WOLF CREEK
NUCLEAR OPERATING CORPORATION

Steven R. Koenig
Manager Regulatory Affairs

April 23, 2015

RA 15-0040

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: Docket No. 50-482: 2014 Annual Radiological Environmental Operating Report

Gentlemen:

The purpose of this letter is to submit the enclosed Annual Radiological Environmental Operating Report, which is being submitted pursuant to Wolf Creek Generating Station (WCGS) Technical Specification 5.6.2. This report covers radiological environmental monitoring around WCGS for the period of January 1, 2014, through December 31, 2014.

This letter contains no commitments. If you have any questions concerning this matter, please contact me at (620) 364-4041.

Sincerely,

Steven R. Koenig

SRK/rlt

Enclosure

cc: M. L. Dapas (NRC), w/e
C. F. Lyon (NRC), w/e
A. A. Rosebrook (NRC), w/e
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IE25
NRR

Enclosure to RA 15-0040

Wolf Creek Nuclear Operating Corporation

Wolf Creek Generating Station

2014 Annual Radiological Environmental Operating Report
(168 pages)

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

2014 ANNUAL RADIOLOGICAL

ENVIRONMENTAL OPERATING REPORT

April 15, 2015

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EXECUTIVE SUMMARY

Plant-related activation, corrosion, or fission products were not detected during 2014 in airborne particulate and radioiodine filters, drinking water, ground water, broadleaf vegetation, shoreline sediment, crops, aquatic vegetation, terrestrial vegetation or soil samples. Activation, corrosion or fission products attributable to plant operation were detected during 2014 in surface water, fish, bottom sediment and deer samples.

Nuclides detected in Radiological Environmental Monitoring Program (REMP) samples were below applicable Nuclear Regulatory Commission (NRC) reporting levels.

Based upon the radiological environmental monitoring program results, it was concluded station operations had no significant radiological impact on the health and safety of the public or the environment.

INTRODUCTION

The 2014 Annual Radiological Environmental Operating Report for Wolf Creek Generating Station (WCGS) covers the period from January 1 through December 31, 2014. WCGS is located in Coffey County, Kansas, approximately five miles northeast of Burlington, Kansas.

Fuel loading commenced at WCGS on March 12, 1985. The operational phase of the REMP began with initial criticality on May 22, 1985, and the first detectable quantities of radioactivity were reported in plant effluents in June 1985.

This report contains a description of the REMP conducted by Wolf Creek Nuclear Operating Corporation (WCNOC), a discussion of monitoring program results, the revisions or changes to the program, program deviations, the Interlaboratory Comparison Program and a comparison to the Radioactive Effluent Release Program. The Interlaboratory Comparison Program results, a summary of results in the NRC Branch Technical Position specified format, the individual sample results, and the Land Use Census Report are included as appendices.

I. PROGRAM DESCRIPTION

Radiological environmental monitoring samples were collected according to the schedule in WCGS procedure AP 07B-004, *Offsite Dose Calculation Manual (Radiological Environmental Monitoring Program)*. Radiological environmental monitoring program samples were collected by the WCGS Environmental Management group and were analyzed by Environmental, Inc. Landauer, Inc. processed the environmental optically stimulated luminescence (OSL) dosimeters. Table 1 identifies the exposure pathway/sample type, number of samples and sample locations, sample collection frequency, and type and frequency of analysis. Table 2 lists the sample location identifiers, distances and directions from the plant. Samples in addition to those required by AP 07B-004 were also obtained and analyzed.

The following is a description of the sampling and analysis program by individual pathways.

A. Airborne Pathway

Low volume air sampling pumps with digital flow meters continuously collected air particulate and radioiodine samples on 47 mm glass fiber filters and charcoal canisters, respectively. The air particulate filters and charcoal canisters were collected weekly. Gross beta analysis was performed weekly on the air particulate filters. Gamma isotopic analysis was also performed quarterly on the air particulate filters. Charcoal canisters were analyzed weekly for I-131.

Air samples were collected from six locations. The indicator locations sampled included 2, 18, 32, 37 and 49. A control location near the intersection of 20th Road and Yearling Road (location 53) was also sampled. Indicator sample locations are shown in Figure 1 and the control sample location is shown in Figure 5.

B. Direct Radiation Pathway

Optically stimulated luminescence (OSL) dosimeters were used continuously at 43 locations during the sample year to measure direct radiation. The OSLs were typically positioned roughly 3 to 4 feet above the ground in plastic thermostat boxes. Three OSLs were placed at each designated location. The OSLs were changed out quarterly and analyzed quarterly for gamma dose. Transit dose was measured and subtracted from the ambient dose. Indicator OSL sample locations are illustrated in Figure 2 and control sample locations are shown in Figure 5. Control sample locations were 39 (Beto Junction) and 53 (near the intersection of 20th Road and Yearling Road).

C. Waterborne Pathway

Gamma isotopic analysis was performed on the water samples. In addition to gamma isotopic analysis, analysis for I-131 was performed monthly on drinking water and quarterly on ground water samples. Gross beta analysis was performed monthly on drinking water samples. Tritium analysis was performed monthly for surface water and quarterly for drinking water. Tritium analysis was also performed quarterly on ground water samples. Four surface water samples from the Coffey County Lake Spillway (SP) location and four surface water samples from the John Redmond Reservoir (JRR) location were also analyzed for Fe-55. The waterborne pathway sample locations are shown in Figures 3 and 5.

Monthly grab samples of surface water were collected from the JRR control location and from the SP indicator location. The SP indicator sample location is located near the spillway of Coffey County Lake.

Quarterly grab samples of ground water were collected from seven wells. Six locations (C-10, C-49, F-1, G-2, J-1 and J-2) located hydrologically down gradient from the site were used as indicator sample locations. Location B-12 located hydrologically up gradient from the site was used as a control location.

Drinking water was sampled at the water treatment facilities in the towns of Iola (indicator sample location IO-DW) and Burlington (control sample location BW-15). The Iola facility is located downstream of the Neosho River-Wolf Creek confluence and the Burlington facility is located upstream of the Neosho River-Wolf Creek confluence. Composite samples were obtained monthly from automatic samplers at each location. The automatic drinking water samplers collected approximately 27 milliliters of water every two hours.

Shoreline sediments were sampled semiannually. Gamma isotopic analyses were performed on the shoreline sediment samples. Shoreline sediment sample locations were the Coffey County Lake discharge cove (DC) indicator location and the JRR control location.

D. Ingestion Pathway

Milk was not collected during the sample year. The Land Use Census did not identify any locations producing milk for human consumption within five miles of the plant.

Fish were sampled semiannually from the Coffey County Lake (indicator sample location) and from the tail waters of JRR (control sample location). These sample locations are identified in Figure 4. Gamma isotopic analyses were performed on the boneless meat portions of the fish. Several species of game fish and rough fish were sampled. Fish were also analyzed for tritium.

Broadleaf vegetation samples were collected monthly when available during the growing season. Indicator (A-3, B-1, H-2, Q-6 and R-2) location gardens (Figure 4) and a control (D-2) location garden (Figure 5) were sampled. Gamma isotopic analyses were performed on these samples.

Irrigated crop samples were obtained from two indicator sample locations (NR-D1 and NR-D2) downstream of the confluence of Wolf Creek and the Neosho River. Irrigated crops were also sampled from control location NR-U1. Gamma isotopic analysis was performed on each sample. Crop sample locations are identified on Figure 5.

E. Additional Samples Collected (not required by AP 07B-004)

Duplicate ground water grab samples were obtained quarterly from indicator location C-49 and were labeled L-49. These duplicate samples served as laboratory quality checks. Gamma isotopic analysis, I-131 analysis and tritium analysis were performed on the ground water samples.

Bottom sediment samples were collected from indicator sample locations at the DC, Ultimate Heat Sink (UHS), Essential Service Water (ESW) channel, Stringtown Cemetery (SC) and the control sample location (JRR). Gamma isotopic analyses were performed on the bottom sediment samples. Fourteen samples collected from indicator locations and one sample collected from the control location were also analyzed for Fe-55. Six samples collected from indicator locations and one sample collected from the control location were also analyzed for the Hard-to-Detect (HTD) radionuclides. One bottom sediment sample was collected as part of a cooperative sampling effort with the Kansas Department of Health and Environment (KDHE). The sample locations are identified on Figure 3.

Aquatic vegetation was collected from indicator locations Discharge Cove Alternate (DC ALT) and Makeup Discharge Structure (MUDS). Gamma isotopic analyses were performed on the aquatic vegetation samples. These samples were collected as part of a cooperative sampling effort with the KDHE. The sample locations are identified on Figure 3.

Terrestrial vegetation (grass) was sampled from the Environmental Education Area (EEA) and MUDS indicator sample locations. Gamma isotopic analyses were performed on the grass samples. These samples were collected as part of a cooperative sampling effort with the KDHE. The sample locations are identified on Figure 4.

Soil was sampled from the MUDS indicator sample location. Gamma isotopic analysis was performed on the soil sample. This sample was collected as part of a cooperative sampling effort with the KDHE. The sample location is identified on Figure 4.

A deer was sampled from indicator sample location A1.0. Gamma isotopic analysis and tritium analysis was performed on the deer sample. This sample was collected as part of a cooperative sampling effort with the KDHE. The sample location is identified on Figure 4.

II. DISCUSSION OF RESULTS

Analysis results for pathways are summarized in Appendix B using the format described in Radiological Assessment Branch Technical Position, Revision 1, November 1979 (NRC Generic Letter 79-065). Results for individual samples are listed in Appendix C.

A. Airborne Pathway

Chart 1 graphically illustrates weekly gross beta results for the sample year for all of the airborne sample locations. Chart 2 represents the gross beta historical airborne smoothed averages of indicator sample locations and control sample locations. Charts 1 and 2 demonstrate how closely the indicator and control sample locations tracked together. Chart 2 reveals a seasonal cyclic trend; the gross beta values peak in the winter months (December or January) and decrease to a low point in the spring months (May or June). This trend is expected and is attributed to seasonal meteorological changes, i.e., changes in prevailing winds and precipitation.

The gross beta results of 2014 were compared to pre-operational monitoring results of 1983 and 1984. The weekly gross beta analyses range for 1983 and 1984 was 0.0064 to 0.084 pCi/m^3. The 2014 weekly gross beta analyses range for indicator locations was 0.009 to 0.047 pCi/m^3. The 2014 weekly gross beta analyses range was within the 1983 and 1984 pre-operational range. Additionally, the annual mean for indicator locations for 2014 (0.024 pCi/m^3) was lower than the annual mean for 1983 (0.032 pCi/m^3).

The gross beta results for the indicator locations were also compared to the control location. The annual mean for indicator locations for 2014 (0.024 pCi/m^3) was slightly lower than the annual mean of the control location (0.025 pCi/m^3). The indicator location with the highest gross beta annual mean was location 49 (0.025 pCi/m^3) and was the same as the annual mean of the control location (0.025 pCi/m^3).

Naturally occurring Be-7 activity was detected, as was the case during pre-operational monitoring. In 1984, the range for Be-7 detected activity was 0.024 to 0.211 pCi/m^3 for indicator locations and the annual mean for indicator locations was 0.069 pCi/m^3. In 2014, the range for Be-7 detected activity was 0.042 to 0.096 pCi/m^3 for indicator locations and the annual mean for indicator locations was 0.070 pCi/m^3. The control location annual mean for Be-7 detected activity (0.073 pCi/m^3) was slightly higher than the annual mean of the indicator locations (0.070 pCi/m^3). The indicator location with the highest annual mean of detected Be-7 activity (0.072 pCi/ m^3) was location 2.

I-131 activity was not detected in the weekly analysis of charcoal filters at any location.

The AP 07B-004 required lower limits of detection were met. Plant-related activation, corrosion, or fission products were not detected during 2014 in airborne particulate and radioiodine filters and no unusual trends were noted.

B. Direct Radiation Pathway

Quarterly OSL dosimeter results for each location are shown in Table 3. Measured values have been converted to a standardized 90-day quarter.

The annual mean of indicator sample locations in 2014 was 18.3 mR per standardized 90-day quarter. The annual mean of the control sample locations in 2014 was 18.2 mR per standardized 90-day quarter.

For pre-operational comparison, in 1981, the annual mean of indicator sample locations was 18.9 mR per standardized 90-day quarter and the annual mean for the control sample locations was 17.1 mR per standardized 90-day quarter. It should be noted WCGS changed from thermoluminescence dosimeters (TLD) to optically stimulated luminescence (OSL) dosimeters in 2008.

The indicator sample location with the highest annual mean was 47 (23.9 mR per standardized 90-day quarter). The close proximity of location 47 to the Radwaste Building is likely the reason direct radiation levels are higher at this location.

Based upon Condition Report 00027489, improvements were made in measuring and subtracting transit dose in 2010. As expected, the OSL results have increased since 2010. Chart 3 visibly displays the increase of the OSL results. Chart 3 also displays how closely the indicator and control location OSL dosimeter results are for 2014.

Chart 4 displays the TLD nearsite sample locations (1, 2, 7-9, 11-14, 18, 26, 27, 29, 30, 37 and 38) and the control sample locations (locations 39 and 48) for the preoperational years through 2007.

C. Waterborne Pathway

(1) Surface Water

Tritium, attributable to WCGS operation, was detected in surface water samples collected from the SP indicator sample location. The annual mean for detected tritium activity at the SP location was 11,663 pCi/L and the range was 9,944 to 14,318 pCi/L. The detected tritium activity was below the 30,000 pCi/L AP 07B-004 reporting level. Chart 5 illustrates the yearly averages of surface water tritium data for the SP location. Chart 5 indicates the average tritium concentration of the SP location has reached equilibrium. Tritium activity was not detected in samples obtained from the control sample location (JRR).

During pre-operational radiological environmental monitoring, measured radiological activity was not detected in surface water samples.

The AP 07B-004 required lower limits of detection were met. Radionuclides were not detected by the gamma isotopic analyses or by Fe-55 analyses.

Tritium was the only activity detected during 2014 in surface water samples and no unusual trends were noted.

(2) Ground Water

The AP 07B-004 required lower limits of detection were met for I-131, tritium and gamma isotopic analyses. Radioactivity was not detected in any ground water samples. No unusual trends were noted. Plant-related activation, corrosion or fission products were not detected during 2014 in ground water samples.

(3) Drinking Water

Gross beta activity was detected in drinking water samples collected from the indicator sample location and in samples collected from the control sample location. The annual mean of the indicator sample location gross beta activity (2.9 pCi/L) was slightly higher when compared to the annual mean of the control sample location gross beta activity (2.2 pCi/L). The 2014 annual means of gross beta activity for both the indicator and control sample locations were lower than those of the pre-operational monitoring year of 1984. In 1984, the annual mean of the indicator sample location gross beta activity was 7.5 pCi/L and the annual mean of the control sample location gross beta activity was 6.4 pCi/L.

Chart 6 illustrates the drinking water gross beta results for the last five years and how closely the gross beta results compared for the indicator and control sample locations.

Radionuclides were not detected by the I-131 or gamma isotopic analyses.

The AP 07B-004 required lower limits of detection were met. Plant-related activation, corrosion, or fission products were not detected during 2014 in drinking water samples and no unusual trends were noted.

(4) Shoreline Sediment

Naturally occurring K-40 was detected in shoreline sediment samples collected from the DC (indicator sample location) and JRR (control sample location). K-40 was also detected during pre-operational shoreline sediment monitoring.

No other radionuclides were detected in the DC or JRR shoreline sediment samples during 2014.

The AP 07B-004 required lower limits of detection were met. Plant-related activation, corrosion, or fission products were not detected during 2014 in shoreline sediment samples and no unusual trends were noted.

D. Ingestion Pathway

(1) Milk

Milk was not collected during the sample year since no indicator locations within five miles of the plant were identified during the Land Use Census.

(2) Fish

Naturally occurring K-40 activity was detected in fish samples obtained from the CCL indicator sample location and in fish samples obtained from the JRR control sample location. K-40 activity was also detected during pre-operational fish monitoring.

Fish samples were also analyzed for tritium. Fish samples collected from Coffey County Lake had tritium activity detected (8,594 pCi/kg annual mean). The detected tritium activity was attributable to plant operation. An adult consuming 21 kilograms of fish, at the maximum measured tritium concentration (10,500 pCi/kg), would receive a committed effective dose equivalent of 0.014 mRem.

Tritium activity was not detected in the control location samples collected from JRR.

No other radionuclides were detected in fish samples during 2014. The AP 07B-004 required lower limits of detection were met and no unusual trends were noted.

(3) Broadleaf Vegetation

Gamma analyses of broadleaf vegetation samples obtained from indicator and control sample locations detected naturally occurring Be-7 and K-40. Be-7 and K-40 activity were also detected pre-operationally.

No other radionuclides were detected in broadleaf vegetation samples during the year.

The AP 07B-004 required lower limits of detection were met. Plant-related activation, corrosion, or fission products were not detected during 2014 in broadleaf vegetation samples no unusual trends were noted.

(4) Crop Samples

Gamma analysis detected naturally occurring K-40 activity to be present in the samples collected from the indicator sample locations and in the samples collected from the control sample location. K-40 activity was also detected during pre-operational crop monitoring. K-40 was the only activity detected in the crop samples.

The AP 07B-004 required lower limits of detection were met. Plant-related activation, corrosion, or fission products were not detected during 2014 in crop samples and no unusual trends were noted.

E. Additional Samples Collected (not required by AP 07B-004)

(1) Bottom Sediment

Gamma analysis detected naturally occurring K-40 activity to be present in the samples collected from the indicator sample locations and in the samples collected from the control sample location. K-40 activity was also detected during pre-operational bottom sediment monitoring.

Co-60 activity (33 pCi/kg, dry) was detected in one sample obtained from the UHS indicator location. Co-60 activity was attributable to plant operation and has been identified in plant effluents. Co-60 activity was not detected in pre-operational radiological environmental monitoring and was not detected in the samples collected from the JRR control location.

Cs-137 activity was detected in nine samples obtained from indicator locations (range 33 to 170 pCi/kg, dry). Cs-137 activity was also detected in both samples obtained from the control sample location (range 120 to 132 pCi/kg, dry).

Cs-137 activity was detected in pre-operational samples. The Cs-137 activity detected in 2014 indicator sample location bottom sediment samples was within the pre-operational range. (Cs-137 activity detected in 1981 and 1982 was in the range of 79 to 953 pCi/kg. The decay corrected range of pre-operational Cs-137 activity detected is approximately 37 to 445 pCi/kg.)

The detected Cs-137 activity in the samples collected from the indicator sample locations was likely due to fallout since the measured activity is within the decay corrected range of pre-operational Cs-137 detected activity and Cs-137 activity has also been detected in samples collected at the control sample location.

Chart 7 plots the Cs-137 detected activity from the discharge cove indicator sample location and JRR control sample location bottom sediment samples. The detected Cs-137 activity measured from the discharge cove location reflects a decreasing trend. The Chart 7 trendline indicates Cs-137 activity detected at the JRR control location has also been decreasing. Chart 7 also displays that in recent years, the detected Cs-137 activity for the JRR and DC sample locations overlap.

Fe-55 activity was not detected in the fourteen samples obtained from indicator sample locations or in the sampled collected from the control sample location.

Analysis for the Hard to Detect radionuclides was performed on six indicator location samples and on one sample obtained from the control location. Naturally occurring uranium was detected in the indicator location samples as well as the control location sample.

No other radionuclides were detected in bottom sediment samples and no unusual trends were noted.

(2) Aquatic Vegetation

Gamma analyses of aquatic vegetation samples obtained from indicator sample locations detected naturally occurring Be-7 and K-40. Be-7 and K-40 activity were also detected during pre-operational monitoring.

No other radionuclides were detected in aquatic vegetation samples. Plant-related activation, corrosion, or fission products were not detected during 2014 in aquatic vegetation samples and no unusual trends were noted.

(3) Terrestrial Vegetation

Naturally occurring Be-7 and K-40 activity were detected in terrestrial vegetation indicator location samples. No other radionuclides were detected in terrestrial vegetation. Plant-related activation, corrosion or fission products were not detected during 2014 in terrestrial vegetation samples and no unusual trends were noted.

(4) Soil

Naturally occurring K-40 activity was detected in soil samples obtained from the indicator locations. K-40 activity was also detected during pre-operational soil monitoring.

Cs-137 activity (50 pCi/kg) was detected in the soil sample obtained from the indicator location. Data was reviewed for soil samples collected pre-operationally. The detected Cs-137 activity range from February of 1985 was 255 to 2,160 pCi/kg. The decay corrected range of pre-operational Cs-137 activity detected in soil is approximately 130 to 1,104 pCi/kg. The detected Cs-137 activity in soil sampled in 2014 is within the decay corrected pre-operational range and is likely due to fallout.

Plant-related activation, corrosion, or fission products were not detected during 2014 in soil samples and no unusual trends were noted.

(5) Deer

Naturally occurring K-40 activity was detected in the deer sample obtained from the indicator location.

Tritium activity (1,251 pCi/kg) was also detected in the deer sample. The detected tritium activity was attributable to plant operation.

An adult consuming 72.6 kilograms of deer meat, at the measured tritium concentration (1,251 pCi/kg), would receive a committed effective dose equivalent of 0.006 mRem.

No other radionuclides were detected in the deer sample. No unusual trends were identified.

III. PROGRAM REVISIONS/CHANGES

Based upon Condition Report 00085428, AP 07B-004, *Offsite Dose Calculation Manual (Radiological Environmental Monitoring Program)*, was revised to remove required monitoring at dosimeter location 47.

Based upon Condition Report 00084016, AP 07B-004, *Offsite Dose Calculation Manual (Radiological Environmental Monitoring Program)*, was revised to clarify the descriptions of the drinking water sample locations.

Dosimeter location 17 was moved to the north side of the road due to utility pole replacement.

IV. PROGRAM DEVIATIONS

Air Samples

The following air sample locations failed to meet the requirement for "continuous sampler operation." As described in footnote (1) of procedure AP 07B-004, *Offsite Dose Calculation Manual (Radiological Environmental Monitoring Program)*, Table 5-1, deviations are permitted from the required sampling schedule due to malfunction of sampling equipment and other legitimate reasons. Discrepancies greater than five percent between Total Military Time and Total Digital Flow Meter Time, which resulted in a loss of air sample collected, are listed in the following table.

Location	Sample Period	Percent Discrepancy/ Hours Unavailable	Explanation of Deviation/Comments Condition Report Number
49	02/10/14 – 02/17/14	45.7 / 76	Damaged Electrical Power Box Condition Report 00079702
49	06/16/14 – 06/23/14	39.7 / 66	Power Outage / Equipment Operated as Expected / Condition Report 00085514
37	07/14/14 – 07/22/14	22.0 / 42	Power Outage / Equipment Operated as Expected / Condition Report 00086521
49	08/11/14 – 08/18/14	12.9 / 22	Power Outage / Equipment Operated as Expected / Condition Report 00087208
49	08/25/14 – 09/02/14	8.8 / 17	Power Outage / Equipment Operated as Expected / Condition Report 00087685

Ground Water

Ground water was not sampled during the first quarter of 2014 from indicator location G-2 due to an inoperable pump. The ground water well is maintained by the landowner. WCNOC personnel attempted to collect water from this location during the months of February and March. Condition Report 00082043 was generated to document the condition.

Ground Water Protection

The following information is being provided in association with the Nuclear Energy Institute (NEI) Groundwater Protection Industry Initiative:

Describe offsite ground water or surface water sample results that exceeded the REMP reporting criteria that were voluntarily communicated to State/Local officials during the calendar year – None.

V. INTERLABORATORY COMPARISON PROGRAM

Environmental, Inc., Midwest Laboratory was contracted to perform radiological analysis of environmental samples for WCNOC. The lab participated in the intercomparison studies administered by Environmental Resources Associates. Appendix A is the Interlaboratory Comparison Program Results for Environmental, Inc., Midwest Laboratory. Intercomparison results, in-house spikes, blanks, duplicates and mixed analyte performance evaluation program results are also contained in Appendix A.

VI. COMPARISON TO THE RADIOACTIVE EFFLUENT RELEASE PROGRAM

As described in the section discussing radioisotopes found in fish from Coffey County Lake, dose that may be received as a result of tritium released from WCGS is comparable with the theoretical doses calculated by the Radioactive Effluent Release Program.

The theoretical doses calculated by the Radioactive Effluent Release Program assume a person drinks the water from Coffey County Lake and eats the fish from Coffey County Lake. Based upon these assumptions the dose to man from both pathways was calculated to be 0.411 mRem for 2014.

Using sample data obtained from the REMP, an adult drinking 2 liters per day of surface water from Coffey County Lake, using the average tritium activity (11,663 pCi/L), would receive a committed effective dose equivalent of 0.532 mRem per year. For an adult eating 21 kg of fish per year from Coffey County Lake, using the average tritium activity (8,594 pCi/kg), would receive a committed effective dose equivalent of 0.011 mRem per year. Based upon the REMP results, the dose from both pathways was calculated to be 0.543 mRem per year.

It should be noted Coffey County Lake is not used as a drinking water source. Calculating the dose to man for tritium detected in the Coffey County Lake surface water is for comparison purposes only.

The tritium dose values are being compared on a qualitative basis. It is not expected that the annual doses, as calculated in the Radioactive Effluent Release Report, would compare directly to those calculated from the REMP. The Radioactive Effluent Release Report provides a "snap shot" of potential dose resulting from the year's releases. The REMP data indicates the accumulated result of releasing tritium into the lake since the start of plant operation.

TABLE 1

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DESCRIPTION (SAMPLE COLLECTION SPECIFIED BY AP 07B-004)

EXPOSURE PATHWAY/ SAMPLE TYPE	NUMBER OF SAMPLES AND SAMPLE LOCATIONS	SAMPLE COLLECTION FREQUENCY	TYPE AND FREQUENCY OF ANALYSIS
AIRBORNE	**(See Figures 1 & 5)**		
Radioiodine and Particulates	Samples from six locations	Continuous sampler operation with sample collection weekly, or more frequently if required, by dust loading.	Analyze radioiodine canister weekly for I-131
	Samples from locations near the site boundary in three sectors having the highest calculated annual average D/Q and one supplemental location (Locations 2, 18, 37, or 49 on Figure 1)		Analyze particulate filter weekly for gross beta activity; perform quarterly gamma isotopic analysis composite (by location)
	Sample from the vicinity of a community having the highest calculated annual average D/Q (Location 32 on Figure 1, New Strawn)		
	Sample from a control location 9.5 to 18.5 miles distant in a low ranked D/Q sector (Location 53 on Figure 5)		

TABLE 1 (Cont.)

EXPOSURE PATHWAY/ SAMPLE TYPE	NUMBER OF SAMPLES AND SAMPLE LOCATIONS	SAMPLE COLLECTION FREQUENCY	TYPE AND FREQUENCY OF ANALYSIS
DIRECT RADIATION	**(See Figures 2 & 5)**		
	39 routine monitoring stations with two or more dosimeters measuring dose continuously, placed as follows: An inner ring of stations, one in each meteorological sector 0-3 mile range from the site (Locations 1, 7, 9, 11-13, 18, 26, 27, 29, 30, 37, 38, 46, & 49 on Figure 2). An outer ring of stations, one in each meteorological sector in the 3 to 5 mile range from the site (Locations 4, 5, 15-17, 19, 22-25, 32, 34-36, 50 & 51 on Figure 2). Four sectors [A, B, G & J] contain an additional station (Locations 2, 8, 14 & 20). The balance of the stations to be placed in special interest areas such as population centers (Locations 23, 32 & 52), nearby residences	Quarterly	Gamma dose quarterly

TABLE 1 (Cont.)

EXPOSURE PATHWAY/ SAMPLE TYPE	NUMBER OF SAMPLES AND SAMPLE LOCATIONS	SAMPLE COLLECTION FREQUENCY	TYPE AND FREQUENCY OF ANALYSIS
DIRECT RADIATION (cont.)	(many locations are near a residence), schools (Locations 23 & 52), Wilson Cadman Wildlife Education Area (44), CCL Public Fishing Area (46) and in two areas to serve as control stations 10-20 miles distant from the site (Locations 39 and 53 on Figure 5).		
WATERBORNE	(See Figure 3)		
Surface	One sample upstream (Location JRR on Figure 3) and one sample downstream (Location SP on Figure 3).	Monthly grab sample	Monthly gamma isotopic analysis and composite for tritium analysis quarterly
Ground	Samples from one or two sources only if likely to be affected. Indicator samples at locations hydrologically down-gradient of the site (Locations C-10, C-49, F-1, G-2, J-1 and J-2 on Figure 3); control sample at a location hydrologically upgradient of the site (Location B-12 on Figure 3).	Quarterly grab sample	Quarterly gamma isotopic analysis and tritium analysis

TABLE 1 (Cont.)

EXPOSURE PATHWAY/ SAMPLE TYPE	NUMBER OF SAMPLES AND SAMPLE LOCATIONS	SAMPLE COLLECTION FREQUENCY	TYPE AND FREQUENCY OF ANALYSIS
WATERBORNE (cont.)			
Drinking	Sample of municipal water supply at an indicator location downstream of the Neosho River-Wolf Creek confluence (Location IO-DW on Figure 5); control sample from location upstream of the Neosho River-Wolf Creek confluence (Location BW-15 on Figure 3).	Monthly Composite	Monthly gamma isotopic analysis and gross beta analysis of composite sample. Quarterly tritium analysis of composites.
Shoreline Sediment	One sample from the vicinity of Coffey County Lake discharge cove (Location DC on Figure 3); control sample from John Redmond Reservoir (Location JRR on Figure 3).	Semiannually	Semiannual gamma isotopic analysis
INGESTION	(See Figures 4 & 5)		
Milk	Samples from milking animals at three indicator locations within 5 miles of the site having the highest dose potential (currently there are no locations producing milk for human consumption within 5 miles of the site); one sample from a control location greater than 10 miles from the site if indicator locations are sampled.	Semimonthly April to November; monthly December-March	Gamma isotopic analysis and I-131 analysis of each sample

TABLE 1 (Cont.)

EXPOSURE PATHWAY/ SAMPLE TYPE	NUMBER OF SAMPLES AND SAMPLE LOCATIONS	SAMPLE COLLECTION FREQUENCY	TYPE AND FREQUENCY OF ANALYSIS
INGESTION (cont.)			
Fish	Indicator samples of 1 to 3 recreationally important species from Coffey County Lake; control samples of similar species from John Redmond Reservoir spillway (Figure 4).	Semiannually	Gamma isotopic analysis on edible portions
Broadleaf Vegetation	Samples of available broadleaf vegetation from two indicator locations (using the criteria from the "Land Use Census" section) with highest calculated annual average D/Q (Locations A-3 and Q-6 and alternate locations B-1, H-2, N-1 and R-2 on Figure 4); sample of similar broadleaf vegetation from a control location 9.5 to 18.5 miles distant in a low ranked D/Q sector (Location D-2 on Figure 5).	Monthly when available	Gamma isotopic analysis on edible portions
Irrigated Crops	Sample of crops irrigated with water from the Neosho River downstream of the Neosho River - Wolf Creek confluence (locations will vary from year to year, e.g., Location NR-D1 and NR-D2 on Figure 5).	At time of harvest	Gamma isotopic analysis on edible portions

TABLE 2
SAMPLE LOCATION IDENTIFIERS, DISTANCES (Miles) AND DIRECTIONS (Sectors)

Sample Type	Location Identifier	Distance from Reactor	Direction	Sector
Air Particulates and Radioiodine	2	2.7	N	A
	18	3.0	SSE	H
	32	3.1	WNW	P
	37	2.0	NNW	R
	49	0.8	NNE	B
	53	10.8	ENE	D
Dosimeters	1	1.4	N	A
	2	2.7	N	A
	4	4.0	NNE	B
	5	4.1	NE	C
	7	2.1	NE	C
	8	1.7	NNE	B
	9	2.0	ENE	D
	11	1.7	E	E
	12	1.9	ESE	F
	13	1.6	SE	G
	14	2.5	SE	G
	15	4.6	ESE	F
	16	4.3	E	E
	17	3.7	SE	G
	18	3.0	SSE	H
	19	3.9	SSE	H
	20	3.3	S	J
	22	3.9	SSW	K
	23	4.3	SW	L
	24	4.1	WSW	M
	25	3.4	W	N
	26	2.4	WSW	M
	27	2.2	SW	L
	29	2.7	SSW	K
	30	2.5	W	N
	32	3.1	WNW	P
	34	4.4	NW	Q
	35	4.6	NNW	R
	36	4.2	N	A
	37	2.0	NNW	R
	38	1.2	NW	Q
	39	13.1	N	A
	41	0.8	NNW	R
	42	0.8	SSE	H
	43	0.7	WNW	P
	44	3.0	NNW	R

TABLE 2 (Cont.)
SAMPLE LOCATION IDENTIFIERS, DISTANCES (Miles) AND DIRECTIONS (Sectors)

Sample Type	Location Identifier	Distance from Reactor	Direction	Sector
Dosimeters	46	1.6	WNW	P
	47	0.16	S	J
	49	0.8	NNE	B
	50	3.6	ENE	D
	51	4.3	S	J
	52	3.6	SW	L
	53	10.8	ENE	D
Surface Water	JRR	3.7	W	N
	SP	3.2	SSE	H
Ground Water	B-12	1.9	NNE	B
	C-10	2.7	W	N
	C-49/L-49	2.8	SW	L
	F-1	2.5	ESE	F
	G-2	3.6	SE	G
	J-1	3.8	S	J
	J-2	4.3	S	J
Drinking Water	BW-15	3.9	SW	L
	IO-DW	26.1	SSE	H
Shoreline Sediment	DC	0.8	WNW	P
	JRR	3.6	W	N
Fish	CCL	0.6	E to NNW	E to R
	JRR	3.7	W	N
Food/Garden	A-3	2.6	N	A
	B-1	0.8	NNE	B
	D-2	14.8	ENE	D
	H-2	3.0	SSE	H
	Q-6	2.4	NW	Q
	R-2	2.0	NNW	R
Crops	NR-D1	8.9	S	J
	NR-D2	11.5	S	J
	NR-U1	4.0	SSW	K
Bottom Sediment	DC	0.9	WNW	P
	ESW	0.5	E	E
	JRR	3.7	W	N
	SC	0.8	NNW	R
	UHS	0.6	E	E
Aquatic Vegetation	DC ALT	1.5	NW	Q
	MUDS	1.5	WNW	P

TABLE 2 (Cont.)
SAMPLE LOCATION IDENTIFIERS, DISTANCES (Miles) AND DIRECTIONS (Sectors)

Sample Type	Location Identifier	Distance from Reactor	Direction	Sector
Terrestrial Vegetation	EEA	3.0	NNW	R
	MUDS	1.5	WNW	P
Soil	MUDS	1.5	WNW	P
Meat (Deer)	A1.0	1.0	N	A

TABLE 3
OSL Dosimeter Results
(mR/Standardized 90-day Quarter)

Location	Qtr. 1 (mR)	Qtr. 2 (mR)	Qtr. 3 (mR)	Qtr. 4 (mR)	Total Annual Exposure (mR)
1	19.2	23.7	19.8	15.8	78.5
2	16.0	17.2	20.5	16.2	69.9
4	19.1	20.6	20.2	18.8	78.7
5	16.8	16.5	16.3	16.8	66.4
7	17.1	15.1	17.3	18.0	67.5
8	18.5	18.4	19.2	21.4	77.5
9	17.4	17.0	17.1	15.5	67.0
11	18.5	20.2	20.5	22.1	81.3
12	19.0	15.8	18.3	17.7	70.8
13	18.5	19.9	21.9	19.4	79.7
14	20.0	18.2	22.0	17.6	77.8
15	17.6	20.0	16.5	18.2	72.3
16	15.5	17.4	22.4	18.5	73.8
17	18.5	18.2	17.6	18.2	72.5
18	17.9	18.2	19.9	14.7	70.7
19	20.7	20.1	20.4	20.4	81.6
20	17.1	18.6	18.3	18.0	72.0
22	22.2	17.7	19.7	21.0	80.6
23	19.1	18.7	18.8	19.8	76.4
24	19.4	18.7	19.1	19.1	76.3
25	13.1	16.6	14.4	14.6	58.7
26	15.7	16.6	17.4	16.1	65.8
27	17.9	18.5	18.1	20.5	75.0
29	16.2	15.3	13.5	14.1	59.1
30	18.1	21.3	20.2	17.6	77.2
32	16.5	17.9	19.4	16.0	69.8
34	22.0	21.8	20.2	19.7	83.7
35	18.2	19.2	20.2	17.3	74.9
36	17.9	18.9	19.2	18.8	74.8
37	15.0	13.7	16.7	18.0	63.4
38	18.6	19.4	23.1	20.4	81.5
39	15.9	17.9	18.6	19.1	71.5
41	17.8	16.3	21.4	18.1	73.6
42	12.9	11.5	15.8	13.2	53.4
43	12.3	13.3	10.4	10.0	46.0
44	19.2	18.5	20.8	19.5	78.0
46	18.4	19.0	16.0	16.7	70.1
47	25.7	30.2	21.8	17.8	95.5
49	19.7	16.1	14.6	16.8	67.2
50	19.1	17.2	20.3	21.8	78.4
51	18.1	18.6	19.9	18.9	75.5
52	17.6	22.0	22.8	18.7	81.1
53	16.2	19.2	19.4	19.2	74.0

FIGURE 1

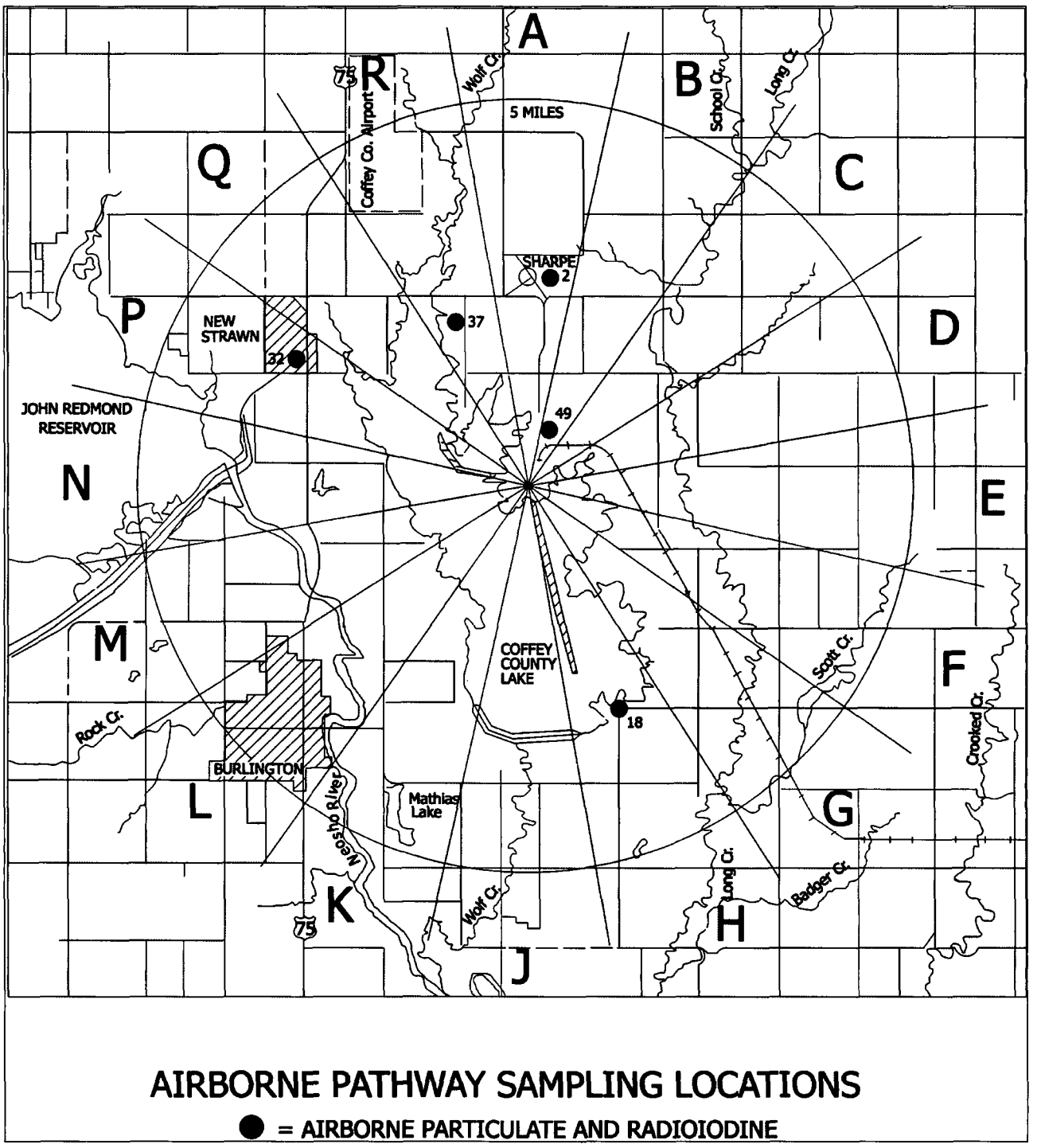
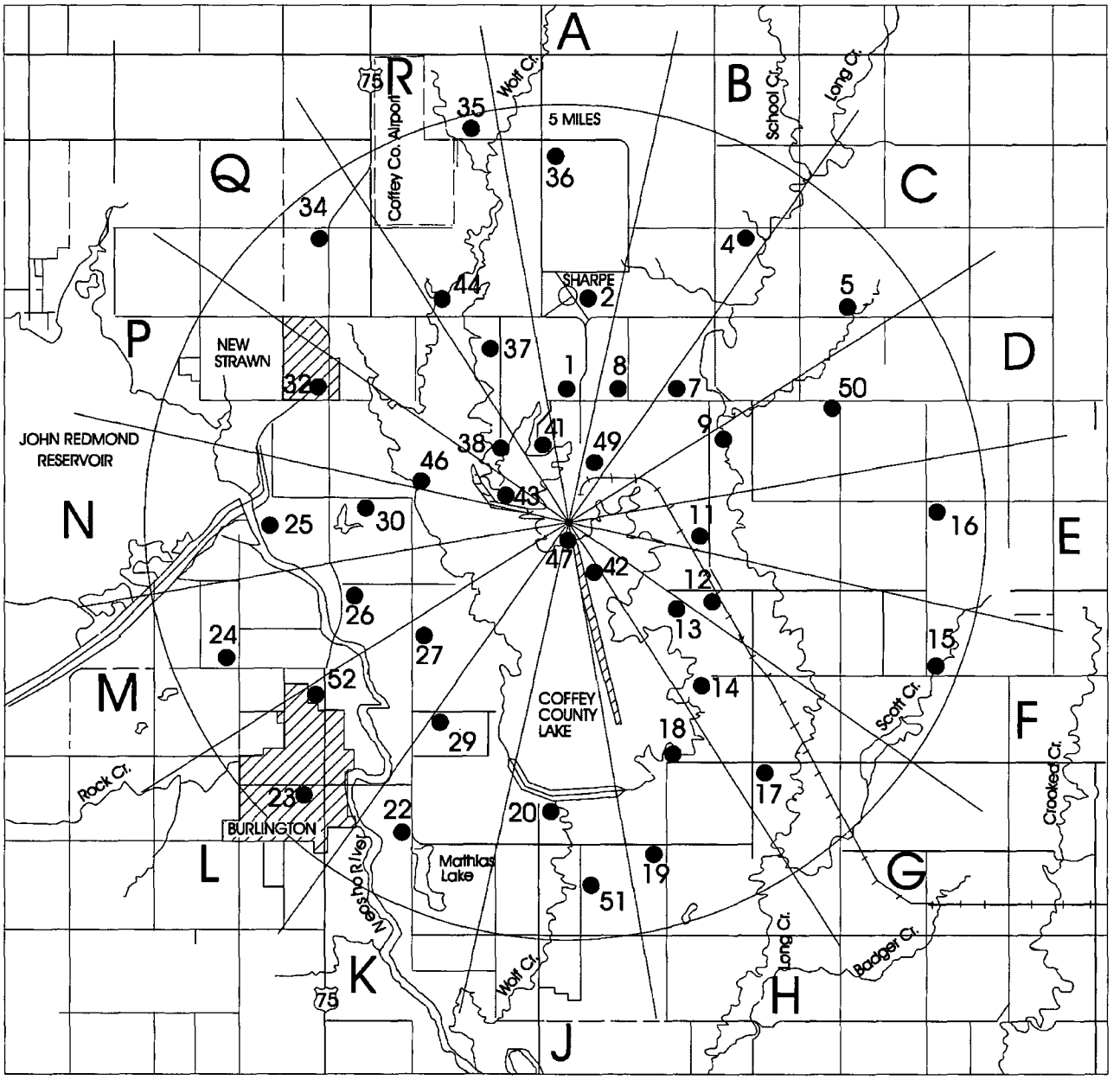

A
B
C
D
E
F
G
H
J
K
L
M
N
P
Q
R
5 MILES
Coffey Co. Airport
Wolf Cr.
School Cr.
Long Cr.
SHARPE
2
37
NEW STRAWN
32
JOHN REDMOND RESERVOIR
49
COFFEY COUNTY LAKE
18
Scott Cr.
Crooked Cr.
Rock Cr.
BURLINGTON
Neosho River
Mathias Lake
Badger Cr.
75
AIRBORNE PATHWAY SAMPLING LOCATIONS
● = AIRBORNE PARTICULATE AND RADIOIODINE

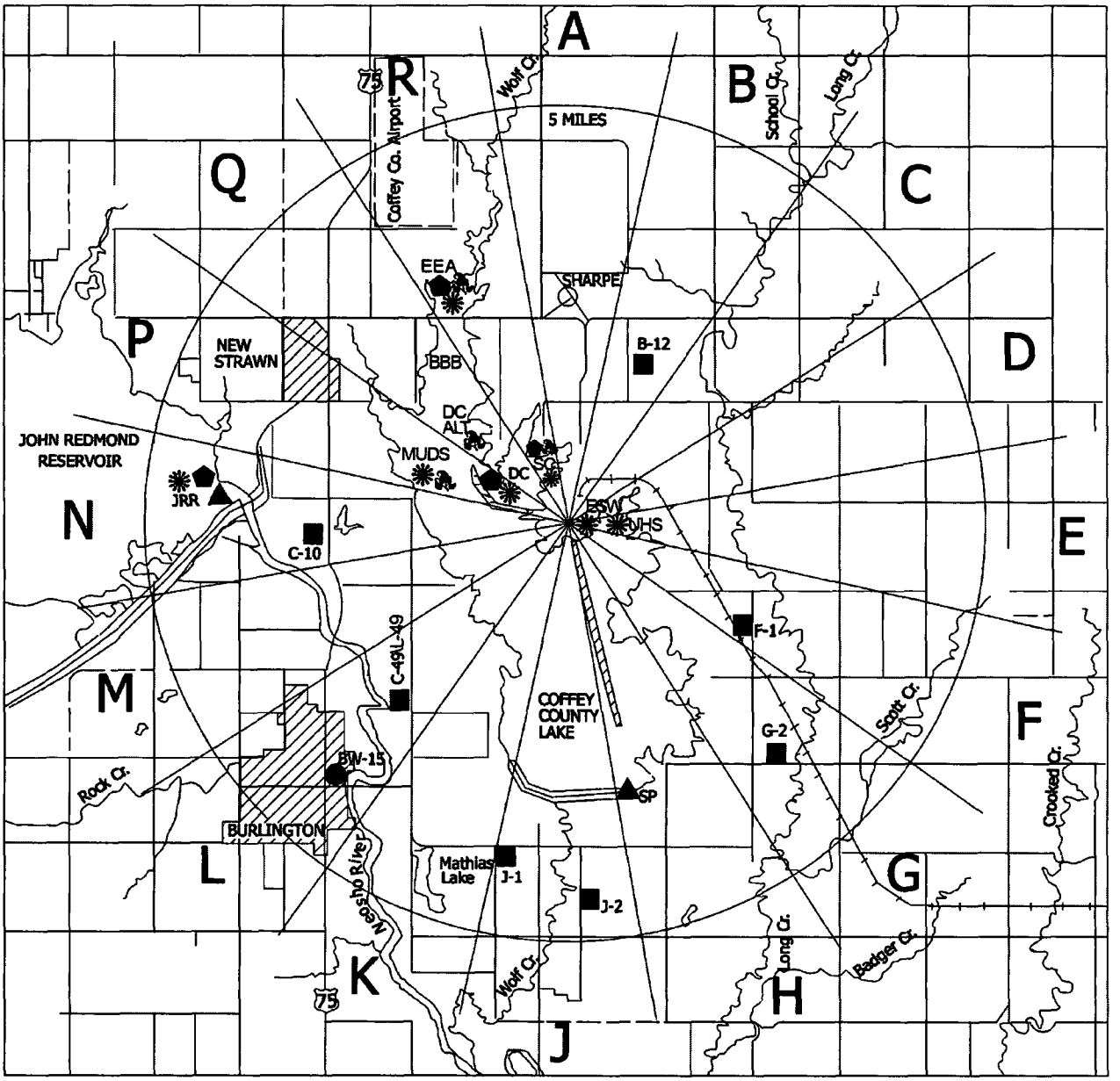
FIGURE 2



DIRECT RADIATION PATHWAY SAMPLING LOCATIONS

● = DOSIMETER LOCATIONS

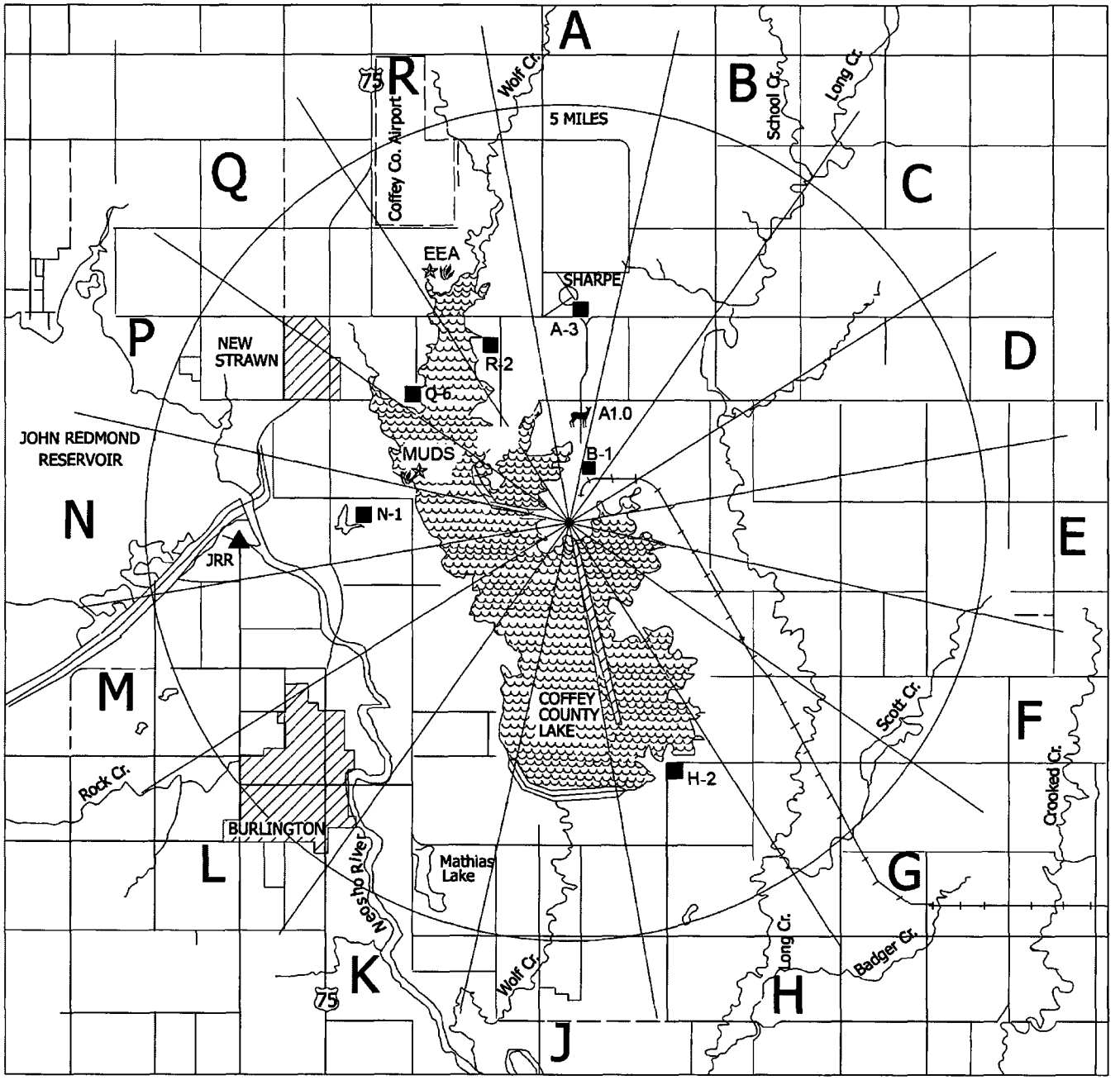
FIGURE 3



WATERBORNE PATHWAY SAMPLING LOCATIONS

- ● = DRINKING WATER
- ▲ = SURFACE WATER
- ■ = GROUND WATER
- ⬟ = SHORELINE SEDIMENT
- ✳ = BOTTOM SEDIMENT
- = AQUATIC VEGETATION

FIGURE 4



INGESTION PATHWAY SAMPLING LOCATIONS

▲ = FISH (JRR) ■ = BROADLEAF VEGETATION ☆ = SOIL

= FISH (CCL) = TERRESTRIAL VEGETATION = DEER

FIGURE 5

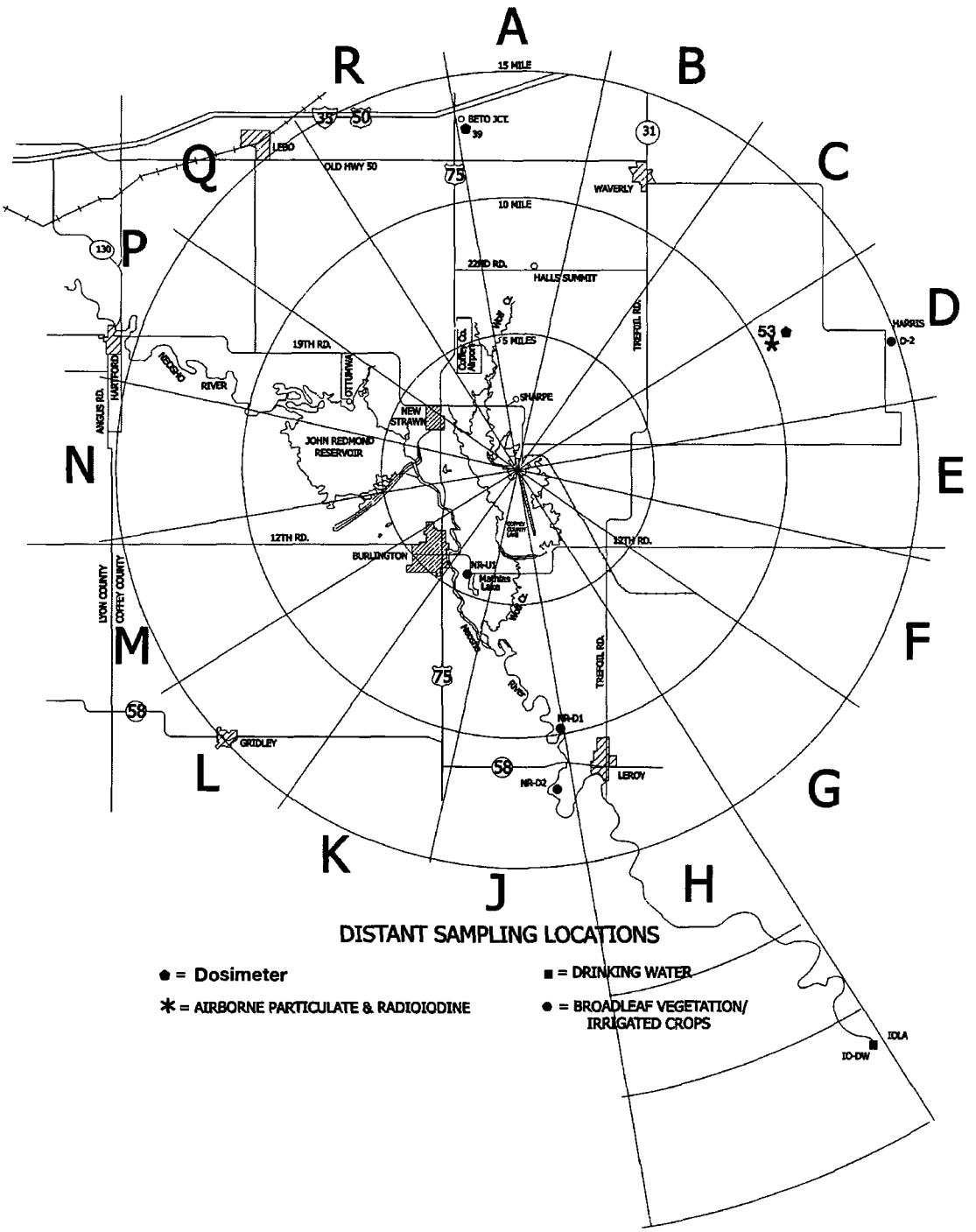

A
B
C
D
E
F
G
H
J
K
L
M
N
P
Q
R
15 MILE
10 MILE
5 MILES
BETO JCT.
LEBO
OLD HWY 50
WAVERLY
HALLS SUMMIT
19TH RD.
12TH RD.
13TH RD.
NEOSHO RIVER
JOHN REDMOND RESERVOIR
NEW STRAWN
SHARPE
BURLINGTON
GRIDLEY
LEROY
HARRIS
ANGUS RD.
HARTFORD
OTTUMWA
TREFOIL RD.
LYON COUNTY
COFFEY COUNTY
NR-U1
NR-D1
NR-D2
D-2
IO-DW
IDLA
DISTANT SAMPLING LOCATIONS
= Dosimeter
= AIRBORNE PARTICULATE & RADIOIODINE
= DRINKING WATER
= BROADLEAF VEGETATION/ IRRIGATED CROPS

CHART 1

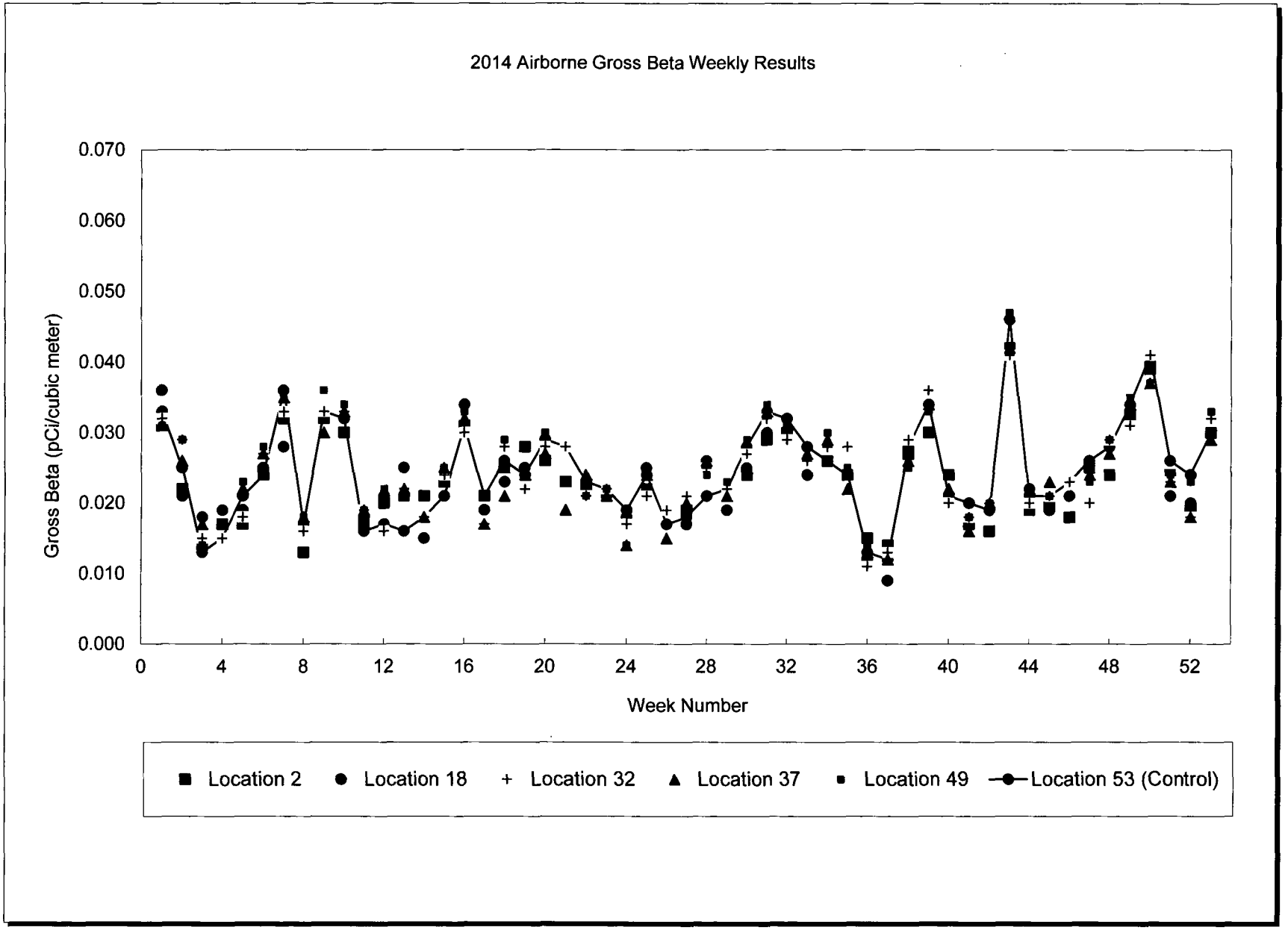

2014 Airborne Gross Beta Weekly Results
Gross Beta (pCi/cubic meter)
0.070
0.060
0.050
0.040
0.030
0.020
0.010
0.000
0
4
8
12
16
20
24
28
32
36
40
44
48
52
Week Number
Location 2
Location 18
Location 32
Location 37
Location 49
Location 53 (Control)

CHART 2

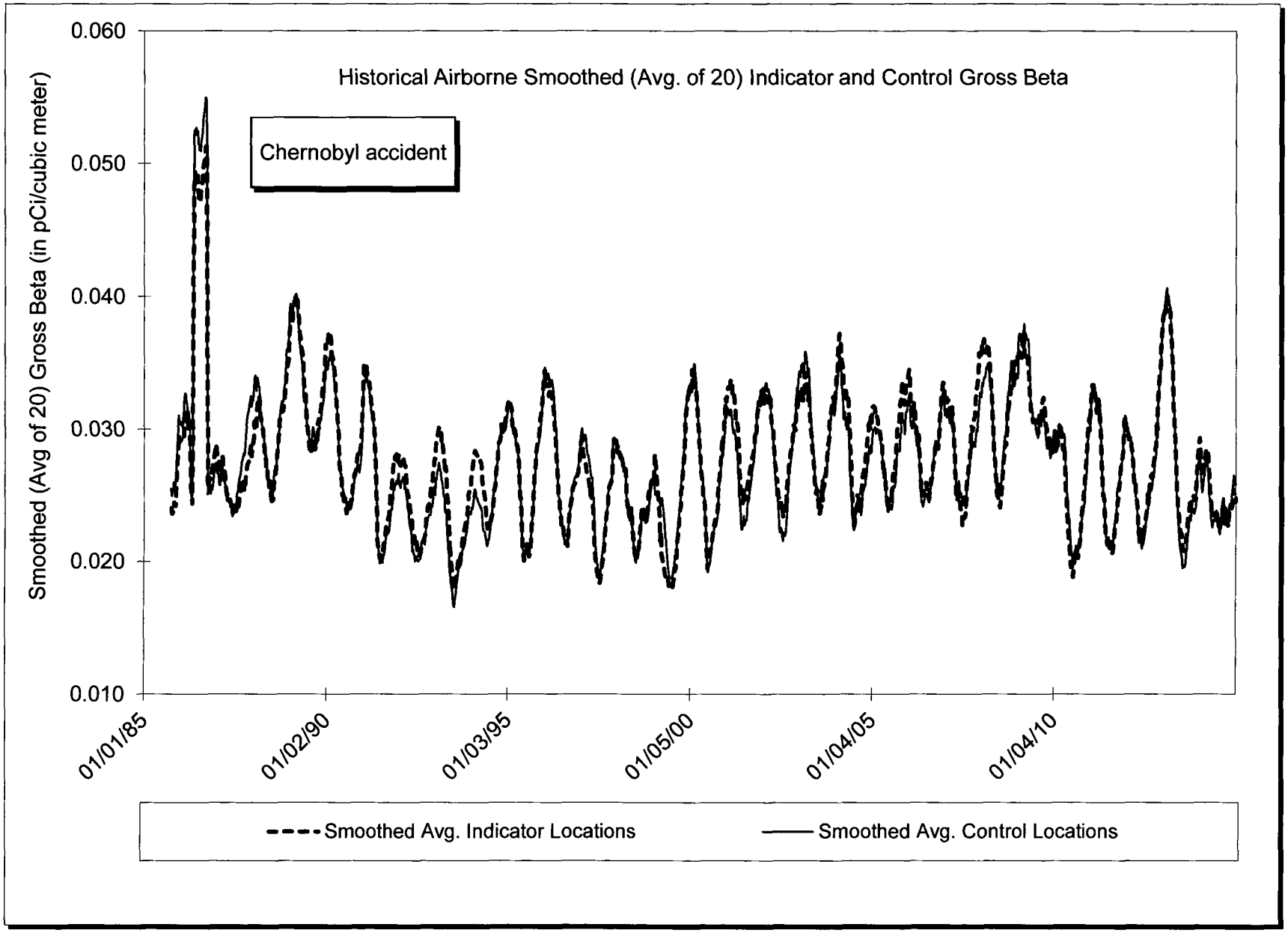

Historical Airborne Smoothed (Avg. of 20) Indicator and Control Gross Beta
Chernobyl accident
Smoothed (Avg of 20) Gross Beta (in pCi/cubic meter)
0.060
0.050
0.040
0.030
0.020
0.010
01/01/85
01/02/90
01/03/95
01/05/00
01/04/05
01/04/10
Smoothed Avg. Indicator Locations
Smoothed Avg. Control Locations

CHART 3

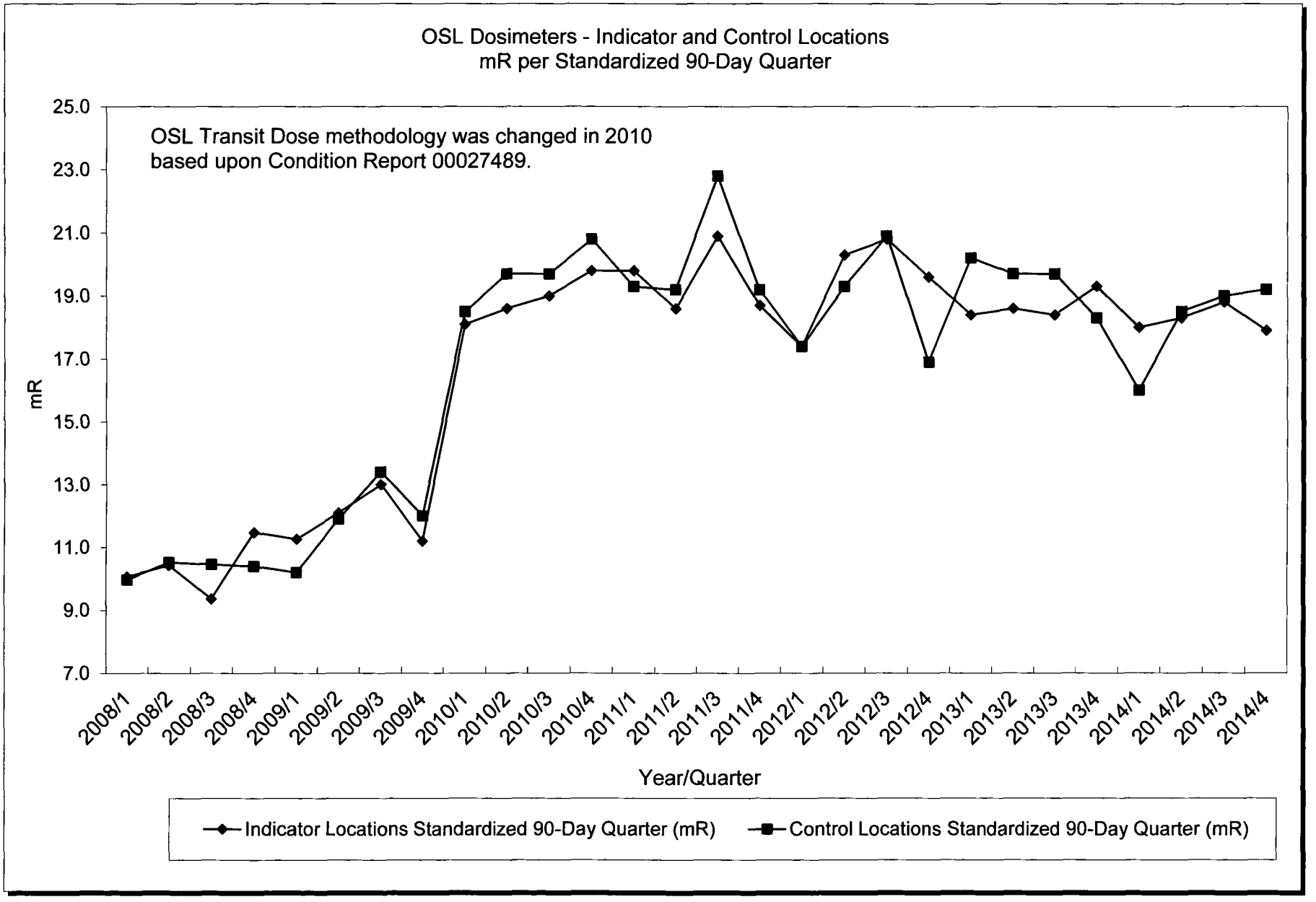

OSL Dosimeters - Indicator and Control Locations
mR per Standardized 90-Day Quarter
OSL Transit Dose methodology was changed in 2010
based upon Condition Report 00027489.
mR
25.0
23.0
21.0
19.0
17.0
15.0
13.0
11.0
9.0
7.0
2008/1
2008/2
2008/3
2008/4
2009/1
2009/2
2009/3
2009/4
2010/1
2010/2
2010/3
2010/4
2011/1
2011/2
2011/3
2011/4
2012/1
2012/2
2012/3
2012/4
2013/1
2013/2
2013/3
2013/4
2014/1
2014/2
2014/3
2014/4
Year/Quarter
Indicator Locations Standardized 90-Day Quarter (mR)
Control Locations Standardized 90-Day Quarter (mR)

CHART 4

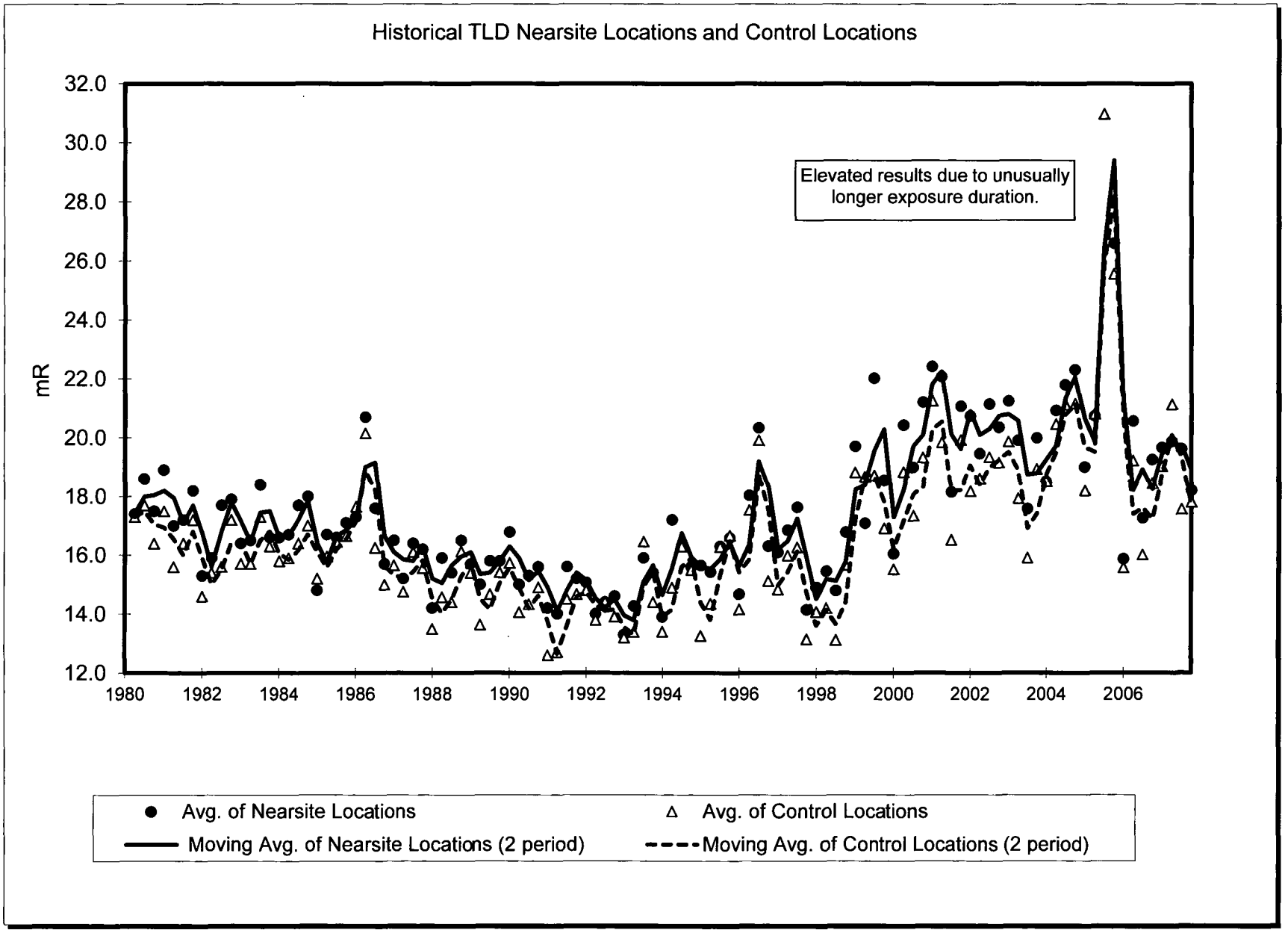

Historical TLD Nearsite Locations and Control Locations
mR
32.0
30.0
28.0
26.0
24.0
22.0
20.0
18.0
16.0
14.0
12.0
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
Elevated results due to unusually longer exposure duration.
Avg. of Nearsite Locations
Avg. of Control Locations
Moving Avg. of Nearsite Locations (2 period)
Moving Avg. of Control Locations (2 period)

CHART 5

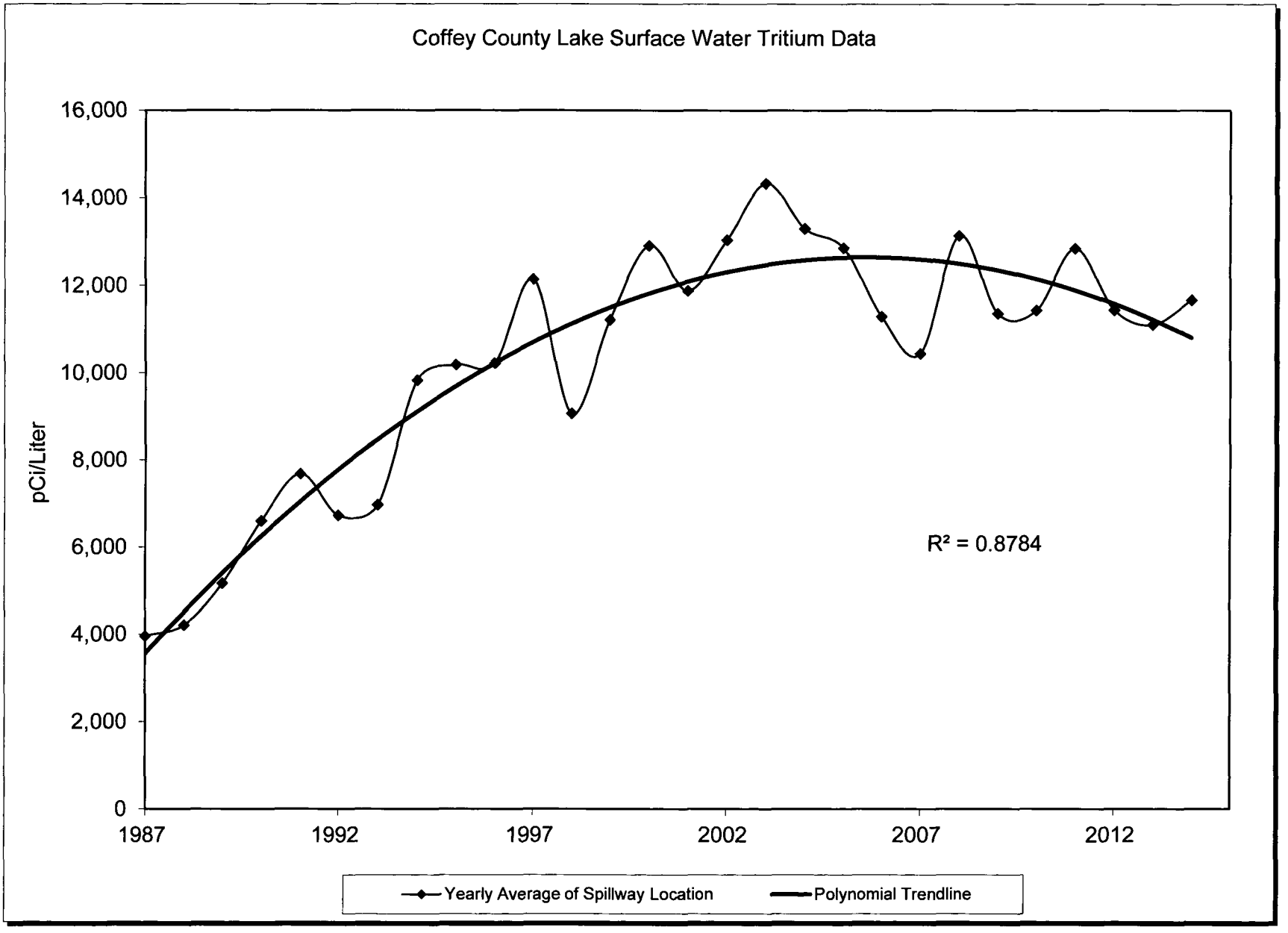

Coffey County Lake Surface Water Tritium Data
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
pCi/Liter
1987
1992
1997
2002
2007
2012
R² = 0.8784
Yearly Average of Spillway Location
Polynomial Trendline

CHART 6

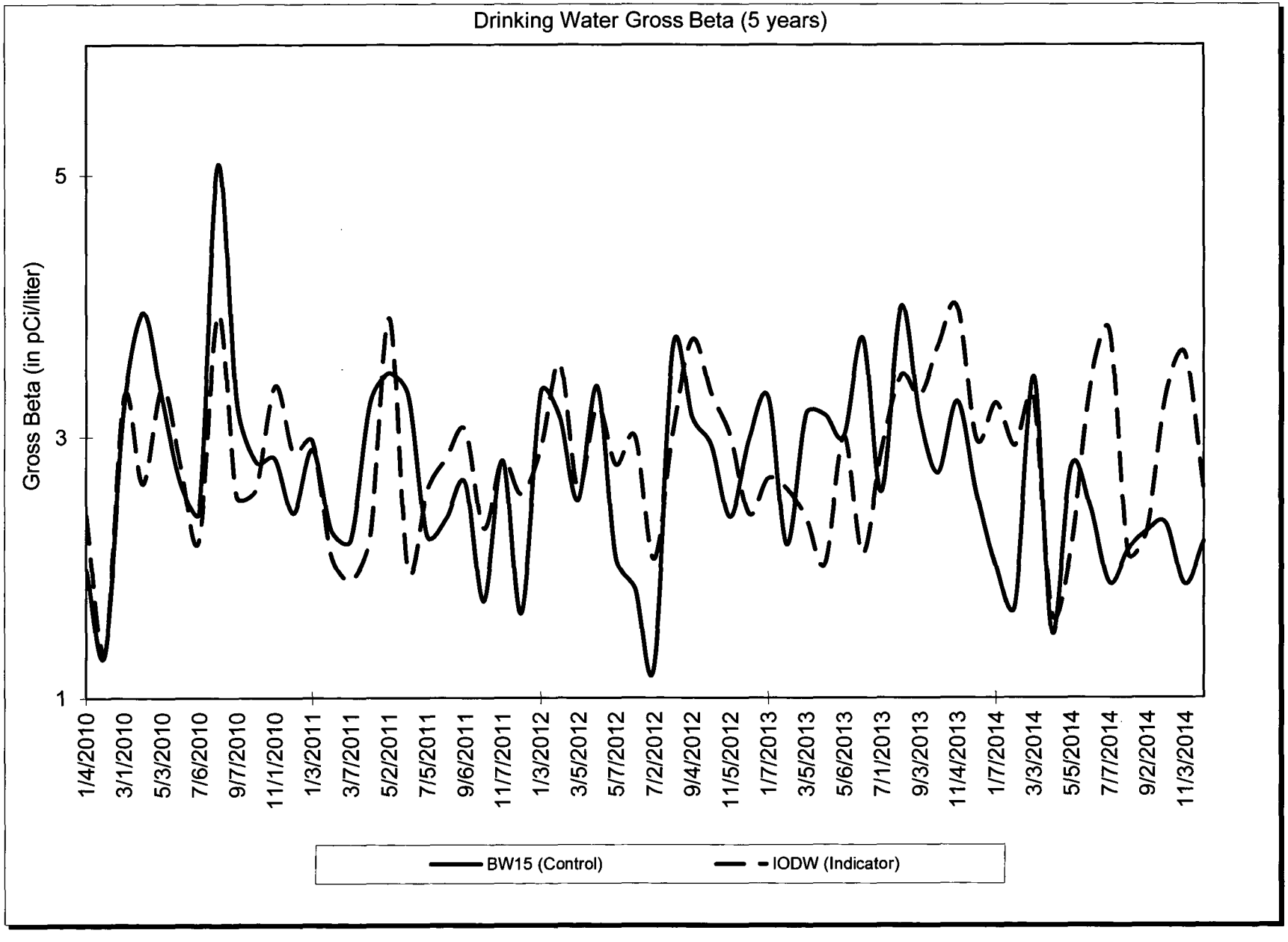
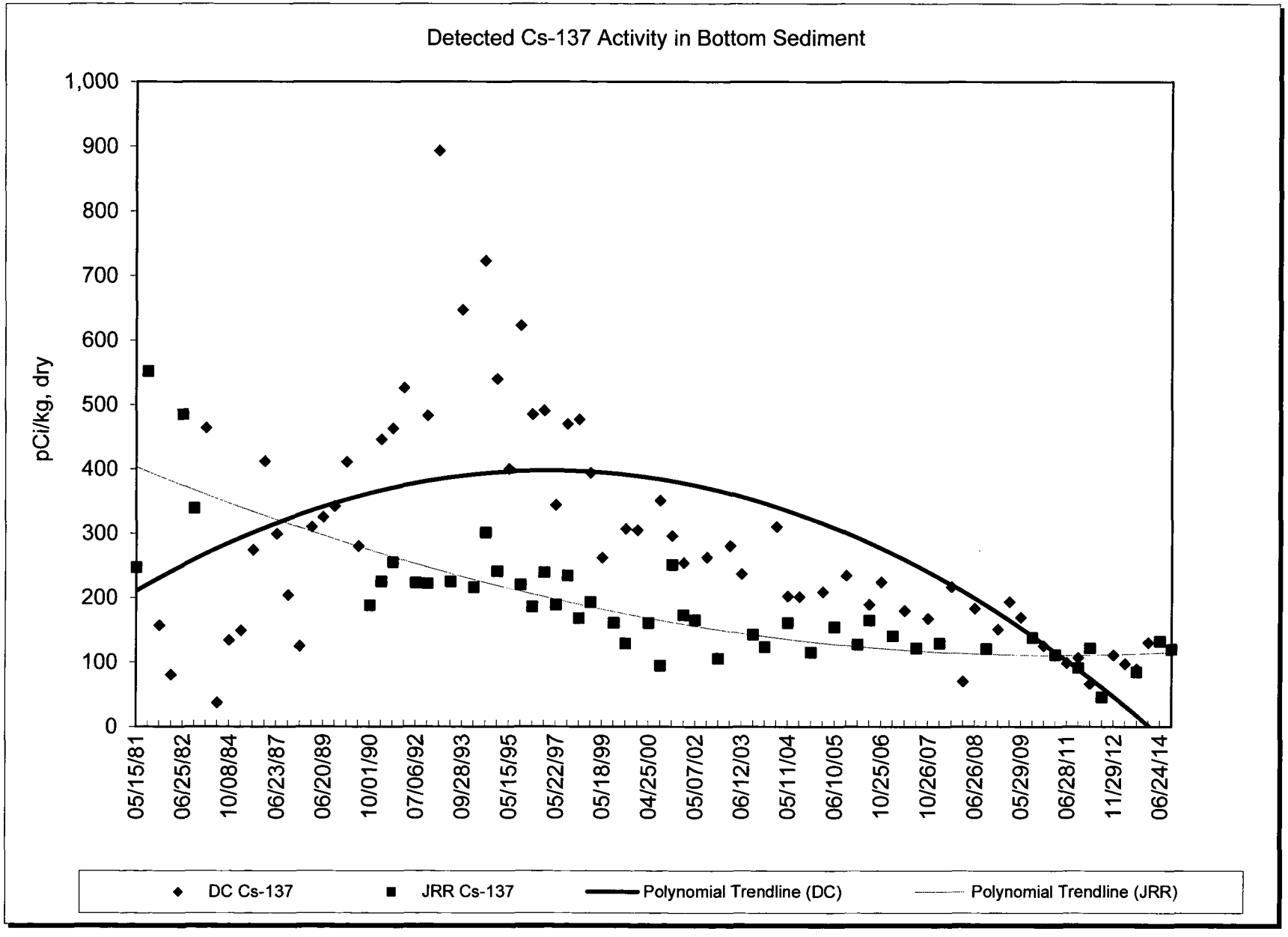

Drinking Water Gross Beta (5 years)
Gross Beta (in pCi/liter)
5
3
1
1/4/2010
3/1/2010
5/3/2010
7/6/2010
9/7/2010
11/1/2010
1/3/2011
3/7/2011
5/2/2011
7/5/2011
9/6/2011
11/7/2011
1/3/2012
3/5/2012
5/7/2012
7/2/2012
9/4/2012
11/5/2012
1/7/2013
3/5/2013
5/6/2013
7/1/2013
9/3/2013
11/4/2013
1/7/2014
3/3/2014
5/5/2014
7/7/2014
9/2/2014
11/3/2014
BW15 (Control)
IODW (Indicator)

CHART 7


Detected Cs-137 Activity in Bottom Sediment
pCi/kg, dry
1,000
900
800
700
600
500
400
300
200
100
0
05/15/81
06/25/82
10/08/84
06/23/87
06/20/89
10/01/90
07/06/92
09/28/93
05/15/95
05/22/97
05/18/99
04/25/00
05/07/02
06/12/03
05/11/04
06/10/05
10/25/06
10/26/07
06/26/08
05/29/09
06/28/11
11/29/12
06/24/14
DC Cs-137
JRR Cs-137
Polynomial Trendline (DC)
Polynomial Trendline (JRR)

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APPENDIX A

INTERLABORATORY COMPARISON PROGRAM RESULTS

NOTE: Environmental Inc., Midwest Laboratory participates in intercomparison studies administered by Environmental Resources Associates, and serves as a replacement for studies conducted previously by the U.S. EPA Environmental Monitoring Systems Laboratory, Las Vegas, Nevada. Results are reported in Appendix A. TLD Intercomparison results, in-house spikes, blanks, duplicates and mixed analyte performance evaluation program results are also reported. Appendix A is updated four times a year; the complete Appendix is included in March, June, September and December monthly progress reports only.

January, 2014 through December, 2014

Appendix A

Interlaboratory Comparison Program Results

Environmental, Inc., Midwest Laboratory has participated in interlaboratory comparison (crosscheck) programs since the formulation of it's quality control program in December 1971. These programs are operated by agencies which supply environmental type samples containing concentrations of radionuclides known to the issuing agency but not to participant laboratories. The purpose of such a program is to provide an independent check on a laboratory's analytical procedures and to alert it of any possible problems.

Participant laboratories measure the concentration of specified radionuclides and report them to the issuing agency. Several months later, the agency reports the known values to the participant laboratories and specifies control limits. Results consistently higher or lower than the known values or outside the control limits indicate a need to check the instruments or procedures used.

Results in Table A-1 were obtained through participation in the environmental sample crosscheck program administered by Environmental Resources Associates, serving as a replacement for studies conducted previously by the U.S. EPA Environmental Monitoring Systems Laboratory, Las Vegas, Nevada.

Table A-2 lists results for thermoluminescent dosimeters (TLDs), via International Intercomparison of Environmental Dosimeters, when available, and internal laboratory testing.

Table A-3 lists results of the analyses on in-house "spiked" samples for the past twelve months. All samples are prepared using NIST traceable sources. Data for previous years available upon request.

Table A-4 lists results of the analyses on in-house "blank" samples for the past twelve months. Data for previous years available upon request.

Table A-5 lists REMP specific analytical results from the in-house "duplicate" program for the past twelve months. Acceptance is based on the difference of the results being less than the sum of the errors. Complete analytical data for duplicate analyses is available upon request.

The results in Table A-6 were obtained through participation in the Mixed Analyte Performance Evaluation Program.

Results in Table A-7 were obtained through participation in the environmental sample crosscheck program administered by Environmental Resources Associates, serving as a replacement for studies conducted previously by the Environmental Measurement Laboratory Quality Assessment Program (EML).

Attachment A lists the laboratory precision at the 1 sigma level for various analyses. The acceptance criteria in Table A-3 is set at ± 2 sigma.

Out-of-limit results are explained directly below the result.

Attachment A

ACCEPTANCE CRITERIA FOR "SPIKED" SAMPLES

LABORATORY PRECISION: ONE STANDARD DEVIATION VALUES FOR VARIOUS ANALYSES[a]

Analysis	Level	One standard deviation for single determination
Gamma Emitters	5 to 100 pCi/liter or kg	5.0 pCi/liter
	> 100 pCi/liter or kg	5% of known value
Strontium-89[b]	5 to 50 pCi/liter or kg	5.0 pCi/liter
	> 50 pCi/liter or kg	10% of known value
Strontium-90[b]	2 to 30 pCi/liter or kg	5.0 pCi/liter
	> 30 pCi/liter or kg	10% of known value
Potassium-40	≥ 0.1 g/liter or kg	5% of known value
Gross alpha	≤ 20 pCi/liter	5.0 pCi/liter
	> 20 pCi/liter	25% of known value
Gross beta	≤ 100 pCi/liter	5.0 pCi/liter
	> 100 pCi/liter	5% of known value
Tritium	≤ 4,000 pCi/liter	$\pm 1\sigma$ = $169.85 \times (\text{known})^{0.0933}$
	> 4,000 pCi/liter	10% of known value
Radium-226,-228	≥ 0.1 pCi/liter	15% of known value
Plutonium	≥ 0.1 pCi/liter, gram, or sample	10% of known value
Iodine-131, Iodine-129[b]	≤ 55 pCi/liter	6 pCi/liter
	> 55 pCi/liter	10% of known value
Uranium-238, Nickel-63[b] Technetium-99[b]	≤ 35 pCi/liter	6 pCi/liter
	> 35 pCi/liter	15% of known value
Iron-55[b]	50 to 100 pCi/liter	10 pCi/liter
	> 100 pCi/liter	10% of known value
Other Analyses [b]	---	20% of known value

[a] From EPA publication, "Environmental Radioactivity Laboratory Intercomparison Studies Program, Fiscal Year, 1981-1982, EPA-600/4-81-004.

[b] Laboratory limit.

TABLE A-1. Interlaboratory Comparison Crosscheck program, Environmental Resource Associates (ERA)[a].

Lab Code	Date	Analysis	Concentration (pCi/L) Laboratory Result [b]	ERA Result [c]	Control Limits	Acceptance
ERW-1384	4/7/2014	Sr-89	40.29 ± 5.76	36.70	27.50 ± 43.60	Pass
ERW-1384	4/7/2014	Sr-90	24.08 ± 2.35	26.50	19.20 ± 30.90	Pass
ERW-1385	4/7/2014	Ba-133	78.23 ± 3.93	87.90	74.00 ± 96.70	Pass
ERW-1385	4/7/2014	Co-60	62.75 ± 3.53	64.20	57.80 ± 73.10	Pass
ERW-1385	4/7/2014	Cs-134	44.97 ± 3.99	44.30	35.50 ± 48.70	Pass
ERW-1385	4/7/2014	Cs-137	88.54 ± 4.93	89.10	80.20 ± 101.00	Pass
ERW-1385	4/7/2014	Zn-65	249.1 ± 10.4	235.0	212.0 - 275.0	Pass
ERW-1388	4/7/2014	Gr. Alpha	56.70 ± 2.47	61.00	31.90 ± 75.80	Pass
ERW-1388	4/7/2014	Gr. Beta	32.10 ± 1.20	33.00	21.40 ± 40.70	Pass
ERW-1391	4/7/2014	I-131	25.52 ± 1.12	25.70	21.30 ± 30.30	Pass
ERW-1394	4/7/2014	Ra-226	12.30 ± 0.61	12.40	9.26 ± 14.30	Pass
ERW-1394	4/7/2014	Ra-228	5.08 ± 1.16	4.26	2.46 ± 5.86	Pass
ERW-1394	4/7/2014	Uranium	10.76 ± 0.74	10.20	7.95 ± 11.80	Pass
ERW-1397	4/7/2014	H-3	8982 ± 279	8770	7610 - 9650	Pass
ERW-5382	10/6/2014	Sr-89	29.40 ± 5.32	31.40	22.80 ± 38.10	Pass
ERW-5382	10/6/2014	Sr-90	19.19 ± 1.85	21.80	15.60 ± 25.70	Pass
ERW-5385	10/6/2014	Ba-133	43.54 ± 4.54	49.10	40.30 ± 54.50	Pass
ERW-5385	10/6/2014	Cs-134	81.95 ± 7.49	89.80	73.70 ± 98.80	Pass
ERW-5385	10/6/2014	Cs-137	95.76 ± 5.50	98.80	88.90 ± 111.00	Pass
ERW-5385	10/6/2014	Co-60	90.25 ± 2.77	92.10	82.90 ± 104.00	Pass
ERW-5385	10/6/2014	Zn-65	327.4 ± 23.3	310.0	279.0 - 362.0	Pass
ERW-5388	10/6/2014	Gr. Alpha	30.88 ± 8.05	37.60	19.40 ± 46.10	Pass
ERW-5388	10/6/2014	G. Beta	20.47 ± 4.75	27.40	17.30 ± 35.30	Pass
ERW-5392	10/6/2014	I-131	19.58 ± 2.35	20.30	16.80 ± 24.40	Pass
ERW-5394	10/6/2014	Ra-226	15.10 ± 1.81	14.70	11.00 ± 16.90	Pass
ERW-5394	10/6/2014	Ra-228	4.42 ± 0.86	4.31	2.50 ± 5.92	Pass
ERW-5394	10/6/2014	Uranium	5.51 ± 0.37	5.80	4.34 ± 6.96	Pass
ERW-5397	10/6/2014	H-3	6876 ± 383	6880	5940 - 7570	Pass

[a] Results obtained by Environmental, Inc., Midwest Laboratory as a participant in the crosscheck program for proficiency testing in drinking water conducted by Environmental Resources Associates (ERA).

[b] Unless otherwise indicated, the laboratory result is given as the mean ± standard deviation for three determinations.

[c] Results are presented as the known values, expected laboratory precision (1 sigma, 1 determination) and control limits as provided by ERA.

TABLE A-2. Thermoluminescent Dosimetry, (TLD, $CaSO_4$: Dy Cards).

Lab Code	Date	Description	mR Known Value	mR Lab Result ± 2 sigma	Control Limits	Acceptance
Environmental, Inc.						
2014-1	5/15/2014	50 cm.	26.83	34.43 ± 3.76	18.78 - 34.88	Pass
2014-1	5/15/2014	60 cm.	18.63	22.20 ± 1.16	13.04 - 24.22	Pass
2014-1	5/15/2014	70 cm.	13.69	14.74 ± 0.80	9.58 - 17.80	Pass
2014-1	5/15/2014	75 cm.	11.93	12.68 ± 1.05	8.35 - 15.51	Pass
2014-1	5/15/2014	80 cm.	10.48	11.81 ± 0.91	7.34 - 13.62	Pass
2014-1	5/15/2014	90 cm.	8.28	7.72 ± 0.71	5.80 - 10.76	Pass
2014-1	5/15/2014	100 cm.	6.71	6.46 ± 0.71	4.70 - 8.72	Pass
2014-1	5/15/2014	110 cm.	5.54	5.25 ± 1.03	3.88 - 7.20	Pass
2014-1	5/15/2014	120 cm.	4.66	4.76 ± 0.48	3.26 - 6.06	Pass
2014-1	5/15/2014	135 cm.	3.68	2.87 ± 0.46	2.58 - 4.78	Pass
2014-1	5/15/2014	150 cm.	2.98	2.30 ± 0.15	2.09 - 3.87	Pass
2014-1	5/15/2014	165 cm.	2.46	2.09 ± 0.28	1.72 - 3.20	Pass
2014-1	5/15/2014	180 cm.	2.07	1.75 ± 0.21	1.45 - 2.69	Pass
Environmental, Inc.						
2014-2	12/9/2014	30 cm.	77.04	84.03 ± 8.47	53.90 - 100.20	Pass
2014-2	12/9/2014	30 cm.	77.04	83.74 ± 12.02	53.90 - 100.20	Pass
2014-2	12/9/2014	60 cm.	19.26	20.39 ± 2.37	13.50 - 25.00	Pass
2014-2	12/9/2014	60 cm.	19.26	20.33 ± 1.19	13.50 - 25.00	Pass
2014-2	12/9/2014	120 cm.	4.82	5.15 ± 0.20	3.40 - 6.30	Pass
2014-2	12/9/2014	120 cm.	4.82	5.20 ± 0.45	3.40 - 6.30	Pass
2014-2	12/9/2014	150 cm.	3.08	3.84 ± 0.61	2.20 - 4.00	Pass
2014-2	12/9/2014	150 cm.	3.08	3.17 ± 0.38	2.20 - 4.00	Pass
2014-2	12/9/2014	150 cm.	3.08	3.31 ± 0.32	2.00 - 4.00	Pass
2014-2	12/9/2014	180 cm.	2.14	2.27 ± 0.51	1.50 - 2.80	Pass
2014-2	12/9/2014	180 cm.	2.14	2.23 ± 0.12	1.50 - 2.80	Pass
2014-2	12/9/2014	180 cm.	2.14	2.74 ± 0.48	1.50 - 2.80	Pass
2014-2	12/9/2014	180 cm.	2.14	1.97 ± 0.41	1.50 - 2.80	Pass

TABLE A-3. In-House "Spiked" Samples

Lab Code [b]	Date	Concentration (pCi/L)[a] Analysis	Laboratory results 2s, n=1 [c]	Known Activity	Control Limits [d]	Acceptance
SPW-1011	1/13/2014	Ra-228	35.47 ± 2.55	30.85	21.60 - 40.11	Pass
SPAP-103	1/13/2014	Gr. Beta	43.91 ± 0.34	44.82	26.89 - 62.75	Pass
SPAP-105	1/13/2014	Cs-134	2.46 ± 0.67	2.82	1.69 - 3.95	Pass
SPAP-105	1/13/2014	Cs-137	102.4 ± 2.7	99.9	89.9 - 109.9	Pass
SPW-107	1/13/2014	H-3	62,380 ± 707	62,246	49,797 - 74,695	Pass
SPW-129	1/15/2014	Cs-134	69.90 ± 3.71	78.00	68.00 - 88.00	Pass
SPW-129	1/15/2014	Cs-137	84.36 ± 7.06	75.77	65.77 - 85.77	Pass
SPW-129	1/15/2014	Sr-90	39.48 ± 1.52	39.20	31.36 - 47.04	Pass
SPW-130	1/15/2014	Ni-63	255.8 ± 3.8	204.0	142.8 - 265.2	Pass
SPW-133	1/15/2014	C-14	3153 ± 15	4737	2842 - 6632	Pass
SPMI-135	1/15/2014	Cs-134	76.80 ± 4.04	78.00	68.00 - 88.00	Pass
SPMI-135	1/15/2014	Cs-137	80.44 ± 6.63	75.80	65.80 - 85.80	Pass
W-12014	1/20/2014	Gr. Alpha	19.69 ± 0.41	20.00	10.00 - 30.00	Pass
W-12014	1/20/2014	Gr. Beta	30.35 ± 0.33	30.90	20.90 - 40.90	Pass
SPW-297	1/29/2014	Tc-99	104.2 ± 1.7	107.8	75.5 - 140.2	Pass
SPW-657	2/25/2014	Ra-226	15.84 ± 0.45	16.70	11.69 - 21.71	Pass
SPW-1127	3/26/2014	U-238	43.28 ± 2.56	41.72	29.20 - 54.24	Pass
SPW-1917	3/28/2014	Pu-238	27.37 ± 2.13	23.80	14.28 - 33.32	Pass
SPW-1786	4/25/2014	Tc-99	531.1 ± 8.7	539.15	377.41 - 700.90	Pass
SPW-2168	5/21/2014	Cs-134	70.90 ± 5.81	69.50	59.50 - 79.50	Pass
SPW-2168	5/21/2014	Cs-137	79.72 ± 6.49	75.17	65.17 - 85.17	Pass
SPW-2168	5/21/2014	Sr-89	83.35 ± 5.05	72.85	58.28 - 87.42	Pass
SPW-2168	5/21/2014	Sr-90	33.37 ± 1.52	38.87	31.10 - 46.64	Pass
SPMI-2170	5/21/2014	Cs-134	64.15 ± 4.93	69.50	59.50 - 79.50	Pass
SPMI-2170	5/21/2014	Cs-137	76.21 ± 6.91	75.17	65.17 - 85.17	Pass
SPMI-2170	5/21/2014	Sr-89	65.82 ± 4.89	72.85	58.28 - 87.42	Pass
SPMI-2170	5/21/2014	Sr-90	40.90 ± 1.59	38.87	31.10 - 46.64	Pass
SPW-2792	6/18/2014	U-238	44.80 ± 1.54	41.70	29.19 - 54.21	Pass
SPW-2796	6/18/2014	C-14	3495 ± 9	4,737	2,842 - 6632	Pass
WW-2836	6/30/2014	Co-60	131.8 ± 6.9	140.90	126.81 - 154.99	Pass
WW-2836	6/30/2014	Cs-137	143.8 ± 9.1	145.60	131.04 - 160.16	Pass
WW-2836	6/30/2014	H-3	6220 ± 238	6,361	5,089 - 7633	Pass

TABLE A-3. In-House "Spiked" Samples

Lab Code [b]	Date	Concentration (pCi/L)[a] Analysis	Laboratory results 2s, n=1 [c]	Known Activity	Control Limits [d]	Acceptance
SPW-3486	7/17/2014	Fe-55	2211 ± 72	2319	1855 - 2783	Pass
SPW-080714	8/7/2014	Gr. Alpha	18.42 ± 0.40	20.10	10.05 - 30.15	Pass
SPW-080714	8/7/2014	Gr. Beta	31.70 ± 0.40	32.40	22.40 - 42.40	Pass
SPW-081214	8/12/2014	Pu-238	22.59 ± 2.15	22.70	18.16 - 27.24	Pass
SPW-4093	8/13/2014	I-131(G)	59.95 ± 6.17	59.62	49.62 - 69.62	Pass
SPW-4093	8/13/2014	Sr-90	39.46 ± 1.55	38.65	28.65 - 48.65	Pass
SPW-4093	8/13/2014	Sr-89	105.5 ± 4.9	115.0	92.0 - 149.5	Pass
SPMI-4095	8/13/2014	I-131(G)	59.92 ± 6.17	59.62	49.62 - 69.62	Pass
SPMI-4095	8/13/2014	I-131	60.05 ± 0.72	59.62	47.70 - 71.54	Pass
SPW-4104	8/13/2014	Ni-63	200.1 ± 3.4	203.2	142.2 - 264.1	Pass
SPW-4106	8/13/2014	H-3	59,597 ± 695	60,261	48209 - 72313	Pass
SPW-4108	8/13/2014	Cs-134	2.45 ± 0.81	2.32	0.00 - 12.32	Pass
SPW-4108	8/13/2014	Cs-137	90.20 ± 3.74	98.56	88.56 - 108.56	Pass
SPAP-4110	8/13/2014	Gr. Beta	43.65 ± 0.11	44.19	34.19 - 54.19	Pass
SPF-4112	8/13/2014	I-131	2.64 ± 0.38	2.86	0.00 - 12.86	Pass
SPF-4112	8/13/2014	Cs-134	0.91 ± 0.03	1.03	0.00 - 11.03	Pass
SPF-4112	8/13/2014	Cs-137	2.61 ± 0.06	2.39	0.00 - 12.39	Pass
SPW-081414	8/14/2014	H-3	14,663 ± 788	17,700	14160 - 21240	Pass
W081614	8/16/2014	Ra-226	14.30 ± 0.37	16.70	11.69 - 21.71	Pass
W082614	8/26/2014	Ra-228	27.18 ± 2.13	30.49	20.49 - 40.49	Pass
SPW-090414	9/4/2014	Gr. Alpha	17.85 ± 0.39	20.10	10.05 - 30.15	Pass
SPW-090414	9/4/2014	Gr. Beta	30.03 ± 0.33	30.90	20.90 - 40.90	Pass
SPW-5124	9/29/2014	Ra-228	32.93 ± 2.38	31.94	21.94 - 41.94	Pass
W100714	10/7/2014	Gr. Alpha	18.56 ± 0.40	20.10	10.05 - 30.15	Pass
W100714	10/7/2014	Gr. Beta	27.71 ± 0.32	30.90	20.90 - 40.90	Pass
W111014	11/10/2014	Gr. Alpha	17.84 ± 0.38	20.10	10.05 - 30.15	Pass
W111014	11/10/2014	Gr. Beta	30.12 ± 0.33	30.90	20.90 - 40.90	Pass
W112514	11/25/2014	Ra-226	16.63 ± 0.41	16.70	11.69 - 21.71	Pass
W120814	12/8/2014	Gr. Alpha	19.29 ± 0.41	20.10	10.05 - 30.15	Pass
W120814	12/8/2014	Gr. Beta	27.93 ± 0.32	30.90	20.90 - 40.90	Pass
SPW-7149	12/26/2014	Ni-63	217.53 ± 3.25	203.10	142.17 - 264.03	Pass

[a] Liquid sample results are reported in pCi/Liter, air filters(pCi/m3), charcoal (pCi/charcoal canister), and solid samples (pCi/kg).

[b] Laboratory codes : W (Water), MI (milk), AP (air filter), SO (soil), VE (vegetation), CH (charcoal canister), F (fish), U (urine).

[c] Results are based on single determinations.

[d] Control limits are established from the precision values listed in Attachment A of this report, adjusted to ± 2s.

NOTE: For fish, Jello is used for the spike matrix. For vegetation, cabbage is used for the spike matrix.

TABLE A-4. In-House "Blank" Samples

Lab Code	Sample Type	Date	Analysis[b]	Concentration (pCi/L)[a]		
				Laboratory results (4.66σ)		Acceptance
				LLD	Activity[c]	Criteria (4.66 σ)
SPW-1001	Water	1/13/2014	Ra-228	0.74	0.39 ± 0.39	2
SPAP-102	Air Particulate	1/13/2014	Gr. Beta	0.003	0.015 ± 0.003	0.01
SPAP-104	Air Particulate	1/13/2014	Cs-134	0.006	0.005 ± 0.005	0.05
SPAP-104	Air Particulate	1/13/2014	Cs-137	0.004	-0.002 ± 0.005	0.05
SPW-106	Water	1/13/2014	H-3	151.0	115.0 ± 97.0	200
SPW-128	Water	1/15/2014	Cs-134	2.85	0.59 ± 1.46	10
SPW-128	Water	1/15/2014	Cs-137	2.52	0.68 ± 1.64	10
SPW-128	Water	1/15/2014	Sr-90	0.61	0.74 ± 0.36	1
SPW-130	Water	1/15/2014	Ni-63	10.85	1.57 ± 6.60	20
SPW-133	Water	1/15/2014	C-14	13.51	3.10 ± 8.27	200
SPMI-134	Milk	1/15/2014	Cs-134	4.43	0.14 ± 2.46	10
SPMI-134	Milk	1/15/2014	Cs-137	1.92	-2.07 ± 2.48	10
W-12014	Water	1/20/2014	Gr. Alpha	0.48	-0.31 ± 0.31	2
W-12014	Water	1/20/2014	Gr. Beta	0.78	-0.24 ± 0.54	4
SPW-297	Water	1/29/2014	Tc-99	5.63	-4.42 ± 3.34	10
SPW-656	Water	2/25/2014	Ra-226	0.03	0.01 ± 0.02	1
SPW-1126	Water	3/26/2014	U-238	0.13	0.08 ± 0.12	1
SPW-1127	Water	3/26/2014	U-233/234	0.13	0.11 ± 0.13	1
SPW-1127	Water	3/26/2014	U-238	0.00	0.08 ± 0.12	1
SPW-1917	Water	3/28/2014	Pu-238	0.02	0.01 ± 0.01	1
SPW-1785	Water	4/25/2014	Tc-99	5.61	-4.33 ± 3.33	10
SPW-1831	Water	4/30/2014	I-131	0.21	0.07 ± 0.12	0.5
SPW-2167	Water	5/21/2014	Cs-134	2.29	-0.79 ± 1.35	10
SPW-2167	Water	5/21/2014	Cs-137	2.46	0.36 ± 1.48	10
SPW-2167	Water	5/21/2014	I-131(G)	2.77	0.25 ± 1.53	20
SPW-2167	Water	5/21/2014	Sr-89	0.81	0.01 ± 0.62	5
SPW-2167	Water	5/21/2014	Sr-90	0.52	0.03 ± 0.24	1
SPMI-2169	Milk	5/21/2014	Cs-134	4.45	-0.55 ± 2.39	10
SPMI-2169	Milk	5/21/2014	Cs-137	3.91	-0.52 ± 2.60	10
SPMI-2169	Milk	5/21/2014	I-131(G)	4.31	2.57 ± 2.21	20
SPMI-2169	Milk	5/21/2014	Sr-89	0.98	-0.02 ± 0.83	5
SPMI-2169	Milk	5/21/2014	Sr-90	0.61	0.35 ± 0.32	1
SPW-2793	Water	6/18/2014	U-238	0.08	0.02 ± 0.06	1

TABLE A-4. In-House "Blank" Samples

Lab Code	Sample Type	Date	Analysis[b]	Concentration (pCi/L)[a]		
				Laboratory results (4.66σ)		Acceptance
				LLD	Activity[c]	Criteria (4.66 σ)
SPW-3485	Water	7/17/2014	Fe-55	597.6	10.3 ± 363.3	1000
SPW-4092	Water	8/13/2014	I-131(G)	3.59	0.91 ± 1.95	20
SPW-4092	Water	8/13/2014	Cs-134	3.71	-0.31 ± 1.77	10
SPW-4092	Water	8/13/2014	Cs-137	2.71	-2.20 ± 1.98	10
SPW-4092	Water	8/13/2014	Sr-89	0.89	0.11 ± 0.63	5
SPW-4092	Water	8/13/2014	Sr-90	0.52	-0.05 ± 0.23	1
SPMI-4094	Milk	8/13/2014	I-131	0.35	0.03 ± 0.20	0.5
SPMI-4094	Milk	8/13/2014	I-131(G)	4.50	-0.41 ± 2.44	20
SPMI-4094	Milk	8/13/2014	Cs-134	4.30	-0.84 ± 2.02	10
SPMI-4094	Milk	8/13/2014	Cs-137	3.45	0.96 ± 2.51	10
SPMI-4094	Milk	8/13/2014	Sr-89	0.80	-0.19 ± 0.79	5
SPMI-4094	Milk	8/13/2014	Sr-90	0.47	0.71 ± 0.30	1
SPW-4103	Water	8/13/2014	Ni-63	0.12	0.02 ± 0.07	20
SPW-4105	Water	8/13/2014	H-3	138.1	104.1 ± 78.1	200
SPW-4107	Water	8/13/2014	I-131(G)	3.21	-3.68 ± 1.33	20
SPW-4107	Water	8/13/2014	Cs-134	2.72	-0.62 ± 1.49	10
SPW-4107	Water	8/13/2014	Cs-137	2.56	0.75 ± 1.62	10
SPAP-4109	Air Particulate	8/13/2014	Gr. Beta	0.004	-0.003 ± 0.00	0.01
SPF-4111	Fish	8/13/2014	Cs-134	0.01	0.00 ± 0.01	100
SPF-4111	Fish	8/13/2014	Cs-137	0.01	-0.01 ± 0.01	100
SPF-4111	Fish	8/13/2014	Co-60	0.01	0.00 ± 0.01	100
W-081614	Water	8/16/2014	Ra-226	0.04	0.05 ± 0.03	1
W-082614	Water	8/16/2014	Ra-228	0.62	0.29 ± 0.40	2
W-092314	Water	9/23/2014	Ra-226	0.02	0.04 ± 0.02	1
W-5123	Water	9/29/2014	Ra-228	0.70	0.43 ± 0.38	2
W-100714	Water	10/7/2014	Gr. Alpha	0.39	0.04 ± 0.28	2
W-100714	Water	10/7/2014	Gr. Beta	0.76	-0.06 ± 0.53	4
W-111014	Water	11/10/2014	Gr. Alpha	0.39	0.01 ± 0.28	2
W-111014	Water	11/10/2014	Gr. Beta	0.75	-0.25 ± 0.52	4
W-112514	Water	11/25/2014	Ra-226	0.05	0.02 ± 0.03	2
W-120814	Water	12/8/2014	Gr. Alpha	0.42	0.04 ± 0.30	2
W-120814	Water	12/8/2014	Gr. Beta	0.74	-0.42 ± 0.51	4
SPW-7148	Water	12/26/2014	Ni-63	10.80	-1.80 ± 6.50	20

[a] Liquid sample results are reported in pCi/Liter, air filters(pCi/m^3), charcoal (pCi/charcoal canister), and solid samples (pCi/kg).

[b] I-131(G); iodine-131 as analyzed by gamma spectroscopy.

[c] Activity reported is a net activity result.

TABLE A-5. In-House "Duplicate" Samples

Lab Code	Date	Analysis	Concentration (pCi/L)[a] First Result	Second Result	Averaged Result	Acceptance
AP-7829, 7830	1/2/2014	Be-7	0.08 ± 0.02	0.06 ± 0.01	0.07 ± 0.01	Pass
AP-7913, 7914	1/2/2014	Be-7	0.07 ± 0.01	0.06 ± 0.01	0.06 ± 0.01	Pass
AP-7871, 7872	1/3/2014	Be-7	0.05 ± 0.02	0.06 ± 0.01	0.06 ± 0.01	Pass
S-43, 44	1/9/2014	K-40	19.28 ± 0.57	19.24 ± 0.57	19.26 ± 0.40	Pass
SG-64, 65	1/9/2014	Gr. Alpha	686.08 ± 69.97	642.46 ± 65.59	664.27 ± 47.95	Pass
SG-64, 65	1/9/2014	Ra-226	97.30 ± 9.78	92.20 ± 9.27	94.75 ± 6.74	Pass
SG-64, 65	1/9/2014	Ra-228	91.90 ± 9.30	97.10 ± 9.87	94.50 ± 6.78	Pass
S-136, 137	1/13/2014	Be-7	14.90 ± 0.39	14.88 ± 0.38	14.89 ± 0.27	Pass
S-136, 137	1/13/2014	K-40	3.29 ± 0.36	3.93 ± 0.36	3.61 ± 0.25	Pass
WW-220, 221	1/13/2014	H-3	231.85 ± 80.45	273.46 ± 82.47	252.66 ± 57.60	Pass
WW-262, 263	1/21/2014	H-3	294.80 ± 89.80	265.00 ± 88.47	279.90 ± 63.03	Pass
WW-346, 347	1/24/2014	H-3	934.97 ± 118.47	965.59 ± 119.52	950.28 ± 84.14	Pass
SWU-367, 368	1/29/2014	Gr. Beta	0.74 ± 0.38	1.31 ± 0.42	1.02 ± 0.28	Pass
F-409, 410	2/2/2014	Cs-137	0.05 ± 0.02	0.05 ± 0.02	0.05 ± 0.01	Pass
F-409, 410	2/2/2014	Gr. Beta	3.60 ± 0.07	3.72 ± 0.07	3.66 ± 0.05	Pass
AP-7829, 7830	1/2/2014	Be-7	0.08 ± 0.02	0.06 ± 0.01	0.07 ± 0.01	Pass
AP-7913, 7914	1/2/2014	Be-7	0.07 ± 0.01	0.06 ± 0.01	0.06 ± 0.01	Pass
AP-7871, 7872	1/3/2014	Be-7	0.05 ± 0.02	0.06 ± 0.01	0.06 ± 0.01	Pass
S-43, 44	1/9/2014	K-40	19.28 ± 0.57	19.24 ± 0.57	19.26 ± 0.40	Pass
SG-64, 65	1/9/2014	Gr. Alpha	686.08 ± 69.97	642.46 ± 65.59	664.27 ± 47.95	Pass
SG-64, 65	1/9/2014	Ra-226	97.30 ± 9.78	92.20 ± 9.27	94.75 ± 6.74	Pass
SG-64, 65	1/9/2014	Ra-228	91.90 ± 9.30	97.10 ± 9.87	94.50 ± 6.78	Pass
S-136, 137	1/13/2014	Be-7	14.90 ± 0.39	14.88 ± 0.38	14.89 ± 0.27	Pass
S-136, 137	1/13/2014	K-40	3.29 ± 0.36	3.93 ± 0.36	3.61 ± 0.25	Pass
WW-220, 221	1/13/2014	H-3	231.85 ± 80.45	273.46 ± 82.47	252.66 ± 57.60	Pass
WW-262, 263	1/21/2014	H-3	294.80 ± 89.80	265.00 ± 88.47	279.90 ± 63.03	Pass
WW-346, 347	1/24/2014	H-3	934.97 ± 118.47	965.59 ± 119.52	950.28 ± 84.14	Pass
SWU-367, 368	1/29/2014	Gr. Beta	0.74 ± 0.38	1.31 ± 0.42	1.02 ± 0.28	Pass
F-409, 410	2/2/2014	Cs-137	0.05 ± 0.02	0.05 ± 0.02	0.05 ± 0.01	Pass
F-409, 410	2/2/2014	Gr. Beta	3.60 ± 0.07	3.72 ± 0.07	3.66 ± 0.05	Pass
WW-491, 492	2/6/2014	H-3	474.00 ± 101.10	583.10 ± 105.30	528.55 ± 72.99	Pass
WW-575, 576	2/13/2014	H-3	196.69 ± 82.94	154.68 ± 80.89	175.69 ± 57.93	Pass
W-617, 618	2/14/2014	H-3	526.29 ± 97.65	579.51 ± 99.77	552.90 ± 69.80	Pass
SWU-743, 744	2/25/2014	Gr. Beta	1.61 ± 0.65	1.73 ± 0.71	1.67 ± 0.48	Pass
S-700, 701	2/26/2014	K-40	21.32 ± 0.64	21.15 ± 0.59	21.24 ± 0.44	Pass
S-806, 807	3/4/2014	K-40	24.79 ± 0.57	24.17 ± 0.59	24.48 ± 0.41	Pass
SG-928, 929	3/11/2014	Ac-228	6.78 ± 0.34	6.94 ± 0.35	6.86 ± 0.24	Pass
SG-928, 929	3/11/2014	Bi-214	5.32 ± 0.20	5.34 ± 0.22	5.33 ± 0.15	Pass
SG-928, 929	3/11/2014	K-40	4.79 ± 0.80	6.24 ± 1.01	5.52 ± 0.64	Pass
SG-928, 929	3/11/2014	Pb-212	2.70 ± 0.09	2.75 ± 0.09	2.73 ± 0.06	Pass
SG-928, 929	3/11/2014	Pb-214	5.39 ± 0.17	5.53 ± 0.17	5.46 ± 0.12	Pass
SG-928, 929	3/11/2014	Th-228	6.10 ± 2.07	4.76 ± 1.93	5.43 ± 1.42	Pass
SG-928, 929	3/11/2014	Tl-208	0.92 ± 0.06	0.91 ± 0.06	0.92 ± 0.04	Pass

TABLE A-5. In-House "Duplicate" Samples

Lab Code	Date	Analysis	Concentration (pCi/L)[a] First Result	Second Result	Averaged Result	Acceptance
S-2119, 2120	3/12/2014	Ac-228	0.76 ± 0.20	0.73 ± 0.21	0.75 ± 0.15	Pass
S-2119, 2120	3/12/2014	Cs-137	0.13 ± 0.05	0.11 ± 0.05	0.12 ± 0.04	Pass
S-2119, 2120	3/12/2014	K-40	17.48 ± 1.48	18.39 ± 1.53	17.94 ± 1.06	Pass
S-2119, 2120	3/12/2014	Pb-214	0.73 ± 0.18	0.63 ± 0.12	0.68 ± 0.11	Pass
F-1594, 1595	3/16/2014	Cs-137	0.02 ± 0.01	0.03 ± 0.02	0.03 ± 0.01	Pass
SO-1115, 1116	3/18/2014	Cs-137	0.06 ± 0.01	0.06 ± 0.00	0.06 ± 0.00	Pass
SO-1115, 1116	3/18/2014	Gr. Beta	23.30 ± 2.10	24.40 ± 2.20	23.85 ± 1.52	Pass
SO-1115, 1116	3/18/2014	K-40	12.63 ± 0.18	12.84 ± 0.15	12.74 ± 0.12	Pass
SO-1115, 1116	3/18/2014	U-233/4	0.11 ± 0.02	0.12 ± 0.02	0.12 ± 0.01	Pass
SO-1115, 1116	3/18/2014	U-238	0.13 ± 0.02	0.14 ± 0.02	0.14 ± 0.01	Pass
S-1033, 1034	3/19/2014	Ac-228	0.99 ± 0.20	1.13 ± 0.26	1.06 ± 0.16	Pass
S-1033, 1034	3/19/2014	Bi-214	1.02 ± 0.18	0.98 ± 0.16	1.00 ± 0.12	Pass
S-1033, 1034	3/19/2014	Cs-137	0.15 ± 0.04	0.14 ± 0.04	0.15 ± 0.03	Pass
S-1033, 1034	3/19/2014	K-40	15.39 ± 1.19	15.13 ± 1.19	15.26 ± 0.84	Pass
S-1033, 1034	3/19/2014	Pb-214	1.09 ± 0.13	0.88 ± 0.17	0.99 ± 0.11	Pass
S-1033, 1034	3/19/2014	Tl-208	0.36 ± 0.05	0.31 ± 0.05	0.34 ± 0.04	Pass
W-1094, 1095	3/23/2014	Ra-226	0.30 ± 0.20	0.70 ± 0.20	0.50 ± 0.14	Pass
W-1094, 1095	3/23/2014	Ra-228	1.10 ± 0.79	1.13 ± 0.86	1.12 ± 0.58	Pass
AP-1197, 1198	3/27/2014	Be-7	0.17 ± 0.08	0.14 ± 0.08	0.15 ± 0.05	Pass
AP-1698, 1699	3/31/2014	Be-7	0.06 ± 0.02	0.07 ± 0.02	0.07 ± 0.01	Pass
E-1218, 1219	4/1/2014	Gr. Beta	1.57 ± 0.04	1.57 ± 0.04	1.57 ± 0.03	Pass
E-1218, 1219	4/1/2014	K-40	1.26 ± 0.14	1.31 ± 0.18	1.29 ± 0.11	Pass
SWU-1260, 1261	4/1/2014	Gr. Beta	2.81 ± 0.51	2.94 ± 0.50	2.88 ± 0.36	Pass
AP-1615, 1616	4/1/2014	Be-7	0.07 ± 0.01	0.07 ± 0.02	0.07 ± 0.01	Pass
AP-1657, 1658	4/2/2014	Be-7	0.07 ± 0.01	0.08 ± 0.01	0.07 ± 0.01	Pass
AP-1804, 1805	4/3/2014	Be-7	0.05 ± 0.02	0.06 ± 0.01	0.06 ± 0.01	Pass
P-1489, 1490	4/7/2014	H-3	582.31 ± 101.85	505.07 ± 98.72	543.69 ± 70.92	Pass
BS-1531, 1532	4/16/2014	K-40	0.51 ± 0.19	0.58 ± 0.23	0.54 ± 0.15	Pass
S-1909, 1910	4/22/2014	K-40	14.71 ± 0.54	14.78 ± 0.53	14.75 ± 0.38	Pass
SWU-1867, 1868	4/29/2014	Gr. Beta	2.28 ± 0.40	1.67 ± 0.35	1.98 ± 0.27	Pass
AP-1930, 1931	5/1/2014	Be-7	0.16 ± 0.09	0.19 ± 0.11	0.17 ± 0.07	Pass
SL-1888, 1889	5/1/2014	Be-7	0.80 ± 0.04	0.76 ± 0.08	0.78 ± 0.05	Pass
SL-1888, 1889	5/1/2014	Cs-137	0.01 ± 0.00	0.01 ± 0.00	0.01 ± 0.00	Pass
SL-1888, 1889	5/1/2014	Gr. Beta	11.57 ± 0.72	12.67 ± 0.78	12.12 ± 0.53	Pass
SL-1888, 1889	5/1/2014	K-40	1.04 ± 0.05	1.00 ± 0.09	1.02 ± 0.05	Pass
SO-1972, 1973	5/1/2014	Cs-137	0.12 ± 0.03	0.10 ± 0.02	0.11 ± 0.02	Pass
SO-1972, 1973	5/1/2014	Gr. Alpha	7.51 ± 3.24	9.09 ± 3.63	8.30 ± 2.43	Pass
SO-1972, 1973	5/1/2014	Gr. Beta	29.89 ± 3.25	31.42 ± 3.04	30.66 ± 2.23	Pass
SO-1972, 1973	5/1/2014	K-40	20.45 ± 0.85	20.88 ± 0.76	20.66 ± 0.57	Pass
W-617, 618	5/8/2014	H-3	175.13 ± 83.82	177.17 ± 83.92	176.15 ± 59.31	Pass
AP-2077, 2078	5/8/2014	Be-7	0.23 ± 0.11	0.18 ± 0.11	0.20 ± 0.08	Pass

TABLE A-5. In-House "Duplicate" Samples

			Concentration (pCi/L)[a]			
Lab Code	Date	Analysis	First Result	Second Result	Averaged Result	Acceptance
S-2205, 2206	5/15/2014	Be-7	0.50 ± 0.19	0.70 ± 0.18	0.60 ± 0.13	Pass
S-2205, 2206	5/15/2014	K-40	33.60 ± 0.79	33.52 ± 0.70	33.56 ± 0.53	Pass
VE-2184, 2185	5/19/2014	Be-7	0.62 ± 0.18	0.53 ± 0.17	0.58 ± 0.12	Pass
VE-2184, 2185	5/19/2014	K-40	5.30 ± 0.44	5.14 ± 0.44	5.22 ± 0.31	Pass
DW-50102, 50103	5/20/2014	Ra-226	7.07 ± 0.76	8.31 ± 0.90	7.69 ± 0.59	Pass
DW-50102, 50103	5/20/2014	Ra-228	5.44 ± 0.85	6.02 ± 0.67	5.73 ± 0.54	Pass
SW-2226, 2227	5/21/2014	H-3	14318.00 ± 347.00	14350.00 ± 347.00	14334.00 ± 245.37	Pass
DW-50087, 50088	5/21/2014	Gr. Alpha	1.76 ± 1.09	2.67 ± 1.01	2.22 ± 0.74	Pass
DW-50090, 50091	5/21/2014	Ra-226	0.61 ± 0.09	0.47 ± 0.09	0.54 ± 0.06	Pass
DW-50090, 50091	5/21/2014	Ra-228	0.97 ± 0.41	1.26 ± 0.52	1.12 ± 0.33	Pass
DW-50098, 50099	5/21/2014	Gr. Alpha	13.04 ± 1.36	10.76 ± 1.26	11.90 ± 0.93	Pass
AP-2289, 2290	5/22/2014	Be-7	0.14 ± 0.08	0.24 ± 0.10	0.19 ± 0.06	Pass
PM-3174, 3175	5/28/2014	K-40	30.68 ± 1.30	32.64 ± 1.24	31.66 ± 0.90	Pass
G-2415, 2416	6/2/2014	Be-7	0.73 ± 0.16	0.62 ± 0.28	0.68 ± 0.16	Pass
G-2415, 2416	6/2/2014	Gr. Beta	5.89 ± 0.09	5.90 ± 0.09	5.89 ± 0.06	Pass
G-2415, 2416	6/2/2014	K-40	5.30 ± 0.49	5.19 ± 0.65	5.25 ± 0.41	Pass
WW-2541, 2542	6/4/2014	H-3	5107.00 ± 223.00	5029.00 ± 222.00	5068.00 ± 157.33	Pass
SW-2817, 2818	6/16/2014	H-3	13303.00 ± 336.00	13130.00 ± 334.00	13216.50 ± 236.88	Pass
SS-2943, 2944	6/24/2014	K-40	11.49 ± 0.79	11.81 ± 0.70	11.65 ± 0.53	Pass
S-3048, 3049	6/27/2014	K-40	42.51 ± 1.31	40.04 ± 1.39	41.28 ± 0.95	Pass
SWT-3216, 3217	7/1/2014	Gr. Beta	2.27 ± 0.94	2.53 ± 1.05	2.40 ± 0.70	Pass
AP-3699,3700	7/3/2014	Be-7	0.06 ± 0.01	0.07 ± 0.02	0.07 ± 0.01	Pass
S-3300, 3301	7/8/2014	K-40	4.85 ± 0.97	5.91 ± 1.17	5.38 ± 0.76	Pass
S-3300, 3301	7/8/2014	Ac-228	10.23 ± 0.43	10.18 ± 0.32	10.21 ± 0.27	Pass
S-3300, 3301	7/8/2014	Ra-226	70.14 ± 2.37	72.01 ± 2.38	71.08 ± 1.68	Pass
VE-3237,3238	7/8/2014	K-40	2.54 ± 0.27	2.63 ± 0.24	2.59 ± 0.18	Pass
CF-3384,3385	7/14/2014	K-40	11.10 ± 0.58	10.69 ± 0.60	10.90 ± 0.42	Pass
S-3447,3448	7/16/2014	K-40	19.63 ± 0.64	21.03 ± 0.96	20.33 ± 0.58	Pass
WW-3573,3574	7/18/2014	H-3	381.58 ± 85.76	401.30 ± 86.67	391.44 ± 60.96	Pass
VE-3594,3595	7/22/2014	K-40	3.04 ± 0.19	3.21 ± 0.15	3.13 ± 0.12	Pass
WW-3762,3763	7/25/2014	H-3	315.47 ± 87.02	327.30 ± 87.56	321.39 ± 61.72	Pass
SWT-3867, 3868	7/29/2014	Gr. Beta	1.10 ± 0.53	1.51 ± 0.58	1.31 ± 0.39	Pass
S-3804, 3805	7/30/2014	Ac-228	0.67 ± 0.11	0.61 ± 0.10	0.64 ± 0.07	Pass
S-3804, 3805	7/30/2014	Pb-214	0.56 ± 0.05	0.51 ± 0.04	0.54 ± 0.03	Pass
LW-3931, 3932	7/31/2014	Gr. Beta	1.04 ± 0.40	0.95 ± 0.41	1.00 ± 0.29	Pass

TABLE A-5. In-House "Duplicate" Samples

Lab Code	Date	Analysis	Concentration (pCi/L)[a] First Result	Second Result	Averaged Result	Acceptance
G-3952,3953	8/4/2014	K-40	5.42 ± 0.42	5.35 ± 0.34	5.38 ± 0.27	Pass
G-3952,3953	8/4/2014	Be-7	1.29 ± 0.19	1.24 ± 0.16	1.27 ± 0.13	Pass
G-3952,3953	8/4/2014	Gr. Beta	8.53 ± 0.20	8.63 ± 0.20	8.58 ± 0.14	Pass
G-3952,3953	8/4/2014	H-3	140.16 ± 93.50	127.25 ± 92.99	133.70 ± 65.94	Pass
WW-4036, 4037	8/5/2014	H-3	190.60 ± 82.60	164.70 ± 81.30	177.65 ± 57.95	Pass
VE-4204,4205	8/11/2014	K-40	6.28 ± 0.38	6.60 ± 0.37	6.44 ± 0.27	Pass
WW-4394,4395	8/13/2014	H-3	1540.26 ± 136.52	1499.15 ± 135.43	1519.71 ± 96.15	Pass
VE-4183,4184	8/14/2014	K-40	5.70 ± 0.41	5.73 ± 0.34	5.72 ± 0.27	Pass
AV-4455, 4456	8/22/2014	Be-7	286.67 ± 102.30	251.99 ± 98.94	269.33 ± 71.16	Pass
AV-4455, 4456	8/22/2014	K-40	2547.90 ± 255.70	2201.40 ± 203.90	2374.65 ± 163.52	Pass
WW-4500, 4501	8/26/2014	H-3	347.00 ± 100.00	321.00 ± 98.00	334.00 ± 70.01	Pass
AP-090214A/B	9/2/2014	Gr. Beta	0.03 ± 0.04	0.03 ± 0.04	0.03 ± 0.00	Pass
SG-5089, 5090	9/19/2014	Ac-228	8.26 ± 0.63	9.48 ± 0.68	8.87 ± 0.46	Pass
SG-5089, 5090	9/19/2014	Bi-214	4.71 ± 0.29	4.41 ± 0.31	4.56 ± 0.21	Pass
SG-5194,5	10/1/2014	Gr. Alpha	276.20 ± 9.51	258.60 ± 9.26	267.40 ± 6.64	Pass
SG-5194,5	10/1/2014	Pb-214	43.56 ± 0.73	43.94 ± 0.78	43.75 ± 0.53	Pass
SG-5194,5	10/1/2014	Ac-228	59.90 ± 1.37	62.80 ± 1.73	61.35 ± 1.10	Pass
S-5632,3	10/8/2014	K-40	19.28 ± 0.88	17.94 ± 0.89	18.61 ± 0.63	Pass
S-5632,3	10/8/2014	Cs-137	0.15 ± 0.03	0.13 ± 0.03	0.14 ± 0.02	Pass
S-5632,3	10/8/2014	Tl-208	0.32 ± 0.03	0.34 ± 0.03	0.33 ± 0.02	Pass
S-5632,3	10/8/2014	Pb-212	0.92 ± 0.05	0.92 ± 0.05	0.92 ± 0.03	Pass
S-5632,3	10/8/2014	Pb-214	1.25 ± 0.08	1.09 ± 0.09	1.17 ± 0.06	Pass
S-5632,3	10/8/2014	Bi-212	1.25 ± 0.29	1.34 ± 0.47	1.29 ± 0.27	Pass
S-5632,3	10/8/2014	Ac-228	1.08 ± 0.14	1.10 ± 0.14	1.09 ± 0.10	Pass
DW-50243,4	10/13/2014	Gr. Alpha	2.99 ± 0.94	4.98 ± 1.17	3.99 ± 0.75	Pass
AP-101414A/B	10/14/2014	Gr. Beta	0.02 ± 0.00	0.02 ± 0.00	0.02 ± 0.00	Pass
SG-5590,1	10/15/2014	Pb-214	80.30 ± 8.08	73.40 ± 7.51	76.85 ± 5.52	Pass
SG-5590,1	10/15/2014	Ac-228	64.50 ± 1.87	62.80 ± 1.15	63.65 ± 1.10	Pass
DW-50251,2	10/16/2014	Ra-226	0.55 ± 0.13	0.32 ± 0.10	0.44 ± 0.08	Pass
U-5842,3	10/20/2014	H-3	7376 ± 949	7342 ± 947	7359 ± 670	Pass
CF-6074,5	10/21/2014	H-3	7509 ± 283	7969 ± 291	7739 ± 203	Pass
CF-6074,5	10/21/2014	K-40	3.09 ± 0.31	3.30 ± 0.38	3.20 ± 0.25	Pass

TABLE A-5. In-House "Duplicate" Samples

Lab Code	Date	Analysis	Concentration (pCi/L)[a] First Result	Second Result	Averaged Result	Acceptance
VE-6269,70	11/3/2014	K-40	6.25 ± 0.54	6.56 ± 0.49	6.41 ± 0.36	Pass
VE-6269,70	11/3/2014	Be-7	0.81 ± 0.28	0.74 ± 0.18	0.77 ± 0.17	Pass
SO-6500,1	11/5/2014	Sr-90	0.07 ± 0.03	0.07 ± 0.02	0.07 ± 0.02	Pass
SO-6500,1	11/5/2014	Gr. Alpha	11.77 ± 1.73	12.18 ± 1.62	11.98 ± 1.19	Pass
SO-6500,1	11/5/2014	Gr. Beta	26.69 ± 1.62	24.19 ± 1.13	25.44 ± 0.99	Pass
SO-6500,1	11/5/2014	U-233/4	0.14 ± 0.04	0.14 ± 0.05	0.14 ± 0.03	Pass
SO-6500,1	11/5/2014	U-238	0.18 ± 0.05	0.13 ± 0.04	0.15 ± 0.03	Pass
SO-6500,1	11/5/2014	Th-228	0.47 ± 0.11	0.34 ± 0.06	0.41 ± 0.06	Pass
SO-6500,1	11/5/2014	Th-230	0.38 ± 0.07	0.29 ± 0.05	0.34 ± 0.04	Pass
SO-6500,1	11/5/2014	Th-232	0.41 ± 0.08	0.41 ± 0.06	0.41 ± 0.05	Pass
SO-6500,1	11/5/2014	Bi-214	0.75 ± 0.02	0.78 ± 0.02	0.77 ± 0.01	Pass
SO-6500,1	11/5/2014	Pb-214	0.78 ± 0.08	0.86 ± 0.09	0.82 ± 0.06	Pass
SO-6500,1	11/5/2014	Ac-228	1.02 ± 0.11	1.13 ± 0.13	1.08 ± 0.09	Pass
SO-6500,1	11/5/2014	Cs-137	0.40 ± 0.01	0.39 ± 0.01	0.39 ± 0.01	Pass
DW-50262,3	11/10/2014	Gr. Alpha	8.95 ± 1.26	7.84 ± 1.24	8.40 ± 0.88	Pass
DW-50264,5	11/10/2014	Ra-226	3.89 ± 0.24	3.71 ± 0.20	3.80 ± 0.16	Pass
DW-50264,5	11/10/2014	Ra-228	2.96 ± 0.63	2.33 ± 0.59	2.65 ± 0.43	Pass
AP-120214A/B	12/2/2014	Gr. Beta	0.03 ± 0.00	0.03 ± 0.00	0.03 ± 0.00	Pass
AP-120814A/B	12/8/2014	Gr. Beta	0.03 ± 0.01	0.03 ± 0.01	0.03 ± 0.00	Pass
SG-7068,9	12/19/2014	Pb-214	4.27 ± 0.23	4.38 ± 0.33	4.33 ± 0.20	Pass
SG-7068,9	12/19/2014	Ac-228	2.72 ± 0.36	3.27 ± 0.49	3.00 ± 0.30	Pass
S-7152,3	12/25/2014	K-40	20.83 ± 0.88	20.16 ± 0.62	20.49 ± 0.54	Pass

TABLE A-6. Department of Energy's Mixed Analyte Performance Evaluation Program (MAPEP).

			Concentration [a]			
Lab Code [b]	Date	Analysis	Laboratory result	Known Activity	Control Limits [c]	Acceptance
MAW-1140	2/1/2014	Gr. Alpha	0.77 ± 0.06	0.85	0.26 - 1.44	Pass
MAW-1140	2/1/2014	Gr. Beta	4.31 ± 0.08	4.19	2.10 - 6.29	Pass
MAW-1142	2/1/2014	I-129	-0.01 ± 8.00	0.00	NA	Pass
MAW-1184	2/1/2014	Fe-55	0.40 ± 3.20	0.00	-0.01 - 2.00	Pass
MAW-1184	2/1/2014	H-3	345.10 ± 10.60	321.00	225.00 - 417.00	Pass
MAW-1184	2/1/2014	Ni-63	32.40 ± 3.20	34.00	23.80 - 44.20	Pass
MAW-1184 [e]	2/1/2014	Pu-238	1.28 ± 0.12	0.83	0.58 - 1.08	Fail
MAW-1184 [e]	2/1/2014	Pu-239/240	0.91 ± 0.10	0.68	0.47 - 0.88	Fail
MAW-1184	2/1/2014	Sr-90	7.00 ± 0.70	8.51	5.96 - 11.06	Pass
MAW-1184	2/1/2014	Tc-99	8.10 ± 0.60	10.30	7.20 - 13.40	Pass
MAW-1184	2/1/2014	U-233/234	0.20 ± 0.07	0.23	0.16 - 0.29	Pass
MAW-1184	2/1/2014	U-238	1.25 ± 0.18	1.45	1.02 - 1.89	Pass
MAW-1184	2/1/2014	Co-57	27.86 ± 0.38	27.50	19.30 - 35.80	Pass
MAW-1184	2/1/2014	Co-60	15.99 ± 0.27	16.00	11.20 - 20.80	Pass
MAW-1184	2/1/2014	Cs-134	21.85 ± 0.54	23.10	16.20 - 30.00	Pass
MAW-1184	2/1/2014	Cs-137	28.74 ± 0.49	28.90	20.20 - 37.60	Pass
MAW-1184	2/1/2014	K-40	1.80 ± 2.00	0.00	0.00 - 10.00	Pass
MAW-1184	2/1/2014	Mn-54	14.06 ± 0.40	13.90	9.70 - 18.10	Pass
MAW-1184	2/1/2014	Zn-65	0.00 ± 0.19	0.00	-0.01 - 0.00	Pass
MAVE-1148	2/1/2014	Co-57	11.63 ± 0.19	10.10	7.10 - 13.10	Pass
MAVE-1148	2/1/2014	Co-60	7.28 ± 0.18	6.93	4.85 - 9.01	Pass
MAVE-1148	2/1/2014	Cs-134	6.29 ± 0.29	6.04	4.23 - 7.85	Pass
MAVE-1148	2/1/2014	Cs-137	5.18 ± 0.20	4.74	3.32 - 6.16	Pass
MAVE-1148	2/1/2014	Mn-54	9.22 ± 0.26	8.62	6.03 - 11.21	Pass
MAVE-1148	2/1/2014	Zn-65	8.59 ± 0.40	7.86	5.50 - 10.22	Pass
MAAP-1151	2/1/2014	Am-241	0.09 ± 0.02	0.09	0.06 - 0.12	Pass
MAAP-1151 [d]	2/1/2014	Co-57	1.60 ± 0.05	0.00	NA	Fail
MAAP-1151	2/1/2014	Co-60	1.38 ± 0.08	1.39	0.97 - 1.81	Pass
MAAP-1151	2/1/2014	Cs-134	1.75 ± 0.11	1.91	1.34 - 2.48	Pass
MAAP-1151	2/1/2014	Cs-137	1.81 ± 0.10	1.76	1.23 - 2.29	Pass
MAAP-1151	2/1/2014	Mn-54	0.01 ± 0.03	0.00	NA	Pass
MAAP-1151 [e]	2/1/2014	Pu-238	0.08 ± 0.02	0.00	NA	Fail
MAAP-1151	2/1/2014	Pu-239/240	0.10 ± 0.02	0.08	0.05 - 0.10	Pass
MAAP-1151	2/1/2014	Zn-65	-0.24 ± 0.09	0.00	-0.50 - 1.00	Pass

TABLE A-6. Department of Energy's Mixed Analyte Performance Evaluation Program (MAPEP).

			Concentration [a]			
Lab Code [b]	Date	Analysis	Laboratory result	Known Activity	Control Limits [c]	Acceptance
MAAP-1151	2/1/2014	U-233/234	0.03 ± 0.01	0.02	0.01 - 0.03	Pass
MAAP-1151	2/1/2014	U-238	0.13 ± 0.02	0.13	0.09 - 0.17	Pass
MAAP-1151	2/1/2014	Sr-90	1.11 ± 0.14	1.18	0.83 - 1.53	Pass
MAAP-1154	2/1/2014	Gr. Alpha	0.56 ± 0.06	1.77	0.53 - 3.01	Pass
MAAP-1154	2/1/2014	Gr. Beta	0.98 ± 0.06	0.77	0.39 - 1.16	Pass
MASO-1146	2/1/2014	Co-57	1064.50 ± 3.60	966.00	676.00 - 1256.00	Pass
MASO-1146	2/1/2014	Co-60	1.70 ± 0.50	1.22	NA [d]	Pass
MASO-1146 [f]	2/1/2014	Cs-134	6.10 ± 1.80	0.00	NA	Fail
MASO-1146	2/1/2014	Cs-137	1364.30 ± 5.30	1238.00	867.00 - 1609.00	Pass
MASO-1146	2/1/2014	K-40	728.90 ± 15.90	622.00	435.00 - 809.00	Pass
MASO-1146	2/1/2014	Mn-54	1588.00 ± 6.00	1430.00	1001.00 - 1859.00	Pass
MASO-1146	2/1/2014	Zn-65	763.50 ± 6.80	695.00	487.00 - 904.00	Pass
MASO-1146	2/1/2014	Am-241	68.20 ± 9.00	68.00	47.60 - 88.40	Pass
MASO-1146	2/1/2014	Ni-63	4.80 ± 15.30	0.00	NA	Pass
MASO-1146 [e]	2/1/2014	Pu-238	140.60 ± 15.50	96.00	67.00 - 125.00	Fail
MASO-1146 [e]	2/1/2014	Pu-239/240	102.00 ± 13.10	76.80	53.80 - 99.80	Fail
MASO-1146	2/1/2014	Sr-90	1.23 ± 1.37	0.00	NA	Pass
MASO-1146	2/1/2014	Tc-99	-0.30 ± 12.00	0.00	NA	Pass
MASO-1146 [g]	2/1/2014	U-233/234	22.90 ± 3.00	81.00	57.00 - 105.00	Fail
MASO-1146 [g]	2/1/2014	U-238	32.00 ± 3.60	83.00	58.00 - 108.00	Fail
MASO-4439	8/1/2014	Am-241	65.90 ± 6.70	85.50	59.90 - 111.20	Pass
MASO-4439	8/1/2014	Ni-63	771.62 ± 23.29	980.00	686.00 - 1274.00	Pass
MASO-4439	8/1/2014	Pu-239/240	55.63 ± 5.81	58.60	41.00 - 76.20	Pass
MASO-4439	8/1/2014	Sr-90	778.34 ± 17.82	858.00	601.00 - 1115.00	Pass
MASO-4439	8/1/2014	Tc-99	458.20 ± 9.20	589.00	412.00 - 766.00	Pass
MASO-4439	8/1/2014	Cs-134	520.60 ± 7.09	622.00	435.00 - 809.00	Pass
MASO-4439	8/1/2014	Co-57	1135.00 ± 7.40	1116.00	781.00 - 1451.00	Pass
MASO-4439	8/1/2014	Co-60	768.20 ± 7.70	779.00	545.00 - 1013.00	Pass
MASO-4439	8/1/2014	Mn-54	1050.70 ± 12.60	1009.00	706.00 - 1312.00	Pass
MASO-4439	8/1/2014	Zn-65	407.89 ± 15.03	541.00	379.00 - 703.00	Pass
MAW-4431	8/1/2014	Am-241	0.79 ± 0.08	0.88	0.62 - 1.14	Pass
MAW-4431	8/1/2014	Cs-137	18.62 ± 0.54	18.40	12.90 - 23.90	Pass
MAW-4431	8/1/2014	Co-57	24.85 ± 0.42	24.70	17.30 - 32.10	Pass
MAW-4431	8/1/2014	Co-60	12.27 ± 0.38	12.40	8.70 - 16.10	Pass
MAW-4431	8/1/2014	H-3	207.20 ± 10.60	208.00	146.00 - 270.00	Pass
MAW-4431 [h]	8/1/2014	Fe-55	55.10 ± 14.80	31.50	22.10 - 41.00	Fail
MAW-4431	8/1/2014	Mn-54	14.36 ± 0.53	14.00	9.80 - 18.20	Pass
MAW-4431	8/1/2014	Zn-65	11.46 ± 0.78	10.90	7.60 - 14.20	Pass

TABLE A-6. Department of Energy's Mixed Analyte Performance Evaluation Program (MAPEP).

			Concentration [a]			
Lab Code [b]	Date	Analysis	Laboratory result	Known Activity	Control Limits [c]	Acceptance
MAW-4431	8/1/2014	Tc-99	6.10 ± 0.50	6.99	4.89 - 9.09	Pass
MAW-4431	8/1/2014	Pu-238	0.59 ± 0.07	0.62	0.43 - 0.80	Pass
MAW-4431	8/1/2014	U-233/234	0.22 ± 0.04	0.21	0.14 - 0.27	Pass
MAW-4431	8/1/2014	U-238	1.25 ± 0.10	1.42	0.99 - 1.85	Pass
MAW-4493	8/1/2014	Gr. Alpha	0.93 ± 0.07	1.40	0.42 - 2.38	Pass
MAW-4493	8/1/2014	Gr. Beta	6.31 ± 1.35	6.50	3.25 - 9.75	Pass
MAAP-4433	8/1/2014	Am-241	0.06 ± 0.02	0.07	0.05 - 0.09	Pass
MAAP-4433	8/1/2014	Pu-238	0.10 ± 0.03	0.11	0.08 - 0.14	Pass
MAAP-4433	8/1/2014	Pu-239/240	0.04 ± 0.02	0.05	0.03 - 0.06	Pass
MAAP-4433	8/1/2014	Sr-90	0.74 ± 0.10	0.70	0.49 - 0.91	Pass
MAAP-4433	8/1/2014	U-233/234	0.03 ± 0.01	0.04	0.03 - 0.05	Pass
MAAP-4433	8/1/2014	U-238	0.21 ± 0.03	0.25	0.18 - 0.33	Pass
MAAP-4444	8/1/2014	Sr-89	7.82 ± 0.52	9.40	6.60 - 12.20	Pass
MAAP-4444	8/1/2014	Sr-90	0.76 ± 0.10	0.76	0.53 - 0.99	Pass
MAVE-4436	8/1/2014	Cs-134	7.49 ± 0.18	7.38	5.17 - 9.59	Pass
MAVE-4436	8/1/2014	Co-57	11.20 ± 0.19	9.20	6.40 - 12.00	Pass
MAVE-4436	8/1/2014	Co-60	6.84 ± 0.17	6.11	4.28 - 7.94	Pass
MAVE-4436	8/1/2014	Mn-54	8.11 ± 0.26	7.11	4.97 - 9.23	Pass
MAVE-4436	8/1/2014	Zn-65	7.76 ± 0.43	6.42	4.49 - 8.35	Pass

[a] Results are reported in units of Bq/kg (soil), Bq/L (water) or Bq/total sample (filters, vegetation).

[b] Laboratory codes as follows: MAW (water), MAAP (air filter), MASO (soil), MAVE (vegetation).

[c] MAPEP results are presented as the known values and expected laboratory precision (1 sigma, 1 determination) and control limits as defined by the MAPEP. A known value of "zero" indicates an analysis was included in the testing series as a "false positive". MAPEP does not provide control limits.

[d] Interference from Eu-152 resulted in misidentification of Co-57.

[e] The high bias on the plutonium crosscheck samples was traced to contamination from a newly purchased standard.

The results of reanalysis with replacement tracer purchased from NIST:

MAW-1184	Pu-238	0.68 ± 0.10	Bq / L
MAW-1184	Pu-239/240	0.66 ± 0.10	Bq / L
MASO-1146	Pu-238	95.15 ± 8.98	Bq / kg
MASO-1146	Pu-239/240	67.21 ± 7.54	Bq / kg

Insufficient sample remained to reanalyze the Air filter sample(MAAP-1151). High bias results due to same contaminated tracer.

[f] Cs-134 was positively identified in both library peaks, calculation on the second peak; 2.78 ± 0.93 Bq/kg.

[g] 80% of participating laboratories were outside the acceptable range.

Parallel reanalysis was run on ERA spiked sample with acceptable results.

[h] Result of reanalysis Fe-55 32.63 ± 16.30 Bq / L

TABLE A-7. Interlaboratory Comparison Crosscheck program, Environmental Resource Associates (ERA)[a].

Lab Code [b]	Date	Analysis	Concentration (pCi/L) [b] Laboratory Result [c]	ERA Result [d]	Control Limits	Acceptance
ERAP-1044	3/17/2014	Am-241	54.2 ± 3.0	59.7	36.8 - 80.8	Pass
ERAP-1044	3/17/2014	Co-60	1177.9 ± 14.3	1120.0	867.0 - 1400.0	Pass
ERAP-1044	3/17/2014	Cs-134	1010.5 ± 15.8	1010.0	643.0 - 1250.0	Pass
ERAP-1044	3/17/2014	Cs-137	938.3 ± 45.7	828.0	622.0 - 1090.0	Pass
ERAP-1044	3/17/2014	Fe-55	142.3 ± 87.3	240.0	74.4 - 469.0	Pass
ERAP-1044	3/17/2014	Gr. Alpha	52.3 ± 0.5	46.0	15.4 - 71.4	Pass
ERAP-1044	3/17/2014	Gr. Beta	64.4 ± 2.6	53.8	34.0 - 78.4	Pass
ERAP-1044	3/17/2014	Mn-54	< 4.9	0.0	NA	Pass
ERAP-1044	3/17/2014	Pu-238	63.0 ± 2.6	56.3	38.6 - 74.0	Pass
ERAP-1044	3/17/2014	Pu-239/240	52.8 ± 1.9	48.6	35.2 - 63.5	Pass
ERAP-1044	3/17/2014	Sr-90	81.4 ± 1.6	78.9	38.6 - 118.0	Pass
ERAP-1044	3/17/2014	U-233/234	30.4 ± 1.7	36.4	22.6 - 54.9	Pass
ERAP-1044	3/17/2014	U-238	30.4 ± 1.4	36.1	23.3 - 49.9	Pass
ERAP-1044	3/17/2014	Uranium	62.0 ± 3.5	74.3	41.1 - 113.0	Pass
ERAP-1044	3/17/2014	Zn-65	852.2 ± 26.1	667.0	478.0 - 921.0	Pass
ERSO-1050	3/17/2014	Am-241	426.6 ± 155.5	399.0	233.0 - 518.0	Pass
ERSO-1050	3/17/2014	Ac-228	1260.0 ± 107.0	1240.0	795.0 - 1720.0	Pass
ERSO-1050	3/17/2014	Bi-212	1331.9 ± 309.7	1240.0	330.0 - 1820.0	Pass
ERSO-1050	3/17/2014	Bi-214	1804.5 ± 50.4	1960.0	1180.0 - 2820.0	Pass
ERSO-1050	3/17/2014	Co-60	6738.8 ± 167.6	6830.0	4620.0 - 9400.0	Pass
ERSO-1050	3/17/2014	Cs-134	3262.9 ± 108.8	3390.0	2220.0 - 4070.0	Pass
ERSO-1050	3/17/2014	Cs-137	8538.6 ± 55.0	8490.0	6510.0 - 10900.0	Pass
ERSO-1050	3/17/2014	K-40	11241.3 ± 296.6	10500.0	7660.0 - 14100.0	Pass
ERSO-1050	3/17/2014	Mn-54	< 21.6	0.0	NA	Pass
ERSO-1050	3/17/2014	Pb-212	1119.6 ± 26.1	1240.0	812.0 - 1730.0	Pass
ERSO-1050	3/17/2014	Pb-214	1861.7 ± 54.9	2070.0	1210.0 - 3090.0	Pass
ERSO-1050 [e]	3/17/2014	Pu-238	1085.5 ± 167.7	578.0	348.0 - 797.0	Fail
ERSO-1050 [e]	3/17/2014	Pu-239/240	681.6 ± 128.6	471.0	308.0 - 651.0	Fail
ERSO-1050	3/17/2014	Sr-90	2338.0 ± 144.0	2780.0	1060.0 - 4390.0	Pass
ERSO-1050	3/17/2014	Th-234	3474.9 ± 226.0	3360.0	1060.0 - 6320.0	Pass
ERSO-1050	3/17/2014	U-233/234	3319.5 ± 250.2	2780.0	1060.0 - 4390.0	Pass
ERSO-1050	3/17/2014	U-238	3375.6 ± 252.6	3360.0	2080.0 - 4260.0	Pass
ERSO-1050	3/17/2014	Uranium	6810.6 ± 551.1	6910.0	3750.0 - 9120.0	Pass
ERSO-1050	3/17/2014	Zn-65	5968.0 ± 226.1	5400.0	4300.0 - 7180.0	Pass

TABLE A-7. Interlaboratory Comparison Crosscheck program, Environmental Resource Associates (ERA)[a].

Lab Code [b]	Date	Analysis	Concentration (pCi/L) [b] Laboratory Result [c]	ERA Result [d]	Control Limits	Acceptance
ERVE-1051	3/17/2014	Am-241	1532.0 ± 149.5	1490.0	911.0 - 1980.0	Pass
ERVE-1051	3/17/2014	Cm-244	519.8 ± 94.6	516.0	253.0 - 804.0	Pass
ERVE-1051	3/17/2014	Co-60	981.2 ± 41.8	926.0	639.0 - 1290.0	Pass
ERVE-1051	3/17/2014	Cs-134	701.4 ± 58.6	646.0	415.0 - 839.0	Pass
ERVE-1051	3/17/2014	Cs-137	961.9 ± 46.3	880.0	638.0 - 1220.0	Pass
ERVE-1051	3/17/2014	K-40	32789.7 ± 758.2	31900.0	23000.0 - 44800.0	Pass
ERVE-1051	3/17/2014	Mn-54	< 25.9	0.0	NA	Pass
ERVE-1051	3/17/2014	Pu-238	2724.1 ± 259.4	2110.0	1260.0 - 2890.0	Pass
ERVE-1051	3/17/2014	Pu-239/240	4361.4 ± 323.4	3740.0	2300.0 - 5150.0	Pass
ERVE-1051	3/17/2014	Sr-90	2405.7 ± 263.2	2580.0	1470.0 - 3420.0	Pass
ERVE-1051	3/17/2014	U-233/234	1612.2 ± 162.0	1760.0	1160.0 - 2260.0	Pass
ERVE-1051	3/17/2014	U-238	1574.3 ± 159.6	1750.0	1170.0 - 2220.0	Pass
ERVE-1051	3/17/2014	Uranium	3255.4 ± 356.7	3580.0	2430.0 - 4460.0	Pass
ERVE-1051	3/17/2014	Zn-65	1124.1 ± 101.2	919.0	663.0 - 1290.0	Pass
ERW-1054	3/17/2014	Am-241	104.6 ± 3.4	114.0	76.8 - 153.0	Pass
ERW-1054	3/17/2014	Co-60	1195.2 ± 18.9	1270.0	1100.0 - 1490.0	Pass
ERW-1054	3/17/2014	Cs-134	1474.9 ± 47.5	1660.0	1220.0 - 1910.0	Pass
ERW-1054	3/17/2014	Cs-137	2591.0 ± 23.4	2690.0	2280.0 - 3220.0	Pass
ERW-1054	3/17/2014	Mn-54	< 4.3	0.0	NA	Pass
ERW-1054	3/17/2014	Pu-238	54.1 ± 3.6	44.1	32.6 - 54.9	Pass
ERW-1054	3/17/2014	Pu-239/240	185.9 ± 17.6	160.0	124.0 - 202.0	Pass
ERW-1054	3/17/2014	U-233/234	74.8 ± 6.3	82.4	61.9 - 106.0	Pass
ERW-1054	3/17/2014	U-238	76.4 ± 7.8	81.8	62.4 - 100.0	Pass
ERW-1054	3/17/2014	Uranium	154.3 ± 14.6	168.0	123.0 - 217.0	Pass
ERW-1054	3/17/2014	Zn-65	1818.5 ± 56.4	1800.0	1500.0 - 2270.0	Pass
ERW-1055 [f]	3/17/2014	Fe-55	636.3 ± 176.0	1200.0	716.0 - 1630.0	Fail
ERW-1055	3/17/2014	Gr. Alpha	120.9 ± 3.5	133.0	47.2 - 206.0	Pass
ERW-1055	3/17/2014	Gr. Beta	141.6 ± 2.3	174.0	99.6 - 258.0	Pass
ERW-1055	3/17/2014	Sr-90	873.9 ± 56.9	890.0	580.0 - 1180.0	Pass
ERW-1060	3/17/2014	H-3	5818.0 ± 230.0	5580.0	3740.0 - 7960.0	Pass

[a] Results obtained by Environmental, Inc., Midwest Laboratory as a participant in the crosscheck program for proficiency testing administered by Environmental Resources Associates, serving as a replacement for studies conducted previously by the Environmental Measurements Laboratory Quality Assessment Program (EML).

[b] Laboratory codes as follows: ERW (water), ERAP (air filter), ERSO (soil), ERVE (vegetation). Results are reported in units of pCi/L, except for air filters (pCi/Filter), vegetation and soil (pCi/kg).

[c] Unless otherwise indicated, the laboratory result is given as the mean ± standard deviation for three determinations.

[d] Results are presented as the known values, expected laboratory precision (1 sigma, 1 determination) and control limits as provided by ERA. A known value of "zero" indicates an analysis was included in the testing series as a "false positive". Control limits are not provided.

[e] The high bias on the plutonium crosscheck samples was traced to contamination from a newly purchased standard. The results of reanalysis with replacement tracer purchased from NIST:

ERSO-1050	Pu-238	634.7 ± 98.50	Bq / kg
ERSO-1050	Pu-239/240	451.8 ± 82.80	Bq / kg

[f] An error in the efficiency calculation was found. The result of recalculation was 932 pCi/L. The sample was repeated, result of reanalysis, 1066 pCi/L.

Appendix B

Summary Tables in the format of NRC Radiological Assessment Branch Technical Position
Revision 1, November 1979

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

Name of Facility: Wolf Creek Generating Station Docket No.: 50-482

Location of Facility: Coffey County, Kansas Reporting Period: Annual 2014

Medium of Pathway Sampled (Unit of Measurement)	Analysis and Total Number of Analysis Performed	ODCM Lower Limit of Detection (LLD)	All Indicator Locations ** Mean (f) ** Range	Indicator Location with Highest Annual Mean Name Distance and Direction	 ** Mean (f) ** Range	Control Locations ** Mean (f) ** Range	Number of Nonroutine Reported Measurements **
Air Particulate (pCi/m^3)	Gross Beta (318)	0.01	0.024 (265/265) (0.009 - 0.047)	49 0.8 miles NNE	0.025 (53/53) (0.009 - 0.047)	Station 53 0.025 (53/53) (0.012 - 0.046)	0
	Gamma (24) Be-7	-	0.070 (20/20) (0.042 - 0.096)	2 2.7 miles N	0.072 (4/4) (0.043 - 0.092)	0.073 (4/4) (0.059 - 0.088)	0
Air Radioiodine (pCi/m^3)	I-131 (318)	0.07	- (0/265)	N/A	N/A	Station 53 - (0/53)	0
Direct Radiation Dosimeters (mR per std. 90-day Qtr.)	Gamma Dose (172)	-	18.3 (164/164) (10.0 – 30.2)	47 0.16 miles S	23.9 (4/4) (17.8 – 30.2)	Stations 39 & 53 18.2 (8/8) (15.9 – 19.4)	0
Surface Water (pCi/l)	Gamma (24)		- (0/12)	N/A	N/A	JRR - (0/12)	0
	Tritium (24)	3,000	11,663 (12/12) (9,944–14,318)	SP 3.2 miles SSE	11,663 (12/12) (9,944–14,318)	- (0/12)	0
	Fe-55 (8)	-	- (0/4)	N/A	N/A	- (0/4)	0
Ground Water (pCi/l)	I-131 (31)	1	- (0/27)	N/A	N/A	B-12 - (0/4)	0
	Gamma (31)		- (0/27)	N/A	N/A	- (0/4)	0
	Tritium (31)	2,000	- (0/27)	N/A	N/A	- (0/4)	0

** Mean and range based upon detectable measurements only. Fraction of detectable measurements at specified locations is indicated in parentheses (f)

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

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Location of Facility: Coffey County, Kansas Reporting Period: Annual 2014

Medium of Pathway Sampled (Unit of Measurement)	Analysis and Total Number of Analysis Performed	ODCM Lower Limit of Detection (LLD)	All Indicator Locations ** Mean (f) ** Range	Indicator Location with Highest Annual Mean Name Distance and Direction	** Mean (f) ** Range	Control Locations ** Mean (f) ** Range	Number of Nonroutine Reported Measurements **
Drinking Water (pCi/l)	I-131 (24)	1	- (0/12)	N/A	N/A	BW-15 - (0/12)	0
	Gross Beta (24)	4	2.9 (12/12) (1.6 – 3.8)	IO-DW 26.1 miles SSE	2.9 (12/12) (1.6 – 3.8)	2.2 (12/12) (1.5 – 3.5)	0
	Gamma (24)		- (0/12)	N/A	N/A	- (0/12)	0
	Tritium (8)	2,000	- (0/4)	N/A	N/A	- (0/4)	0
Shoreline Sediment (pCi/kg dry)	Gamma (4)					JRR	
	K-40	-	7,142 (2/2) (5,732 – 8,552)	DC 0.9 miles WNW	7,142 (2/2) (5,732 – 8,552)	12,099 (2/2) (11,494 – 12,704)	0
Fish (pCi/kg wet)	Gamma (21)					JRR	
	K-40	-	3,116 (14/14) (2,654 – 3,431)	CCL 0.6 miles E to NNW	3,116 (14/14) (2,654 – 3,431)	3,298 (7/7) (3,029 – 3,677)	0
	Tritium (21)	-	8,594 (14/14) (6,166 – 10,500)	CCL 0.6 miles E to NNW	8,594 (14/14) (6,166 – 10,500)	- (0/7)	0
Food and Garden (pCi/kg wet)	Gamma (26)					D-2	
	Be-7	-	608 (18/19) (287 – 990)	Q-6 2.4 miles NW	879 (1/2)	733 (6/7) (632 – 897)	0
	K-40	-	5,901 (19/19) (3,834 – 8,401)	A-3 2.6 miles N	6,555 (1/1)	5,345 (7/7) (3,345 – 7,594)	0

** Mean and range based upon detectable measurements only. Fraction of detectable measurements at specified locations is indicated in parentheses (f)

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

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Location of Facility: Coffey County, Kansas Reporting Period: Annual 2014

Medium of Pathway Sampled (Unit of Measurement)	Analysis and Total Number of Analysis Performed	ODCM Lower Limit of Detection (LLD)	All Indicator Locations ** Mean (f) ** Range	Indicator Location with Highest Annual Mean Name Distance and Direction	** Mean (f) ** Range	Control Locations ** Mean (f) ** Range	Number of Nonroutine Reported Measurements **
						NR-U1	
Crops (pCi/kg wet)	Gamma (4)						
	K-40	-	7,666 (2/2) (2,788 – 12,544)	NR-D1 8.9 miles S	12,544 (1/1)	7,943 (2/2) (2,046 – 13,841)	0
Bottom Sediment (pCi/kg dry)	Gamma (17)					JRR	
	K-40	-	12,416 (15/15) (9,598 – 20,399)	DC 0.9 miles WNW	13,421 (2/2) (12,932-13,910)	17,273 (2/2) (16,906 – 17,639)	0
	Co-60	-	33 (1/15)	UHS 0.6 miles E	33 (1/10)	- (0/2)	0
	Cs-137	-	90 (9/15) (33 – 170)	DC 0.9 miles WNW	124 (2/2) (118 – 130)	126 (2/2) (120 – 132)	0
	Fe-55 (15)	-	- (0/14)	N/A	N/A	- (0/1)	0
	HTD (7)						
	U-233/234	-	412 (6/6) (300 – 490)	ESW 0.5 miles E	488 (1/1)	244 (1/1)	0
	U-235	-	13 (6/6) (9 – 17)	ESW 0.5 miles E	14 (1/1)	11 (1/1)	0
	U-238	-	358 (6/6) (281 – 443)	ESW 0.5 miles E	362 (1/1)	172 (1/1)	0

** Mean and range based upon detectable measurements only. Fraction of detectable measurements at specified locations is indicated in parentheses (f)

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

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Location of Facility: Coffey County, Kansas Reporting Period: Annual 2014

Medium of Pathway Sampled (Unit of Measurement)	Analysis and Total Number of Analysis Performed	ODCM Lower Limit of Detection (LLD)	All Indicator Locations ** Mean (f) ** Range	Indicator Location with Highest Annual Mean Name Distance and Direction	** Mean (f) ** Range	Control Locations ** Mean (f) ** Range	Number of Nonroutine Reported Measurements **
Aquatic Vegetation (pCi/kg wet)	Gamma (3)					No Control	
	Be-7	-	299 (2/3) (287 – 311)	DC-ALT 1.5 miles NW	311 (1/1)		0
	K-40	-	2,479 (3/3) (2,370 – 2,548)	MUDS 1.5 miles WNW	2,548 (1/1)		0
Terrestrial Vegetation (pCi/kg wet)	Gamma (3)					No Control	
	Be-7	-	1,394 (3/3) (1,022 – 1,612)	MUDS 1.5 miles WNW	1,579 (2/2) (1,546 – 1,612)		0
	K-40	-	5,264 (3/3) (4,016 – 7,351)	EEA 3.0 miles NNW	7,351 (1/1)		0
Soil (pCi/kg dry)	Gamma (1)					No Control	
	K-40	-	10,533 (1/1)	MUDS 1.5 miles WNW	10,533 (1/1)		0
	Cs-137	-	50 (1/1)	MUDS 1.5 miles WNW	50 (1/1)		0
Deer (pCi/kg wet)	Gamma (1)					No Control	
	K-40	-	2,554 (1/1)	A1.0 1.0 miles N	2,554 (1/1)		0
	Tritium (1)	-	1,251 (1/1)	A1.0 1.0 miles N	1,251 (1/1)		0

** Mean and range based upon detectable measurements only. Fraction of detectable measurements at specified locations is indicated in parentheses (f)

APPENDIX C

INDIVIDUAL SAMPLE RESULTS

Air Particulate and Charcoal Filters

Location: 002

Collection Start Date	Collection End Date	Volume m^3	Gross Beta Concentration (pCi/m^3)	I-131 Concentration (pCi/m^3)	Duplicate Analysis
30-DEC-13	07-JAN-14	353	0.031 +/- 0.004	< 0.008	
07-JAN-14	13-JAN-14	251	0.022 +/- 0.005	< 0.012	
13-JAN-14	20-JAN-14	307	0.013 +/- 0.004		Duplicate
13-JAN-14	20-JAN-14	307	0.014 +/- 0.004	< 0.011	
20-JAN-14	27-JAN-14	277	0.017 +/- 0.004	< 0.011	
27-JAN-14	03-FEB-14	291	0.017 +/- 0.004	< 0.022	
03-FEB-14	10-FEB-14	305	0.024 +/- 0.004	< 0.011	
10-FEB-14	17-FEB-14	283	0.032 +/- 0.005	< 0.007	
17-FEB-14	24-FEB-14	301	0.013 +/- 0.004	< 0.007	
24-FEB-14	04-MAR-14	347	0.032 +/- 0.004	< 0.013	
04-MAR-14	12-MAR-14	335	0.030 +/- 0.004	< 0.011	
12-MAR-14	19-MAR-14	294	0.017 +/- 0.004	< 0.010	
19-MAR-14	26-MAR-14	306	0.020 +/- 0.004	< 0.014	
26-MAR-14	02-APR-14	294	0.021 +/- 0.004	< 0.013	
02-APR-14	09-APR-14	297	0.021 +/- 0.004	< 0.015	
09-APR-14	16-APR-14	298	0.023 +/- 0.004	< 0.008	
16-APR-14	24-APR-14	334	0.031 +/- 0.004	< 0.018	
24-APR-14	30-APR-14	266	0.021 +/- 0.004	< 0.015	
30-APR-14	05-MAY-14	201	0.025 +/- 0.005	< 0.014	
05-MAY-14	13-MAY-14	351	0.028 +/- 0.004	< 0.011	
13-MAY-14	19-MAY-14	248	0.026 +/- 0.004	< 0.011	
19-MAY-14	27-MAY-14	342	0.023 +/- 0.004	< 0.009	
27-MAY-14	03-JUN-14	299	0.022 +/- 0.004	< 0.010	
03-JUN-14	09-JUN-14	256	0.021 +/- 0.004		Duplicate
03-JUN-14	09-JUN-14	256	0.022 +/- 0.004	< 0.009	
09-JUN-14	16-JUN-14	304	0.017 +/- 0.004	< 0.009	
09-JUN-14	16-JUN-14	304	0.012 +/- 0.004		Duplicate
16-JUN-14	23-JUN-14	294	0.022 +/- 0.004	< 0.007	
23-JUN-14	30-JUN-14	306	0.019 +/- 0.004	< 0.010	
30-JUN-14	07-JUL-14	294	0.019 +/- 0.004	< 0.010	
07-JUL-14	14-JUL-14	300	0.024 +/- 0.004		Duplicate
07-JUL-14	14-JUL-14	300	0.025 +/- 0.004	< 0.010	
14-JUL-14	22-JUL-14	341	0.022 +/- 0.004	< 0.019	
22-JUL-14	28-JUL-14	259	0.024 +/- 0.005	< 0.012	
28-JUL-14	04-AUG-14	290	0.029 +/- 0.004	< 0.010	
04-AUG-14	11-AUG-14	306	0.030 +/- 0.004	< 0.011	
11-AUG-14	18-AUG-14	292	0.026 +/- 0.004	< 0.014	
18-AUG-14	25-AUG-14	300	0.026 +/- 0.004	< 0.009	

Air Particulate and Charcoal Filters

Location: 002

Collection Start Date	Collection End Date	Volume m^3	Gross Beta Concentration (pCi/m^3)	I-131 Concentration (pCi/m^3)	Duplicate Analysis
25-AUG-14	02-SEP-14	343	0.024 +/- 0.004	< 0.009	
02-SEP-14	08-SEP-14	258	0.015 +/- 0.004	< 0.013	
08-SEP-14	15-SEP-14	303	0.014 +/- 0.004	< 0.010	
15-SEP-14	22-SEP-14	302	0.027 +/- 0.004	< 0.022	
22-SEP-14	29-SEP-14	301	0.030 +/- 0.004	< 0.009	
29-SEP-14	06-OCT-14	298	0.024 +/- 0.004	< 0.012	
06-OCT-14	14-OCT-14	346	0.016 +/- 0.003		Duplicate
06-OCT-14	14-OCT-14	346	0.017 +/- 0.003	< 0.011	
14-OCT-14	20-OCT-14	252	0.016 +/- 0.004	< 0.010	
20-OCT-14	27-OCT-14	298	0.042 +/- 0.005	< 0.007	
27-OCT-14	03-NOV-14	307	0.019 +/- 0.004	< 0.011	
03-NOV-14	10-NOV-14	300	0.020 +/- 0.004	< 0.011	
10-NOV-14	17-NOV-14	327	0.018 +/- 0.004	< 0.009	
17-NOV-14	24-NOV-14	287	0.025 +/- 0.004	< 0.013	
24-NOV-14	02-DEC-14	346	0.024 +/- 0.004	< 0.014	
02-DEC-14	08-DEC-14	255	0.032 +/- 0.005	< 0.012	
02-DEC-14	08-DEC-14	255	0.034 +/- 0.005		Duplicate
08-DEC-14	16-DEC-14	343	0.039 +/- 0.004	< 0.011	
16-DEC-14	22-DEC-14	260	0.024 +/- 0.005	< 0.008	
22-DEC-14	29-DEC-14	302	0.019 +/- 0.004	< 0.009	
29-DEC-14	05-JAN-15	323	0.030 +/- 0.004		
29-DEC-14	05-JAN-15	323		< 0.010	

Air Particulate and Charcoal Filters

Location: 018

Collection Start Date	Collection End Date	Volume m^3	Gross Beta Concentration (pCi/m^3)	I-131 Concentration (pCi/m^3)	Duplicate Analysis
30-DEC-13	07-JAN-14	351	0.036 +/- 0.004	< 0.008	
07-JAN-14	13-JAN-14	253	0.021 +/- 0.005	< 0.012	
13-JAN-14	20-JAN-14	311	0.018 +/- 0.004	< 0.011	
20-JAN-14	27-JAN-14	308	0.019 +/- 0.004	< 0.010	
27-JAN-14	03-FEB-14	301	0.019 +/- 0.004	< 0.021	
03-FEB-14	10-FEB-14	304	0.025 +/- 0.004	< 0.011	
10-FEB-14	17-FEB-14	293	0.028 +/- 0.004	< 0.007	
17-FEB-14	24-FEB-14	304	0.016 +/- 0.004	< 0.006	
17-FEB-14	24-FEB-14	304	0.018 +/- 0.004		Duplicate
24-FEB-14	04-MAR-14	351	0.033 +/- 0.004		Duplicate
24-FEB-14	04-MAR-14	351	0.032 +/- 0.004	< 0.010	
04-MAR-14	12-MAR-14	346	0.032 +/- 0.004	< 0.011	
12-MAR-14	19-MAR-14	296	0.018 +/- 0.004	< 0.010	
19-MAR-14	26-MAR-14	299	0.021 +/- 0.004	< 0.014	
26-MAR-14	02-APR-14	297	0.025 +/- 0.004	< 0.013	
02-APR-14	09-APR-14	303	0.015 +/- 0.004	< 0.014	
09-APR-14	16-APR-14	300	0.024 +/- 0.004	< 0.008	
16-APR-14	24-APR-14	338	0.034 +/- 0.004	< 0.018	
24-APR-14	30-APR-14	261	0.019 +/- 0.004	< 0.016	
30-APR-14	05-MAY-14	207	0.023 +/- 0.005	< 0.013	
05-MAY-14	13-MAY-14	342	0.025 +/- 0.004	< 0.011	
13-MAY-14	19-MAY-14	253	0.028 +/- 0.004	< 0.010	
19-MAY-14	27-MAY-14	348	0.023 +/- 0.003	< 0.009	
27-MAY-14	03-JUN-14	298	0.023 +/- 0.004	< 0.010	
03-JUN-14	09-JUN-14	256	0.021 +/- 0.004	< 0.009	
09-JUN-14	16-JUN-14	297	0.018 +/- 0.004	< 0.009	
16-JUN-14	23-JUN-14	297	0.025 +/- 0.004	< 0.007	
23-JUN-14	30-JUN-14	304	0.017 +/- 0.004	< 0.010	
30-JUN-14	07-JUL-14	298	0.017 +/- 0.004	< 0.010	
07-JUL-14	14-JUL-14	298	0.026 +/- 0.004	< 0.010	
14-JUL-14	22-JUL-14	340	0.019 +/- 0.004	< 0.019	
22-JUL-14	28-JUL-14	263	0.025 +/- 0.005	< 0.012	
28-JUL-14	04-AUG-14	294	0.030 +/- 0.004	< 0.010	
04-AUG-14	11-AUG-14	300	0.030 +/- 0.004	< 0.011	
11-AUG-14	18-AUG-14	294	0.024 +/- 0.004	< 0.014	
18-AUG-14	25-AUG-14	301	0.026 +/- 0.004	< 0.009	
25-AUG-14	02-SEP-14	340	0.024 +/- 0.004	< 0.010	
02-SEP-14	08-SEP-14	261	0.012 +/- 0.004	< 0.013	

Air Particulate and Charcoal Filters

Location: 018

Collection Start Date	Collection End Date	Volume m^3	Gross Beta Concentration (pCi/m^3)	I-131 Concentration (pCi/m^3)	Duplicate Analysis
08-SEP-14	15-SEP-14	301	0.009 +/- 0.004	< 0.011	
08-SEP-14	15-SEP-14	301	0.014 +/- 0.004		Duplicate
15-SEP-14	22-SEP-14	301	0.027 +/- 0.004	< 0.022	
22-SEP-14	29-SEP-14	297	0.034 +/- 0.004	< 0.009	
29-SEP-14	06-OCT-14	301	0.021 +/- 0.004	< 0.012	
06-OCT-14	14-OCT-14	342	0.017 +/- 0.003	< 0.011	
14-OCT-14	20-OCT-14	260	0.016 +/- 0.004	< 0.010	
20-OCT-14	27-OCT-14	299	0.041 +/- 0.005	< 0.007	
27-OCT-14	03-NOV-14	309	0.022 +/- 0.004	< 0.011	
03-NOV-14	10-NOV-14	300	0.019 +/- 0.004	< 0.011	
10-NOV-14	17-NOV-14	316	0.021 +/- 0.004	< 0.009	
17-NOV-14	24-NOV-14	297	0.025 +/- 0.004	< 0.013	
24-NOV-14	02-DEC-14	341	0.028 +/- 0.004	< 0.014	
02-DEC-14	08-DEC-14	254	0.033 +/- 0.005	< 0.012	
08-DEC-14	16-DEC-14	342	0.040 +/- 0.004	< 0.011	
16-DEC-14	22-DEC-14	261	0.021 +/- 0.004	< 0.008	
22-DEC-14	29-DEC-14	302	0.020 +/- 0.004	< 0.009	
29-DEC-14	05-JAN-15	333	0.032 +/- 0.004		
29-DEC-14	05-JAN-15	333		< 0.010	

Air Particulate and Charcoal Filters

Location: 032

Collection Start Date	Collection End Date	Volume m^3	Gross Beta Concentration (pCi/m^3)	I-131 Concentration (pCi/m^3)	Duplicate Analysis
30-DEC-13	07-JAN-14	341	0.032 +/- 0.004	< 0.008	
07-JAN-14	13-JAN-14	253	0.029 +/- 0.005	< 0.012	
13-JAN-14	20-JAN-14	307	0.015 +/- 0.004	< 0.011	
20-JAN-14	27-JAN-14	304	0.015 +/- 0.004	< 0.010	
27-JAN-14	03-FEB-14	299	0.018 +/- 0.004	< 0.022	
03-FEB-14	10-FEB-14	303	0.027 +/- 0.004	< 0.011	
10-FEB-14	17-FEB-14	295	0.033 +/- 0.004	< 0.007	
17-FEB-14	24-FEB-14	301	0.016 +/- 0.004	< 0.007	
24-FEB-14	04-MAR-14	346	0.033 +/- 0.004	< 0.013	
04-MAR-14	12-MAR-14	332	0.033 +/- 0.004	< 0.011	
12-MAR-14	19-MAR-14	294	0.019 +/- 0.004	< 0.010	
19-MAR-14	26-MAR-14	303	0.016 +/- 0.004	< 0.014	
26-MAR-14	02-APR-14	295	0.022 +/- 0.004	< 0.013	
02-APR-14	09-APR-14	298	0.018 +/- 0.004	< 0.015	
09-APR-14	16-APR-14	295	0.024 +/- 0.004	< 0.008	
16-APR-14	24-APR-14	349	0.030 +/- 0.004	< 0.017	
24-APR-14	30-APR-14	265	0.017 +/- 0.004	< 0.015	
30-APR-14	05-MAY-14	204	0.028 +/- 0.005	< 0.013	
05-MAY-14	13-MAY-14	352	0.022 +/- 0.003	< 0.011	
13-MAY-14	19-MAY-14	253	0.028 +/- 0.004	< 0.010	
19-MAY-14	27-MAY-14	347	0.028 +/- 0.004	< 0.009	
27-MAY-14	03-JUN-14	299	0.021 +/- 0.004	< 0.010	
03-JUN-14	09-JUN-14	256	0.022 +/- 0.004	< 0.009	
09-JUN-14	16-JUN-14	302	0.017 +/- 0.004	< 0.009	
16-JUN-14	23-JUN-14	297	0.021 +/- 0.004	< 0.007	
23-JUN-14	30-JUN-14	306	0.019 +/- 0.004	< 0.010	
30-JUN-14	07-JUL-14	302	0.021 +/- 0.004	< 0.010	
07-JUL-14	14-JUL-14	291	0.025 +/- 0.004	< 0.010	
14-JUL-14	22-JUL-14	345	0.022 +/- 0.004	< 0.019	
22-JUL-14	28-JUL-14	261	0.027 +/- 0.005	< 0.012	
28-JUL-14	04-AUG-14	292	0.032 +/- 0.005	< 0.010	
04-AUG-14	11-AUG-14	305	0.029 +/- 0.004	< 0.011	
11-AUG-14	18-AUG-14	296	0.026 +/- 0.004	< 0.014	
18-AUG-14	25-AUG-14	306	0.028 +/- 0.004	< 0.008	
25-AUG-14	02-SEP-14	341	0.028 +/- 0.004	< 0.010	
02-SEP-14	08-SEP-14	259	0.011 +/- 0.004	< 0.013	
08-SEP-14	15-SEP-14	308	0.013 +/- 0.004	< 0.010	
15-SEP-14	22-SEP-14	299	0.029 +/- 0.004	< 0.022	

Air Particulate and Charcoal Filters

Location: 032

Collection Start Date	Collection End Date	Volume m^3	Gross Beta Concentration (pCi/m^3)	I-131 Concentration (pCi/m^3)	Duplicate Analysis
22-SEP-14	29-SEP-14	296	0.036 +/- 0.004	< 0.009	
29-SEP-14	06-OCT-14	300	0.020 +/- 0.004	< 0.012	
06-OCT-14	14-OCT-14	343	0.018 +/- 0.003	< 0.011	
14-OCT-14	20-OCT-14	257	0.020 +/- 0.005	< 0.010	
20-OCT-14	27-OCT-14	301	0.041 +/- 0.005	< 0.007	
27-OCT-14	03-NOV-14	310	0.020 +/- 0.004	< 0.011	
03-NOV-14	10-NOV-14	296	0.021 +/- 0.004	< 0.011	
10-NOV-14	17-NOV-14	329	0.023 +/- 0.004	< 0.009	
17-NOV-14	24-NOV-14	289	0.020 +/- 0.004	< 0.013	
24-NOV-14	02-DEC-14	340	0.028 +/- 0.004		Duplicate
24-NOV-14	02-DEC-14	340	0.029 +/- 0.004	< 0.014	
02-DEC-14	08-DEC-14	258	0.031 +/- 0.005	< 0.012	
08-DEC-14	16-DEC-14	343	0.041 +/- 0.004	< 0.011	
16-DEC-14	22-DEC-14	262	0.023 +/- 0.004	< 0.008	
22-DEC-14	29-DEC-14	307	0.018 +/- 0.004	< 0.009	
29-DEC-14	05-JAN-15	306	0.032 +/- 0.004		
29-DEC-14	05-JAN-15	306		< 0.011	

Air Particulate and Charcoal Filters

Location: 037

Collection Start Date	Collection End Date	Volume m^3	Gross Beta Concentration (pCi/m^3)	I-131 Concentration (pCi/m^3)	Duplicate Analysis
30-DEC-13	07-JAN-14	353	0.031 +/- 0.004	< 0.008	
07-JAN-14	13-JAN-14	248	0.026 +/- 0.005	< 0.012	
13-JAN-14	20-JAN-14	306	0.017 +/- 0.004	< 0.011	
20-JAN-14	27-JAN-14	311	0.017 +/- 0.004	< 0.010	
27-JAN-14	03-FEB-14	294	0.022 +/- 0.004	< 0.022	
03-FEB-14	10-FEB-14	292	0.027 +/- 0.004	< 0.012	
10-FEB-14	17-FEB-14	289	0.035 +/- 0.005	< 0.007	
10-FEB-14	17-FEB-14	289	0.038 +/- 0.005		Duplicate
17-FEB-14	24-FEB-14	297	0.018 +/- 0.004	< 0.007	
24-FEB-14	04-MAR-14	348	0.030 +/- 0.004	< 0.009	
04-MAR-14	12-MAR-14	339	0.033 +/- 0.004	< 0.011	
12-MAR-14	19-MAR-14	294	0.019 +/- 0.004	< 0.010	
19-MAR-14	26-MAR-14	308	0.021 +/- 0.004	< 0.014	
19-MAR-14	26-MAR-14	308	0.020 +/- 0.004		Duplicate
26-MAR-14	02-APR-14	300	0.022 +/- 0.004	< 0.013	
02-APR-14	09-APR-14	302	0.018 +/- 0.004	< 0.014	
09-APR-14	16-APR-14	298	0.025 +/- 0.004	< 0.008	
16-APR-14	24-APR-14	345	0.032 +/- 0.004	< 0.017	
24-APR-14	30-APR-14	270	0.017 +/- 0.004	< 0.015	
30-APR-14	05-MAY-14	202	0.021 +/- 0.005	< 0.013	
05-MAY-14	13-MAY-14	352	0.024 +/- 0.003	< 0.011	
13-MAY-14	19-MAY-14	255	0.027 +/- 0.004	< 0.010	
19-MAY-14	27-MAY-14	348	0.019 +/- 0.004	< 0.009	
27-MAY-14	03-JUN-14	291	0.024 +/- 0.004	< 0.010	
03-JUN-14	09-JUN-14	258	0.021 +/- 0.004	< 0.009	
09-JUN-14	16-JUN-14	302	0.014 +/- 0.004	< 0.009	
16-JUN-14	23-JUN-14	297	0.024 +/- 0.004	< 0.007	
23-JUN-14	30-JUN-14	307	0.015 +/- 0.004	< 0.009	
30-JUN-14	07-JUL-14	298	0.020 +/- 0.004	< 0.010	
07-JUL-14	14-JUL-14	312	0.026 +/- 0.004	< 0.009	
14-JUL-14	22-JUL-14	268	0.021 +/- 0.005	< 0.024	
22-JUL-14	28-JUL-14	266	0.025 +/- 0.005	< 0.012	
28-JUL-14	04-AUG-14	298	0.033 +/- 0.005	< 0.010	
28-JUL-14	04-AUG-14	298	0.029 +/- 0.004		Duplicate
04-AUG-14	11-AUG-14	305	0.031 +/- 0.004	< 0.011	
11-AUG-14	18-AUG-14	300	0.027 +/- 0.004	< 0.014	
18-AUG-14	25-AUG-14	298	0.029 +/- 0.004	< 0.009	
25-AUG-14	02-SEP-14	344	0.022 +/- 0.004	< 0.009	

Air Particulate and Charcoal Filters

Location: 037

Collection Start Date	Collection End Date	Volume m^3	Gross Beta Concentration (pCi/m^3)	I-131 Concentration (pCi/m^3)	Duplicate Analysis
02-SEP-14	08-SEP-14	261	0.013 +/- 0.004	< 0.013	
08-SEP-14	15-SEP-14	302	0.012 +/- 0.004	< 0.010	
15-SEP-14	22-SEP-14	304	0.026 +/- 0.004	< 0.022	
22-SEP-14	29-SEP-14	300	0.034 +/- 0.004	< 0.009	
29-SEP-14	06-OCT-14	296	0.022 +/- 0.004	< 0.012	
06-OCT-14	14-OCT-14	343	0.016 +/- 0.003	< 0.011	
14-OCT-14	20-OCT-14	258	0.020 +/- 0.005	< 0.010	
20-OCT-14	27-OCT-14	304	0.042 +/- 0.005	< 0.007	
27-OCT-14	03-NOV-14	310	0.022 +/- 0.004	< 0.011	
03-NOV-14	10-NOV-14	307	0.023 +/- 0.004	< 0.011	
10-NOV-14	17-NOV-14	329	0.018 +/- 0.004	< 0.009	
17-NOV-14	24-NOV-14	295	0.024 +/- 0.004	< 0.013	
24-NOV-14	02-DEC-14	342	0.027 +/- 0.004	< 0.014	
02-DEC-14	08-DEC-14	261	0.034 +/- 0.005	< 0.012	
08-DEC-14	16-DEC-14	333	0.037 +/- 0.004	< 0.012	
16-DEC-14	22-DEC-14	264	0.023 +/- 0.004	< 0.008	
22-DEC-14	29-DEC-14	309	0.018 +/- 0.004	< 0.009	
29-DEC-14	05-JAN-15	312	0.029 +/- 0.004		
29-DEC-14	05-JAN-15	312		< 0.010	

Air Particulate and Charcoal Filters

Location: 049

Collection Start Date	Collection End Date	Volume m^3	Gross Beta Concentration (pCi/m^3)	I-131 Concentration (pCi/m^3)	Duplicate Analysis
30-DEC-13	07-JAN-14	353	0.031 +/- 0.004	< 0.008	
07-JAN-14	13-JAN-14	255	0.029 +/- 0.005	< 0.011	
13-JAN-14	20-JAN-14	308	0.014 +/- 0.004	< 0.011	
20-JAN-14	27-JAN-14	305	0.017 +/- 0.004	< 0.010	
27-JAN-14	03-FEB-14	304	0.023 +/- 0.004	< 0.021	
03-FEB-14	10-FEB-14	307	0.028 +/- 0.004	< 0.011	
10-FEB-14	17-FEB-14	157	0.035 +/- 0.007	< 0.013	
17-FEB-14	24-FEB-14	303	0.018 +/- 0.004	< 0.006	
24-FEB-14	04-MAR-14	348	0.036 +/- 0.004	< 0.009	
04-MAR-14	12-MAR-14	337	0.034 +/- 0.004	< 0.011	
12-MAR-14	19-MAR-14	292	0.019 +/- 0.004	< 0.010	
19-MAR-14	26-MAR-14	305	0.022 +/- 0.004	< 0.014	
26-MAR-14	02-APR-14	296	0.021 +/- 0.004	< 0.013	
02-APR-14	09-APR-14	301	0.021 +/- 0.004	< 0.014	
09-APR-14	16-APR-14	298	0.025 +/- 0.004	< 0.008	
16-APR-14	24-APR-14	365	0.033 +/- 0.004	< 0.016	
24-APR-14	30-APR-14	270	0.019 +/- 0.004	< 0.015	
30-APR-14	05-MAY-14	202	0.029 +/- 0.005	< 0.013	
05-MAY-14	13-MAY-14	347	0.024 +/- 0.003	< 0.011	
13-MAY-14	19-MAY-14	253	0.030 +/- 0.004	< 0.010	
19-MAY-14	27-MAY-14	347	0.023 +/- 0.003	< 0.009	
27-MAY-14	03-JUN-14	299	0.021 +/- 0.004	< 0.010	
03-JUN-14	09-JUN-14	256	0.022 +/- 0.004	< 0.009	
09-JUN-14	16-JUN-14	302	0.014 +/- 0.004	< 0.009	
16-JUN-14	23-JUN-14	180	0.024 +/- 0.006	< 0.011	
23-JUN-14	30-JUN-14	298	0.017 +/- 0.004	< 0.010	
30-JUN-14	07-JUL-14	299	0.019 +/- 0.004	< 0.010	
07-JUL-14	14-JUL-14	301	0.024 +/- 0.004	< 0.010	
14-JUL-14	22-JUL-14	344	0.023 +/- 0.004	< 0.019	
22-JUL-14	28-JUL-14	259	0.029 +/- 0.005	< 0.012	
28-JUL-14	04-AUG-14	297	0.034 +/- 0.005	< 0.010	
04-AUG-14	11-AUG-14	304	0.031 +/- 0.004	< 0.011	
11-AUG-14	18-AUG-14	261	0.024 +/- 0.005	< 0.016	
18-AUG-14	25-AUG-14	295	0.030 +/- 0.004	< 0.009	
25-AUG-14	02-SEP-14	314	0.026 +/- 0.004		Duplicate
25-AUG-14	02-SEP-14	314	0.025 +/- 0.004	< 0.010	
02-SEP-14	08-SEP-14	259	0.014 +/- 0.004	< 0.013	
08-SEP-14	15-SEP-14	301	0.009 +/- 0.004	< 0.011	

Air Particulate and Charcoal Filters

Location: 049

Collection Start Date	Collection End Date	Volume m^3	Gross Beta Concentration (pCi/m^3)	I-131 Concentration (pCi/m^3)	Duplicate Analysis
15-SEP-14	22-SEP-14	302	0.025 +/- 0.004	< 0.022	
22-SEP-14	29-SEP-14	299	0.033 +/- 0.004	< 0.009	
29-SEP-14	06-OCT-14	299	0.024 +/- 0.004	< 0.012	
06-OCT-14	14-OCT-14	343	0.018 +/- 0.003	< 0.011	
14-OCT-14	20-OCT-14	260	0.020 +/- 0.005	< 0.010	
20-OCT-14	27-OCT-14	299	0.047 +/- 0.005	< 0.007	
27-OCT-14	03-NOV-14	307	0.022 +/- 0.004	< 0.011	
03-NOV-14	10-NOV-14	305	0.021 +/- 0.004	< 0.011	
10-NOV-14	17-NOV-14	325	0.021 +/- 0.004	< 0.009	
17-NOV-14	24-NOV-14	296	0.023 +/- 0.004	< 0.013	
24-NOV-14	02-DEC-14	344	0.029 +/- 0.004	< 0.014	
02-DEC-14	08-DEC-14	260	0.035 +/- 0.005	< 0.012	
08-DEC-14	16-DEC-14	343	0.037 +/- 0.004	< 0.011	
16-DEC-14	22-DEC-14	262	0.024 +/- 0.004	< 0.008	
22-DEC-14	29-DEC-14	303	0.023 +/- 0.004	< 0.009	
29-DEC-14	05-JAN-15	316	0.033 +/- 0.004		
29-DEC-14	05-JAN-15	316		< 0.010	

Air Particulate and Charcoal Filters

Location: 053

Collection Start Date	Collection End Date	Volume m^3	Gross Beta Concentration (pCi/m^3)	I-131 Concentration (pCi/m^3)	Duplicate Analysis
30-DEC-13	07-JAN-14	347	0.033 +/- 0.004	< 0.008	
07-JAN-14	13-JAN-14	253	0.025 +/- 0.005	< 0.012	
13-JAN-14	20-JAN-14	306	0.013 +/- 0.004	< 0.011	
20-JAN-14	27-JAN-14	308	0.015 +/- 0.004	< 0.010	
27-JAN-14	03-FEB-14	298	0.021 +/- 0.004	< 0.022	
03-FEB-14	10-FEB-14	306	0.024 +/- 0.004	< 0.011	
10-FEB-14	17-FEB-14	288	0.036 +/- 0.005	< 0.007	
17-FEB-14	24-FEB-14	292	0.017 +/- 0.004	< 0.007	
24-FEB-14	04-MAR-14	350	0.033 +/- 0.004	< 0.011	
04-MAR-14	12-MAR-14	342	0.032 +/- 0.004	< 0.011	
12-MAR-14	19-MAR-14	295	0.016 +/- 0.004	< 0.010	
19-MAR-14	26-MAR-14	307	0.017 +/- 0.004	< 0.014	
26-MAR-14	02-APR-14	297	0.016 +/- 0.004	< 0.013	
02-APR-14	09-APR-14	302	0.018 +/- 0.004	< 0.014	
09-APR-14	16-APR-14	303	0.021 +/- 0.004	< 0.008	
16-APR-14	24-APR-14	343	0.031 +/- 0.004	< 0.017	
24-APR-14	30-APR-14	261	0.021 +/- 0.004	< 0.016	
30-APR-14	05-MAY-14	202	0.026 +/- 0.005	< 0.013	
05-MAY-14	13-MAY-14	345	0.024 +/- 0.003	< 0.011	
13-MAY-14	19-MAY-14	255	0.031 +/- 0.004		Duplicate
13-MAY-14	19-MAY-14	255	0.029 +/- 0.004	< 0.010	
19-MAY-14	27-MAY-14	346	0.028 +/- 0.004	< 0.009	
27-MAY-14	03-JUN-14	298	0.023 +/- 0.004	< 0.010	
03-JUN-14	09-JUN-14	255	0.022 +/- 0.004	< 0.009	
09-JUN-14	16-JUN-14	297	0.019 +/- 0.004	< 0.009	
16-JUN-14	23-JUN-14	292	0.024 +/- 0.004	< 0.007	
23-JUN-14	30-JUN-14	304	0.017 +/- 0.004	< 0.010	
30-JUN-14	07-JUL-14	297	0.018 +/- 0.004	< 0.010	
07-JUL-14	14-JUL-14	302	0.021 +/- 0.004	< 0.010	
14-JUL-14	22-JUL-14	339	0.022 +/- 0.004	< 0.019	
22-JUL-14	28-JUL-14	261	0.028 +/- 0.005	< 0.012	
28-JUL-14	04-AUG-14	293	0.033 +/- 0.005	< 0.010	
04-AUG-14	11-AUG-14	307	0.032 +/- 0.004	< 0.011	
11-AUG-14	18-AUG-14	296	0.028 +/- 0.004	< 0.014	
18-AUG-14	25-AUG-14	299	0.026 +/- 0.004	< 0.009	
25-AUG-14	02-SEP-14	343	0.024 +/- 0.004	< 0.009	
02-SEP-14	08-SEP-14	251	0.013 +/- 0.005	< 0.013	
08-SEP-14	15-SEP-14	303	0.012 +/- 0.004	< 0.010	

Air Particulate and Charcoal Filters

Location: 053

Collection Start Date	Collection End Date	Volume m^3	Gross Beta Concentration (pCi/m^3)	I-131 Concentration (pCi/m^3)	Duplicate Analysis
15-SEP-14	22-SEP-14	305	0.028 +/- 0.004	< 0.022	
22-SEP-14	29-SEP-14	293	0.034 +/- 0.004	< 0.009	
29-SEP-14	06-OCT-14	303	0.021 +/- 0.004	< 0.011	
06-OCT-14	14-OCT-14	341	0.020 +/- 0.004	< 0.011	
14-OCT-14	20-OCT-14	259	0.019 +/- 0.004	< 0.010	
20-OCT-14	27-OCT-14	297	0.046 +/- 0.005	< 0.007	
27-OCT-14	03-NOV-14	314	0.021 +/- 0.004	< 0.011	
03-NOV-14	10-NOV-14	301	0.021 +/- 0.004	< 0.011	
10-NOV-14	17-NOV-14	322	0.023 +/- 0.004	< 0.009	
17-NOV-14	24-NOV-14	293	0.026 +/- 0.004	< 0.013	
24-NOV-14	02-DEC-14	340	0.028 +/- 0.004	< 0.014	
02-DEC-14	08-DEC-14	256	0.034 +/- 0.005	< 0.012	
08-DEC-14	16-DEC-14	341	0.041 +/- 0.004	< 0.011	
16-DEC-14	22-DEC-14	258	0.026 +/- 0.005	< 0.008	
22-DEC-14	29-DEC-14	328	0.024 +/- 0.004	< 0.008	
29-DEC-14	05-JAN-15	310	0.030 +/- 0.004		
29-DEC-14	05-JAN-15	310		< 0.010	

Quarterly Air Particulate - Gamma

Location: 002

02-APR-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.066+/-	0.012
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.001
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

30-JUN-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.086+/-	0.015
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.001
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

29-SEP-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.092+/-	0.017
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.001
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

*** Duplicate Analysis**

Quarterly Air Particulate - Gamma

Location: 002

29-DEC-14

Nuclide	Concentration (pCi/m^3)		
BE-7	0.043+/-	0.011	
BE-7	0.043+/-	0.012	*
MN-54	<	0.001	*
MN-54	<	0.001	
CO-58	<	0.001	*
CO-58	<	0.001	
FE-59	<	0.002	*
FE-59	<	0.002	
CO-60	<	0.001	*
CO-60	<	0.001	
ZN-65	<	0.001	*
ZN-65	<	0.001	
ZR-NB-95	<	0.001	*
ZR-NB-95	<	0.001	
CS-134	<	0.001	*
CS-134	<	0.001	
CS-137	<	0.001	*
CS-137	<	0.001	

*** Duplicate Analysis**

Quarterly Air Particulate - Gamma

Location: 018

02-APR-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.058+/-	0.013
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.001
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

30-JUN-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.091+/-	0.015
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.001
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

29-SEP-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.074+/-	0.015
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.001
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

*** Duplicate Analysis**

Quarterly Air Particulate - Gamma

Location: 018

29-DEC-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.054+/-	0.014
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.002
CO-60	<	0.001
ZN-65	<	0.002
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

* Duplicate Analysis

Quarterly Air Particulate - Gamma

Location: 032

02-APR-14

Nuclide	Concentration (pCi/m³)		
BE-7	0.061+/-	0.013	
MN-54	<	0.001	
CO-58	<	0.001	
FE-59	<	0.002	
CO-60	<	0.001	
ZN-65	<	0.001	
ZR-NB-95	<	0.001	
CS-134	<	0.001	
CS-137	<	0.001	

30-JUN-14

Nuclide	Concentration (pCi/m³)		
BE-7	0.096+/-	0.016	*
BE-7	0.096+/-	0.020	
MN-54	<	0.001	*
MN-54	<	0.001	
CO-58	<	0.001	*
CO-58	<	0.001	
FE-59	<	0.001	*
FE-59	<	0.002	
CO-60	<	0.001	*
CO-60	<	0.001	
ZN-65	<	0.001	*
ZN-65	<	0.001	
ZR-NB-95	<	0.001	*
ZR-NB-95	<	0.001	
CS-134	<	0.001	*
CS-134	<	0.001	
CS-137	<	0.001	*
CS-137	<	0.001	

29-SEP-14

Nuclide	Concentration (pCi/m³)	
BE-7	0.080+/-	0.012
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.001
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

*** Duplicate Analysis**

Quarterly Air Particulate - Gamma

Location: 032

29-DEC-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.042+/-	0.013
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.001
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

*** Duplicate Analysis**

Quarterly Air Particulate - Gamma

Location: 037

02-APR-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.062+/-	0.014
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.001
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

30-JUN-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.090+/-	0.019
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.002
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

29-SEP-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.077+/-	0.012
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.001
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

*** Duplicate Analysis**

Quarterly Air Particulate - Gamma

Location: 037

29-DEC-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.055+/-	0.015
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.002
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

* Duplicate Analysis

Quarterly Air Particulate - Gamma

Location: 049

02-APR-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.071+/-	0.012
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.002
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

30-JUN-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.079+/-	0.017
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.002
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

29-SEP-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.071+/-	0.015
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.001
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

*** Duplicate Analysis**

Quarterly Air Particulate - Gamma

Location: **049**

29-DEC-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.056+/-	0.013
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.002
CO-60	<	0.001
ZN-65	<	0.002
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

*** Duplicate Analysis**

Quarterly Air Particulate - Gamma

Location: 053

02-APR-14

Nuclide	Concentration (pCi/m³)		
BE-7	0.069+/-	0.013	
BE-7	0.075+/-	0.012	*
MN-54	<	0.001	*
MN-54	<	0.001	
CO-58	<	0.001	*
CO-58	<	0.001	
FE-59	<	0.001	*
FE-59	<	0.001	
CO-60	<	0.001	*
CO-60	<	0.001	
ZN-65	<	0.001	*
ZN-65	<	0.001	
ZR-NB-95	<	0.001	*
ZR-NB-95	<	0.001	
CS-134	<	0.001	*
CS-134	<	0.001	
CS-137	<	0.001	*
CS-137	<	0.001	

30-JUN-14

Nuclide	Concentration (pCi/m³)	
BE-7	0.088+/-	0.017
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.002
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

29-SEP-14

Nuclide	Concentration (pCi/m³)	
BE-7	0.075+/-	0.015
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.002
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

*** Duplicate Analysis**

Quarterly Air Particulate - Gamma

Location: 053

29-DEC-14

Nuclide	Concentration (pCi/m^3)	
BE-7	0.059+/-	0.012
MN-54	<	0.001
CO-58	<	0.001
FE-59	<	0.001
CO-60	<	0.001
ZN-65	<	0.001
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

*** Duplicate Analysis**

Exposure Pathway - Waterborne
Surface Water
Location JRR

Collection Date	Nuclide	Concentration (pCi/Liter)		Duplicate Analysis
21-JAN-14	MN-54	<	2.4	
21-JAN-14	CO-58	<	3.1	
21-JAN-14	FE-59	<	3.9	
21-JAN-14	CO-60	<	2.0	
21-JAN-14	ZN-65	<	5.1	
21-JAN-14	ZR-NB-95	<	2.0	
21-JAN-14	I-131	<	4.6	
21-JAN-14	CS-134	<	4.0	
21-JAN-14	CS-137	<	2.7	
21-JAN-14	BA-LA-140	<	1.8	
21-JAN-14	H-3	<	151.0	
17-FEB-14	MN-54	<	2.5	
17-FEB-14	CO-58	<	1.8	
17-FEB-14	FE-59	<	4.6	
17-FEB-14	CO-60	<	2.2	
17-FEB-14	ZN-65	<	4.8	
17-FEB-14	ZR-NB-95	<	2.8	
17-FEB-14	I-131	<	3.5	
17-FEB-14	CS-134	<	2.9	
17-FEB-14	CS-137	<	2.7	
17-FEB-14	BA-LA-140	<	2.3	
17-FEB-14	H-3	<	147.0	
17-FEB-14	FE-55	<	139.0	
19-MAR-14	MN-54	<	2.4	
19-MAR-14	CO-58	<	2.6	
19-MAR-14	FE-59	<	4.3	
19-MAR-14	CO-60	<	1.1	
19-MAR-14	ZN-65	<	2.3	
19-MAR-14	ZR-NB-95	<	4.3	
19-MAR-14	I-131	<	5.0	
19-MAR-14	CS-134	<	3.5	
19-MAR-14	CS-137	<	3.0	
19-MAR-14	BA-LA-140	<	2.9	
19-MAR-14	H-3	<	145.0	
16-APR-14	MN-54	<	2.6	
16-APR-14	CO-58	<	2.6	
16-APR-14	FE-59	<	5.0	
16-APR-14	CO-60	<	1.3	
16-APR-14	ZN-65	<	3.3	

Exposure Pathway - Waterborne
Surface Water
Location JRR

Collection Date	Nuclide	Concentration (pCi/Liter)		Duplicate Analysis
16-APR-14	ZR-NB-95	<	2.6	
16-APR-14	I-131	<	4.9	
16-APR-14	CS-134	<	3.0	
16-APR-14	CS-137	<	3.3	
16-APR-14	BA-LA-140	<	3.2	
16-APR-14	H-3	<	144.0	
21-MAY-14	MN-54	<	2.5	
21-MAY-14	CO-58	<	1.9	
21-MAY-14	FE-59	<	4.6	
21-MAY-14	CO-60	<	2.1	
21-MAY-14	ZN-65	<	2.7	
21-MAY-14	ZR-NB-95	<	3.6	
21-MAY-14	I-131	<	5.5	
21-MAY-14	CS-134	<	3.7	
21-MAY-14	CS-137	<	3.8	
21-MAY-14	BA-LA-140	<	3.2	
21-MAY-14	H-3	<	147.0	
21-MAY-14	FE-55	<	118.0	
16-JUN-14	MN-54	<	1.9	
16-JUN-14	CO-58	<	1.4	
16-JUN-14	FE-59	<	3.0	
16-JUN-14	CO-60	<	1.8	
16-JUN-14	ZN-65	<	5.7	
16-JUN-14	ZR-NB-95	<	2.7	
16-JUN-14	I-131	<	4.7	
16-JUN-14	CS-134	<	2.8	
16-JUN-14	CS-137	<	2.0	
16-JUN-14	BA-LA-140	<	1.5	
16-JUN-14	H-3	<	141.0	
24-JUL-14	MN-54	<	1.4	
24-JUL-14	CO-58	<	1.4	
24-JUL-14	FE-59	<	2.6	
24-JUL-14	CO-60	<	1.6	
24-JUL-14	ZN-65	<	2.4	
24-JUL-14	ZR-NB-95	<	2.3	
24-JUL-14	I-131	<	4.6	
24-JUL-14	CS-134	<	2.6	
24-JUL-14	CS-137	<	2.4	
24-JUL-14	BA-LA-140	<	2.0	

Exposure Pathway - Waterborne
Surface Water
Location JRR

Collection Date	Nuclide	Concentration (pCi/Liter)		Duplicate Analysis
24-JUL-14	H-3	<	136.0	
25-AUG-14	MN-54	<	2.1	
25-AUG-14	CO-58	<	2.5	
25-AUG-14	FE-59	<	4.4	
25-AUG-14	CO-60	<	1.7	
25-AUG-14	ZN-65	<	5.1	
25-AUG-14	ZR-NB-95	<	2.5	
25-AUG-14	I-131	<	5.3	
25-AUG-14	CS-134	<	3.5	
25-AUG-14	CS-137	<	2.4	
25-AUG-14	BA-LA-140	<	1.6	
25-AUG-14	H-3	<	176.0	
25-AUG-14	FE-55	<	162.0	
15-SEP-14	MN-54	<	3.9	
15-SEP-14	CO-58	<	3.3	
15-SEP-14	FE-59	<	4.3	
15-SEP-14	CO-60	<	1.4	
15-SEP-14	ZN-65	<	7.8	
15-SEP-14	ZR-NB-95	<	3.4	
15-SEP-14	I-131	<	6.6	
15-SEP-14	CS-134	<	3.9	
15-SEP-14	CS-137	<	3.5	
15-SEP-14	BA-LA-140	<	2.6	
15-SEP-14	H-3	<	156.0	
27-OCT-14	MN-54	<	4.8	
27-OCT-14	CO-58	<	1.3	
27-OCT-14	FE-59	<	3.3	
27-OCT-14	CO-60	<	2.1	
27-OCT-14	ZN-65	<	5.8	
27-OCT-14	ZR-NB-95	<	4.2	
27-OCT-14	I-131	<	5.1	
27-OCT-14	CS-134	<	4.0	
27-OCT-14	CS-137	<	4.6	
27-OCT-14	BA-LA-140	<	2.1	
27-OCT-14	H-3	<	169.0	
17-NOV-14	MN-54	<	2.2	
17-NOV-14	CO-58	<	2.2	
17-NOV-14	FE-59	<	3.0	
17-NOV-14	CO-60	<	1.1	

Exposure Pathway - Waterborne
Surface Water
Location JRR

Collection Date	Nuclide	Concentration (pCi/Liter)		Duplicate Analysis
17-NOV-14	ZN-65	<	3.8	
17-NOV-14	ZR-NB-95	<	2.4	
17-NOV-14	I-131	<	3.4	
17-NOV-14	CS-134	<	2.5	
17-NOV-14	CS-137	<	2.7	
17-NOV-14	BA-LA-140	<	2.2	
17-NOV-14	H-3	<	179.0	
17-NOV-14	FE-55	<	181.0	
08-DEC-14	MN-54	<	3.3	
08-DEC-14	CO-58	<	2.3	
08-DEC-14	FE-59	<	5.4	
08-DEC-14	CO-60	<	3.0	
08-DEC-14	ZN-65	<	2.9	
08-DEC-14	ZR-NB-95	<	2.5	
08-DEC-14	I-131	<	3.8	
08-DEC-14	CS-134	<	4.1	
08-DEC-14	CS-137	<	3.6	
08-DEC-14	BA-LA-140	<	3.5	
08-DEC-14	H-3	<	166.0	

Exposure Pathway - Waterborne
Surface Water
Location SP

Collection Date	Nuclide	Concentration (pCi/Liter)			Duplicate Analysis
21-JAN-14	MN-54		<	2.2	
21-JAN-14	CO-58		<	2.2	
21-JAN-14	FE-59		<	5.0	
21-JAN-14	CO-60		<	2.8	
21-JAN-14	ZN-65		<	3.1	
21-JAN-14	ZR-NB-95		<	3.4	
21-JAN-14	I-131		<	3.6	
21-JAN-14	CS-134		<	3.1	
21-JAN-14	CS-137		<	3.0	
21-JAN-14	BA-LA-140		<	2.5	
21-JAN-14	H-3	10,278	+/-	297.0	
24-FEB-14	MN-54		<	2.8	
24-FEB-14	CO-58		<	1.4	
24-FEB-14	FE-59		<	2.4	
24-FEB-14	CO-60		<	1.4	
24-FEB-14	ZN-65		<	3.9	
24-FEB-14	ZR-NB-95		<	3.0	
24-FEB-14	I-131		<	2.5	
24-FEB-14	CS-134		<	3.3	
24-FEB-14	CS-137		<	1.8	
24-FEB-14	BA-LA-140		<	1.2	
24-FEB-14	H-3	9,944	+/-	288.0	
24-FEB-14	FE-55		<	145.0	
19-MAR-14	MN-54		<	2.8	
19-MAR-14	CO-58		<	1.7	
19-MAR-14	FE-59		<	6.0	
19-MAR-14	CO-60		<	3.1	
19-MAR-14	ZN-65		<	3.3	
19-MAR-14	ZR-NB-95		<	2.7	
19-MAR-14	I-131		<	5.6	
19-MAR-14	CS-134		<	3.7	
19-MAR-14	CS-137		<	2.6	
19-MAR-14	BA-LA-140		<	2.9	
19-MAR-14	H-3	12,629	+/-	327.0	
16-APR-14	MN-54		<	2.6	
16-APR-14	CO-58		<	3.6	
16-APR-14	FE-59		<	4.1	
16-APR-14	CO-60		<	2.1	
16-APR-14	ZN-65		<	4.1	

Exposure Pathway - Waterborne
Surface Water
Location SP

Collection Date	Nuclide	Concentration (pCi/Liter)			Duplicate Analysis
16-APR-14	ZR-NB-95		<	2.7	
16-APR-14	I-131		<	4.5	
16-APR-14	CS-134		<	3.2	
16-APR-14	CS-137		<	2.6	
16-APR-14	BA-LA-140		<	3.3	
16-APR-14	H-3	13,104	+/-	334.0	
21-MAY-14	MN-54		<	5.7	
21-MAY-14	MN-54		<	2.0	Duplicate
21-MAY-14	CO-58		<	3.9	
21-MAY-14	CO-58		<	1.8	Duplicate
21-MAY-14	FE-59		<	4.4	Duplicate
21-MAY-14	FE-59		<	7.6	
21-MAY-14	CO-60		<	1.6	Duplicate
21-MAY-14	CO-60		<	3.7	
21-MAY-14	ZN-65		<	1.3	Duplicate
21-MAY-14	ZN-65		<	4.4	
21-MAY-14	ZR-NB-95		<	4.2	
21-MAY-14	ZR-NB-95		<	2.8	Duplicate
21-MAY-14	I-131		<	8.3	
21-MAY-14	I-131		<	5.4	Duplicate
21-MAY-14	CS-134		<	5.0	
21-MAY-14	CS-134		<	2.7	Duplicate
21-MAY-14	CS-137		<	1.9	Duplicate
21-MAY-14	CS-137		<	3.3	
21-MAY-14	BA-LA-140		<	5.7	
21-MAY-14	BA-LA-140		<	2.1	Duplicate
21-MAY-14	H-3	14,350	+/-	348.0	Duplicate
21-MAY-14	H-3	14,318	+/-	347.0	
21-MAY-14	FE-55		<	184.0	Duplicate
21-MAY-14	FE-55		<	122.0	
16-JUN-14	MN-54		<	2.2	Duplicate
16-JUN-14	MN-54		<	2.5	
16-JUN-14	CO-58		<	3.8	
16-JUN-14	CO-58		<	2.1	Duplicate
16-JUN-14	FE-59		<	4.2	Duplicate
16-JUN-14	FE-59		<	4.7	
16-JUN-14	CO-60		<	2.0	Duplicate
16-JUN-14	CO-60		<	4.7	
16-JUN-14	ZN-65		<	7.1	

Exposure Pathway - Waterborne
Surface Water
Location SP

Collection Date	Nuclide	Concentration (pCi/Liter)			Duplicate Analysis
16-JUN-14	ZN-65		<	4.3	Duplicate
16-JUN-14	ZR-NB-95		<	3.8	
16-JUN-14	ZR-NB-95		<	4.1	Duplicate
16-JUN-14	I-131		<	7.2	Duplicate
16-JUN-14	I-131		<	6.4	
16-JUN-14	CS-134		<	4.1	Duplicate
16-JUN-14	CS-134		<	4.5	
16-JUN-14	CS-137		<	4.1	
16-JUN-14	CS-137		<	5.0	Duplicate
16-JUN-14	BA-LA-140		<	5.8	
16-JUN-14	BA-LA-140		<	1.4	Duplicate
16-JUN-14	H-3	13,303	+/-	336.0	Duplicate
16-JUN-14	H-3	13,130	+/-	334.0	
24-JUL-14	MN-54		<	2.6	
24-JUL-14	CO-58		<	2.0	
24-JUL-14	FE-59		<	4.9	
24-JUL-14	CO-60		<	1.2	
24-JUL-14	ZN-65		<	3.5	
24-JUL-14	ZR-NB-95		<	4.0	
24-JUL-14	I-131		<	6.4	
24-JUL-14	CS-134		<	3.7	
24-JUL-14	CS-137		<	2.4	
24-JUL-14	BA-LA-140		<	1.5	
24-JUL-14	H-3	11,534	+/-	309.0	
25-AUG-14	MN-54		<	2.0	
25-AUG-14	CO-58		<	2.6	
25-AUG-14	FE-59		<	4.9	
25-AUG-14	CO-60		<	2.6	
25-AUG-14	ZN-65		<	2.5	
25-AUG-14	ZR-NB-95		<	2.4	
25-AUG-14	I-131		<	4.2	
25-AUG-14	CS-134		<	3.3	
25-AUG-14	CS-137		<	3.1	
25-AUG-14	BA-LA-140		<	3.1	
25-AUG-14	H-3	11,950	+/-	305.0	
25-AUG-14	FE-55		<	165.0	
15-SEP-14	MN-54		<	1.4	
15-SEP-14	CO-58		<	3.1	
15-SEP-14	FE-59		<	4.1	

Exposure Pathway - Waterborne
Surface Water
Location SP

Collection Date	Nuclide	Concentration (pCi/Liter)			Duplicate Analysis
15-SEP-14	CO-60		<	2.5	
15-SEP-14	ZN-65		<	2.7	
15-SEP-14	ZR-NB-95		<	2.2	
15-SEP-14	I-131		<	4.8	
15-SEP-14	CS-134		<	2.8	
15-SEP-14	CS-137		<	3.3	
15-SEP-14	BA-LA-140		<	2.6	
15-SEP-14	H-3	11,606	+/-	337.0	
27-OCT-14	MN-54		<	2.7	
27-OCT-14	CO-58		<	2.4	
27-OCT-14	FE-59		<	6.4	
27-OCT-14	CO-60		<	3.4	
27-OCT-14	ZN-65		<	3.1	
27-OCT-14	ZR-NB-95		<	2.9	
27-OCT-14	I-131		<	5.7	
27-OCT-14	CS-134		<	4.4	
27-OCT-14	CS-137		<	3.5	
27-OCT-14	BA-LA-140		<	2.5	
27-OCT-14	H-3	10,419	+/-	363.0	
17-NOV-14	MN-54		<	3.6	
17-NOV-14	CO-58		<	3.7	
17-NOV-14	FE-59		<	4.7	
17-NOV-14	CO-60		<	3.4	
17-NOV-14	ZN-65		<	6.0	
17-NOV-14	ZR-NB-95		<	2.8	
17-NOV-14	I-131		<	6.4	
17-NOV-14	CS-134		<	3.9	
17-NOV-14	CS-137		<	4.0	
17-NOV-14	BA-LA-140		<	2.5	
17-NOV-14	H-3	10,222	+/-	361.0	
17-NOV-14	FE-55		<	183.0	
08-DEC-14	MN-54		<	1.8	
08-DEC-14	CO-58		<	2.2	
08-DEC-14	FE-59		<	5.1	
08-DEC-14	CO-60		<	1.6	
08-DEC-14	ZN-65		<	4.1	
08-DEC-14	ZR-NB-95		<	3.0	
08-DEC-14	I-131		<	3.0	
08-DEC-14	CS-134		<	2.5	

Exposure Pathway - Waterborne
Surface Water

Location SP

Collection Date	Nuclide	Concentration (pCi/Liter)			Duplicate Analysis
08-DEC-14	CS-137		<	3.2	
08-DEC-14	BA-LA-140		<	1.9	
08-DEC-14	H-3	10,817	+/-	372.0	

Exposure Pathway - Waterborne
Ground Water
Location B-12

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
17-FEB-14	MN-54	< 2.9	
17-FEB-14	CO-58	< 1.9	
17-FEB-14	FE-59	< 4.0	
17-FEB-14	CO-60	< 2.3	
17-FEB-14	ZN-65	< 3.5	
17-FEB-14	ZR-NB-95	< 2.2	
17-FEB-14	CS-134	< 2.6	
17-FEB-14	CS-137	< 2.4	
17-FEB-14	BA-LA-140	< 2.1	
17-FEB-14	H-3	< 147.0	
17-FEB-14	I-131 (CHEM)	< 0.308	
21-MAY-14	MN-54	< 2.7	
21-MAY-14	CO-58	< 2.0	
21-MAY-14	FE-59	< 3.4	
21-MAY-14	CO-60	< 2.5	
21-MAY-14	ZN-65	< 2.2	
21-MAY-14	ZR-NB-95	< 3.2	
21-MAY-14	CS-134	< 2.6	
21-MAY-14	CS-137	< 3.0	
21-MAY-14	BA-LA-140	< 2.7	
21-MAY-14	H-3	< 145.0	
21-MAY-14	I-131 (CHEM)	< 0.365	
25-AUG-14	MN-54	< 3.5	
25-AUG-14	CO-58	< 2.9	
25-AUG-14	FE-59	< 4.1	
25-AUG-14	CO-60	< 1.3	
25-AUG-14	ZN-65	< 6.4	
25-AUG-14	ZR-NB-95	< 2.6	
25-AUG-14	CS-134	< 4.3	
25-AUG-14	CS-137	< 4.2	
25-AUG-14	BA-LA-140	< 3.2	
25-AUG-14	H-3	< 176.0	
25-AUG-14	I-131 (CHEM)	< 0.2	
17-NOV-14	MN-54	< 1.8	
17-NOV-14	CO-58	< 2.5	
17-NOV-14	FE-59	< 2.9	
17-NOV-14	CO-60	< 2.0	
17-NOV-14	ZN-65	< 4.2	
17-NOV-14	ZR-NB-95	< 2.5	

Exposure Pathway - Waterborne
Ground Water
Location B-12

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
17-NOV-14	CS-134	< 2.9	
17-NOV-14	CS-137	< 3.0	
17-NOV-14	BA-LA-140	< 2.3	
17-NOV-14	H-3	< 179.0	
17-NOV-14	I-131 (CHEM)	< 0.321	

Exposure Pathway - Waterborne
Ground Water
Location C-10

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
17-FEB-14	MN-54	< 1.3	
17-FEB-14	CO-58	< 1.0	
17-FEB-14	FE-59	< 2.7	
17-FEB-14	CO-60	< 1.3	
17-FEB-14	ZN-65	< 2.7	
17-FEB-14	ZR-NB-95	< 2.0	
17-FEB-14	CS-134	< 2.4	
17-FEB-14	CS-137	< 2.9	
17-FEB-14	BA-LA-140	< 2.8	
17-FEB-14	H-3	< 147.0	
17-FEB-14	I-131 (CHEM)	< 0.295	
21-MAY-14	MN-54	< 2.9	
21-MAY-14	CO-58	< 2.6	
21-MAY-14	FE-59	< 6.0	
21-MAY-14	CO-60	< 1.9	
21-MAY-14	ZN-65	< 6.3	
21-MAY-14	ZR-NB-95	< 3.3	
21-MAY-14	CS-134	< 3.3	
21-MAY-14	CS-137	< 2.8	
21-MAY-14	BA-LA-140	< 2.4	
21-MAY-14	H-3	< 145.0	
21-MAY-14	I-131 (CHEM)	< 0.364	
25-AUG-14	MN-54	< 1.4	
25-AUG-14	CO-58	< 2.7	
25-AUG-14	FE-59	< 3.9	
25-AUG-14	CO-60	< 1.4	
25-AUG-14	ZN-65	< 3.1	
25-AUG-14	ZR-NB-95	< 2.3	
25-AUG-14	CS-134	< 3.7	
25-AUG-14	CS-137	< 3.4	
25-AUG-14	BA-LA-140	< 2.5	
25-AUG-14	H-3	< 176.0	
25-AUG-14	I-131 (CHEM)	< 0.214	
17-NOV-14	MN-54	< 4.3	
17-NOV-14	CO-58	< 3.6	
17-NOV-14	FE-59	< 6.9	
17-NOV-14	CO-60	< 2.7	
17-NOV-14	ZN-65	< 6.3	
17-NOV-14	ZR-NB-95	< 2.1	

Exposure Pathway - Waterborne
Ground Water
Location C-10

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
17-NOV-14	CS-134	< 5.2	
17-NOV-14	CS-137	< 3.6	
17-NOV-14	BA-LA-140	< 1.9	
17-NOV-14	H-3	< 179.0	
17-NOV-14	I-131 (CHEM)	< 0.324	

Exposure Pathway - Waterborne
Ground Water
Location C-49

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
17-FEB-14	MN-54	< 2.3	
17-FEB-14	CO-58	< 2.1	
17-FEB-14	FE-59	< 4.4	
17-FEB-14	CO-60	< 1.3	
17-FEB-14	ZN-65	< 4.1	
17-FEB-14	ZR-NB-95	< 1.9	
17-FEB-14	CS-134	< 2.2	
17-FEB-14	CS-137	< 2.7	
17-FEB-14	BA-LA-140	< 1.1	
17-FEB-14	H-3	< 147.0	
17-FEB-14	I-131 (CHEM)	< 0.406	
21-MAY-14	MN-54	< 2.8	
21-MAY-14	CO-58	< 2.7	
21-MAY-14	FE-59	< 6.4	
21-MAY-14	CO-60	< 2.2	
21-MAY-14	ZN-65	< 4.3	
21-MAY-14	ZR-NB-95	< 4.9	
21-MAY-14	CS-134	< 4.0	
21-MAY-14	CS-137	< 3.3	
21-MAY-14	BA-LA-140	< 2.3	
21-MAY-14	H-3	< 145.0	
21-MAY-14	I-131 (CHEM)	< 0.328	
25-AUG-14	MN-54	< 3.7	
25-AUG-14	CO-58	< 4.2	
25-AUG-14	FE-59	< 6.2	
25-AUG-14	CO-60	< 3.7	
25-AUG-14	ZN-65	< 4.4	
25-AUG-14	ZR-NB-95	< 4.9	
25-AUG-14	CS-134	< 5.6	
25-AUG-14	CS-137	< 6.0	
25-AUG-14	BA-LA-140	< 4.6	
25-AUG-14	H-3	< 176.0	
25-AUG-14	I-131 (CHEM)	< 0.315	
17-NOV-14	MN-54	< 2.4	
17-NOV-14	CO-58	< 0.8	
17-NOV-14	FE-59	< 4.3	
17-NOV-14	CO-60	< 2.1	
17-NOV-14	ZN-65	< 3.6	
17-NOV-14	ZR-NB-95	< 2.9	

Exposure Pathway - Waterborne
Ground Water
Location C-49

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
17-NOV-14	CS-134	< 2.6	
17-NOV-14	CS-137	< 3.1	
17-NOV-14	BA-LA-140	< 2.5	
17-NOV-14	H-3	< 179.0	
17-NOV-14	I-131 (CHEM)	< 0.34	

Exposure Pathway - Waterborne
Ground Water
Location F-1

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
24-FEB-14	MN-54	< 4.4	
24-FEB-14	CO-58	< 4.9	
24-FEB-14	FE-59	< 6.3	
24-FEB-14	CO-60	< 5.6	
24-FEB-14	ZN-65	< 15.3	
24-FEB-14	ZR-NB-95	< 8.1	
24-FEB-14	CS-134	< 5.6	
24-FEB-14	CS-137	< 5.3	
24-FEB-14	BA-LA-140	< 6.2	
24-FEB-14	H-3	< 138.0	
24-FEB-14	I-131 (CHEM)	< 0.262	
21-MAY-14	MN-54	< 1.7	
21-MAY-14	CO-58	< 2.5	
21-MAY-14	FE-59	< 4.5	
21-MAY-14	CO-60	< 2.7	
21-MAY-14	ZN-65	< 4.1	
21-MAY-14	ZR-NB-95	< 2.1	
21-MAY-14	CS-134	< 2.9	
21-MAY-14	CS-137	< 2.4	
21-MAY-14	BA-LA-140	< 3.0	
21-MAY-14	H-3	< 145.0	
21-MAY-14	I-131 (CHEM)	< 0.298	
25-AUG-14	MN-54	< 2.5	
25-AUG-14	CO-58	< 1.4	
25-AUG-14	FE-59	< 1.6	
25-AUG-14	CO-60	< 2.3	
25-AUG-14	ZN-65	< 2.8	
25-AUG-14	ZR-NB-95	< 2.8	
25-AUG-14	CS-134	< 2.5	
25-AUG-14	CS-137	< 1.6	
25-AUG-14	BA-LA-140	< 2.4	
25-AUG-14	H-3	< 176.0	
25-AUG-14	I-131 (CHEM)	< 0.24	
17-NOV-14	MN-54	< 2.7	
17-NOV-14	CO-58	< 1.9	
17-NOV-14	FE-59	< 3.6	
17-NOV-14	CO-60	< 2.7	
17-NOV-14	ZN-65	< 6.7	
17-NOV-14	ZR-NB-95	< 2.9	

Exposure Pathway - Waterborne
Ground Water
Location F-1

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
17-NOV-14	CS-134	< 3.0	
17-NOV-14	CS-137	< 2.6	
17-NOV-14	BA-LA-140	< 2.4	
17-NOV-14	H-3	< 179.0	
17-NOV-14	I-131 (CHEM)	< 0.329	

Exposure Pathway - Waterborne
Ground Water
Location G-2

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
26-JUN-14	MN-54	< 2.0	
26-JUN-14	CO-58	< 1.4	
26-JUN-14	FE-59	< 2.9	
26-JUN-14	CO-60	< 2.3	
26-JUN-14	ZN-65	< 5.3	
26-JUN-14	ZR-NB-95	< 3.0	
26-JUN-14	CS-134	< 2.9	
26-JUN-14	CS-137	< 3.3	
26-JUN-14	BA-LA-140	< 3.3	
26-JUN-14	H-3	< 142.0	
26-JUN-14	I-131 (CHEM)	< 0.402	
25-AUG-14	MN-54	< 2.0	
25-AUG-14	CO-58	< 3.0	
25-AUG-14	FE-59	< 7.0	
25-AUG-14	CO-60	< 2.4	
25-AUG-14	ZN-65	< 7.4	
25-AUG-14	ZR-NB-95	< 3.0	
25-AUG-14	CS-134	< 3.6	
25-AUG-14	CS-137	< 3.1	
25-AUG-14	BA-LA-140	< 2.9	
25-AUG-14	H-3	< 176.0	
25-AUG-14	I-131 (CHEM)	< 0.234	
17-NOV-14	MN-54	< 2.5	
17-NOV-14	CO-58	< 2.5	
17-NOV-14	FE-59	< 5.0	
17-NOV-14	CO-60	< 1.8	
17-NOV-14	ZN-65	< 4.2	
17-NOV-14	ZR-NB-95	< 2.6	
17-NOV-14	CS-134	< 3.1	
17-NOV-14	CS-137	< 2.8	
17-NOV-14	BA-LA-140	< 1.6	
17-NOV-14	H-3	< 179.0	
17-NOV-14	I-131 (CHEM)	< 0.432	

Exposure Pathway - Waterborne
Ground Water
Location J-1

Collection Date	Nuclide	Concentration (pCi/Liter)		Duplicate Analysis
17-FEB-14	MN-54	<	3.2	Duplicate
17-FEB-14	MN-54	<	3.5	
17-FEB-14	CO-58	<	3.2	
17-FEB-14	CO-58	<	2.1	Duplicate
17-FEB-14	FE-59	<	6.0	Duplicate
17-FEB-14	FE-59	<	5.0	
17-FEB-14	CO-60	<	1.9	
17-FEB-14	CO-60	<	1.8	Duplicate
17-FEB-14	ZN-65	<	7.1	Duplicate
17-FEB-14	ZN-65	<	6.3	
17-FEB-14	ZR-NB-95	<	4.4	
17-FEB-14	ZR-NB-95	<	2.0	Duplicate
17-FEB-14	CS-134	<	4.2	
17-FEB-14	CS-134	<	2.4	Duplicate
17-FEB-14	CS-137	<	2.6	
17-FEB-14	CS-137	<	3.2	Duplicate
17-FEB-14	BA-LA-140	<	2.6	Duplicate
17-FEB-14	BA-LA-140	<	3.4	
17-FEB-14	H-3	<	147.0	Duplicate
17-FEB-14	H-3	<	147.0	
17-FEB-14	I-131 (CHEM)	<	0.419	
17-FEB-14	I-131 (CHEM)	<	0.412	Duplicate
22-MAY-14	MN-54	<	5.6	
22-MAY-14	CO-58	<	3.0	
22-MAY-14	FE-59	<	5.0	
22-MAY-14	CO-60	<	3.4	
22-MAY-14	ZN-65	<	10.3	
22-MAY-14	ZR-NB-95	<	3.7	
22-MAY-14	CS-134	<	6.1	
22-MAY-14	CS-137	<	4.8	
22-MAY-14	BA-LA-140	<	6.0	
22-MAY-14	H-3	<	145.0	
22-MAY-14	I-131 (CHEM)	<	0.319	
25-AUG-14	MN-54	<	2.3	
25-AUG-14	CO-58	<	4.2	
25-AUG-14	FE-59	<	7.9	
25-AUG-14	CO-60	<	3.6	
25-AUG-14	ZN-65	<	11.4	
25-AUG-14	ZR-NB-95	<	5.8	

Exposure Pathway - Waterborne
Ground Water
Location J-1

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
25-AUG-14	CS-134	< 4.8	
25-AUG-14	CS-137	< 4.8	
25-AUG-14	BA-LA-140	< 3.9	
25-AUG-14	H-3	< 176.0	
25-AUG-14	I-131 (CHEM)	< 0.283	
17-NOV-14	MN-54	< 2.9	
17-NOV-14	CO-58	< 3.3	
17-NOV-14	FE-59	< 2.8	
17-NOV-14	CO-60	< 2.6	
17-NOV-14	ZN-65	< 9.0	
17-NOV-14	ZR-NB-95	< 3.6	
17-NOV-14	CS-134	< 4.5	
17-NOV-14	CS-137	< 4.5	
17-NOV-14	BA-LA-140	< 1.8	
17-NOV-14	H-3	< 179.0	
17-NOV-14	I-131 (CHEM)	< 0.303	

Exposure Pathway - Waterborne
Ground Water
Location J-2

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
17-FEB-14	MN-54	< 4.4	
17-FEB-14	CO-58	< 3.2	
17-FEB-14	FE-59	< 6.3	
17-FEB-14	CO-60	< 2.8	
17-FEB-14	ZN-65	< 9.2	
17-FEB-14	ZR-NB-95	< 5.1	
17-FEB-14	CS-134	< 4.4	
17-FEB-14	CS-137	< 4.0	
17-FEB-14	BA-LA-140	< 3.7	
17-FEB-14	H-3	< 147.0	
17-FEB-14	I-131 (CHEM)	< 0.291	
21-MAY-14	MN-54	< 2.8	
21-MAY-14	CO-58	< 1.4	
21-MAY-14	FE-59	< 3.7	
21-MAY-14	CO-60	< 1.8	
21-MAY-14	ZN-65	< 3.6	
21-MAY-14	ZR-NB-95	< 3.1	
21-MAY-14	CS-134	< 4.3	
21-MAY-14	CS-137	< 3.3	
21-MAY-14	BA-LA-140	< 2.2	
21-MAY-14	H-3	< 145.0	
21-MAY-14	I-131 (CHEM)	< 0.303	
25-AUG-14	MN-54	< 3.4	
25-AUG-14	CO-58	< 2.8	
25-AUG-14	FE-59	< 5.7	
25-AUG-14	CO-60	< 1.4	
25-AUG-14	ZN-65	< 3.6	
25-AUG-14	ZR-NB-95	< 2.7	
25-AUG-14	CS-134	< 3.5	
25-AUG-14	CS-137	< 3.0	
25-AUG-14	BA-LA-140	< 2.3	
25-AUG-14	H-3	< 176.0	
25-AUG-14	I-131 (CHEM)	< 0.264	
17-NOV-14	MN-54	< 3.1	
17-NOV-14	CO-58	< 2.8	
17-NOV-14	FE-59	< 3.3	
17-NOV-14	CO-60	< 1.8	
17-NOV-14	ZN-65	< 6.3	
17-NOV-14	ZR-NB-95	< 3.9	

Exposure Pathway - Waterborne
Ground Water
Location J-2

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
17-NOV-14	CS-134	< 3.3	
17-NOV-14	CS-137	< 2.9	
17-NOV-14	BA-LA-140	< 2.7	
17-NOV-14	H-3	< 179.0	
17-NOV-14	I-131 (CHEM)	< 0.296	

Exposure Pathway - Waterborne
Ground Water
Location L-49

Collection Date	Nuclide	Concentration (pCi/Liter)		Duplicate Analysis
17-FEB-14	MN-54	<	2.7	
17-FEB-14	CO-58	<	3.8	
17-FEB-14	FE-59	<	4.4	
17-FEB-14	CO-60	<	1.8	
17-FEB-14	ZN-65	<	2.8	
17-FEB-14	ZR-NB-95	<	2.7	
17-FEB-14	CS-134	<	3.4	
17-FEB-14	CS-137	<	2.6	
17-FEB-14	BA-LA-140	<	3.0	
17-FEB-14	H-3	<	147.0	
17-FEB-14	I-131 (CHEM)	<	0.358	
21-MAY-14	MN-54	<	2.7	
21-MAY-14	CO-58	<	2.5	
21-MAY-14	FE-59	<	3.8	
21-MAY-14	CO-60	<	2.3	
21-MAY-14	ZN-65	<	4.3	
21-MAY-14	ZR-NB-95	<	1.9	
21-MAY-14	CS-134	<	2.0	
21-MAY-14	CS-137	<	2.8	
21-MAY-14	BA-LA-140	<	2.2	
21-MAY-14	H-3	<	145.0	
21-MAY-14	I-131 (CHEM)	<	0.23	
25-AUG-14	MN-54	<	3.6	
25-AUG-14	CO-58	<	3.2	
25-AUG-14	FE-59	<	4.4	
25-AUG-14	CO-60	<	2.0	
25-AUG-14	ZN-65	<	2.5	
25-AUG-14	ZR-NB-95	<	3.7	
25-AUG-14	CS-134	<	4.9	
25-AUG-14	CS-137	<	3.8	
25-AUG-14	BA-LA-140	<	2.3	
25-AUG-14	H-3	<	176.0	
25-AUG-14	I-131 (CHEM)	<	0.317	
17-NOV-14	MN-54	<	3.4	
17-NOV-14	CO-58	<	2.7	
17-NOV-14	FE-59	<	5.0	
17-NOV-14	CO-60	<	3.3	
17-NOV-14	ZN-65	<	5.2	
17-NOV-14	ZR-NB-95	<	3.5	

Exposure Pathway - Waterborne
Ground Water
Location L-49

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
17-NOV-14	CS-134	< 3.9	
17-NOV-14	CS-137	< 3.2	
17-NOV-14	BA-LA-140	< 1.7	
17-NOV-14	H-3	< 179.0	
17-NOV-14	I-131 (CHEM)	< 0.414	

Exposure Pathway - Waterborne
Drinking Water

Location BW-15

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
03-FEB-14	MN-54	< 1.6	
03-FEB-14	CO-58	< 2.5	
03-FEB-14	FE-59	< 5.3	
03-FEB-14	CO-60	< 2.5	
03-FEB-14	ZN-65	< 5.2	
03-FEB-14	ZR-NB-95	< 3.3	
03-FEB-14	CS-134	< 2.7	
03-FEB-14	CS-137	< 2.2	
03-FEB-14	BA-LA-140	< 2.5	
03-FEB-14	GROSS BETA	2.008 +/- 0.612	
03-FEB-14	I-131 (CHEM)	< 0.304	
03-MAR-14	MN-54	< 3.0	
03-MAR-14	CO-58	< 2.4	
03-MAR-14	FE-59	< 4.0	
03-MAR-14	CO-60	< 2.7	
03-MAR-14	ZN-65	< 6.8	
03-MAR-14	ZR-NB-95	< 3.4	
03-MAR-14	CS-134	< 3.4	
03-MAR-14	CS-137	< 2.2	
03-MAR-14	BA-LA-140	< 2.3	
03-MAR-14	GROSS BETA	1.702 +/- 0.582	
03-MAR-14	I-131 (CHEM)	< 0.344	
02-APR-14	MN-54	< 3.1	
02-APR-14	CO-58	< 2.1	
02-APR-14	FE-59	< 4.2	
02-APR-14	CO-60	< 1.9	
02-APR-14	ZN-65	< 4.1	
02-APR-14	ZR-NB-95	< 2.2	
02-APR-14	CS-134	< 2.9	
02-APR-14	CS-137	< 3.6	
02-APR-14	BA-LA-140	< 3.3	
02-APR-14	GROSS BETA	3.462 +/- 0.763	
02-APR-14	I-131 (CHEM)	< 0.457	
05-MAY-14	MN-54	< 2.9	
05-MAY-14	CO-58	< 1.1	
05-MAY-14	FE-59	< 3.2	
05-MAY-14	CO-60	< 1.4	
05-MAY-14	ZN-65	< 1.5	

Exposure Pathway - Waterborne
Drinking Water

Location BW-15

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
05-MAY-14	ZR-NB-95	< 2.4	
05-MAY-14	CS-134	< 2.6	
05-MAY-14	CS-137	< 3.3	
05-MAY-14	BA-LA-140	< 2.3	
05-MAY-14	GROSS BETA	1.497 +/- 0.575	
05-MAY-14	I-131 (CHEM)	< 0.214	
02-JUN-14	MN-54	< 1.7	
02-JUN-14	CO-58	< 2.0	
02-JUN-14	FE-59	< 2.9	
02-JUN-14	CO-60	< 2.0	
02-JUN-14	ZN-65	< 3.4	
02-JUN-14	ZR-NB-95	< 1.5	
02-JUN-14	CS-134	< 2.2	
02-JUN-14	CS-137	< 1.6	
02-JUN-14	BA-LA-140	< 2.8	
02-JUN-14	GROSS BETA	2.768 +/- 0.667	
02-JUN-14	I-131 (CHEM)	< 0.176	
07-JUL-14	MN-54	< 1.7	
07-JUL-14	CO-58	< 2.3	
07-JUL-14	FE-59	< 4.1	
07-JUL-14	CO-60	< 2.0	
07-JUL-14	ZN-65	< 4.9	
07-JUL-14	ZR-NB-95	< 2.5	
07-JUL-14	CS-134	< 3.5	
07-JUL-14	CS-137	< 2.3	
07-JUL-14	BA-LA-140	< 2.5	
07-JUL-14	GROSS BETA	2.458 +/- 0.65	
07-JUL-14	I-131 (CHEM)	< 0.354	
04-AUG-14	MN-54	< 1.4	
04-AUG-14	CO-58	< 2.4	
04-AUG-14	FE-59	< 2.8	
04-AUG-14	CO-60	< 2.7	
04-AUG-14	ZN-65	< 3.0	
04-AUG-14	ZR-NB-95	< 2.9	
04-AUG-14	CS-134	< 3.1	
04-AUG-14	CS-137	< 3.1	
04-AUG-14	BA-LA-140	< 2.7	
04-AUG-14	GROSS BETA	1.879 +/- 0.599	

Exposure Pathway - Waterborne
Drinking Water

Location BW-15

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
04-AUG-14	I-131 (CHEM)	< 0.163	
02-SEP-14	MN-54	< 3.5	
02-SEP-14	CO-58	< 3.8	
02-SEP-14	FE-59	< 5.2	
02-SEP-14	CO-60	< 1.4	
02-SEP-14	ZN-65	< 4.2	
02-SEP-14	ZR-NB-95	< 4.1	
02-SEP-14	CS-134	< 4.3	
02-SEP-14	CS-137	< 3.8	
02-SEP-14	BA-LA-140	< 3.1	
02-SEP-14	GROSS BETA	2.131 +/- 0.611	
02-SEP-14	I-131 (CHEM)	< 0.292	
06-OCT-14	MN-54	< 2.0	
06-OCT-14	CO-58	< 1.5	
06-OCT-14	FE-59	< 5.2	
06-OCT-14	CO-60	< 1.8	
06-OCT-14	ZN-65	< 2.5	
06-OCT-14	ZR-NB-95	< 2.6	
06-OCT-14	CS-134	< 2.6	
06-OCT-14	CS-137	< 3.0	
06-OCT-14	BA-LA-140	< 2.5	
06-OCT-14	GROSS BETA	2.275 +/- 0.468	
06-OCT-14	I-131 (CHEM)	< 0.457	
03-NOV-14	MN-54	< 5.9	
03-NOV-14	CO-58	< 4.0	
03-NOV-14	FE-59	< 3.1	
03-NOV-14	CO-60	< 5.7	
03-NOV-14	ZN-65	< 5.4	
03-NOV-14	ZR-NB-95	< 5.5	
03-NOV-14	CS-134	< 6.3	
03-NOV-14	CS-137	< 3.9	
03-NOV-14	BA-LA-140	< 2.9	
03-NOV-14	GROSS BETA	2.335 +/- 0.468	
03-NOV-14	I-131 (CHEM)	< 0.308	
02-DEC-14	MN-54	< 2.6	
02-DEC-14	CO-58	< 2.1	
02-DEC-14	FE-59	< 6.5	
02-DEC-14	CO-60	< 2.6	

Exposure Pathway - Waterborne
Drinking Water

Location BW-15

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
02-DEC-14	ZN-65	< 4.2	
02-DEC-14	ZR-NB-95	< 3.0	
02-DEC-14	CS-134	< 3.9	
02-DEC-14	CS-137	< 3.6	
02-DEC-14	BA-LA-140	< 1.7	
02-DEC-14	GROSS BETA	1.869 +/- 0.613	
02-DEC-14	I-131 (CHEM)	< 0.466	
05-JAN-15	MN-54	< 2.9	
05-JAN-15	CO-58	< 2.2	
05-JAN-15	FE-59	< 3.8	
05-JAN-15	CO-60	< 1.3	
05-JAN-15	ZN-65	< 4.7	
05-JAN-15	ZR-NB-95	< 3.2	
05-JAN-15	CS-134	< 3.2	
05-JAN-15	CS-137	< 2.7	
05-JAN-15	BA-LA-140	< 1.9	
05-JAN-15	GROSS BETA	2.193 +/- 0.336	
05-JAN-15	I-131 (CHEM)	< 0.263	

Exposure Pathway - Waterborne
Drinking Water

Location IO-DW

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
03-FEB-14	MN-54	< 1.8	
03-FEB-14	CO-58	< 1.7	
03-FEB-14	FE-59	< 4.9	
03-FEB-14	CO-60	< 1.7	
03-FEB-14	ZN-65	< 2.3	
03-FEB-14	ZR-NB-95	< 2.5	
03-FEB-14	CS-134	< 2.5	
03-FEB-14	CS-137	< 2.7	
03-FEB-14	BA-LA-140	< 1.5	
03-FEB-14	GROSS BETA	3.262 +/- 0.707	
03-FEB-14	I-131 (CHEM)	< 0.298	
03-MAR-14	MN-54	< 2.2	
03-MAR-14	CO-58	< 1.1	
03-MAR-14	FE-59	< 3.6	
03-MAR-14	CO-60	< 3.2	
03-MAR-14	ZN-65	< 2.3	
03-MAR-14	ZR-NB-95	< 2.5	
03-MAR-14	CS-134	< 2.3	
03-MAR-14	CS-137	< 2.8	
03-MAR-14	BA-LA-140	< 2.7	
03-MAR-14	GROSS BETA	2.931 +/- 0.695	
03-MAR-14	I-131 (CHEM)	< 0.342	
02-APR-14	MN-54	< 2.6	
02-APR-14	CO-58	< 1.5	
02-APR-14	FE-59	< 3.0	
02-APR-14	CO-60	< 2.7	
02-APR-14	ZN-65	< 3.3	
02-APR-14	ZR-NB-95	< 3.2	
02-APR-14	CS-134	< 3.0	
02-APR-14	CS-137	< 3.5	
02-APR-14	BA-LA-140	< 2.9	
02-APR-14	GROSS BETA	3.296 +/- 0.864	
02-APR-14	I-131 (CHEM)	< 0.479	
05-MAY-14	MN-54	< 2.5	
05-MAY-14	CO-58	< 2.6	
05-MAY-14	FE-59	< 5.2	
05-MAY-14	CO-60	< 1.6	
05-MAY-14	ZN-65	< 2.9	

Exposure Pathway - Waterborne
Drinking Water

Location IO-DW

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
05-MAY-14	ZR-NB-95	< 1.7	
05-MAY-14	CS-134	< 3.5	
05-MAY-14	CS-137	< 3.1	
05-MAY-14	BA-LA-140	< 3.0	
05-MAY-14	GROSS BETA	1.642 +/- 0.586	
05-MAY-14	I-131 (CHEM)	< 0.204	
02-JUN-14	MN-54	< 1.3	
02-JUN-14	CO-58	< 1.9	
02-JUN-14	FE-59	< 3.4	
02-JUN-14	CO-60	< 2.3	
02-JUN-14	ZN-65	< 2.6	
02-JUN-14	ZR-NB-95	< 2.5	
02-JUN-14	CS-134	< 2.7	
02-JUN-14	CS-137	< 2.9	
02-JUN-14	BA-LA-140	< 2.2	
02-JUN-14	GROSS BETA	2.139 +/- 0.615	
02-JUN-14	I-131 (CHEM)	< 0.31	
07-JUL-14	MN-54	< 1.9	
07-JUL-14	CO-58	< 3.0	
07-JUL-14	FE-59	< 1.9	
07-JUL-14	CO-60	< 2.6	
07-JUL-14	ZN-65	< 4.0	
07-JUL-14	ZR-NB-95	< 3.3	
07-JUL-14	CS-134	< 2.6	
07-JUL-14	CS-137	< 2.8	
07-JUL-14	BA-LA-140	< 1.8	
07-JUL-14	GROSS BETA	3.408 +/- 0.757	
07-JUL-14	I-131 (CHEM)	< 0.491	
04-AUG-14	MN-54	< 4.0	
04-AUG-14	CO-58	< 2.8	
04-AUG-14	FE-59	< 5.9	
04-AUG-14	CO-60	< 3.6	
04-AUG-14	ZN-65	< 9.3	
04-AUG-14	ZR-NB-95	< 2.3	
04-AUG-14	CS-134	< 4.2	
04-AUG-14	CS-137	< 4.2	
04-AUG-14	BA-LA-140	< 3.8	
04-AUG-14	GROSS BETA	3.807 +/- 0.746	

Exposure Pathway - Waterborne
Drinking Water

Location IO-DW

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
04-AUG-14	I-131 (CHEM)	< 0.249	
02-SEP-14	MN-54	< 2.6	
02-SEP-14	CO-58	< 2.2	
02-SEP-14	FE-59	< 5.8	
02-SEP-14	CO-60	< 2.9	
02-SEP-14	ZN-65	< 7.6	
02-SEP-14	ZR-NB-95	< 2.6	
02-SEP-14	CS-134	< 4.1	
02-SEP-14	CS-137	< 2.7	
02-SEP-14	BA-LA-140	< 1.5	
02-SEP-14	GROSS BETA	2.106 +/- 0.626	
02-SEP-14	I-131 (CHEM)	< 0.28	
06-OCT-14	MN-54	< 1.9	
06-OCT-14	CO-58	< 1.9	
06-OCT-14	FE-59	< 5.8	
06-OCT-14	CO-60	< 2.6	
06-OCT-14	ZN-65	< 2.3	
06-OCT-14	ZR-NB-95	< 3.7	
06-OCT-14	CS-134	< 3.8	
06-OCT-14	CS-137	< 2.4	
06-OCT-14	BA-LA-140	< 2.3	
06-OCT-14	GROSS BETA	2.273 +/- 0.461	
06-OCT-14	I-131 (CHEM)	< 0.428	
03-NOV-14	MN-54	< 3.4	
03-NOV-14	CO-58	< 1.6	
03-NOV-14	FE-59	< 3.7	
03-NOV-14	CO-60	< 2.8	
03-NOV-14	ZN-65	< 7.6	
03-NOV-14	ZR-NB-95	< 2.8	
03-NOV-14	CS-134	< 4.4	
03-NOV-14	CS-137	< 5.6	
03-NOV-14	BA-LA-140	< 2.3	
03-NOV-14	GROSS BETA	3.329 +/- 0.553	
03-NOV-14	I-131 (CHEM)	< 0.346	
02-DEC-14	MN-54	< 2.3	
02-DEC-14	CO-58	< 2.7	
02-DEC-14	FE-59	< 3.9	
02-DEC-14	CO-60	< 2.5	

Exposure Pathway - Waterborne
Drinking Water

Location IO-DW

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
02-DEC-14	ZN-65	< 5.9	
02-DEC-14	ZR-NB-95	< 3.1	
02-DEC-14	CS-134	< 3.7	
02-DEC-14	CS-137	< 4.3	
02-DEC-14	BA-LA-140	< 2.0	
02-DEC-14	GROSS BETA	3.639 +/- 0.814	
02-DEC-14	I-131 (CHEM)	< 0.275	
05-JAN-15	MN-54	< 2.4	
05-JAN-15	CO-58	< 2.0	
05-JAN-15	FE-59	< 3.1	
05-JAN-15	CO-60	< 2.6	
05-JAN-15	ZN-65	< 4.1	
05-JAN-15	ZR-NB-95	< 1.9	
05-JAN-15	CS-134	< 2.8	
05-JAN-15	CS-137	< 3.3	
05-JAN-15	BA-LA-140	< 2.0	
05-JAN-15	GROSS BETA	2.596 +/- 0.352	
05-JAN-15	I-131 (CHEM)	< 0.211	

Exposure Pathway - Waterborne
Drinking Water
Quarterly Tritium Analysis
Location BW-15

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
02-APR-14	H-3	< 149	
07-JUL-14	H-3	< 136	
06-OCT-14	H-3	< 158	
05-JAN-15	H-3	< 177	

Exposure Pathway - Waterborne
Drinking Water
Quarterly Tritium Analysis
Location IO-DW

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
02-APR-14	H-3	< 149	
07-JUL-14	H-3	< 136	
06-OCT-14	H-3	< 158	
05-JAN-15	H-3	< 177	

Exposure Pathway - Waterborne
Shoreline Sediment

Location DC

Collection Date	Nuclide	Concentration (pCi/Kg Dry)	Duplicate Analysis
23-JUN-14	K-40	5,731.5 +/- 471.0	
23-JUN-14	MN-54	< 27.3	
23-JUN-14	CO-58	< 16.8	
23-JUN-14	FE-59	< 29.4	
23-JUN-14	CO-60	< 14.0	
23-JUN-14	ZN-65	< 29.3	
23-JUN-14	CS-134	< 18.7	
23-JUN-14	CS-137	< 22.5	
06-OCT-14	K-40	8,551.8 +/- 558.5	
06-OCT-14	MN-54	< 22.3	
06-OCT-14	CO-58	< 21.3	
06-OCT-14	FE-59	< 32.1	
06-OCT-14	CO-60	< 10.1	
06-OCT-14	ZN-65	< 44.4	
06-OCT-14	CS-134	< 14.1	
06-OCT-14	CS-137	< 20.0	

Exposure Pathway - Waterborne
Shoreline Sediment

Location JRR

Collection Date	Nuclide	Concentration (pCi/Kg Dry)			Duplicate Analysis
24-JUN-14	K-40	11,494.0	+/-	789.4	
24-JUN-14	K-40	11,807.0	+/-	699.1	Duplicate
24-JUN-14	MN-54	<		27.1	
24-JUN-14	MN-54	<		32.8	Duplicate
24-JUN-14	CO-58	<		21.7	
24-JUN-14	CO-58	<		31.6	Duplicate
24-JUN-14	FE-59	<		40.7	Duplicate
24-JUN-14	FE-59	<		75.7	
24-JUN-14	CO-60	<		26.9	Duplicate
24-JUN-14	CO-60	<		9.4	
24-JUN-14	ZN-65	<		64.2	
24-JUN-14	ZN-65	<		59.6	Duplicate
24-JUN-14	CS-134	<		26.5	Duplicate
24-JUN-14	CS-134	<		23.2	
24-JUN-14	CS-137	<		24.1	
24-JUN-14	CS-137	<		28.4	Duplicate
06-OCT-14	K-40	12,704.0	+/-	648.7	
06-OCT-14	MN-54	<		21.2	
06-OCT-14	CO-58	<		25.0	
06-OCT-14	FE-59	<		33.9	
06-OCT-14	CO-60	<		11.0	
06-OCT-14	ZN-65	<		49.5	
06-OCT-14	CS-134	<		16.8	
06-OCT-14	CS-137	<		18.7	

Exposure Pathway - Ingestion
Fish

Location CCL

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)		Duplicate Analysis
22-MAY-14	CHANNEL CATFISH	K-40	3,240.1 +/-	342.8	
22-MAY-14	CHANNEL CATFISH	MN-54	<	9.5	
22-MAY-14	CHANNEL CATFISH	CO-58	<	8.8	
22-MAY-14	CHANNEL CATFISH	FE-59	<	30.7	
22-MAY-14	CHANNEL CATFISH	CO-60	<	11.6	
22-MAY-14	CHANNEL CATFISH	ZN-65	<	37.2	
22-MAY-14	CHANNEL CATFISH	I-131	<	27.4	
22-MAY-14	CHANNEL CATFISH	CS-134	<	13.6	
22-MAY-14	CHANNEL CATFISH	CS-137	<	10.8	
22-MAY-14	CHANNEL CATFISH	H-3	10,336.0 +/-	265.0	
22-MAY-14	COMMON CARP	K-40	2,780.0 +/-	340.6	
22-MAY-14	COMMON CARP	MN-54	<	11.8	
22-MAY-14	COMMON CARP	CO-58	<	8.7	
22-MAY-14	COMMON CARP	FE-59	<	24.9	
22-MAY-14	COMMON CARP	CO-60	<	10.4	
22-MAY-14	COMMON CARP	ZN-65	<	27.6	
22-MAY-14	COMMON CARP	I-131	<	38.7	
22-MAY-14	COMMON CARP	CS-134	<	13.7	
22-MAY-14	COMMON CARP	CS-137	<	8.7	
22-MAY-14	COMMON CARP	H-3	9,512.0 +/-	250.0	
22-MAY-14	FRESHWATER DRUM	K-40	3,367.4 +/-	367.9	
22-MAY-14	FRESHWATER DRUM	MN-54	<	10.4	
22-MAY-14	FRESHWATER DRUM	CO-58	<	16.2	
22-MAY-14	FRESHWATER DRUM	FE-59	<	32.1	
22-MAY-14	FRESHWATER DRUM	CO-60	<	11.9	
22-MAY-14	FRESHWATER DRUM	ZN-65	<	19.5	
22-MAY-14	FRESHWATER DRUM	I-131	<	21.9	
22-MAY-14	FRESHWATER DRUM	CS-134	<	14.2	
22-MAY-14	FRESHWATER DRUM	CS-137	<	14.3	
22-MAY-14	FRESHWATER DRUM	H-3	10,500.0 +/-	326.0	
22-MAY-14	RIVER CARPSUCKER	K-40	3,223.6 +/-	364.0	
22-MAY-14	RIVER CARPSUCKER	MN-54	<	13.3	
22-MAY-14	RIVER CARPSUCKER	CO-58	<	9.1	
22-MAY-14	RIVER CARPSUCKER	FE-59	<	16.1	
22-MAY-14	RIVER CARPSUCKER	CO-60	<	11.2	
22-MAY-14	RIVER CARPSUCKER	ZN-65	<	21.1	
22-MAY-14	RIVER CARPSUCKER	I-131	<	34.8	
22-MAY-14	RIVER CARPSUCKER	CS-134	<	12.0	
22-MAY-14	RIVER CARPSUCKER	CS-137	<	13.1	

Exposure Pathway - Ingestion
Fish

Location CCL

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)	Duplicate Analysis
22-MAY-14	RIVER CARPSUCKER	H-3	9,191.0 +/- 231.0	
22-MAY-14	SMALLMOUTH BASS	K-40	3,400.6 +/- 373.2	
22-MAY-14	SMALLMOUTH BASS	MN-54	< 12.2	
22-MAY-14	SMALLMOUTH BASS	CO-58	< 10.1	
22-MAY-14	SMALLMOUTH BASS	FE-59	< 17.8	
22-MAY-14	SMALLMOUTH BASS	CO-60	< 8.6	
22-MAY-14	SMALLMOUTH BASS	ZN-65	< 12.9	
22-MAY-14	SMALLMOUTH BASS	I-131	< 36.2	
22-MAY-14	SMALLMOUTH BASS	CS-134	< 12.9	
22-MAY-14	SMALLMOUTH BASS	CS-137	< 11.8	
22-MAY-14	SMALLMOUTH BASS	H-3	9,653.0 +/- 256.0	
22-MAY-14	SMALLMOUTH BUFFALO	K-40	3,229.8 +/- 378.8	
22-MAY-14	SMALLMOUTH BUFFALO	MN-54	< 11.8	
22-MAY-14	SMALLMOUTH BUFFALO	CO-58	< 8.8	
22-MAY-14	SMALLMOUTH BUFFALO	FE-59	< 22.0	
22-MAY-14	SMALLMOUTH BUFFALO	CO-60	< 14.0	
22-MAY-14	SMALLMOUTH BUFFALO	ZN-65	< 15.3	
22-MAY-14	SMALLMOUTH BUFFALO	I-131	< 38.2	
22-MAY-14	SMALLMOUTH BUFFALO	CS-134	< 10.7	
22-MAY-14	SMALLMOUTH BUFFALO	CS-137	< 13.4	
22-MAY-14	SMALLMOUTH BUFFALO	H-3	10,073.0 +/- 258.0	
22-MAY-14	WHITE BASS	K-40	2,934.4 +/- 342.6	
22-MAY-14	WHITE BASS	MN-54	< 12.1	
22-MAY-14	WHITE BASS	CO-58	< 14.3	
22-MAY-14	WHITE BASS	FE-59	< 16.8	
22-MAY-14	WHITE BASS	CO-60	< 12.2	
22-MAY-14	WHITE BASS	ZN-65	< 10.5	
22-MAY-14	WHITE BASS	I-131	< 22.4	
22-MAY-14	WHITE BASS	CS-134	< 13.8	
22-MAY-14	WHITE BASS	CS-137	< 14.8	
22-MAY-14	WHITE BASS	H-3	10,468.0 +/- 274.0	
21-OCT-14	BLUE CATFISH	K-40	3,022.3 +/- 344.0	
21-OCT-14	BLUE CATFISH	MN-54	< 10.0	
21-OCT-14	BLUE CATFISH	CO-58	< 10.2	
21-OCT-14	BLUE CATFISH	FE-59	< 27.4	
21-OCT-14	BLUE CATFISH	CO-60	< 11.1	
21-OCT-14	BLUE CATFISH	ZN-65	< 26.1	
21-OCT-14	BLUE CATFISH	I-131	< 56.6	
21-OCT-14	BLUE CATFISH	CS-134	< 11.8	

Exposure Pathway - Ingestion
Fish

Location CCL

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)	Duplicate Analysis
21-OCT-14	BLUE CATFISH	CS-137	< 12.6	
21-OCT-14	BLUE CATFISH	H-3	8,049.0 +/- 300.0	
21-OCT-14	CHANNEL CATFISH	K-40	3,198.4 +/- 378.6	
21-OCT-14	CHANNEL CATFISH	MN-54	< 7.1	
21-OCT-14	CHANNEL CATFISH	CO-58	< 9.2	
21-OCT-14	CHANNEL CATFISH	FE-59	< 12.8	
21-OCT-14	CHANNEL CATFISH	CO-60	< 7.0	
21-OCT-14	CHANNEL CATFISH	ZN-65	< 26.2	
21-OCT-14	CHANNEL CATFISH	I-131	< 31.8	
21-OCT-14	CHANNEL CATFISH	CS-134	< 13.7	
21-OCT-14	CHANNEL CATFISH	CS-137	< 12.4	
21-OCT-14	CHANNEL CATFISH	H-3	7,237.0 +/- 282.0	
21-OCT-14	COMMON CARP	K-40	2,653.8 +/- 296.4	
21-OCT-14	COMMON CARP	MN-54	< 11.2	
21-OCT-14	COMMON CARP	CO-58	< 9.4	
21-OCT-14	COMMON CARP	FE-59	< 17.8	
21-OCT-14	COMMON CARP	CO-60	< 9.9	
21-OCT-14	COMMON CARP	ZN-65	< 16.0	
21-OCT-14	COMMON CARP	I-131	< 43.6	
21-OCT-14	COMMON CARP	CS-134	< 10.3	
21-OCT-14	COMMON CARP	CS-137	< 7.5	
21-OCT-14	COMMON CARP	H-3	6,703.0 +/- 281.0	
21-OCT-14	FRESHWATER DRUM	K-40	2,835.6 +/- 313.0	
21-OCT-14	FRESHWATER DRUM	MN-54	< 9.0	
21-OCT-14	FRESHWATER DRUM	CO-58	< 10.6	
21-OCT-14	FRESHWATER DRUM	FE-59	< 23.4	
21-OCT-14	FRESHWATER DRUM	CO-60	< 5.9	
21-OCT-14	FRESHWATER DRUM	ZN-65	< 21.8	
21-OCT-14	FRESHWATER DRUM	I-131	< 36.6	
21-OCT-14	FRESHWATER DRUM	CS-134	< 12.0	
21-OCT-14	FRESHWATER DRUM	CS-137	< 13.6	
21-OCT-14	FRESHWATER DRUM	H-3	7,136.0 +/- 274.0	
21-OCT-14	WHITE BASS	K-40	3,304.1 +/- 376.5	
21-OCT-14	WHITE BASS	K-40	3,090.9 +/- 309.5	Duplicate
21-OCT-14	WHITE BASS	MN-54	< 10.4	
21-OCT-14	WHITE BASS	MN-54	< 12.3	Duplicate
21-OCT-14	WHITE BASS	CO-58	< 10.3	Duplicate
21-OCT-14	WHITE BASS	CO-58	< 17.1	
21-OCT-14	WHITE BASS	FE-59	< 26.3	

Exposure Pathway - Ingestion
Fish

Location CCL

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)	Duplicate Analysis
21-OCT-14	WHITE BASS	FE-59	< 33.5	Duplicate
21-OCT-14	WHITE BASS	CO-60	< 8.9	
21-OCT-14	WHITE BASS	CO-60	< 10.0	Duplicate
21-OCT-14	WHITE BASS	ZN-65	< 25.4	
21-OCT-14	WHITE BASS	ZN-65	< 26.8	Duplicate
21-OCT-14	WHITE BASS	I-131	< 45.9	
21-OCT-14	WHITE BASS	I-131	< 37.6	Duplicate
21-OCT-14	WHITE BASS	CS-134	< 15.8	
21-OCT-14	WHITE BASS	CS-134	< 10.7	Duplicate
21-OCT-14	WHITE BASS	CS-137	< 11.5	Duplicate
21-OCT-14	WHITE BASS	CS-137	< 17.1	
21-OCT-14	WHITE BASS	H-3	7,509.0 +/- 283.0	Duplicate
21-OCT-14	WHITE BASS	H-3	7,969.0 +/- 291.0	
21-OCT-14	WIPER	K-40	3,430.8 +/- 347.9	
21-OCT-14	WIPER	MN-54	< 10.1	
21-OCT-14	WIPER	CO-58	< 10.6	
21-OCT-14	WIPER	FE-59	< 23.4	
21-OCT-14	WIPER	CO-60	< 5.4	
21-OCT-14	WIPER	ZN-65	< 30.6	
21-OCT-14	WIPER	I-131	< 55.4	
21-OCT-14	WIPER	CS-134	< 13.1	
21-OCT-14	WIPER	CS-137	< 14.1	
21-OCT-14	WIPER	H-3	6,166.0 +/- 265.0	
22-OCT-14	SMALLMOUTH BUFFALO	K-40	3,006.5 +/- 338.9	
22-OCT-14	SMALLMOUTH BUFFALO	MN-54	< 9.9	
22-OCT-14	SMALLMOUTH BUFFALO	CO-58	< 18.5	
22-OCT-14	SMALLMOUTH BUFFALO	FE-59	< 37.0	
22-OCT-14	SMALLMOUTH BUFFALO	CO-60	< 9.4	
22-OCT-14	SMALLMOUTH BUFFALO	ZN-65	< 29.2	
22-OCT-14	SMALLMOUTH BUFFALO	I-131	< 50.0	
22-OCT-14	SMALLMOUTH BUFFALO	CS-134	< 13.7	
22-OCT-14	SMALLMOUTH BUFFALO	CS-137	< 15.8	
22-OCT-14	SMALLMOUTH BUFFALO	H-3	7,321.0 +/- 275.0	

Exposure Pathway - Ingestion
Fish

Location JRR

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)		Duplicate Analysis
24-JUN-14	BIGMOUTH BUFFALO	K-40	3,336.4 +/-	381.6	
24-JUN-14	BIGMOUTH BUFFALO	MN-54	<	11.9	
24-JUN-14	BIGMOUTH BUFFALO	CO-58	<	10.9	
24-JUN-14	BIGMOUTH BUFFALO	FE-59	<	14.6	
24-JUN-14	BIGMOUTH BUFFALO	CO-60	<	15.7	
24-JUN-14	BIGMOUTH BUFFALO	ZN-65	<	29.0	
24-JUN-14	BIGMOUTH BUFFALO	I-131	<	25.4	
24-JUN-14	BIGMOUTH BUFFALO	CS-134	<	16.2	
24-JUN-14	BIGMOUTH BUFFALO	CS-137	<	14.8	
24-JUN-14	BIGMOUTH BUFFALO	H-3	<	95.0	
24-JUN-14	COMMON CARP	K-40	3,677.0 +/-	383.0	
24-JUN-14	COMMON CARP	MN-54	<	11.1	
24-JUN-14	COMMON CARP	CO-58	<	11.8	
24-JUN-14	COMMON CARP	FE-59	<	32.5	
24-JUN-14	COMMON CARP	CO-60	<	13.3	
24-JUN-14	COMMON CARP	ZN-65	<	31.9	
24-JUN-14	COMMON CARP	I-131	<	18.6	
24-JUN-14	COMMON CARP	CS-134	<	12.4	
24-JUN-14	COMMON CARP	CS-137	<	15.0	
24-JUN-14	COMMON CARP	H-3	<	106.0	
24-JUN-14	FLATHEAD CATFISH	K-40	3,336.8 +/-	387.8	
24-JUN-14	FLATHEAD CATFISH	MN-54	<	13.7	
24-JUN-14	FLATHEAD CATFISH	CO-58	<	13.5	
24-JUN-14	FLATHEAD CATFISH	FE-59	<	31.2	
24-JUN-14	FLATHEAD CATFISH	CO-60	<	9.9	
24-JUN-14	FLATHEAD CATFISH	ZN-65	<	32.2	
24-JUN-14	FLATHEAD CATFISH	I-131	<	25.1	
24-JUN-14	FLATHEAD CATFISH	CS-134	<	13.2	
24-JUN-14	FLATHEAD CATFISH	CS-137	<	12.6	
24-JUN-14	FLATHEAD CATFISH	H-3	<	104.0	
24-JUN-14	SMALLMOUTH BUFFALO	K-40	3,086.2 +/-	372.6	
24-JUN-14	SMALLMOUTH BUFFALO	MN-54	<	11.5	
24-JUN-14	SMALLMOUTH BUFFALO	CO-58	<	17.6	
24-JUN-14	SMALLMOUTH BUFFALO	FE-59	<	18.3	
24-JUN-14	SMALLMOUTH BUFFALO	CO-60	<	12.1	
24-JUN-14	SMALLMOUTH BUFFALO	ZN-65	<	24.8	
24-JUN-14	SMALLMOUTH BUFFALO	I-131	<	25.4	
24-JUN-14	SMALLMOUTH BUFFALO	CS-134	<	12.8	
24-JUN-14	SMALLMOUTH BUFFALO	CS-137	<	13.7	

Exposure Pathway - Ingestion
Fish

Location JRR

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)	Duplicate Analysis
24-JUN-14	SMALLMOUTH BUFFALO	H-3	< 105.0	
05-NOV-14	CHANNEL CATFISH	K-40	3,565.9 +/- 377.7	
05-NOV-14	CHANNEL CATFISH	MN-54	< 13.7	
05-NOV-14	CHANNEL CATFISH	CO-58	< 7.3	
05-NOV-14	CHANNEL CATFISH	FE-59	< 27.0	
05-NOV-14	CHANNEL CATFISH	CO-60	< 13.4	
05-NOV-14	CHANNEL CATFISH	ZN-65	< 23.2	
05-NOV-14	CHANNEL CATFISH	I-131	< 25.6	
05-NOV-14	CHANNEL CATFISH	CS-134	< 13.4	
05-NOV-14	CHANNEL CATFISH	CS-137	< 14.0	
05-NOV-14	CHANNEL CATFISH	H-3	< 141.0	
05-NOV-14	COMMON CARP	K-40	3,029.0 +/- 333.2	
05-NOV-14	COMMON CARP	MN-54	< 10.6	
05-NOV-14	COMMON CARP	CO-58	< 9.4	
05-NOV-14	COMMON CARP	FE-59	< 23.6	
05-NOV-14	COMMON CARP	CO-60	< 13.1	
05-NOV-14	COMMON CARP	ZN-65	< 23.6	
05-NOV-14	COMMON CARP	I-131	< 21.1	
05-NOV-14	COMMON CARP	CS-134	< 12.4	
05-NOV-14	COMMON CARP	CS-137	< 12.5	
05-NOV-14	COMMON CARP	H-3	< 143.0	
05-NOV-14	SMALLMOUTH BUFFALO	K-40	3,384.4 +/- 423.2	Duplicate
05-NOV-14	SMALLMOUTH BUFFALO	K-40	3,054.2 +/- 364.5	
05-NOV-14	SMALLMOUTH BUFFALO	MN-54	< 21.8	Duplicate
05-NOV-14	SMALLMOUTH BUFFALO	MN-54	< 12.7	
05-NOV-14	SMALLMOUTH BUFFALO	CO-58	< 16.7	
05-NOV-14	SMALLMOUTH BUFFALO	CO-58	< 16.0	Duplicate
05-NOV-14	SMALLMOUTH BUFFALO	FE-59	< 20.2	Duplicate
05-NOV-14	SMALLMOUTH BUFFALO	FE-59	< 24.7	
05-NOV-14	SMALLMOUTH BUFFALO	CO-60	< 6.9	
05-NOV-14	SMALLMOUTH BUFFALO	CO-60	< 16.7	Duplicate
05-NOV-14	SMALLMOUTH BUFFALO	ZN-65	< 42.0	Duplicate
05-NOV-14	SMALLMOUTH BUFFALO	ZN-65	< 23.4	
05-NOV-14	SMALLMOUTH BUFFALO	I-131	< 35.1	Duplicate
05-NOV-14	SMALLMOUTH BUFFALO	I-131	< 26.0	
05-NOV-14	SMALLMOUTH BUFFALO	CS-134	< 18.0	Duplicate
05-NOV-14	SMALLMOUTH BUFFALO	CS-134	< 15.0	
05-NOV-14	SMALLMOUTH BUFFALO	CS-137	< 15.0	
05-NOV-14	SMALLMOUTH BUFFALO	CS-137	< 12.5	Duplicate

Exposure Pathway - Ingestion
Fish

Location JRR

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)	Duplicate Analysis
05-NOV-14	SMALLMOUTH BUFFALO	H-3	< 149.0	
05-NOV-14	SMALLMOUTH BUFFALO	H-3	< 149.0	Duplicate

Exposure Pathway - Ingestion
Food/Garden
Location A-3

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)			Duplicate Analysis
03-NOV-14	HORSERADISH LEAVES	BE-7	807.9	+/-	278.6	Duplicate
03-NOV-14	HORSERADISH LEAVES	BE-7	737.7	+/-	178.1	
03-NOV-14	HORSERADISH LEAVES	K-40	6,253.3	+/-	541.4	Duplicate
03-NOV-14	HORSERADISH LEAVES	K-40	6,555.0	+/-	491.6	
03-NOV-14	HORSERADISH LEAVES	MN-54		<	15.3	Duplicate
03-NOV-14	HORSERADISH LEAVES	MN-54		<	16.5	
03-NOV-14	HORSERADISH LEAVES	CO-58		<	19.9	Duplicate
03-NOV-14	HORSERADISH LEAVES	CO-58		<	13.4	
03-NOV-14	HORSERADISH LEAVES	FE-59		<	23.1	Duplicate
03-NOV-14	HORSERADISH LEAVES	FE-59		<	29.8	
03-NOV-14	HORSERADISH LEAVES	CO-60		<	9.4	Duplicate
03-NOV-14	HORSERADISH LEAVES	CO-60		<	17.8	
03-NOV-14	HORSERADISH LEAVES	ZN-65		<	37.0	Duplicate
03-NOV-14	HORSERADISH LEAVES	ZN-65		<	23.5	
03-NOV-14	HORSERADISH LEAVES	ZR-NB-95		<	20.0	Duplicate
03-NOV-14	HORSERADISH LEAVES	ZR-NB-95		<	21.4	
03-NOV-14	HORSERADISH LEAVES	I-131		<	49.1	Duplicate
03-NOV-14	HORSERADISH LEAVES	I-131		<	25.8	
03-NOV-14	HORSERADISH LEAVES	CS-134		<	19.3	Duplicate
03-NOV-14	HORSERADISH LEAVES	CS-134		<	13.9	
03-NOV-14	HORSERADISH LEAVES	CS-137		<	13.5	Duplicate
03-NOV-14	HORSERADISH LEAVES	CS-137		<	21.0	

Exposure Pathway - Ingestion
Food/Garden
Location B-1

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)			Duplicate Analysis
19-MAY-14	HORSERADISH LEAVES	BE-7	528.7	+/-	174.3	Duplicate
19-MAY-14	HORSERADISH LEAVES	BE-7	617.3	+/-	175.1	
19-MAY-14	HORSERADISH LEAVES	K-40	5,135.8	+/-	437.3	Duplicate
19-MAY-14	HORSERADISH LEAVES	K-40	5,297.9	+/-	437.6	
19-MAY-14	HORSERADISH LEAVES	MN-54		<	12.5	
19-MAY-14	HORSERADISH LEAVES	MN-54		<	7.2	Duplicate
19-MAY-14	HORSERADISH LEAVES	CO-58		<	8.9	Duplicate
19-MAY-14	HORSERADISH LEAVES	CO-58		<	14.2	
19-MAY-14	HORSERADISH LEAVES	FE-59		<	32.2	Duplicate
19-MAY-14	HORSERADISH LEAVES	FE-59		<	26.0	
19-MAY-14	HORSERADISH LEAVES	CO-60		<	12.4	Duplicate
19-MAY-14	HORSERADISH LEAVES	CO-60		<	11.3	
19-MAY-14	HORSERADISH LEAVES	ZN-65		<	18.4	Duplicate
19-MAY-14	HORSERADISH LEAVES	ZN-65		<	19.6	
19-MAY-14	HORSERADISH LEAVES	ZR-NB-95		<	8.1	
19-MAY-14	HORSERADISH LEAVES	ZR-NB-95		<	11.4	Duplicate
19-MAY-14	HORSERADISH LEAVES	I-131		<	22.6	Duplicate
19-MAY-14	HORSERADISH LEAVES	I-131		<	26.4	
19-MAY-14	HORSERADISH LEAVES	CS-134		<	14.1	Duplicate
19-MAY-14	HORSERADISH LEAVES	CS-134		<	12.9	
19-MAY-14	HORSERADISH LEAVES	CS-137		<	8.8	
19-MAY-14	HORSERADISH LEAVES	CS-137		<	16.4	Duplicate
09-JUN-14	HORSERADISH LEAVES	BE-7	795.5	+/-	173.4	
09-JUN-14	HORSERADISH LEAVES	K-40	4,480.3	+/-	398.0	
09-JUN-14	HORSERADISH LEAVES	MN-54		<	13.1	
09-JUN-14	HORSERADISH LEAVES	CO-58		<	11.9	
09-JUN-14	HORSERADISH LEAVES	FE-59		<	26.6	
09-JUN-14	HORSERADISH LEAVES	CO-60		<	7.8	
09-JUN-14	HORSERADISH LEAVES	ZN-65		<	28.5	
09-JUN-14	HORSERADISH LEAVES	ZR-NB-95		<	12.0	
09-JUN-14	HORSERADISH LEAVES	I-131		<	25.5	
09-JUN-14	HORSERADISH LEAVES	CS-134		<	12.2	
09-JUN-14	HORSERADISH LEAVES	CS-137		<	10.9	
28-JUL-14	HORSERADISH LEAVES	BE-7	467.3	+/-	176.8	
28-JUL-14	HORSERADISH LEAVES	K-40	5,006.9	+/-	430.9	
28-JUL-14	HORSERADISH LEAVES	MN-54		<	9.6	
28-JUL-14	HORSERADISH LEAVES	CO-58		<	11.3	
28-JUL-14	HORSERADISH LEAVES	FE-59		<	31.3	
28-JUL-14	HORSERADISH LEAVES	CO-60		<	10.7	

Exposure Pathway - Ingestion
Food/Garden
Location B-1

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)			Duplicate Analysis
28-JUL-14	HORSERADISH LEAVES	ZN-65		<	20.4	
28-JUL-14	HORSERADISH LEAVES	ZR-NB-95		<	16.2	
28-JUL-14	HORSERADISH LEAVES	I-131		<	28.3	
28-JUL-14	HORSERADISH LEAVES	CS-134		<	14.9	
28-JUL-14	HORSERADISH LEAVES	CS-137		<	13.1	
20-OCT-14	HORSERADISH LEAVES	BE-7	382.0	+/-	159.6	
20-OCT-14	HORSERADISH LEAVES	K-40	3,833.9	+/-	365.7	
20-OCT-14	HORSERADISH LEAVES	MN-54		<	8.6	
20-OCT-14	HORSERADISH LEAVES	CO-58		<	12.8	
20-OCT-14	HORSERADISH LEAVES	FE-59		<	36.2	
20-OCT-14	HORSERADISH LEAVES	CO-60		<	7.5	
20-OCT-14	HORSERADISH LEAVES	ZN-65		<	26.6	
20-OCT-14	HORSERADISH LEAVES	ZR-NB-95		<	18.0	
20-OCT-14	HORSERADISH LEAVES	I-131		<	34.8	
20-OCT-14	HORSERADISH LEAVES	CS-134		<	14.9	
20-OCT-14	HORSERADISH LEAVES	CS-137		<	16.0	
03-NOV-14	HORSERADISH LEAVES	BE-7	363.3	+/-	206.1	
03-NOV-14	HORSERADISH LEAVES	K-40	5,782.8	+/-	502.4	
03-NOV-14	HORSERADISH LEAVES	MN-54		<	17.0	
03-NOV-14	HORSERADISH LEAVES	CO-58		<	13.5	
03-NOV-14	HORSERADISH LEAVES	FE-59		<	42.4	
03-NOV-14	HORSERADISH LEAVES	CO-60		<	9.1	
03-NOV-14	HORSERADISH LEAVES	ZN-65		<	22.7	
03-NOV-14	HORSERADISH LEAVES	ZR-NB-95		<	19.4	
03-NOV-14	HORSERADISH LEAVES	I-131		<	37.6	
03-NOV-14	HORSERADISH LEAVES	CS-134		<	17.6	
03-NOV-14	HORSERADISH LEAVES	CS-137		<	19.9	

Exposure Pathway - Ingestion
Food/Garden
Location D-2

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)	Duplicate Analysis
19-MAY-14	HORSERADISH LEAVES	BE-7	631.5 +/- 173.4	
19-MAY-14	HORSERADISH LEAVES	K-40	5,315.4 +/- 486.0	
19-MAY-14	HORSERADISH LEAVES	MN-54	< 8.4	
19-MAY-14	HORSERADISH LEAVES	CO-58	< 12.4	
19-MAY-14	HORSERADISH LEAVES	FE-59	< 27.2	
19-MAY-14	HORSERADISH LEAVES	CO-60	< 15.6	
19-MAY-14	HORSERADISH LEAVES	ZN-65	< 18.0	
19-MAY-14	HORSERADISH LEAVES	ZR-NB-95	< 17.8	
19-MAY-14	HORSERADISH LEAVES	I-131	< 29.8	
19-MAY-14	HORSERADISH LEAVES	CS-134	< 13.8	
19-MAY-14	HORSERADISH LEAVES	CS-137	< 17.2	
09-JUN-14	HORSERADISH LEAVES	BE-7	704.6 +/- 206.9	
09-JUN-14	HORSERADISH LEAVES	K-40	5,287.5 +/- 485.6	
09-JUN-14	HORSERADISH LEAVES	MN-54	< 14.5	
09-JUN-14	HORSERADISH LEAVES	CO-58	< 7.7	
09-JUN-14	HORSERADISH LEAVES	FE-59	< 27.1	
09-JUN-14	HORSERADISH LEAVES	CO-60	< 7.6	
09-JUN-14	HORSERADISH LEAVES	ZN-65	< 26.3	
09-JUN-14	HORSERADISH LEAVES	ZR-NB-95	< 9.5	
09-JUN-14	HORSERADISH LEAVES	I-131	< 28.0	
09-JUN-14	HORSERADISH LEAVES	CS-134	< 14.8	
09-JUN-14	HORSERADISH LEAVES	CS-137	< 9.5	
28-JUL-14	HORSERADISH LEAVES	BE-7	726.7 +/- 185.6	
28-JUL-14	HORSERADISH LEAVES	K-40	6,569.2 +/- 494.3	
28-JUL-14	HORSERADISH LEAVES	MN-54	< 13.8	
28-JUL-14	HORSERADISH LEAVES	CO-58	< 11.3	
28-JUL-14	HORSERADISH LEAVES	FE-59	< 26.7	
28-JUL-14	HORSERADISH LEAVES	CO-60	< 11.3	
28-JUL-14	HORSERADISH LEAVES	ZN-65	< 23.4	
28-JUL-14	HORSERADISH LEAVES	ZR-NB-95	< 16.8	
28-JUL-14	HORSERADISH LEAVES	I-131	< 25.5	
28-JUL-14	HORSERADISH LEAVES	CS-134	< 15.7	
28-JUL-14	HORSERADISH LEAVES	CS-137	< 16.5	
25-AUG-14	RHUBARB	BE-7	< 190.1	
25-AUG-14	RHUBARB	K-40	4,190.6 +/- 401.8	
25-AUG-14	RHUBARB	MN-54	< 11.0	
25-AUG-14	RHUBARB	CO-58	< 15.3	
25-AUG-14	RHUBARB	FE-59	< 24.6	
25-AUG-14	RHUBARB	CO-60	< 16.9	

Exposure Pathway - Ingestion
Food/Garden
Location D-2

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)	Duplicate Analysis
25-AUG-14	RHUBARB	ZN-65	< 24.5	
25-AUG-14	RHUBARB	ZR-NB-95	< 14.8	
25-AUG-14	RHUBARB	I-131	< 41.7	
25-AUG-14	RHUBARB	CS-134	< 14.9	
25-AUG-14	RHUBARB	CS-137	< 19.6	
15-SEP-14	RHUBARB	BE-7	758.9 +/- 217.8	
15-SEP-14	RHUBARB	K-40	3,345.1 +/- 477.9	
15-SEP-14	RHUBARB	MN-54	< 24.9	
15-SEP-14	RHUBARB	CO-58	< 20.0	
15-SEP-14	RHUBARB	FE-59	< 19.9	
15-SEP-14	RHUBARB	CO-60	< 24.7	
15-SEP-14	RHUBARB	ZN-65	< 38.0	
15-SEP-14	RHUBARB	ZR-NB-95	< 21.6	
15-SEP-14	RHUBARB	I-131	< 40.5	
15-SEP-14	RHUBARB	CS-134	< 23.0	
15-SEP-14	RHUBARB	CS-137	< 16.4	
20-OCT-14	HORSERADISH LEAVES	BE-7	897.3 +/- 188.2	
20-OCT-14	HORSERADISH LEAVES	K-40	5,113.6 +/- 416.5	
20-OCT-14	HORSERADISH LEAVES	MN-54	< 10.8	
20-OCT-14	HORSERADISH LEAVES	CO-58	< 11.7	
20-OCT-14	HORSERADISH LEAVES	FE-59	< 12.8	
20-OCT-14	HORSERADISH LEAVES	CO-60	< 12.8	
20-OCT-14	HORSERADISH LEAVES	ZN-65	< 15.8	
20-OCT-14	HORSERADISH LEAVES	ZR-NB-95	< 11.3	
20-OCT-14	HORSERADISH LEAVES	I-131	< 22.0	
20-OCT-14	HORSERADISH LEAVES	CS-134	< 11.9	
20-OCT-14	HORSERADISH LEAVES	CS-137	< 14.6	
03-NOV-14	RHUBARB	BE-7	680.4 +/- 227.3	
03-NOV-14	RHUBARB	K-40	7,594.0 +/- 569.7	
03-NOV-14	RHUBARB	MN-54	< 19.5	
03-NOV-14	RHUBARB	CO-58	< 9.0	
03-NOV-14	RHUBARB	FE-59	< 12.4	
03-NOV-14	RHUBARB	CO-60	< 12.1	
03-NOV-14	RHUBARB	ZN-65	< 22.7	
03-NOV-14	RHUBARB	ZR-NB-95	< 19.5	
03-NOV-14	RHUBARB	I-131	< 36.8	
03-NOV-14	RHUBARB	CS-134	< 16.9	
03-NOV-14	RHUBARB	CS-137	< 14.7	

Exposure Pathway - Ingestion
Food/Garden
Location H-2

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)			Duplicate Analysis
19-MAY-14	HORSERADISH LEAVES	BE-7	759.7	+/-	161.2	
19-MAY-14	HORSERADISH LEAVES	K-40	7,221.8	+/-	478.4	
19-MAY-14	HORSERADISH LEAVES	MN-54		<	7.9	
19-MAY-14	HORSERADISH LEAVES	CO-58		<	12.7	
19-MAY-14	HORSERADISH LEAVES	FE-59		<	38.4	
19-MAY-14	HORSERADISH LEAVES	CO-60		<	11.8	
19-MAY-14	HORSERADISH LEAVES	ZN-65		<	28.5	
19-MAY-14	HORSERADISH LEAVES	ZR-NB-95		<	11.5	
19-MAY-14	HORSERADISH LEAVES	I-131		<	21.1	
19-MAY-14	HORSERADISH LEAVES	CS-134		<	14.1	
19-MAY-14	HORSERADISH LEAVES	CS-137		<	14.2	
09-JUN-14	HORSERADISH LEAVES	BE-7	661.2	+/-	169.0	
09-JUN-14	HORSERADISH LEAVES	K-40	4,673.3	+/-	377.2	
09-JUN-14	HORSERADISH LEAVES	MN-54		<	12.4	
09-JUN-14	HORSERADISH LEAVES	CO-58		<	11.4	
09-JUN-14	HORSERADISH LEAVES	FE-59		<	26.8	
09-JUN-14	HORSERADISH LEAVES	CO-60		<	7.7	
09-JUN-14	HORSERADISH LEAVES	ZN-65		<	18.8	
09-JUN-14	HORSERADISH LEAVES	ZR-NB-95		<	12.4	
09-JUN-14	HORSERADISH LEAVES	I-131		<	26.4	
09-JUN-14	HORSERADISH LEAVES	CS-134		<	11.2	
09-JUN-14	HORSERADISH LEAVES	CS-137		<	9.7	
28-JUL-14	HORSERADISH LEAVES	BE-7	509.1	+/-	155.3	
28-JUL-14	HORSERADISH LEAVES	K-40	6,430.5	+/-	521.2	
28-JUL-14	HORSERADISH LEAVES	MN-54		<	22.3	
28-JUL-14	HORSERADISH LEAVES	CO-58		<	16.4	
28-JUL-14	HORSERADISH LEAVES	FE-59		<	25.5	
28-JUL-14	HORSERADISH LEAVES	CO-60		<	15.3	
28-JUL-14	HORSERADISH LEAVES	ZN-65		<	23.2	
28-JUL-14	HORSERADISH LEAVES	ZR-NB-95		<	22.3	
28-JUL-14	HORSERADISH LEAVES	I-131		<	28.4	
28-JUL-14	HORSERADISH LEAVES	CS-134		<	16.0	
28-JUL-14	HORSERADISH LEAVES	CS-137		<	15.4	
25-AUG-14	HORSERADISH LEAVES	BE-7	441.7	+/-	207.2	
25-AUG-14	HORSERADISH LEAVES	BE-7	437.5	+/-	175.1	Duplicate
25-AUG-14	HORSERADISH LEAVES	K-40	7,856.8	+/-	472.4	Duplicate
25-AUG-14	HORSERADISH LEAVES	K-40	8,401.1	+/-	594.9	
25-AUG-14	HORSERADISH LEAVES	MN-54		<	17.8	
25-AUG-14	HORSERADISH LEAVES	MN-54		<	21.2	Duplicate

Exposure Pathway - Ingestion
Food/Garden
Location H-2

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)			Duplicate Analysis
25-AUG-14	HORSERADISH LEAVES	CO-58		<	17.5	
25-AUG-14	HORSERADISH LEAVES	CO-58		<	20.7	Duplicate
25-AUG-14	HORSERADISH LEAVES	FE-59		<	39.0	Duplicate
25-AUG-14	HORSERADISH LEAVES	FE-59		<	23.5	
25-AUG-14	HORSERADISH LEAVES	CO-60		<	21.7	Duplicate
25-AUG-14	HORSERADISH LEAVES	CO-60		<	16.9	
25-AUG-14	HORSERADISH LEAVES	ZN-65		<	25.4	Duplicate
25-AUG-14	HORSERADISH LEAVES	ZN-65		<	32.4	
25-AUG-14	HORSERADISH LEAVES	ZR-NB-95		<	26.6	Duplicate
25-AUG-14	HORSERADISH LEAVES	ZR-NB-95		<	19.4	
25-AUG-14	HORSERADISH LEAVES	I-131		<	43.4	
25-AUG-14	HORSERADISH LEAVES	I-131		<	43.1	Duplicate
25-AUG-14	HORSERADISH LEAVES	CS-134		<	18.4	Duplicate
25-AUG-14	HORSERADISH LEAVES	CS-134		<	17.2	
25-AUG-14	HORSERADISH LEAVES	CS-137		<	20.3	
25-AUG-14	HORSERADISH LEAVES	CS-137		<	21.7	Duplicate
15-SEP-14	HORSERADISH LEAVES	BE-7	354.1	+/-	186.5	
15-SEP-14	HORSERADISH LEAVES	K-40	7,321.4	+/-	559.8	
15-SEP-14	HORSERADISH LEAVES	MN-54		<	16.9	
15-SEP-14	HORSERADISH LEAVES	CO-58		<	19.9	
15-SEP-14	HORSERADISH LEAVES	FE-59		<	44.8	
15-SEP-14	HORSERADISH LEAVES	CO-60		<	19.7	
15-SEP-14	HORSERADISH LEAVES	ZN-65		<	18.7	
15-SEP-14	HORSERADISH LEAVES	ZR-NB-95		<	15.7	
15-SEP-14	HORSERADISH LEAVES	I-131		<	30.7	
15-SEP-14	HORSERADISH LEAVES	CS-134		<	19.0	
15-SEP-14	HORSERADISH LEAVES	CS-137		<	15.3	
20-OCT-14	HORSERADISH LEAVES	BE-7	360.2	+/-	151.9	
20-OCT-14	HORSERADISH LEAVES	K-40	4,327.5	+/-	397.4	
20-OCT-14	HORSERADISH LEAVES	MN-54		<	18.3	
20-OCT-14	HORSERADISH LEAVES	CO-58		<	15.8	
20-OCT-14	HORSERADISH LEAVES	FE-59		<	28.8	
20-OCT-14	HORSERADISH LEAVES	CO-60		<	10.0	
20-OCT-14	HORSERADISH LEAVES	ZN-65		<	29.2	
20-OCT-14	HORSERADISH LEAVES	ZR-NB-95		<	17.3	
20-OCT-14	HORSERADISH LEAVES	I-131		<	29.5	
20-OCT-14	HORSERADISH LEAVES	CS-134		<	15.8	
20-OCT-14	HORSERADISH LEAVES	CS-137		<	15.6	
03-NOV-14	HORSERADISH LEAVES	BE-7	286.9	+/-	106.8	

Exposure Pathway - Ingestion
Food/Garden
Location H-2

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)			Duplicate Analysis
03-NOV-14	HORSERADISH LEAVES	K-40	5,471.6	+/-	381.7	
03-NOV-14	HORSERADISH LEAVES	MN-54		<	13.8	
03-NOV-14	HORSERADISH LEAVES	CO-58		<	12.0	
03-NOV-14	HORSERADISH LEAVES	FE-59		<	26.7	
03-NOV-14	HORSERADISH LEAVES	CO-60		<	11.1	
03-NOV-14	HORSERADISH LEAVES	ZN-65		<	15.7	
03-NOV-14	HORSERADISH LEAVES	ZR-NB-95		<	11.8	
03-NOV-14	HORSERADISH LEAVES	I-131		<	25.7	
03-NOV-14	HORSERADISH LEAVES	CS-134		<	12.9	
03-NOV-14	HORSERADISH LEAVES	CS-137		<	9.3	

Exposure Pathway - Ingestion
Food/Garden
Location Q-6

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)			Duplicate Analysis
15-SEP-14	GREEN BEAN LEAVES	BE-7	878.5	+/-	248.7	
15-SEP-14	GREEN BEAN LEAVES	K-40	5,047.3	+/-	506.3	
15-SEP-14	GREEN BEAN LEAVES	MN-54		<	21.0	
15-SEP-14	GREEN BEAN LEAVES	CO-58		<	21.9	
15-SEP-14	GREEN BEAN LEAVES	FE-59		<	34.6	
15-SEP-14	GREEN BEAN LEAVES	CO-60		<	17.6	
15-SEP-14	GREEN BEAN LEAVES	ZN-65		<	34.1	
15-SEP-14	GREEN BEAN LEAVES	ZR-NB-95		<	21.3	
15-SEP-14	GREEN BEAN LEAVES	I-131		<	27.1	
15-SEP-14	GREEN BEAN LEAVES	CS-134		<	21.8	
15-SEP-14	GREEN BEAN LEAVES	CS-137		<	20.5	
03-NOV-14	KALE	BE-7		<	178.0	
03-NOV-14	KALE	K-40	7,685.8	+/-	510.8	
03-NOV-14	KALE	MN-54		<	9.2	
03-NOV-14	KALE	CO-58		<	17.9	
03-NOV-14	KALE	FE-59		<	33.2	
03-NOV-14	KALE	CO-60		<	9.1	
03-NOV-14	KALE	ZN-65		<	34.7	
03-NOV-14	KALE	ZR-NB-95		<	13.1	
03-NOV-14	KALE	I-131		<	21.4	
03-NOV-14	KALE	CS-134		<	14.8	
03-NOV-14	KALE	CS-137		<	19.1	

Exposure Pathway - Ingestion
Food/Garden
Location R-2

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)	Duplicate Analysis
28-JUL-14	HORSERADISH LEAVES	BE-7	772.1 +/- 193.6	
28-JUL-14	HORSERADISH LEAVES	K-40	6,161.5 +/- 573.5	
28-JUL-14	HORSERADISH LEAVES	MN-54	< 22.0	
28-JUL-14	HORSERADISH LEAVES	CO-58	< 17.0	
28-JUL-14	HORSERADISH LEAVES	FE-59	< 47.6	
28-JUL-14	HORSERADISH LEAVES	CO-60	< 16.0	
28-JUL-14	HORSERADISH LEAVES	ZN-65	< 21.9	
28-JUL-14	HORSERADISH LEAVES	ZR-NB-95	< 20.3	
28-JUL-14	HORSERADISH LEAVES	I-131	< 38.1	
28-JUL-14	HORSERADISH LEAVES	CS-134	< 18.7	
28-JUL-14	HORSERADISH LEAVES	CS-137	< 18.0	
25-AUG-14	HORSERADISH LEAVES	BE-7	990.3 +/- 214.8	
25-AUG-14	HORSERADISH LEAVES	K-40	7,255.9 +/- 528.0	
25-AUG-14	HORSERADISH LEAVES	MN-54	< 14.7	
25-AUG-14	HORSERADISH LEAVES	CO-58	< 18.6	
25-AUG-14	HORSERADISH LEAVES	FE-59	< 50.6	
25-AUG-14	HORSERADISH LEAVES	CO-60	< 14.3	
25-AUG-14	HORSERADISH LEAVES	ZN-65	< 38.1	
25-AUG-14	HORSERADISH LEAVES	ZR-NB-95	< 18.8	
25-AUG-14	HORSERADISH LEAVES	I-131	< 53.1	
25-AUG-14	HORSERADISH LEAVES	CS-134	< 15.3	
25-AUG-14	HORSERADISH LEAVES	CS-137	< 17.3	
15-SEP-14	HORSERADISH LEAVES	BE-7	787.5 +/- 206.2	
15-SEP-14	HORSERADISH LEAVES	K-40	5,652.7 +/- 483.6	
15-SEP-14	HORSERADISH LEAVES	MN-54	< 12.4	
15-SEP-14	HORSERADISH LEAVES	CO-58	< 13.7	
15-SEP-14	HORSERADISH LEAVES	FE-59	< 25.8	
15-SEP-14	HORSERADISH LEAVES	CO-60	< 12.6	
15-SEP-14	HORSERADISH LEAVES	ZN-65	< 25.8	
15-SEP-14	HORSERADISH LEAVES	ZR-NB-95	< 19.9	
15-SEP-14	HORSERADISH LEAVES	I-131	< 28.1	
15-SEP-14	HORSERADISH LEAVES	CS-134	< 17.8	
15-SEP-14	HORSERADISH LEAVES	CS-137	< 15.8	
03-NOV-14	HORSERADISH LEAVES	BE-7	784.7 +/- 208.3	
03-NOV-14	HORSERADISH LEAVES	K-40	5,520.5 +/- 452.0	
03-NOV-14	HORSERADISH LEAVES	MN-54	< 9.2	
03-NOV-14	HORSERADISH LEAVES	CO-58	< 8.8	
03-NOV-14	HORSERADISH LEAVES	FE-59	< 20.7	
03-NOV-14	HORSERADISH LEAVES	CO-60	< 12.3	

Exposure Pathway - Ingestion
Food/Garden
Location R-2

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)		Duplicate Analysis
03-NOV-14	HORSERADISH LEAVES	ZN-65	<	40.1	
03-NOV-14	HORSERADISH LEAVES	ZR-NB-95	<	12.0	
03-NOV-14	HORSERADISH LEAVES	I-131	<	36.5	
03-NOV-14	HORSERADISH LEAVES	CS-134	<	14.6	
03-NOV-14	HORSERADISH LEAVES	CS-137	<	14.8	

Exposure Pathway - Ingestion
Feed and Forage

Location NR-D1

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)		Duplicate Analysis
30-OCT-14	IRRIGATED SOYBEANS	BE-7	<	104.3	
30-OCT-14	IRRIGATED SOYBEANS	K-40	12,544.0 +/-	548.3	
30-OCT-14	IRRIGATED SOYBEANS	MN-54	<	15.1	
30-OCT-14	IRRIGATED SOYBEANS	CO-58	<	8.6	
30-OCT-14	IRRIGATED SOYBEANS	FE-59	<	28.5	
30-OCT-14	IRRIGATED SOYBEANS	CO-60	<	6.9	
30-OCT-14	IRRIGATED SOYBEANS	ZN-65	<	37.8	
30-OCT-14	IRRIGATED SOYBEANS	ZR-NB-95	<	9.5	
30-OCT-14	IRRIGATED SOYBEANS	I-131	<	13.8	
30-OCT-14	IRRIGATED SOYBEANS	CS-134	<	9.2	
30-OCT-14	IRRIGATED SOYBEANS	CS-137	<	11.0	

Exposure Pathway - Ingestion
Feed and Forage

Location NR-D2

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)		Duplicate Analysis
29-SEP-14	IRRIGATED CORN	BE-7	<	49.1	
29-SEP-14	IRRIGATED CORN	K-40	2,788.4 +/-	227.0	
29-SEP-14	IRRIGATED CORN	MN-54	<	7.6	
29-SEP-14	IRRIGATED CORN	CO-58	<	9.9	
29-SEP-14	IRRIGATED CORN	FE-59	<	12.6	
29-SEP-14	IRRIGATED CORN	CO-60	<	5.8	
29-SEP-14	IRRIGATED CORN	ZN-65	<	16.3	
29-SEP-14	IRRIGATED CORN	ZR-NB-95	<	7.4	
29-SEP-14	IRRIGATED CORN	I-131	<	14.4	
29-SEP-14	IRRIGATED CORN	CS-134	<	6.9	
29-SEP-14	IRRIGATED CORN	CS-137	<	8.1	

Exposure Pathway - Ingestion
Feed and Forage

Location NR-U1

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)		Duplicate Analysis
02-OCT-14	IRRIGATED CORN	BE-7	<	49.2	
02-OCT-14	IRRIGATED CORN	BE-7	<	51.6	Duplicate
02-OCT-14	IRRIGATED CORN	K-40	1,855.9 +/-	186.1	Duplicate
02-OCT-14	IRRIGATED CORN	K-40	2,045.7 +/-	214.2	
02-OCT-14	IRRIGATED CORN	MN-54	<	4.3	
02-OCT-14	IRRIGATED CORN	MN-54	<	7.6	Duplicate
02-OCT-14	IRRIGATED CORN	CO-58	<	7.6	Duplicate
02-OCT-14	IRRIGATED CORN	CO-58	<	3.5	
02-OCT-14	IRRIGATED CORN	FE-59	<	6.8	Duplicate
02-OCT-14	IRRIGATED CORN	FE-59	<	14.1	
02-OCT-14	IRRIGATED CORN	CO-60	<	7.6	Duplicate
02-OCT-14	IRRIGATED CORN	CO-60	<	6.0	
02-OCT-14	IRRIGATED CORN	ZN-65	<	5.6	
02-OCT-14	IRRIGATED CORN	ZN-65	<	14.7	Duplicate
02-OCT-14	IRRIGATED CORN	ZR-NB-95	<	6.8	
02-OCT-14	IRRIGATED CORN	ZR-NB-95	<	7.0	Duplicate
02-OCT-14	IRRIGATED CORN	I-131	<	12.1	
02-OCT-14	IRRIGATED CORN	I-131	<	12.1	Duplicate
02-OCT-14	IRRIGATED CORN	CS-134	<	8.1	Duplicate
02-OCT-14	IRRIGATED CORN	CS-134	<	6.2	
02-OCT-14	IRRIGATED CORN	CS-137	<	4.6	
02-OCT-14	IRRIGATED CORN	CS-137	<	8.3	Duplicate
17-NOV-14	IRRIGATED SOYBEANS	BE-7	<	78.3	
17-NOV-14	IRRIGATED SOYBEANS	K-40	13,841.0 +/-	483.5	
17-NOV-14	IRRIGATED SOYBEANS	MN-54	<	11.2	
17-NOV-14	IRRIGATED SOYBEANS	CO-58	<	13.0	
17-NOV-14	IRRIGATED SOYBEANS	FE-59	<	32.4	
17-NOV-14	IRRIGATED SOYBEANS	CO-60	<	8.5	
17-NOV-14	IRRIGATED SOYBEANS	ZN-65	<	30.6	
17-NOV-14	IRRIGATED SOYBEANS	ZR-NB-95	<	6.2	
17-NOV-14	IRRIGATED SOYBEANS	I-131	<	12.3	
17-NOV-14	IRRIGATED SOYBEANS	CS-134	<	9.1	
17-NOV-14	IRRIGATED SOYBEANS	CS-137	<	9.7	

Exposure Pathway - Aquatic
Bottom Sediment

Location DC

Collection Date	Nuclide	Concentration (pCi/Kg Dry)	Duplicate Analysis
23-JUN-14	K-40	13,910.0 +/- 827.8	
23-JUN-14	MN-54	< 27.7	
23-JUN-14	CO-58	< 30.9	
23-JUN-14	FE-59	< 30.9	
23-JUN-14	CO-60	< 19.3	
23-JUN-14	ZN-65	< 61.1	
23-JUN-14	CS-134	< 25.7	
23-JUN-14	CS-137	130.4 +/- 43.7	
23-JUN-14	FE-55	< 15,023.0	
06-OCT-14	K-40	12,932.0 +/- 746.2	
06-OCT-14	MN-54	< 26.9	
06-OCT-14	CO-58	< 22.3	
06-OCT-14	FE-59	< 61.9	
06-OCT-14	CO-60	< 18.5	
06-OCT-14	ZN-65	< 46.3	
06-OCT-14	CS-134	< 24.2	
06-OCT-14	CS-137	117.9 +/- 44.6	
06-OCT-14	FE-55	< 15,022.0	

Exposure Pathway - Aquatic
Bottom Sediment

Location ESW 2014-8

Collection Date	Nuclide	Concentration (pCi/Kg Dry)	Duplicate Analysis
05-NOV-14	K-40	9,597.7 +/- 614.1	
05-NOV-14	MN-54	< 22.9	
05-NOV-14	CO-58	< 18.6	
05-NOV-14	FE-59	< 77.3	
05-NOV-14	CO-60	< 15.7	
05-NOV-14	ZN-65	< 39.4	
05-NOV-14	CS-134	< 22.5	
05-NOV-14	CS-137	< 25.2	
05-NOV-14	FE-55	< 15,432.5	

Exposure Pathway - Aquatic
Bottom Sediment

Location ESW CHAN-7

Collection Date	Nuclide	Concentration (pCi/Kg Dry)	Duplicate Analysis
24-JUN-14	K-40	10,749.0 +/- 702.5	
24-JUN-14	MN-54	< 18.7	
24-JUN-14	CO-58	< 20.1	
24-JUN-14	FE-59	< 35.3	
24-JUN-14	CO-60	< 8.8	
24-JUN-14	ZN-65	< 49.6	
24-JUN-14	CS-134	< 22.6	
24-JUN-14	CS-137	33.4 +/- 16.0	
24-JUN-14	SR-89	< 214.8	
24-JUN-14	SR-90	< 47.7	
24-JUN-14	U-233/234	488.2 +/- 43.2	
24-JUN-14	U-235	14.2 +/- 8.7	
24-JUN-14	PU-239/240	< 5.7	
24-JUN-14	U-238	361.7 +/- 37.5	
24-JUN-14	AM-241	< 20.5	
24-JUN-14	CM-242	< 50.2	
24-JUN-14	CM-243/244	< 37.4	
24-JUN-14	FE-55	< 15,428.0	
24-JUN-14	NI-63	< 377.3	
24-JUN-14	PU-238	< 5.7	

Exposure Pathway - Aquatic
Bottom Sediment
Location JRR

Collection Date	Nuclide	Concentration (pCi/Kg Dry)			Duplicate Analysis
24-JUN-14	K-40	16,906.0	+/-	901.7	
24-JUN-14	MN-54		<	36.9	
24-JUN-14	CO-58		<	24.8	
24-JUN-14	FE-59		<	35.0	
24-JUN-14	CO-60		<	13.1	
24-JUN-14	ZN-65		<	59.2	
24-JUN-14	CS-134		<	29.9	
24-JUN-14	CS-137	132.3	+/-	43.0	
06-OCT-14	K-40	17,639.0	+/-	878.9	
06-OCT-14	MN-54		<	30.1	
06-OCT-14	CO-58		<	23.1	
06-OCT-14	FE-59		<	62.4	
06-OCT-14	CO-60		<	11.4	
06-OCT-14	ZN-65		<	54.5	
06-OCT-14	CS-134		<	22.4	
06-OCT-14	CS-137	119.6	+/-	41.9	
06-OCT-14	SR-89		<	127.7	
06-OCT-14	SR-90		<	43.8	
06-OCT-14	U-233	244.2	+/-	33.5	
06-OCT-14	U-235	11.4	+/-	7.9	
06-OCT-14	FE-55		<	16,335.6	
06-OCT-14	U-238	171.5	+/-	28.1	
06-OCT-14	PU-239		<	7.5	
06-OCT-14	AM-241		<	55.8	
06-OCT-14	CM-242		<	39.5	
06-OCT-14	CM-244		<	30.6	
06-OCT-14	NI-63		<	435.7	
06-OCT-14	PU-238		<	21.1	

Exposure Pathway - Aquatic
Bottom Sediment

Location SC

Collection Date	Nuclide	Concentration (pCi/Kg Dry)		Duplicate Analysis
14-MAY-14	K-40	11,340.0 +/-	732.6	
14-MAY-14	MN-54	<	14.5	
14-MAY-14	CO-58	<	20.0	
14-MAY-14	FE-59	<	17.6	
14-MAY-14	CO-60	<	12.2	
14-MAY-14	ZN-65	<	43.5	
14-MAY-14	CS-134	<	20.3	
14-MAY-14	CS-137	<	22.1	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2014-25

Collection Date	Nuclide	Concentration (pCi/Kg Dry)			Duplicate Analysis
24-JUN-14	K-40	9,849.0	+/-	719.4	
24-JUN-14	MN-54		<	29.9	
24-JUN-14	CO-58		<	21.5	
24-JUN-14	FE-59		<	66.6	
24-JUN-14	CO-60		<	22.5	
24-JUN-14	ZN-65		<	47.1	
24-JUN-14	CS-134		<	24.3	
24-JUN-14	CS-137		<	24.8	
24-JUN-14	U-238	281.7	+/-	37.1	
24-JUN-14	AM-241		<	13.5	
24-JUN-14	CM-242		<	66.3	
24-JUN-14	FE-55		<	15,316.0	
24-JUN-14	PU-239/240		<	5.4	
24-JUN-14	SR-89		<	177.0	
24-JUN-14	NI-63		<	380.2	
24-JUN-14	SR-90		<	73.3	
24-JUN-14	CM-243/244		<	33.2	
24-JUN-14	U-233/234	299.9	+/-	38.2	
24-JUN-14	U-235	9.7	+/-	7.6	
24-JUN-14	PU-238		<	5.4	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2014-26

Collection Date	Nuclide	Concentration (pCi/Kg Dry)	Duplicate Analysis
24-JUN-14	K-40	11,860.0 +/- 716.8	
24-JUN-14	MN-54	< 26.8	
24-JUN-14	CO-58	< 31.0	
24-JUN-14	FE-59	< 39.8	
24-JUN-14	CO-60	< 20.6	
24-JUN-14	ZN-65	< 42.9	
24-JUN-14	CS-134	< 24.8	
24-JUN-14	CS-137	50.5 +/- 26.6	
24-JUN-14	U-233/234	335.2 +/- 36.8	
24-JUN-14	SR-90	< 86.2	
24-JUN-14	SR-89	< 211.5	
24-JUN-14	NI-63	< 381.5	
24-JUN-14	CM-243/244	< 49.3	
24-JUN-14	PU-239/240	< 10.0	
24-JUN-14	FE-55	< 18,070.2	
24-JUN-14	CM-242	< 46.5	
24-JUN-14	AM-241	< 28.5	
24-JUN-14	U-238	281.0 +/- 33.7	
24-JUN-14	PU-238	< 5.7	
24-JUN-14	U-235	15.1 +/- 8.3	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2014-27

Collection Date	Nuclide	Concentration (pCi/Kg Dry)			Duplicate Analysis
24-JUN-14	K-40	13,282.0	+/-	799.0	
24-JUN-14	MN-54		<	33.3	
24-JUN-14	CO-58		<	27.2	
24-JUN-14	FE-59		<	73.0	
24-JUN-14	CO-60		<	5.1	
24-JUN-14	ZN-65		<	54.7	
24-JUN-14	CS-134		<	26.0	
24-JUN-14	CS-137	93.5	+/-	38.3	
24-JUN-14	CM-243/244		<	11.0	
24-JUN-14	NI-63		<	449.5	
24-JUN-14	SR-89		<	209.7	
24-JUN-14	SR-90		<	94.1	
24-JUN-14	U-233/234	451.5	+/-	42.6	
24-JUN-14	U-235	16.8	+/-	8.6	
24-JUN-14	PU-238		<	7.9	
24-JUN-14	U-238	418.8	+/-	40.8	
24-JUN-14	AM-241		<	6.4	
24-JUN-14	CM-242		<	19.1	
24-JUN-14	FE-55		<	15,474.7	
24-JUN-14	PU-239/240		<	13.6	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2014-28

Collection Date	Nuclide	Concentration (pCi/Kg Dry)			Duplicate Analysis
24-JUN-14	K-40	12,029.0	+/-	706.4	
24-JUN-14	MN-54		<	30.9	
24-JUN-14	CO-58		<	26.8	
24-JUN-14	FE-59		<	34.2	
24-JUN-14	CO-60	33.4	+/-	16.0	
24-JUN-14	ZN-65		<	44.5	
24-JUN-14	CS-134		<	19.9	
24-JUN-14	CS-137	66.1	+/-	34.8	
24-JUN-14	SR-89		<	162.7	
24-JUN-14	NI-63		<	431.4	
24-JUN-14	SR-90		<	70.0	
24-JUN-14	U-233/234	405.5	+/-	39.7	
24-JUN-14	U-235	8.7	+/-	7.5	
24-JUN-14	PU-238		<	10.7	
24-JUN-14	U-238	360.0	+/-	37.9	
24-JUN-14	AM-241		<	13.5	
24-JUN-14	CM-242		<	22.0	
24-JUN-14	CM-243/244		<	13.5	
24-JUN-14	FE-55		<	14,974.0	
24-JUN-14	PU-239/240		<	10.7	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2014-29

Collection Date	Nuclide	Concentration (pCi/Kg Dry)	Duplicate Analysis
05-NOV-14	K-40	11,320.0 +/- 1,299.0	
05-NOV-14	MN-54	< 63.8	
05-NOV-14	CO-58	< 79.8	
05-NOV-14	FE-59	< 154.1	
05-NOV-14	CO-60	< 46.4	
05-NOV-14	ZN-65	< 123.6	
05-NOV-14	CS-134	< 50.0	
05-NOV-14	CS-137	< 43.0	
05-NOV-14	FE-55	< 15,910.6	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2014-30

Collection Date	Nuclide	Concentration (pCi/Kg Dry)	Duplicate Analysis
05-NOV-14	K-40	11,568.0 +/- 1,360.0	
05-NOV-14	MN-54	< 52.4	
05-NOV-14	CO-58	< 35.6	
05-NOV-14	FE-59	< 115.6	
05-NOV-14	CO-60	< 39.3	
05-NOV-14	ZN-65	< 121.7	
05-NOV-14	CS-134	< 46.5	
05-NOV-14	CS-137	170.0 +/- 55.4	
05-NOV-14	SR-89	< 126.0	
05-NOV-14	SR-90	< 32.7	
05-NOV-14	NI-63	< 452.3	
05-NOV-14	FE-55	< 15,561.6	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2014-31

Collection Date	Nuclide	Concentration (pCi/Kg Dry)	Duplicate Analysis
05-NOV-14	K-40	20,399.0 +/- 1,002.0	
05-NOV-14	MN-54	< 29.7	
05-NOV-14	CO-58	< 34.6	
05-NOV-14	FE-59	< 88.9	
05-NOV-14	CO-60	< 13.0	
05-NOV-14	ZN-65	< 86.4	
05-NOV-14	CS-134	< 19.7	
05-NOV-14	CS-137	58.0 +/- 25.1	
05-NOV-14	FE-55	< 15,769.1	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2014-32

Collection Date	Nuclide	Concentration (pCi/Kg Dry)	Duplicate Analysis
05-NOV-14	K-40	12,087.0 +/- 1,305.0	
05-NOV-14	MN-54	< 66.4	
05-NOV-14	CO-58	< 66.9	
05-NOV-14	FE-59	< 186.0	
05-NOV-14	CO-60	< 52.2	
05-NOV-14	ZN-65	< 112.9	
05-NOV-14	CS-134	< 53.4	
05-NOV-14	CS-137	< 61.6	
05-NOV-14	FE-55	< 15,619.2	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS HS-7

Collection Date	Nuclide	Concentration (pCi/Kg Dry)			Duplicate Analysis
24-JUN-14	K-40	13,462.0	+/-	757.3	
24-JUN-14	MN-54		<	36.0	
24-JUN-14	CO-58		<	25.4	
24-JUN-14	FE-59		<	56.3	
24-JUN-14	CO-60		<	20.3	
24-JUN-14	ZN-65		<	50.8	
24-JUN-14	CS-134		<	22.3	
24-JUN-14	CS-137	92.4	+/-	32.1	
24-JUN-14	CM-243/244		<	32.6	
24-JUN-14	FE-55		<	15,545.1	
24-JUN-14	PU-239/240		<	10.5	
24-JUN-14	CM-242		<	65.2	
24-JUN-14	AM-241		<	46.1	
24-JUN-14	U-238	442.6	+/-	39.7	
24-JUN-14	PU-238		<	14.9	
24-JUN-14	U-235	11.5	+/-	6.9	
24-JUN-14	U-233/234	489.5	+/-	41.7	
24-JUN-14	SR-90		<	103.0	
24-JUN-14	NI-63		<	445.2	
24-JUN-14	SR-89		<	239.5	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS HS-8

Collection Date	Nuclide	Concentration (pCi/Kg Dry)	Duplicate Analysis
05-NOV-14	K-40	11,857.0 +/- 1,394.0	
05-NOV-14	MN-54	< 64.4	
05-NOV-14	CO-58	< 62.3	
05-NOV-14	FE-59	< 201.9	
05-NOV-14	CO-60	< 43.0	
05-NOV-14	ZN-65	< 99.9	
05-NOV-14	CS-134	< 55.1	
05-NOV-14	CS-137	< 63.4	
05-NOV-14	FE-55	< 15,636.1	

Exposure Pathway - Aquatic
Vegetation
Location DC-ALT

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)	Duplicate Sample
23-JUN-14	AMERICAN PONDWEED	BE-7	< 133.6	
23-JUN-14	AMERICAN PONDWEED	K-40	2,517.9 +/- 298.3	
23-JUN-14	AMERICAN PONDWEED	MN-54	< 5.5	
23-JUN-14	AMERICAN PONDWEED	CO-58	< 9.2	
23-JUN-14	AMERICAN PONDWEED	FE-59	< 22.8	
23-JUN-14	AMERICAN PONDWEED	CO-60	< 10.9	
23-JUN-14	AMERICAN PONDWEED	ZN-65	< 21.8	
23-JUN-14	AMERICAN PONDWEED	ZR-NB-95	< 9.5	
23-JUN-14	AMERICAN PONDWEED	I-131	< 19.6	
23-JUN-14	AMERICAN PONDWEED	CS-134	< 10.2	
23-JUN-14	AMERICAN PONDWEED	CS-137	< 11.2	
29-SEP-14	AMERICAN PONDWEED	BE-7	311.2 +/- 105.2	
29-SEP-14	AMERICAN PONDWEED	K-40	2,369.7 +/- 252.0	
29-SEP-14	AMERICAN PONDWEED	MN-54	< 5.5	
29-SEP-14	AMERICAN PONDWEED	CO-58	< 6.1	
29-SEP-14	AMERICAN PONDWEED	FE-59	< 16.3	
29-SEP-14	AMERICAN PONDWEED	CO-60	< 10.2	
29-SEP-14	AMERICAN PONDWEED	ZN-65	< 8.3	
29-SEP-14	AMERICAN PONDWEED	ZR-NB-95	< 9.1	
29-SEP-14	AMERICAN PONDWEED	I-131	< 19.4	
29-SEP-14	AMERICAN PONDWEED	CS-134	< 9.2	
29-SEP-14	AMERICAN PONDWEED	CS-137	< 10.6	

Exposure Pathway - Aquatic
Vegetation
Location MUDS

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)			Duplicate Sample
22-AUG-14	AM. PONDWEED & NAIAD	BE-7	286.7	+/-	102.3	
22-AUG-14	AM. PONDWEED & NAIAD	BE-7	252.0	+/-	98.9	Duplicate
22-AUG-14	AM. PONDWEED & NAIAD	K-40	2,201.4	+/-	203.9	Duplicate
22-AUG-14	AM. PONDWEED & NAIAD	K-40	2,547.9	+/-	255.7	
22-AUG-14	AM. PONDWEED & NAIAD	MN-54		<	9.2	
22-AUG-14	AM. PONDWEED & NAIAD	MN-54		<	8.6	Duplicate
22-AUG-14	AM. PONDWEED & NAIAD	CO-58		<	7.9	Duplicate
22-AUG-14	AM. PONDWEED & NAIAD	CO-58		<	10.0	
22-AUG-14	AM. PONDWEED & NAIAD	FE-59		<	17.9	Duplicate
22-AUG-14	AM. PONDWEED & NAIAD	FE-59		<	11.5	
22-AUG-14	AM. PONDWEED & NAIAD	CO-60		<	7.9	Duplicate
22-AUG-14	AM. PONDWEED & NAIAD	CO-60		<	9.7	
22-AUG-14	AM. PONDWEED & NAIAD	ZN-65		<	18.2	
22-AUG-14	AM. PONDWEED & NAIAD	ZN-65		<	14.8	Duplicate
22-AUG-14	AM. PONDWEED & NAIAD	ZR-NB-95		<	12.1	
22-AUG-14	AM. PONDWEED & NAIAD	ZR-NB-95		<	9.2	Duplicate
22-AUG-14	AM. PONDWEED & NAIAD	I-131		<	21.6	
22-AUG-14	AM. PONDWEED & NAIAD	I-131		<	27.4	Duplicate
22-AUG-14	AM. PONDWEED & NAIAD	CS-134		<	8.8	Duplicate
22-AUG-14	AM. PONDWEED & NAIAD	CS-134		<	9.1	
22-AUG-14	AM. PONDWEED & NAIAD	CS-137		<	10.7	
22-AUG-14	AM. PONDWEED & NAIAD	CS-137		<	10.4	Duplicate

Exposure Pathway - Terrestrial
Vegetation

Location EEA

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)	Duplicate Analysis
03-JUN-14	PASTURAGE	BE-7	1,022.1 +/- 140.8	
03-JUN-14	PASTURAGE	K-40	7,351.1 +/- 368.1	
03-JUN-14	PASTURAGE	MN-54	< 12.7	
03-JUN-14	PASTURAGE	CO-58	< 14.2	
03-JUN-14	PASTURAGE	FE-59	< 32.7	
03-JUN-14	PASTURAGE	CO-60	< 14.1	
03-JUN-14	PASTURAGE	ZN-65	< 27.3	
03-JUN-14	PASTURAGE	ZR-NB-95	< 17.2	
03-JUN-14	PASTURAGE	I-131	< 19.0	
03-JUN-14	PASTURAGE	CS-134	< 12.6	
03-JUN-14	PASTURAGE	CS-137	< 12.5	

Exposure Pathway - Terrestrial
Vegetation

Location MUDS

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)		Duplicate Analysis
27-MAY-14	PASTURAGE	BE-7	1,546.2 +/-	253.3	
27-MAY-14	PASTURAGE	K-40	4,423.9 +/-	653.5	
27-MAY-14	PASTURAGE	MN-54	<	18.2	
27-MAY-14	PASTURAGE	CO-58	<	8.9	
27-MAY-14	PASTURAGE	FE-59	<	36.3	
27-MAY-14	PASTURAGE	CO-60	<	13.6	
27-MAY-14	PASTURAGE	ZN-65	<	23.4	
27-MAY-14	PASTURAGE	ZR-NB-95	<	12.2	
27-MAY-14	PASTURAGE	I-131	<	30.2	
27-MAY-14	PASTURAGE	CS-134	<	15.1	
27-MAY-14	PASTURAGE	CS-137	<	12.3	
22-AUG-14	PASTURAGE	BE-7	1,612.3 +/-	300.3	
22-AUG-14	PASTURAGE	K-40	4,016.0 +/-	497.4	
22-AUG-14	PASTURAGE	MN-54	<	17.9	
22-AUG-14	PASTURAGE	CO-58	<	18.9	
22-AUG-14	PASTURAGE	FE-59	<	46.2	
22-AUG-14	PASTURAGE	CO-60	<	21.6	
22-AUG-14	PASTURAGE	ZN-65	<	43.5	
22-AUG-14	PASTURAGE	ZR-NB-95	<	29.0	
22-AUG-14	PASTURAGE	I-131	<	37.6	
22-AUG-14	PASTURAGE	CS-134	<	18.0	
22-AUG-14	PASTURAGE	CS-137	<	22.2	

Exposure Pathway - Terrestrial
Soil
Location MUDS

Collection Date	Nuclide	Concentration (pCi/Kg Dry)	Duplicate Analysis
14-MAY-14	K-40	10,533.0 +/- 702.0	
14-MAY-14	MN-54	< 27.6	
14-MAY-14	CO-58	< 19.4	
14-MAY-14	FE-59	< 25.2	
14-MAY-14	CO-60	< 13.0	
14-MAY-14	ZN-65	< 52.8	
14-MAY-14	CS-134	< 21.2	
14-MAY-14	CS-137	50.4 +/- 22.6	

Exposure Pathway - Ingestion
Meat

Location A1.0

Collection Date	Sample Description	Nuclide	Concentration (pCi/Kg Wet)	Duplicate Analysis
17-SEP-14	DEER	K-40	2,553.8 +/- 393.4	
17-SEP-14	DEER	MN-54	< 10.8	
17-SEP-14	DEER	CO-58	< 9.5	
17-SEP-14	DEER	FE-59	< 27.9	
17-SEP-14	DEER	CO-60	< 15.1	
17-SEP-14	DEER	ZN-65	< 16.3	
17-SEP-14	DEER	CS-134	< 15.3	
17-SEP-14	DEER	CS-137	< 14.4	
17-SEP-14	DEER	H-3	1,251.0 +/- 103.0	

WOLF CREEK GENERATING STATION

2014 LAND USE CENSUS REPORT

Prepared by:	Teresa L. Rice	09-24-14
	Teresa L. Rice	Date
Peer Review:	Craig T. Adkinson	09/24/14
	Craig T. Adkinson	Date
Approved by:	James K. Rudeen	09/24/14
	James K. Rudeen	Date

EXECUTIVE SUMMARY

The annual Land Use Census of rural residents within five miles of the Wolf Creek Generating Station (WCGS) has been completed in 2014 in accordance with AP 07B-004, [Offsite Dose Calculation Manual (Radiological Environmental Monitoring Program)].

No program changes are necessary regarding milk locations. Again, no milk sampling locations were identified.

The two broadleaf vegetation locations with the highest calculated annual average D/Q rankings are A2.60-17TE1527 and Q2.35-MILA1619. AP 07B-004 specifies, "Alternate sampling locations may be used to provide continued monitoring". The third-ranked garden is N2.38-RODR9. Since these gardens are currently listed as sample locations for the Radiological Environmental Monitoring Program in procedure AP 07B-004 (locations A-3, Q-6 and N-1), no program changes are necessary regarding broadleaf vegetation locations.

BACKGROUND

Section 5.2, Attachment A, of procedure AP 07B-004, directs that "a Land Use Census shall be conducted annually during the growing season to identify the nearest (1) milk animal, (2) residence, and (3) garden of greater than 500 square feet producing broadleaf vegetation in each of the 16 meteorological sections within five miles of the WCGS site."

Table 5-1, Attachment A, of procedure AP 07B-004, requires that broadleaf vegetation samples be collected from "two indicator locations (using the criteria from the "Land Use Census" section) with highest calculated annual average D/Q."

Table 5-1, Attachment A, of procedure AP 07B-004, also requires that milk samples be collected from "three indicator locations within 5 miles of the site having the highest dose potential."

METHODOLOGY

Over two hundred surveys were mailed to the rural residents living within five miles of WCGS. A follow-up survey was sent to residents who did not respond. The survey excluded the residents of New Strawn and Burlington. These locations were excluded due to the large number of households and the low likelihood that information gained from these residences would affect the locations chosen for REMP sampling. Drive-by information was collected for the nearest residences in each sector that did not return surveys.

The information collected was compiled and the results are identified in Tables 1-3. Calculations were performed so that garden locations could be ranked by their respective D/Q. These results are contained in Table 4.

RESULTS

No changes were identified for the nearest occupied residence in each sector. Seven changes were noted for the nearest garden producing broadleaf vegetation. There were no changes regarding milk sample locations. Again, no locations were identified that routinely milked animals for human consumption.

TABLE 1

2014 Land Use Census Data

Location of Nearest:

Sector	Residence	Milking Animals	Broadleaf Garden
A	A2.47-17RD1474	None	A2.60-17TE1527
B	B3.53-QURD1755	None	None
C	C1.92-16RD1703	None	C3.16-QURD1712
D	D2.03-QULA1571	None	D2.33-RERD1520
E	E1.77-QULA1485	None	E4.92-15R2065
F	F1.84-QULA1419	None	F2.28-14RD1785
G	G3.03-13RD1820	None	G3.66-12RD1814
H	H3.09-12RD1711	None	None
J	J3.70-11RD1540	None	J3.70-11RD1540
K	K2.70-12LA1439	None	K4.10-NARD1120
L	L2.10-NARD1339	None	L2.39-NARD1309
M	M2.34-14RD1346	None	M3.78-LYRD1390
N	N2.08-15RD1350	None	N2.38-RODR9
P	P2.76-HW751534	None	P3.52-16RD1196
Q	Q2.35-MILA1619	None	Q2.35-MILA1619
R	R2.08-NALN1650	None	None

Identifiers are based upon the following protocol:

EXAMPLE: A2.47-17RD1474

"A" = Sector A

"2.47" = 2.47 miles from the reactor

"17RD1474" = address

TABLE 2

SECTOR	2013 NEAREST RESIDENCE	2014 NEAREST RESIDENCE
A	A2.47-17RD1474	A2.47-17RD1474
B	B3.53-QURD1755	B3.53-QURD1755
C	C1.92-16RD1703	C1.92-16RD1703
D	D2.03-QULA1571	D2.03-QULA1571
E	E1.77-QULA1485	E1.77-QULA1485
F	F1.84-QULA1419	F1.84-QULA1419
G	G3.03-13RD1820	G3.03-13RD1820
H	H3.09-12RD1711	H3.09-12RD1711
J	J3.70-11RD1540	J3.70-11RD1540
K	K2.70-12LA1439	K2.70-12LA1439
L	L2.10-NARD1339	L2.10-NARD1339
M	M2.34-14RD1346	M2.34-14RD1346
N	N2.08-15RD1350	N2.08-15RD1350
P	P2.76-HW751534	P2.76-HW751534
Q	Q2.35-MILA1619	Q2.35-MILA1619
R	R2.08-NALN1650	R2.08-NALN1650

NOTE: Entries underlined indicate changes from the 2013 Land Use Census.

TABLE 3

2014 Land Use Census Milk and Garden Data

SECTOR	2013 MILKING ANIMALS	2014 MILKING ANIMALS	2013 NEAREST GARDEN PRODUCING BROADLEAF VEGETATION	2014 NEAREST GARDEN PRODUCING BROADLEAF VEGETATION
A	None	None	A2.60-17TE1527	A2.60-17TE1527
B	None	None	None	None
C	None	None	C3.58-RERD1675	C3.16-QURD1712
D	None	None	D3.00-16RD1829	D2.33-RERD1520
E	None	None	None	E4.92-15R2065
F	None	None	F2.44-RERD1391	F2.28-14RD1785
G	None	None	G3.77-12RD1831	G3.66-12RD1814
H	None	None	H3.89-11RD1655	None
J	None	None	J3.70-11RD1540	J3.70-11RD1540
K	None	None	K4.10-NARD1120	K4.10-NARD1120
L	None	None	L2.39-NARD1309	L2.39-NARD1309
M	None	None	M3.78-LYRD1390	M3.78-LYRD1390
N	None	None	N2.38-RODR9	N2.38-RODR9
P	None	None	P2.93-BRST250	P3.52-16RD1196
Q	None	None	Q2.35-MILA1619	Q2.35-MILA1619
R	None	None	None	None

NOTE: Underlined entries indicate changes from the 2013 Land Use Census.

TABLE 4

Information Used for D/Q Calculations on Gardens Producing Broadleaf Vegetation

FROM LAND USE			FROM SA-13-002					
	DIST	CALC	NEAR	NEAR	FAR	FAR		SECTOR
SECTOR	(MI)	(METERS)	DIST	D / Q	DIST	D / Q	CALC	RANKING
A	2.60	**4184**	4000	1.86E-09	5000	1.26E-09	**1.75E-09**	1
B								
C	3.16	**5086**	5000	2.51E-10	6000	1.85E-10	**2.45E-10**	12
D	2.33	**3750**	3000	4.88E-10	4000	2.93E-10	**3.42E-10**	10
E	4.92	**7918**	7000	1.23E-10	8000	9.93E-11	**1.01E-10**	13
F	2.28	**3669**	3000	6.15E-10	4000	3.69E-10	**4.50E-10**	6
G	3.66	**5890**	5000	4.85E-10	6000	3.57E-10	**3.71E-10**	9
H								
J	3.70	**5955**	5000	6.06E-10	6000	4.46E-10	**4.53E-10**	5
K	4.10	**6598**	6000	4.46E-10	7000	3.31E-10	**3.77E-10**	8
L	2.39	**3846**	3000	1.10E-09	4000	6.62E-10	**7.29E-10**	4
M	3.78	**6083**	6000	2.67E-10	7000	1.99E-10	**2.61E-10**	11
N	2.38	**3830**	3000	1.17E-09	4000	7.00E-10	**7.80E-10**	3
P	3.52	**5665**	5000	5.19E-10	6000	3.82E-10	**4.28E-10**	7
Q	2.35	**3782**	3000	1.46E-09	4000	8.79E-10	**1.01E-09**	2
R								

Originated by: Teresa L. Rice Date: 09-24-14

Verified by: Craig T. Atkinson Date: 09/24/14