Zinc-65	0.456		A			False Positive Test	0.228	

Radiological Reference Date: August 1, 2012

Notes:

- (1) = False Positive
- (17) = NOT DETECTED - reported a statistically zero result

**Laboratory Services Section
Environmental Sciences Branch**

Each laboratory procedure is performed under unique analysis conditions. Variations occur in volumes, counting efficiencies, detector backgrounds, count times, decay factors, chemical recoveries, and other analysis parameters which affect the sensitivity of the measurement. The detection limits listed in the following tables were derived using standard analysis conditions and are routinely achievable on normal samples. If greater sensitivity is required, it is usually possible to adjust detection limits by changing one or more of these parameters.

**Detection Limits for Gamma Spectroscopy
Sample Type**

Isotope	Soil - Sediment		Air Filter		Water - Milk		Vegetation - Fish	
	μCi/g	pCi/kg	μCi/filter	pCi/filter	μCi/ml	pCi/l	μCi/g	pCi/kg
Ac-228	2.0E-07	2.0E+02	2.0E-05	2.0E+01	2.0E-08	2.0E+01	1.0E-07	1.0E+02
Ag-110m	1.0E-07	1.0E+02	5.0E-06	5.0E+00	5.0E-09	5.0E+00	1.0E-07	1.0E+02
Am-241	1.0E-07	1.0E+02	5.0E-06	5.0E+00	1.0E-08	1.0E+01	1.0E-07	1.0E+02
Ba-140	4.0E-07	4.0E+02	2.0E-05	2.0E+01	2.0E-08	2.0E+01	1.0E-07	1.0E+02
Be-7	1.0E-06	1.0E+03	3.0E-05	3.0E+01	3.0E-08	3.0E+01	1.0E-07	1.0E+02
Bi-212	5.0E-07	5.0E+02	3.0E-05	3.0E+01	1.0E-07	1.0E+02	1.0E-07	1.0E+02
Bi-214	2.0E-07	2.0E+02	1.0E-05	1.0E+01	1.0E-08	1.0E+01	1.0E-07	1.0E+02
Co-57	1.0E-07	1.0E+02	2.0E-06	2.0E+00	5.0E-09	5.0E+00	1.0E-07	1.0E+02
Co-58	1.0E-07	1.0E+02	5.0E-06	5.0E+00	5.0E-09	5.0E+00	1.0E-07	1.0E+02
Co-60	1.0E-07	1.0E+02	1.0E-05	1.0E+01	1.0E-08	1.0E+01	1.0E-07	1.0E+02
Cr-51	1.0E-06	1.0E+03	3.0E-05	3.0E+01	3.0E-08	3.0E+01	1.0E-07	1.0E+02
Cs-134	1.0E-07	1.0E+02	5.0E-06	5.0E+00	5.0E-09	5.0E+00	1.0E-07	1.0E+02
Cs-137	1.0E-07	1.0E+02	5.0E-06	5.0E+00	5.0E-09	5.0E+00	1.0E-07	1.0E+02
Fe-59	1.0E-07	1.0E+02	1.0E-05	1.0E+01	1.0E-08	1.0E+01	1.0E-07	1.0E+02
I-125	1.0E-06	1.0E+03	1.0E-05	1.0E+01	2.0E-08	2.0E+01	1.0E-07	1.0E+02
I-131*	1.0E-07	1.0E+02	5.0E-06	5.0E+00	1.0E-08	1.0E+01	1.0E-07	1.0E+02
Ir-192	1.0E-07	1.0E+02	5.0E-06	5.0E+00	1.0E-08	1.0E+01	1.0E-07	1.0E+02
K-40	2.0E-06	2.0E+03	1.0E-04	1.0E+02	4.0E-08	4.0E+01	1.0E-07	1.0E+02
La-140	1.0E-07	1.0E+02	5.0E-06	5.0E+00	5.0E-09	5.0E+00	1.0E-07	1.0E+02
Mn-54	1.0E-07	1.0E+02	5.0E-06	5.0E+00	5.0E-09	5.0E+00	1.0E-07	1.0E+02
Nb-95	1.0E-07	1.0E+02	5.0E-06	5.0E+00	5.0E-09	5.0E+00	1.0E-07	1.0E+02
Pb-210	4.0E-07	4.0E+02	2.0E-05	2.0E+01	5.0E-09	5.0E+00	1.0E-07	1.0E+02
Pb-212	2.0E-07	2.0E+02	1.0E-05	1.0E+01	3.0E-08	3.0E+01	1.0E-07	1.0E+02
Pb-214	2.0E-07	2.0E+02	1.0E-05	1.0E+01	1.0E-08	1.0E+01	1.0E-07	1.0E+02
Ra-226	2.0E-06	2.0E+03	1.0E-04	1.0E+02	1.0E-07	1.0E+02	2.0E-07	2.0E+02
Sb-124	1.0E-07	1.0E+02	5.0E-06	5.0E+00	5.0E-09	5.0E+00	1.0E-07	1.0E+02
Sc-46	1.0E-07	1.0E+02	5.0E-06	5.0E+00	5.0E-09	5.0E+00	1.0E-07	1.0E+02
Th-230	1.0E-05	1.0E+04	3.0E-04	3.0E+02	1.0E-06	1.0E+03	2.0E-06	2.0E+03
Th-234	1.0E-06	1.0E+03	4.0E-05	4.0E+01	1.0E-07	1.0E+02	2.0E-07	2.0E+02
Tl-208	1.0E-07	1.0E+02	5.0E-06	5.0E+00	5.0E-09	5.0E+00	1.0E-07	1.0E+02
U-235	4.0E-07	4.0E+02	2.0E-05	2.0E+01	3.0E-08	3.0E+01	1.0E-07	1.0E+02
U-238	1.0E-06	1.0E+03	3.0E-05	3.0E+01	6.0E-08	6.0E+01	2.0E-07	2.0E+02
Zn-65	2.0E-07	2.0E+02	1.0E-05	1.0E+01	1.0E-08	1.0E+01	1.0E-07	1.0E+02
Zr-95	1.0E-07	1.0E+02	1.0E-05	1.0E+01	1.0E-08	1.0E+01	1.0E-07	1.0E+02

*Air iodine can be determined by using cartridges. Detection limits are 2.0E-14μCi/ml or 2.0E-02 pCi/m³.

**Laboratory Services Section
Environmental Sciences Branch**

**Detection Limits for Chemical Analysis Procedures
Sample Type**

Isotope	Soil - Sediment		Air Filter		Water - Milk		Vegetation - Fish	
	$\mu\text{Ci/g}$	pCi/kg	$\mu\text{Ci/filter}$	pCi/filter	$\mu\text{Ci/ml}$	pCi/l	$\mu\text{Ci/g}$	pCi/kg
Alpha	6.1E-06	6.1E+03	7.0E-07	7.0E-01	3.3E-09	3.3E+00	3.3E-06	3.3E+03
Beta	1.2E-05	1.2E+04	1.3E-06	1.3E+00	6.6E-09	6.6E+00	6.6E-06	6.6E+03
C-14					3.0E-07	3.0E+02		
H-3			2.0E-06	2.0E+00	1.0E-06	1.0E+03		
Ra-226	4.0E-07	4.0E+02	8.0E-07	8.0E-01	8.0E-10	8.0E-01	4.0E-07	4.0E+02
Ra-228	1.9E-06	1.9E+03	3.9E-06	3.9E+00	3.9E-09	3.9E+00	1.9E-06	1.9E+03
Sr-89	9.0E-07	9.0E+02	1.7E-06	1.7E+00	1.7E-09	1.7E+00	9.0E-07	9.0E+02
Sr-90	1.3E-06	1.3E+03	2.7E-06	2.7E+00	2.7E-09	2.7E+00	1.3E-06	1.3E+03

**Detection Limits for Alpha Spectroscopy
Sample Type**

Isotope	Soil - Sediment		Air Filter		Water - Milk		Vegetation - Fish	
	$\mu\text{Ci/g}$	pCi/kg	$\mu\text{Ci/filter}$	pCi/filter	$\mu\text{Ci/ml}$	pCi/l	$\mu\text{Ci/g}$	pCi/kg
Am-241	1.0E-06	1.0E+03	1.0E-06	1.0E+00	1.0E-09	1.0E+00	1.0E-06	1.0E+03
Pu-239	2.0E-07	2.0E+02	2.0E-07	2.0E-01	2.0E-10	2.0E-01	2.0E-07	2.0E+02
Th-228	1.0E-06	1.0E+03	1.0E-06	1.0E+00	1.0E-09	1.0E+00	1.0E-06	1.0E+03
Th-230	1.0E-06	1.0E+03	1.0E-06	1.0E+00	1.0E-09	1.0E+00	1.0E-06	1.0E+03
Th-232	1.0E-06	1.0E+03	1.0E-06	1.0E+00	1.0E-09	1.0E+00	1.0E-06	1.0E+03
U-234	1.0E-06	1.0E+03	1.0E-06	1.0E+00	1.0E-09	1.0E+00	1.0E-06	1.0E+03
U-238	1.0E-06	1.0E+03	1.0E-06	1.0E+00	1.0E-09	1.0E+00	1.0E-06	1.0E+03

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