Radiation Branch
Environmental Monitoring Summary
for 2003

December 2004

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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Publication #22-12142

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Introduction

This is the seventh annual reporting of environmental monitoring results to be produced as an internal document. 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 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 details have been omitted. Specific information about individual facilities can be found in the license files. Copies of this and the previous documents for 1993-1997 and individual reports for 1998-2002 can be made available through an open records request.

All analyses of environmental media, i.e., soil, air, water, vegetation, are performed by the Texas Department of Health, Bureau of Laboratories. The Bureau of Laboratories operates a highly capable radio-chemistry program. Currently the Radiochemistry section participates in a program sponsored by the U.S. Department of Energy, referred to as DOELAP (Department of Energy Laboratory Accreditation Program). It was developed by the U.S. Department of Energy in order to provide quality assurance and control for D.O.E. contractors. The results of the Bureau of Laboratory's performance in these "cross checks" can be found in the appendices to this document or on the internet at the following location (http://www.eml.doe.gov/publications/reports/eml621.pdf).

All thermoluminescent dosimeter (TLD) readings are performed by the staff of the Bureau of Radiation Control. The Bureau maintains a Harshaw/Bicron Model 6600 TLD reader. Approximately two hundred and ten TLD's are exchanged and read each calendar quarter. Background is subtracted from all station readings except for Comanche Peak Steam Electric Station, South Texas Project, and Pantex. Background is not subtracted from these three locations because the readings should be 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 Texas Department of Health or any other agency such as the U.S. Nuclear Regulatory Commission or the U.S. Department of Energy. Some of the TLD readings at a few of the monitored facilities exceeded 100 mrem 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 Bureau of Radiation Control. Licensees are allowed to use mitigating factors, such as occupancy and distance to nearest occupied areas, in demonstrating compliance with those limits.

Any questions should be directed to Ruben K. Cortez at 512-834-6688, ext. 2004 or ruben.cortez@tdh.state.tx.us.

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Ruben K. Cortez

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Fixed Nuclear

Facilities

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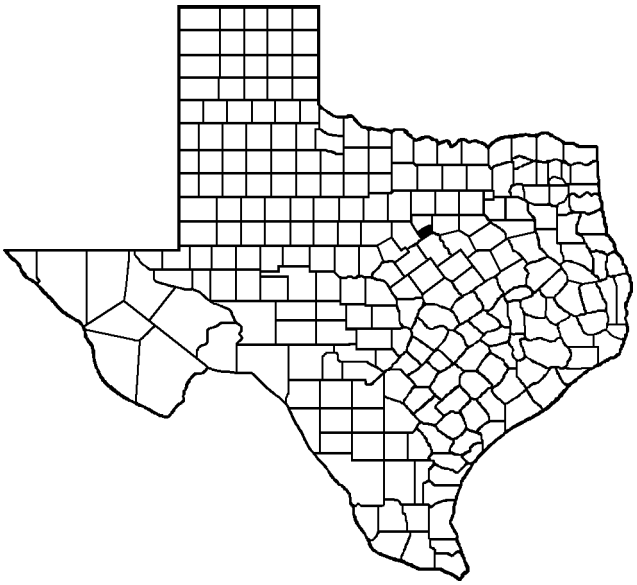
Comanche Peak Steam Electric Station

BRC Site No. 031

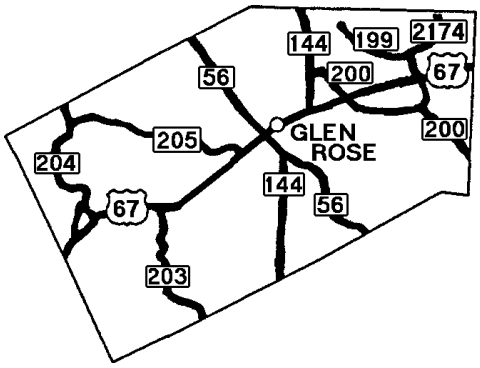
Comanche Peak Steam Electric Station (CPSES) is a two-unit nuclear-fueled power plant, owned and operated by TXU Energy, is located in Somervell County four and one-half miles northwest of Glen Rose and approximately 80 miles southwest of downtown Dallas.

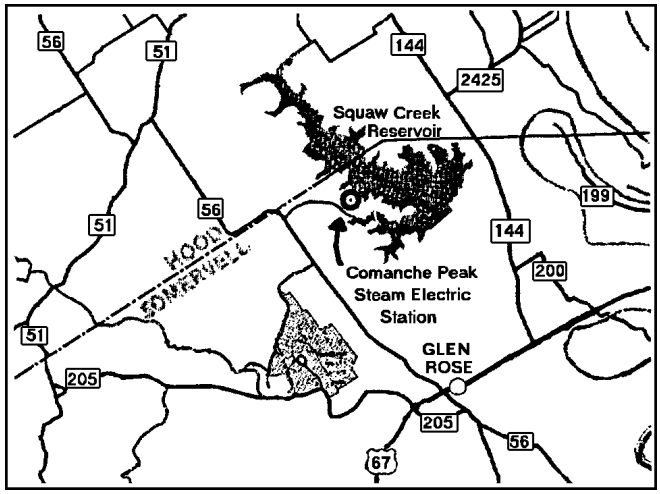
CPSES, TXU Energy's sole nuclear power plant, with an operating capacity of 2,300 megawatts annually (two Westinghouse 1,150 megawatt (electric) pressurized water reactor units), began operation in 1990, although fuel had been received on site in 1982-1983. The plant has approximately 1,300 employees. The BRC surveillance program consists of sampling air, water, sediment, fish, and vegetation and TLD monitoring.



Shaded area indicates location of Somervell County

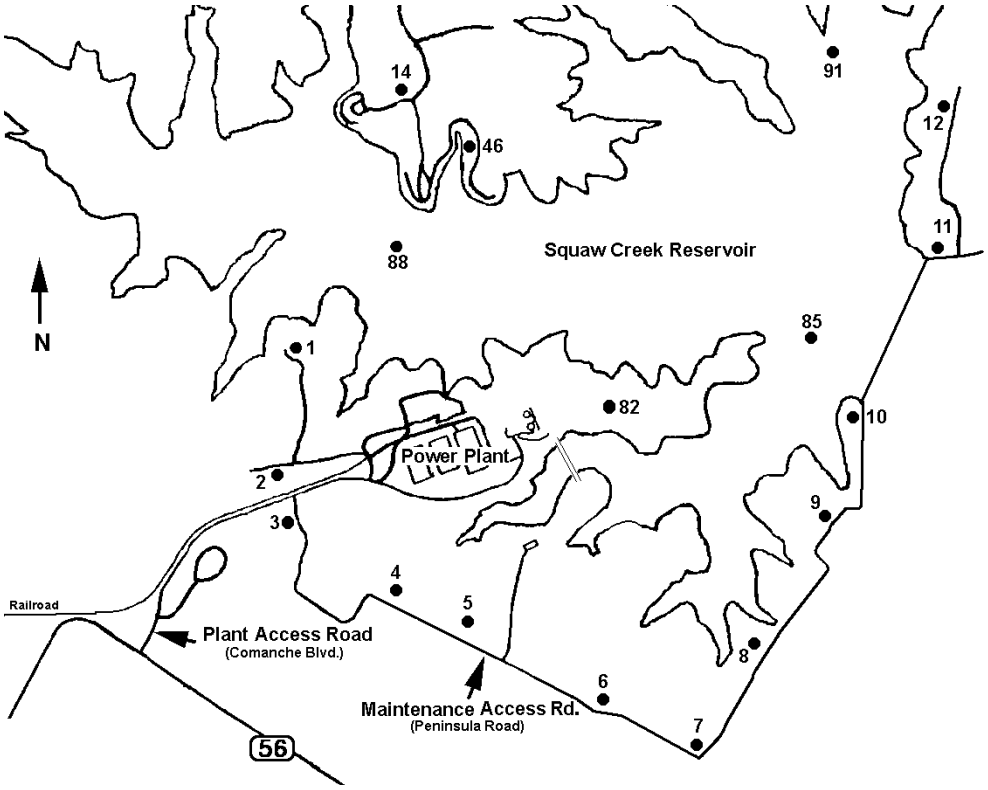
Somervell County

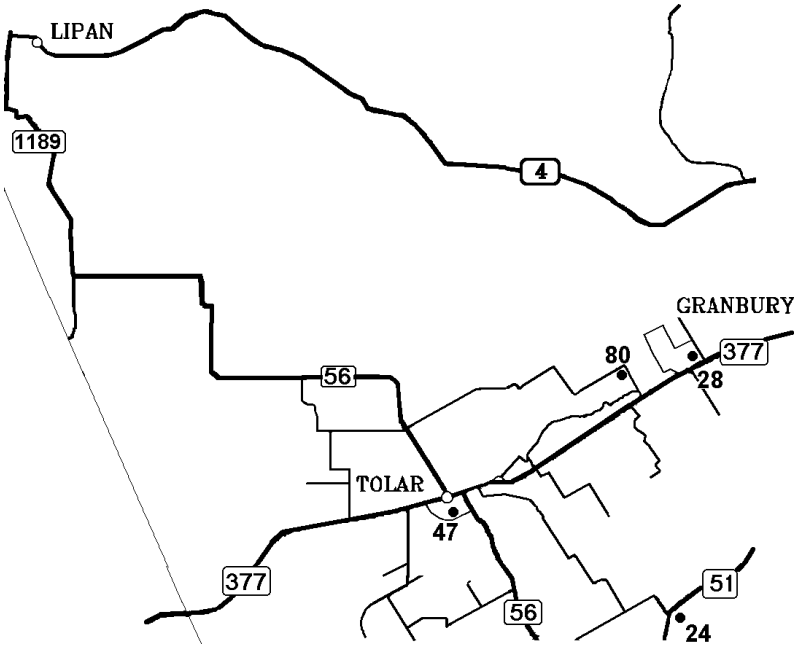


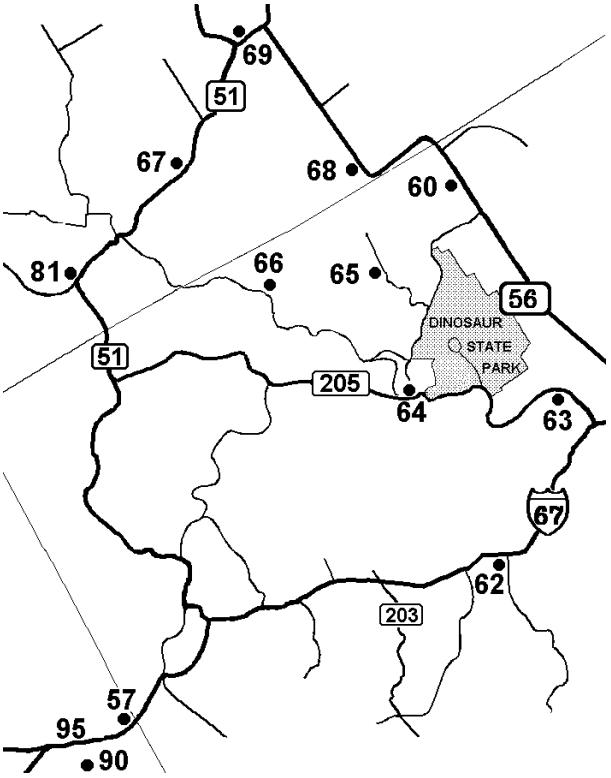


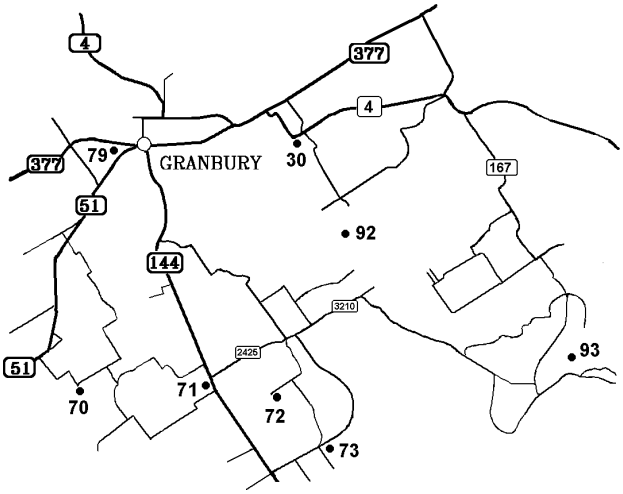
Monitoring Station Locations

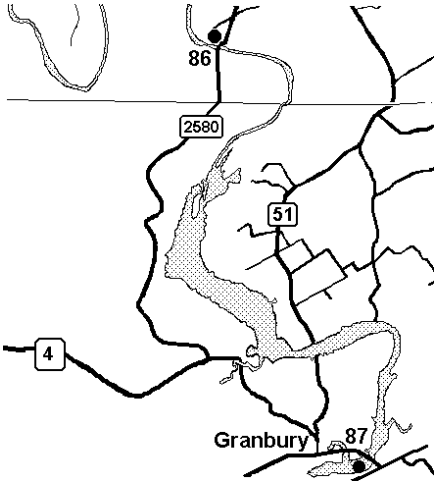
Note: Sample type not indicated on maps.

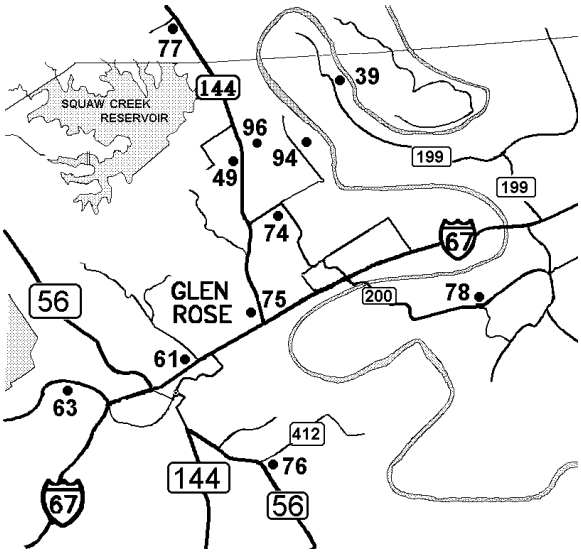





69
51
67
68
60
81
66
65
56
DINOSAUR
STATE
PARK
51
205
64
63
67
62
203
57
95
90


4
377
4
377
79
GRANBURY
30
167
51
92
144
3210
2425
51
93
70
71
72
73


86
2580
51
4
Granbury
87


77
144
SQUAW CREEK
RESERVOIR
39
96
94
49
199
199
74
67
56
GLEN
ROSE
75
200
78
61
63
412
144
76
67
56

Thermoluminescent Dosimeter (TLD) Monitoring Results[1]
(quarterly and annual readings are in mrem)

Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Notes*
01	14.0	12.0	12.7	11.3	50.0	
02	16.0	14.0	13.8	12.2	56.0	
03	12.0	10.0	14.8	13.1	49.9	
04	15.0	13.0	13.8	12.2	54.0	
05	14.0	12.0	12.7	11.3	50.0	
06	13.0	12.0	11.6	10.3	46.9	
07	13.0	12.0	11.6	10.3	46.9	
08	15.0	12.0	12.7	11.3	51.0	
09	16.0	13.0	13.8	12.2	55.0	
10	14.0	12.0	13.8	12.2	52.0	
11	13.0	12.0	11.6	10.3	46.9	
12	16.0	14.0	14.8	13.1	57.9	
14	14.0	13.0	12.7	11.3	51.0	
24	15.0	13.0	12.8	11.3	52.1	
28	15.0	14.0	13.0	11.3	53.3	
30	15.0	13.0	12.7	11.3	52.0	
39	20.0	14.0	13.8	12.2	60.0	
46	13.0	12.0	11.6	10.3	46.9	
47	15.0	13.0	13.0	11.3	52.3	
49	15.0	13.0	13.8	12.2	54.0	
60	15.0	13.0	12.7	11.3	52.0	
61	14.0	12.0	12.7	11.3	50.0	
62	14.0	12.0	12.7	11.3	50.0	
63	16.0	14.0	13.8	12.2	56.0	
64	--	13.0	12.7	11.3	49.3	[2]Q1 TLD missing
65	14.0	10.9	10.7	9.4	45.0	
66	15.0	13.0	12.8	11.3	52.1	
67	15.0	--	12.7	11.3	52.0	[2]Q2 TLD missing
68	14.0	11.0	12.7	11.3	49.0	
69	14.0	11.1	11.8	10.3	47.2	
70	16.0	13.3	13.8	12.2	55.3	
71	15.0	12.0	12.7	11.3	51.0	
72	--	13.0	13.8	12.2	52.0	[2]Q1 TLD missing
73	14.0	12.0	12.7	11.3	50.0	
74	15.0	12.0	12.7	11.3	51.0	
75	14.0	13.0	12.7	11.3	51.0	
76	14.0	11.0	11.6	10.3	46.9	
77	12.0	11.0	11.6	10.3	44.9	
78	14.0	13.0	12.7	11.3	51.0	
79	13.0	13.1	12.8	11.3	50.2	
80	15.0	13.0	13.0	11.3	52.3	
81	16.0	14.0	14.8	13.1	57.9	
82	16.8	14.0	13.8	12.2	56.8	

NOTE: [1] Background is not subtracted from the data.

[2] If data are missing during a quarter, an average of known quarter readings for that year and location is used to fill in for the missing data.

Comanche Peak Steam Electric Station

Date	*Lab No.*	*Station*	*Beta*	*Ba-140*	*Co-58*	*Co-60*	*Cs-134*	*Cs-137*	*Fe-59*	*H-3*	*I-131*	*La-140*	*Mn-54*	*Nb-95*	*Zn-65*	*Zr-95*
Air Iodine pCi/m³																
2003-01-07	ER030018	01									<6E-3					
2003-01-07	ER030016	57									<8E-3					
2003-01-14	ER030056	01									<1.0E-2					
2003-01-14	ER030058	57									<5E-3					
2003-01-21	ER030077	01									<9E-3					
2003-01-21	ER030079	57									<5E-3					
2003-01-28	ER030095	01									<7E-3					
2003-01-28	ER030097	57									<5E-3					
2003-02-04	ER030112	01									<7E-3					
2003-02-04	ER030110	57									<7E-3					
2003-02-11	ER030114	01									<7E-3					
2003-02-11	ER030116	57									<7E-3					
2003-02-18	ER030125	01									<5E-3					
2003-02-18	ER030123	57									<6E-3					
2003-02-27	ER030138	01									<8E-3					
2003-02-27	ER030140	57									<5E-3					
2003-03-04	ER030146	01									<7E-3					
2003-03-04	ER030144	57									<1.2E-2					
2003-03-11	ER030150	01									<5E-3					
2003-03-11	ER030148	57									<8E-3					
2003-03-18	ER030151	01									<8E-3					
2003-03-18	ER030153	57									<1.7E-2					
2003-03-25	ER030174	01									<7E-3					
2003-03-25	ER030176	57									<1.2E-2					
2003-04-01	ER030184	01									<5E-3					
2003-04-01	ER030182	57									<8E-3					
2003-04-08	ER030191	01									<7E-3					
2003-04-08	ER030193	57									<5E-3					
2003-04-15	ER030215	01									<4E-3					
2003-04-15	ER030213	57									<8E-3					
2003-04-22	ER030226	57									<6E-3					
2003-04-22	ER030228	57									<6E-3					
2003-04-29	ER030257	01									<6E-3					
2003-04-29	ER030255	57									<6E-3					
2003-05-06	ER030271	01									<5E-3					
2003-05-06	ER030269	57									<6E-3					
2003-05-13	ER030278	01									<5E-3					
2003-05-13	ER030280	57									<6E-3					
2003-05-20	ER030286	01									<6E-3					
2003-05-20	ER030288	57									<5E-3					
2003-05-27	ER030294	01									<6E-3					
2003-05-27	ER030296	57									<6E-3					
2003-06-03	ER030309	01									<5E-3					
2003-06-03	ER030311	57									<6E-3					
2003-06-10	ER030317	01									<4E-3					
2003-06-10	ER030319	57									<5E-3					

Environmental Sample Results

Date	Lab. No.	Station	Beta	Ba-140	Co-58	Co-60	Cs-134	Cs-137	Fe-59	H-3	I-131	La-140	Mn-54	Nb-95	Zn-65	Zr-95
2003-06-16	ER030327	01									<6E-3					
2003-06-16	ER030329	57									<5E-3					
2003-06-24	ER030372	01									<6E-3					
2003-06-24	ER030370	57									<5E-3					
2003-07-01	ER030380	01									<6E-3					
2003-07-01	ER030382	57									<5E-3					
2003-07-08	ER030388	01									<7E-3					
2003-07-08	ER030390	57									<5E-3					
2003-07-15	ER030412	01									<5E-3					
2003-07-15	ER030410	57									<5E-3					
2003-07-22	ER030428	01									<5E-3					
2003-07-22	ER030426	57									<5E-3					
2003-07-29	ER030444	01									<6E-3					
2003-07-29	ER030446	57									<6E-3					
2003-08-05	ER030458	01									<5E-3					
2003-08-05	ER030460	57									<5E-3					
2003-08-12	ER030467	01									<5E-3					
2003-08-12	ER030469	57									<5E-3					
2003-08-19	ER030476	01									<5E-3					
2003-08-19	ER030478	57									<5E-3					
2003-08-26	ER030484	01									<6E-3					
2003-08-26	ER030486	57									<6E-3					
2003-09-01	ER030496	01									<7E-3					
2003-09-01	ER030498	57									<7E-3					
2003-09-09	ER030505	01									<5E-3					
2003-09-09	ER030507	57									<5E-3					
2003-09-16	ER030518	01									<8E-3					
2003-09-16	ER030520	57									<5E-3					
2003-09-23	ER030598	01									<1.5E-2					
2003-09-23	ER030600	57									<6E-3					
2003-09-30	ER030628	01									<6E-3					
2003-09-30	ER030630	57									<6E-3					
2003-10-07	ER030648	01									<5E-3					
2003-10-07	ER030646	57									<5E-3					
2003-10-14	ER030658	01									<4E-3					
2003-10-14	ER030656	57									<5E-3					
2003-10-21	ER030683	01									<5E-3					
2003-10-21	ER030685	57									<5E-3					
2003-10-28	ER030704	01									<6E-3					
2003-10-28	ER030706	57									<5E-3					
2003-11-04	ER030718	01									<5E-3					
2003-11-04	ER030716	57									<5E-3					
2003-11-11	ER030731	01									<6E-3					
2003-11-11	ER030733	57									<6E-3					
2003-11-18	ER030765	01									<5E-3					
2003-11-18	ER030763	57									<1.0E-2					
2003-11-25	ER030774	01									<8E-3					
2003-11-25	ER030776	57									<1.3E-2					
2003-12-02	ER030785	01									<6E-3					
2003-12-02	ER030787	57									<9E-3					

Environmental Sample Results

Date	Lab. No.	Station	Beta	Ba-140	Co-58	Co-60	Cs-134	Cs-137	Fe-59	H-3	I-131	La-140	Mn-54	Nb-95	Zn-65	Zr-95
2003-12-09	ER030793	01									<5E-3					
2003-12-09	ER030795	57									<5E-3					
2003-12-16	ER030811	01									<5E-3					
2003-12-16	ER030813	57									<5E-3					
2003-12-23	ER030836	01									<9E-3					
2003-12-23	ER030838	57									<7E-3					
2003-12-30	ER040001	01									<6E-3					
2003-12-30	ER040003	57									<5E-3					
Air Particulate pCi/m³																
2003-01-07	ER030017	01	2.9E-2													
2003-01-07	ER030015	57	2.4E-2													
2003-01-14	ER030055	01	2.6E-2													
2003-01-14	ER030057	57	2.1E-2													
2003-01-21	ER030076	01	3.5E-2													
2003-01-21	ER030078	57	3.3E-2													
2003-01-28	ER030094	01	5.3E-2													
2003-01-28	ER030096	57	4.6E-2													
2003-02-04	ER030111	01	4.6E-2													
2003-02-04	ER030109	57	3.7E-2													
2003-02-11	ER030113	01	2.5E-2													
2003-02-11	ER030115	57	2.1E-2													
2003-02-18	ER030124	01	2.5E-2													
2003-02-18	ER030122	57	2.3E-2													
2003-02-27	ER030139	01	2.3E-2													
2003-02-27	ER030141	57	2.5E-2													
2003-03-04	ER030145	01	2.9E-2													
2003-03-04	ER030143	57	2.7E-2													
2003-03-11	ER030149	01	3.3E-2													
2003-03-11	ER030147	57	3.5E-2													
2003-03-18	ER030152	01	2.6E-2													
2003-03-18	ER030154	57	2.4E-2													
2003-03-25	ER030173	01	2.0E-2													
2003-03-25	ER030175	57	1.9E-2													
2003-04-01	ER030183	01	2.1E-2													
2003-04-01	ER030181	57	2.0E-2													
2003-04-08	ER030190	01	2.0E-2													
2003-04-08	ER030192	57	2.2E-2													
2003-04-15	ER030214	01	2.4E-2													
2003-04-15	ER030212	57	2.2E-2													
2003-04-22	ER030227	01	2.4E-2													
2003-04-22	ER030225	57	2.3E-2													
2003-04-29	ER030256	01	1.9E-2													
2003-04-29	ER030254	57	1.9E-2													
2003-05-06	ER030270	01	2.6E-2													
2003-05-06	ER030268	57	2.4E-2													
2003-05-13	ER030277	01	2.7E-2													
2003-05-13	ER030279	57	2.6E-2													
2003-05-20	ER030285	01	2.4E-2													
2003-05-20	ER030287	57	2.3E-2													

Environmental Sample Results

Date	Lab. No.	Station	Beta	Ba-140	Co-58	Co-60	Cs-134	Cs-137	Fe-59	H-3	I-131	La-140	Mn-54	Nb-95	Zn-65	Zr-95
2003-05-27	ER030293	01	2.3E-2													
2003-05-27	ER030295	57	1.9E-2													
2003-06-03	ER030308	01	3.0E-2													
2003-06-03	ER030310	57	2.9E-2													
2003-06-10	ER030316	01	1.6E-2													
2003-06-10	ER030318	57	1.8E-2													
2003-06-16	ER030326	01	1.8E-2													
2003-06-16	ER030328	57	1.8E-2													
2003-06-24	ER030371	01	2.3E-2													
2003-06-24	ER030369	57	1.8E-2													
2003-07-01	ER030379	01	1.9E-2													
2003-07-01	ER030381	57	1.9E-2													
2003-07-08	ER030387	01	1.8E-2													
2003-07-08	ER030389	57	1.7E-2													
2003-07-15	ER030411	01	1.7E-2													
2003-07-15	ER030409	57	1.6E-2													
2003-07-22	ER030427	01	2.0E-2													
2003-07-22	ER030425	57	1.7E-2													
2003-07-29	ER030443	01	5E-3													
2003-07-29	ER030445	57	2.0E-2													
2003-08-05	ER030457	01	2.1E-2													
2003-08-05	ER030459	57	2.1E-2													
2003-08-12	ER030466	01	3.2E-2													
2003-08-12	ER030468	57	2.9E-2													
2003-08-19	ER030475	01	1.2E-2													
2003-08-19	ER030477	57	1.8E-2													
2003-08-26	ER030483	01	2.0E-2													
2003-08-26	ER030485	57	1.9E-2													
2003-09-01	ER030495	01	1.5E-2													
2003-09-01	ER030497	57	1.3E-2													
2003-09-09	ER030504	01	2.9E-2													
2003-09-09	ER030506	57	2.6E-2													
2003-09-16	ER030517	01	2.4E-2													
2003-09-16	ER030519	57	2.3E-2													
2003-09-23	ER030597	01	3.3E-2													
2003-09-23	ER030599	57	3.2E-2													
2003-09-30	ER030629	01	3.6E-2													
2003-09-30	ER030631	57	3.1E-2													
2003-10-07	ER030647	01	3.3E-2													
2003-10-07	ER030645	57	2.9E-2													
2003-10-14	ER030657	01	2.1E-2													
2003-10-14	ER030655	57	2.0E-2													
2003-10-21	ER030682	01	2.9E-2													
2003-10-21	ER030684	57	2.9E-2													
2003-10-28	ER030703	01	3.2E-2													
2003-10-28	ER030705	57	2.9E-2													
2003-11-04	ER030717	01	2.9E-2													
2003-11-04	ER030715	57	2.4E-2													
2003-11-11	ER030730	01	3.2E-2													
2003-11-11	ER030732	57	3.0E-2													

Date	Lab. No.	Station	Beta	Ba-140	Co-58	Co-60	Cs-134	Cs-137	Fe-59	H-3	I-131	La-140	Mn-54	Nb-95	Zn-65	Zr-95
2003-11-18	ER030764	01	2.4E-2													
2003-11-18	ER030762	57	3.8E-2													
2003-11-25	ER030773	01	2.5E-2													
2003-11-25	ER030775	57	3.8E-2													
2003-12-02	ER030784	01	3.3E-2													
2003-12-02	ER030786	57	4.8E-2													
2003-12-09	ER030792	01	4.2E-2													
2003-12-09	ER030794	57	3.1E-2													
2003-12-16	ER030810	01	3.4E-2													
2003-12-16	ER030812	57	2.7E-2													
2003-12-23	ER030835	01	2.4E-2													
2003-12-23	ER030837	57	2.0E-2													
2003-12-30	ER040002	01	2.5E-2													
2003-12-30	ER040004	57	1.9E-2													
Air Particulate Composite pCi/Sample																
2003-02-05	ER030029	01		<1.5E+1	<4.3	<5.8	<4.4	<5.1	<9.2		<4.3	<5.1	<4.6	<4.5	<1.1E+1	<8.0
2003-02-05	ER030032	01		<7.1	<2.2	<2.6	<2.4	<2.5	<4.2		<2.2	<2.7	<2.3	<2.3	<5.4	<4.0
2003-04-14	ER030206	01		<1.6E+1	<4.4	<5.8	<5.0	<5.0	<8.7		<3.9	<5.4	<4.7	<4.3	<1.2E+1	<7.6
2003-04-14	ER030207	57		<7.0	<2.1	<2.4	<2.3	<2.4	<4.7		<2.1	<3.0	<2.2	<2.1	<4.3	<3.7
2003-07-16	ER030403	01		<9.6	<2.9	<3.8	<2.5	<3.4	<5.7		<2.4	<3.4	<3.0	<2.7	<6.2	<4.8
2003-07-16	ER030404	57		<7.9	<2.3	<2.7	<2.4	<2.7	<4.7		<2.4	<3.2	<2.3	<2.3	<5.1	<3.8
2003-10-28	ER030695	01		<1.1E+1	<3.3	<4.0	<3.0	<3.8	<6.7		<3.1	<4.2	<3.3	<3.2	<8.2	<5.5
2003-10-28	ER030696	57		<1.1E+1	<3.4	<4.4	<3.2	<4.3	<7.0		<3.1	<4.4	<3.5	<3.5	<8.5	<5.4
Fish pCi/kg																
2003-04-30	ER030300	91		<1.17E+2	<8.2	<7.8	<5.7	<6.3	<2.2E+1		<9.1E+1	<3.4E+1	<6.5	<1.1E+1	<1.7E+1	<1.4E+1
2003-04-30	ER030301	91		<1.43E+2	<9.2	<7.6	<7.3	<7.5	<2.5E+1		<1.29E+2	<3.9E+1	<7.3	<1.3E+1	<1.9E+1	<1.6E+1
2003-10-04	ER030680	92		<7.2E+1	<9.3	<8.8	<7.6	<7.8	<2.2E+1		<3.9E+1	<2.2E+1	<8.1	<1.2E+1	<2.1E+1	<1.7E+1
2003-10-05	ER030679	91		<7.4E+1	<9.7	<1.1E+1	<7.9	<8.6	<2.4E+1		<3.5E+1	<2.3E+1	<8.9	<1.2E+1	<2.3E+1	<1.8E+1
2003-10-05	ER030681	91		<4.1E+1	<5.7	<5.4	<4.3	<5.1	<1.5E+1		<2.2E+1	<1.3E+1	<5.0	<6.6	<1.3E+1	<9.6
Food Product pCi/kg																
2003-11-18	ER030766	93		<2.4E+1	<6.6	<7.3	<6.2	<6.5	<1.6E+1		<7.4	<6.7	<6.3	<6.6	<1.8E+1	<1.1E+1
Sediment pCi/kg																
2003-07-08	ER030391	88		<2.30E+2	<5.8E+1	<6.9E+1	<6.0E+1	<5.8E+1	<1.16E+2		<6.6E+1	<6.9E+1	<5.8E+1	<5.7E+1	<1.60E+2	<8.1E+1
Vegetation for Milk pCi/kg																
2003-01-28	ER030100	14		<7.8E+1	<1.3E+1	<1.4E+1	<1.2E+1	<1.4E+1	<3.3E+1		<3.5E+1	<2.5E+1	<1.3E+1	<1.6E+1	<3.3E+1	<2.5E+1
2003-02-28	ER030135	14		<6.3E+1	<1.1E+1	<1.1E+1	<1.1E+1	<1.1E+1	<2.5E+1		<2.8E+1	<2.1E+1	<9.5	<1.3E+1	<2.5E+1	<1.9E+1
2003-03-25	ER030180	14		<3.6E+1	<6.6	<6.9	<5.1	<6.3	<1.7E+1		<1.5E+1	<8.8	<6.3	<7.3	<1.7E+1	<1.2E+1
2003-03-25	ER030179	90		<3.1E+1	<6.8	<7.5	<5.5	<6.2	<1.8E+1		<1.2E+1	<8.4	<6.4	<7.1	<1.8E+1	<1.2E+1
2003-04-29	ER030260	14		<8.3E+1	<1.6E+1	<1.5E+1	<1.5E+1	<1.6E+1	<3.4E+1		<3.8E+1	<2.4E+1	<1.4E+1	<1.7E+1	<3.5E+1	<2.7E+1
2003-05-27	ER030299	14		<8.2E+1	<1.6E+1	<1.7E+1	<1.6E+1	<1.7E+1	<3.6E+1		<3.2E+1	<2.2E+1	<1.6E+1	<1.8E+1	<3.5E+1	<2.8E+1
2003-06-24	ER030368	14		<1.11E+2	<2.1E+1	<2.1E+1	<2.1E+1	<2.2E+1	<4.4E+1		<4.4E+1	<3.6E+1	<2.1E+1	<2.3E+1	<4.5E+1	<3.6E+1
2003-06-24	ER030367	90		<6.5E+1	<1.3E+1	<1.4E+1	<1.3E+1	<1.4E+1	<2.8E+1		<2.9E+1	<2.0E+1	<1.2E+1	<1.4E+1	<3.0E+1	<2.4E+1
2003-07-29	ER030449	14		<5.0E+1	<1.3E+1	<1.6E+1	<1.2E+1	<1.4E+1	<2.7E+1		<1.8E+1	<1.4E+1	<1.3E+1	<1.3E+1	<2.9E+1	<2.2E+1
2003-08-26	ER030487	14		<3.7E+1	<9.9	<1.1E+1	<9.4	<1.1E+1	<2.2E+1		<1.4E+1	<9.8	<9.8	<9.5	<2.2E+1	<1.7E+1

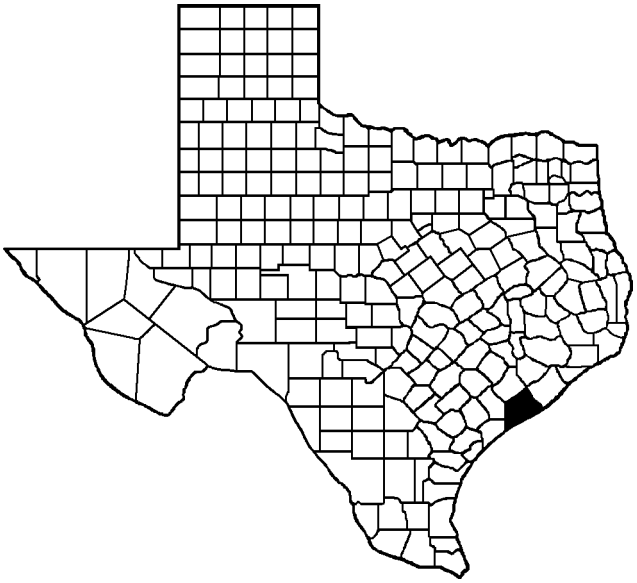
Date	*Lab. No.*	*Station*	*Beta*	*Ba-140*	*Co-58*	*Co-60*	*Cs-134*	*Cs-137*	*Fe-59*	*H-3*	*I-131*	*La-140*	*Mn-54*	*Nb-95*	*Zn-65*	*Zr-95*
2003-09-30	ER030632	14		<1.20E+2	<2.6E+1	<2.7E+1	<2.1E+1	<2.6E+1	<5.4E+1		<5.0E+1	<4.0E+1	<2.3E+1	<2.6E+1	<5.4E+1	<4.4E+1
2003-09-30	ER030633	90		<5.7E+1	<1.2E+1	<1.3E+1	<1.2E+1	<1.2E+1	<2.7E+1		<2.4E+1	<1.6E+1	<1.2E+1	<1.3E+1	<2.8E+1	<2.2E+1
2003-10-28	ER030709	14		<8.5E+1	<1.7E+1	<1.7E+1	<1.8E+1	4.6E+1	<3.5E+1		<3.6E+1	<2.5E+1	<1.7E+1	<1.8E+1	<3.9E+1	<2.9E+1
2003-11-25	ER030779	14		<4.6E+1	<9.6	<1.1E+1	<9.2	<1.0E+1	<2.1E+1		<1.9E+1	<1.4E+1	<9.0	<9.4	<2.3E+1	<1.7E+1
2003-12-30	ER040006	14		<6.9E+1	<1.4E+1	<1.6E+1	<1.2E+1	<1.4E+1	<3.0E+1		<3.0E+1	<2.3E+1	<1.3E+1	<1.6E+1	<3.2E+1	<2.5E+1
2003-12-30	ER040005	90		<6.6E+1	<1.4E+1	<1.5E+1	<1.3E+1	<1.6E+1	<3.5E+1		<2.5E+1	<1.9E+1	<1.4E+1	<1.6E+1	<3.6E+1	<2.6E+1
Water-Surface pCi/l																
2003-01-28	ER030098	85	1.9E+1	<8.5	<2.0	<1.9	<2.0	<2.0	<3.5		<3.2	<2.4	<1.9	<2.1	<4.2	<3.7
2003-01-28	ER030099	86	8.8	<1.3E+1	<2.7	<2.7	<2.4	<2.8	<5.2		<4.3	<3.8	<2.5	<2.8	<5.7	<4.6
2003-02-28	ER030136	85	1.5E+1	<1.8E+1	<2.4	<2.1	<2.1	<2.1	<4.8		<9.3	<5.7	<2.1	<2.7	<4.5	<4.3
2003-02-28	ER030137	86	6.5	<1.9E+1	<2.4	<2.1	<2.1	<2.2	<4.8		<1.1E+1	<6.4	<2.1	<2.8	<4.3	<4.1
2003-03-25	ER030177	86	6.7	<2.1E+1	<4.5	<5.8	<4.4	<4.9	<9.4		<7.1	<7.0	<4.5	<4.9	<1.1E+1	<7.9
2003-03-26	ER030178	85	1.4E+1	<1.7E+1	<3.9	<4.1	<3.4	<3.9	<7.3		<6.1	<6.4	<3.7	<4.1	<7.6	<6.6
2003-04-29	ER030259	85	1.5E+1	<1.2E+1	<2.3	<2.2	<2.2	<2.4	<4.6		<5.0	<3.8	<2.2	<2.5	<4.5	<3.9
2003-04-29	ER030258	86	9.5	<1.1E+1	<2.3	<2.2	<2.3	<2.4	<4.4		<4.6	<3.5	<2.1	<2.4	<4.6	<4.1
2003-05-27	ER030297	85	1.4E+1	<1.9E+1	<4.4	<5.5	<4.2	<4.7	<8.8		<5.5	<5.2	<4.5	<4.4	<9.9	<7.6
2003-05-27	ER030298	86	7.7	<7.3	<1.9	<2.0	<1.8	<2.0	<3.4		<2.5	<2.5	<1.8	<1.9	<3.8	<3.2
2003-06-24	ER030365	85	1.3E+1	<8.4	<2.0	<2.2	<2.2	<2.3	<3.8		<3.4	<2.9	<2.1	<2.2	<4.4	<3.6
2003-06-24	ER030366	86	5.2	<1.1E+1	<2.1	<2.2	<2.3	<2.3	<4.2		<4.2	<3.3	<2.0	<2.2	<4.2	<3.9
2003-07-29	ER030448	85	1.7E+1	<9.1	<2.0	<2.3	<2.1	<2.3	<4.0		<3.1	<2.8	<2.0	<2.2	<4.5	<3.8
2003-07-29	ER030447	86	8.6	<7.5	<1.8	<2.0	<1.8	<2.1	<3.5		<2.4	<2.5	<1.8	<1.9	<3.8	<3.3
2003-08-26	ER030488	85	1.1E+1	<1.8E+1	<4.4	<5.6	<4.4	<5.0	<9.0		<5.1	<6.0	<4.5	<4.3	<1.1E+1	<7.9
2003-08-26	ER030489	86	9.3	<7.0	<1.8	<2.0	<1.9	<2.1	<3.5		<2.3	<2.5	<1.9	<2.0	<4.2	<3.2
2003-09-30	ER030636	85	1.3E+1	<9.6	<2.1	<2.2	<2.4	<2.4	<4.2		<2.4	<2.7	<2.1	<2.3	<4.5	<3.9
2003-09-30	ER030635	86	6.2	<1.3E+1	<3.0	<2.9	<3.1	<3.4	<6.3		<3.9	<4.1	<3.1	<3.3	<7.0	<5.6
2003-10-28	ER030707	85	1.4E+1	<1.1E+1	<1.9	<2.0	<2.1	<2.2	<3.9		<3.9	<3.4	<1.9	<2.2	<4.1	<3.7
2003-10-28	ER030708	86	8.2	<9.6	<2.0	<2.0	<1.9	<2.0	<4.3		<3.3	<3.2	<2.0	<2.2	<3.8	<3.6
2003-11-25	ER030777	85	1.6E+1	<2.3E+1	<4.4	<5.5	<4.5	<5.0	<9.9		<7.5	<7.1	<4.8	<4.9	<1.0E+1	<8.3
2003-11-25	ER030778	86	7.9	<9.3	<1.9	<1.7	<1.9	<2.0	<4.0		<3.5	<3.1	<1.9	<2.1	<4.1	<3.4
2003-12-30	ER040007	85	1.5E+1	<8.7	<1.9	<2.0	<1.9	<1.9	<4.0		<3.3	<3.0	<1.9	<2.1	<3.8	<3.5
2003-12-30	ER040008	86	1.1E+1	<9.5	<1.9	<2.1	<1.8	<2.0	<4.2		<3.5	<3.0	<1.9	<2.2	<3.8	<3.5
Water-Surface Composite pCi/l																
2003-02-27	ER030035	85								1.11E+4						
2003-02-27	ER030036	86								<1.0E+3						
2003-04-25	ER030210	85								1.1E+4						
2003-04-25	ER030211	86								<1.0E+3						
2003-07-30	ER030407	85								1.13E+4						
2003-07-30	ER030408	86								<1.0E+3						
2003-11-17	ER030701	85								1.27E+4						
2003-11-17	ER030702	86								<1.0E+3						

South Texas Project

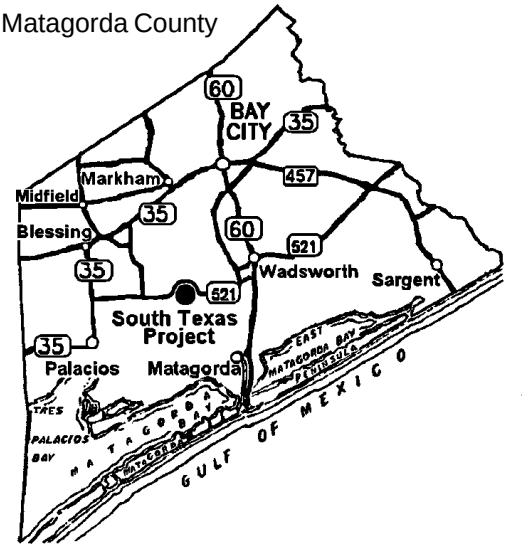
BRC Site No. 012

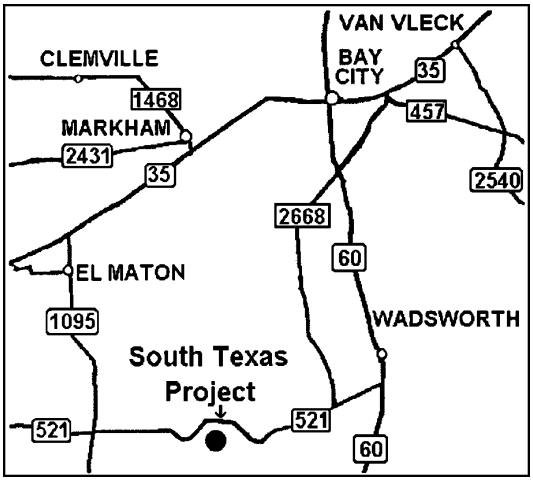
The South Texas Project (STP) is a commercial nuclear power plant operated by STP Nuclear Operating Company and is located 89 miles southwest of Houston and 14 miles south-southwest of Bay City. Two 1250 megawatt (electric) Westinghouse pressurized water reactor nuclear steam supply electrical generating units 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 AEP Central Power and Light Company, Austin Energy, City Public Service of San Antonio, and Reliant Energy HL&P. STP Nuclear Operating Company manages and operates the plant for its owners, who share its energy in proportion to their ownership interest. STP produces 2,500 megawatts of electricity annually, enough to serve more than one million homes in south central Texas. The BRC surveillance program consists of sampling air, water, sediment, fish, and vegetation and TLD monitoring.



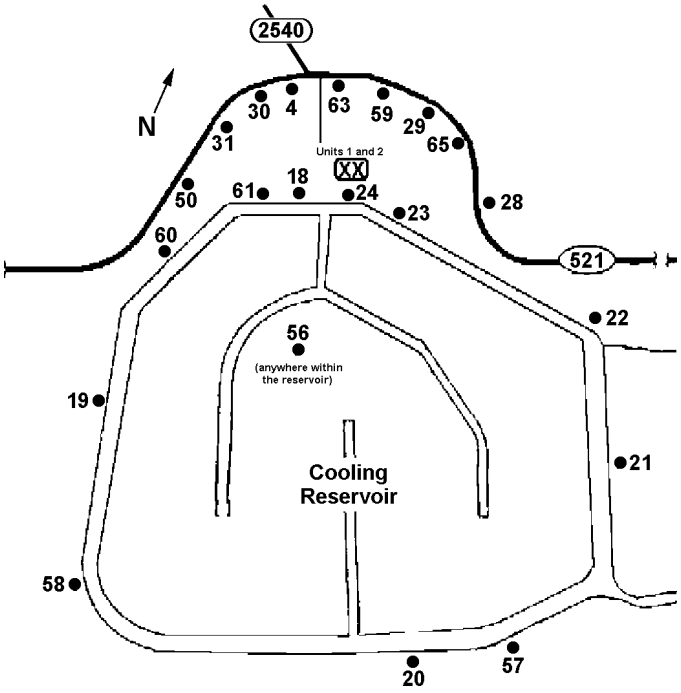
Shaded area indicates location of Matagorda County

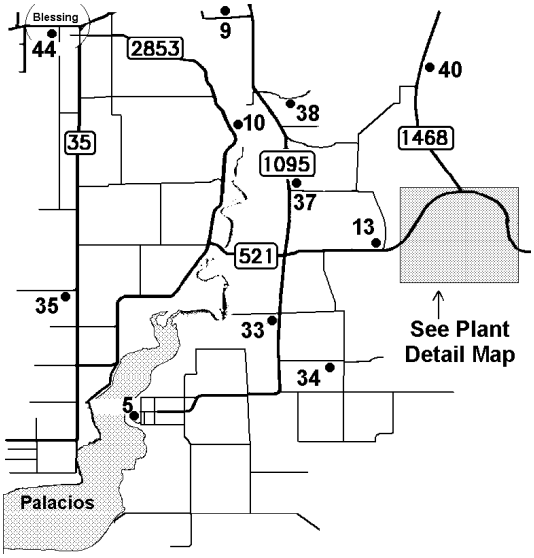


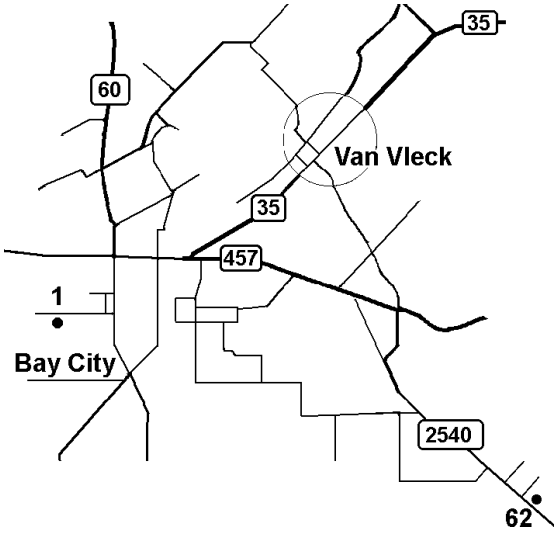


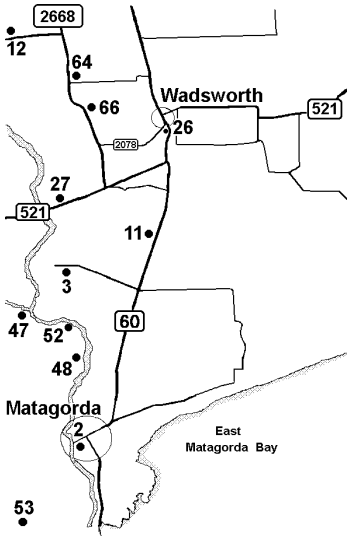
Monitoring Station Locations

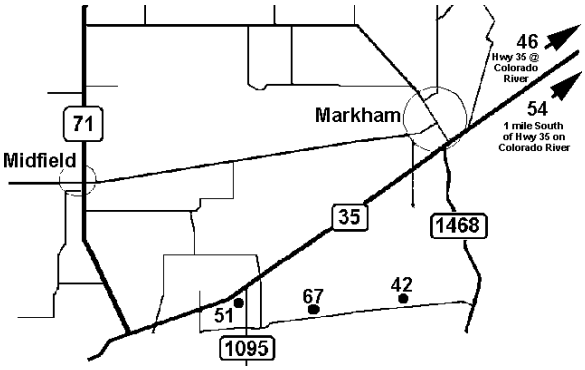
Note: Sample type not indicated on maps.











Thermoluminescent Dosimeter (TLD) Monitoring Results[1]
(quarterly and annual readings are in mrem)

Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Notes*
01	15.0	14.0	--	13.0	56.0	[2]Q3 TLD missing
02	15.0	14.0	14.1	13.9	57.0	
03	12.0	12.0	11.9	13.0	48.9	
04	15.0	14.0	15.2	14.7	58.9	
05	14.0	13.0	11.9	12.1	51.0	
09	16.0	15.0	14.1	13.9	59.0	
10	15.0	14.0	14.1	13.9	57.0	
11	15.0	14.0	13.0	13.0	55.0	
12	15.0	14.0	14.1	13.9	57.0	
13	16.0	15.0	13.9	14.7	59.6	
18	14.0	14.0	13.0	13.0	54.0	
19	14.0	13.0	13.0	14.7	54.7	
20	15.0	14.0	13.0	13.9	55.9	
21	14.0	12.0	11.9	13.9	51.8	
22	15.0	13.0	13.0	13.0	54.0	
23	15.0	13.0	13.0	13.9	54.9	
24	15.0	15.0	13.0	13.0	56.0	
26	14.0	12.0	13.0	12.1	51.1	
27	15.0	13.0	13.0	13.9	54.9	
28	15.0	14.0	14.1	14.7	57.8	
29	16.0	14.0	14.1	14.7	58.8	
30	15.0	14.0	14.1	13.9	57.0	
31	17.0	16.0	16.3	15.6	64.9	
33	16.0	14.0	16.3	14.7	61.0	
34	16.0	14.0	14.1	14.7	58.8	
35	15.0	13.0	14.1	14.7	56.8	
37	18.0	15.0	15.2	15.6	63.8	
38	14.0	13.0	14.1	13.9	55.0	
40	15.0	13.0	13.0	13.0	54.0	
42	19.0	16.0	16.3	18.2	69.5	
44	13.0	13.0	13.0	12.1	51.1	
50	18.0	16.0	16.3	16.5	66.5	
51	16.0	15.0	15.2	14.7	60.7	
57	14.0	12.0	13.0	13.0	52.0	
58	14.0	13.0	--	12.1	52.1	[2]Q3 TLD missing
59	16.0	14.0	14.1	14.7	58.8	
60	14.0	13.0	15.2	13.0	55.2	
61	14.0	13.0	18.4	13.9	59.3	
62	17.0	17.0	16.3	15.6	65.9	
63	15.0	14.0	14.1	13.9	57.0	
64	15.0	14.0	14.1	14.7	57.8	
65	16.0	15.0	15.2	14.7	60.9	
66	16.0	13.0	13.0	13.9	55.9	
67	15.0	14.0	14.1	14.7	57.8	

NOTE: [1] Background is not subtracted from the data.

[2] If data are missing during a quarter, an average of known quarter readings for that year and location is used to fill in for the missing data.

South Texas Project

Date	*Lab-No.*	*Station*	*Beta*	*Ba-140*	*Co-58*	*Co-60*	*Cs-134*	*Cs-137*	*Fe-59*	*H-3*	*I-131*	*La-140*	*Mn-54*	*Nb-95*	*Zn-65*	*Zr-95*
Air Iodine pCi/m³																
2003-01-07	ER030027	30									<1.3E-2					
2003-01-07	ER030025	35									<1.2E-2					
2003-01-14	ER030064	30									<7E-3					
2003-01-14	ER030062	35									<1.2E-2					
2003-01-21	ER030085	30									<7E-3					
2003-01-21	ER030083	35									<7E-3					
2003-01-29	ER030104	30									<8E-3					
2003-01-29	ER030102	35									<8E-3					
2003-02-03	ER030108	30									<1.2E-2					
2003-02-03	ER030106	35									<1.2E-2					
2003-02-12	ER030120	30									<7E-3					
2003-02-12	ER030118	35									<6E-3					
2003-02-18	ER030130	30									<1.0E-2					
2003-02-18	ER030128	35									<1.7E-2					
2003-02-25	ER030134	30									<5E-3					
2003-02-25	ER030132	35									<9E-3					
2003-03-04	ER030162	30									<2.9E-2					
2003-03-04	ER030160	35									<4.7E-2					
2003-03-11	ER030166	30									<1.5E-2					
2003-03-11	ER030164	35									<2.9E-2					
2003-03-18	ER030158	30									<9E-3					
2003-03-18	ER030156	35									<1.4E-2					
2003-03-25	ER030171	30									<6E-3					
2003-03-25	ER030169	35									<1.2E-2					
2003-04-01	ER030188	30									<6E-3					
2003-04-01	ER030186	35									<8E-3					
2003-04-08	ER030197	30									<6E-3					
2003-04-08	ER030195	35									<1.1E-2					
2003-04-15	ER030219	30									<5E-3					
2003-04-15	ER030217	35									<8E-3					
2003-04-22	ER030224	30									<5E-3					
2003-04-22	ER030222	35									<6E-3					
2003-04-29	ER030264	30									<1.0E-2					
2003-04-29	ER030262	35									<1.1E-2					
2003-05-06	ER030276	30									<1.0E-2					
2003-05-06	ER030274	35									<9E-3					
2003-05-14	ER030284	30									<5E-3					
2003-05-14	ER030282	35									<5E-3					
2003-05-21	ER030292	30									<7E-3					
2003-05-21	ER030290	35									<7E-3					
2003-05-28	ER030305	30									<8E-3					
2003-05-28	ER030303	35									<8E-3					
2003-06-03	ER030315	30									<1.1E-2					
2003-06-03	ER030313	35									<9E-3					
2003-06-11	ER030324	30									<4E-3					
2003-06-11	ER030322	35									<5E-3					

Environmental Sample Results

Date	Lab. No.	Station	Beta	Ba-140	Co-58	Co-60	Cs-134	Cs-137	Fe-59	H-3	I-131	La-140	Mn-54	Nb-95	Zn-65	Zr-95
2003-06-17	ER030361	30									<1.0E-2					
2003-06-17	ER030359	35									<1.0E-2					
2003-06-24	ER030376	30									<7E-3					
2003-06-24	ER030374	35									<8E-3					
2003-07-02	ER030386	30									<7E-3					
2003-07-02	ER030384	35									<7E-3					
2003-07-09	ER030399	30									<5E-3					
2003-07-09	ER030397	35									<5E-3					
2003-07-14	ER030417	30									<8E-3					
2003-07-14	ER030415	35									<9E-3					
2003-07-22	ER030442	30									<6E-3					
2003-07-22	ER030440	35									<6E-3					
2003-07-29	ER030453	30									<6E-3					
2003-07-29	ER030451	35									<6E-3					
2003-08-06	ER030465	30									<6E-3					
2003-08-06	ER030463	35									<7E-3					
2003-08-12	ER030473	30									<6E-3					
2003-08-12	ER030471	35									<6E-3					
2003-08-19	ER030482	30									<7E-3					
2003-08-19	ER030480	35									<8E-3					
2003-08-26	ER030493	30									<8E-3					
2003-08-26	ER030491	35									<6E-3					
2003-09-03	ER030502	30									<6E-3					
2003-09-03	ER030500	35									<6E-3					
2003-09-10	ER030511	30									<9E-3					
2003-09-10	ER030509	35									<8E-3					
2003-09-16	ER030515	30									<6E-3					
2003-09-16	ER030513	35									<6E-3					
2003-09-24	ER030627	30									<6E-3					
2003-09-24	ER030625	35									<6E-3					
2003-10-01	ER030643	30									<7E-3					
2003-10-01	ER030641	35									<7E-3					
2003-10-08	ER030653	30									<5E-3					
2003-10-08	ER030651	35									<6E-3					
2003-10-14	ER030671	30									<6E-3					
2003-10-14	ER030669	35									<7E-3					
2003-10-21	ER030690	30									<4E-3					
2003-10-21	ER030688	35									<6E-3					
2003-10-28	ER030713	30									<6E-3					
2003-10-28	ER030711	35									<6E-3					
2003-11-04	ER030728	30									<6E-3					
2003-11-04	ER030726	35									<6E-3					
2003-11-11	ER030761	30									<8E-3					
2003-11-11	ER030759	35									<8E-3					
2003-11-18	ER030770	30									<7E-3					
2003-11-18	ER030768	35									<6E-3					
2003-11-25	ER030783	30									<1.0E-2					
2003-11-25	ER030781	35									<9E-3					
2003-12-02	ER030791	30									<5E-3					
2003-12-02	ER030789	35									<6E-3					

Date	Lab. No.	Station	Beta	Ba-140	Co-58	Co-60	Cs-134	Cs-137	Fe-59	H-3	I-131	La-140	Mn-54	Nb-95	Zn-65	Zr-95
2003-12-09	ER030800	30									<5E-3					
2003-12-09	ER030798	35									<6E-3					
2003-12-16	ER030817	30									<5E-3					
2003-12-16	ER030815	35									<6E-3					
2003-12-22	ER030831	30									<8E-3					
2003-12-22	ER030829	35									<9E-3					
2003-12-29	ER040012	30									<9E-3					
2003-12-29	ER040010	35									<1.0E-2					
Air Particulate pCi/m³																
2003-01-07	ER030026	30	2.8E-2													
2003-01-07	ER030024	35	3.0E-2													
2003-01-14	ER030063	30	2.1E-2													
2003-01-14	ER030061	35	2.3E-2													
2003-01-21	ER030084	30	2.6E-2													
2003-01-21	ER030082	35	2.8E-2													
2003-01-29	ER030103	30	3.1E-2													
2003-01-29	ER030101	35	3.3E-2													
2003-02-03	ER030107	30	5.8E-2													
2003-02-03	ER030105	35	5.8E-2													
2003-02-12	ER030119	30	2.3E-2													
2003-02-12	ER030117	35	2.3E-2													
2003-02-18	ER030129	30	2.2E-2													
2003-02-18	ER030127	35	2.8E-2													
2003-02-25	ER030133	30	2.2E-2													
2003-02-25	ER030131	35	2.2E-2													
2003-03-04	ER030161	30	1.6E-2													
2003-03-04	ER030159	35	1.7E-2													
2003-03-11	ER030165	30	2.8E-2													
2003-03-11	ER030163	35	2.5E-2													
2003-03-18	ER030157	30	1.8E-2													
2003-03-18	ER030155	35	1.8E-2													
2003-03-25	ER030170	30	2.2E-2													
2003-03-25	ER030168	35	2.1E-2													
2003-04-01	ER030187	30	2.2E-2													
2003-04-01	ER030185	35	2.4E-2													
2003-04-08	ER030196	30	1.5E-2													
2003-04-08	ER030194	35	1.6E-2													
2003-04-15	ER030218	30	2.4E-2													
2003-04-15	ER030216	35	2.4E-2													
2003-04-22	ER030223	30	2.3E-2													
2003-04-22	ER030221	35	2.4E-2													
2003-04-29	ER030263	30	3.0E-2													
2003-04-29	ER030261	35	2.3E-2													
2003-05-06	ER030275	30	2.4E-2													
2003-05-06	ER030273	35	2.7E-2													
2003-05-14	ER030283	30	2.3E-2													
2003-05-14	ER030281	35	2.7E-2													
2003-05-21	ER030291	30	2.0E-2													
2003-05-21	ER030289	35	2.3E-2													

Environmental Sample Results

Date	Lab. No.	Station	Beta	Ba-140	Co-58	Co-60	Cs-134	Cs-137	Fe-59	H-3	I-131	La-140	Mn-54	Nb-95	Zn-65	Zr-95
2003-05-28	ER030304	30	2.8E-2													
2003-05-28	ER030302	35	2.6E-2													
2003-06-03	ER030314	30	2.9E-2													
2003-06-03	ER030312	35	2.6E-2													
2003-06-11	ER030323	30	1.5E-2													
2003-06-11	ER030321	35	1.6E-2													
2003-06-17	ER030360	30	1.5E-2													
2003-06-17	ER030358	35	1.7E-2													
2003-06-24	ER030375	30	1.5E-2													
2003-06-24	ER030373	35	1.6E-2													
2003-07-02	ER030385	30	1.6E-2													
2003-07-02	ER030383	35	1.6E-2													
2003-07-09	ER030398	30	1.4E-2													
2003-07-09	ER030396	35	1.5E-2													
2003-07-14	ER030416	30	1.8E-2													
2003-07-14	ER030414	35	2.1E-2													
2003-07-22	ER030441	30	1.8E-2													
2003-07-22	ER030439	30	1.6E-2													
2003-07-29	ER030452	30	2.5E-2													
2003-07-29	ER030450	35	2.1E-2													
2003-08-06	ER030464	30	1.9E-2													
2003-08-06	ER030462	35	1.8E-2													
2003-08-12	ER030472	30	1.8E-2													
2003-08-12	ER030470	35	2.1E-2													
2003-08-19	ER030481	30	1.8E-2													
2003-08-19	ER030479	35	1.7E-2													
2003-08-26	ER030492	30	1.4E-2													
2003-08-26	ER030490	35	1.4E-2													
2003-09-03	ER030501	30	1.0E-2													
2003-09-03	ER030499	35	9E-3													
2003-09-10	ER030510	30	2.4E-2													
2003-09-10	ER030508	35	2.5E-2													
2003-09-16	ER030514	30	1.8E-2													
2003-09-16	ER030512	35	1.7E-2													
2003-09-24	ER030626	30	2.7E-2													
2003-09-24	ER030624	35	2.6E-2													
2003-10-01	ER030642	30	3.1E-2													
2003-10-01	ER030640	35	3.1E-2													
2003-10-08	ER030652	30	2.6E-2													
2003-10-08	ER030650	35	2.7E-2													
2003-10-14	ER030670	30	1.4E-2													
2003-10-14	ER030668	35	1.5E-2													
2003-10-21	ER030689	30	2.5E-2													
2003-10-21	ER030687	35	2.8E-2													
2003-10-28	ER030712	30	2.7E-2													
2003-10-28	ER030710	35	2.6E-2													
2003-11-04	ER030727	30	2.5E-2													
2003-11-04	ER030725	35	2.7E-2													
2003-11-11	ER030760	30	3.5E-2													
2003-11-11	ER030758	35	3.6E-2													

Date	Lab. No.	Station	Beta	Ba-140	Co-58	Co-60	Cs-134	Cs-137	Fe-59	H-3	I-131	La-140	Mn-54	Nb-95	Zn-65	Zr-95
2003-11-18	ER030769	30	1.5E-2													
2003-11-18	ER030767	35	1.7E-2													
2003-11-25	ER030782	30	2.0E-2													
2003-11-25	ER030780	35	2.1E-2													
2003-12-02	ER030790	30	2.4E-2													
2003-12-02	ER030788	35	2.1E-2													
2003-12-09	ER030799	30	3.2E-2													
2003-12-09	ER030797	35	3.3E-2													
2003-12-16	ER030816	30	2.4E-2													
2003-12-16	ER030814	35	2.4E-2													
2003-12-22	ER030830	30	1.8E-2													
2003-12-22	ER030828	35	1.8E-2													
2003-12-29	ER040011	30	2.2E-2													
2003-12-29	ER040009	35	2.2E-2													
Air Particulate Composite pCi/Sample																
2003-02-05	ER030030	30		<7.5	<2.4	<2.6	<2.3	<2.5	<4.1		<2.2	<2.9	<2.5	<2.2	<5.1	<4.0
2003-02-05	ER030031	35		<1.5E+1	<4.5	<5.7	<5.1	<5.1	<8.7		<4.2	<5.5	<4.7	<4.7	<1.2E+1	<7.9
2003-04-16	ER030204	30		<7.7	<2.4	<2.9	<2.6	<2.7	<4.7		<2.5	<2.9	<2.6	<2.4	<5.8	<4.2
2003-04-16	ER030205	35		<6.8	<2.0	<3.5	<2.3	<2.4	<4.8		<2.1	<2.9	<2.3	<2.3	<5.5	<3.9
2003-07-16	ER030401	30		<1.0E+1	<2.9	<3.7	<2.9	<3.2	<5.6		<2.5	<3.3	<2.7	<2.9	<7.8	<4.6
2003-07-16	ER030402	35		<7.7	<2.4	<2.8	<2.7	<2.7	<4.6		<2.5	<3.0	<2.4	<2.3	<5.8	<3.9
2003-10-28	ER030697	30		<1.1E+1	<3.2	<4.2	<3.1	<3.7	<6.9		<3.0	<3.7	<3.2	<3.2	<7.8	<5.8
2003-10-28	ER030698	35		<9.6	<2.7	<3.9	<2.9	<3.1	<5.4		<2.5	<3.7	<3.1	<2.7	<6.5	<4.8
Fish pCi/kg																
2003-06-25	ER030395	53		<1.27E+2	<1.5E+1	<1.7E+1	<1.3E+1	<1.5E+1	<3.3E+1		<6.6E+1	<4.1E+1	<1.3E+1	<1.8E+1	<3.2E+1	<2.6E+1
2003-12-02	ER030796	53		<7.7E+1	<1.5E+1	<1.8E+1	<1.5E+1	<1.6E+1	<3.1E+1		<2.9E+1	<2.2E+1	<1.4E+1	<1.7E+1	<3.3E+1	<2.4E+1
Food Product pCi/kg																
2003-04-23	ER030229	35		<6.2E+1	<1.6E+1	<1.7E+1	<1.7E+1	<1.9E+1	<3.6E+1		<2.1E+1	<1.9E+1	<1.6E+1	<1.7E+1	<4.0E+1	<2.9E+1
2003-04-23	ER030230	63		<6.2E+1	<1.6E+1	<1.7E+1	<1.7E+1	<1.9E+1	<3.6E+1		<2.1E+1	<1.9E+1	<1.6E+1	<1.7E+1	<4.0E+1	<2.9E+1
2003-07-29	ER030454	35		<1.19E+2	<3.1E+1	<3.9E+1	<2.9E+1	<3.3E+1	<6.4E+1		<3.6E+1	<3.4E+1	<3.1E+1	<3.0E+1	<7.1E+1	<5.1E+1
2003-12-23	ER030834	30		<2.42E+2	<5.0E+1	<5.7E+1	<4.8E+1	<5.6E+1	<1.11E+2		<9.5E+1	<8.0E+1	<5.0E+1	<5.6E+1	<1.17E+2	<9.3E+1
2003-12-23	ER030833	35		<1.43E+2	<3.1E+1	<3.7E+1	<2.9E+1	<3.2E+1	<7.2E+1		<4.3E+1	<4.9E+1	<3.2E+1	<3.6E+1	<8.2E+1	<5.6E+1
Sediment pCi/kg																
2003-04-29	ER030267	52		<5.74E+2	<8.0E+1	<8.8E+1	<9.0E+1	<7.7E+1	<2.04E+2		<2.34E+2	<1.92E+2	<7.9E+1	<1.04E+2	<2.25E+2	<1.46E+2
Vegetation for Milk pCi/kg																
2003-01-14	ER030065	04		<6.1E+1	<1.4E+1	<1.4E+1	<1.2E+1	<1.2E+1	<3.2E+1		<2.4E+1	<1.5E+1	<1.3E+1	<1.4E+1	<3.4E+1	<2.3E+1
2003-03-31	ER030189	04		<5.0E+1	<9.4	<1.1E+1	<8.2	<9.5	<2.8E+1		<1.9E+1	<1.3E+1	<9.2	<1.1E+1	<2.7E+1	<1.8E+1
2003-04-29	ER030266	30		<5.2E+1	<8.7	<9.0	<7.6	<8.5	<2.2E+1		<2.5E+1	<1.4E+1	<7.9	<9.3	<2.1E+1	<1.6E+1
2003-05-28	ER030307	30		<5.5E+1	<1.2E+1	<1.3E+1	<1.1E+1	<1.2E+1	<2.7E+1		<2.1E+1	<1.6E+1	<1.1E+1	<1.3E+1	<2.8E+1	<2.0E+1
2003-06-24	ER030377	04		<5.8E+1	<1.2E+1	<1.4E+1	<1.1E+1	<1.2E+1	<2.8E+1		<2.5E+1	<1.6E+1	<1.2E+1	<1.3E+1	<3.0E+1	<2.1E+1
2003-07-29	ER030455	04		<5.3E+1	<1.3E+1	<1.4E+1	<1.3E+1	<1.4E+1	<2.7E+1		<1.8E+1	<1.5E+1	<1.3E+1	<1.4E+1	<3.1E+1	<2.2E+1
2003-07-29	ER030456	30		<6.3E+1	<1.4E+1	<1.4E+1	<1.3E+1	<1.4E+1	<3.2E+1		<2.3E+1	<1.6E+1	<1.4E+1	<1.5E+1	<3.4E+1	<2.4E+1
2003-08-26	ER030494	04		<6.5E+1	<1.5E+1	<1.5E+1	<1.4E+1	<1.5E+1	<3.3E+1		<2.7E+1	<1.8E+1	<1.4E+1	<1.5E+1	<3.5E+1	<2.5E+1
2003-09-29	ER030634	04		<6.3E+1	<1.3E+1	<1.3E+1	<1.1E+1	<1.2E+1	<3.0E+1		<2.9E+1	<1.8E+1	<1.2E+1	<1.4E+1	<3.0E+1	<2.2E+1
2003-10-28	ER030714	04		<4.9E+1	<1.1E+1	<1.2E+1	<9.2	<9.3	<2.4E+1		<1.8E+1	<1.3E+1	<1.0E+1	<1.1E+1	<2.6E+1	<1.8E+1

Date	*Lab. No.*	*Station*	*Beta*	*Ba-140*	*Co-58*	*Co-60*	*Cs-134*	*Cs-137*	*Fe-59*	*H-3*	*I-131*	*La-140*	*Mn-54*	*Nb-95*	*Zn-65*	*Zr-95*
2003-11-18	ER030771	04		<4.5E+1	<1.1E+1	<1.2E+1	<9.4	<9.6	<2.5E+1		<1.6E+1	<1.3E+1	<9.8	<1.1E+1	<2.6E+1	<1.8E+1
2003-12-23	ER030832	04		<2.6E+1	<5.7	<7.0	<5.3	<6.3	<1.5E+1		<9.7	<8.4	<5.7	<6.5	<1.5E+1	<1.1E+1
Water-Surface pCi/l																
2003-01-07	ER030028	54	1.2E+1	<1.1E+1	<2.0	<1.9	<2.0	<2.1	<3.9		<4.1	<2.9	<2.0	<2.2	<3.9	<3.7
2003-01-23	ER030093	47	6.0	<9.9	<2.1	<1.7	<2.0	<2.1	<3.8		<3.7	<2.8	<2.0	<2.2	<4.0	<3.5
2003-02-12	ER030121	46	5.0	<1.3E+1	<2.5	<2.6	<2.5	<2.9	<5.3		<4.5	<4.0	<2.6	<2.8	<5.7	<4.7
2003-02-26	ER030142	47	1.4E+1	<3.1E+1	<4.4	<4.2	<3.9	<4.1	<8.6		<1.5E+1	<1.2E+1	<3.9	<5.3	<8.9	<8.0
2003-03-11	ER030167	54	1.0E+1	<1.6E+1	<2.2	<2.0	<2.1	<2.2	<4.5		<8.2	<5.1	<1.9	<2.6	<4.3	<4.1
2003-03-25	ER030172	47	5.6	<7.6	<1.9	<2.0	<2.0	<2.3	<3.9		<2.7	<2.7	<1.9	<2.1	<4.2	<3.5
2003-04-08	ER030198	54	6.5	<1.8E+1	<4.4	<5.6	<4.3	<4.8	<8.8		<5.3	<5.6	<4.7	<4.5	<1.0E+1	<7.3
2003-04-29	ER030265	52	1.0E+1	<1.3E+1	<2.3	<2.2	<2.3	<2.4	<4.7		<5.3	<3.6	<2.2	<2.5	<4.4	<4.1
2003-05-06	ER030272	54	5.4	<8.8	<2.2	<2.2	<2.3	<2.4	<3.9		<3.2	<2.9	<2.1	<2.3	<4.3	<3.8
2003-05-29	ER030306	52	5.3E+1	<1.1E+1	<2.2	<2.3	<2.3	<2.5	<4.2		<4.6	<3.5	<2.2	<2.3	<4.7	<3.9
2003-06-11	ER030325	52	5.9	<8.9	<1.9	<2.0	<2.0	<2.1	<3.8		<3.3	<2.9	<1.9	<2.0	<4.0	<3.3
2003-06-25	ER030378	52	1.1E+1	<1.0E+1	<2.0	<2.2	<2.2	<2.4	<4.1		<4.3	<3.3	<2.0	<2.2	<4.1	<3.7
2003-07-09	ER030400	54	5.1	<8.4	<1.9	<2.1	<2.2	<2.3	<3.6		<3.0	<2.7	<2.0	<2.1	<4.0	<3.7
2003-07-30	ER030461	52	5.6	<1.3E+1	<2.2	<2.1	<2.3	<2.3	<4.4		<5.1	<3.8	<2.1	<2.4	<4.6	<3.9
2003-08-12	ER030474	54	7.0	<8.7	<2.0	<2.2	<2.1	<2.4	<3.7		<2.9	<2.5	<2.2	<2.1	<4.4	<3.5
2003-08-28	ER030503	52	2.3E+1	<1.2E+1	<2.1	<1.9	<1.8	<2.2	<4.5		<5.4	<4.6	<1.8	<2.4	<4.1	<3.6
2003-09-16	ER030516	54	7.3	<9.5	<2.2	<2.2	<2.3	<2.4	<4.2		<3.5	<2.9	<2.1	<2.4	<4.6	<4.0
2003-09-30	ER030644	52	1.7E+1	<1.3E+1	<2.4	<2.2	<2.3	<2.4	<4.5		<5.5	<3.8	<2.1	<2.5	<4.7	<4.1
2003-10-08	ER030654	54	7.3	<8.7	<2.1	<2.3	<2.3	<2.4	<4.1		<3.2	<2.8	<2.1	<2.3	<4.6	<3.9
2003-10-30	ER030719	52	1.4E+1	<9.2	<2.2	<2.1	<1.9	<2.1	<4.2		<3.4	<3.4	<2.1	<2.1	<4.3	<3.6
2003-11-04	ER030729	54	6.2	<8.6	<1.8	<2.1	<2.0	<2.2	<3.7		<2.9	<2.6	<2.0	<2.0	<4.1	<3.3
2003-11-18	ER030772	47	4.1E+1	<8.0	<2.0	<2.0	<1.9	<2.1	<4.1		<2.6	<2.7	<2.2	<2.1	<4.2	<3.4
2003-12-09	ER030801	54	1.5E+1	<9.0	<2.1	<2.0	<1.9	<2.1	<3.8		<3.3	<3.4	<1.8	<2.0	<4.1	<3.6
2003-12-16	ER030818	47	1.5E+1	<7.0	<1.8	<1.8	<1.8	<2.1	<3.5		<2.3	<2.5	<1.8	<2.0	<3.7	<3.2
Water-Surface Composite pCi/l																
2003-02-27	ER030033	47								<1.0E+3						
2003-02-27	ER030034	54								<1.0E+3						
2003-04-25	ER030208	47								<1.0E+3						
2003-04-25	ER030209	54								<1.0E+3						
2003-07-30	ER030405	52								<1.0E+3						
2003-07-30	ER030406	54								<1.0E+3						
2003-11-17	ER030699	52								<1.0E+3						
2003-11-17	ER030700	54								<1.0E+3						

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Radioactive Waste

Processors

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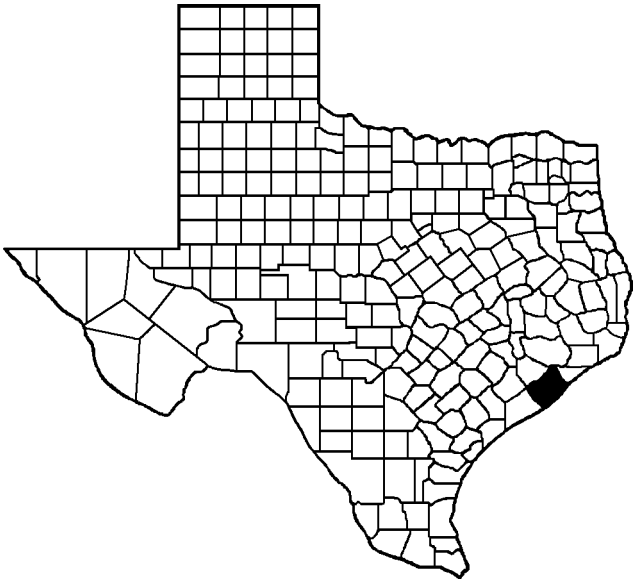
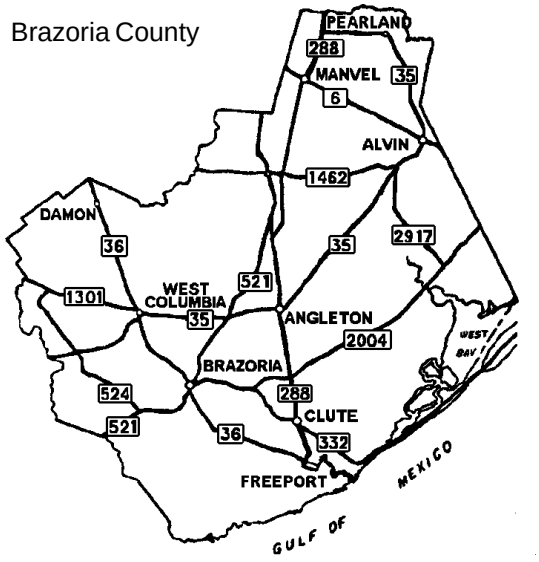
Iso-Tex, Inc.

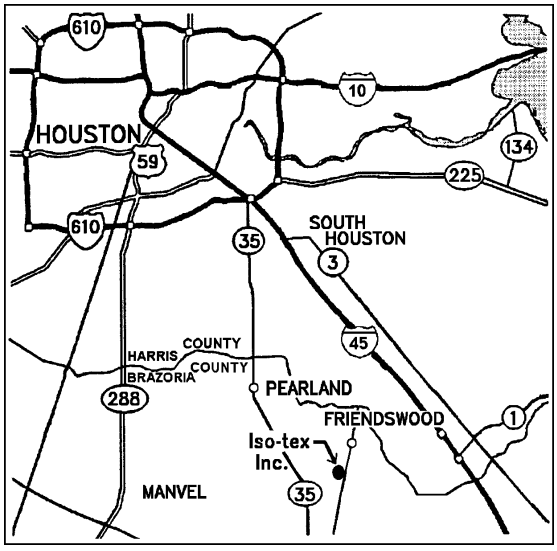
BRC Site No. 021

Iso-Tex, Inc. is an FDA licensed facility for drug manufacturing of radio-pharmaceuticals and radio-isotope labeling. The facility is also in the process of decommissioning a waste-processing license. The facility is located 17 miles south southeast of downtown Houston and approximately 5 miles southeast of Pearland on County Road 129. The BRC surveillance program consists of TLD monitoring.



Shaded area indicates location of Brazoria County

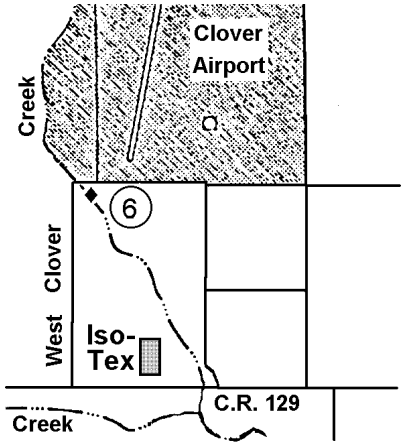




Monitoring Station Locations

♦ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security -- Diagram Removed



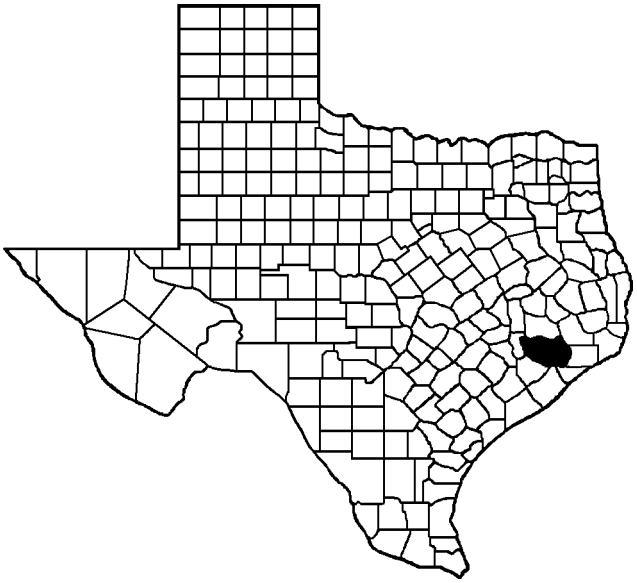
Thermoluminescent Dosimeter (TLD) Monitoring Results
(quarterly and annual readings are in mrem)

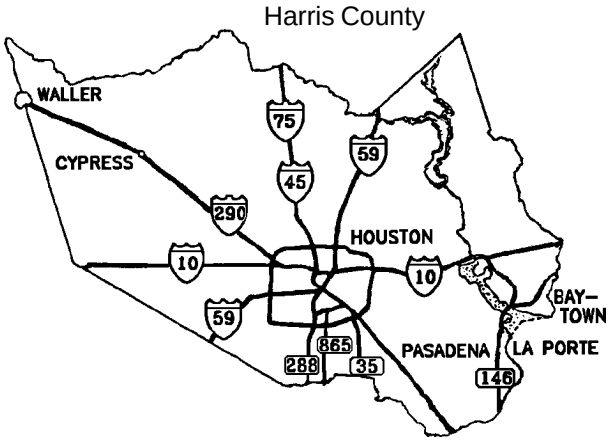
Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Notes*
01	1.0	1.0	0.0	0.0	2.0	
06	15.0	14.0	14.1	13.9	57.0	Background
07	5.0	6.0	3.3	3.5	20.8	
10	2.0	3.0	1.1	1.7	7.8	

Nuclear Sources and Services, Inc.

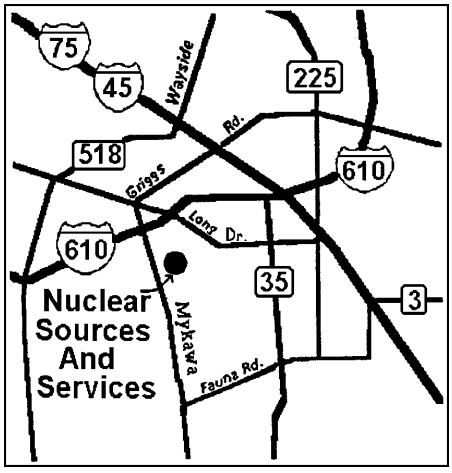
BRC Site No. 023

The Nuclear Sources and Services, Inc. (NSSI) facility occupies approximately 5 acres in a light industrial area of Southeast Houston approximately 4 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 offsite generators both inside and outside of Texas. At the conclusion of treatment or storage, the residues are shipped to permitted offsite facilities for disposal. The BRC surveillance program consists of soil sampling and TLD monitoring.





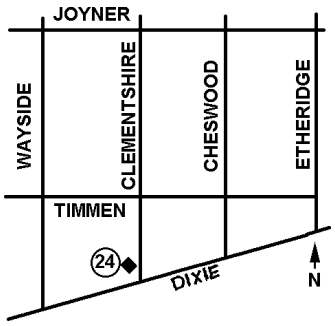
Shaded area indicates location of Harris County



Monitoring Station Locations

♦ TLD Station	♥ Sample Station	♣ TLD & Sample Station

Homeland Security --
Diagram Removed



Thermoluminescent Dosimeter (TLD) Monitoring Results[1]
(quarterly and annual readings are in mrem)

Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Notes*
03	82.0	552.0	144.1	108.3	886.4	
04	304.0	81.0	52.0	24.3	461.3	
06	33.0	44.0	7.6	22.5	107.1	
07	60.0	53.0	21.7	36.4	171.1	
11	27.0	27.0	4.3	22.5	80.8	
12	23.0	176.0	7.6	35.5	312.1	[2]Q3 Neutron TLD missing
16	16.0	26.0	17.3	21.7	81.0	
18	38.0	389.0	143.0	104.0	674.0	
19	19.0	75.0	79.1	49.4	222.5	
20	129.0	57.0	46.6	21.7	254.3	
21	135.0	1248.0	894.0	318.1	2595.1	
22	7.0	9.0	5.4	3.5	24.9	
23	34.0	11.0	10.8	10.4	66.2	
24	13.0	12.0	13.0	12.1	50.1	Background
25	42.0	51.0	28.2	35.5	156.7	
41	45.0	249.0	109.4	70.2	473.6	

NOTE: [1] Neutron dosimeters are deployed at this facility. The neutron doses are added to gamma doses.
[2] If data are missing during a quarter, an average of known quarter readings for that year and location is used to fill in for the missing data.

Environmental Sample Results

Date	*Lab No.*	*Station*	*Alpha*	*Ra-226**	*Am-241*	*Co-60*	*Cs-137*	*I-125*	*Ra-226*
Soil µCi/g									
2003-01-09	ER030021	26	1.7E-5	1.6E-6	<4E-7	<2E-7	5.1E-6	<2E-7	<4.6E-6
2003-01-09	ER030020	28	2.7E-5	2.4E-6	<3E-7	<2E-7	<3E-7	<2E-7	<3.7E-6
2003-04-10	ER030200	26	1.2E-5	1.0E-6	<3E-7	<2E-7	5.8E-6	<2E-7	<3.2E-6
2003-04-10	ER030199	28	1.4E-5	1.1E-6	<3E-7	<2E-7	<2E-7	<2E-7	<2.7E-6
2003-07-10	ER030394	26	<1.2E-5	8E-7	<4E-7	<2E-7	1.5E-5	<3E-7	<5.6E-6
2003-07-10	ER030393	28	<1.2E-5	1.3E-6	<3E-7	<3E-7	<3E-7	<3E-7	<4.4E-6
2003-10-02	ER030638	26	1.2E-5	9E-7	<2E-7	<1E-7	1.6E-5	<2E-7	<3.4E-6
2003-10-02	ER030637	28	1.5E-5	1.0E-6	<2E-7	<2E-7	<2E-7	<2E-7	<2.9E-6

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

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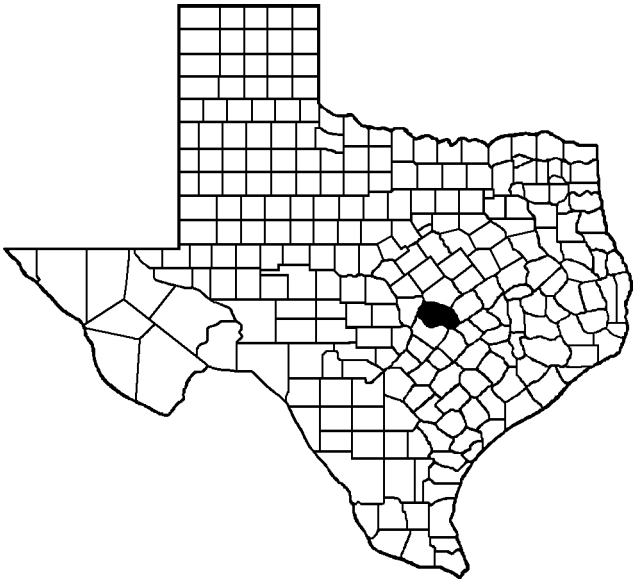
Thermo MeasureTech

BRC Site No. 004

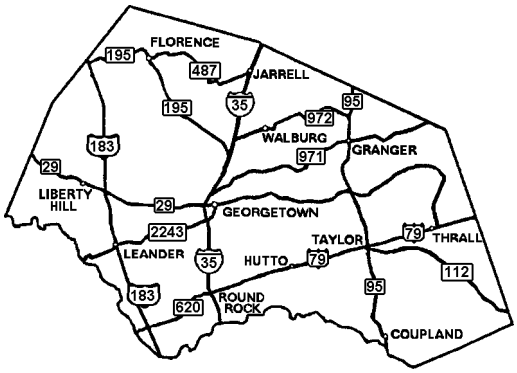
Thermo MeasureTech is located just north of Round Rock in Williamson County. The BRC implemented a monitoring program in July of 1990 and collected baseline radiation data prior to the licensee moving any radioactive materials to the site. The major licensed activity at the facility is the manufacture and distribution of gauging devices and fluorescence analyzers.

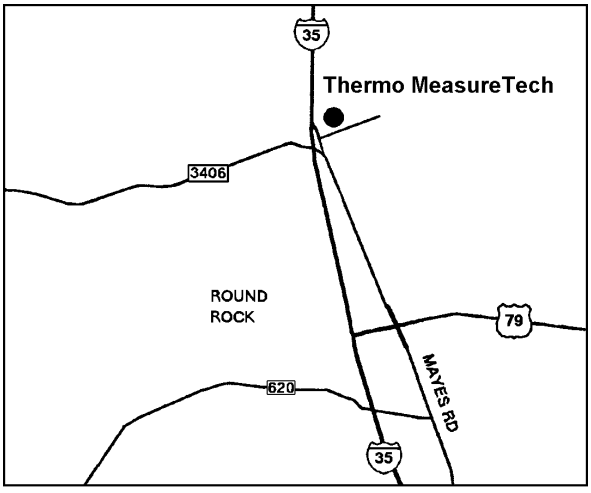
Upon receipt of a statement from Thermo MeasureTech, that it no longer wished to pursue a license to process radioactive waste in 1992, the BRC removed the soil and vegetation sampling from the monitoring program. Consequently, reports after 1992 only contain the results of doses indicated by TLDs used to monitor ambient radiation levels at selected locations on and around the premises.



Shaded area indicates location of Williamson County

Williamson County

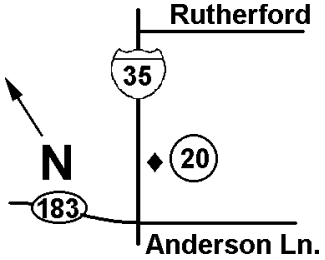




Monitoring Station Locations

♦ TLD Station	♥ Sample Station	♣ TLD & Sample Station

Homeland Security --
Diagram Removed



**Thermoluminescent Dosimeter (TLD) Monitoring Results*
(quarterly and annual readings are in mrem)**

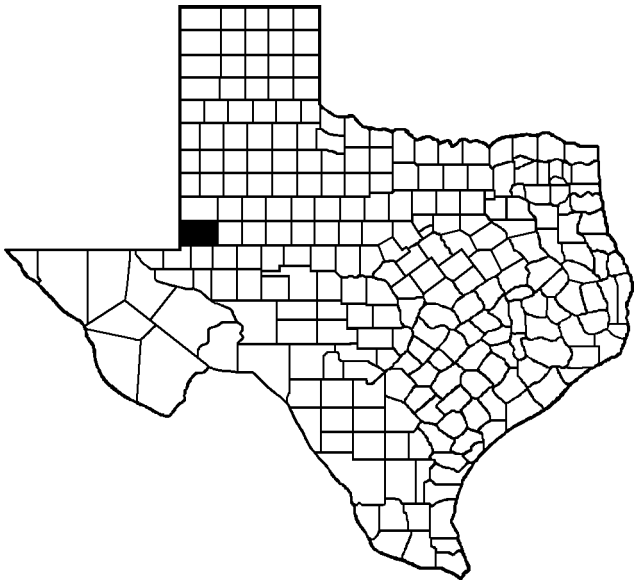
Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Notes*
04	10.1	8.9	7.0	7.0	33.0	
05	739.1	1310.6	613.0	373.0	3035.7	
06	337.7	316.5	220.0	326.0	1200.2	
07	498.5	928.8	664.0	510.0	2601.3	
08	2.0	2.0	1.0	1.0	6.0	
09	2.0	1.0	2.0	0.0	5.0	
10	870.6	1094.0	891.0	862.0	3717.6	
11	1483.3	1934.7	756.0	673.0	4847.0	
12	1578.3	1939.7	986.0	1078.0	5582.0	
13	2169.8	3103.9	2063.0	1702.0	9038.7	
20	15.0	13.8	14.0	16.0	58.8	Background

NOTE: * Neutron dosimeters are deployed at this facility. The neutron doses are added to gamma doses.

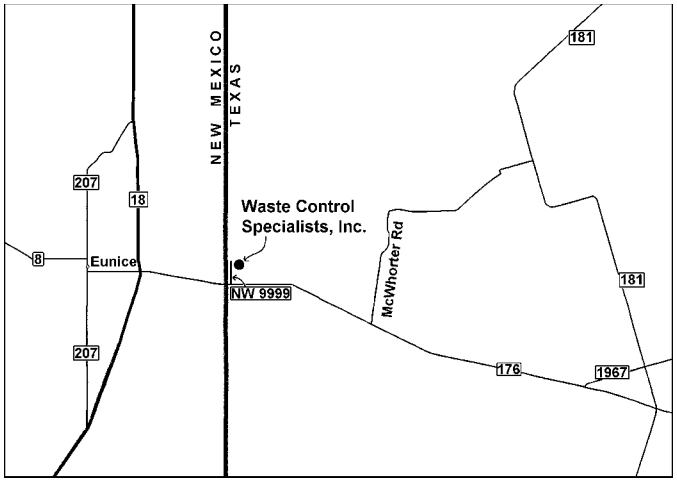
Waste Control Specialists

BRC Site No. 048

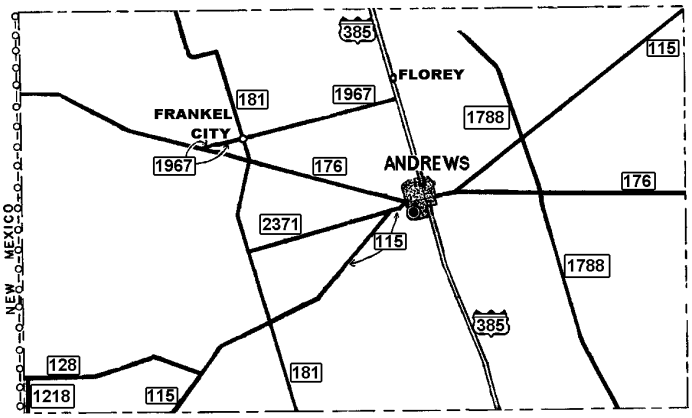
Waste Control Specialists (WCS) facility occupies 14,400 acres, in Andrews County approximately 30 miles west of Andrews on the Texas-New Mexico border. Approximately 1,300 acres are devoted to low-level radioactive waste storage. The primary activities of WCS currently are treatment, storage, and disposal of radioactive and hazardous wastes. The BRC surveillance program consists of sampling water, sewage, and soil and TLD monitoring.



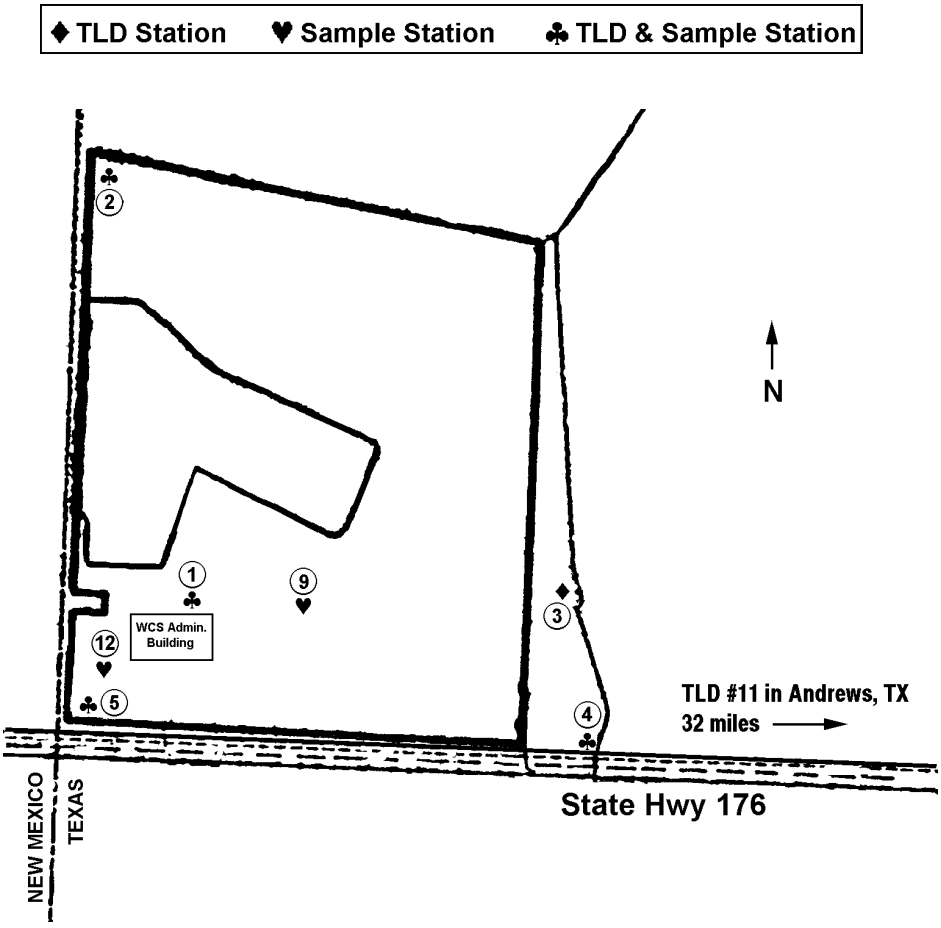
Shaded area indicates location of Andrews County



Andrews County



Monitoring Station Locations



Thermoluminescent Dosimeter (TLD) Monitoring Results
(quarterly and annual readings are in mrem)

Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Note*
01	4.0	2.1	3.1	3.6	12.8	
02	3.0	3.2	3.1	2.7	12.0	
03	5.0	3.2	4.1	3.6	15.9	
04	5.0	3.2	4.1	3.6	15.9	
05	2.0	1.1	2.0	1.8	6.9	
11	15.0	13.9	14.3	15.5	58.7	Background

Environmental Sample Results

Date	*Lab No.*	*Station*	*Alpha*	*Beta*	*Pu-239**	*Ra-226**	*Th-232**	*U-234**	*U-238**	*Cs-137*
Sewage µCi/ml										
2003-04-23	ER030248	12	-	-	5.0E-9	4.7E-9	<1.0E-9	3.8E-8	2.4E-8	<6.5E-9
Soil µCi/g										
2003-01-22	ER030086	01	-	-	-	6E-7	-	<1.0E-6	<1.0E-6	-
2003-01-22	ER030088	02	-	-	-	7E-7	-	<1.0E-6	<1.0E-6	-
2003-01-22	ER030089	04	-	-	-	1.1E-6	-	<1.0E-6	<1.0E-6	-
2003-01-22	ER030090	05	-	-	-	8E-7	-	<1.0E-6	<1.0E-6	-
2003-01-22	ER030091	09	-	-	-	7E-7	-	<1.0E-6	<1.0E-6	1E-7
2003-04-23	ER030241	01	-	-	-	8E-7	-	<1.0E-6	<1.0E-6	-
2003-04-23	ER030243	02	-	-	-	1.1E-6	-	<1.0E-6	<1.0E-6	-
2003-04-23	ER030244	04	-	-	-	7E-7	-	<1.0E-6	<1.0E-6	-
2003-04-23	ER030245	05	-	-	-	9E-7	-	<1.0E-6	<1.0E-6	-
2003-04-23	ER030246	09	-	-	-	7E-7	-	<1.0E-6	<1.0E-6	-
2003-07-17	ER030418	01	-	-	-	5E-7	-	<1.0E-6	<1.0E-6	-
2003-07-17	ER030420	02	-	-	-	7E-7	-	<1.0E-6	<1.0E-6	-
2003-07-17	ER030421	04	-	-	-	8E-7	-	<1.0E-6	<1.0E-6	-
2003-07-17	ER030422	05	-	-	-	4E-7	-	<1.0E-6	<1.0E-6	1E-7
2003-07-17	ER030423	09	-	-	-	6E-7	-	<1.0E-6	<1.0E-6	1E-7
2003-10-14	ER030672	01	-	-	-	5E-7	-	<1.0E-6	<1.0E-6	-
2003-10-14	ER030674	02	-	-	-	6E-7	-	<1.0E-6	<1.0E-6	-
2003-10-14	ER030675	04	-	-	-	1.1E-6	-	<1.0E-6	<1.0E-6	-
2003-10-14	ER030676	05	-	-	-	1.0E-6	-	<1.0E-6	<1.0E-6	-
2003-10-14	ER030677	09	-	-	-	8E-7	-	<1.0E-6	<1.0E-6	1E-7
Water-Monitor Well µCi/ml										
2003-01-22	ER030087	01	1.24E-7	1.12E-7	-	3.7E-9	-	5.7E-8	3.7E-8	-
2003-01-22	ER030092	09	2.5E-9	4.4E-9	-	2.3E-8	-	<1.0E-9	<1.0E-9	-
2003-04-23	ER030242	01	9.1E-8	7.6E-8	-	3.0E-9	-	5.9E-8	3.6E-8	-
2003-04-23	ER030247	09	3.1E-9	3.4E-9	-	8E-10	-	<1.0E-9	<1.0E-9	-
2003-07-17	ER030419	01	1.00E-7	7.8E-8	-	2.8E-9	-	6.3E-8	3.8E-8	-
2003-07-17	ER030424	09	2.3E-9	5.4E-9	-	9E-10	-	1.1E-9	<1.0E-9	-
2003-10-14	ER030673	01	1.16E-7	8.8E-8	-	2.9E-9	-	6.3E-8	3.9E-8	-
2003-10-14	ER030678	09	<2.0E-9	4.0E-9	-	8E-10	-	1.1E-9	<1.0E-9	-

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

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Research Reactors

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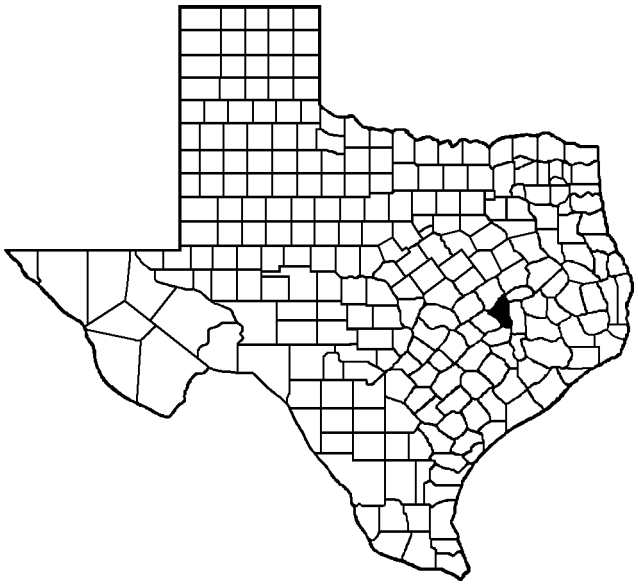
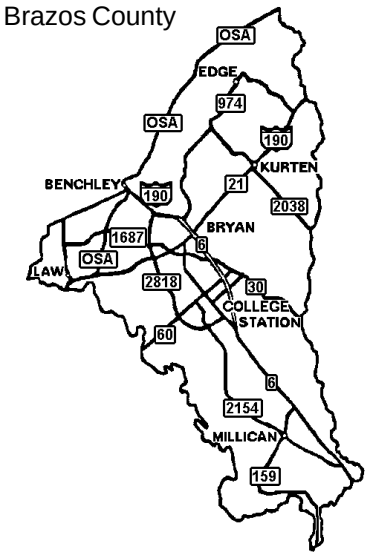
Texas A & M University Nuclear Science Center

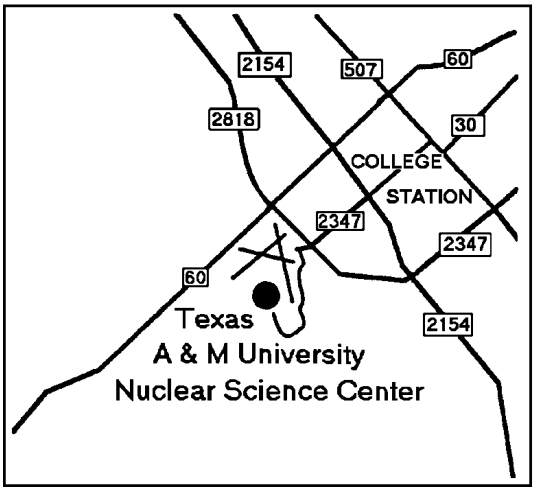
BRC Site No. 001

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 BRC surveillance program consists of sediment, milk, and TLD monitoring.



Shaded area indicates location of Brazos County

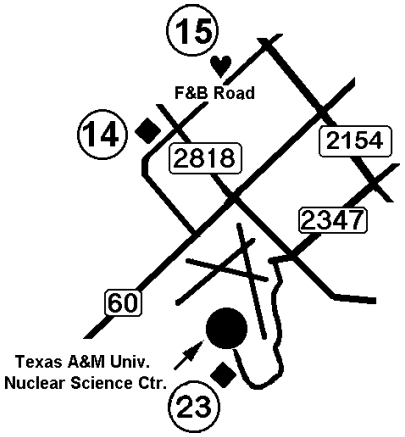




Monitoring Station Locations

♦ TLD Station	♥ Sample Station	♣ TLD & Sample Station

Homeland Security --
Diagram Removed



Thermoluminescent Dosimeter (TLD) Monitoring Results
(quarterly and annual readings are in mrem)

Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Notes*
02	4.0	2.8	3.5	3.2	13.5	
03	4.0	1.9	3.5	1.6	11.0	
04	8.1	5.6	8.3	8.0	30.0	
05	5.1	1.9	4.7	3.2	14.9	
10	3.0	0.9	2.4	2.4	8.7	
11	3.0	0.9	2.4	1.6	7.9	
14	18.2	15.8	18.9	14.4	67.3	Background
18	7.1	3.7	5.9	4.0	20.7	
19	4.0	3.7	4.7	2.4	14.8	
20	0.0	3.7	2.4	0.0	6.1	
21	0.0	0.9	0.0	0.0	0.9	
22	0.0	0.0	0.0	0.0	0.0	
23	19.2	14.6	16.5	13.6	63.9	Background

Texas A & M University Nuclear Science Center

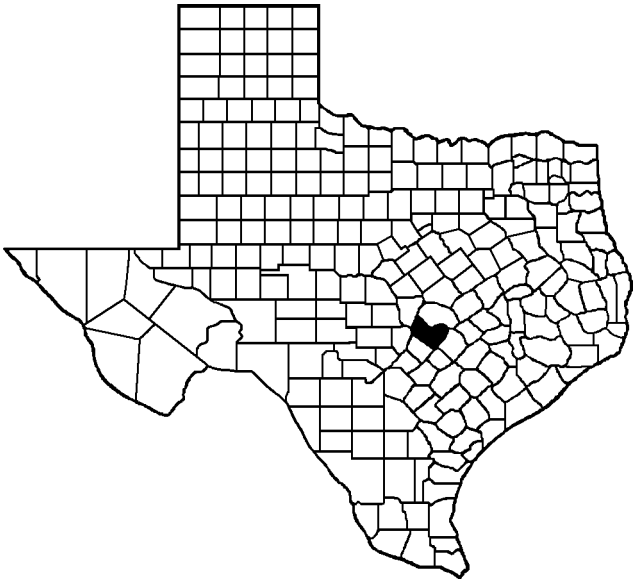
Date	*Lab No.*	*Station*	*Ba-140*	*Co-58*	*Co-60*	*Cs-134*	*Cs-137*	*Fe-59*	*I-131*	*La-140*	*Mn-54*	*Nb-95*	*Sc-46*	*Zn-65*	*Zr-95*
*** Milk µCi/ml**															
2003-01-13	ER030060	15	-	-	-	-	-	-	<5.1E-9	-	-	-	-	-	-
2003-04-10	ER030203	15	-	-	-	-	-	-	<6.1E-9	-	-	-	-	-	-
Sediment µCi/g															
2003-01-09	ER030059	16	<7E-7	<2E-7	<3E-7	<2E-7	<2E-7	<3E-7	<3E-7	<2E-7	<2E-7	<2E-7	-	<4E-7	<3E-7
2003-04-08	ER030202	16	<3E-7	<1E-7	5E-7	<1E-7	<1E-7	<2E-7	<2E-7	<1E-7	3E-7	<1E-7	-	<2E-7	<2E-7
2003-07-15	ER030413	16	<4E-7	<1E-7	5E-7	<1E-7	<2E-7	<2E-7	<1E-7	<1E-7	5E-7	<1E-7	2E-7	<4E-7	<2E-7
2003-09-30	ER030649	16	<6E-7	<2E-7	1.4E-6	<2E-7	<2E-7	<3E-7	<2E-7	<2E-7	2E-7	<2E-7	-	<4E-7	<3E-7

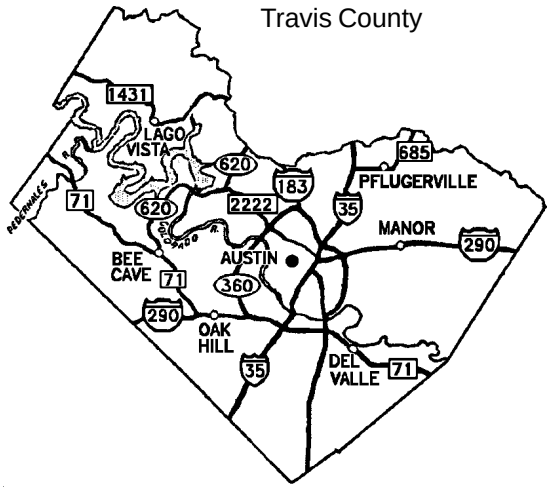
* Dairy closed after second quarter of 2003.

University of Texas Nuclear Engineering Teaching Laboratory

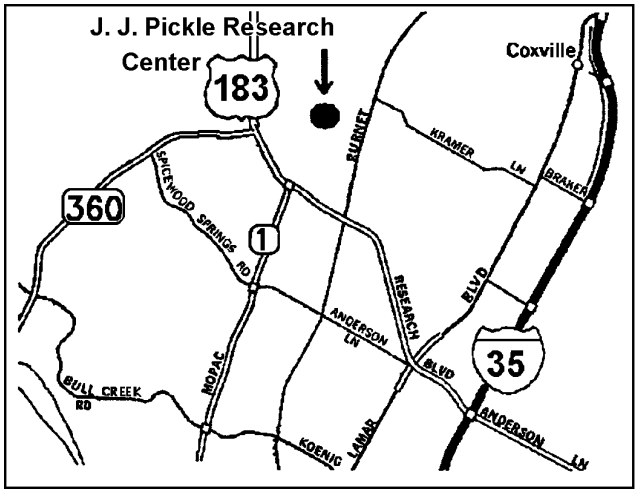
BRC Site No. 003

U. T. Nuclear Engineering Teaching Laboratory (NETL) is located at the J. J. Pickle Research Center, approximately five miles north of the Texas Department of Health 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 BRC surveillance program consists of water, sewage, and TLD monitoring.





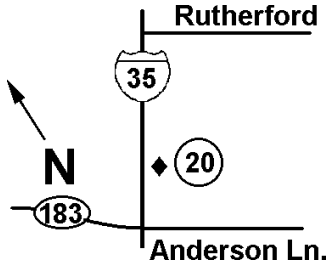
Shaded area indicates location of Travis County



Monitoring Station Locations

♦ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security -- Diagram Removed



Thermoluminescent Dosimeter (TLD) Monitoring Results
(quarterly and annual readings are in mrem)

Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Note*
01	0.0	0.0	0.0	0.0	0.0	
02	0.0	0.0	0.0	0.0	0.0	
03	0.0	0.0	0.0	0.0	0.0	
04	2.0	1.0	2.0	1.0	6.0	
05	1.0	0.0	0.0	0.0	1.0	
20	15.0	13.8	14.0	16.0	58.8	Background

Environmental Sample Results

University of Texas Nuclear Engineering Teaching Laboratory

Date	Lab No.	Station	Ba-140	Co-58	Co-60	Cs-134	Cs-137	Fe-59	H-3	I-131	La-140	Mn-54	Nb-95	Zn-65	Zr-95
Sewage µCi/ml															
2003-01-22	ER030080	08	<3.8E-8	<8.9E-9	<9.6E-9	<8.1E-9	<9.2E-9	<1.9E-8	<1.0E-6	<1.4E-8	<1.4E-8	<8.5E-9	<9.6E-9	<2.1E-8	<1.6E-8
2003-04-22	ER030220	09	<2.3E-8	<5.6E-9	<6.9E-9	<5.9E-9	<6.6E-9	<1.2E-8	<1.0E-6	<6.8E-9	<8.2E-9	<6.4E-9	<6.2E-9	<1.4E-8	<1.1E-8
2003-07-23	ER030429	08	<2.3E-8	<5.7E-9	<6.8E-9	<5.8E-9	<6.7E-9	<1.2E-8	<1.0E-6	<6.2E-9	<7.3E-9	<6.0E-9	<6.4E-9	<1.4E-8	<1.0E-8
2003-10-22	ER030686	09	<4.7E-8	<1.2E-8	<1.4E-8	<1.4E-8	<1.4E-8	<2.6E-8	<1.0E-6	<1.5E-8	<1.5E-8	<1.3E-8	<1.3E-8	<2.9E-8	<2.3E-8
Water-Surface µCi/ml															
2003-01-22	ER030081	07	<9.7E-9	<2.0E-9	<2.0E-9	<2.1E-9	<2.1E-9	<4.1E-9	<1.0E-6	<3.8E-9	<2.6E-9	<1.8E-9	<2.1E-9	<4.1E-9	<3.4E-9

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Other Facilities

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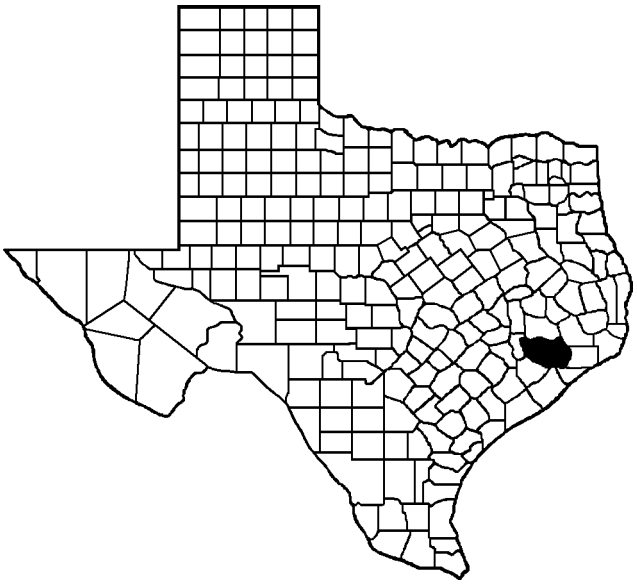
Gammatron, Inc.

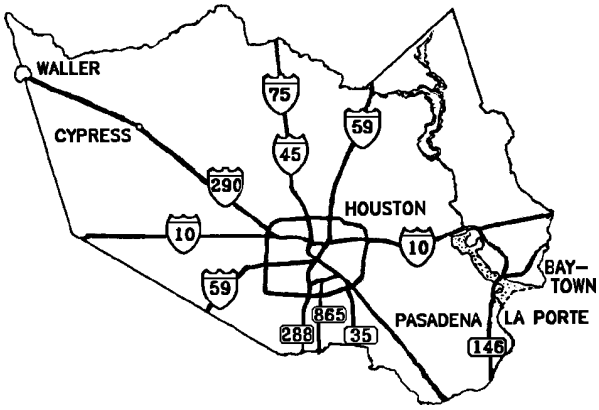
BRC Site No. 018

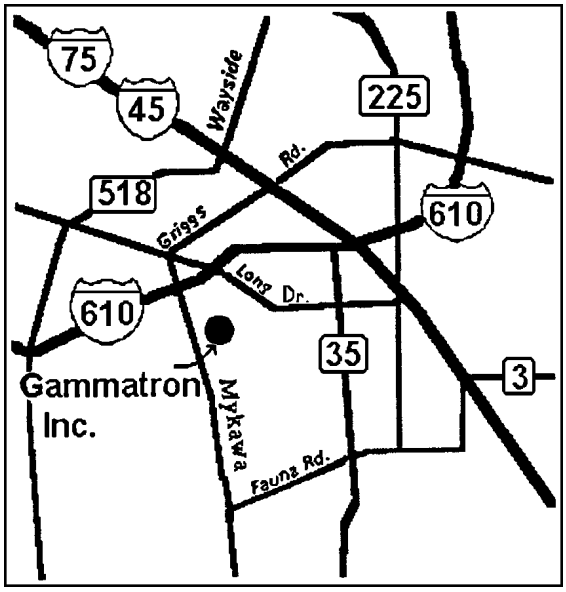
Gammatron, Inc. is a manufacturer of sealed radioactive sources, specializing in Am241Be and Am241Li neutron sources and Cs137 gamma sources. The facility is located in an industrial area of Houston approximately 4 miles northwest of William P. Hobby Airport. The BRC surveillance program consists of soil and TLD monitoring.



Shaded area indicates location of Harris County

Harris County

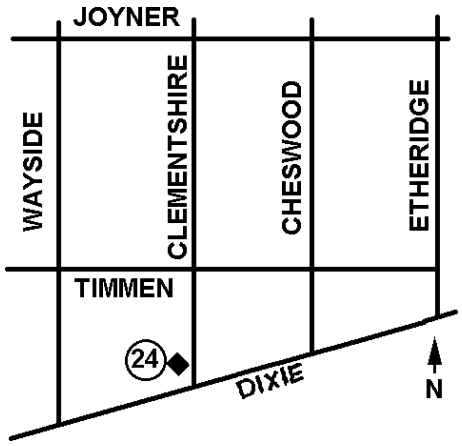




Monitoring Station Locations

♦ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security -- Diagram Removed



Thermoluminescent Dosimeter (TLD) Monitoring Results[1]
(quarterly and annual readings are in mrem)

Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Notes*
03	121.0	325.0	79.1	73.7	598.8	
05	61.0	82.0	53.1	73.7	269.8	
08	128.0	154.0	102.9	208.9	593.8	
24	13.0	12.0	13.0	12.1	50.1	Background
30	86.0	67.0	66.1	56.3	275.4	
31	29.0	28.0	5.4	33.8	96.2	
34	157.0	196.0	83.4	160.3	596.7	
40	81.0	80.0	52.0	105.7	318.7	

NOTE: [1] Neutron dosimeters are deployed at this facility. The neutron doses are added to gamma doses.

Environmental Sample Results

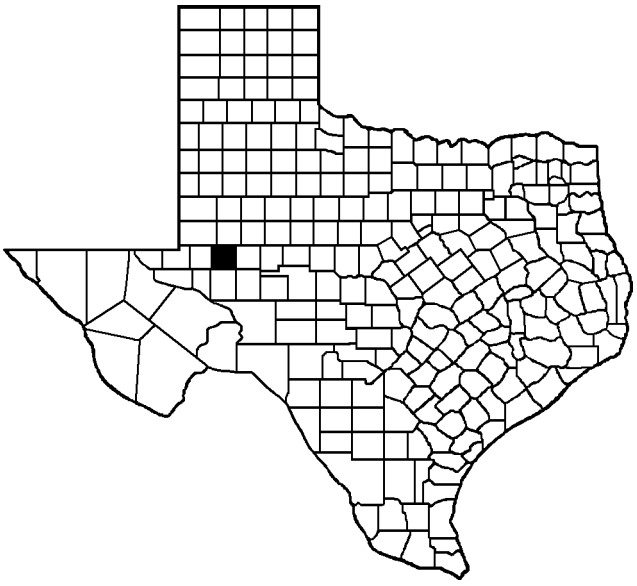
Date	*Lab No.*	*Station*	*Alpha*	*Ra-226**	*Am-241*	*Co-60*	*Cs-137*	*Ra-226*
Soil µCi/g								
2003-01-09	ER030019	31	1.2E-5	1.6E-6	<9E-7	<1E-7	<2E-7	<2.3E-6
2003-04-10	ER030201	31	<1.2E-5	9E-7	<1.3E-6	<1E-7	<2E-7	<2.8E-6
2003-07-10	ER030392	31	1.5E-5	1.2E-6	<1.4E-6	<2E-7	<2E-7	<3.8E-6
2003-10-02	ER030639	31	2.3E-5	1.0E-6	<3E-7	<2E-7	<2E-7	<3.2E-6

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

GeoCo, Inc.

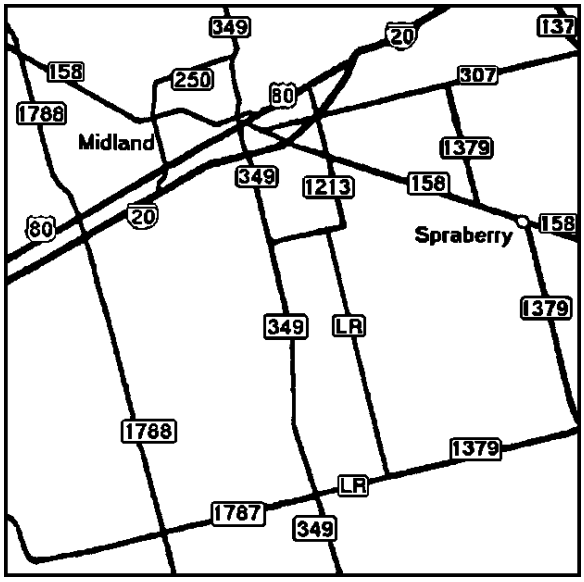
BRC Site No. 051

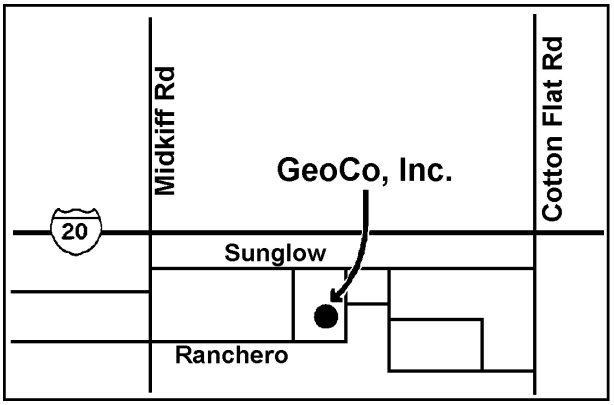
GeoCo, Inc. is a tracer studies company specializing in oil and gas wells. The facility is located in Midland approximately six miles east of Midland-Odessa International Airport. The BRC surveillance program consists of TLD monitoring.



Shaded area indicates location of Midland County

Midland County

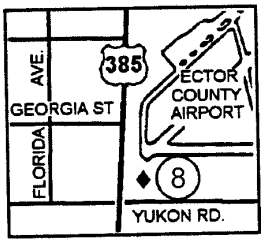




Monitoring Station Locations

♦ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security -- Diagram Removed



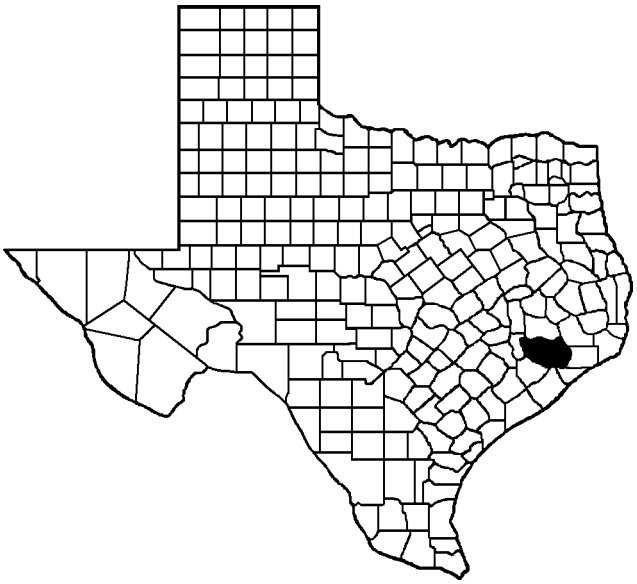
Thermoluminescent Dosimeter (TLD) Monitoring Results
(quarterly and annual readings are in mrem)

Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Notes*
01	65.4	91.0	124.7	111.0	392.1	
08	20.0	21.4	17.4	18.2	77.0	Background

Gulf Nuclear of Louisiana - Webster

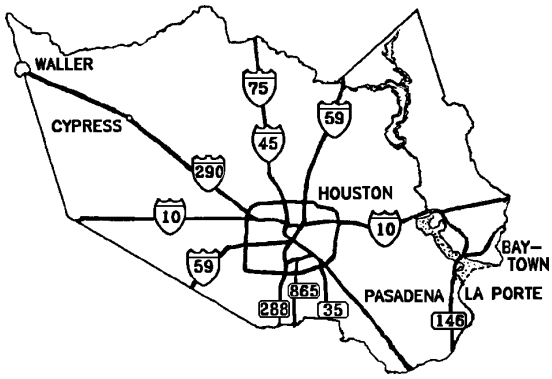
BRC Site No. 014

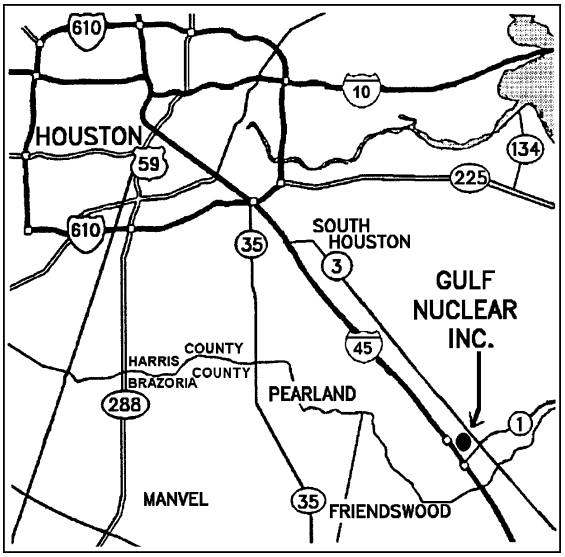
Gulf Nuclear of Louisiana (GNI) was a manufacturer of sealed radioactive sources (Am241Be neutron sources and Cs137 gamma sources), distributor of tracer material used in oil and gas wells, and a radioactive waste processor. GNI is located 20 miles southeast of downtown Houston off of the Gulf Freeway (I-45) in Webster. The BRC surveillance program consists of TLD monitoring. In the second quarter of 2003 the monitoring program was suspended due to razing of the building and removal of the facility fence by EPA as part of site decommissioning. Final close-out survey of the facility took place in November and December of 2003. The site is expected to be released for unrestricted use in 2004.



Shaded area indicates location of Harris County

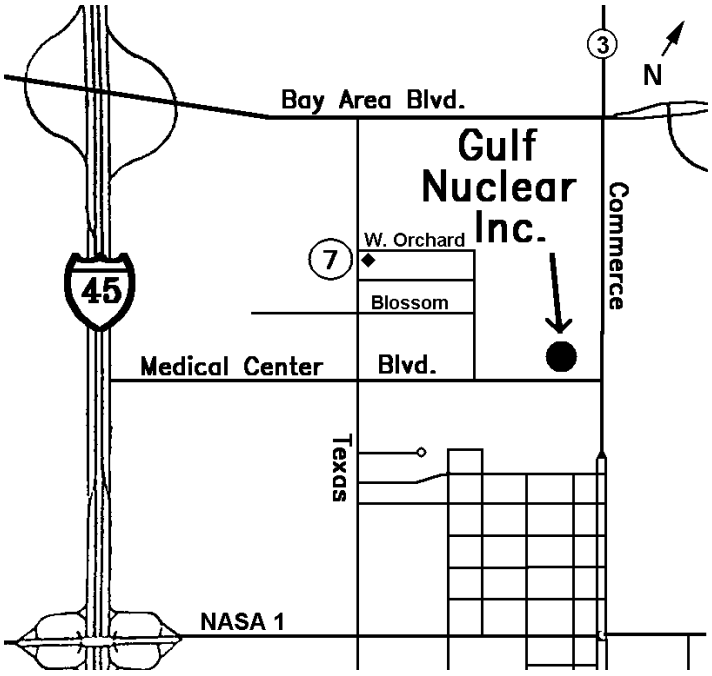
Harris County

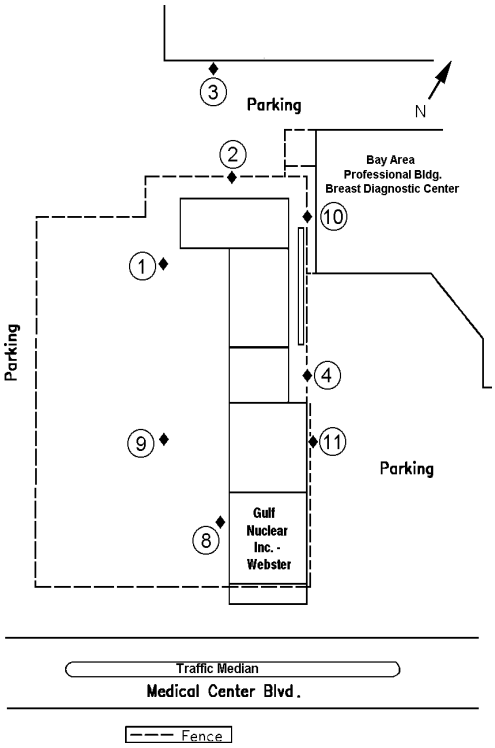




Monitoring Station Locations

♦ TLD Station ♥ Sample Station ♣ TLD & Sample Station





Thermoluminescent Dosimeter (TLD) Monitoring Results
(quarterly and annual readings are in mrem)

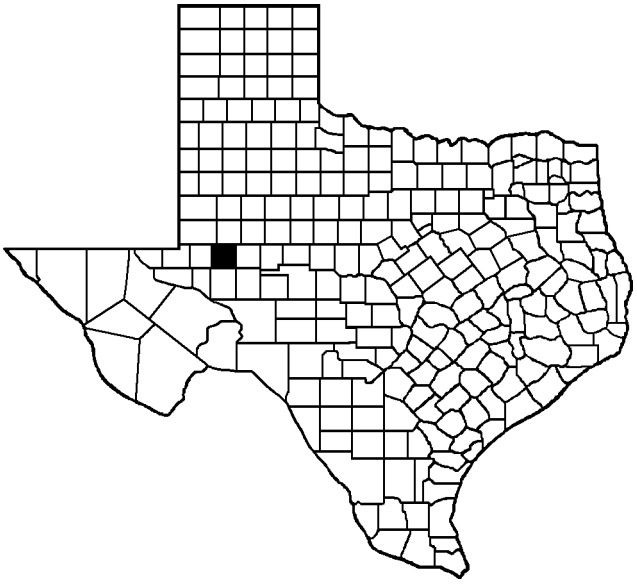
Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Notes*
01	7893.0	3647.0	--	--	11540.0	Site released during 2nd quarter 2003 after EPA
02	326.0	164.5	--	--	490.5	Superfund cleanup.
03	101.0	38.5	--	--	139.5	
04	337.0	248.5	--	--	585.5	
07	16.0	24.5	--	--	40.5	Background
08	--	--	--	--	0.0	[1]Q1 TLD missing, Q2 TLD not placed
09	13428.0	9086.0	--	--	22514.0	
10	218.0	182.0	--	--	400.0	
11	295.0	192.5	--	--	487.5	

NOTE: [1] If data are missing during a quarter, an average of known quarter readings for that year and location is used to fill in for the missing data.

Isotech Laboratories, Inc.

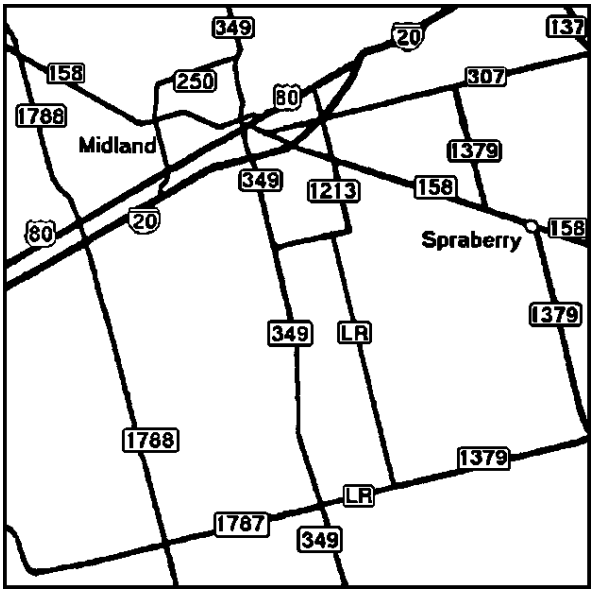
BRC Site No. 008

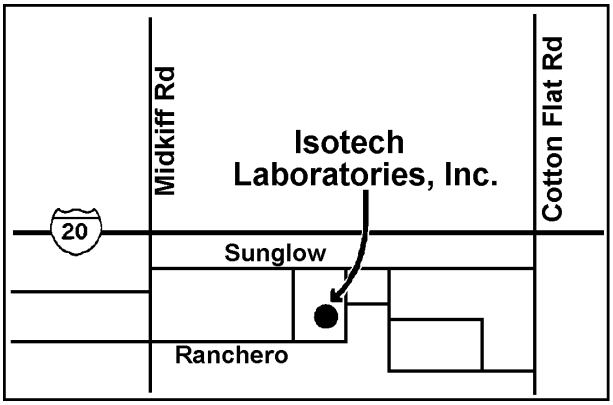
Isotech Laboratories, Inc. manufactures tracer material for the oil and gas industry, calibrates radiation detection instruments, and provides radiation safety training for well-logging and tracer services. The facility is located in Midland approximately six miles east of Midland-Odessa International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



Shaded area indicates location of Midland County

Midland County

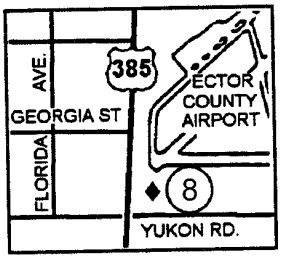




Monitoring Station Locations

♦ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security -- Diagram Removed



Thermoluminescent Dosimeter (TLD) Monitoring Results
(quarterly and annual readings are in mrem)

Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Notes*
01	10.2	3.2	11.2	9.1	33.7	
02	99.2	64.2	91.0	95.6	350.0	
03	50.1	26.8	49.1	57.3	183.3	
04	51.1	25.7	53.2	58.2	188.2	
06	97.1	15.0	28.6	34.6	175.3	
08	20.0	21.4	17.4	18.2	77.0	Background

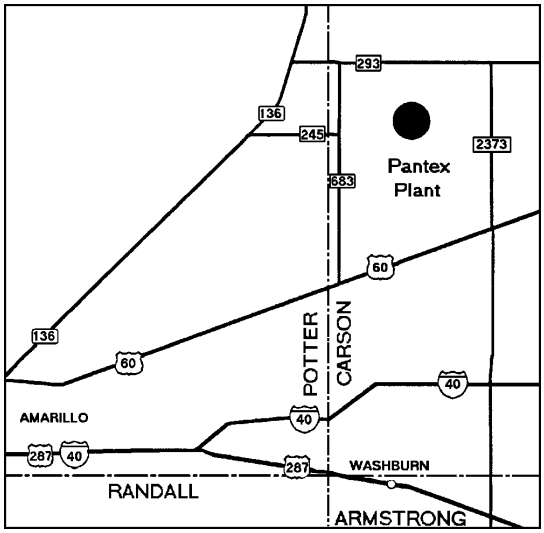
Pantex

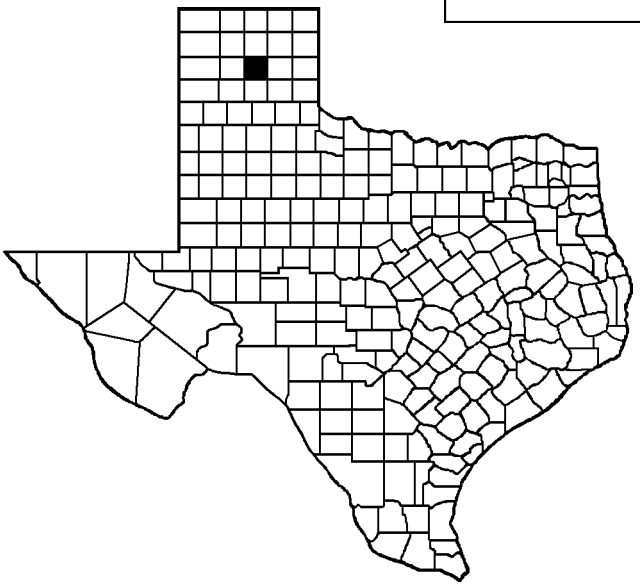
BRC Site No. 005

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 16,000-acre site. The Pantex facility consists of 10,080 acres of U.S. Department of Energy (DOE) owned land and 5,856 acres of land leased from Texas Tech University, used as a safety and security buffer zone

The Pantex plant is located on the Llano Estacado (staked plains) portion of the Great Plains at an elevation of approximately 3,500 feet (1,067 meters). The topography at Pantex plant is relatively flat, characterized by rolling grassy plains and numerous natural playa basins. The region is a semi-arid farming and ranching area. Pantex plant is surrounded by agricultural land, but several significant industrial facilities are also located nearby.

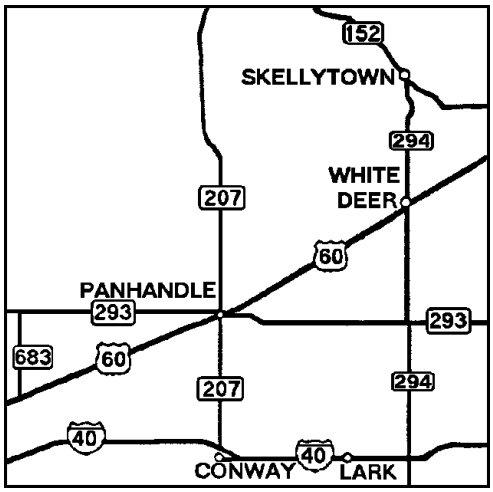
The BRC surveillance program consists of sampling air, water, soil, sediment, and vegetation and TLD monitoring. Analysis of samples is concentrated on determining presence of any special nuclear material.





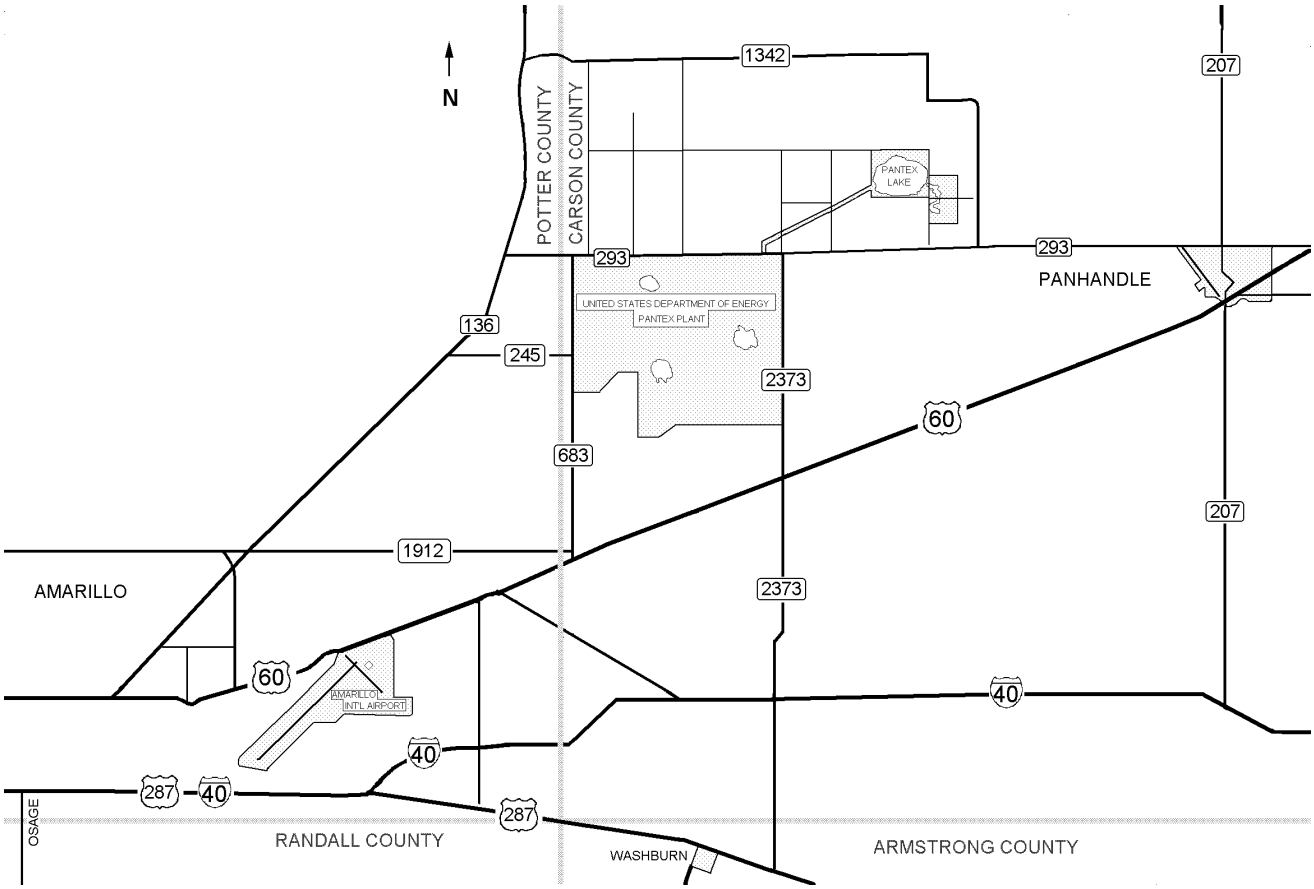
Shaded area indicates location of Carson County

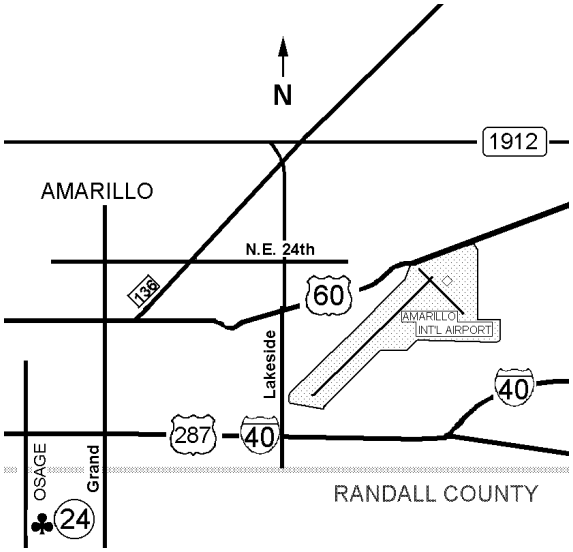
Carson County

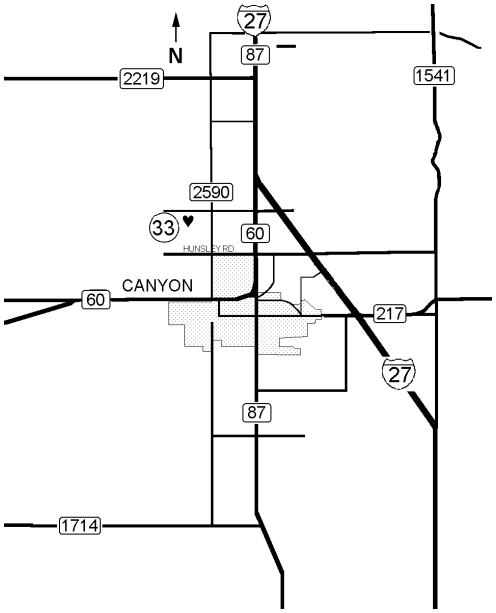


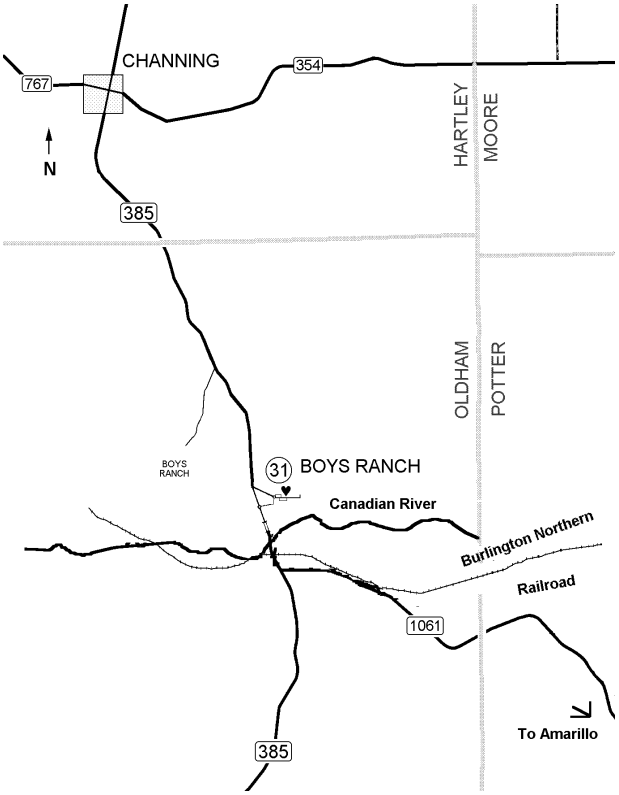
Monitoring Station Locations

♦ TLD Station ♥ Sample Station ♣ TLD & Sample Station

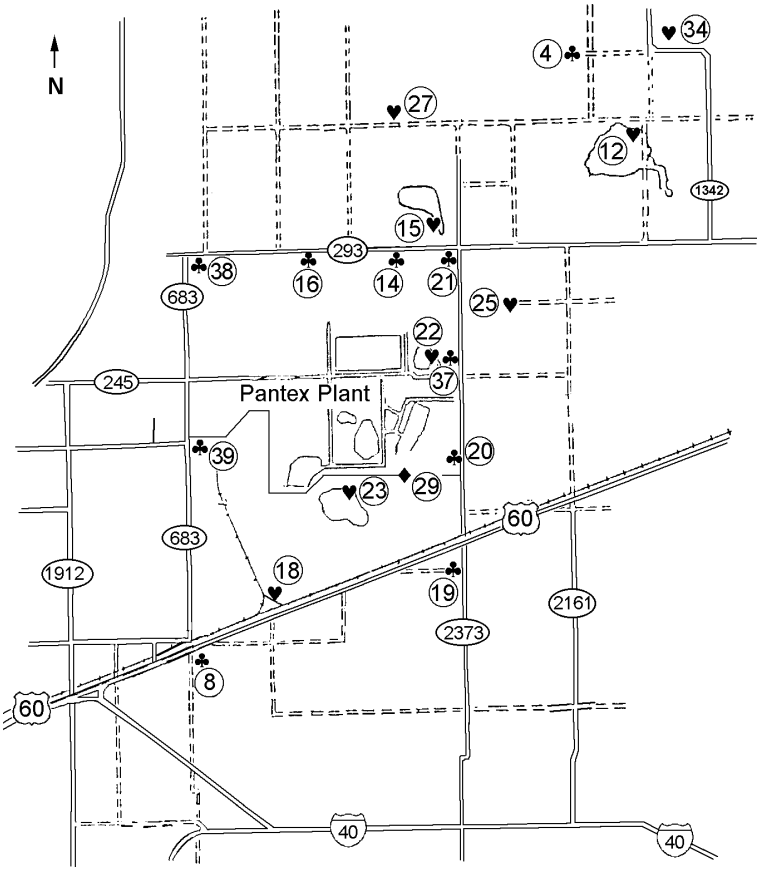


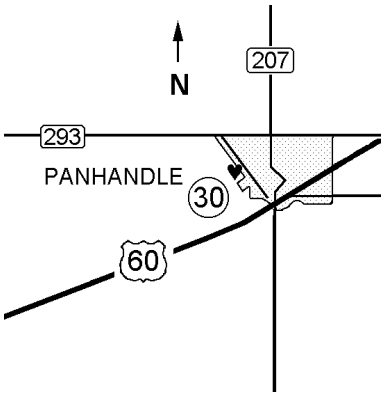






Homeland Security -- Diagram Removed





Thermoluminescent Dosimeter (TLD) Monitoring Results[1]
(quarterly and annual readings are in mrem)

Station	Q1	Q2	Q3	Q4	Annual Dose	Notes
04	23.5	19.0	27.1	28.5	98.1	
08	23.5	19.0	26.0	27.4	95.9	
14	24.5	17.0	27.1	27.4	96.0	
16	23.5	16.0	24.9	27.4	91.8	
19	23.5	19.0	26.0	28.5	97.0	
20	--	18.0	26.0	27.4	95.2	[2]Q1 TLD missing
21	22.5	20.0	24.9	26.3	93.7	
24	21.5	--	22.8	24.1	91.2	Background; [2]Q2 Data lost during transit
29	23.5	--	26.0	26.3	101.1	[2]Q2 Data lost during transit
37	25.6	--	28.2	28.5	109.7	[2]Q2 TLD missing
38	22.5	--	23.8	26.3	96.8	[2]Q2 Data lost during transit
39	23.5	22.0	26.0	26.3	97.8	

NOTE: [1] Background is not subtracted from the data.

[2] If data are missing during a quarter, an average of known quarter readings for that year and location is used to fill in for the missing data.

Environmental Sample Results

Date	Lab No.	Station	Pu-239*	U-234*	U-235*	U-238*	Ra-226
Air Samples µCi/ml							
2003-01-08	ER030053	104	<5E-17	<4.7E-16	<4.7E-16	<4.7E-16	<1.5E-14
2003-01-08	ER030054	105	<1.1E-16	<5.1E-16	<5.1E-16	<5.1E-16	<1.1E-14
2003-01-14	ER030330	104	<5E-17	<4.5E-16	<4.5E-16	<4.5E-16	<1.1E-14
2003-01-14	ER030331	104Q	<5E-17	<4.5E-16	<4.5E-16	<4.5E-16	<1.4E-14
2003-01-14	ER030332	105	<6E-17	<5.2E-16	<5.2E-16	<5.2E-16	8.0E-15
2003-01-30	ER030333	104	<5E-17	<4.7E-16	<4.7E-16	<4.7E-16	<1.1E-14
2003-01-30	ER030334	105	<6E-17	<5.2E-16	<5.2E-16	<5.2E-16	<1.6E-14
2003-03-04	ER030335	104	<5E-17	<4.7E-16	<4.7E-16	<4.7E-16	<1.2E-14
2003-03-04	ER030336	105	<6E-17	<5.1E-16	<5.1E-16	<5.1E-16	<1.2E-14
2003-03-12	ER030337	104	<5E-17	<4.7E-16	<4.7E-16	<4.7E-16	<1.1E-14
2003-03-12	ER030338	105	<6E-17	<5.2E-16	<5.2E-16	<5.2E-16	<1.3E-14
2003-03-18	ER030339	104	<5E-17	<4.7E-16	<4.7E-16	<4.7E-16	<1.4E-14
2003-03-18	ER030340	104Q	<5E-17	<4.5E-16	<4.5E-16	<4.5E-16	<1.3E-14
2003-03-18	ER030341	105	<6E-17	<5.2E-16	<5.2E-16	<5.2E-16	<1.3E-14
2003-04-22	ER030342	104	<5E-17	<4.7E-16	<4.7E-16	<4.7E-16	<1.5E-14
2003-04-22	ER030343	104Q	<5E-17	<4.5E-16	<4.5E-16	<4.5E-16	5.4E-15
2003-04-22	ER030344	105	<6E-17	<5.1E-16	<5.1E-16	<5.1E-16	<1.3E-14
2003-04-30	ER030345	104	<5E-17	<4.8E-16	<4.8E-16	<4.8E-16	1.0E-14
2003-04-30	ER030346	105	<5E-17	<4.9E-16	<4.9E-16	<4.9E-16	<1.2E-14
2003-05-13	ER030347	104	<5E-17	<4.8E-16	<4.8E-16	4.8E-16	<1.5E-14
2003-05-13	ER030348	105	<5E-17	<5.0E-16	<5.0E-16	<5.0E-16	<1.3E-14
2003-05-20	ER030349	104	<5E-17	<4.6E-16	<4.6E-16	<4.6E-16	<1.4E-14
2003-05-20	ER030350	105	<5E-17	4.9E-16	<4.9E-16	<4.9E-16	1.1E-14
2003-06-05	ER030351	104	<5E-17	<4.6E-16	<4.6E-16	<4.6E-16	<1.1E-14
2003-06-05	ER030352	105	<5E-17	<4.9E-16	<4.9E-16	<4.9E-16	<1.2E-14
2003-06-13	ER030601	104	<1.1E-16	<4.8E-16	<4.8E-16	<4.8E-16	<2.2E-14
2003-06-13	ER030602	104Q	<5E-17	4.3E-16	<4.5E-16	<4.5E-16	1.6E-14
2003-06-13	ER030603	105	<5E-17	5.1E-16	<4.8E-16	4.8E-16	1.0E-14
2003-07-01	ER030604	104	<1.0E-16	<4.8E-16	<4.8E-16	<4.8E-16	7.2E-15
2003-07-01	ER030605	105	<5E-17	<4.9E-16	<4.9E-16	<4.9E-16	<1.2E-14

Date	*Lab No.*	*Station*	*Pu-239**	*U-234**	*U-235**	*U-238**	*Ra-226*
2003-07-09	ER030606	104	<1.0E-16	<4.7E-16	<4.7E-16	<4.7E-16	3.0E-14
2003-07-09	ER030607	104Q	<1.4E-16	<4.5E-16	<4.5E-16	<4.5E-16	1.4E-14
2003-07-09	ER030608	105	<6E-17	<5.1E-16	<5.1E-16	<5.1E-16	<1.6E-14
2003-07-16	ER030609	104	<5E-17	<4.8E-16	<4.8E-16	<4.8E-16	<1.5E-14
2003-07-16	ER030610	105	<5E-17	<5.0E-16	<5.0E-16	<5.0E-16	<1.2E-14
2003-07-22	ER030611	104	<5E-17	<4.8E-16	<4.8E-16	<4.8E-16	8.4E-15
2003-07-22	ER030612	104Q	<1.3E-16	<6.1E-16	<6.1E-16	<6.1E-16	<1.9E-14
2003-07-22	ER030613	105	<6E-17	<5.2E-16	<5.2E-16	<5.2E-16	1.9E-14
2003-08-13	ER030614	104	<1.0E-16	<4.8E-16	<4.8E-16	<4.8E-16	<1.4E-14
2003-08-13	ER030615	104Q	<5E-17	<4.5E-16	<4.5E-16	<4.5E-16	<1.3E-14
2003-08-13	ER030616	105	<6E-17	<5.1E-16	<5.1E-16	<5.1E-16	<1.2E-14
2003-08-26	ER030617	104	<5E-17	<4.7E-16	<4.7E-16	<4.7E-16	1.2E-14
2003-08-26	ER030618	105	<1.0E-16	<4.7E-16	<4.7E-16	<4.7E-16	<1.6E-14
2003-08-28	ER030619	104	<1.0E-16	<4.8E-16	<4.8E-16	<4.8E-16	1.8E-14
2003-08-28	ER030620	104Q	<5E-17	<4.5E-16	<4.5E-16	<4.5E-16	<1.2E-14
2003-08-28	ER030621	105	<1.1E-16	<5.1E-16	<5.1E-16	<5.1E-16	<2.9E-14
2003-09-04	ER030622	104	<1.0E-16	<4.7E-16	<4.7E-16	<4.7E-16	<1.4E-14
2003-09-04	ER030623	105	<5E-17	<5.0E-16	<5.0E-16	<5.0E-16	<1.5E-14
2003-09-30	ER040057	104	<5E-17	<4.5E-16	<4.5E-16	<4.5E-16	<1.4E-14
2003-09-30	ER040058	105	<5E-17	<5.0E-16	<5.0E-16	<5.0E-16	<1.5E-14
2003-10-22	ER040061	104	<5E-17	<4.6E-16	<4.6E-16	<4.6E-16	<9.9E-15
2003-10-22	ER040062	105	<6E-17	<5.1E-16	<5.1E-16	5.2E-16	<1.5E-14
2003-11-20	ER040059	104	<5E-17	<4.5E-16	<4.5E-16	<4.5E-16	8.5E-15
2003-11-20	ER040060	105	<6E-17	<5.1E-16	<5.1E-16	<5.1E-16	<1.6E-14
2003-12-04	ER040063	104	<5E-17	<4.3E-16	<4.3E-16	<4.3E-16	1.0E-14
2003-12-04	ER040064	104Q	<5E-17	<4.8E-16	<4.8E-16	4.9E-16	8.0E-15
2003-12-04	ER040065	105	<6E-17	5.9E-16	<5.1E-16	<5.1E-16	<2.9E-14
2003-12-21	ER040066	104	<5E-17	<4.4E-16	<4.4E-16	<4.4E-16	<1.4E-14
2003-12-21	ER040067	104Q	<6E-17	<5.2E-16	<5.2E-16	<5.2E-16	<1.6E-14
2003-12-21	ER040068	105	<6E-17	<5.2E-16	<5.2E-16	<5.2E-16	1.8E-14

Date	*Lab No.*	*Station*	*Pu-239**	*U-234**	*U-235**	*U-238**	*H-3*	*Ra-226*	*U-238*
Sediment µCi/g									
2003-01-14	ER030075	22	<1E-7	1.0E-6	<1.0E-6	<1.0E-6	<1.0E-6	<3.5E-6	<2.0E-6
2003-04-23	ER030240	12	<1E-7	<1.0E-6	<1.0E-6	<1.0E-6	-	<3.4E-6	<3.1E-6
2003-07-22	ER030438	23	<1E-7	<1.0E-6	<1.0E-6	1.0E-6	-	2.8E-6	<2.9E-6
2003-10-15	ER030667	23	<1E-7	<1.0E-6	<1.0E-6	<1.0E-6	-	<1.8E-6	<1.1E-6
Soil µCi/g									
2003-01-12	ER030066	14	<1E-7	1.0E-6	<1.0E-6	<1.0E-6	-	<3.3E-6	<3.0E-6
2003-01-13	ER030067	18	<1E-7	<1.0E-6	<1.0E-6	<1.0E-6	-	<3.3E-6	<1.8E-6
2003-01-13	ER030068	20	<1E-7	1.0E-6	<1.0E-6	<1.0E-6	-	<3.1E-6	<2.8E-6
2003-01-13	ER030069	37	<1E-7	<1.0E-6	<1.0E-6	<1.0E-6	-	<4.2E-6	<2.5E-6
2003-01-13	ER030070	39	<1E-7	<1.0E-6	<1.0E-6	<1.0E-6	-	<3.3E-6	<2.8E-6
2003-04-22	ER030231	04	<1E-7	<1.0E-6	<1.0E-6	1.0E-6	-	<2.4E-6	<1.5E-6
2003-04-22	ER030233	16	<1E-7	<1.0E-6	<1.0E-6	1.0E-6	-	<2.9E-6	<2.4E-6
2003-04-22	ER030234	19	<1E-7	<1.0E-6	<1.0E-6	1.0E-6	-	<3.4E-6	<3.0E-6
2003-04-22	ER030235	21	<1E-7	<1.0E-6	<1.0E-6	<1.0E-6	-	<2.6E-6	<2.3E-6
2003-04-22	ER030236	38	<1E-7	<1.0E-6	<1.0E-6	1.1E-6	-	<2.6E-6	<1.7E-6
2003-04-23	ER030232	08	<1E-7	<1.0E-6	<1.0E-6	<1.0E-6	-	<3.3E-6	<3.1E-6
2003-07-22	ER030431	18	<1E-7	1.0E-6	<1.0E-6	1.1E-6	-	<2.6E-6	<1.6E-6
2003-07-22	ER030432	20	<1E-7	1.0E-6	<1.0E-6	<1.0E-6	-	1.4E-6	<1.4E-6
2003-07-22	ER030433	37	<1E-7	1.0E-6	<1.0E-6	1.1E-6	-	4.0E-6	<3.0E-6
2003-07-22	ER030434	39	<1E-7	1.1E-6	<1.0E-6	1.0E-6	-	<3.0E-6	<2.5E-6
2003-10-14	ER030659	14	<1E-7	1.0E-6	<1.0E-6	1.1E-6	-	<2.9E-6	<1.7E-6
2003-10-14	ER030660	18	<1E-7	<1.0E-6	<1.0E-6	1.1E-6	-	<2.9E-6	<2.6E-6
2003-10-14	ER030661	20	<1E-7	<1.0E-6	<1.0E-6	1.0E-6	-	<2.4E-6	<1.5E-6
2003-10-14	ER030662	37	<1E-7	<1.0E-6	<1.0E-6	1.0E-6	-	<2.8E-6	<1.7E-6
2003-10-14	ER030663	39	<1E-7	1.0E-6	<1.0E-6	<1.0E-6	-	<3.0E-6	<2.6E-6

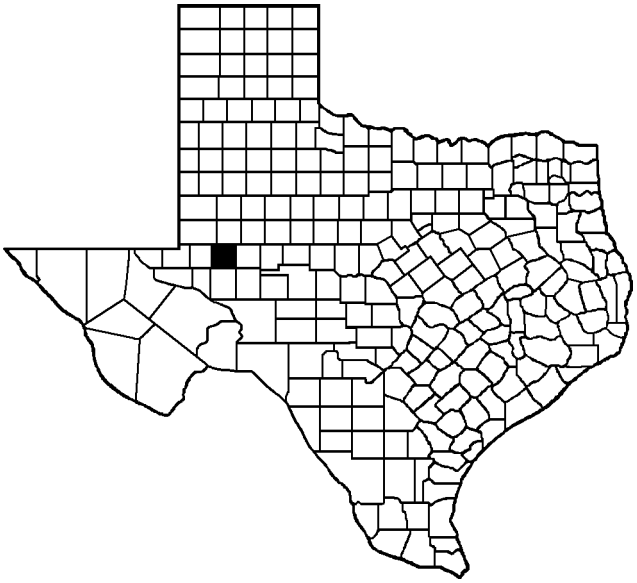
Date	*Lab No.*	*Station*	*Pu-239**	*U-234**	*U-235**	*U-238**	*H-3*	*Ra-226*	*U-238*
Vegetation µCi/g									
2003-07-22	ER030430	20	<1E-7	<1.0E-6	<1.0E-6	<1.0E-6		<7E-7	<5E-7
Water-Drinking µCi/ml									
2003-01-14	ER030073	30	<1E-10	4.0E-9	<1.0E-9	1.9E-9	<1.0E-6	<1.35E-7	<1.64E-7
2003-04-22	ER030239	30	<1E-10	5.1E-9	<1.0E-9	2.9E-9	<1.0E-6	<1.12E-7	<7.6E-8
2003-07-22	ER030437	30	<1E-10	4.8E-9	<1.0E-9	2.3E-9	<1.0E-6	<7.8E-8	<6.5E-8
2003-10-14	ER030666	30	<1E-10	5.4E-9	<1.0E-9	2.6E-9	<1.0E-6	<6.5E-8	6.5E-8
Water-Ground µCi/ml									
2003-01-13	ER030072	27	<1E-10	3.3E-9	<1.0E-9	1.7E-9	<1.0E-6	<1.14E-7	<7.7E-8
2003-04-23	ER030238	27	<1E-10	4.8E-9	<1.0E-9	2.4E-9	<1.0E-6	<1.02E-7	<7.6E-8
2003-07-22	ER030436	27	<1E-10	4.3E-9	<1.0E-9	2.1E-9	<1.0E-6	<5.6E-8	<5.0E-8
2003-10-15	ER030665	27	<1E-10	4.7E-9	<1.0E-9	2.3E-9	<1.0E-6	6.2E-8	6.9E-8
Water-Surface µCi/ml									
2003-01-13	ER030071	24	<1E-10	3.8E-9	<1.0E-9	2.4E-9	<1.0E-6	<1.14E-7	<7.6E-8
2003-01-14	ER030074	22	<1E-10	<1.0E-9	<1.0E-9	<1.0E-9	<1.0E-6	<9.6E-8	<7.7E-8
2003-04-23	ER030237	24	<1E-10	1.1E-8	<1.0E-9	6.9E-8	<1.0E-6	<1.12E-7	<7.7E-8
2003-07-22	ER030435	24	<1E-10	5.5E-9	<1.0E-9	3.1E-9	<1.0E-6	8.4E-8	9.2E-8
2003-10-15	ER030664	24	<1E-10	5.2E-9	<1.0E-9	3.2E-9	<1.0E-6	7.6E-8	7.7E-8

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

R/A Services, Inc.

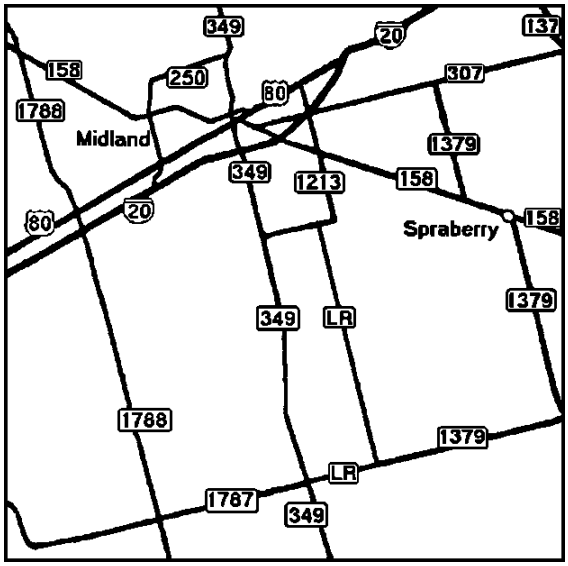
BRC Site No. 009

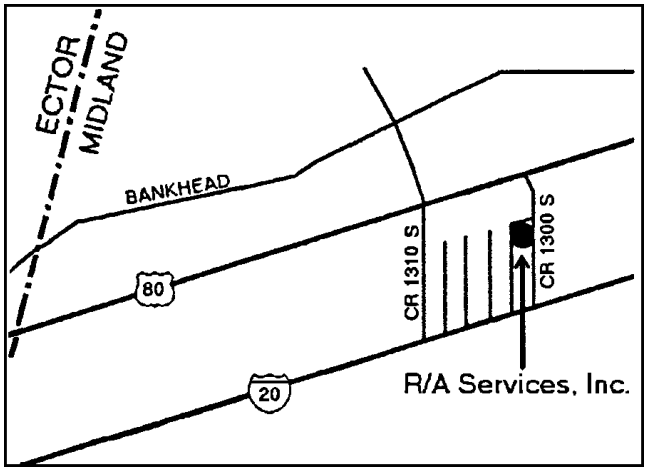
The former R/A Services, Inc. site is located approximately 3.5 miles south of Midland/ Odessa International Airport. This site is currently occupied by another licensee that performs oil field tracer studies and is in the process of obtaining the property. The BRC surveillance program consists of TLD monitoring.



Shaded area indicates location of Midland County

Midland County

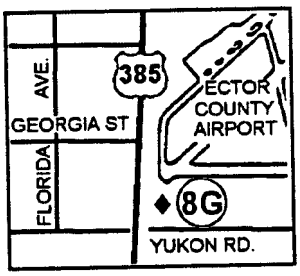




Monitoring Station Locations

♦ TLD Station	♥ Sample Station	♣ TLD & Sample Station

Homeland Security --
Diagram Removed



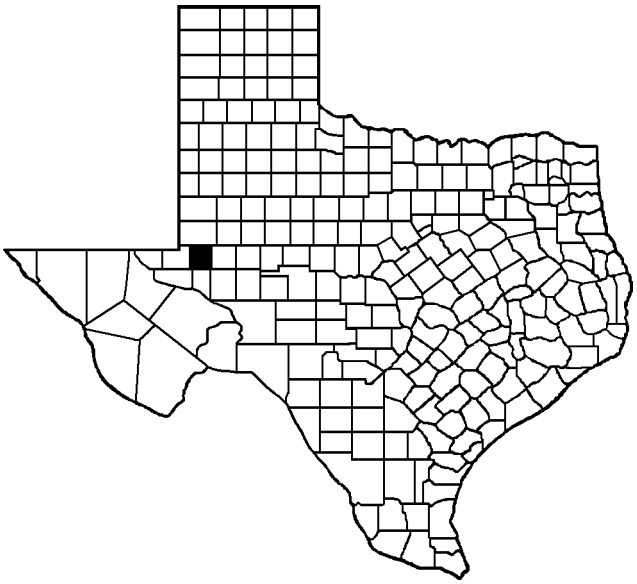
Thermoluminescent Dosimeter (TLD) Monitoring Results
(quarterly and annual readings are in mrem)

Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Notes*
01	10.0	2.2	10.2	23.4	45.8	
02	16.0	8.7	17.4	25.2	67.3	
03	28.0	11.9	27.6	67.6	135.1	
04	14.0	3.3	16.4	23.4	57.1	
05	6.0	0.0	6.1	12.6	24.7	
06	3.0	0.0	4.1	9.0	16.1	
08	4.0	0.0	6.1	24.3	34.4	
08	20.0	21.4	17.4	18.2	77.0	Background
11	2.0	0.0	2.0	11.7	15.7	
12	2.0	0.0	2.0	5.4	9.4	

Radiation Technology, Inc.

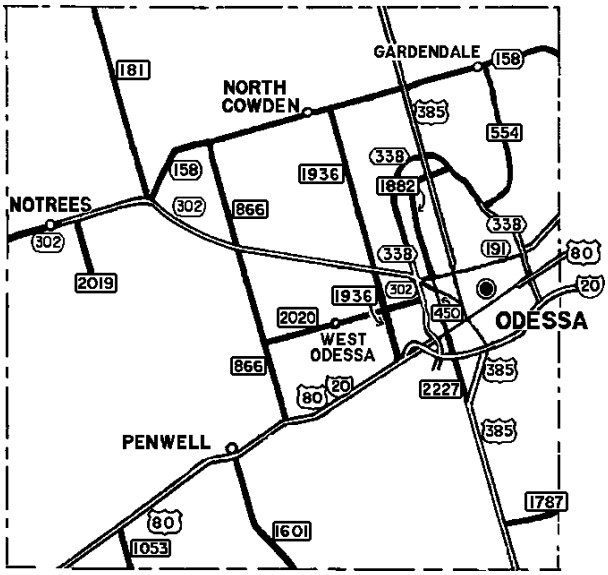
BRC Site No. 050

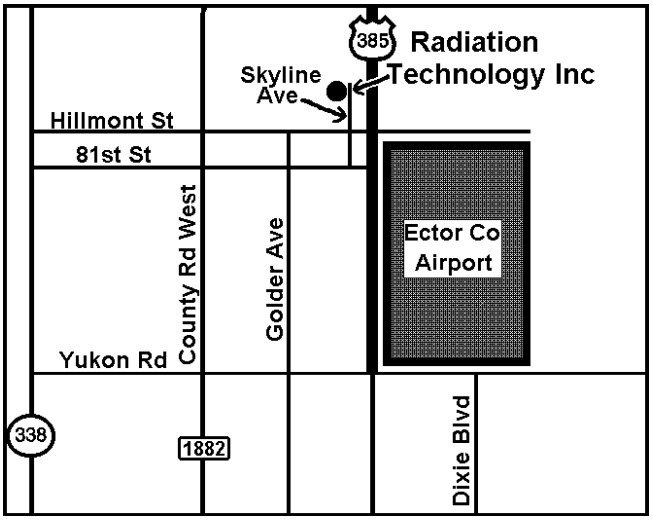
Radiation Technology, Inc. (RTI), located six miles north of downtown Odessa, provides installation, repair, and maintenance of nuclear gauging devices and provides services for loading and unloading radioactive sources in nuclear gauges. BRC surveillance program consists of TLD monitoring.



Shaded area indicates location of Ector County

Ector County

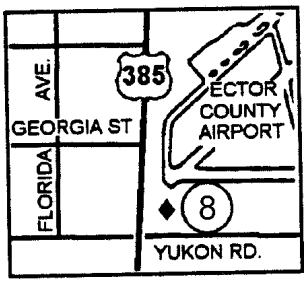




Monitoring Station Locations

♦ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security -- Diagram Removed



Thermoluminescent Dosimeter (TLD) Monitoring Results*
(quarterly and annual readings are in mrem)

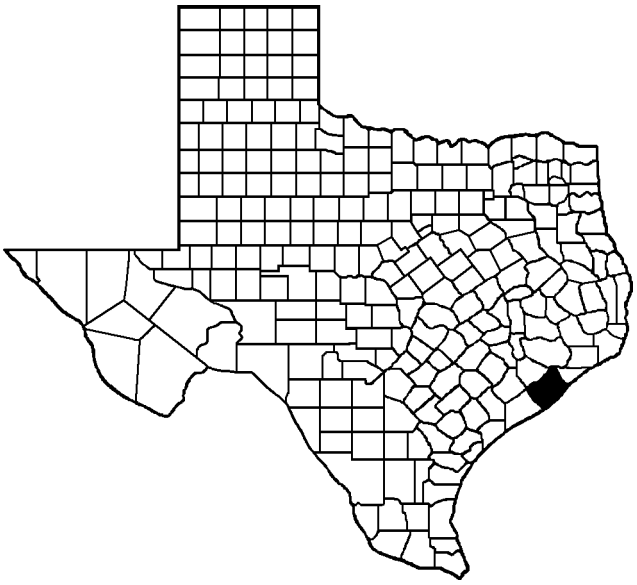
Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Notes*
01	48.0	53.1	42.5	30.6	174.2	
02	1603.5	2230.6	1803.2	1804.2	7441.5	
03	564.0	643.5	566.8	364.9	2139.2	
04	77.0	79.1	87.0	62.2	305.3	
08	20.0	21.4	17.4	18.2	77.0	Background

NOTE: * Neutron dosimeters are deployed at this facility. The neutron doses are added to gamma doses.

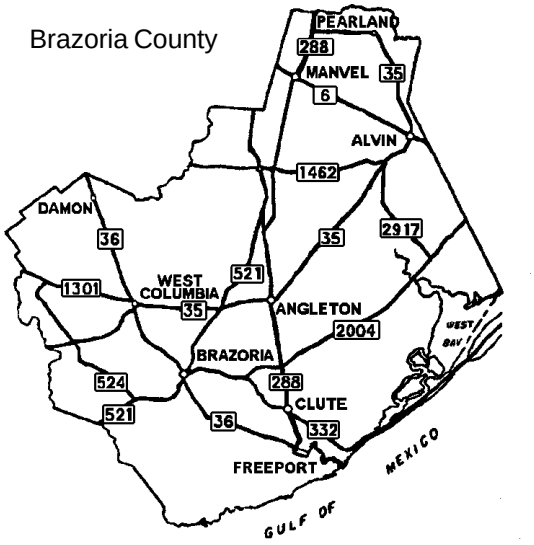
Rhodia, Inc.

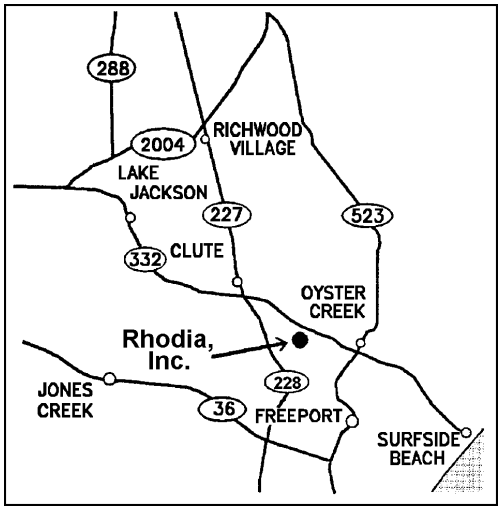
BRC Site No. 026

Rhodia, Inc. is an international specialty chemicals manufacturer. Rhodia's Freeport facility, located approximately 55 miles south of Houston, uses material containing uranium and thorium. The BRC surveillance program consists of TLD monitoring.



Shaded area indicates location of Brazoria County





Monitoring Station Locations

♦ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security --
Diagram Removed

Thermoluminescent Dosimeter (TLD) Monitoring Results
(quarterly and annual readings are in mrem)

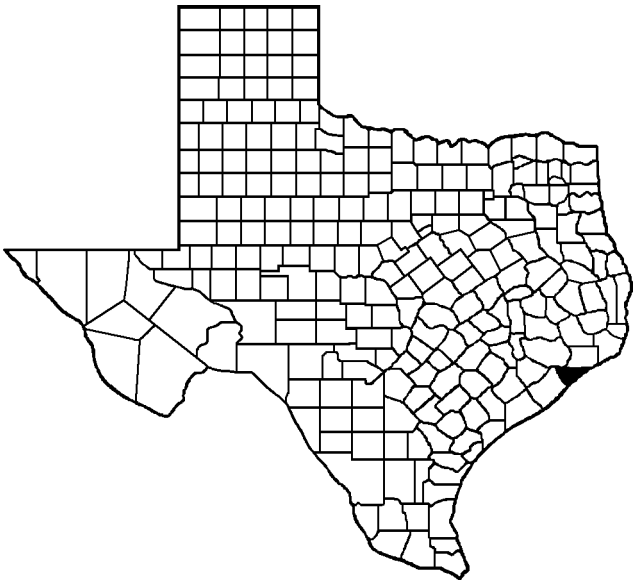
Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Notes*
01	6.0	17.0	8.7	0.0	31.7	
02	0.0	1.0	0.0	0.0	1.0	
04	--	6.0	6.5	5.2	23.6	[1]Q1 TLD missing
05	36.0	31.0	29.3	31.2	127.5	
06	31.0	28.0	24.9	31.2	115.1	
16	16.0	15.0	14.1	14.7	59.8	Background

NOTE: [1] If data are missing during a quarter, an average of known quarter readings for that year and location is used to fill in for the missing data.

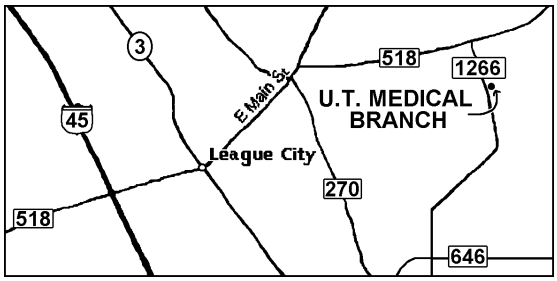
University of Texas Medical Branch

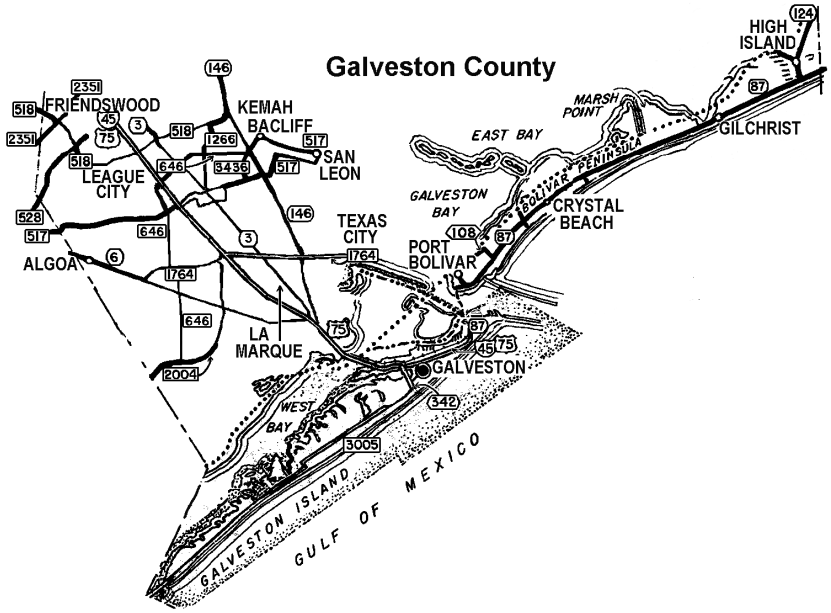
BRC Site No. 049

University of Texas Medical Branch (UTMB), located in Galveston, is a research medical hospital. The BRC surveillance program consists of TLD monitoring at their laundry facility near League City.



Shaded area indicates location of Galveston County





Monitoring Station Locations

♦ TLD Station ♥ Sample Station ♣ TLD & Sample Station

Homeland Security --
Diagram Removed

Thermoluminescent Dosimeter (TLD) Monitoring Results*
(quarterly and annual readings are in mrem)

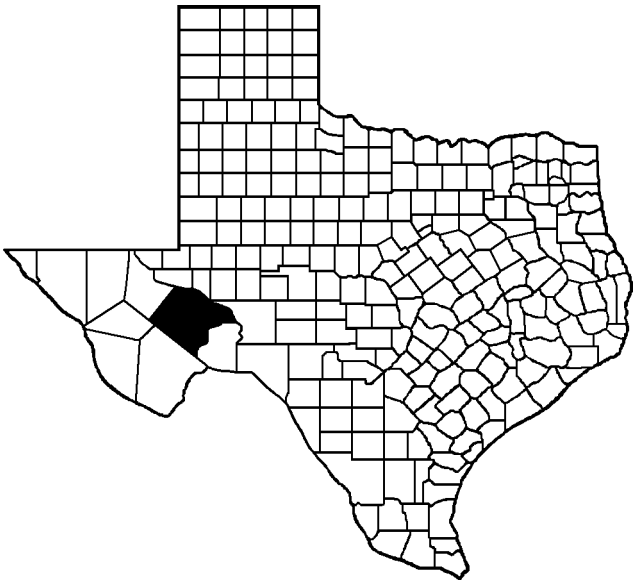
Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Note*
01	45.5	2.0	0.0	0.9	48.4	
02	31.1	5.0	0.0	0.9	37.0	
03	22.2	2.0	0.0	1.8	26.0	
04	2.2	2.0	0.0	1.8	6.0	
05	14.4	12.0	11.9	11.8	50.1	Background

NOTE: * Neutron dosimeters are deployed at this facility. The neutron doses are added to gamma doses.

U. T. Systems Interim Waste Storage Facility

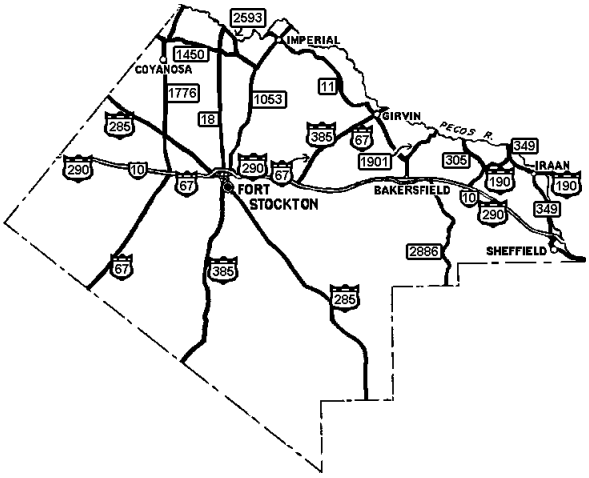
BRC Site No. 042

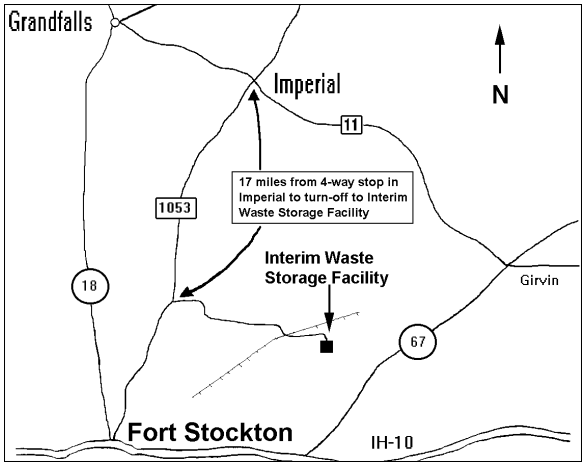
University of Texas Systems Interim Waste Storage Facility, located in Pecos County, provides temporary storage for low-level radioactive waste from several U.T. campuses throughout Texas. The BRC surveillance program consists of TLD monitoring.



Shaded area indicates location of Pecos County

Pecos County

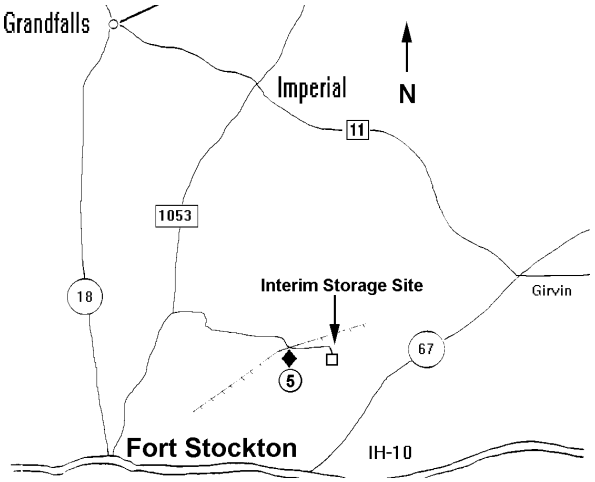




Monitoring Station Locations

♦ TLD Station	♥ Sample Station	♣ TLD & Sample Station

Homeland Security -- Diagram Removed



Thermoluminescent Dosimeter (TLD) Monitoring Results
(quarterly and annual readings are in mrem)

Station	*Q1*	*Q2*	*Q3*	*Q4*	*Annual Dose*	*Note*
01	2.1	2.0	2.1	1.8	8.0	
02	0.0	0.0	0.0	0.0	0.0	
03	0.0	0.0	0.0	0.0	0.0	
04	0.0	0.0	0.0	0.0	0.0	
05	21.7	19.0	19.6	20.7	81.0	Background

Appendices

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QAP 0303

EML-621
June 2003

QAP 58 Results by Laboratory

Lab: TX Texas Dept. of Health/Laboratories, Austin

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 56 Evaluation
Matrix: AI Air Filter Bq / filter								
1	AM241	0.279	0.008	0.340	0.040	0.821	W	
1	CO60	34.300	0.500	33.500	0.870	1.024	A	A
1	CS137	106.700	3.700	99.700	2.300	1.070	A	A
1	Gross Alpha	1.220	0.080	1.170	0.120	1.043	A	N
1	Gross Beta	1.410	0.090	1.500	0.150	0.940	A	A
1	MN54	47.250	1.920	43.800	1.130	1.079	A	A
1	PU238	0.491	0.005	0.520	0.010	0.944	A	A
1	PU239	0.318	0.006	0.330	0.010	0.964	A	A
1	U234	0.204	0.004	0.240	0.003	0.850	W	A
1	U238	0.203	0.004	0.240	0.010	0.846	W	W
Matrix: SO Soil Bq / kg								
1	AC228	57.000	1.900	57.600	2.500	0.990	A	A
1	AM241	11.910	0.960	15.600	1.000	0.763	W	
1	BI212	32.600	3.800	60.600	4.000	0.538	W	W
1	BI214	60.700	1.900	67.000	2.300	0.906	A	A
1	CS137	1493.000	32.000	1450.000	73.000	1.030	A	A
1	K40	674.000	18.000	636.000	33.000	1.060	A	A
1	PB212	51.100	2.200	57.900	2.900	0.883	W	A
1	PB214	61.400	2.200	71.100	2.300	0.864	W	A
1	PU239	23.800	0.800	23.400	1.100	1.017	A	A
1	SR90	50.500	6.500	64.400	3.100	0.784	W	A
1	TH234	125.000	9.000	127.000	7.100	0.984	A	
1	U234	106.900	2.400	120.000	0.500	0.891	A	A
1	U238	111.300	2.500	125.000	0.300	0.890	A	A
Matrix: VE Vegetation Bq / kg								
1	AM241	3.210	0.470	3.510	0.130	0.915	A	
1	CO60	14.500	0.800	12.100	0.700	1.198	A	W
1	CS137	485.000	13.000	444.000	22.000	1.092	A	W
1	K40	1237.000	31.000	1120.000	60.000	1.104	A	A
1	PU239	4.870	0.360	5.170	0.520	0.942	A	A
1	SR90	538.000	22.000	650.000	27.000	0.828	A	A
Matrix: WA Water Bq / L								
1	AM241	2.370	0.050	2.130	0.150	1.113	A	
1	CO60	240.200	2.100	234.000	8.400	1.026	A	A
1	CS134	25.500	0.400	30.500	1.090	0.836	W	A
1	CS137	65.300	1.400	63.800	3.400	1.024	A	A
1	Gross Alpha	361.000	31.000	377.500	10.000	0.956	A	A
1	Gross Beta	631.000	31.000	627.500	10.000	1.006	A	A
1	H3	445.000	27.000	390.000	3.400	1.141	A	A
1	PU238	3.430	0.070	3.330	0.300	1.030	A	A
1	PU239	4.000	0.080	3.920	0.300	1.020	A	A
1	SR90	4.270	0.550	4.340	0.200	0.984	A	A
1	U234	1.940	0.050	2.050	0.190	0.946	A	A
1	U238	1.900	0.050	2.160	0.210	0.880	W	A

Values for elemental uranium are reported in µg/filter, g, or mL. **pCi/g or mL=Bq x 0.027**

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

Texas Department of Health Laboratory

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/m^3.

Texas Department of Health Laboratory

Detection Limits for Chemical Analysis Procedures
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
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	
	µCi/g	pCi/kg	µCi/filter	pCi/filter	µCi/ml	pCi/l	µCi/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