TEXAS
Health and Human Services

Texas Department of State Health Services

John Hellerstedt, M.D.
Commissioner

Pantex Facility Environmental Sample Report for January through December 2019

Pantex Environmental Sample Report For January – December, 2018

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Section 1

This document contains the environmental monitoring results for samples obtained on and around the Pantex facility in support of the Agreement-in-Principle, Task II for the months of January through December 2019. Maps indicating sample locations are also included in the report.

The Texas Department of State Health Services (DSHS) Laboratory Services Section performed all analyses of soil, water, crops, sediment, and vegetation samples.

Area monitoring for exposure utilized Landauer optically stimulated luminescence devices (OSL). These badges were processed by Landauer. Background was not subtracted from these readings to show ambient doses. Unless otherwise noted, the badges were exposed to radiation as they passed through x-ray devices at an airport. The total exposure measured by an OSL dosimeter which was used to measure the exposure from the airport screening x-ray device to the badges was 49 millirem. If that dose was subtracted from the dose recorded from the posted OSL dosimeters, no dosimeter would have received more than 100 millirem for the year.

Analysis of sample data indicated no release of radioactive material to the environment that exceeded regulatory limits of the DSHS or any other regulatory agency occurred.

Specific sample information can be made available through an open record request to radiationcontrolopenrecords@dshs.state.tx.us.

Questions about this report should be directed to Arthur L Tucker at 512-834-6712 or through email at art.tucker@dshs.texas.gov.

Robert Free
Environmental Monitoring Group Manager

Section 2

ENVIRONMENTAL SURVEILLANCE PROGRAM

Licensee/Facility:	Pantex – USDOE Facility
Location:	Carson County
Contact:	Craig Snider
Phone Number:	(806) 477-7158
Mailing Address:	Craig Snider U. S. Department of Energy, NNSA Pantex Site Office P. O. Box 30030 Amarillo, Texas 79120-0030
License Number:	Not Applicable
Use Code:	Not Applicable
Date Program Revised:	January 21, 2020
Additional Information:	*Note – Arthur Tucker at DSHS (Radiation Control Program) exchanges OSL's

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM

Acronyms

Acronym:	Ac	Definition:	Actinium
Acronym:	AS	Definition:	Alpha Spectroscopy
Acronym:	BC	Definition:	Beta Counting (Proportional)
Acronym:	Be	Definition:	Beryllium
Acronym:	Bi	Definition:	Bismuth
Acronym:	Cs	Definition:	Cesium
Acronym:	EXP	Definition:	Exposure
Acronym:	FT	Definition:	Feet
Acronym:	GB	Definition:	Gross Beta
Acronym:	GPS	Definition:	Global Positioning System
Acronym:	GS	Definition:	Gamma Spectroscopy
Acronym:	H3	Definition:	Tritium
Acronym:	K	Definition:	Potassium
Acronym:	Pb	Definition:	Lead
Acronym:	PU	Definition:	Plutonium
Acronym:	QTR	Definition:	Quarter
Acronym:	Ra	Definition:	Radium
Acronym:	TCEQ	Definition:	Texas Commission on Environmental Quality
Acronym:	Tl	Definition:	Thallium
Acronym:	TLD	Definition:	Thermoluminescence Dosimeter
Acronym:	U	Definition:	Uranium
Acronym:	uR/hr	Definition:	MicroRem per hour

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM
NOTES

1	Sample 30. City of Panhandle Maintenance can be contacted at 806-537-3517 to arrange for sampling of the cities well water. Sample should not be acified.
2	Sample 15. This sample is taken on private property. Observe landowners rights.
3	Samples at Playas 1, 3, and 4 must be coordinated with Pantex personnel and require their accompaniment.
4	Soil and vegetation samples should be taken in the immediate area of the posted TLD when possible. If no TLD is located at the sample location, mark the sample location with a flag stake.
5	*If water sample is not available due to environmental conditions in the quarter for which it was scheduled, the sample must be taken in the next quarter in which samples are obtained.
6	** Based on Burning Ground Activity.

Environmental Sampling Procedure for Pantex

1. Scope

The scope of this procedure is to provide guidance for performing radiological sampling on and around the Pantex facility in support of the Agreement-In-Principle, Task II.

A. Water Samples

I. Purpose

Water samples are collected and evaluated for calculating ingestion exposure pathway hazards resulting from the release of radioactive materials.

Discussion

a. In almost any conceivable event involving the release of radioactive materials, water contamination should be negligible, but the possibility of significant contamination cannot be completely ignored.

(1) Public concerns demand that public water supplies be sampled.

(2) Food producers and/or harvesters may require assurance that products grown or processed using area water supplies will be marketable.

(3) DSHS' responsibility for protecting the public health and safety will not permit ignoring the potential of exposure through this medium.

b. Contaminants may not appear in water supplies until long after the release of radioactive material has terminated.

(1) Contaminants in surface water supplies may result from run-off that has washed adjacent land areas and vegetation.

(2) Contaminants in ground water supplies may take years to appear because of the extremely slow movement of water through some aquifers.

II. Equipment

The following equipment will be required for collection of water samples:

- One-gallon cubitainer with cap and transport box
- Pen, pencil or permanent marker
- Absorbent towels
- Bucket or dipper
- Security tape
- Personal Protective Equipment (PPE)

III. Collection

a. Cubitainers should be capped prior to entry into the sample area, and should remain capped at all times except while they are being filled.

b. Always rinse the cubitainer immediately before use. Rinse the cubitainer by filling it approximately half full, shaking it to wash all inside surfaces, and emptying it before filling it with the sample intended for analysis. (Water from the source intended to be sampled may be used to rinse the cubitainer.)

c. Each water sample should consist of 1-gallon of water.

d. Collecting the sample.

(1) Surface water samples should be collected by pouring the sample into the cubitainer from a bucket or dipper.

(a) *When collecting samples from shallow sources, care must be exercised to avoid stirring up silt that could influence the sample results.*

(2) Samples from municipal water supplies should be collected from a raw water tap. Prior to obtaining the sample, allow the sample to flow uncollected for an ample period of time to allow the line to be flushed and a representative sample collected.

e. After filling, cap tightly and dry the outside of the cubitainer. Secure the cap in place using security tape.

f. Assemble the cubitainer transport box if available.

g. Label to the cubitainer with the sample information.

h. Place the cubitainer in the cubitainer transport box if available and close box cover.

i. Wash any buckets, dippers or funnels in clean water before using them to collect another sample.

j. Store used gloves and/or shoe covers in a plastic bag until they can be properly disposed of. Any used absorbent towels may also be stored in the bag with the discarded gloves and shoe covers.

k. All water samples shall be forwarded to the DSHS laboratory facility for evaluation.

(1) Note: Chain of sample custody shall be certified by each person having temporary or ultimate custody of a specific sample.

B. Vegetation Samples Including Crops

I Purpose

Vegetation and or crop samples are collected and evaluated for estimating ingestion exposure pathway hazards. The term vegetation as used in this procedure is inclusive of crops.

II Discussion

1 Contaminants deposited on, or absorbed by vegetation are significant because they could potentially affect persons in one or more of the following manners:

(a) Direct ingestion on the surface of vegetables, grain, nuts or fruits, or in the edible portion of the plant following uptake;

(b) Indirect ingestion through consumption of meat, milk or other foods from animals that have eaten vegetation on or in which contaminants were present.

(c) The size of the area from which vegetation samples are collected is of little significance because the intent in evaluating the sample is to determine the

quantity of radionuclides that would be ingested during plant consumption. Assessments will be based on the quantity of contaminants per unit weight or volume of vegetation.

III. Equipment

For collecting grass samples, or samples of other plants that can be cut with grass clippers, the following equipment will be required:

- Grass clippers
- Pen, pencil or permanent marker
- Spray bottle with water
- Absorbent towels
- Large (1 gallon or larger) sealable bags
- Security tape.
- Personal Protection Equipment (PPE)

a. For collecting hay samples, wire cutters may be required.

b. For collecting grain samples, a knife may be required for cutting the seed head from the plant.

IV. Collection

a. Unless otherwise specified, each sample should consist of at least a 1-gallon sealable bag of vegetation. Excess air should be squeezed out of the bag before it is closed

The 1-gallon sealable bag will contain the desired quantity if it is filled with tightly packed cured hay or dry grass, or if it is filled with moderately packed green grass.

b. For samples taken from pastures, fields or orchards prior to harvest, the selection of vegetation to be included in a given sample should be based on the following considerations:

(1) If the sample is to represent vegetation that an animal would consume during grazing, the sample should include only plants that the animal would normally eat and be limited to the portion of the plant normally consumed by the animal.

(2) If the sample is to consist of items for human consumption, include only the part of the plant that is normally eaten, plus any husks, shucks, rinds, pods, peelings, skins, hulls or shells not routinely removed prior to retail marketing.

(3) If the sample is to represent nuts or grain that would be harvested for human or animal consumption, include the hulls, shells or seed heads.

(4) If the sample is to represent plants that would be harvested as hay or ensilage, include the entire above ground portion of the plant.

c. Close the 1-gallon sealable bag and seal it with security tape.

d. Enter required data on the sample bag.

e. Store used gloves and/or shoe covers in a plastic bag until they can be properly disposed of.

f. Wash the grass clippers (or other collection tools) with clean water before using them to collect another sample.

g. All vegetation or crop shall be forwarded to the DSHS laboratory facility for evaluation.

Note: Chain of sample custody shall be certified by each person, including couriers, having temporary or ultimate custody of a specific sample.

C. <u>Soil Samples</u>

I Purpose

a. Soil samples are collected and evaluated to identify and quantify radioactive contaminants that have been deposited on the ground surface as a result of an airborne release.

II Discussion

a. Contaminants deposited on the soil are significant because they could potentially affect persons through plant uptake and subsequent entry into the food chain.

b. In instances where the soil is very uneven due to clods or cracking, a greater sampling depth will be required.

III. Equipment

The following equipment will be required each time a soil sample is collected:

- Ruler (1 foot minimum)
- Trowel
- Sample container with lid (16 oz. plastic tub)
- Roll of Tape
- Pen, pencil or permanent marker
- Spray bottle with water
- Absorbent towels
- Security tape
- Personal Protection Equipment (PPE)

IV. Collection

a. When selecting a soil collection site, apply the following criteria in descending order of priority.

Note: Except as noted below, if no site is found to meet the sampling criteria, choose a site that comes closest to meeting the criteria.

(1) Ideally, the site should be free of vegetation; but, some vegetation will probably be present on all sites.

(2) When it is necessary to collect a sample that is covered with vegetation, clip the vegetation closely prior to taking the sample.

b. Mark off a 12" X 12" area within the selected site, being careful not to touch the ground inside the marked area.

c. Remove the soil from inside the marked area to a uniform depth and place it in the sample container leaving just enough space for the lid.

(1) Sampling depth may be varied from sample locations if doing so will result in a more representative sampling.

d. Use security tape to seal the lid to the container.

e. Enter required data on sample container.

f. Wash the trowel with clean water before using it to collect another sample.

g. Store used gloves and/or shoe covers in a plastic bag until they can be properly disposed. Any used absorbent towels may also be stored in the bag with the discarded gloves and shoe covers.

h. All soil samples collected shall be forwarded to the DSHS laboratory facility for evaluation.

Note: Chain of sample custody shall be certified by each person, including couriers, having temporary or ultimate custody of a specific sample.

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	004	SAMPLE TYPE	TLD	uR/Hr METER READING
		ANALYSIS TYPE:	PASSIVE INTEGRATION OF GAMMA RADIATION	GAMMA EXP RATE
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	
LOCATION DESCRIPTIO	6.3 MI NNE OF PANTEX, 1.2 MI NW OF PANTEX LAKE, NEAR CORNER OF FENCE ENCIRCLING CITY OF AMARILLO PUMP STA. ON BARBED WIRE FENCE NEXT TO PANTEX PLANT AIR SAMPLER OA-AR-04. PANTEX PLANT TLD LOCATION OD-04.			
	GPS:	N 35.39763 W 101.50608	GPS dm	N 35 23.819 W 101 30.655

STATION:	004	SAMPLE TYPE	SOIL	
		ANALYSIS TYPE:	GS,AS	
FREQUENCY:	2 & 4 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239
LOCATION DESCRIPTIO	6.3 MI NNE OF PANTEX, 1.2 MI NW OF PANTEX LAKE, NEAR CORNER OF FENCE ENCIRCLING CITY OF AMARILLO PUMP STA. ON BARBED WIRE FENCE NEXT TO PANTEX PLANT AIR SAMPLER OA-AR-04. PANTEX PLANT TLD LOCATION OD-04.SAMPLES TAKEN 6 FT N OF PANTEX PLANT AIR SAMPLER.			
	GPS:	N 35.39763 W 101.50608	GPS dm	N 35 23.819 W 101 30.655

STATION:	004	SAMPLE TYPE	VEGETATION	
		ANALYSIS TYPE:	GS,AS,H3	
FREQUENCY:	2 & 4 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3
LOCATION DESCRIPTIO	6.3 MI NNE OF PANTEX, 1.2 MI NW OF PANTEX LAKE, NEAR CORNER OF FENCE ENCIRCLING CITY OF AMARILLO PUMP STA. ON BARBED WIRE FENCE NEXT TO PANTEX PLANT AIR SAMPLER OA-AR-04. PANTEX PLANT TLD LOCATION OD-04.SAMPLES TAKEN 6 FT N OF PANTEX PLANT AIR SAMPLER.			
	GPS:	N 35.39763 W 101.50608	GPS dm	N 35 23.819 W 101 30.655

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	008	SAMPLE TYPE	TLD	uR/Hr METER READING
		ANALYSIS TYPE:	PASSIVE INTEGRATION OF GAMMA RADIATION	GAMMA EXP RATE
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	
LOCATION DESCRIPTIO	5.3 MI SW OF PANTEX PLANT AT SE CORNER OF INTERSECTION OF FM 683 & HWY 60, TLD ON BARBED WIRE FENCE 200 FT FROM CORNER ON FENCE NEXT TO PANTEX PLANT AIR SAMPLER. (PANTEX PLANT TLD LOCATION FD-16B).			
	GPS:	N 35.26252 W 101.61733	GPS dm	N 35 15.748 W 101 37.085

STATION:	008	SAMPLE TYPE	SOIL	
		ANALYSIS TYPE:	GS,AS	
FREQUENCY:	2 & 4 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239
LOCATION DESCRIPTIO	5.3 MI SW OF PANTEX PLANT AT SE CORNER OF INTERSECTION OF FM 683 & HWY 60, TLD ON BARBED WIRE FENCE 200 FT FROM CORNER ON FENCE NEXT TO PANTEX PLANT AIR SAMPLER. (PANTEX PLANT TLD LOCATION FD-16B). SAMPLES TAKEN 6 FT NORTH OF PANTEX PLANT AIR SAMPLER.			
	GPS:	N 35.26252 W 101.61733	GPS dm	N 35 15.748 W 101 37.085

STATION:	008	SAMPLE TYPE	VEGETATION	
		ANALYSIS TYPE:	GS,AS,H3	
FREQUENCY:	2 & 4 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3
LOCATION DESCRIPTIO	5.3 MI SW OF PANTEX PLANT AT SE CORNER OF INTERSECTION OF FM 683 & HWY 60, TLD ON BARBED WIRE FENCE 200 FT FROM CORNER ON FENCE NEXT TO PANTEX PLANT AIR SAMPLER. (PANTEX PLANT TLD LOCATION FD-16B). SAMPLES TAKEN 6 FT NORTH OF PANTEX PLANT AIR SAMPLER.			
	GPS:	N 35.26252 W 101.61733	GPS dm	N 35 15.748 W 101 37.085

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	012	SAMPLE TYPE	WATER-SURFACE	
		ANALYSIS TYPE:	GS,AS,BC,H3	
FREQUENCY:	REMOVED 8/15/2008	SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3	
LOCATION DESCRIPTIO	5.9 MI NE OF PANTEX PLANT ON N SIDE OF PANTEX LAKE, ABOUT 1000 FT S OF ACCESS ROAD WHICH IS ABOUT 1 MI W OF FM 1342.			
		GPS:		GPS dm

STATION:	012	SAMPLE TYPE	SEDIMENT	
		ANALYSIS TYPE:	GS,AS	
FREQUENCY:	REMOVED 8/15/2008	SUSPECTED RADIONUCLIDES:	U234,U238,PU239	
LOCATION DESCRIPTIO	5.9 MI NE OF PANTEX PLANT ON N SIDE OF PANTEX LAKE, ABOUT 1000 FT S OF ACCESS ROAD WHICH IS ABOUT 1 MI W OF FM 1342.			
		GPS:		GPS dm

STATION:	014	SAMPLE TYPE	TLD	uR/Hr METER READING
		ANALYSIS TYPE:	PASSIVE INTEGRATION OF GAMMA RADIATION	GAMMA EXP RATE
FREQUENCY:	QUARTERLY	SUSPECTED RADIONUCLIDES:		
LOCATION DESCRIPTIO	1.0 MI W OF INTERSECTION OF FM 293 AND FM 2373 ON S SIDE OF FM 293, ON FENCE NEXT TO PANTEX PLANT AIR SAMPLER. (PANTEX PLANT TLD LOCATION FD-06).			
		GPS:	N 35.35332 W 101.55893	GPS dm N 35 21.196 W 101 33.542

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM
SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	014	SAMPLE TYPE	SOIL		
		ANALYSIS TYPE:	GS,AS		
FREQUENCY:	1 & 3 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239	
LOCATION DESCRIPTIO	1.0 MI W OF INTERSECTION OF FM 293 AND FM 2373 ON S SIDE OF FM 293, ON FENCE NEXT TO PANTEX PLANT AIR SAMPLER. (PANTEX PLANT TLD LOCATION FD-06). SAMPLES TAKEN 6 FT NORTH OF FENCE.				
		GPS:	N 35.35332 W 101.55893	GPS dm	N 35 21.196 W 101 33.542

STATION:	014	SAMPLE TYPE	VEGETATION		
		ANALYSIS TYPE:	GS,AS,H3		
FREQUENCY:	1 & 3 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3	
LOCATION DESCRIPTIO	1.0 MI W OF INTERSECTION OF FM 293 AND FM 2373 ON S SIDE OF FM 293, ON FENCE NEXT TO PANTEX PLANT AIR SAMPLER. (PANTEX PLANT TLD LOCATION FD-06). SAMPLES TAKEN 6 FT NORTH OF FENCE.				
		GPS:	N 35.35332 W 101.55893	GPS dm	N 35 21.196 W 101 33.542

STATION:	015	SAMPLE TYPE	WATER-SURFACE		
		ANALYSIS TYPE:	GS,AS,BC,H3		
FREQUENCY:	2TH QTR *		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3	
LOCATION DESCRIPTIO	2.9 MI NNE OF PANTEX PLANT 0.9 MI NW OF INTERSECTION OF FM 293 & FM 2373, ON S SIDE OF PLAYA ABOUT 1500 FT N OF 293, 30 FT N OF BARBED WIRE FENCE.				
		GPS:	N 35.3599 W 101.5561	GPS dm	N 35 21.614 W 101 33.380

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	015	SAMPLE TYPE	SEDIMENT	
		ANALYSIS TYPE:	GS,AS	
FREQUENCY:	2TH QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239
LOCATION DESCRIPTIO	2.9 MI NNE OF PANTEX PLANT 0.9 MI NW OF INTERSECTION OF FM 293 & FM 2373, ON S SIDE OF PLAYA ABOUT 1500 FT N OF 293, 30 FT N OF BARBED WIRE FENCE.			
		GPS:	N 35.3599 W 101.5561	GPS dm N 35 21.614 W 101 33.380

STATION:	016	SAMPLE TYPE	TLD	uR/Hr METER READING
		ANALYSIS TYPE:	PASSIVE INTEGRATION OF GAMMA RADIATION	GAMMA EXP RATE
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	
LOCATION DESCRIPTIO	2.2 MI W OF INTERSECTION OF FM 293 AND FM 2373, ON S SIDE OF FM 293. TLD LOCATED ON BARBED WIRE FENCE NEXT TO TCEQ AIR SAMPLE STATION #5. (PANTEX PLANT TLD LOCATION FD-05).			
		GPS:	N 35.35296 W 101.58072	GPS dm N 35 21.157 W 101 34.837

STATION:	016	SAMPLE TYPE	SOIL	
		ANALYSIS TYPE:	GS,AS	
FREQUENCY:	2 & 4 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239
LOCATION DESCRIPTIO	2.2 MI W OF INTERSECTION OF FM 293 AND FM 2373, ON S SIDE OF FM 293. TLD LOCATED ON BARBED WIRE FENCE NEXT TO TCEQ AIR SAMPLE STATION #5. (PANTEX PLANT TLD LOCATION FD-05). SAMPLES TAKEN 6 FT NORTH OF FENCE.			
		GPS:	N 35.35296 W 101.58072	GPS dm N 35 21.157 W 101 34.837

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	016	SAMPLE TYPE	VEGETATION		
		ANALYSIS TYPE:	GS,AS,H3		
FREQUENCY:	2 & 4 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3	
LOCATION DESCRIPTIO	2.2 MI W OF INTERSECTION OF FM 293 AND FM 2373, ON S SIDE OF FM 293. TLD LOCATED ON BARBED WIRE FENCE NEXT TO TCEQ AIR SAMPLE STATION #5. (PANTEX PLANT TLD LOCATION FD-05). SAMPLES TAKEN 6 FT NORTH OF FENCE.				
		GPS:	N 35.35296 W 101.58072	GPS dm	N 35 21.157 W 101 34.837

STATION:	018	SAMPLE TYPE	SOIL		
		ANALYSIS TYPE:	GS,AS		
FREQUENCY:	1 & 3 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239	
LOCATION DESCRIPTIO	3.6 MI SW OF PANTEX PLANT, 100 FEET EAST INTERSECTION OF COUNTY ROAD C HWY 60, ON THE SOUTH SIDE OF HIGHWAY 60 NEAR BARBED WIRE FENCE.				
		GPS:	N 35.27084 W 101.59403	GPS dm	N 35 16.246 W 101 35.675

STATION:	018	SAMPLE TYPE	VEGETATION		
		ANALYSIS TYPE:	GS,AS,H3		
FREQUENCY:	1 & 3 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3	
LOCATION DESCRIPTIO	3.6 MI SW OF PANTEX PLANT, 100 FEET EAST INTERSECTION OF COUNTY ROAD C HWY 60, ON THE SOUTH SIDE OF HIGHWAY 60 NEAR BARBED WIRE FENCE.				
		GPS:	N 35.27084 W 101.59403	GPS dm	N 35 16.246 W 101 35.675

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	019	SAMPLE TYPE	TLD	uR/Hr METER READING
		ANALYSIS TYPE:	PASSIVE INTEGRATION OF GAMMA RADIATION	GAMMA EXP RATE
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	
LOCATION DESCRIPTIO	SW CORNER OF INTERSECTION OF FM 2373 AND HWY 60, ON FENCE 100 FT FROM CORNER NEXT TO PANTEX PLANT AIR SAMPLER. (PANTEX PLANT TLD LOCATION FD-12).			
	GPS:	N 35.28600 W 101.54122	GPS dm	N 35 17.166 W 101 32.476.

STATION:	019	SAMPLE TYPE	SOIL	
		ANALYSIS TYPE:	GS,AS	
FREQUENCY:	2 & 4 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239
LOCATION DESCRIPTIO	SW CORNER OF INTERSECTION OF FM 2373 AND HWY 60, ON FENCE 500 FT FROM CORNER.			
	GPS:	N 35.28600 W 101.54122	GPS dm	N 35 17.166 W 101 32.476.

STATION:	019	SAMPLE TYPE	VEGETATION	
		ANALYSIS TYPE:	GS,AS,H3	
FREQUENCY:	2 & 4 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3
LOCATION DESCRIPTIO	SW CORNER OF INTERSECTION OF FM 2373 AND HWY 60, ON FENCE 500 FT FROM CORNER.			
	GPS:	N 35.28600 W 101.54122	GPS dm	N 35 17.166 W 101 32.476.

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	020	SAMPLE TYPE	TLD	uR/Hr METER READING
		ANALYSIS TYPE:	PASSIVE INTEGRATION OF GAMMA RADIATION	GAMMA EXP RATE
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	
LOCATION DESCRIPTIO	SW CORNER OF INTERSECTION OF FM 2373 AND HWY 60, ON FENCE 500 FT FROM CORNER.			
	GPS:	N 35.30812 W 101.54124	GPS dm	N 35 18.489 W 101 32.478

STATION:	020	SAMPLE TYPE	SOIL	
		ANALYSIS TYPE:	GS,AS	
FREQUENCY:	1 & 3 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239
LOCATION DESCRIPTIO	1.5 MI N OF INTERSECTION OF FM 2373 & HWY 60, ON W SIDE OF FM 2373. (PANTEX PLANT TLD LOCATION FD-10). SAMPLES TAKEN NEAR "NO TRESPASSING" SIGN 2 FT E OF BARBED WIRE FENCE.			
	GPS:	N 35.30812 W 101.54124	GPS dm	N 35 18.489 W 101 32.478

STATION:	020	SAMPLE TYPE	VEGETATION	
		ANALYSIS TYPE:	GS,AS,H3	
FREQUENCY:	1 & 3 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3
LOCATION DESCRIPTIO	1.5 MI N OF INTERSECTION OF FM 2373 & HWY 60, ON W SIDE OF FM 2373. (PANTEX PLANT TLD LOCATION FD-10). SAMPLES TAKEN NEAR "NO TRESPASSING" SIGN 2 FT E OF BARBED WIRE FENCE.			
	GPS:	N 35.30812 W 101.54124	GPS dm	N 35 18.489 W 101 32.478

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	021	SAMPLE TYPE	TLD	uR/Hr METER READING
		ANALYSIS TYPE:	PASSIVE INTEGRATION OF GAMMA RADIATION	GAMMA EXP RATE
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	
LOCATION DESCRIPTIO	NE CORNER OF PANTEX PLANT. INTERSECTION OF FM 293 AND FM 2373 ON BARBED WIRE FENCE. (PANTEX PLANT TLD LOCATION FD-07).			
	GPS:	N 35.35313 W 101.54166	GPS dm	N 35 21.196 W 101 32.492

STATION:	021	SAMPLE TYPE	SOIL	
		ANALYSIS TYPE:	GS,AS	
FREQUENCY:	2 & 4 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239
LOCATION DESCRIPTIO	NE CORNER OF PANTEX PLANT. INTERSECTION OF FM 293 AND FM 2373 ON BARBED WIRE FENCE. (PANTEX PLANT TLD LOCATION FD-07). SAMPLES TAKEN 2 FT E OF BARBED WIRE FENCE.			
	GPS:	N 35.35313 W 101.54166	GPS dm	N 35 21.196 W 101 32.492

STATION:	021	SAMPLE TYPE	VEGETATION	
		ANALYSIS TYPE:	GS,AS,H3	
FREQUENCY:	2 & 4 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3
LOCATION DESCRIPTIO	NE CORNER OF PANTEX PLANT. INTERSECTION OF FM 293 AND FM 2373 ON BARBED WIRE FENCE. (PANTEX PLANT TLD LOCATION FD-07). SAMPLES TAKEN 2 FT E OF BARBED WIRE FENCE.			
	GPS:	N 35.35313 W 101.54166	GPS dm	N 35 21.196 W 101 32.492

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM
SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	022	SAMPLE TYPE	SEDIMENT		
		ANALYSIS TYPE:	GS,AS		
FREQUENCY:	1ST QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3	
LOCATION DESCRIPTIO	1.0 MI NE OF PANTEX PLANT, NE OF PANTEX PLANT ADMINISTRATION BLDG., ON E SIDE OF PLAYA 1. (ENTER THRU ACCESS GATE ON SE CORNER OF PLAYA 1 PASTURE).				
		GPS:	N 35.2965 W 101.5715	GPS dm	N 35 17.775 W 101 34.239

STATION:	022	SAMPLE TYPE	WATER-SURFACE		
		ANALYSIS TYPE:	GS,AS,BC,H3		
FREQUENCY:	1ST QTR *		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3	
LOCATION DESCRIPTIO	1.0 MI NE OF PANTEX PLANT, NE OF PANTEX PLANT ADMINISTRATION BLDG., ON E SIDE OF PLAYA 1. (ENTER THRU ACCESS GATE ON SE CORNER OF PLAYA 1 PASTURE).				
		GPS:	N 35.2965 W 101.5715	GPS dm	N 35 17.775 W 101 34.239

STATION:	023	SAMPLE TYPE	SEDIMENT		
		ANALYSIS TYPE:	GS,AS		
FREQUENCY:	4RD QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239	
LOCATION DESCRIPTIO	1.7 MI SSW OF PANTEX PLANT, SW OF PANTEX PLANT ZONE 12, ON E SIDE OF PLAYA 4.				
		GPS:	N 35.1723 W 101.8120	GPS dm	N 35 17.697 W 101 34.300

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	023	SAMPLE TYPE	WATER-SURFACE	
		ANALYSIS TYPE:	GS,AS,BC,H3	
FREQUENCY:	4RD QTR *		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3
LOCATION DESCRIPTIO	1.7 MI SSW OF PANTEX PLANT, SW OF PANTEX PLANT ZONE 12, ON E SIDE OF PLAYA 4.			
	GPS:	N 35.1723 W 101.8120	GPS dm	N 35 17.697 W 101 34.300

STATION:	024	SAMPLE TYPE	TLD	uR/Hr METER READING
		ANALYSIS TYPE:	PASSIVE INTEGRATION OF GAMMA RADIATION	GAMMA EXP RATE
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	
LOCATION DESCRIPTIO	17.4 MI SW OF PANTEX PLANT, AT CITY OF AMARILLO WATER TREATMENT PLANT, 3701 OSAGE ST., ABOUT 400 FT E OF OFFICE BLDG., ON E CHAIN LINK FENCE, 123 FT N OF FENCE GATE.			
	GPS:	N 35.1723 W 101.8120	GPS dm	N 35 10.346 W 101 48.653

STATION:	024	SAMPLE TYPE	WATER-SURFACE	
		ANALYSIS TYPE:	GS,AS,BC,H3	
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3
LOCATION DESCRIPTIO	WATER SAMPLES ARE OBTAINED FROM THE LABORATORY, "RAW WATER" TAP.			
	GPS:	N 35.1723 W 101.8120	GPS dm	N 35 10.346 W 101 48.653

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM
SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	025	SAMPLE TYPE	CROPS-SORG.& WHEAT	
		ANALYSIS TYPE:	GS,AS,H3	
FREQUENCY:	ANNL AS AVAIL		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3
LOCATION DESCRIPTIO	2.1 MI NE OF PANTEX PLANT EAST ENTRANCE E OF FM 2373, NEAR EQUIPMENT BARN.			
		GPS:	N 35.3388 W 101.5405	GPS dm N 30 20.310 W 101 32.226

STATION:	027	SAMPLE TYPE	WATER-GROUND	
		ANALYSIS TYPE:	GS,AS,BC,H3	
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3
LOCATION DESCRIPTIO	CITY OF AMARILLO MASTERSON FIELD PUMP STATION. WATER SAMPLES ARE OBTAINED FROM THE LABORATORY.			
		GPS:	N 35.38250 W 101.55973	GPS dm N 35 17.697 W 101 34.300

STATION:	029	SAMPLE TYPE	TLD	uR/Hr METER READING
		ANALYSIS TYPE:	PASSIVE INTEGRATION OF GAMMA RADIATION	GAMMA EXP RATE
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	
LOCATION DESCRIPTIO	0.95 MI SSE OF BLDG. 12-36 IN PANTEX PLANT. DIRECTLY ACROSS STREET FROM THE E DRIVEWAY OF BLDG. 12-103. ON S SIDE OF PERSHING DRIVE ON BARBED WIRE FENCE. (E OF GATE LEADING TO PLAYA LAKE 4 AND STATE STATION 23.)			
		GPS:	N 35.30266 W 101.56084	GPS dm N 35 18.137 W 101 33.609

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	030	SAMPLE TYPE	WATER-GROUND	
		ANALYSIS TYPE:	GS,AS,BC,H3	
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3

LOCATION DESCRIPTIO: CITY OF PANHANDLE WATER SUPPLY MAINTENANCE FACILITY:FROM HWY 60, TURN N ON HWY 207 3 BLOCKS, THEN R ON EUCLID ST. 2ND BLDG ON R (3 GARAGE DOORS) IS MAINT BARN. MAINT PERSON WILL ACCOMPANY TO PECAN STREET WELL.

GPS: N 35.34903 W 101.39386 GPS dm N 35 20.940 W 101 23.660

STATION:	037	SAMPLE TYPE	TLD	uR/HR METER READING
		ANALYSIS TYPE:	PASSIVE INTEGRATION OF GAMMA RADIATION	GAMMA EXP RATE
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	

LOCATION DESCRIPTIO: 0.6 MI N OF PANTEX PLANT EAST GATE ON FM 2373. (DUE E OF PLAYA 1 ON PERIMETER FENCE). TLD ON BARBED WIRE FENCE.

GPS: N 35.32747 W 101.54152 GPS dm N 35 19.650 W 101 32.484

STATION:	037	SAMPLE TYPE	SOIL	
		ANALYSIS TYPE:	GS, AS	
FREQUENCY:	1 & 3 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239

LOCATION DESCRIPTIO: 0.6 MI N OF PANTEX PLANT EAST GATE ON FM 2373. (DUE E OF PLAYA 1 ON PERIMETER FENCE). TLD ON BARBED WIRE FENCE. SAMPLE TAKEN 2 FT E OF BARBED WIRE FENCE.

GPS: N 35.32747 W 101.54152 GPS dm N 35 19.650 W 101 32.484

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM
SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	037	SAMPLE TYPE	VEGETATION	
		ANALYSIS TYPE:	GS, AS, H3	
FREQUENCY:	1 & 3 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3
LOCATION DESCRIPTIO	0.6 MI N OF PANTEX PLANT EAST GATE ON FM 2373. (DUE E OF PLAYA 1 ON PERIMETER FENCE). TLD ON BARBED WIRE FENCE. SAMPLE TAKEN 2 FT E OF BARBED WIRE FENCE.			
		GPS:	N 35.32747 W 101.54152	GPS dm N 35 19.650 W 101 32.484

STATION:	038	SAMPLE TYPE	TLD	uR/HR METER READING
		ANALYSIS TYPE:	PASSIVE INTEGRATION OF GAMMA RADIATION	GAMMA EXP RATE
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	
LOCATION DESCRIPTIO	0.3 MI S OF INTERSECTION OF FM 293 AND FM 683 ON PANTEX PLANT BARBED WIRE FENCE, E SIDE OF FM 683. TLD ON BARBED WIRE FENCE NEXT TO TCEQ AIR SAMPLE STATION NO. 6 (BRC #106)			
		GPS:	N 35.34790 W 101.61799	GPS dm N 35 20.867 W 101 37.083

STATION:	038	SAMPLE TYPE	SOIL	
		ANALYSIS TYPE:	GS, AS	
FREQUENCY:	2 & 4 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239
LOCATION DESCRIPTIO	0.3 MI S OF INTERSECTION OF FM 293 AND FM 683 ON PANTEX PLANT BARBED WIRE FENCE, E SIDE OF FM 683. TLD ON BARBED WIRE FENCE NEXT TO TCEQ AIR SAMPLE STATION NO. 6 (BRC #106) SAMPLES TAKEN 2 FT W OF BARBED WIRE FENCE.			
		GPS:	N 35.34790 W 101.61799	GPS dm N 35 20.867 W 101 37.083

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	038	SAMPLE TYPE	VEGETATION	
		ANALYSIS TYPE:	GS, AS, H3	
FREQUENCY:	2 & 4 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239, H3
LOCATION DESCRIPTIO	0.3 MI S OF INTERSECTION OF FM 293 AND FM 683 ON PANTEX PLANT BARBED WIRE FENCE, E SIDE OF FM 683. TLD ON BARBED WIRE FENCE NEXT TO TCEQ AIR SAMPLE STATION NO. 6 (BRC #106) SAMPLES TAKEN 2 FT W OF BARBED WIRE FENCE.			
	GPS:	N 35.34790 W 101.61799	GPS dm	N 35 20.867 W 101 37.083

STATION:	039	SAMPLE TYPE	TLD	
		ANALYSIS TYPE:	PASSIVE INTEGRATION OF GAMMA RADIATION	GAMMA EXP RATE
FREQUENCY:	QUARTERLY		SUSPECTED RADIONUCLIDES:	
LOCATION DESCRIPTIO	2.9 MI S OF INTERSECTION OF FM 293 AND FM 683 ON PANTEX PLANT BARBED WIRE FENCE. TLD ON BARBED WIRE FENCE AT PANTEX/TEXAS TECH BOUNDARY. (PANTEX PLANT TLD LOCATION FD-17).			
	GPS:	N 35.30942 W 101.61813	GPS dm	N 35 18.564 W 101 37.087

STATION:	039	SAMPLE TYPE	SOIL	
		ANALYSIS TYPE:	GS, AS	
FREQUENCY:	1 & 3 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239
LOCATION DESCRIPTIO	2.9 MI S OF INTERSECTION OF FM 293 AND FM 683 ON PANTEX PLANT BARBED WIRE FENCE. TLD ON BARBED WIRE FENCE AT PANTEX/TEXAS TECH BOUNDARY. (PANTEX PLANT TLD LOCATION FD-17). SAMPLES TAKEN 2 FT W OF BARBED WIRE FENCE.			
	GPS:	N 35.30942 W 101.61813	GPS dm	N 35 18.564 W 101 37.087

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	039	SAMPLE TYPE	VEGETATION		
		ANALYSIS TYPE:	GS, AS,H3		
FREQUENCY:	1 & 3 QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3	
LOCATION DESCRIPTIO	2.9 MI S OF INTERSECTION OF FM 293 AND FM 683 ON PANTEX PLANT BARBED WIRE FENCE. TLD ON BARBED WIRE FENCE AT PANTEX/TEXAS TECH BOUNDARY. (PANTEX PLANT TLD LOCATION FD-17). SAMPLES TAKEN 2 FT W OF BARBED WIRE FENCE.				
		GPS:	N 35.30942 W 101.61813	GPS dm	N 35 18.564 W 101 37.087

STATION:	040	SAMPLE TYPE	SEDIMENT		
		ANALYSIS TYPE:	GS,AS,BC,H3		
FREQUENCY:	2ND QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3	
LOCATION DESCRIPTIO	PLAYA 3. 2.6 MI NE OF PANTEX PLANT AND .56 MI S OF RR293.				
		GPS:	N 35.3425 W 101.5879	GPS dm	N 35 20.542 W 101 35.285

STATION:	040	SAMPLE TYPE	WATER-SURFACE		
		ANALYSIS TYPE:	GS,AS,BC,H3		
FREQUENCY:	2ND QTR		SUSPECTED RADIONUCLIDES:	U234,U238,PU239,H3	
LOCATION DESCRIPTIO	PLAYA 3. 2.6 MI NE OF PANTEX PLANT AND .56 MI S OF RR293.				
		GPS:	N 35.3425 W 101.5879	GPS dm	N 35 20.542 W 101 35.285

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	101	SAMPLE TYPE	AIR PARTICULATE	
		ANALYSIS TYPE:	GB,AS	
FREQUENCY:	INACTIVE		SUSPECTED RADIONUCLIDES:	U234,U235,U238,PU239
LOCATION DESCRIPTIO	TCEQ #1, AIRS #480650001, HOUSED IN A TRAILER LOCATED ON A TURNAROUND HARD STAND NEAR A SECURITY TRAINING AREA NORTHEAST OF BLDG 12-30, EAST OF PLAYA NO. 1 AND 2,000 FT W OF FM 2373.			
	GPS:		GPS dm	

STATION:	102	SAMPLE TYPE	AIR PARTICULATE	
		ANALYSIS TYPE:	GB,AS	
FREQUENCY:	INACTIVE		SUSPECTED RADIONUCLIDES:	U234,U235,U238,PU239
LOCATION DESCRIPTIO	TCEQ #2, AIRS #480650002, LOCATED S/SE OF ZONE 11, APPROX. 200 FT N OF THE SNOW FENCE AND SW OF ZONE 12.			
	GPS:		GPS dm	

STATION:	104	SAMPLE TYPE	AIR PARTICULATE	
		ANALYSIS TYPE:	GB,AS	
FREQUENCY:	EPISODIC **		SUSPECTED RADIONUCLIDES:	U234,U235,U238,PU239
LOCATION DESCRIPTIO	TCEQ #4, AIRS #480650004, LOCATED ABOUT 210 FT DUE NORTH AND 70 FT DUE WEST OF FIRING SITE 16.			
	GPS:		GPS dm	

PANTEX ENVIRONMENTAL SURVEILANCE PROGRAM SAMPLE LOCATIONS

EFFECTIVE 1/9/17

STATION:	104	SAMPLE TYPE	AIR PARTICULATE	
		ANALYSIS TYPE:	GB,AS	
FREQUENCY:	EPISODIC **		SUSPECTED RADIONUCLIDES:	U234,U235,U238,PU239, ARCH
LOCATION DESCRIPTIO	TCEQ #4, AIRS #480650004, LOCATED ABOUT 210 FT DUE NORTH AND 70 FT DUE WEST OF FIRING SITE 16. NOTE: AIRS #480650004 SECOND SAMPLE TAKEN FOR QUALITY CONTROL.			
	GPS:		GPS dm	

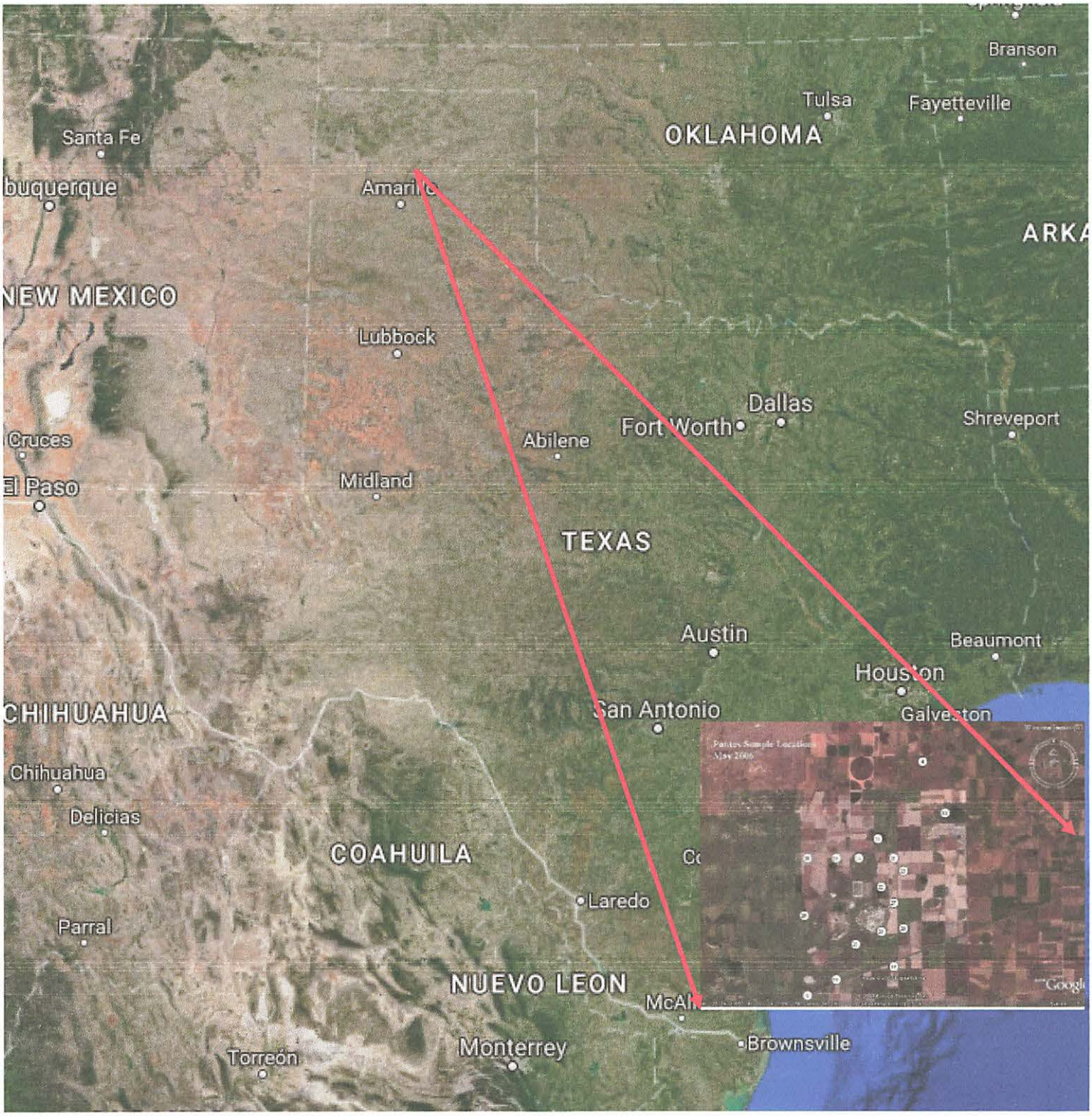
STATION:	105	SAMPLE TYPE	AIR PARTICULATE	
		ANALYSIS TYPE:	GB,AS	
FREQUENCY:	EPISODIC **		SUSPECTED RADIONUCLIDES:	U234,U235,U238,PU239
LOCATION DESCRIPTIO	TCEQ #5, AIRS #480650005, LOCATED JUST INSIDE THE PERIMETER FENCE ON FM 293, APPROX. 3,400 FT NORTHEAST OF THE BURNING GROUNDS, AT THE FOURTH POWER POLE APPROX. 600 FT WEST OF THE FARMHOUSE.			
	GPS:		GPS dm	

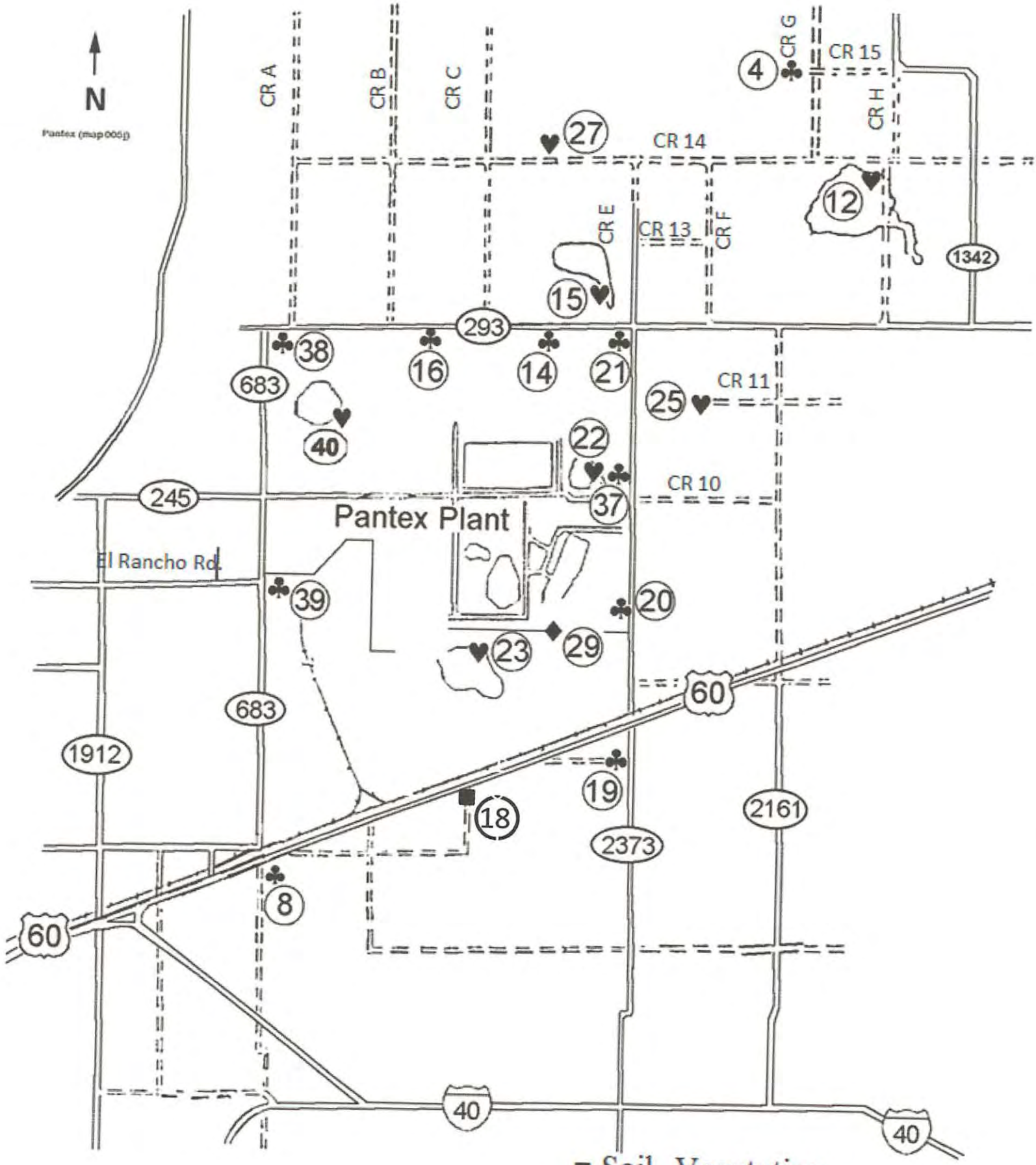
STATION:	106	SAMPLE TYPE	AIR PARTICULATE	
		ANALYSIS TYPE:	GB,AS	
FREQUENCY:	INACTIVE		SUSPECTED RADIONUCLIDES:	U234,U235,U238,PU239
LOCATION DESCRIPTIO	TCEQ #6, AIRS #480650006, LOCATED 0.3 MILES S OF INTERSECTION OF FM 293 AND FM 683 ON PANTEX W BOUNDARY.			
	GPS:		GPS dm	

Section 3

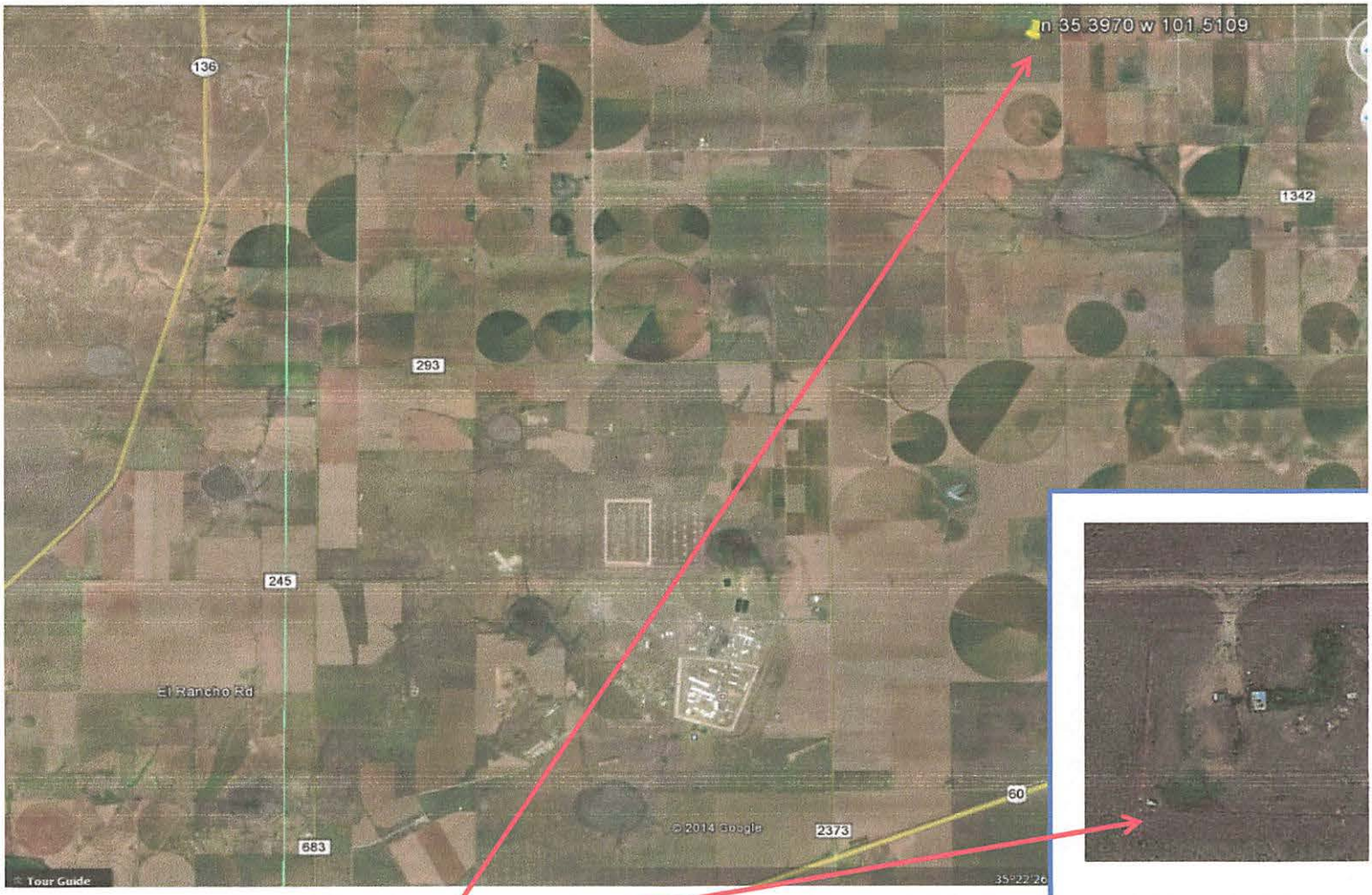
Section 3

Environmental Surveillance Program
Sample Point Maps





■ Soil, Vegetation
♦ OSL Only
♣ OSL, Soil Vegetation
♥ Water –Surface, Sediment



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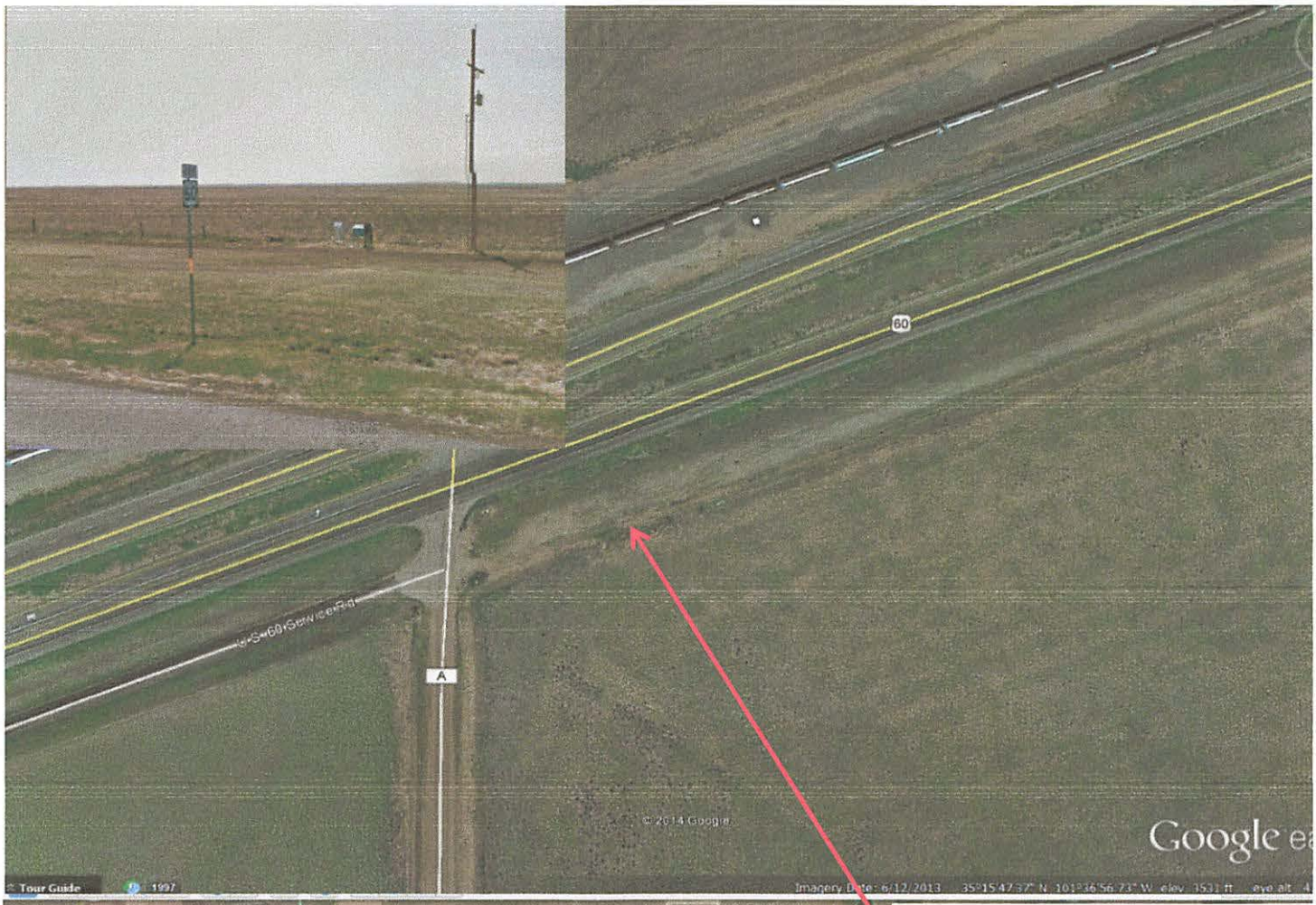

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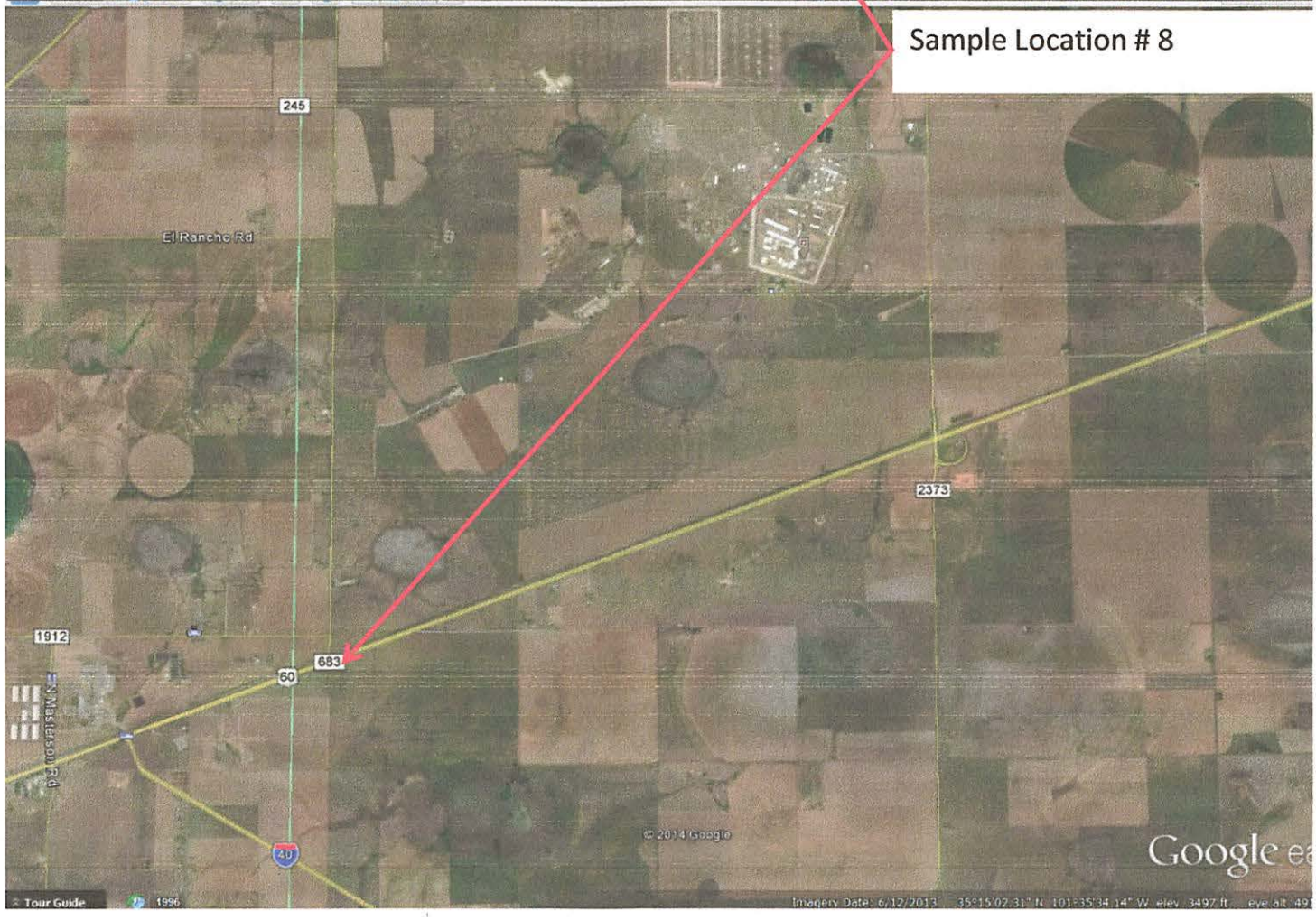

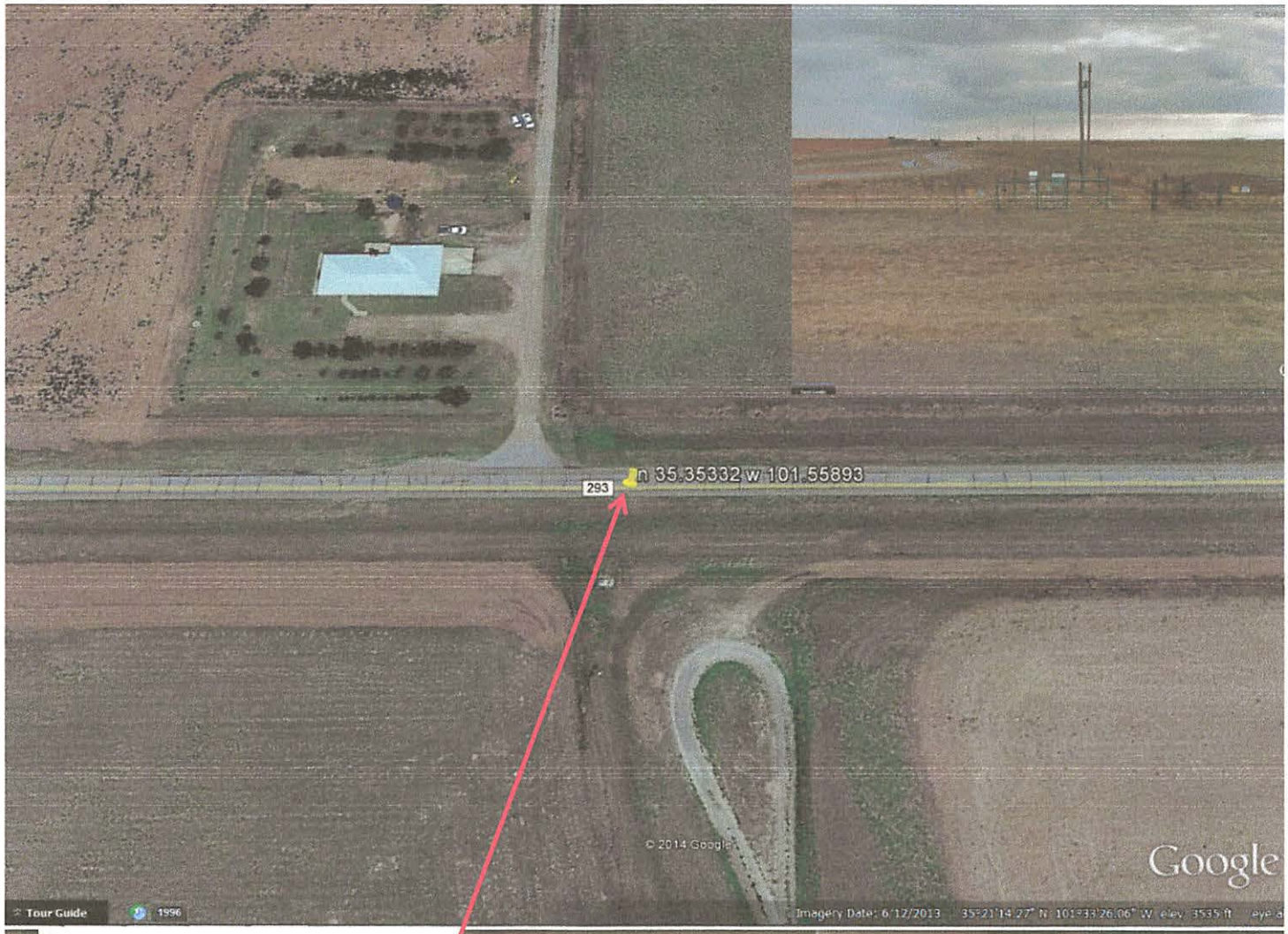

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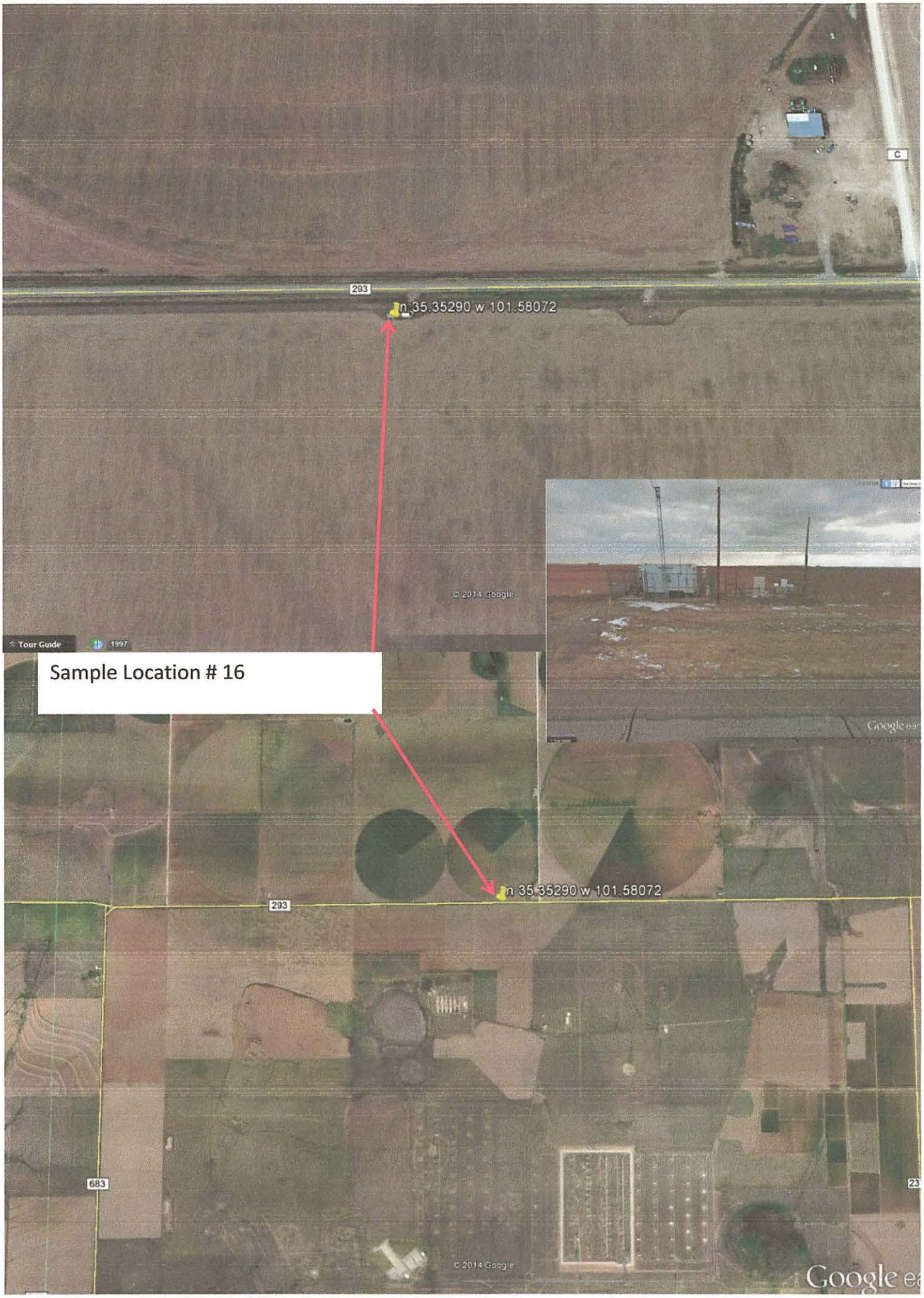
293
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© 2014 Google
Tour Guide
1997
Sample Location # 16
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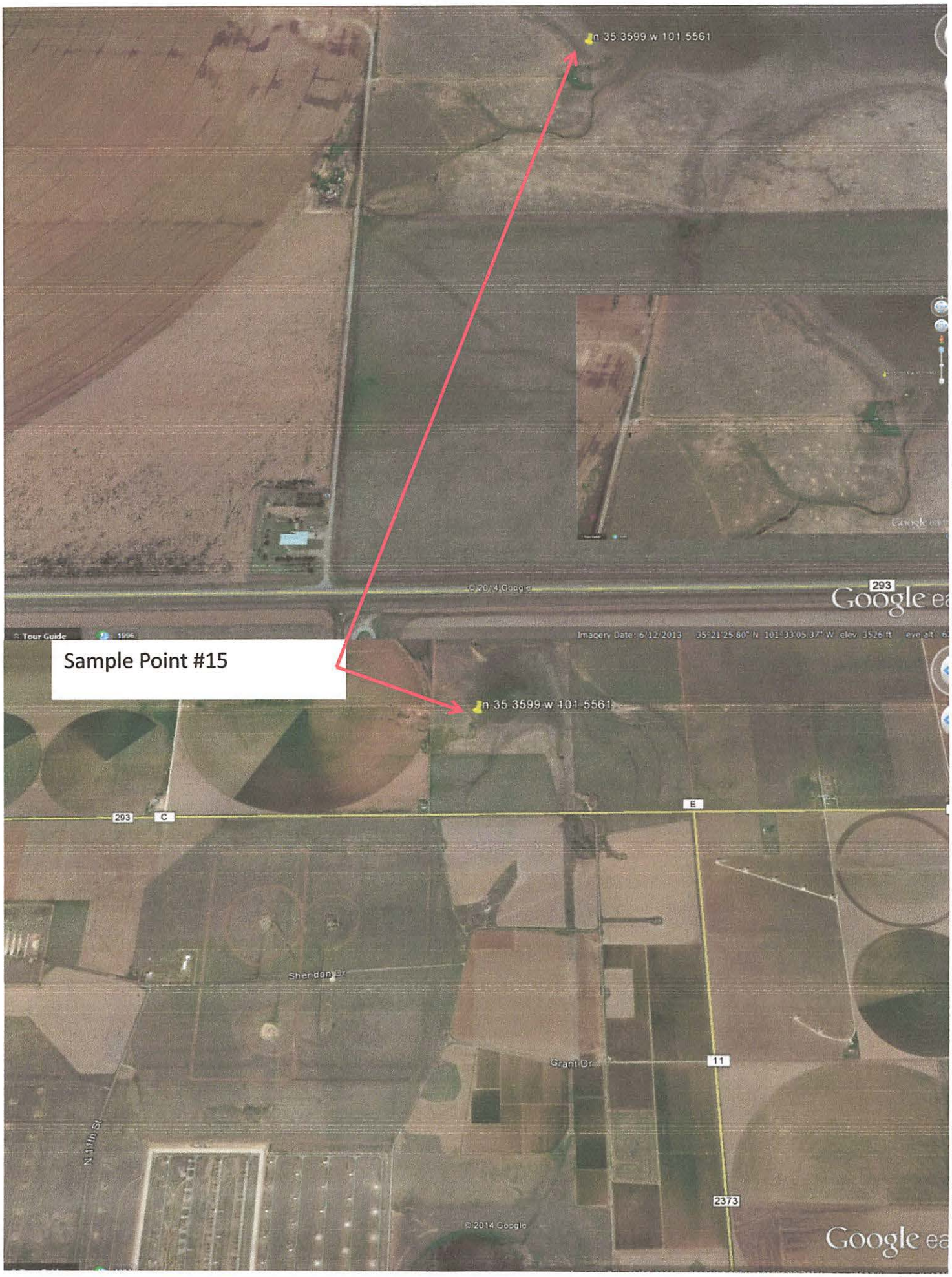
293
683
© 2014 Google
Google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293
Google
Tour Guide
Imagery Date: 6/12/2013
Sample Point #15
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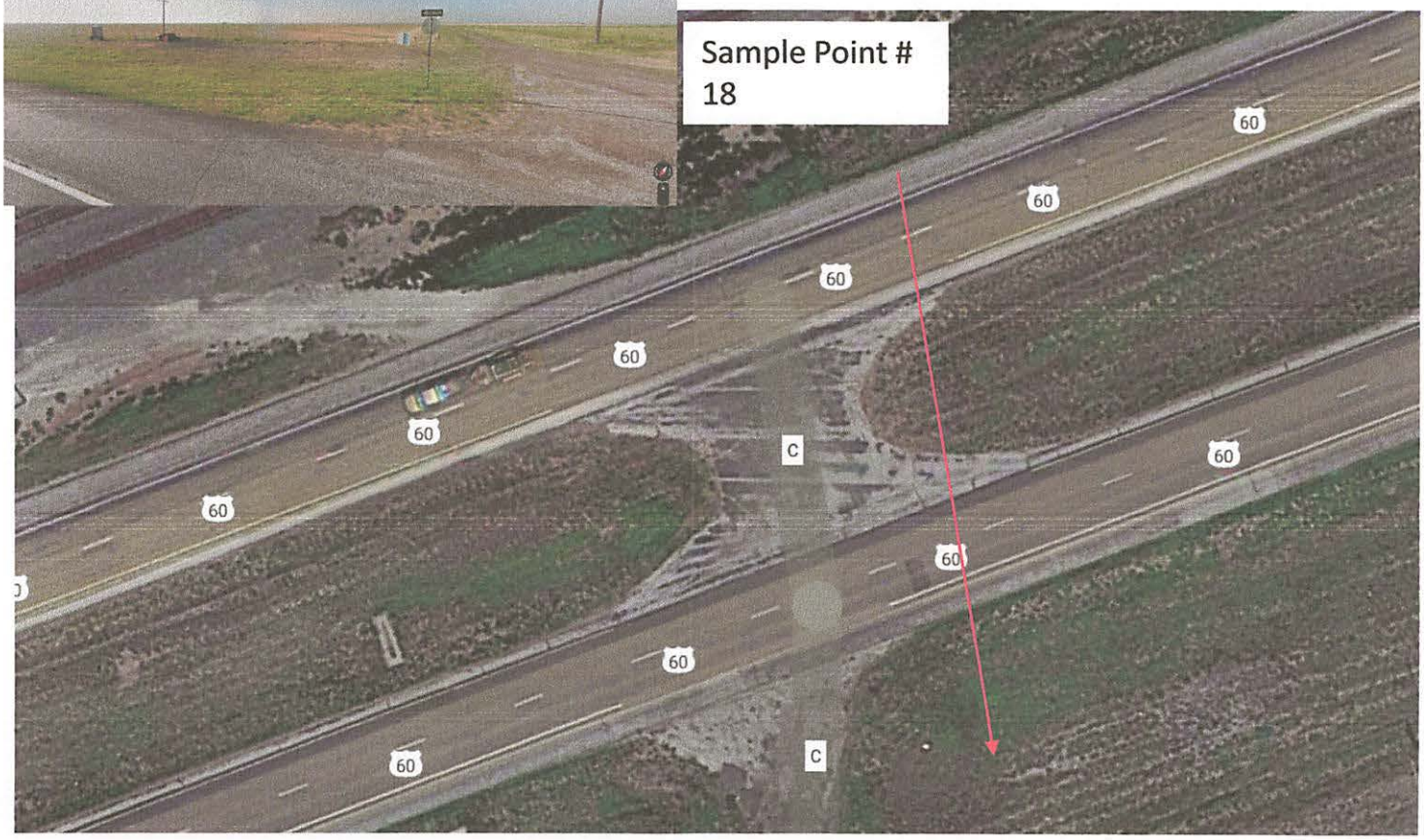
293
C
E
Sheridan Dr
Grant Dr
11
N 11th St
2373
© 2014 Google
Google

683
2373
60
7
6
A
B
C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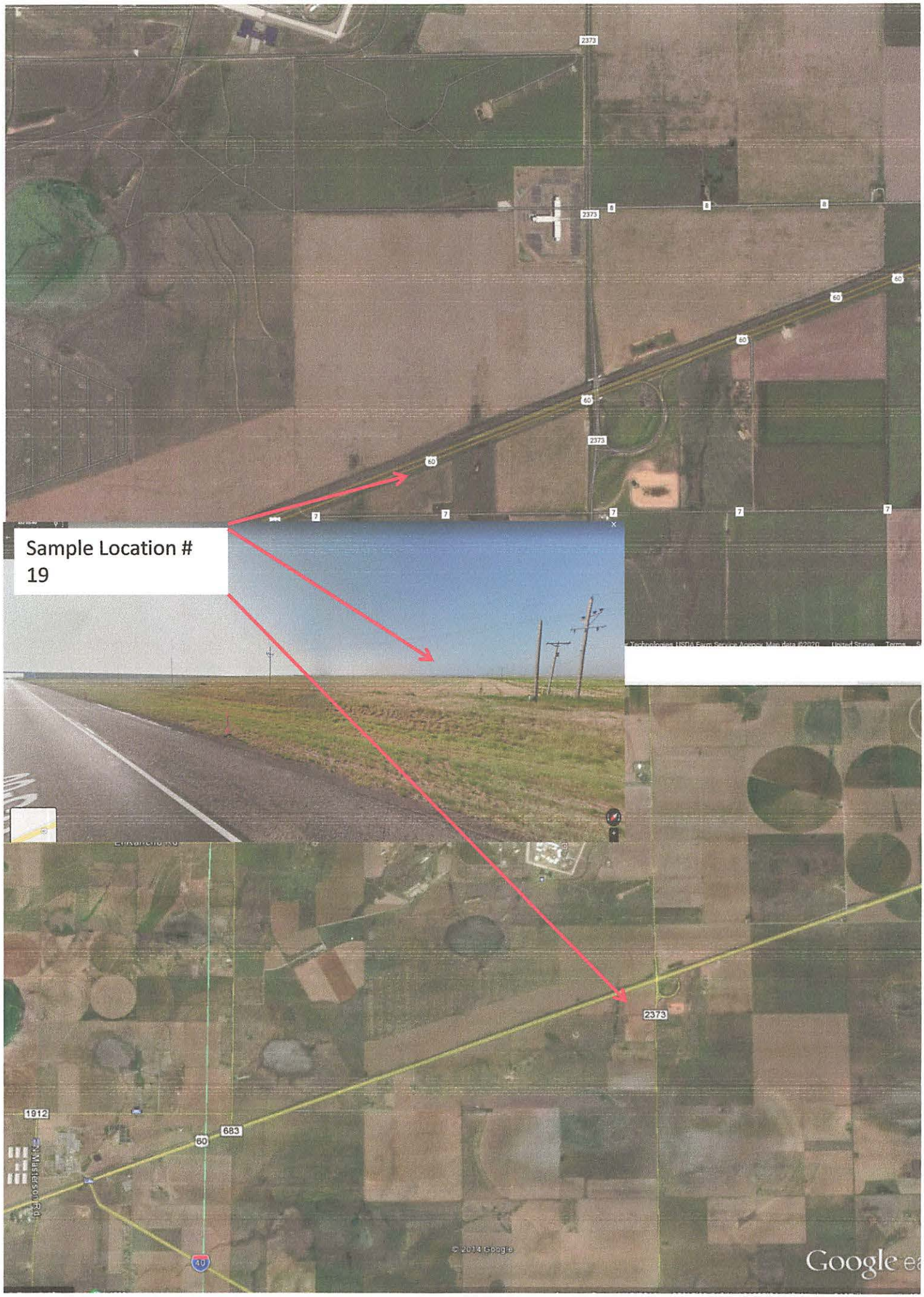
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7
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7
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683
60
40
N Masterson Rd
© 2014 Google
Google

2373
n 35.30812 w 101.54124
Tour Guide
1996
Sample Point # 20
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60
2373
Google

E
293
2373
n 35.35313 w 101.54166
Tour Guide
1996
Sample Point # 21
n 35.35313 w 101.54166
293
2373
© 2014 Google
Google

Sample Point
Pantex Plant
11
2373
2373
8
683
Map
Google

Sample Point # 23
245
El Rancho Rd
683
60
2373
N
© 2014 Google
Google earth

Sample Locations # 24, 27
Air Oasis
Silver Oak Apartments
Little Caesars Pizza
E 34th Ave
Enviro-Ag Engineering
Metro Self Storage
Anytime Fitness
Southeast Pool
Church Of Christ Commanche Trail
Hobby Time
SE 36th Ave
SE 38th Ave
Amarillo Credit Repair
SE 40th Ave
Osage Water Plant
S Osage St
SE 42nd Ave
Amarillo Waste Water Treatment
Tradewind Airport
SE 43rd Ave
Tradewind Elementary School
Try Something Special
Southeast Softball Complex
SE 44th Ave
SE 45th Ave
SE 39th Ave
SE 41st Ave
n 35.1723 w101.8120
© 2014 Google
Google earth

11
2373
n 35.3388 w 101.5405
Tour Guide
1996
Sample Point # 25
n 35.3388 w 101.5405
2373
60
Tour Guide
1997
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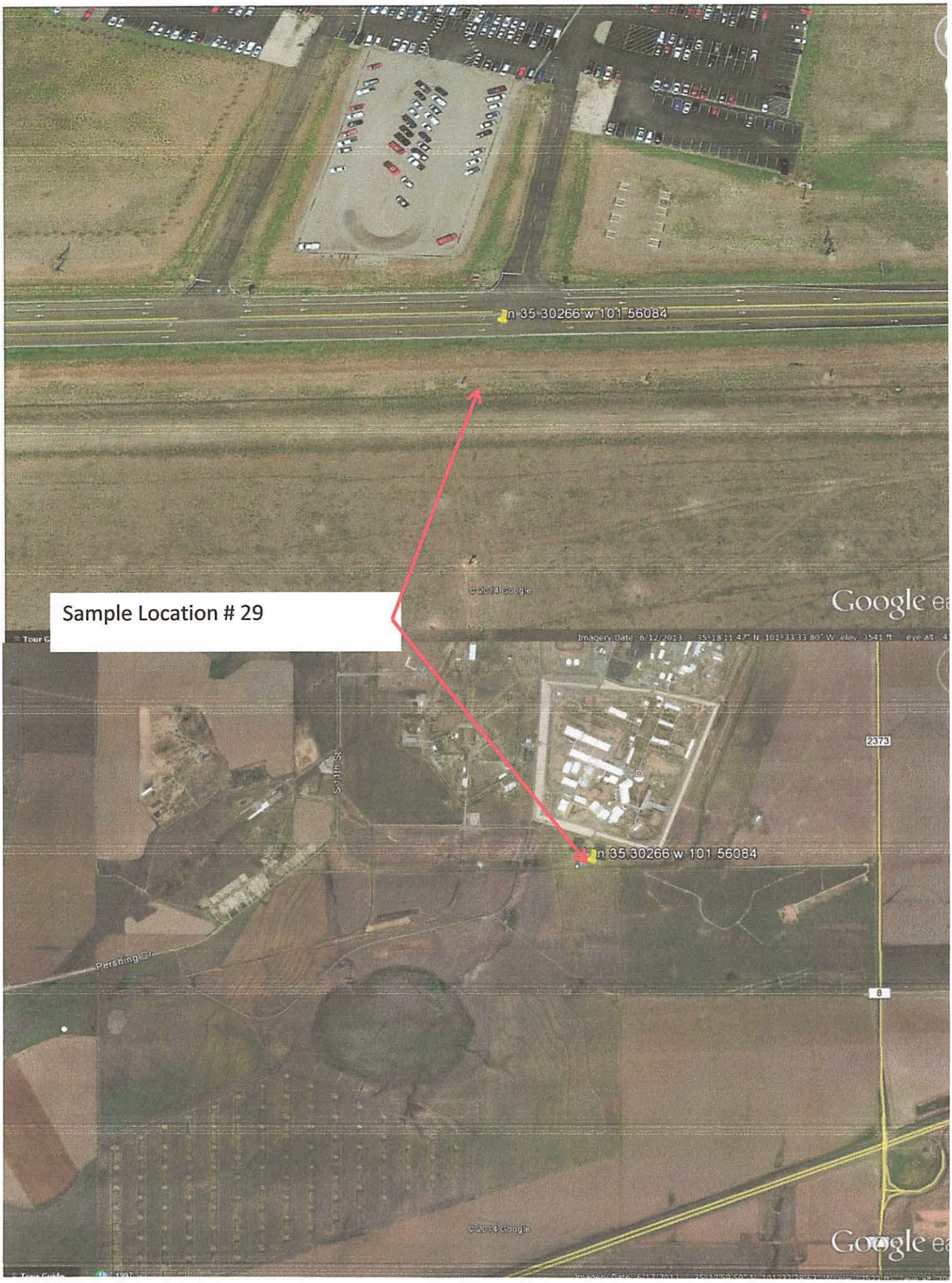
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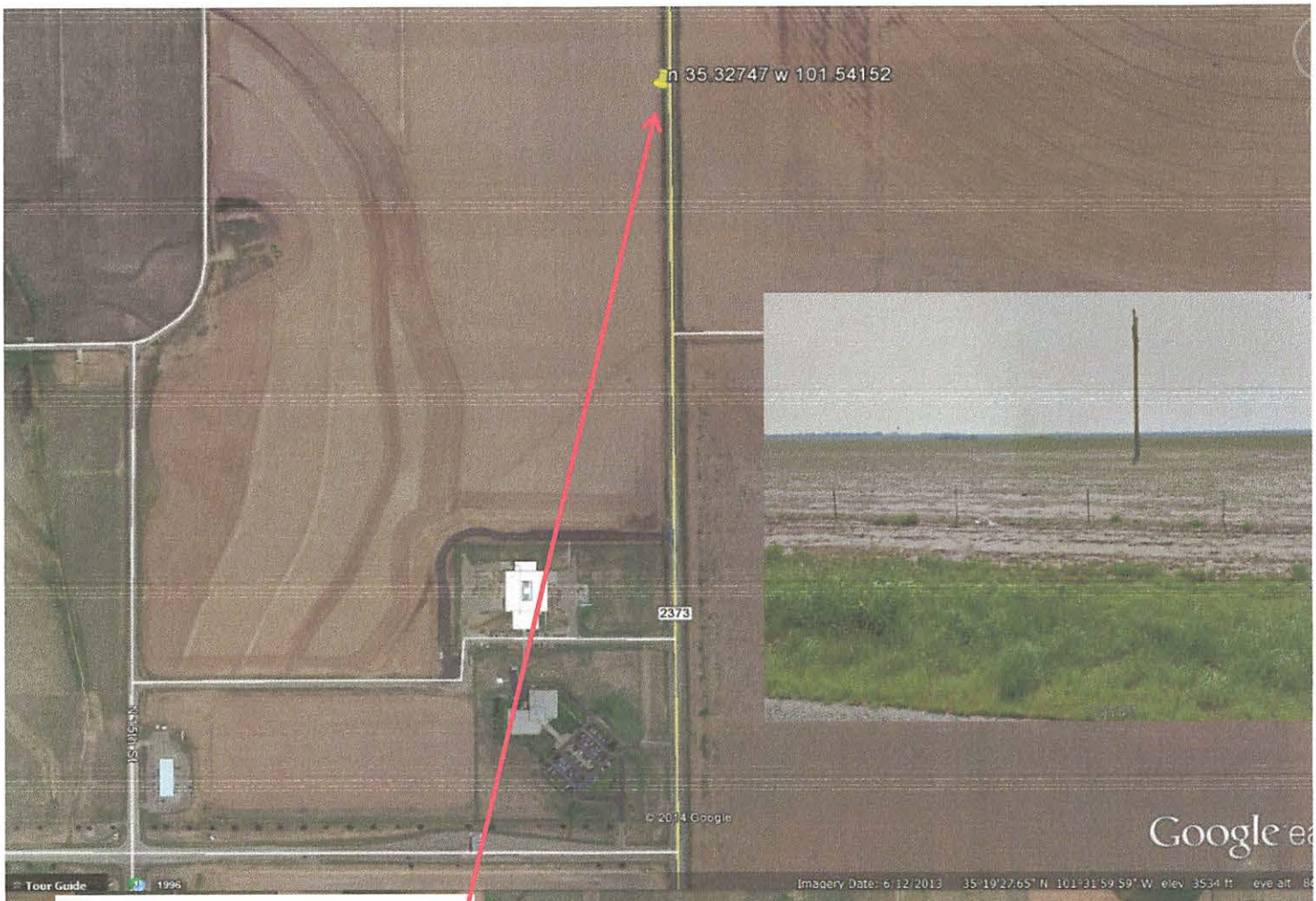
Sample Location # 29
© 2014 Google
Google
Imagery Date: 6/12/2013
2373
S 11th St
n 35 30266 w 101 56084
Pershing Dr
8
© 2014 Google
Google

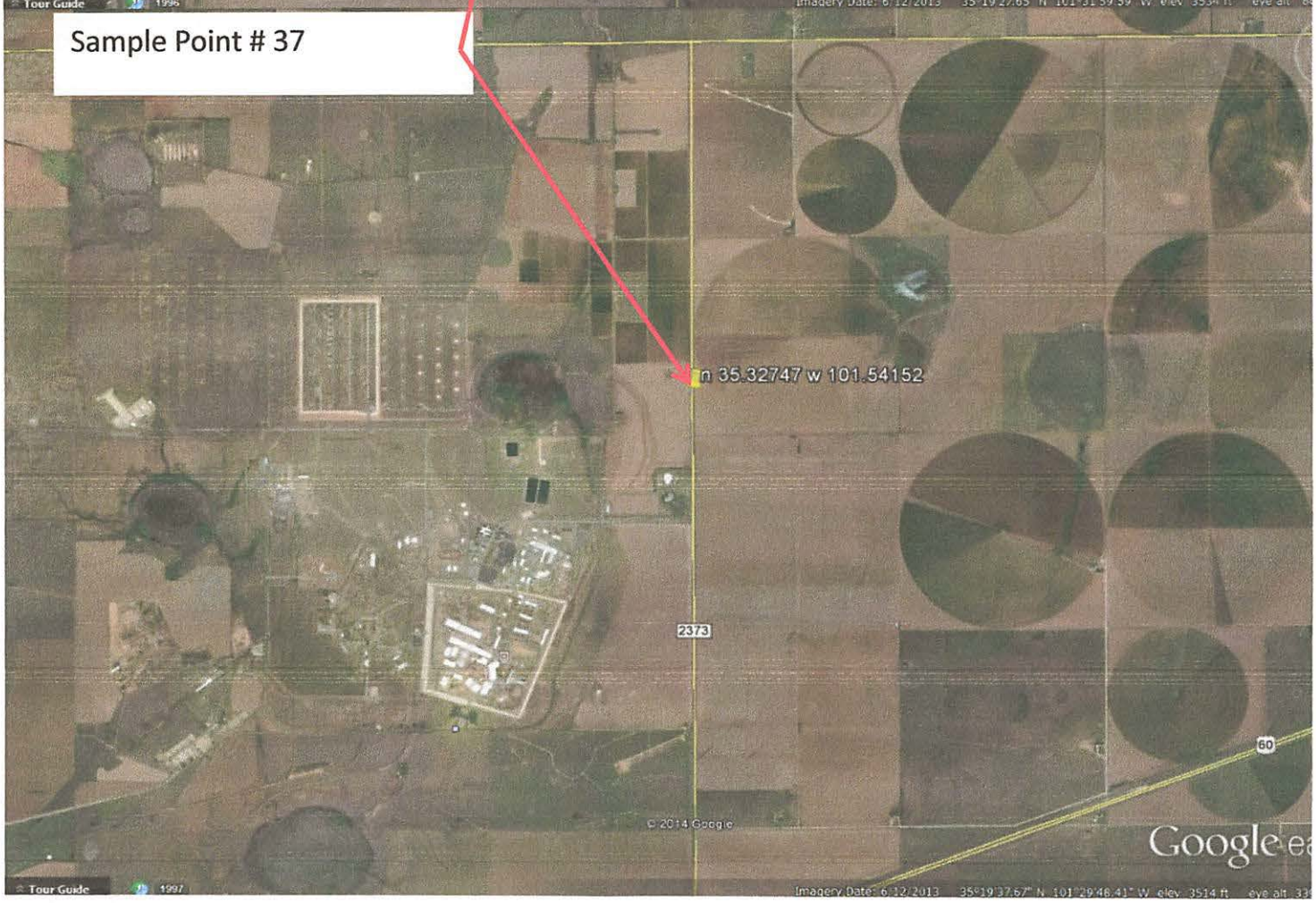
Pecan Ave
W 12th St
W 13th St
Pecan Street
© 2014 Google
Google earth

Sample Point # 30
M
293
Panhandle
207
60
Google earth

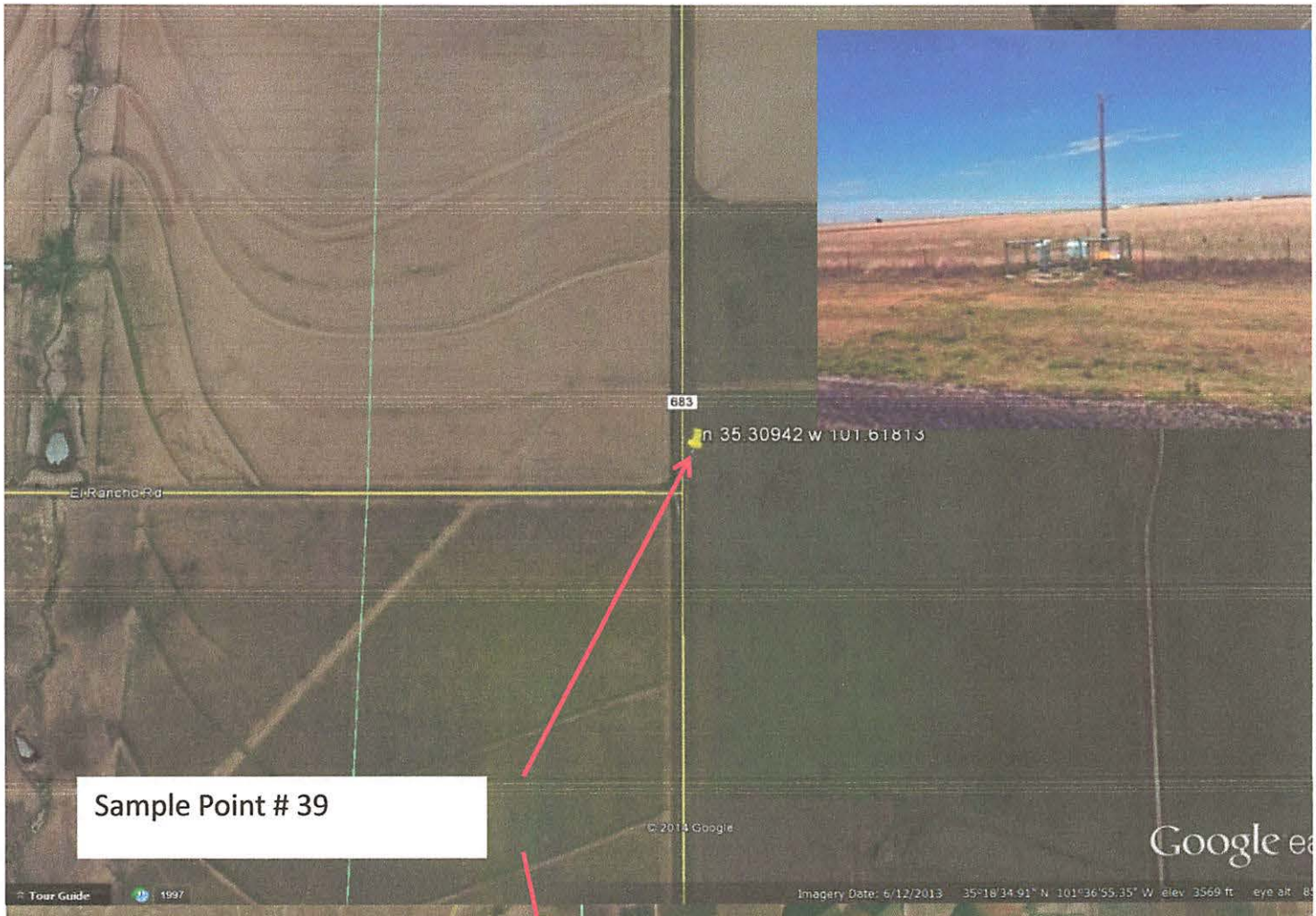
9/19/14
Maintenance Building
Google earth



Sample Point # 37



683
n 35.34790 w 101.61799
© 2014 Google
Google ea
Sample Point # 38
Imagery Date: 6/12/2013 35°20'54.72" N 101°36'58.00" W elev 3599 ft eye alt 44
n 35.34790 w 101.61799
136
683
2373
245
El Rancho Rd
60
St Francis Ave
1912
© 2014 Google
Google ea


683
n 35.30942 w 101.61813
El Rancho Rd
Sample Point # 39
© 2014 Google
Google ea
Tour Guide
1997
Imagery Date: 6/12/2013 35°18'34.91" N 101°36'55.35" W elev 3569 ft eye alt 8

293
136
245
n 35.30942 w 101.61813
El Rancho Rd
2373
St Francis Ave
1912
683
60
© 2014 Google
Google ea

Sample Point # 40
293
683
245
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Section 4

The State of Texas

Department of State Health Service

Radiation Control Program

Pantex Sample Data January - December 2019

Station #: 04 | Type of Sample: Soil | Sample Date: 4/16/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	9.7E-7
Bi 212:	ND	Pb 214:	8.7E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.15E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.67E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 04 | Type of Sample: Vegetation | Sample Date: 4/16/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	2.49E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.14E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 04 | Type of Sample: Soil | Sample Date: 10/15/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.18E-6
Bi 212:	ND	Pb 214:	8.6E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	3.04E-7	Ti 208:	5.2E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.66E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 04 | Type of Sample: Vegetation | Sample Date: 10/15/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	6.51E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.58E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 08 | Type of Sample: Soil | Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.19E-6
Bi 212:	ND	Pb 214:	9.9E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.6E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.79E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	2.03E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	1.15E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 08 | Type of Sample: Vegetation | Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	2.81E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.06E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 08 Type of Sample: Soil Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	2.01E-6
Bi 212:	ND	Pb 214:	9.5E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.5E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.79E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	2.13E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	1.11E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 08 Type of Sample: Vegetation Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	6.84E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	1.21E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 14 | Type of Sample: Soil | Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	9.8E-7
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.39E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.59E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	2.03E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	1.11E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 14 | Type of Sample: Vegetation | Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	8.25E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	*	U 235:	ND
K 40:	6.97E-6	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES: *Sample too dry

Pantex Sample Data January - December 2019

Station #: 14 | Type of Sample: Soil | Sample Date: 7/10/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	5.2E-7
Bi 212:	ND	Pb 214:	8.2E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.43E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.21E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 14 | Type of Sample: Vegetation | Sample Date: 7/10/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	6.18E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.15E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 15 | Type of Sample: Sediment | Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	2.02E-6
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	2.90E-7	Ti 208:	5.50E-7
H 3 *:	NAF	U 235:	ND
K 40:	2.43E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	2.01E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	1.12E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 15 | Type of Sample: Water-Surface | Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.31E-8
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	1.28E-7	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	6.5E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	3.20E-9
U 235:	<1.0E-9
U 238:	3.08E-9

NAF = Not Analyzed For

Units: ☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 16 Type of Sample: Soil Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.12E-6
Bi 212:	ND	Pb 214:	1.00E-6
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.80E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.79E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	1.07E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 16 Type of Sample: Vegetation Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	1.58E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.21E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 16 | Type of Sample: Soil | Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.36E-6
Bi 212:	ND	Pb 214:	1.03E-6
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	5.6E-7
H 3 *:	NAF	U 235:	ND
K 40:	2.04E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	2.30E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	1.04E-6
U 235:	<1.0E-6
U 238:	1.22E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 16 | Type of Sample: Vegetation | Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	7.22E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	4.41E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 18 Type of Sample: Soil Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.25E-6
Bi 212:	ND	Pb 214:	7.7E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.24E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.56E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 18 Type of Sample: Vegetation Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	7.76E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	*	U 235:	ND
K 40:	5.37E-6	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES: *Sample too dry

Pantex Sample Data January - December 2019

Station #: 18 | Type of Sample: Soil | Sample Date: 7/9/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.62E-6
Bi 212:	ND	Pb 214:	9.3E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	5.02E-7	Ti 208:	4.37E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.66E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	1.07E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 18 | Type of Sample: Vegetation | Sample Date: 7/9/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	5.5E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	5.79E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 19 | Type of Sample: Soil | Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	8.9E-7
Bi 212:	ND	Pb 214:	6.1E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	2.42E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.15E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 19 | Type of Sample: Vegetation | Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	2.46E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.14E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 19 | Type of Sample: Soil | Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	7.0E-7
Bi 212:	ND	Pb 214:	7.2E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.58E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.48E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 19 | Type of Sample: Vegetation | Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	6.69E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.27E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 20 | Type of Sample: Soil | Sample Date: 1/23/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	9.5E-7
Bi 212:	ND	Pb 214:	8.8E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.36E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.60E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 20 | Type of Sample: Vegetation | Sample Date: 1/23/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	7.09E-6	Pb 212:	1.39E-7
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.7E-8
H 3 *:	*	U 235:	ND
K 40:	4.65E-6	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES: *Sample too dry

Pantex Sample Data January - December 2019

Station #: 20 | Type of Sample: Soil | Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.60E-6
Bi 212:	ND	Pb 214:	8.6E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.89E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.80E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 20 | Type of Sample: Vegetation | Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	1.01E-5	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	1.98E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 21 | Type of Sample: Soil | Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	9.2E-7
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	2.88E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.27E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 21 | Type of Sample: Vegetation | Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	2.49E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.91E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 21 | Type of Sample: Soil | Sample Date: 10/15/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.00E-6
Bi 212:	ND	Pb 214:	9.0E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.7E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.79E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 21 | Type of Sample: Vegetation | Sample Date: 10/15/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	9.09E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	3.50E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 22 Type of Sample: Sediment Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	8.1E-7
Bi 212:	ND	Pb 214:	6.8E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.78E-7
H 3 *:	*	U 235:	ND
K 40:	1.49E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES: *Sample too dry

Station #: 22 Type of Sample: Water-Surface Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.8E-8	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	3.6E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	2.68E-9
U 235:	<1.0E-9
U 238:	<1.0E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 23 Type of Sample: Sediment Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.27E-6
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.78E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.46E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 23 Type of Sample: Water-Surface Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	NAF	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	<1.0E-9
U 235:	<1.0E-9
U 238:	<1.0E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 24 Type of Sample: Water-Surface Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	5.9E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.05E-9
U 235:	<1.0E-9
U 238:	1.73E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Station #: 24 Type of Sample: Water-Surface Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	6.5E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.4E-9
U 235:	<1.0E-9
U 238:	1.91E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 24 Type of Sample: Water-Surface Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	6.3E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.27E-9
U 235:	<1.0E-9
U 238:	1.89E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Station #: 24 Type of Sample: Water-Surface Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	6.5E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.26E-9
U 235:	<1.0E-9
U 238:	2.07E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 25 | Type of Sample: Crops | Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	N/A	Pb 210:	N/A
Be 7:	N/A	Pb 212:	N/A
Bi 212:	N/A	Pb 214:	N/A
Bi 214:	N/A	Ra 226:	N/A
Cs 137:	N/A	Ti 208:	N/A
H 3 *:	N/A	U 235:	N/A
K 40:	N/A	U 238:	N/A

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	N/A
Ra 226:	N/A
Pu 239:	N/A
U 234:	N/A
U 235:	N/A
U 238:	N/A

NAF = Not Analyzed For

Units: ☐ uCi/grams ☐ uCi/ml

☐ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES: No crops

Station #: 25 | Type of Sample: Crops | Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	1.39E-6	Pb 212:	2.55E-7
Bi 212:	ND	Pb 214:	2.69E-7
Bi 214:	1.92E-7	Ra 226:	ND
Cs 137:	ND	Ti 208:	8.4E-8
H 3 *:	<1.0E-6	U 235:	ND
K 40:	4.83E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 25 Type of Sample: Crops Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	1.88E-6	Pb 212:	9.0E-8
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	6.3E-8
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.18E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 25 Type of Sample: Crops Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	3.04E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	1.88E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 27 Type of Sample: Water-Ground Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	2.16E-8
Bi 214:	2.38E-8	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	6.5E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.61E-9
U 235:	<1.0E-9
U 238:	1.79E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 27 Type of Sample: Water-Ground Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	6.47E-8	Pb 214:	5.83E-8
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	7.2E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.6E-9
U 235:	<1.0E-9
U 238:	2.57E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 27 Type of Sample: Water-Ground Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	7.4E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.6E-9
U 235:	<1.0E-9
U 238:	2.57E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Station #: 27 Type of Sample: Water-Ground Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	1.48E-8
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	5.6E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	3.78E-9
U 235:	<1.0E-9
U 238:	1.65E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 30 Type of Sample: Water-Ground Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	2.53E-8
Bi 214:	2.42E-8	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	7.8E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	5.2E-9
U 235:	<1.0E-9
U 238:	2.58E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 30 Type of Sample: Water-Ground Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	4.20E-8
Bi 214:	4.24E-8	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	7.0E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.9E-9
U 235:	<1.0E-9
U 238:	2.12E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 30 Type of Sample: Water-Ground Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	6.4E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.50E-9
U 235:	<1.0E-9
U 238:	1.85E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Station #: 30 Type of Sample: Water-Ground Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	1.25E-8
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	7.1E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	5.2E-9
U 235:	<1.0E-9
U 238:	1.83E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 37 | Type of Sample: Soil | Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.25E-6
Bi 212:	ND	Pb 214:	1.21E-6
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	5.05E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.85E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	2.33E-6
Ra 226:	NAF
Pu 239:	<40E-7
U 234:	1.22E-6
U 235:	<1.0E-6
U 238:	1.04E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 37 | Type of Sample: Vegetation | Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	9.38E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	*	U 235:	ND
K 40:	6.31E-6	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES: *Sample too dry

Pantex Sample Data January - December 2019

Station #: 37 | Type of Sample: Soil | Sample Date: 7/10/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.53E-6
Bi 212:	ND	Pb 214:	7.6E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	NAF	U 235:	ND
K 40:	1.62E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	1.07E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 37 | Type of Sample: Vegetation | Sample Date: 7/10/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	6.28E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	1.67E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 38 | Type of Sample: Soil | Sample Date: 4/16/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.14E-6
Bi 212:	ND	Pb 214:	9.0E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	3.66E-7	Ti 208:	4.54E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.66E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	1.09E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 38 | Type of Sample: Vegetation | Sample Date: 4/16/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	2.44E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	3.60E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 38 Type of Sample: Soil Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.52E-6
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	4.0E-7	Ti 208:	4.2E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.84E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 38 Type of Sample: Vegetation Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	7.41E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.78E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 39 | Type of Sample: Soil | Sample Date: 1/23/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	9.4E-7
Bi 212:	ND	Pb 214:	8.1E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.48E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.68E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	2.2E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	1.04E-6
U 235:	<1.0E-6
U 238:	1.05E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 39 | Type of Sample: Vegetation | Sample Date: 1/23/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	7.55E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	*	U 235:	ND
K 40:	3.35E-6	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES: *Sample too dry

Pantex Sample Data January - December 2019

Station #: 39 | Type of Sample: Soil | Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	9.7E-7
Bi 212:	ND	Pb 214:	7.8E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	4.07E-7	Ti 208:	3.79E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.51E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 39 | Type of Sample: Vegetation | Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	6.30E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.66E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 40 Type of Sample: Sediment Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.61E-6
Bi 212:	ND	Pb 214:	9.6E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	9.1E-8	Ti 208:	4.16E-7
H 3 *:	*	U 235:	ND
K 40:	1.67E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES: Sample too dry

Station #: 40 Type of Sample: Water-Surface Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	<1.0E-9
U 235:	<1.0E-9
U 238:	<1.0E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

The State of Texas

Department of State Health Service

Radiation Control Program

Pantex Sample Data January - December 2019

Station #: 04 | Type of Sample: Soil | Sample Date: 4/16/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	9.7E-7
Bi 212:	ND	Pb 214:	8.7E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.15E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.67E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 04 | Type of Sample: Vegetation | Sample Date: 4/16/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	2.49E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.14E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 04 Type of Sample: Soil Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.18E-6
Bi 212:	ND	Pb 214:	8.6E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	3.04E-7	Ti 208:	5.2E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.66E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 04 Type of Sample: Vegetation Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	6.51E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.58E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 08 | Type of Sample: Soil | Sample Date: 4/16/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.19E-6
Bi 212:	ND	Pb 214:	9.9E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.6E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.79E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	2.03E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	1.15E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 08 | Type of Sample: Vegetation | Sample Date: 4/16/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	2.81E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.06E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 08 | Type of Sample: Soil | Sample Date: 10/15/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	2.01E-6
Bi 212:	ND	Pb 214:	9.5E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.5E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.79E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	2.13E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	1.11E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 08 | Type of Sample: Vegetation | Sample Date: 10/15/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	6.84E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	1.21E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 14 | Type of Sample: Soil | Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	9.8E-7
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.39E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.59E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	2.03E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	1.11E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 14 | Type of Sample: Vegetation | Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	8.25E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	*	U 235:	ND
K 40:	6.97E-6	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES: *Sample too dry

Pantex Sample Data January - December 2019

Station #: 14 | Type of Sample: Soil | Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	5.2E-7
Bi 212:	ND	Pb 214:	8.2E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.43E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.21E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 14 | Type of Sample: Vegetation | Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	6.18E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.15E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 15 Type of Sample: Sediment Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	2.02E-6
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	2.90E-7	Ti 208:	5.50E-7
H 3 *:	NAF	U 235:	ND
K 40:	2.43E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	2.01E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	1.12E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 15 Type of Sample: Water-Surface Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.31E-8
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	1.28E-7	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	6.5E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	3.20E-9
U 235:	<1.0E-9
U 238:	3.08E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 16 | Type of Sample: Soil | Sample Date: 4/16/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.12E-6
Bi 212:	ND	Pb 214:	1.00E-6
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.80E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.79E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	1.07E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 16 | Type of Sample: Vegetation | Sample Date: 4/16/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	1.58E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.21E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 16 Type of Sample: Soil Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.36E-6
Bi 212:	ND	Pb 214:	1.03E-6
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	5.6E-7
H 3 *:	NAF	U 235:	ND
K 40:	2.04E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	2.30E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	1.04E-6
U 235:	<1.0E-6
U 238:	1.22E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 16 Type of Sample: Vegetation Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	7.22E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	4.41E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 18 | Type of Sample: Soil | Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.25E-6
Bi 212:	ND	Pb 214:	7.7E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.24E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.56E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 18 | Type of Sample: Vegetation | Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	7.76E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	*	U 235:	ND
K 40:	5.37E-6	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES: *Sample too dry

Pantex Sample Data January - December 2019

Station #: 18 | Type of Sample: Soil | Sample Date: 7/9/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.62E-6
Bi 212:	ND	Pb 214:	9.3E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	5.02E-7	Ti 208:	4.37E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.66E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	1.07E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 18 | Type of Sample: Vegetation | Sample Date: 7/9/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	5.5E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	5.79E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 19 | Type of Sample: Soil | Sample Date: 4/16/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	8.9E-7
Bi 212:	ND	Pb 214:	6.1E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	2.42E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.15E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 19 | Type of Sample: Vegetation | Sample Date: 4/16/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	2.46E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.14E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 19 | Type of Sample: Soil | Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	7.0E-7
Bi 212:	ND	Pb 214:	7.2E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.58E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.48E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 19 | Type of Sample: Vegetation | Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	6.69E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.27E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 20 Type of Sample: Soil Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	9.5E-7
Bi 212:	ND	Pb 214:	8.8E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.36E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.60E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Station #: 20 Type of Sample: Vegetation Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	7.09E-6	Pb 212:	1.39E-7
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.7E-8
H 3 *:	*	U 235:	ND
K 40:	4.65E-6	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES: *Sample too dry

Pantex Sample Data January - December 2019

Station #: 20 | Type of Sample: Soil | Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.60E-6
Bi 212:	ND	Pb 214:	8.6E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.89E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.80E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 20 | Type of Sample: Vegetation | Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	1.01E-5	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	1.98E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 21 | Type of Sample: Soil | Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	9.2E-7
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	2.88E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.27E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 21 | Type of Sample: Vegetation | Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	2.49E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.91E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 21 Type of Sample: Soil Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.00E-6
Bi 212:	ND	Pb 214:	9.0E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.7E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.79E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 21 Type of Sample: Vegetation Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	9.09E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	3.50E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 22 Type of Sample: Sediment Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	8.1E-7
Bi 212:	ND	Pb 214:	6.8E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.78E-7
H 3 *:	*	U 235:	ND
K 40:	1.49E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES: *Sample too dry

Station #: 22 Type of Sample: Water-Surface Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.8E-8	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	3.6E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	2.68E-9
U 235:	<1.0E-9
U 238:	<1.0E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 23 Type of Sample: Sediment Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.27E-6
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	3.78E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.46E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units

☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 23 Type of Sample: Water-Surface Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	NAF	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	<1.0E-9
U 235:	<1.0E-9
U 238:	<1.0E-9

NAF = Not Analyzed For

Units

☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 24 Type of Sample: Water-Surface Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	5.9E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.05E-9
U 235:	<1.0E-9
U 238:	1.73E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Station #: 24 Type of Sample: Water-Surface Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	6.5E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.4E-9
U 235:	<1.0E-9
U 238:	1.91E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 24 Type of Sample: Water-Surface Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	6.3E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.27E-9
U 235:	<1.0E-9
U 238:	1.89E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 24 Type of Sample: Water-Surface Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	6.5E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.26E-9
U 235:	<1.0E-9
U 238:	2.07E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 25 Type of Sample: Crops Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	N/A	Pb 210:	N/A
Be 7:	N/A	Pb 212:	N/A
Bi 212:	N/A	Pb 214:	N/A
Bi 214:	N/A	Ra 226:	N/A
Cs 137:	N/A	Ti 208:	N/A
H 3 *:	N/A	U 235:	N/A
K 40:	N/A	U 238:	N/A

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	N/A
Ra 226:	N/A
Pu 239:	N/A
U 234:	N/A
U 235:	N/A
U 238:	N/A

NAF = Not Analyzed For

Units
☐ uCi/grams ☐ uCi/ml

☐ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES: No crops

Station #: 25 Type of Sample: Crops Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	1.39E-6	Pb 212:	2.55E-7
Bi 212:	ND	Pb 214:	2.69E-7
Bi 214:	1.92E-7	Ra 226:	ND
Cs 137:	ND	Ti 208:	8.4E-8
H 3 *:	<1.0E-6	U 235:	ND
K 40:	4.83E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 25 | Type of Sample: Crops | Sample Date: 7/10/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	1.88E-6	Pb 212:	9.0E-8
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	6.3E-8
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.18E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 25 | Type of Sample: Crops | Sample Date: 10/15/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	3.04E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	1.88E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 27 Type of Sample: Water-Ground Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	2.16E-8
Bi 214:	2.38E-8	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	6.5E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.61E-9
U 235:	<1.0E-9
U 238:	1.79E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Station #: 27 Type of Sample: Water-Ground Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	6.47E-8	Pb 214:	5.83E-8
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	7.2E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.6E-9
U 235:	<1.0E-9
U 238:	2.57E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 27 Type of Sample: Water-Ground Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	7.4E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.6E-9
U 235:	<1.0E-9
U 238:	2.57E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Station #: 27 Type of Sample: Water-Ground Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	1.48E-8
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	5.6E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	3.78E-9
U 235:	<1.0E-9
U 238:	1.65E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 30 Type of Sample: Water-Ground Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	2.53E-8
Bi 214:	2.42E-8	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	7.8E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	5.2E-9
U 235:	<1.0E-9
U 238:	2.58E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 30 Type of Sample: Water-Ground Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	4.20E-8
Bi 214:	4.24E-8	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	7.0E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.9E-9
U 235:	<1.0E-9
U 238:	2.12E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 30 Type of Sample: Water-Ground Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	6.4E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	4.50E-9
U 235:	<1.0E-9
U 238:	1.85E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Station #: 30 Type of Sample: Water-Ground Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	1.25E-8
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	7.1E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	5.2E-9
U 235:	<1.0E-9
U 238:	1.83E-9

NAF = Not Analyzed For

Units
☐ uCi/grams ☑ uCi/ml

☑ Regulatory limits were not exceeded
☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 37 | Type of Sample: Soil | Sample Date: 1/23/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.25E-6
Bi 212:	ND	Pb 214:	1.21E-6
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	5.05E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.85E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	2.33E-6
Ra 226:	NAF
Pu 239:	<40E-7
U 234:	1.22E-6
U 235:	<1.0E-6
U 238:	1.04E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 37 | Type of Sample: Vegetation | Sample Date: 1/23/2019

Beta-Gamma

Ac 228:	ND	Pb 210:	ND
Be 7:	9.38E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	*	U 235:	ND
K 40:	6.31E-6	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha

Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES: *Sample too dry

Pantex Sample Data January - December 2019

Station #: 37 | Type of Sample: Soil | Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.53E-6
Bi 212:	ND	Pb 214:	7.6E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	NAF	U 235:	ND
K 40:	1.62E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	1.07E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 37 | Type of Sample: Vegetation | Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	6.28E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	1.67E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 38 | Type of Sample: Soil | Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.14E-6
Bi 212:	ND	Pb 214:	9.0E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	3.66E-7	Ti 208:	4.54E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.66E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	1.09E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 38 | Type of Sample: Vegetation | Sample Date: 4/16/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	2.44E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	3.60E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 38 Type of Sample: Soil Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.52E-6
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	4.0E-7	Ti 208:	4.2E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.84E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 38 Type of Sample: Vegetation Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	7.41E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.78E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 39 | Type of Sample: Soil | Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	9.4E-7
Bi 212:	ND	Pb 214:	8.1E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	4.48E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.68E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	2.2E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	1.04E-6
U 235:	<1.0E-6
U 238:	1.05E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES:

Station #: 39 | Type of Sample: Vegetation | Sample Date: 1/23/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	7.55E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	*	U 235:	ND
K 40:	3.35E-6	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units: ☑ uCi/grams ☐ uCi/ml

☑ Regulatory limits were not exceeded

☐ Regulatory limits were exceeded

NOTES: *Sample too dry

Pantex Sample Data January - December 2019

Station #: 39 Type of Sample: Soil Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	9.7E-7
Bi 212:	ND	Pb 214:	7.8E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	4.07E-7	Ti 208:	3.79E-7
H 3 *:	NAF	U 235:	ND
K 40:	1.51E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Station #: 39 Type of Sample: Vegetation Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	6.30E-6	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	2.66E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Pantex Sample Data January - December 2019

Station #: 40 Type of Sample: Sediment Sample Date: 7/10/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	1.61E-6
Bi 212:	ND	Pb 214:	9.6E-7
Bi 214:	ND	Ra 226:	ND
Cs 137:	9.1E-8	Ti 208:	4.16E-7
H 3 *:	*	U 235:	ND
K 40:	1.67E-5	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-6
Ra 226:	NAF
Pu 239:	<4.0E-7
U 234:	<1.0E-6
U 235:	<1.0E-6
U 238:	<1.0E-6

NAF = Not Analyzed For

Units
- [x] uCi/grams
- [ ] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES: Sample too dry

Station #: 40 Type of Sample: Water-Surface Sample Date: 10/15/2019

Beta-Gamma			
Ac 228:	ND	Pb 210:	ND
Be 7:	ND	Pb 212:	ND
Bi 212:	ND	Pb 214:	ND
Bi 214:	ND	Ra 226:	ND
Cs 137:	ND	Ti 208:	ND
H 3 *:	<1.0E-6	U 235:	ND
K 40:	ND	U 238:	ND

* = H3 activity is in uCi/ml ND = Not Detected

Alpha	
Total Uranium:	<2.0E-9
Ra 226:	NAF
Pu 239:	<4.0E-10
U 234:	<1.0E-9
U 235:	<1.0E-9
U 238:	<1.0E-9

NAF = Not Analyzed For

Units
- [ ] uCi/grams
- [x] uCi/ml

- [x] Regulatory limits were not exceeded
- [ ] Regulatory limits were exceeded

NOTES:

Section 5

The State of Texas Department of State Health Services
Pantex TLD Exposure For January - December 2019

Station	Date Placed	Date Removed	Days Exposed	Exposure in mrem	Average /Quarter	Total for Year
04						
	1/23/2019	4/16/2019	83	37		
	Comments:					
	4/16/2019	7/9/2019	84	35		
	Comments:					
	7/10/2019	7/10/2019	97	40		
	Comments:					
	10/15/2019	1/15/2020	92	36		
	Comments:					
08						
	1/23/2019	4/16/2019	83	35		
	Comments:					
	4/16/2019	7/10/2019	85	33		
	Comments:					
	7/10/2019	7/10/2019	97	37		
	Comments:					
	10/15/2019	1/15/2020	92	36		
	Comments:					
14						
	1/23/2019	4/16/2019	83	37		
	Comments:					

Station	Date Placed	Date Removed	Days Exposed	Exposure in mrem	Average /Quarter	Total for Year
	4/16/2019	7/10/2019	85	36		
	Comments:					
	7/10/2019	7/10/2019	97	39		
	Comments:					
	10/15/2019	1/15/2020	92	37		
	Comments:					
16						
	1/23/2019	4/16/2019	83	36		
	Comments:					
	4/16/2019	7/10/2019	85	35		
	Comments:					
	7/10/2019	7/10/2019	97	36		
	Comments:					
	10/15/2019	1/15/2020	92	36		
	Comments:					
19						
	1/23/2019	4/16/2019	83	38		
	Comments:					
	4/16/2019	7/10/2019	85	36		
	Comments:					
	7/10/2019	7/10/2019	97	39		
	Comments:					
	10/15/2019	1/15/2020	92	36		
	Comments:					
20						

Station	Date Placed	Date Removed	Days Exposed	Exposure in mrem	Average /Quarter	Total for Year
	1/23/2019	4/16/2019	83	34		
	Comments:					
	4/16/2019	7/10/2019	85	33		
	Comments:					
	7/10/2019	7/10/2019	97	40		
	Comments:					
	10/15/2019	1/15/2020	92	38		
	Comments:					
21						
	1/23/2019	4/16/2019	83	33		
	Comments:					
	4/16/2019	7/10/2019	85	34		
	Comments:					
	7/10/2019	7/10/2019	99	34		
	Comments:					
	10/15/2019	1/15/2020	92	36		
	Comments:					
24						
	1/23/2019	4/16/2019	83	33		
	Comments:					
	4/16/2019	7/9/2019	84	33		
	Comments:					
	7/9/2019	10/16/2019	97	34		
	Comments:					

Station	Date Placed	Date Removed	Days Exposed	Exposure in mrem	Average /Quarter	Total for Year
	10/15/2019	1/15/2020	92	35		
	Comments:					
29						
	1/23/2019	4/16/2019	83	37		
	Comments:					
	4/16/2019	7/9/2019	84	35		
	Comments:					
	7/10/2019	7/10/2019	97	38		
	Comments:					
	10/15/2019	1/15/2020	92	36		
	Comments:					
37						
	1/23/2019	4/16/2019	83	37		
	Comments:					
	4/16/2019	7/10/2019	85	36		
	Comments:					
	7/10/2019	7/10/2019	97	40		
	Comments:					
	10/15/2019	1/15/2020	92	38		
	Comments:					
38						
	1/23/2019	4/16/2019	83	35		
	Comments:					
	4/16/2019	7/10/2019	85	34		
	Comments:					

Station	Date Placed	Date Removed	Days Exposed	Exposure in mrem	Average /Quarter	Total for Year
	7/10/2019	7/10/2019	97	0		
	Comments:	OSL was lost.				
	10/15/2019	1/15/2020	92	37		
	Comments:					
39						
	1/23/2019	4/16/2019	83	35		
	Comments:					
	4/16/2019	7/10/2019	85	33		
	Comments:					
	7/10/2019	7/10/2019	97	39		
	Comments:					
	10/15/2019	1/15/2020	92	37		
	Comments:					

Section 6

The State of Texas

Department of State Health Service

Pantex Air Sample Data January - December 2019

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 2/26/2018 Date of Review: 7/26/2019

Station #: 105 Filter#: G7513646 Sample Volume m3: 2043

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.013E-13	Pb 214:	ND	Total Uranium:	<4.9E-16
Bi 212:	ND	RA_226:	ND	U 234:	<4.9E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<4.9E-16
Cs 137:	ND	U 235:	ND	U 238:	<4.9E-16
K 40:	1.28E-14	U 238:	ND	PU 239:	<5.0E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments:

Date of Sample: 3/8/2018 Date of Review: 7/26/2019

Station #: 105 Filter#: G7513648 Sample Volume m3: 1946

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.4E-13	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.2E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.2E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.2E-16
K 40:	ND	U 238:	ND	PU 239:	<5.2E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments:

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 3/19/2018 Date of Review: 7/26/2019

Station #: 104 Filter#: G7513651 Sample Volume m3: 1833

Beta/Gamma Activity				Alpha Activity	
Be 7:	2.96E-14	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.5E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.5E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.5E-16
K 40:	1.06E-14	U 238:	ND	PU 239:	<5.6E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments:

Date of Sample: 3/26/2018 Date of Review: 7/26/2019

Station #: 105 Filter#: G7513652 Sample Volume m3: 2023

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.39E-13	Pb 214:	ND	Total Uranium:	<9.9E-16
Bi 212:	ND	RA_226:	ND	U 234:	<5.0E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.0E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.0E-16
K 40:	1.11E-14	U 238:	ND	PU 239:	<5.0E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments:

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 4/12/2018 Date of Review: 7/26/2019

Station #: 105 Filter#: G7513654 Sample Volume m3: 1821

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.49E-13	Pb 214:	ND	Total Uranium:	<1.2E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.5E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.5E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.5E-16
K 40:	9.3E-15	U 238:	ND	PU 239:	<5.6E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments:

Date of Sample: 4/19/2018 Date of Review: 7/26/2019

Station #: 104 Filter#: G7513657 Sample Volume m3: 1775

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.17E-13	Pb 214:	ND	Total Uranium:	<1.2E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.7E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.7E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.7E-16
K 40:	8.2E-15	U 238:	ND	PU 239:	<5.7E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments:

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 4/30/2018 Date of Review: 7/23/2019

Station #: 105 Filter#: G7513658 Sample Volume m3: 1813

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.62E-13	Pb 214:	ND	Total Uranium:	<1.2E-15
Bi 212:	ND	RA_226:	ND	U 234:	<6.0E-16
Bi 214:	ND	Ti 208:	5.4E-16	U 235:	<6.0E-16
Cs 137:	ND	U 235:	ND	U 238:	<6.0E-16
K 40:	1.37E-14	U 238:	ND	PU 239:	<6.0E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Date of Sample: 5/14/2018 Date of Review: 7/23/2019

Station #: 104 Filter#: G7513661 Sample Volume m3: 1680

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.17E-13	Pb 214:	ND	Total Uranium:	<1.2E-15
Bi 212:	ND	RA_226:	ND	U 234:	<6.0E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<6.0E-16
Cs 137:	ND	U 235:	ND	U 238:	<6.0E-16
K 40:	ND	U 238:	ND	PU 239:	<6.0E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Date of Sample: 5/17/2018 Date of Review: 7/23/2019

Station #: 105 Filter#: G7513662 Sample Volume m3: 1843

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.10E-13	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.5E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.5E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.5E-16
K 40:	ND	U 238:	ND	PU 239:	<5.5E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Date of Sample: 5/23/2018 Date of Review: 7/26/2019

Station #: 104 Filter#: G7513665 Sample Volume m3: 1702

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.06E-13	Pb 214:	ND	Total Uranium:	<1.2E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.9E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.9E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.9E-16
K 40:	1.21E-14	U 238:	ND	PU 239:	<6.0E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments:

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 5/31/2018 Date of Review: 7/23/2019

Station #: 104 Filter#: G7513669 Sample Volume m3: 1673

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.28E-13	Pb 214:	ND	Total Uranium:	<1.3E-15
Bi 212:	ND	RA_226:	ND	U 234:	<6.0E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<6.0E-16
Cs 137:	ND	U 235:	ND	U 238:	<6.0E-16
K 40:	ND	U 238:	ND	PU 239:	<6.0E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments:

Date of Sample: 6/25/2018 Date of Review: 7/23/2019

Station #: 105 Filter#: G7513670 Sample Volume m3: 1813

Beta/Gamma Activity				Alpha Activity	
Be 7:	9.6E-14	Pb 214:	ND	Total Uranium:	<1.2E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.6E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.6E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.6E-16
K 40:	8.5E-15	U 238:	ND	PU 239:	<5.6E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 7/19/2018 Date of Review: 7/23/2019

Station #: 105 Filter#: G7513671 Sample Volume m3: 1839

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.50E-13	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.5E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.5E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.5E-16
K 40:	6.3E-15	U 238:	ND	PU 239:	<5.5E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Date of Sample: 7/31/2018 Date of Review: 8/1/2019

Station #: 105 Filter#: G7513672 Sample Volume m3: 1823

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.50E-13	Pb 214:	ND	Total Uranium:	<1.2E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.5E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.5E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.5E-16
K 40:	8.0E-15	U 238:	ND	PU 239:	<5.6E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments:

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 7/31/2018 Date of Review: 8/15/2019

Station #: 105 Filter#: G7513611 Sample Volume m3: 1823

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.50E-13	Pb 214:	ND	Total Uranium:	<1.2E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.5E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.5E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.5E-16
K 40:	8.0E-15	U 238:	ND	PU 239:	<5.6E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Date of Sample: 8/13/2018 Date of Review: 7/23/2019

Station #: 105 Filter#: G7513673 Sample Volume m3: 1854

Beta/Gamma Activity				Alpha Activity	
Be 7:	7.64E-14	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.4E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.4E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.4E-16
K 40:	6.9E-15	U 238:	ND	PU 239:	<5.4E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 9/17/2018 Date of Review: 8/1/2019

Station #: 104 Filter#: G7513674 Sample Volume m3: 1837

Beta/Gamma Activity				Alpha Activity	
Be 7:	5.85E-14	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.5E-16
Bi 214:	ND	Ti 208:	7.8E-16	U 235:	<5.5E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.5E-16
K 40:	9.4E-15	U 238:	ND	PU 239:	<5.5E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Date of Sample: 10/16/2018 Date of Review: 8/1/2019

Station #: 105 Filter#: G7513675 Sample Volume m3: 1966

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.40E-13	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.1E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.5E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.5E-16
K 40:	ND	U 238:	ND	PU 239:	<5.2E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Date of Sample: 10/29/2018 Date of Review: 8/1/2019

Station #: 105 Filter#: G7513676 Sample Volume m3: 1983

Beta/Gamma Activity				Alpha Activity	
Be 7:	6.35E-14	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.1E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.1E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.1E-16
K 40:	ND	U 238:	ND	PU 239:	<5.1E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Date of Sample: 11/19/2018 Date of Review: 8/1/2019

Station #: 104 Filter#: G7513677 Sample Volume m3: 1972

Beta/Gamma Activity				Alpha Activity	
Be 7:	2.71E-14	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.1E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.1E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.1E-16
K 40:	ND	U 238:	ND	PU 239:	<5.2E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample:	11/29/2018	Date of Review:	8/1/2019		
Station #:	104	Filter#:	G7513678	Sample Volume m3:	2003

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.31E-13	Pb 214:	ND	Total Uranium:	<1.0E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.0E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.0E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.0E-16
K 40:	ND	U 238:	ND	PU 239:	<5.1E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Date of Sample:	12/13/2018	Date of Review:	8/1/2019		
Station #:	105	Filter#:	G7513679	Sample Volume m3:	2011.2

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.76E-13	Pb 214:	ND	Total Uranium:	<1.0E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.0E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.0E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.0E-16
K 40:	ND	U 238:	ND	PU 239:	<5.1E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 1/10/2019 Date of Review: 8/1/2019

Station #: 105 Filter#: G7513680 Sample Volume m3: 2025.2

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.031E-13	Pb 214:	ND	Total Uranium:	<9.9E-16
Bi 212:	ND	RA_226:	ND	U 234:	<5.0E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.0E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.0E-16
K 40:	1.02E-14	U 238:	ND	PU 239:	<5.0E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Date of Sample: 1/31/2019 Date of Review: 8/1/2019

Station #: 105 Filter#: G7515891 Sample Volume m3: 1953.7

Beta/Gamma Activity				Alpha Activity	
Be 7:	8.88E-14	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.2E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.2E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.2E-16
K 40:	ND	U 238:	ND	PU 239:	<5.2E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample:	2/14/2019	Date of Review:	8/1/2019		
Station #:	105	Filter#:	G7515892	Sample Volume m3:	1984.5

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.43E-13	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.1E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.1E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.1E-16
K 40:	ND	U 238:	ND	PU 239:	<5.1E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Date of Sample:	2/21/2019	Date of Review:	8/1/2019		
Station #:	105	Filter#:	G7515893	Sample Volume m3:	1951

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.23E-13	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.2E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.2E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.2E-16
K 40:	9.0E-15	U 238:	ND	PU 239:	<5.2E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded

All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 3/11/2019 Date of Review: 8/15/2019

Station #: 105 Filter#: G7515894 Sample Volume m3: 1943.9

Beta/Gamma Activity				Alpha Activity	
Be 7:	3.73E-14	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.2E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.2E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.2E-16
K 40:	ND	U 238:	ND	PU 239:	<5.2E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: NONE

Date of Sample: 3/11/2019 Date of Review: 8/1/2019

Station #: 105 Filter#: Sample Volume m3: 1943.9

Beta/Gamma Activity				Alpha Activity	
Be 7:	3.73E-14	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.2E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.2E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.2E-16
K 40:	ND	U 238:	ND	PU 239:	<5.2E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments:

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 3/21/2019 Date of Review: 8/1/2019

Station #: 105 Filter#: G7515895 Sample Volume m3: 1991.4

Beta/Gamma Activity				Alpha Activity	
Be 7:	8.65E-14	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.1E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.1E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.1E-16
K 40:	ND	U 238:	ND	PU 239:	<5.1E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: Its received 7/23/19 due to lab not being able to process the alpha samples June 28, 2019.

Date of Sample: 4/11/2019 Date of Review: 8/15/2019

Station #: 105 Filter#: G7515896 Sample Volume m3: 1920.9

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.080E-13	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.3E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.3E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.3E-16
K 40:	ND	U 238:	ND	PU 239:	<5.3E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: NONE

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 4/11/2019 Date of Review: 8/1/2019

Station #: 105 Filter#: Sample Volume m3: 1920.9

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.080E-13	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.3E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.3E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.3E-16
K 40:	ND	U 238:	ND	PU 239:	<5.3E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments:

Date of Sample: 6/3/2019 Date of Review: 10/23/2019

Station #: 105 Filter#: Not Provided Sample Volume m3: 17933

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.64E-13	Pb 214:	ND	Total Uranium:	<1.2E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.6E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.6E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.6E-16
K 40:	ND	U 238:	ND	PU 239:	<5.7E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: NONE

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 6/10/2019 Date of Review: 10/23/2019

Station #: 105 Filter#: G7515901 Sample Volume m3: 1879.4

Beta/Gamma Activity				Alpha Activity	
Be 7:	3.22E-13	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.4E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.4E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.4E-16
K 40:	ND	U 238:	ND	PU 239:	<5.4E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: NONE

Date of Sample: 6/20/2019 Date of Review: 10/23/2019

Station #: 105 Filter#: G7515902 Sample Volume m3: 1828

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.58E-13	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.5E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.5E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.5E-16
K 40:	ND	U 238:	ND	PU 239:	<5.6E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: NONE

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample: 6/24/2019 Date of Review: 10/23/2019

Station #: 105 Filter#: G7515903 Sample Volume m3: 1855

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.38E-13	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.4E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.4E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.4E-16
K 40:	1.21E-14	U 238:	ND	PU 239:	<5.5E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: NONE

Date of Sample: 6/27/2019 Date of Review: 10/23/2019

Station #: 105 Filter#: G7515904 Sample Volume m3: 1781.6

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.25E-13	Pb 214:	ND	Total Uranium:	<1.2E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.7E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.7E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.7E-16
K 40:	ND	U 238:	ND	PU 239:	<5.7E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☑ Reg limit not exceeded All activities in uc/ml.

Comments: NONE

Sample data for samples received and reviewed by the Agency during period identified .

Date of Sample:	7/11/2019	Date of Review:	10/23/2019		
Station #:	105	Filter#:		Sample Volume m3:	1867.9

Beta/Gamma Activity				Alpha Activity	
Be 7:	1.18E-13	Pb 214:	ND	Total Uranium:	<1.1E-15
Bi 212:	ND	RA_226:	ND	U 234:	<5.4E-16
Bi 214:	ND	Ti 208:	ND	U 235:	<5.4E-16
Cs 137:	ND	U 235:	ND	U 238:	<5.4E-16
K 40:	ND	U 238:	ND	PU 239:	<5.5E-17

All activities in uc/ml.

Reg limit exceeded ☐ ☐ Reg limit not exceeded

All activities in uc/ml.

Comments:

Section 7

QAP 0403

QAP 60 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
Matrix: AI Air Filter Bq/filter							
1	AM241	0.115	0.01	0.1045	0.0025	1.100	A
1	CO60	37.5	0.4	35.4	0.85	1.059	A
1	CS134	16.7	0.2	18.2	0.402	0.918	A
1	CS137	28.9	0.5	26.4	0.86	1.095	A
1	Gross Alpha	1.19	0.08	1.2	0.12	0.992	A
1	Gross Beta	2.89	0.13	2.85	0.28	1.014	A
1	PU238	0.041	0.002	0.0405	0.0027	1.012	A
1	PU239	0.164	0.005	0.1644	0.0112	0.998	A
1	U234	0.092	0.005	0.0858	0.0008	1.072	A
1	U238	0.09	0.005	0.085	0.0029	1.059	A
Matrix: SO Soil Bq/kg							
1	AC228	52.4	1.8	49.0	1.96	1.069	A
1	AM241	13.9	0.9	13.0	0.43	1.069	A
1	BI212	51.2	8.2	50.43	4.61	1.015	A
1	BI214	52.3	1.9	58.4	2.2	0.896	A
1	CS137	1359.0	30.0	1323.0	66.17	1.027	A
1	K40	564.0	17.0	539.0	29.11	1.046	A
1	PB212	50.1	1.9	47.73	2.53	1.050	A
1	PB214	55.6	2.0	61.0	2.38	0.911	A
1	PU238	0.888	0.185	0.82	0.05	1.083	A
1	PU239	22.4	1.2	22.82	0.56	0.982	A
1	SR90	52.5	9.4	51.0 *	5.9	1.029	A
1	TH234	71.1	8.9	84.0	5.96	0.846	A
1	U234	84.6	2.7	87.22	1.97	0.970	A
1	U238	90.6	2.7	89.73	4.22	1.010	A
Matrix: VE Vegetation Bq/kg							
1	AM241	5.33	0.56	4.93	0.29	1.081	A
1	CO60	17.7	0.9	14.47	0.64	1.223	A
1	CS137	659.0	11.0	584.67	29.23	1.127	A
1	K40	837.0	25.0	720.0	37.92	1.163	A
1	PU238	0.592	0.159	0.455	0.0485	1.301	A
1	PU239	6.56	0.53	6.81	0.28	0.963	A
1	SR90	688.0	22.0	734.0 *	82.0	0.937	A
Matrix: WA Water Bq/L							
1	AM241	1.22	0.11	1.31	0.04	0.931	A
1	CO60	162.0	1.0	163.2	5.9	0.993	A
1	CS137	52.2	0.9	51.95	2.7	1.005	A
1	Gross Alpha	320.0	28.0	326.0	32.0	0.982	A
1	Gross Beta	1217.0	60.0	1170.0	117.0	1.040	A
1	H3	255.0	18.0	186.6	3.3	1.367	W
1	PU238	1.03	0.06	1.1	0.03	0.936	A
1	PU239	2.86	0.14	3.08	0.1	0.929	A
1	SR90	5.68	0.67	4.76 *	0.5	1.193	W
1	U234	2.26	0.09	2.28	0.02	0.991	A
1	U238	2.25	0.09	2.25	0.06	1.000	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 site specific evaluation.

* Grand mean average used in lieu of experimentally determined EML value

Laboratory Services Section
Environmental Sciences Branch

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

Detection Limits for Gamma Spectroscopy
Sample Type

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

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

Laboratory Services Section
Environmental Sciences Branch

Detection Limits for Chemical Analysis Procedures
Sample Type

Isotope	Soil - Sediment		Air Filter		Water - Milk		Vegetation - Fish	
	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