WOLF CREEK
NUCLEAR OPERATING CORPORATION

Michael J. Westman
Manager Regulatory Affairs

April 24, 2013

RA 13-0053

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

Subject: Docket No. 50-482: 2012 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, 2012, through December 31, 2012.

This letter contains no commitments. If you have any questions concerning this matter, please contact me at (620) 364-8831 ext. 4009, or Mr. William Muilenburg, at (620) 364-8831, ext. 4511.

Sincerely,

Michael J. Westman

MJW/rlt

Enclosure: 2012 Annual Radiological Environmental Operating Report (165 pages)

cc: A. T. Howell (NRC), w/e
C. F. Lyon (NRC), w/e
N. F. O'Keefe (NRC), w/e
Senior Resident Inspector (NRC), w/e

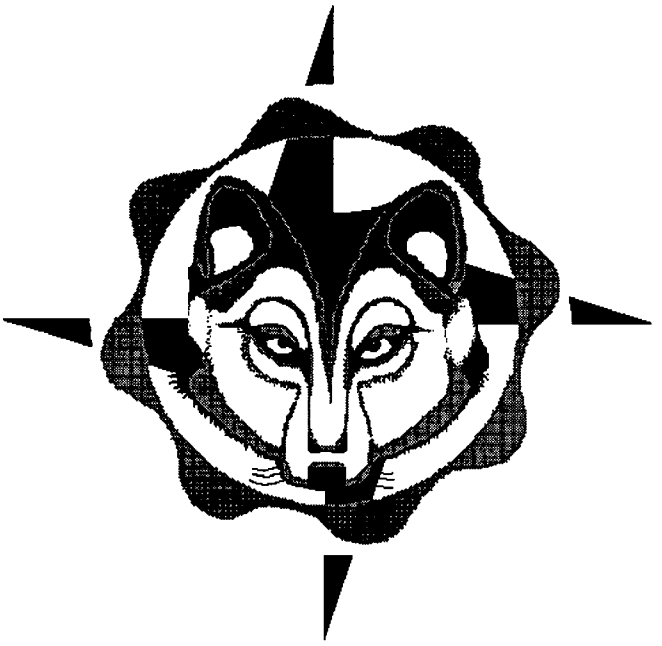
IE25
NRR

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

2012 ANNUAL RADIOLOGICAL

ENVIRONMENTAL OPERATING REPORT



April 15, 2013

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EXECUTIVE SUMMARY

Plant-related activation, corrosion, or fission products were not detected during 2012 in airborne particulate and radioiodine filters, ground water, broadleaf vegetation, shoreline sediment, crops, aquatic vegetation, terrestrial vegetation, bottom sediment, or soil samples. Activation, corrosion or fission products attributable to plant operation were detected during 2012 in surface water, fish, drinking water, 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 2012 Annual Radiological Environmental Operating Report for Wolf Creek Generating Station (WCGS) covers the period from January 1 through December 31, 2012. 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/sample locations, sample collection frequency and type/frequency of analysis. Table 2 lists the sample location identifiers, distances and directions from the plant. Samples in addition to those required by the WCGS Offsite Dose Calculation Manual (ODCM) 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 particulate and radioiodine samples on 47 mm glass fiber filters and charcoal canisters, respectively. The filters and charcoal canisters were changed out weekly. Gross beta analysis was performed on the air particulate filters. Air particulate filters were also analyzed quarterly for gamma emitting isotopes. Charcoal canisters were analyzed for I-131.

Air samples were collected from six locations. The five 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 locations are shown in Figure 1 and the control location is shown in Figure 5.

B. Direct Radiation Pathway

Optically stimulated luminescence (OSL) dosimeters were used 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. Transit dose was measured and subtracted from the ambient dose. Indicator OSL sample locations are illustrated in Figure 2 and control locations are shown in Figure 5. Control locations were 39 (Beto Junction) and 53 (near the intersection of 20th Road and Yearling Road).

C. Waterborne Pathway

Water samples were analyzed to determine if gamma emitters were present. In addition to gamma isotopic analysis, radiochemical analysis for I-131 was performed on drinking water and ground water samples. Gross beta analysis was also performed on drinking water samples. Tritium analysis was performed monthly by liquid scintillation for surface water and quarterly for drinking water. Tritium analysis was also performed 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 location is located near the spillway of Coffey County Lake, formerly known as Wolf Creek 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 location IO-DW) and Burlington (control location BW-15). The Iola facility is located downstream of the site and the Burlington facility is located upstream of the confluence of the Coffey County Lake discharge and the Neosho River. Composite samples were obtained monthly from automatic samplers at each location. The 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 location) and from the tail waters of JRR (control 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 from five gardens. Four indicator (B-1, H-2, N-1 and Q-6) gardens (Figure 4) and one control (D-2) garden (Figure 5) were sampled. Gamma isotopic analyses were performed on these samples.

Crop samples were obtained from two indicator locations (NR-D1 and NR-D2) downstream of the confluence of Wolf Creek and the Neosho River. One crop sample was obtained 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 ODCM)

Quarterly, duplicate ground water grab samples were obtained from indicator location C-49 and were labeled L-49. These duplicate samples served as laboratory quality checks. The ground water samples were analyzed for gamma emitters, I-131, and tritium.

Bottom sediment samples were collected from indicator locations at the Coffey County Lake discharge cove (DC), Environmental Education Area (EEA), Make-Up Discharge Structure (MUDS), Ultimate Heat Sink (UHS), Essential Service Water (ESW) channel, Stringtown Cemetery (SC) and the control location (JRR). Gamma isotopic analyses were performed on the bottom sediment samples. Samples obtained from DC, ESW and UHS were also analyzed for Fe-55. Some of the bottom sediment samples were 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.

Shoreline sediment samples were collected from indicator locations EEA and SC. Gamma isotopic analyses were performed on the samples. These samples were collected as part of a cooperative sampling effort with the KDHE. The sample locations are identified on Figure 3.

Aquatic vegetation was collected from indicator locations DC ALT, EEA, MUDS and SC. 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 EEA indicator location. Gamma isotopic analysis was performed on the grass sample. This sample was collected as part of a cooperative sampling effort with the KDHE. The sample location is identified on Figure 4.

Soil was sampled from the EEA indicator 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 location A1.5. Gamma isotopic analysis and tritium analysis was performed. 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. Chart 2 represents the historical smoothed averages of indicator locations and the control locations gross beta data. Charts 1 and 2 demonstrate how closely the indicator and control 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 2012 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 2012 weekly gross beta analyses range for indicator locations was 0.009 to 0.064 pCi/m^3. The 2012 weekly gross beta analyses range was within the 1983 and 1984 pre-operational range. Additionally, the annual mean for indicator locations for 2012 (0.029 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 2012 (0.029 pCi/m^3) was the same as the annual mean of the control location (0.029 pCi/m^3). The indicator location with the highest gross beta annual mean was location 49 (0.031 pCi/m^3) and was slightly higher than the annual mean of the control location (0.029 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 2012, the range for Be-7 detected activity was 0.052 to 0.105 pCi/m^3 for indicator locations and the annual mean for indicator locations was 0.082 pCi/m^3. The control location annual mean for Be-7 detected activity (0.090 pCi/m^3) was slightly higher than the annual mean of the indicator locations (0.082 pCi/m^3).

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

The ODCM required lower limits of detection were met. Plant-related activation, corrosion, or fission products were not detected during 2012 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 locations in 2012 was 19.5 mR per standardized 90-day quarter. The annual mean of the control locations in 2012 was 18.6 mR per standardized 90-day quarter.

For pre-operational comparison, in 1981, the annual mean of indicator locations was 18.9 mR per standardized 90-day quarter and the annual mean for the control 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 location with the highest annual mean was 47 (24.8 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 2012.

Chart 4 displays the TLD nearsite locations (1, 2, 7-9, 11-14, 18, 26, 27, 29, 30, 37 and 38) and the control 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 Coffey County Lake Spillway (SP) indicator location during 2012. The annual mean for detected tritium activity at the SP location was 11,435 pCi/L and the range was 10,037 to 12,545 pCi/L. The detected tritium activity was below the 30,000 pCi/L ODCM reporting level. Chart 5 illustrates the yearly averages of surface water tritium data for the spillway location. Chart 5 indicates the average tritium concentration of the Coffey County Lake spillway location may have reached equilibrium. Tritium activity was not detected in samples obtained from the control location (JRR).

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

The ODCM 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 in surface water samples and no unusual trends were noted.

(2) Ground Water

ODCM 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 2012 in ground water samples.

(3) Drinking Water

Gross beta activity was detected in drinking water samples collected from the indicator location and in samples collected from the control location. The annual mean of the indicator location gross beta activity (3.0 pCi/L) was slightly higher when compared to the annual mean of the control location gross beta activity (2.8 pCi/L). The 2012 annual means of gross beta activity for both the indicator and control locations were lower than those of the pre-operational monitoring year of 1984. In 1984, the annual mean of the indicator location gross beta activity was 7.5 pCi/L and the annual mean of the control 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 locations.

Tritium activity (222 pCi/L) was detected in the first quarter of 2012 at the indicator location. The detected tritium activity was well below the 20,000 pCi/L ODCM reporting level. Condition Report 00052766 concluded due to low Neosho River flows, coupled with wave overlap discharges from Coffey County Lake, WCGS was a plausible source. Tritium activity was not detected in 2012 at the control location. In 1984 (pre-operational), tritium activity was not detected in any drinking water samples.

ODCM required lower limits of detection were met. Additionally, radionuclides were not detected by the I-131 or gamma isotopic analyses.

(4) Shoreline Sediment

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

ODCM required lower limits of detection were met. Plant-related activation, corrosion, or fission products were not detected during 2012 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 location and in fish samples obtained from the JRR control 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 (7,728 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 (8,948 pCi/kg), would receive a committed effective dose equivalent of 0.012 mRem.

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

No other radionuclides were detected in fish during the year. The ODCM 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 locations detected naturally occurring gamma emitters Be-7 and K-40. Be-7 and K-40 activity were also detected pre-operationally.

No other radionuclides were detected in broadleaf vegetation during the year. The ODCM required lower limits of detection were met and no unusual trends were noted. Plant-related activation, corrosion, or fission products were not detected during 2012 in broadleaf vegetation samples.

(4) Crop Samples

Gamma analysis detected naturally occurring K-40 activity to be present in the samples collected from the indicator locations and in the sample collected from the control location. K-40 activity was also detected during pre-operational crop monitoring. K-40 was the only activity detected in the crop samples. The ODCM required lower limits of detection were met. Plant-related activation, corrosion, or fission products were not detected during 2012 in crop samples and no unusual trends were noted.

E. Additional Samples Collected (not required by ODCM)

(1) Bottom Sediment

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

Cs-137 activity was detected in nine out of the seventeen samples obtained from indicator locations (range 26 to 126 pCi/kg, dry). Cs-137 activity was also detected in both samples obtained from the control location (range 45 to 122 pCi/kg, dry).

Cs-137 activity was detected in pre-operational samples. The Cs-137 activity detected in 2012 indicator 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 38 to 462 pCi/kg.)

The detected Cs-137 activity in the samples collected from the indicator 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 location.

Chart 7 plots the Cs-137 detected activity from the discharge cove indicator location and JRR control 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 locations. No other radionuclides were detected in bottom sediment samples.

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

(2) Aquatic Vegetation

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

No other radionuclides were detected. Plant-related activation, corrosion, or fission products were not detected during 2012 in aquatic vegetation samples and no unusual trends were noted.

(3) Shoreline Sediment

Naturally occurring K-40 activity was detected in the shoreline sediment samples obtained from the EEA and SC indicator locations. K-40 activity was also detected during pre-operational monitoring.

Cs-137 activity (234.3 pCi/kg, dry) was detected in the shoreline sediment sample obtained from the EEA indicator location and in the sample obtained from the SC indicator location (75.8 pCi/kg, dry). Cs-137 activity was also detected in pre-operational shoreline sediment samples. Cs-137 activity detected in shoreline sediment samples collected from the DC location from 1982 to 1984 was in the range of 224 to 437 pCi/kg, dry. The decay corrected range of pre-operational Cs-137 activity detected is approximately 119 to 225 pCi/kg, dry. The detected Cs-137 activity in the shoreline sediment samples was likely due to fallout since the results are nearly within the pre-operational decay corrected range. Additionally, Cs-137 activity is routinely detected in soil and sediment samples collected from the control locations.

No other radionuclides were detected. Plant-related activation, corrosion, or fission products were not detected and no unusual trends were noted.

(4) Terrestrial Vegetation

Naturally occurring Be-7 and K-40 activity were detected in a terrestrial vegetation indicator location sample collected in 2012. No other radionuclides were detected. Plant-related activation, corrosion or fission products were not detected during 2012 in terrestrial vegetation samples and no unusual trends were noted.

(5) Soil

Naturally occurring K-40 activity was detected in the EEA indicator location soil sample. K-40 activity was also detected during pre-operational soil monitoring.

Cs-137 activity (155 pCi/kg) was detected in the EEA indicator location soil sample. 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, dry. The decay corrected range of pre-operational Cs-137 activity detected in soil is approximately 137 to 1,160 pCi/kg. The detected Cs-137 activity in soil sampled in 2012 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 2012 in this soil sample and no unusual trends were noted.

(6) Deer

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

The deer sample was also analyzed for tritium. The detected tritium was 916 pCi/kg. The detected tritium activity was attributable to plant operation.

No other radionuclides were detected. No unusual trends were identified.

III. PROGRAM REVISIONS/CHANGES

Based upon Condition Report 00051888, the descriptions of the air monitoring stations were revised in AP 07B-004, *Offsite Dose Calculation Manual (Radiological Environmental Monitoring Program)*, to be clearer.

For personnel safety reasons, dosimeter locations #4 and #51 were moved within the same sector.

IV. PROGRAM DEVIATIONS

Drinking Water Samples

Drinking water was not continuously collected at the Burlington control sample location during the 08-06-2012 to 09-04-2012 sample period due to an equipment malfunction (ruptured tube). Approximately 2-1/2 gallons of water was collected before the sampler stopped operating. The composited sample and a grab sample were submitted to the vendor lab for analysis. The drinking water sampler was repaired on the same day of discovery. Condition Report 00056913 was generated to document the condition.

Drinking water was not continuously collected at the Iola indicator sample location during 09-28-2012 to 10-01-2012 since the sampler intake tubing was not moved following a water plant line-up change. Sufficient water was collected for the monthly composite sample. The drinking water sampler intake tubing was moved on the same day of discovery to a bay that contained water. Condition Report 00058066 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

During 2012, 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 0.194 mRem for 2012.

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 (11,435 pCi/L), would receive a committed effective dose equivalent of 0.522 mRem per year. For an adult eating 21 kg of fish per year from Coffey County Lake, using the average tritium activity (7,728 pCi/kg), would receive a committed effective dose equivalent of 0.010 mRem per year. Based upon the REMP results, the dose from both pathways was calculated to be 0.532 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 ODCM)

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)**		
	40 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, 47, & 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), Environmental 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 site (Location IO-DW on Figure 5); control *sample from location* upstream of the site (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 Q-6 and N-1 and alternate locations B-1, H-2 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
	EEA	3.0	NNW	R
	JRR	3.6	W	N
	SC	0.8	NNW	R
Fish	CCL	0.6	E to NNW	E to R
	JRR	3.7	W	N
Food/Garden	B-1	0.8	NNE	B
	D-2	14.8	ENE	D
	H-2	3.0	SSE	H
	N-1	2.4	W	N
	Q-6	2.4	NW	Q
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
	EEA	3.0	NNW	R
	ESW	0.5	E	E
	JRR	3.7	W	N
	MUDS	1.5	WNW	P
	SC	0.8	NNW	R
	UHS	0.6	E	E
Aquatic Vegetation	DC ALT	1.5	NW	Q
	EEA	3.0	NNW	R
	MUDS	1.5	WNW	P
	SC	0.8	NNW	R
	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
Soil	EEA	3.0	NNW	R
Meat (Deer)	A1.5	1.5	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	17.6	23.4	23.7	20.4	85.1
2	16.6	19.9	20.6	21.5	78.6
4	20.5	22.3	23.4	21.9	88.1
5	17.1	19.4	19.6	18.6	74.7
7	18.7	18.7	20.3	18.1	75.8
8	19.9	22.8	23.2	24.0	89.9
9	16.8	17.7	19.6	18.6	72.7
11	19.6	20.9	21.2	17.6	79.3
12	19.3	22.3	21.0	20.6	83.2
13	19.1	21.8	21.0	22.6	84.5
14	19.9	20.3	24.4	21.6	86.2
15	17.2	19.6	21.7	21.1	79.6
16	14.4	20.9	20.7	17.9	73.9
17	15.8	17.7	19.6	21.6	74.7
18	18.7	19.3	19.6	21.1	78.7
19	18.6	20.5	24.7	19.8	83.6
20	19.1	21.0	23.6	18.8	82.5
22	22.0	24.3	22.6	20.1	89.0
23	21.5	19.6	21.7	19.1	81.9
24	16.3	21.0	22.2	18.1	77.6
25	15.2	17.3	17.7	17.3	67.5
26	16.2	16.5	21.0	16.9	70.6
27	17.4	21.5	21.6	19.8	80.3
29	13.5	16.8	16.6	14.8	61.7
30	17.6	21.4	20.0	22.0	81.0
32	17.7	21.1	21.7	21.1	81.6
34	16.7	21.2	21.0	20.1	79.0
35	18.2	21.4	21.4	20.1	81.1
36	15.0	20.5	21.2	20.1	76.8
37	18.1	16.5	18.5	20.1	73.2
38	19.5	22.0	17.7	20.3	79.5
39	14.7	16.5	19.6	17.2	68.0
41	14.7	19.3	22.6	18.4	75.0
42	11.0	12.8	13.5	14.7	52.0
43	10.0	13.8	14.3	13.2	51.3
44	17.6	21.1	20.4	18.6	77.7
46	16.8	19.1	22.0	18.1	76.0
47	19.9	27.7	27.9	23.8	99.3
49	17.6	19.7	17.4	19.6	74.3
50	19.9	25.0	20.7	21.6	87.2
51	14.9	21.9	21.0	17.8	75.6
52	16.7	21.9	22.2	22.3	83.1
53	20.1	22.0	22.2	16.7	81.0

FIGURE 1

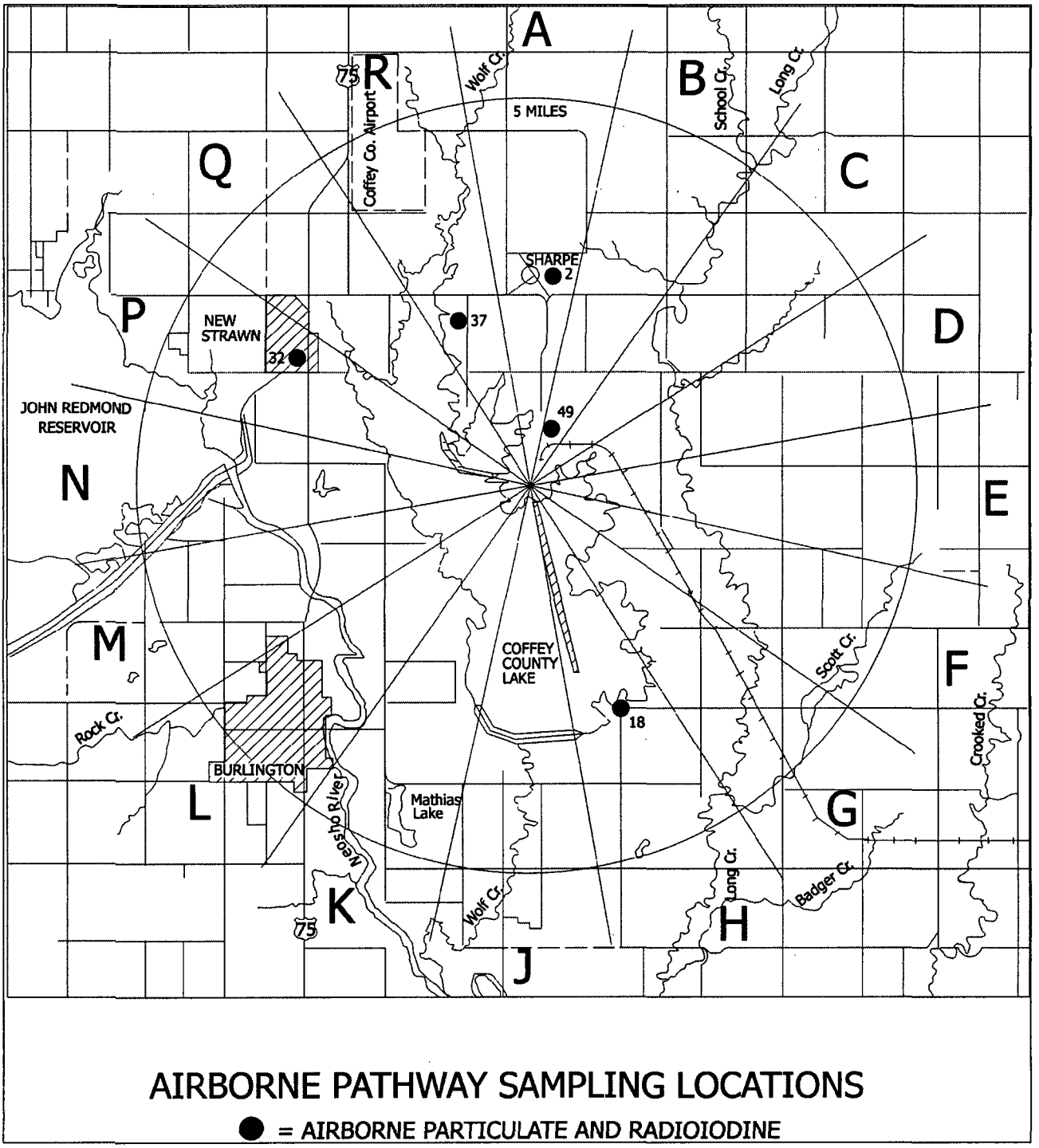
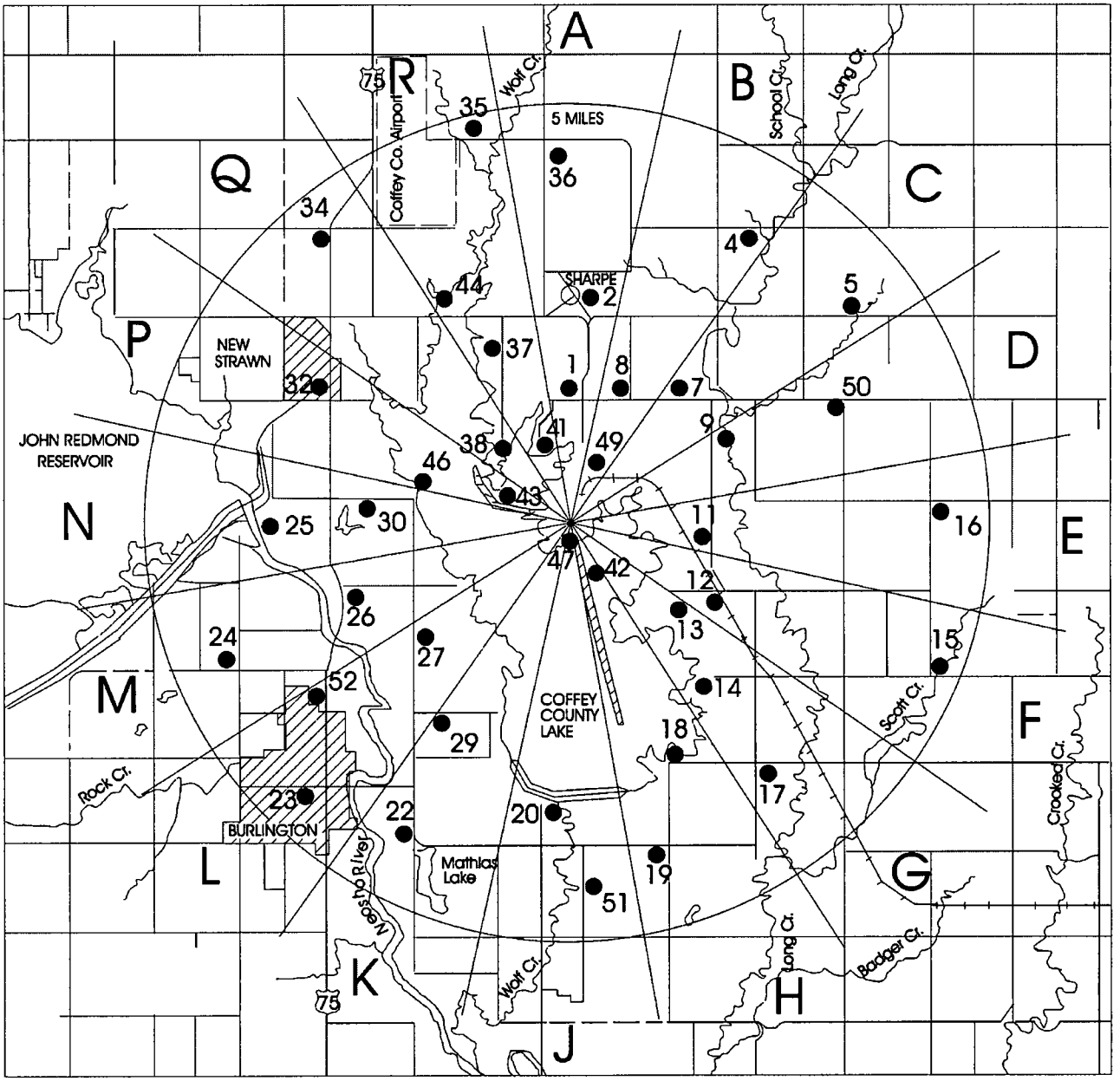

A
B
C
D
E
F
G
H
J
K
L
M
N
P
Q
R
75
Wolf Cr.
Coffey Co. Airport
5 MILES
School Cr.
Long Cr.
SHARPE
2
37
NEW STRAWN
32
JOHN REDMOND RESERVOIR
49
COFFEY COUNTY LAKE
18
Scott Cr.
Crooked Cr.
Rock Cr.
BURLINGTON
Neosho River
Mathias Lake
Long Cr.
Badger Cr.
Wolf Cr.
75
AIRBORNE PATHWAY SAMPLING LOCATIONS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

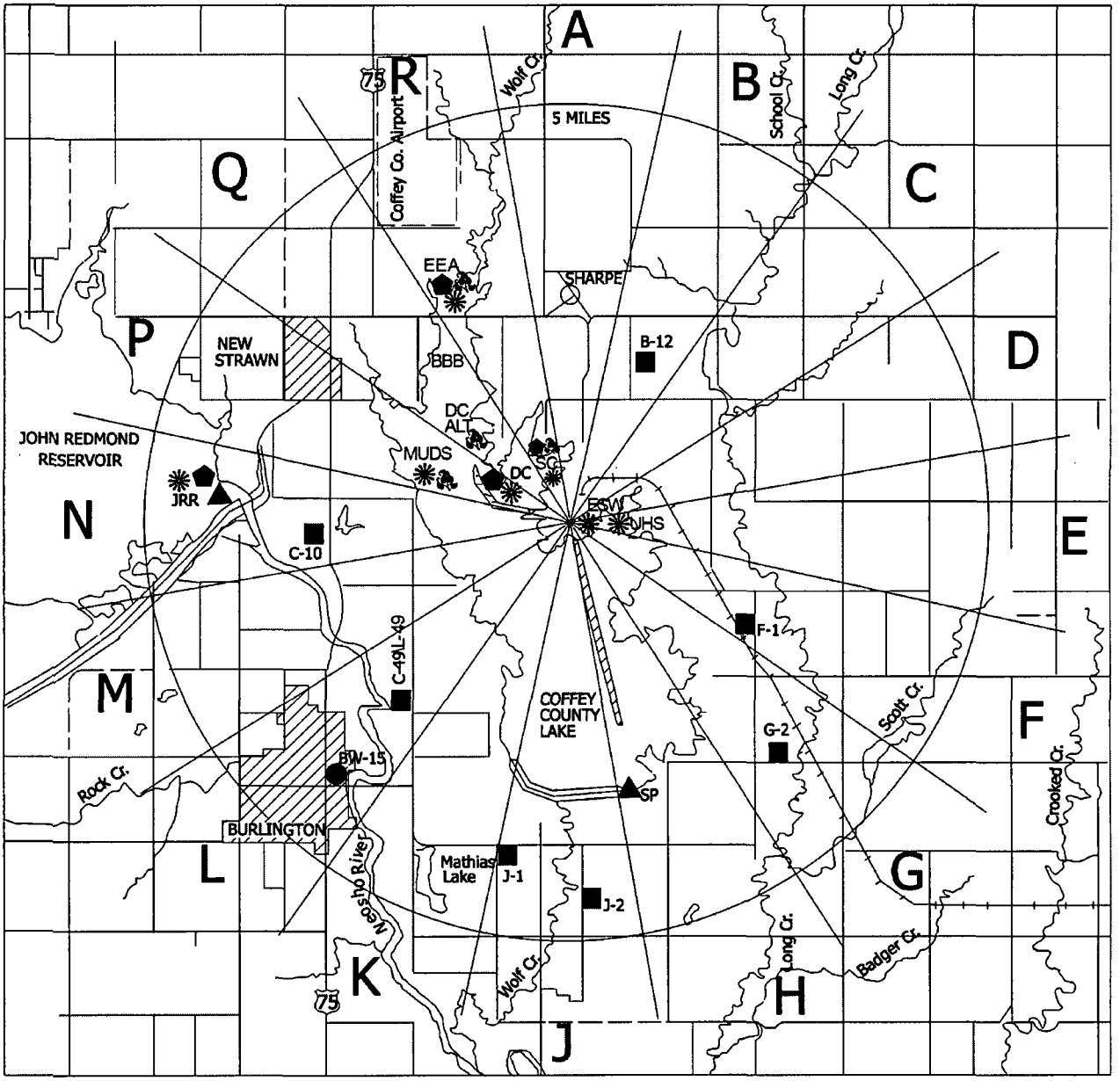
FIGURE 2



DIRECT RADIATION PATHWAY SAMPLING LOCATIONS

● = DOSIMETER LOCATIONS

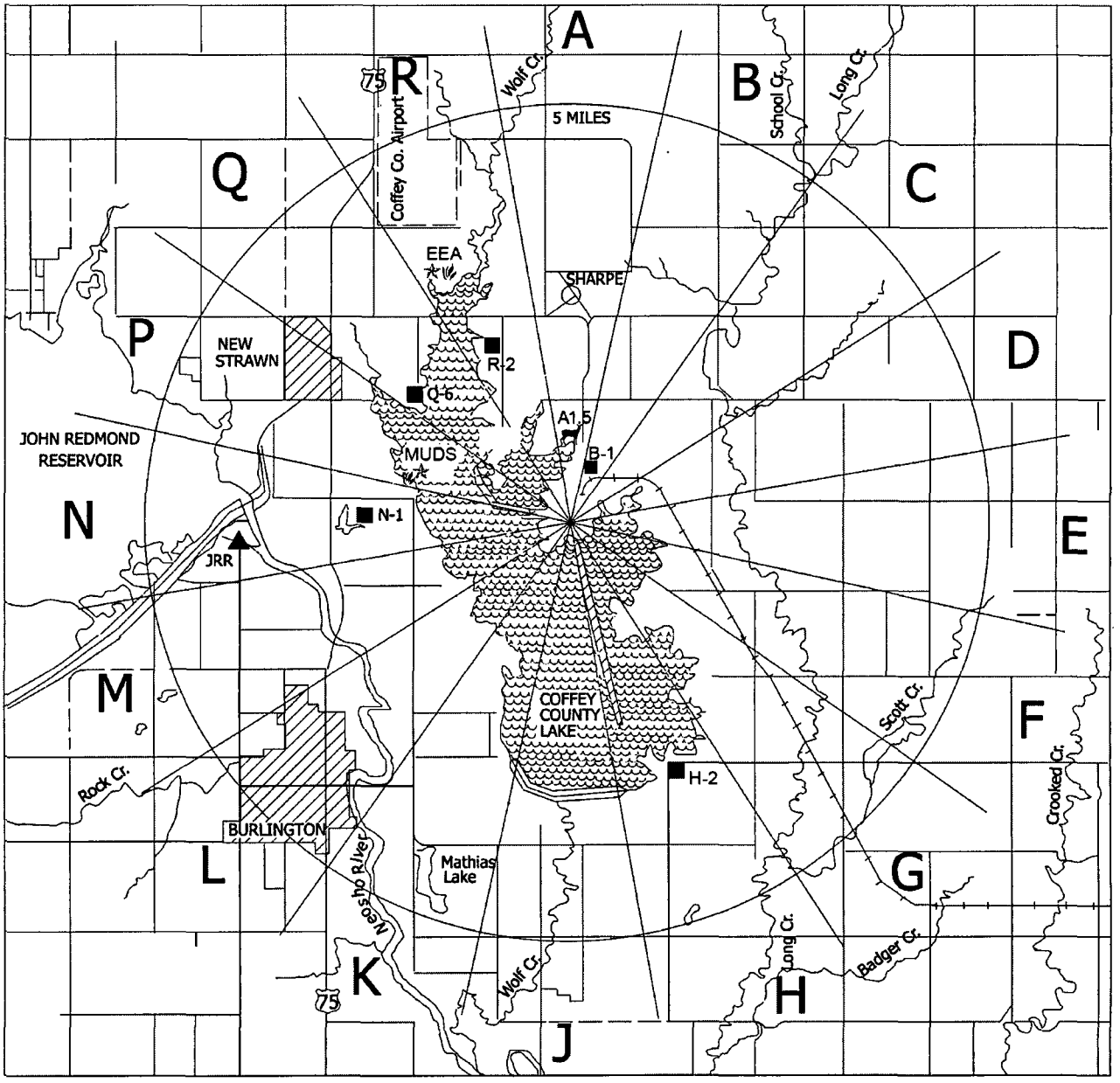
FIGURE 3



WATERBORNE PATHWAY SAMPLING LOCATIONS

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

FIGURE 4



INGESTION PATHWAY SAMPLING LOCATIONS

▲ = FISH (JRR)
= FISH (CCL)
■ = BROADLEAF VEGETATION
= TERRESTRIAL VEGETATION
= SOIL
= DEER

FIGURE 5

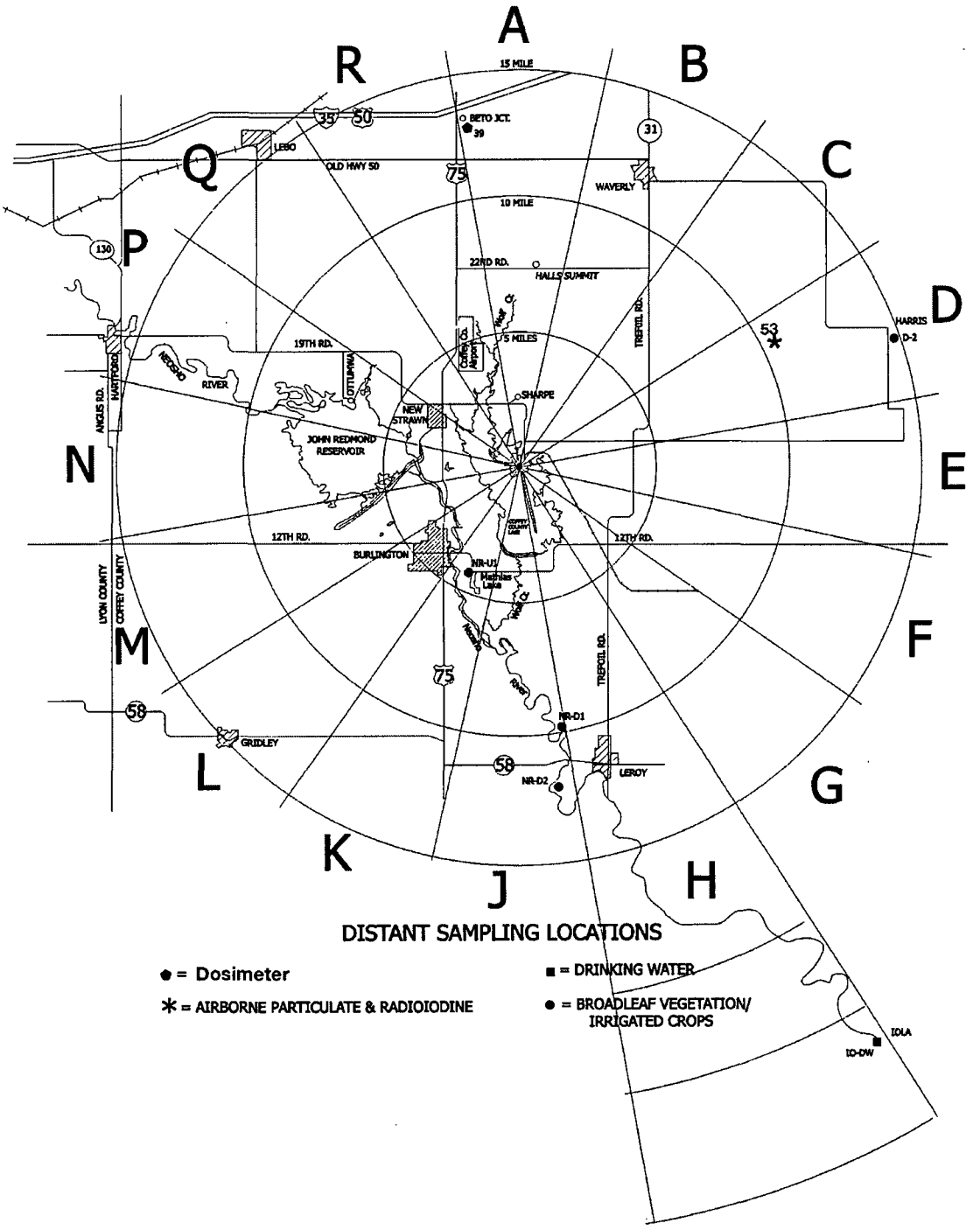

A
B
C
D
E
F
G
H
J
K
L
M
N
P
Q
R
15 MILE
10 MILE
5 MILES
LEBO
BETO JCT.
OLD HWY 50
WAVERLY
22ND RD.
HALLS SUMMIT
HARRIS
D-2
19TH RD.
NEOSHO RIVER
COTTONWOOD
ANGUS RD.
HARTFORD
NEW STRAWN
SHARPE
JOHN REDMOND RESERVOIR
TREFOIL RD.
12TH RD.
BURLINGTON
LYON COUNTY
COFFEY COUNTY
NR-U1
NR-D1
NR-D2
GRIDLEY
LEROY
IOLA
IO-DW
DISTANT SAMPLING LOCATIONS
● = Dosimeter
✱ = AIRBORNE PARTICULATE & RADIOIODINE
■ = DRINKING WATER
● = BROADLEAF VEGETATION/ IRRIGATED CROPS

CHART 1

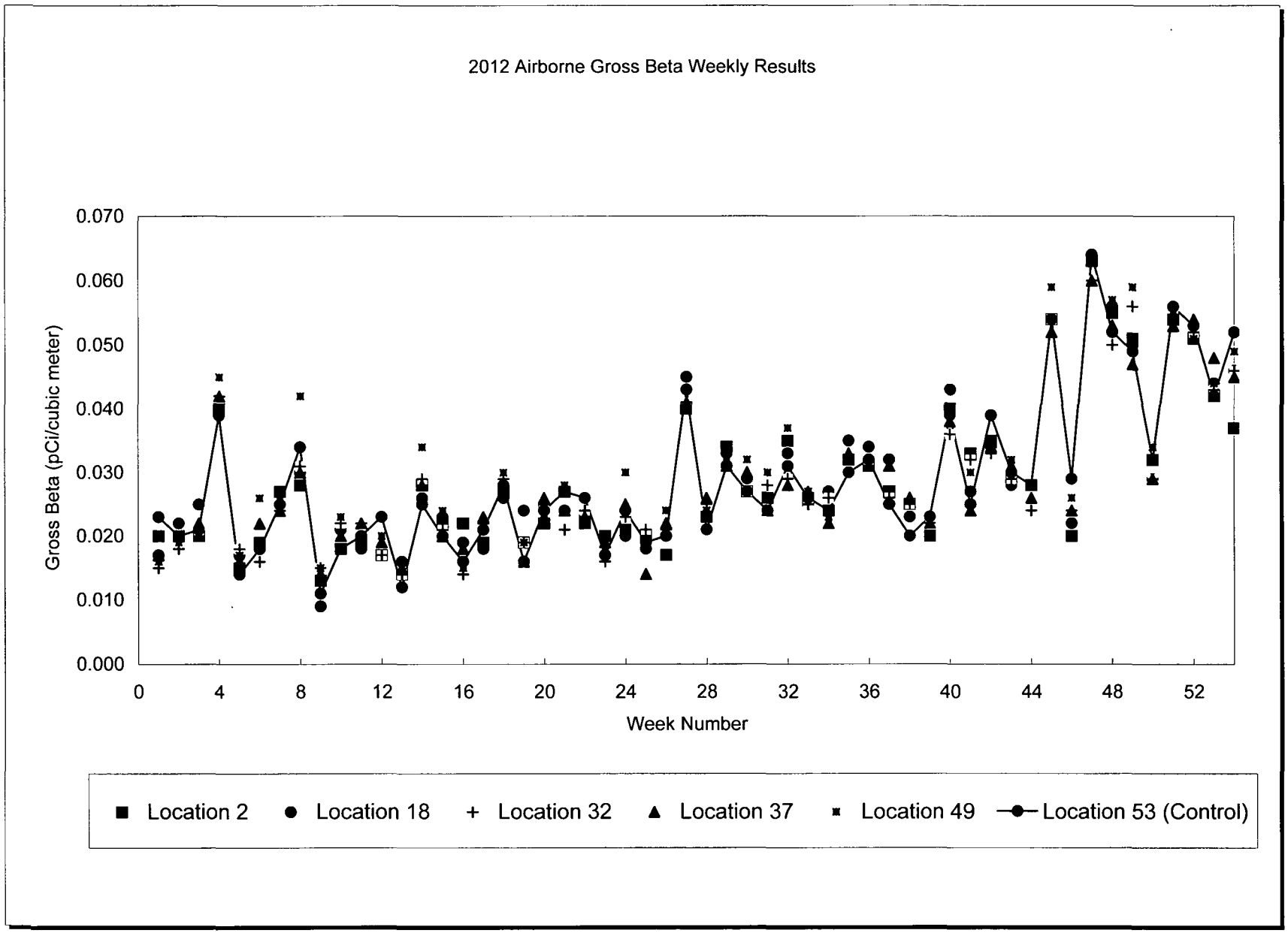

2012 Airborne Gross Beta Weekly Results
Gross Beta (pCi/cubic meter)
0.070
0.060
0.050
0.040
0.030
0.020
0.010
0.000
0
4
8
12
16
20
24
28
32
36
40
44
48
52
Week Number
Location 2
Location 18
Location 32
Location 37
Location 49
Location 53 (Control)

CHART 2

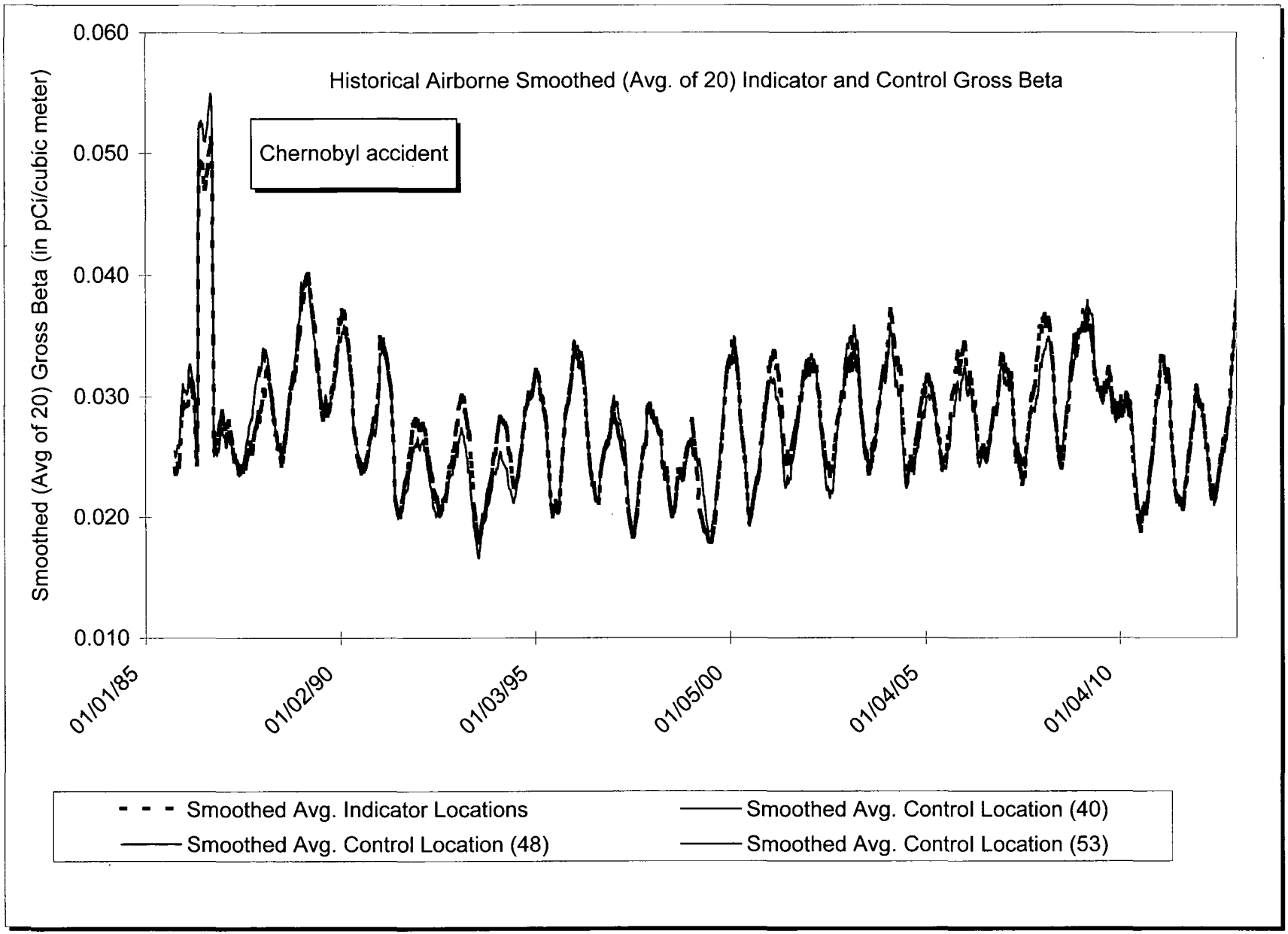

Historical Airborne Smoothed (Avg. of 20) Indicator and Control Gross Beta
Chernobyl accident
Smoothed (Avg of 20) Gross Beta (in pCi/cubic meter)
0.060
0.050
0.040
0.030
0.020
0.010
01/01/85
01/02/90
01/03/95
01/05/00
01/04/05
01/04/10
Smoothed Avg. Indicator Locations
Smoothed Avg. Control Location (40)
Smoothed Avg. Control Location (48)
Smoothed Avg. Control Location (53)

CHART 3

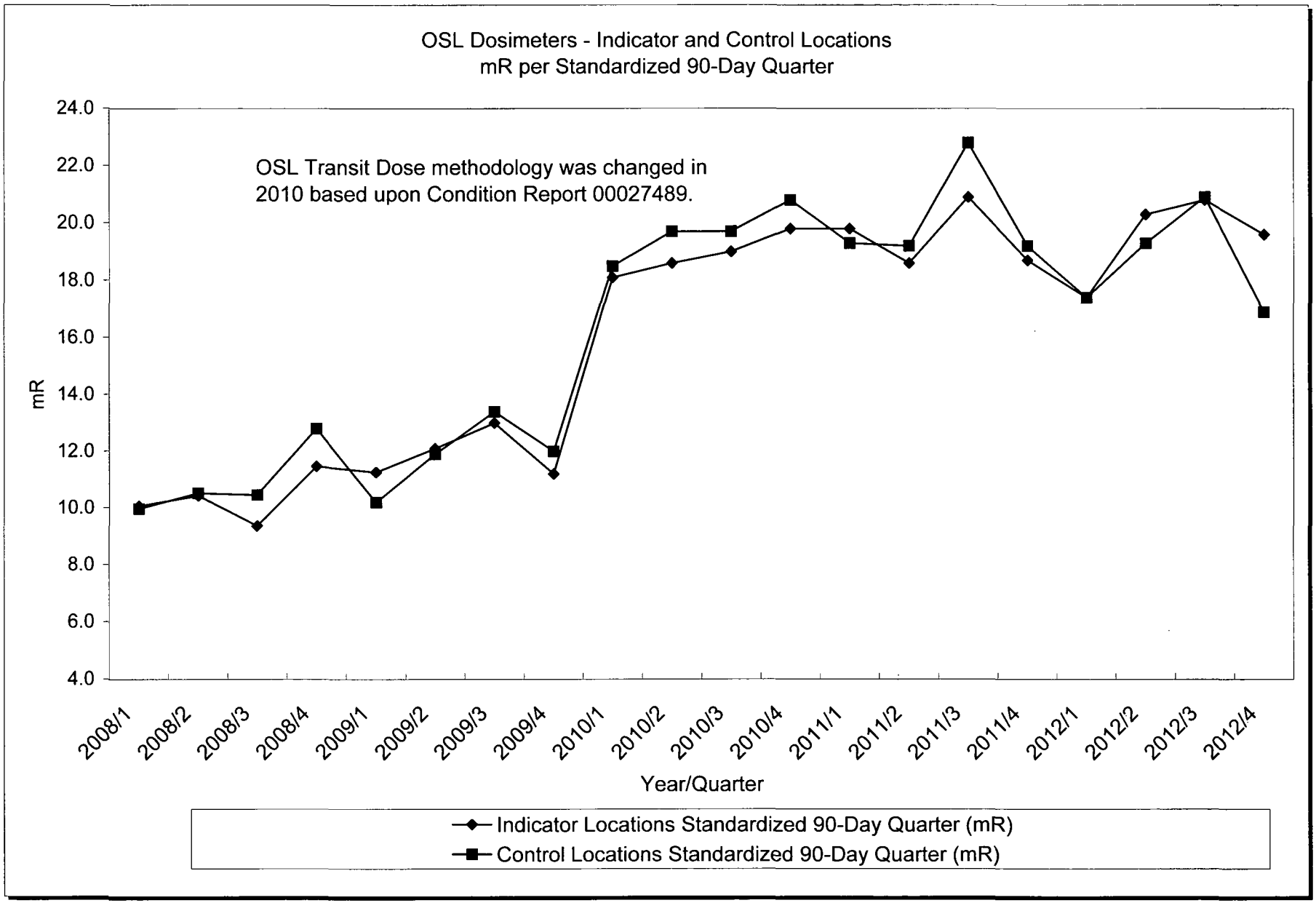

OSL Dosimeters - Indicator and Control Locations
mR per Standardized 90-Day Quarter
OSL Transit Dose methodology was changed in
2010 based upon Condition Report 00027489.
mR
24.0
22.0
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2008/1
2008/2
2008/3
2008/4
2009/1
2009/2
2009/3
2009/4
2010/1
2010/2
2010/3
2010/4
2011/1
2011/2
2011/3
2011/4
2012/1
2012/2
2012/3
2012/4
Year/Quarter
Indicator Locations Standardized 90-Day Quarter (mR)
Control Locations Standardized 90-Day Quarter (mR)

CHART 4

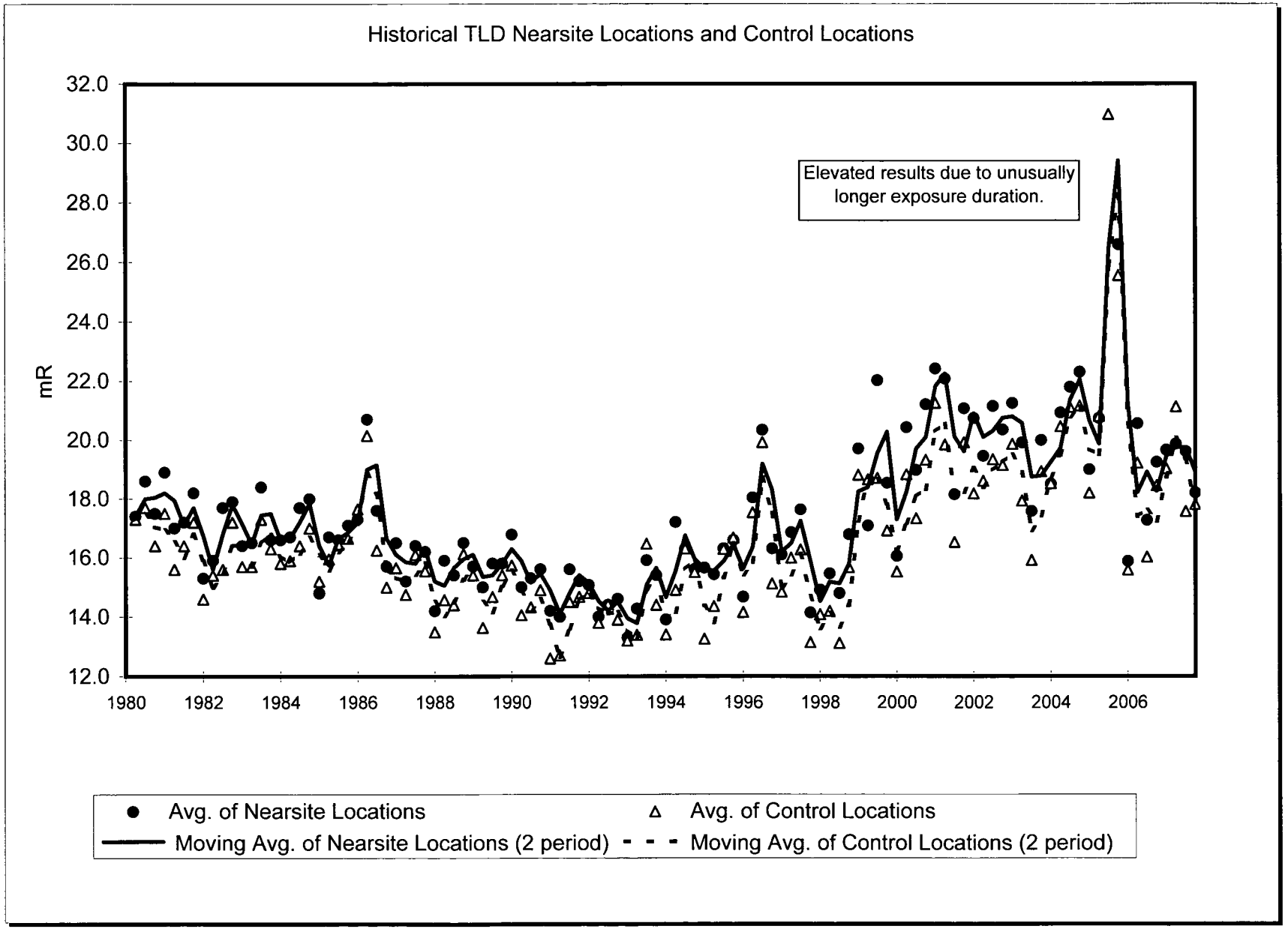

Historical TLD Nearsite Locations and Control Locations
mR
32.0
30.0
28.0
26.0
24.0
22.0
20.0
18.0
16.0
14.0
12.0
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
Elevated results due to unusually longer exposure duration.
Avg. of Nearsite Locations
Avg. of Control Locations
Moving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

CHART 5

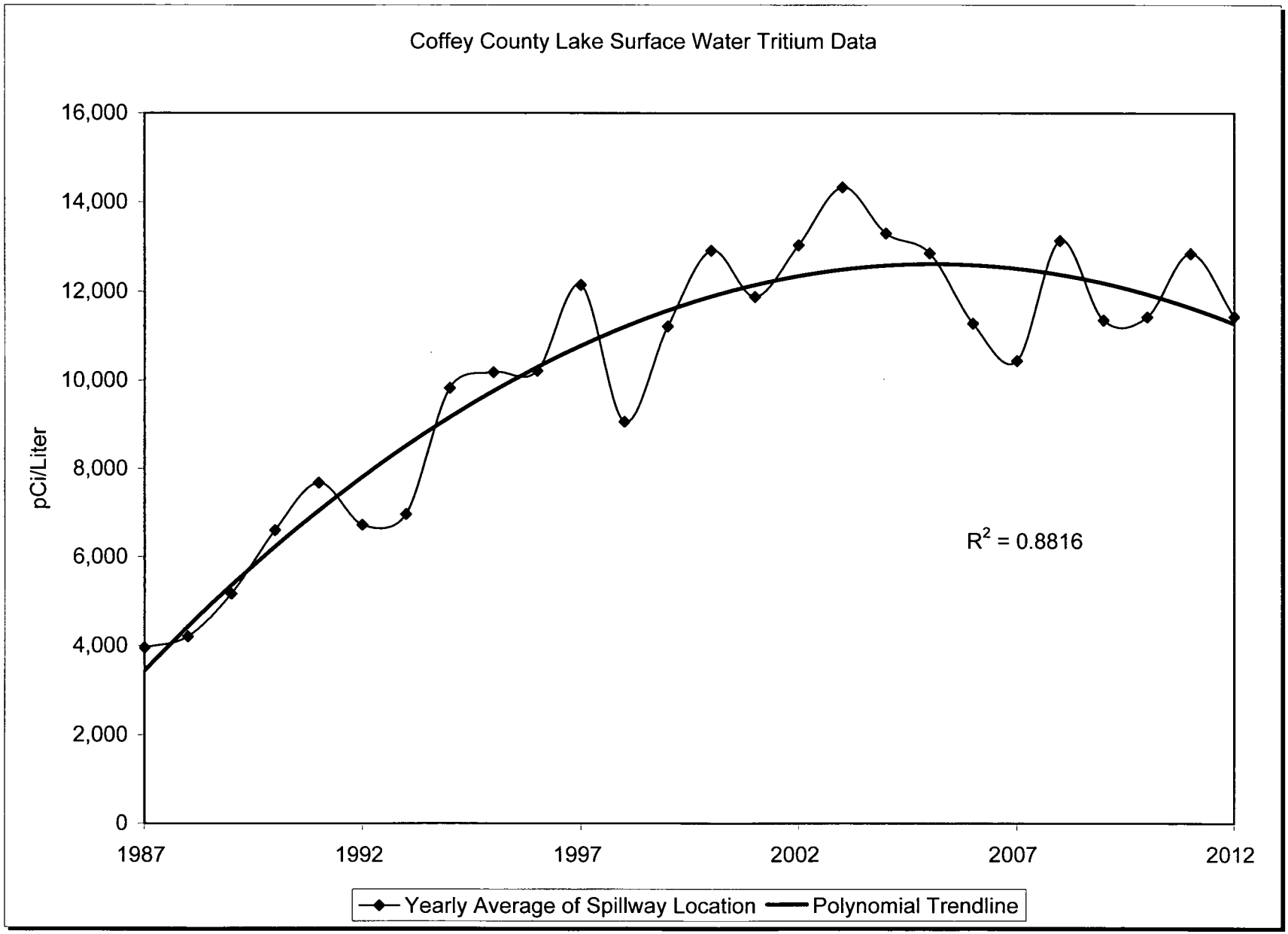

Coffey County Lake Surface Water Tritium Data
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
pCi/Liter
1987
1992
1997
2002
2007
2012
R^2 = 0.8816
Yearly Average of Spillway Location
Polynomial Trendline

CHART 6

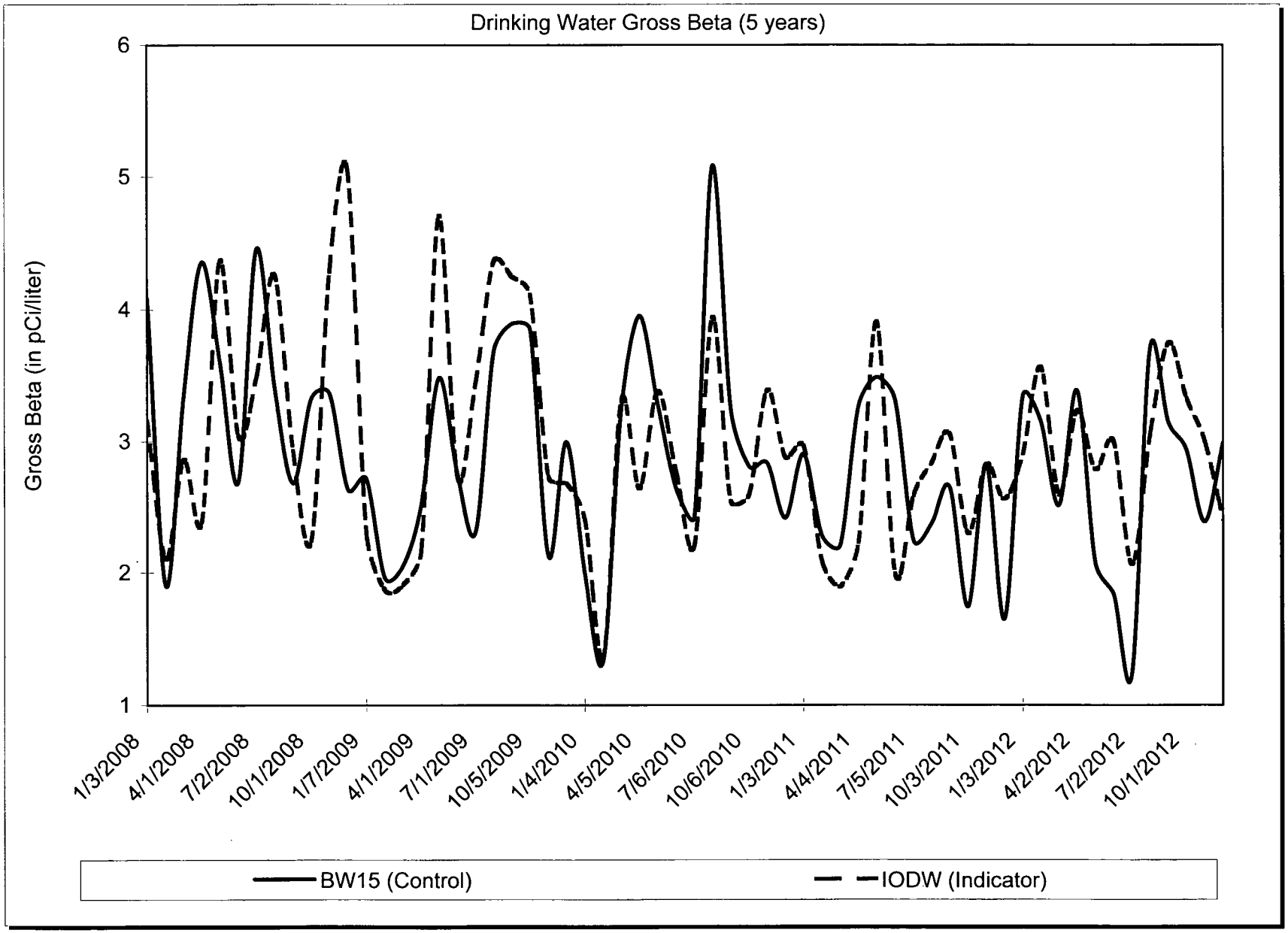
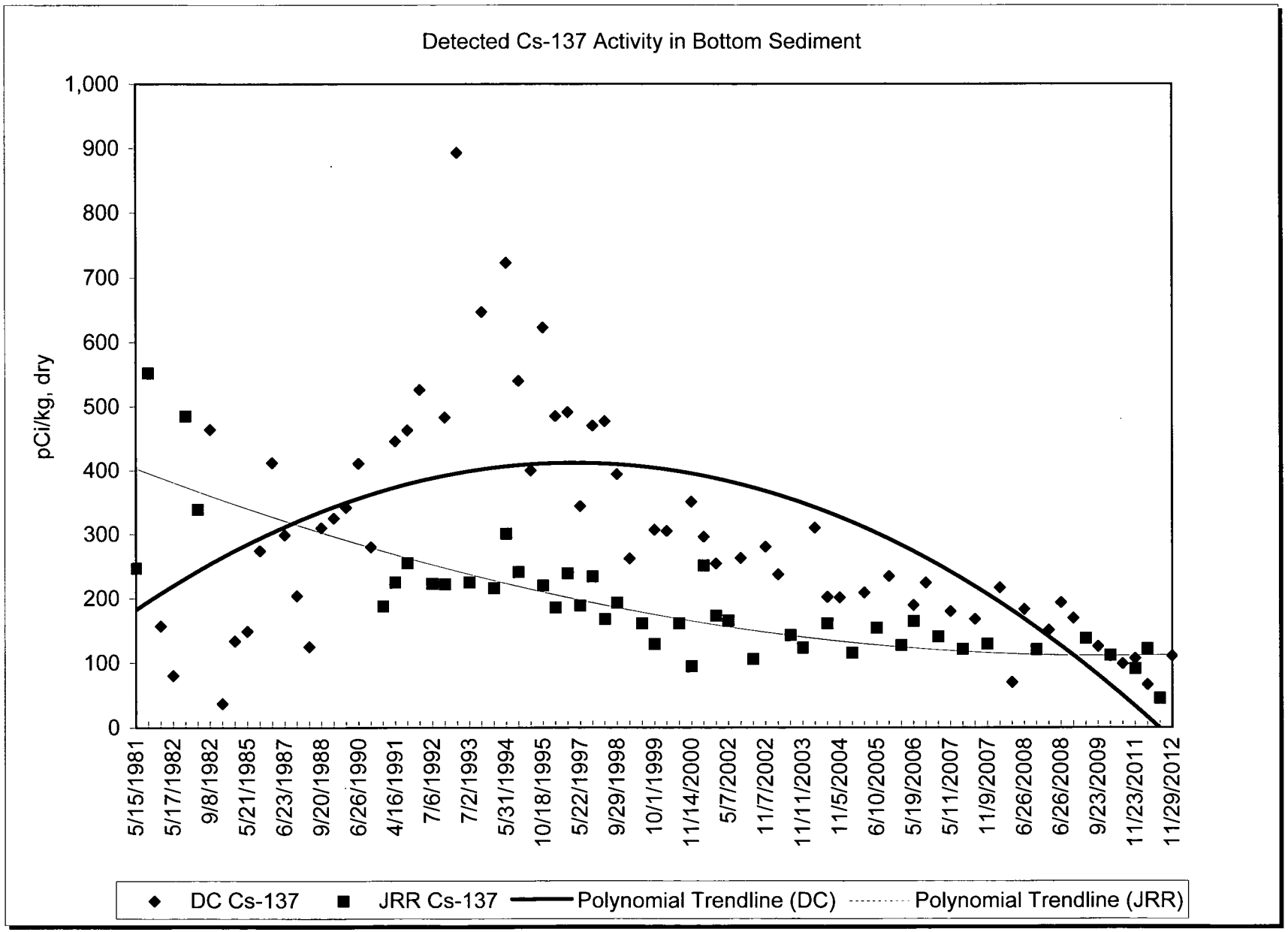

Drinking Water Gross Beta (5 years)
Gross Beta (in pCi/liter)
6
5
4
3
2
1
1/3/2008
4/1/2008
7/2/2008
10/1/2008
1/7/2009
4/1/2009
7/1/2009
10/5/2009
1/4/2010
4/5/2010
7/6/2010
10/6/2010
1/3/2011
4/4/2011
7/5/2011
10/3/2011
1/3/2012
4/2/2012
7/2/2012
10/1/2012
BW15 (Control)
IODW (Indicator)

CHART 7


Detected Cs-137 Activity in Bottom Sediment
pCi/kg, dry
1,000
900
800
700
600
500
400
300
200
100
0
5/15/1981
5/17/1982
9/8/1982
5/21/1985
6/23/1987
9/20/1988
6/26/1990
4/16/1991
7/6/1992
7/2/1993
5/31/1994
10/18/1995
5/22/1997
9/29/1998
10/1/1999
11/14/2000
5/7/2002
11/7/2002
11/11/2003
11/5/2004
6/10/2005
5/19/2006
5/11/2007
11/9/2007
6/26/2008
6/26/2008
9/23/2009
11/23/2011
11/29/2012
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, 2012 through December, 2012

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	Concentration (pCi/L) Analysis	Laboratory Result [b]	ERA Result [c]	Control Limits	Acceptance
ERW-1783	04/09/12	Sr-89	62.2 ± 6.0	58.5	46.9 - 66.3	Pass
ERW-1783	04/09/12	Sr-90	33.7 ± 2.1	37.4	27.4 - 43.1	Pass
ERW-1786	04/09/12	Ba-133	75.7 ± 4.1	82.3	69.1 - 90.5	Pass
ERW-1786	04/09/12	Co-60	71.9 ± 4.0	72.9	65.6 - 82.6	Pass
ERW-1786	04/09/12	Cs-134	70.0 ± 4.3	74.2	60.6 - 81.6	Pass
ERW-1786	04/09/12	Cs-137	151.5 ± 6.1	155.0	140.0 - 172.0	Pass
ERW-1786	04/09/12	Zn-65	108.3 ± 89.0	105.0	94.5 - 125.0	Pass
ERW-1789	04/09/12	Gr. Alpha	55.0 ± 2.4	62.9	33.0 - 78.0	Pass
ERW-1789 [d]	04/09/12	Gr. Beta	76.2 ± 1.8	44.2	29.6 - 51.5	Fail
ERW-1795	04/09/12	Ra-226	6.4 ± 0.4	5.7	4.3 - 6.9	Pass
ERW-1795	04/09/12	Ra-228	5.4 ± 1.2	4.6	2.7 - 6.3	Pass
ERW-1795	04/09/12	Uranium	56.2 ± 2.6	61.5	50.0 - 68.2	Pass
ERW-1798	04/09/12	H-3	16023 ± 355	15800	13800 - 17400	Pass
ERW-6283	10/05/12	Sr-89	41.5 ± 4.1	39.1	29.7 - 46.1	Pass
ERW-6283	10/05/12	Sr-90	19.7 ± 1.6	20.1	14.4 - 23.8	Pass
ERW-6286	10/05/12	Ba-133	82.7 ± 4.4	84.8	71.3 - 93.3	Pass
ERW-6286	10/05/12	Co-60	77.2 ± 3.7	78.3	70.5 - 88.5	Pass
ERW-6286	10/05/12	Cs-134	74.4 ± 1.5	76.6	62.6 - 84.3	Pass
ERW-6286	10/05/12	Cs-137	183.0 ± 6.2	183.0	165.0 - 203.0	Pass
ERW-6286	10/05/12	Zn-65	211.0 ± 9.9	204.0	184.0 - 240.0	Pass
ERW-6288	10/05/12	Gr. Alpha	47.0 ± 2.3	58.6	30.6 - 72.9	Pass
ERW-6288	10/05/12	Gr. Beta	33.4 ± 1.2	39.2	26.0 - 46.7	Pass
ERW-6290	10/05/12	I-131	23.3 ± 1.0	24.8	20.6 - 29.4	Pass
ERW-6295 [e]	10/05/12	Ra-226	17.5 ± 0.7	15.0	11.2 - 17.2	Fail
ERW-6295 [e]	10/05/12	Ra-228	7.4 ± 1.5	4.6	2.7 - 6.2	Fail
ERW-6295	10/05/12	Uranium	61.2 ± 1.8	62.5	50.8 - 69.3	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.

[d] Sample dilution problem suspected. A new dilution was prepared and the sample reanalyzed. Result of reanalysis, 38.3 ± 1.3 pCi/L.

[e] Results of reanalyses (pCi/L): Ra-226, 16.51 ± 0.73 Ra-228, 4.85 ± 1.11. A new test was ordered from Environmental Resources Associates, results will be updated for first quarter, 2013.

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

Lab Code	Date	Description	mR Known Value	Lab Result ± 2 sigma	Control Limits	Acceptance
Environmental, Inc.						
2012-1	2/7/2012	30 cm.	74.87	87.22 ± 2.86	52.41 - 97.33	Pass
2012-1	2/7/2012	40 cm.	42.12	53.70 ± 4.53	29.48 - 54.76	Pass
2012-1	2/7/2012	50 cm.	26.95	33.04 ± 1.96	18.87 - 35.04	Pass
2012-1	2/7/2012	70 cm.	13.75	13.26 ± 1.15	9.63 - 17.88	Pass
2012-1	2/7/2012	75 cm.	11.98	13.38 ± 1.68	8.39 - 15.57	Pass
2012-1	2/7/2012	80 cm.	10.53	11.27 ± 0.95	7.37 - 13.69	Pass
2012-1	2/7/2012	90 cm.	8.32	7.79 ± 0.83	5.82 - 10.82	Pass
2012-1	2/7/2012	100 cm.	6.74	5.91 ± 0.25	4.72 - 8.76	Pass
2012-1	2/7/2012	110 cm.	5.57	4.63 ± 0.83	3.90 - 7.24	Pass
2012-1	2/7/2012	120 cm.	4.68	3.96 ± 1.68	3.28 - 6.08	Pass
2012-1	2/7/2012	150 cm.	2.99	2.41 ± 0.08	2.09 - 3.89	Pass
2012-1	2/7/2012	180 cm.	2.08	2.02 ± 0.25	1.46 - 2.70	Pass
Environmental, Inc.						
2012-2	9/11/2012	40 cm.	33.75	43.74 ± 1.31	23.63 - 43.88	Pass
2012-2	9/11/2012	50 cm.	21.6	25.37 ± 0.82	15.12 - 28.08	Pass
2012-2	9/11/2012	60 cm.	15	16.63 ± 0.45	10.50 - 19.50	Pass
2012-2	9/11/2012	70 cm.	11.02	10.58 ± 0.20	7.71 - 14.33	Pass
2012-2	9/11/2012	80 cm.	8.44	8.55 ± 1.18	5.91 - 10.97	Pass
2012-2	9/11/2012	90 cm.	6.67	5.75 ± 0.33	4.67 - 8.67	Pass
2012-2	9/11/2012	100 cm.	5.4	4.44 ± 0.22	3.78 - 7.02	Pass
2012-2	9/11/2012	110 cm.	4.46	3.85 ± 0.05	3.12 - 5.80	Pass
2012-2	9/11/2012	120 cm.	3.75	3.03 ± 0.71	2.63 - 4.88	Pass
2012-2	9/11/2012	150 cm.	2.4	1.82 ± 0.10	1.68 - 3.12	Pass
2012-2	9/11/2012	180 cm.	1.67	1.19 ± 0.34	1.17 - 2.17	Pass

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

Lab Code [b]	Date	Analysis	Concentration (pCi/L)[a] Laboratory results 2s, n=1 [c]	Known Activity	Control Limits [d]	Acceptance
SPW-41824	2/15/2012	Ra-228	24.85 ± 2.14	28.75	20.13 - 37.38	Pass
W-22712	2/27/2012	Gr. Alpha	14.59 ± 0.34	20.00	10.00 - 30.00	Pass
W-22712	2/27/2012	Gr. Alpha	43.57 ± 0.40	41.70	20.85 - 62.55	Pass
SPAP-1032	3/5/2012	Cs-134	7.06 ± 1.71	5.26	0.00 - 15.26	Pass
SPAP-1032	3/5/2012	Cs-137	102.63 ± 3.13	104.24	93.82 - 114.66	Pass
SPAP-1034	3/5/2012	Gr. Beta	44.30 ± 0.11	46.88	28.13 - 65.63	Pass
SPW-1036	3/5/2012	Cs-134	43.23 ± 3.84	39.42	29.42 - 49.42	Pass
SPW-1036	3/5/2012	Cs-137	57.44 ± 4.60	52.12	42.12 - 62.12	Pass
SPW-1036	3/5/2012	Sr-90	60.51 ± 1.93	61.52	49.22 - 73.82	Pass
SPMI-1038	3/5/2012	Cs-134	37.79 ± 4.06	39.42	29.42 - 49.42	Pass
SPMI-1038	3/5/2012	Cs-137	54.75 ± 5.09	52.12	42.12 - 62.12	Pass
SPW-1045	3/5/2012	H-3	68022 ± 746	69048	55238 - 82858	Pass
SPW-1047	3/5/2012	Ni-63	217.10 ± 3.64	206.64	144.65 - 268.63	Pass
SPW-1049	3/5/2012	C-14	3858.90 ± 12.79	4738.80	2843.28 - 6634.32	Pass
W-31412	3/14/2012	Ra-226	13.13 ± 0.36	16.70	11.69 - 21.71	Pass
SPW-1520	3/23/2012	U-238	45.67 ± 2.02	41.70	29.19 - 54.21	Pass
SPW-41825	4/10/2012	Ra-228	28.48 ± 2.51	28.35	19.85 - 36.86	Pass
WW-1547	4/16/2012	Ba-133	18.99 ± 4.67	26.70	16.70 - 36.70	Pass
WW-1547	4/16/2012	Cs-134	9.28 ± 2.82	8.68	0.00 - 18.68	Pass
WW-1547	4/16/2012	Cs-137	27.77 ± 4.49	29.70	19.70 - 39.70	Pass
W-51712	5/17/2012	Ra-226	17.29 ± 0.43	16.70	11.69 - 21.71	Pass
W-61112	6/11/2012	Gr. Alpha	22.16 ± 0.45	20.00	10.00 - 30.00	Pass
W-61112	6/11/2012	Gr. Beta	43.57 ± 0.40	45.20	35.20 - 55.20	Pass
SPAP-4418	7/25/2012	Gr. Beta	43.74 ± 0.11	46.50	27.90 - 65.10	Pass
SPAP-4420	7/25/2012	Cs-134	4.54 ± 0.73	4.60	2.76 - 6.44	Pass
SPAP-4420	7/25/2012	Cs-137	104.70 ± 2.77	103.30	92.97 - 113.63	Pass
SPMI-4422	7/25/2012	Co-60	31.43 ± 2.12	31.62	21.62 - 41.62	Pass
SPMI-4422	7/25/2012	Cs-134	16.50 ± 1.17	16.15	6.15 - 26.15	Pass
SPMI-4422	7/25/2012	Cs-137	29.60 ± 2.61	26.64	16.64 - 36.64	Pass
SPMI-4422	7/25/2012	Sr-90	31.60 ± 1.35	30.47	24.38 - 36.56	Pass
SPW-4424	7/25/2012	Co-60	38.52 ± 1.76	37.95	27.95 - 47.95	Pass
SPW-4424	7/25/2012	Cs-137	33.23 ± 2.27	32.01	22.01 - 42.01	Pass
SPW-4424	7/25/2012	Sr-90	36.56 ± 1.58	40.60	32.48 - 48.72	Pass
SPF-4426	7/25/2012	Cs-134	947.50 ± 42.50	1025.00	922.50 - 1127.50	Pass
SPF-4426	7/25/2012	Cs-137	2692.00 ± 62.40	2480.00	2232.00 - 2728.00	Pass
SPW-4428	7/25/2012	C-14	4325.70 ± 15.80	4738.80	2843.28 - 6634.32	Pass
SPW-4430	7/25/2012	H-3	70119.40 ± 773.40	67570.00	54056.00 - 81084.00	Pass
SPW-4432	7/25/2012	Ni-63	187.20 ± 3.85	206.80	144.76 - 268.84	Pass
W-81712	8/17/2012	Ra-226	14.94 ± 0.40	16.70	11.69 - 21.71	Pass
SPW-5407	8/29/2012	U-238	42.95 ± 0.11	41.70	29.19 - 54.21	Pass
SPW-18022	9/10/2012	Ra-228	29.03 ± 2.80	28.21	19.75 - 36.67	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
W-91012	9/10/2012	Gr. Alpha	19.95 ± 0.42	20.00	10.00 - 30.00	Pass
W-91012	9/10/2012	Gr. Beta	43.47 ± 0.40	45.20	35.20 - 55.20	Pass
W-100312	10/3/2012	Gr. Alpha	19.95 ± 0.41	20.00	10.00 - 30.00	Pass
W-100312	10/3/2012	Gr. Beta	44.21 ± 0.40	45.20	35.20 - 55.20	Pass
W-101812	10/18/2012	Ra-226	18.80 ± 0.43	16.70	11.69 - 21.71	Pass
ESO-7235	12/6/2012	Sr-90	138.79 ± 2.67	161.05	128.84 - 193.26	Pass
SPW-7753	12/6/2012	U-238	45.55 ± 5.05	41.70	29.19 - 54.21	Pass
SPW-18023	12/18/2012	Ra-228	31.59 ± 2.99	25.98	18.19 - 33.77	Pass

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

[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 ± 2σ.

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-41814	Water	2/15/2012	Ra-228	0.65	0.49 ± 0.36	2
W-22712	Water	2/27/2012	Gr. Alpha	0.42	-0.04 ± 0.29	1
W-22712	Water	2/27/2012	Gr. Beta	0.74	-0.54 ± 0.50	3.2
SPAP-1031	Air Filter	3/5/2012	Cs-134	1.89	-	100
SPAP-1031	Air Filter	3/5/2012	Cs-137	1.16	-	100
SPAP-1033	Air Filter	3/5/2012	Gr. Beta	0.003	0.013 ± 0.003	0.01
SPW-1035	Water	3/5/2012	Cs-134	2.40	-	10
SPW-1035	Water	3/5/2012	Cs-137	2.88	-	10
SPW-1035	Water	3/5/2012	I-131(G)	2.35	-	20
SPW-1035	Water	3/5/2012	Sr-90	0.60	-0.11 ± 0.26	1
SPMI-1037	Milk	3/5/2012	Cs-134	2.85	-	10
SPMI-1037	Milk	3/5/2012	Cs-137	3.73	-	10
SPMI-1037	Milk	3/5/2012	I-131(G)	3.24	-	20
SPW-1044	Water	3/5/2012	H-3	146.10	37.10 ± 74.40	200
SPW-1046	Water	3/5/2012	Ni-63	19.07	8.30 ± 11.79	20
SPW-1048	Water	3/5/2012	C-14	5.70	2.99 ± 3.04	200
SPW-1166	water	3/9/2012	C-14	6.79	1.11	200
W-31412	Water	3/14/2012	Ra-226	0.034	0.043 ± 0.027	1
SPW-1521	Water	3/23/2012	U-238	0.10	0.09 ± 0.11	1
W-51712	Water	4/24/2012	Ra-226	0.04	0.04 ± 0.03	1
W-61112	Water	6/11/2012	Gr. Alpha	0.47	-0.14 ± 0.32	1
W-61112	Water	6/11/2012	Gr. Beta	0.71	0.29 ± 0.51	3.2
SPW-41815	Water	7/7/2011	Ra-228	0.77	0.52 ± 0.42	2
SPAP-4417	Air Filter	7/25/2012	Gr. Beta	0.001	0.021 ± 0.003	0.01
SPMI-4421	Milk	7/25/2012	Co-60	4.29	-	10
SPMI-4421	Milk	7/25/2012	Cs-134	3.58	-	10
SPMI-4421	Milk	7/25/2012	Cs-137	4.60	-	10
SPMI-4421	Milk	7/25/2012	Sr-90	0.45	0.53 ± 0.27	1
SPW-4423	Water	7/25/2012	Co-60	1.88	-	10
SPW-4423	Water	7/25/2012	Cs-134	2.38	-	10
SPW-4423	Water	7/25/2012	Cs-137	2.80	-	10
SPW-4423	water	7/25/2012	Sr-90	0.45	0.08 ± 0.22	1
SPF-4425	Fish	7/25/2012	Co-60	6.74	-	100
SPF-4425	Fish	7/25/2012	Cs-134	7.47	-	100
SPF-4425	Fish	7/25/2012	Cs-137	9.62	-	100
SPW-4427	Water	7/25/2012	C-14	10.93	3.54 ± 5.84	200
SPW-4431	Water	7/25/2012	Ni-63	19.00	5.50 ± 11.70	20
W-81712	Water	8/17/2012	Ra-226	0.038	0.035 ± 0.030	1
SPW-5408	Water	8/29/2012	U-238	0.039	0.015 ± 0.057	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-18032	Water	9/10/2012	Ra-228	0.78	0.85 ± 0.46	2
W-91012	Water	9/10/2012	Gr. Alpha	0.42	0.027 ± 0.29	1
W-91012	Water	9/10/2012	Gr. Beta	0.75	-0.13 ± 0.52	3.2
W-100312	Water	10/3/2012	Gr. Beta	0.77	-0.32 ± 0.53	3.2
W-100312	Water	10/3/2012	Gr. Beta	0.43	0.06 ± 0.30	3.2
W-101812	Water	10/18/2012	Ra-226	0.04	0.04 ± 0.03	1
SPW-7754	Water	12/6/2012	U-238	0.10	0.02 ± 0.08	1
SPW-18033	Water	12/18/2012	Ra-228	0.98	0.43 ± 0.50	2

[a] Liquid sample results are reported in pCi/Liter, air filters(pCi/filter), 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. For gamma spectroscopic analysis, activity detected below the LLD value is not reported.

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

Lab Code	Date	Analysis	Concentration (pCi/L)[a] First Result	Second Result	Averaged Result	Acceptance
CF-20, 21	1/3/2012	Gr. Beta	14.50 ± 0.29	15.02 ± 0.30	14.76 ± 0.21	Pass
CF-20, 21	1/3/2012	K-40	12.88 ± 0.55	12.40 ± 0.53	12.64 ± 0.38	Pass
CF-20, 21	1/3/2012	Sr-90	0.01 ± 0.01	0.01 ± 0.01	0.01 ± 0.00	Pass
P-9133, 9134	1/3/2012	H-3	108.86 ± 83.03	206.60 ± 86.38	157.73 ± 59.91	Pass
U-302, 303	1/17/2012	Beta (-K40)	6.84 ± 2.91	5.24 ± 2.56	6.04 ± 1.94	Pass
S-386, 387	1/23/2012	Ac-228	0.77 ± 0.11	0.79 ± 0.14	0.78 ± 0.09	Pass
S-386, 387	1/23/2012	Bi-214	0.80 ± 0.07	0.73 ± 0.11	0.77 ± 0.07	Pass
S-386, 387	1/23/2012	Pb-214	0.74 ± 0.06	0.75 ± 0.11	0.75 ± 0.06	Pass
S-386, 387	1/23/2012	Tl-208	0.21 ± 0.02	0.21 ± 0.04	0.21 ± 0.02	Pass
S-386, 387	1/23/2012	U-235	0.05 ± 0.02	0.12 ± 0.05	0.09 ± 0.03	Pass
WW-619, 620	1/31/2012	H-3	257.20 ± 86.00	305.80 ± 88.30	281.50 ± 61.63	Pass
MI-702, 703	2/6/2012	K-40	1337.00 ± 123.00	1460.40 ± 102.00	1398.70 ± 79.90	Pass
WW-892, 893	2/17/2012	Gr. Beta	3.46 ± 0.56	3.77 ± 0.59	3.61 ± 0.41	Pass
S-850, 851	2/22/2012	Cs-134	0.14 ± 0.02	0.13 ± 0.02	0.14 ± 0.01	Pass
S-850, 851	2/22/2012	Cs-137	0.21 ± 0.03	0.22 ± 0.03	0.22 ± 0.02	Pass
W-1251, 1252	3/6/2012	Gr. Alpha	1.20 ± 0.62	1.27 ± 0.92	1.24 ± 0.55	Pass
W-1251, 1252	3/6/2012	Gr. Beta	16.86 ± 1.43	15.14 ± 1.34	16.00 ± 0.98	Pass
W-1251, 1252	3/6/2012	H-3	5235.52 ± 230.91	4893.24 ± 224.55	5064.38 ± 161.05	Pass
W-1251, 1252	3/6/2012	Tc-99	19.67 ± 3.60	14.46 ± 3.51	17.07 ± 2.51	Pass
AP-1209, 1210	3/8/2012	Be-7	0.24 ± 0.12	0.20 ± 0.11	0.22 ± 0.08	Pass
XWW-1564, 1565	3/14/2012	H-3	308.00 ± 88.00	293.00 ± 87.00	300.50 ± 61.87	Pass
SG-1438, 1439	3/19/2012	Ac-228	6.01 ± 0.30	6.23 ± 0.31	6.12 ± 0.22	Pass
SG-1438, 1439	3/19/2012	Pb-214	4.69 ± 0.49	5.20 ± 0.54	4.95 ± 0.36	Pass
WW-1585, 1586	3/19/2012	H-3	3124.50 ± 176.96	2982.38 ± 173.62	3053.44 ± 123.96	Pass
AP-2103, 2104	3/28/2012	Be-7	0.080 ± 0.016	0.076 ± 0.013	0.078 ± 0.010	Pass
AP-2166, 2167	3/28/2012	Be-7	0.061 ± 0.020	0.071 ± 0.016	0.066 ± 0.013	Pass
AP-1632, 1633	3/29/2012	Be-7	0.26 ± 0.12	0.24 ± 0.12	0.25 ± 0.08	Pass
E-1653, 1654	4/2/2012	Gr. Beta	1.53 ± 0.05	1.55 ± 0.04	1.54 ± 0.03	Pass
E-1653, 1654	4/2/2012	K-40	1.34 ± 0.13	1.36 ± 0.14	1.35 ± 0.10	Pass
SG-1677, 1678	4/2/2012	Ac-228	6.63 ± 0.37	6.49 ± 0.33	6.56 ± 0.25	Pass
SG-1677, 1678	4/2/2012	Pb-214	4.77 ± 0.16	5.07 ± 0.14	4.92 ± 0.11	Pass
SWU-1719, 1720	4/3/2012	Gr. Beta	1.16 ± 0.41	1.53 ± 0.44	1.35 ± 0.30	Pass
W-1698, 1699	4/5/2012	Gr. Beta	10.86 ± 1.49	9.42 ± 1.32	10.14 ± 1.00	Pass
W-1698, 1699	4/5/2012	Ra-226	0.41 ± 0.15	0.67 ± 0.18	0.54 ± 0.12	Pass
W-1698, 1699	4/5/2012	Ra-228	1.46 ± 0.76	1.48 ± 0.74	1.47 ± 0.53	Pass
SG-1761, 1762	4/10/2012	Ac-228	16.26 ± 0.53	16.55 ± 0.44	16.41 ± 0.34	Pass
SG-1761, 1762	4/10/2012	Pb-214	14.16 ± 1.44	15.40 ± 1.56	14.78 ± 1.06	Pass
AP-2019, 2020	4/12/2012	Be-7	0.17 ± 0.10	0.17 ± 0.08	0.17 ± 0.07	Pass
DW-2272, 2273	4/20/2012	I-131	0.52 ± 0.24	0.49 ± 0.27	0.51 ± 0.18	Pass
DW-2356, 2357	4/24/2012	Gr. Beta	12.82 ± 2.01	9.47 ± 1.74	11.14 ± 1.33	Pass

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

Lab Code	Date	Analysis	Concentration (pCi/L)[a] First Result	Second Result	Averaged Result	Acceptance
G-2403, 2404	5/1/2012	Be-7	1.77 ± 0.21	1.55 ± 0.33	1.66 ± 0.20	Pass
G-2403, 2404	5/1/2012	K-40	6.38 ± 0.50	6.93 ± 0.72	6.66 ± 0.44	Pass
BS-2445, 2446	5/1/2012	Gr. Beta	8.92 ± 1.52	9.29 ± 1.63	9.11 ± 1.11	Pass
BS-2445, 2446	5/1/2012	K-40	5.86 ± 0.38	6.22 ± 0.48	6.04 ± 0.31	Pass
SWU-2550, 2551	5/1/2012	Gr. Beta	2.07 ± 0.65	1.59 ± 0.62	1.83 ± 0.45	Pass
WW-2614, 2615	5/1/2012	Gr. Beta	2.03 ± 1.04	2.36 ± 1.14	2.20 ± 0.77	Pass
WW-2614, 2615	5/1/2012	H-3	750.60 ± 106.20	653.20 ± 102.30	701.90 ± 73.73	Pass
BS-2656, 2657	5/2/2012	Cs-137	0.13 ± 0.07	0.07 ± 0.04	0.10 ± 0.04	Pass
BS-2656, 2657	5/2/2012	K-40	10.15 ± 0.97	11.13 ± 0.90	10.64 ± 0.66	Pass
SO-2635, 2636	5/3/2012	Cs-137	0.046 ± 0.024	0.050 ± 0.027	0.048 ± 0.018	Pass
SO-2635, 2636	5/3/2012	K-40	13.20 ± 0.74	14.01 ± 0.67	13.61 ± 0.50	Pass
MI-2677, 2678	5/7/2012	K-40	1415.30 ± 131.40	1348.10 ± 109.00	1381.70 ± 85.36	Pass
VE-2719, 2720	5/7/2012	K-40	4.15 ± 0.36	4.19 ± 0.38	4.17 ± 0.26	Pass
SWU-3221, 3222	5/8/2012	Gr. Beta	1.67 ± 0.47	1.39 ± 0.45	1.53 ± 0.33	Pass
SWU-3221, 3222	5/8/2012	H-3	236.90 ± 101.90	281.90 ± 103.70	259.40 ± 72.69	Pass
WW-3073, 3074	5/14/2012	H-3	339.12 ± 145.45	337.23 ± 98.19	338.18 ± 87.74	Pass
AP-2968, 2969	5/17/2012	Be-7	0.25 ± 0.12	0.21 ± 0.09	0.23 ± 0.07	Pass
F-3031, 3032	5/22/2012	H-3	11291.00 ± 372.80	11167.00 ± 315.00	11229.00 ± 244.03	Pass
F-3031, 3032	5/22/2012	K-40	3528.90 ± 372.80	3677.20 ± 392.40	3603.05 ± 270.63	Pass
G-3094, 3095	5/23/2012	Gr. Beta	7.89 ± 0.16	8.01 ± 0.16	7.95 ± 0.11	Pass
F-3412, 3413	5/23/2012	Gr. Beta	3.46 ± 0.10	3.33 ± 0.10	3.40 ± 0.07	Pass
F-3412, 3413	5/23/2012	K-40	2.40 ± 0.38	2.55 ± 0.43	2.48 ± 0.29	Pass
MI-3067, 3068	5/24/2012	K-40	1267.20 ± 105.00	1305.70 ± 109.80	1286.45 ± 75.96	Pass
SO-3305, 3306	5/30/2012	Cs-137	0.024 ± 0.013	0.030 ± 0.015	0.027 ± 0.010	Pass
SO-3305, 3306	5/30/2012	Gr. Beta	10.95 ± 0.89	10.86 ± 0.89	10.91 ± 0.63	Pass
SO-3305, 3306	5/30/2012	Tl-208	0.068 ± 0.018	0.062 ± 0.017	0.065 ± 0.012	Pass
LW-3454, 3455	5/31/2012	Gr. Beta	2.12 ± 0.86	2.27 ± 0.77	2.20 ± 0.58	Pass
BS-3697, 3698	6/14/2012	Be-7	2.05 ± 0.19	2.27 ± 0.38	2.16 ± 0.21	Pass
BS-3697, 3698	6/14/2012	Cs-137	2.32 ± 0.39	2.26 ± 0.66	2.29 ± 0.38	Pass
BS-3697, 3698	6/14/2012	K-40	6.67 ± 0.28	6.64 ± 0.42	6.66 ± 0.25	Pass
VE-3798, 3799	6/20/2012	K-40	5.93 ± 0.38	6.03 ± 0.37	5.98 ± 0.26	Pass
WW-4790, 4791	6/20/2012	H-3	251.33 ± 86.51	372.48 ± 92.27	311.90 ± 63.24	Pass
DW-30103, 30104	6/27/2012	Ra-226	0.30 ± 0.08	0.42 ± 0.09	0.36 ± 0.06	Pass
DW-30103, 30104	6/27/2012	Ra-228	0.76 ± 0.54	0.78 ± 0.54	0.77 ± 0.38	Pass
LW-3970, 3971	6/28/2012	Gr. Beta	1.49 ± 1.06	0.72 ± 0.53	1.11 ± 0.59	Pass
DW-3949, 3950	6/29/2012	I-131	0.54 ± 0.26	0.25 ± 0.26	0.40 ± 0.18	Pass
SG-4075, 4076	7/2/2012	Ac-228	0.33 ± 0.09	0.34 ± 0.06	0.34 ± 0.05	Pass
SG-4075, 4076	7/2/2012	K-40	6.71 ± 0.58	7.20 ± 0.32	6.96 ± 0.33	Pass
SG-4075, 4076	7/2/2012	Pb-214	0.46 ± 0.05	0.49 ± 0.03	0.48 ± 0.03	Pass
AP-4390, 4391	7/3/2012	Be-7	0.09 ± 0.02	0.09 ± 0.01	0.09 ± 0.01	Pass
AP-4390, 4391	7/3/2012	Be-7	0.11 ± 0.02	0.10 ± 0.01	0.11 ± 0.01	Pass
AP-4012, 4013	7/5/2012	Be-7	0.27 ± 0.09	0.29 ± 0.16	0.28 ± 0.09	Pass
SW-4033, 4034	7/5/2012	H-3	614.99 ± 107.99	512.31 ± 103.83	563.65 ± 74.91	Pass

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

Lab Code	Date	Analysis	Concentration (pCi/L)[a] First Result	Second Result	Averaged Result	Acceptance
VE-4054, 4055	7/9/2012	K-40	7.28 ± 0.56	7.42 ± 0.63	7.35 ± 0.42	Pass
VE-4222, 4223	7/13/2012	Be-7	0.16 ± 0.08	0.22 ± 0.09	0.19 ± 0.06	Pass
VE-4222, 4223	7/13/2012	K-40	7.20 ± 0.30	6.60 ± 0.30	6.90 ± 0.21	Pass
DW-30113, 30114	7/13/2012	Ra-228	1.93 ± 0.66	1.03 ± 0.53	1.48 ± 0.42	Pass
DW-30115, 30116	7/13/2012	Gr. Alpha	7.46 ± 1.21	7.02 ± 1.14	7.24 ± 0.83	Pass
DW-30124, 30125	7/13/2012	Ra-226	1.16 ± 0.15	0.90 ± 0.12	1.03 ± 0.10	Pass
DW-30124, 30125	7/13/2012	Ra-228	1.38 ± 0.56	1.72 ± 0.60	1.55 ± 0.41	Pass
DW-30126, 30127	7/13/2012	Gr. Alpha	6.23 ± 1.16	6.75 ± 1.29	6.49 ± 0.87	Pass
AP-4433, 4434	7/19/2012	Be-7	0.17 ± 0.09	0.21 ± 0.10	0.19 ± 0.07	Pass
SG-4475, 4476	7/19/2012	Gr. Alpha	17.03 ± 4.17	15.56 ± 3.96	16.30 ± 2.88	Pass
SG-4475, 4476	7/19/2012	Gr. Beta	13.23 ± 2.61	14.36 ± 2.47	13.80 ± 1.80	Pass
WW-4685, 4686	7/24/2012	H-3	289.00 ± 99.00	375.00 ± 103.00	332.00 ± 71.43	Pass
AP-4706, 4707	7/26/2012	Be-7	0.28 ± 0.14	0.24 ± 0.14	0.26 ± 0.10	Pass
SO-4748, 4749	7/26/2012	Gr. Beta	20.45 ± 1.04	19.22 ± 0.94	19.84 ± 0.70	Pass
SO-4748, 4749	7/26/2012	Gr. Beta	20.45 ± 1.04	19.22 ± 0.94	19.84 ± 0.70	Pass
SO-4748, 4749	7/26/2012	U-233/4	0.11 ± 0.02	0.10 ± 0.01	0.11 ± 0.01	Pass
SO-4748, 4749	7/26/2012	U-238	0.12 ± 0.02	0.11 ± 0.01	0.12 ± 0.01	Pass
VE-4832, 4833	8/1/2012	K-40	4.06 ± 0.22	4.08 ± 0.24	4.07 ± 0.16	Pass
DW-30149, 30150	8/1/2012	Ra-226	2.69 ± 0.22	2.79 ± 0.22	2.74 ± 0.16	Pass
DW-30149, 30150	8/1/2012	Ra-228	2.77 ± 0.75	1.61 ± 0.57	2.19 ± 0.47	Pass
SG-4916, 4917	8/3/2012	Ac-228	11.03 ± 0.33	11.08 ± 0.44	11.06 ± 0.28	Pass
SG-4916, 4917	8/3/2012	K-40	6.39 ± 0.80	6.98 ± 0.88	6.69 ± 0.59	Pass
F-5313, 5314	8/9/2012	Cs-137	0.05 ± 0.02	0.05 ± 0.02	0.05 ± 0.01	Pass
F-5313, 5314	8/9/2012	Gr. Beta	4.12 ± 0.08	4.10 ± 0.08	4.11 ± 0.06	Pass
F-5313, 5314	8/9/2012	K-40	3.07 ± 0.42	3.14 ± 0.40	3.11 ± 0.29	Pass
VE-5166, 5167	8/15/2012	K-40	4.26 ± 0.28	3.66 ± 0.47	3.96 ± 0.27	Pass
VE-5376, 5377	8/22/2012	Gr. Beta	7.72 ± 0.17	7.61 ± 0.16	7.67 ± 0.12	Pass
VE-5334, 5335	8/27/2012	K-40	1.65 ± 0.17	1.72 ± 0.15	1.68 ± 0.12	Pass
VE-5481, 5482	8/28/2012	Be-7	2.52 ± 0.19	2.65 ± 0.21	2.59 ± 0.14	Pass
VE-5481, 5482	8/28/2012	K-40	5.05 ± 0.37	4.79 ± 0.39	4.92 ± 0.27	Pass
VE-5481, 5482	8/28/2012	Sr-90	0.01 ± 0.00	0.01 ± 0.01	0.01 ± 0.00	Pass
DW-30164, 30165	8/30/2012	Ra-226	1.33 ± 0.15	1.59 ± 0.17	1.46 ± 0.11	Pass
DW-30164, 30165	8/30/2012	Ra-228	2.76 ± 0.66	1.54 ± 0.56	2.15 ± 0.43	Pass
VE-5166, 5167	9/4/2012	K-40	2.05 ± 0.32	2.53 ± 0.36	2.29 ± 0.24	Pass
ME-5607, 5608	9/4/2012	Gr. Beta	2.92 ± 0.08	2.89 ± 0.08	2.90 ± 0.06	Pass
ME-5607, 5608	9/4/2012	K-40	2.06 ± 0.32	2.53 ± 0.36	2.29 ± 0.24	Pass
SW-5901, 5902	9/17/2012	H-3	10909.00 ± 311.00	10817.00 ± 310.00	10863.00 ± 219.56	Pass
BS-6048, 6049	9/24/2012	K-40	1.24 ± 0.20	1.18 ± 0.21	1.21 ± 0.14	Pass
AP-6482, 6483	9/27/2012	Be-7	0.09 ± 0.02	0.09 ± 0.03	0.09 ± 0.02	Pass

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

Lab Code	Date	Analysis	Concentration (pCi/L)[a] First Result	Second Result	Averaged Result	Acceptance
G-6090, 6091	10/1/2012	Be-7	3.74 ± 0.33	3.54 ± 0.30	3.64 ± 0.22	Pass
G-6090, 6091	10/1/2012	Gr. Beta	10.81 ± 0.34	10.72 ± 0.33	10.77 ± 0.24	Pass
G-6090, 6091	10/1/2012	K-40	5.99 ± 0.47	5.45 ± 0.44	5.72 ± 0.32	Pass
SO-6111, 6112	10/1/2012	Cs-137	0.06 ± 0.03	0.04 ± 0.02	0.05 ± 0.02	Pass
SO-6111, 6112	10/1/2012	K-40	19.66 ± 0.84	20.09 ± 0.80	19.88 ± 0.58	Pass
W-6795, 6796	10/1/2012	H-3	215.20 ± 88.00	292.80 ± 91.60	254.00 ± 63.51	Pass
AP-6461, 6462	10/2/2012	Be-7	0.07 ± 0.01	0.07 ± 0.02	0.07 ± 0.01	Pass
WW-6279, 6280	10/3/2012	Gr. Beta	1.54 ± 0.68	1.67 ± 0.75	1.61 ± 0.51	Pass
W-6346, 6347	10/3/2012	Ra-226	0.30 ± 0.10	0.36 ± 0.10	0.33 ± 0.07	Pass
VE-6503, 6504	10/9/2012	K-40	5.23 ± 0.83	6.00 ± 0.45	5.62 ± 0.47	Pass
WW-6606, 6607	10/10/2012	Gr. Beta	3.18 ± 1.31	2.42 ± 1.27	2.80 ± 0.91	Pass
WW-6606, 6607	10/10/2012	H-3	273.10 ± 85.70	219.80 ± 83.10	246.45 ± 59.69	Pass
WW-7237, 7238	10/12/2012	H-3	175.44 ± 99.84	180.75 ± 100.03	178.10 ± 70.66	Pass
F-6627, 6628	10/15/2012	K-40	3.05 ± 0.39	3.23 ± 0.37	3.14 ± 0.27	Pass
VE-6669, 6670	10/16/2012	Be-7	0.48 ± 0.26	0.50 ± 0.13	0.49 ± 0.15	Pass
VE-6669, 6670	10/16/2012	K-40	4.06 ± 0.28	3.68 ± 0.26	3.87 ± 0.19	Pass
SS-6711, 6712	10/16/2012	Ac-228	0.16 ± 0.05	0.17 ± 0.06	0.17 ± 0.04	Pass
SS-6711, 6712	10/16/2012	Bi-214	0.13 ± 0.03	0.16 ± 0.03	0.14 ± 0.02	Pass
SS-6711, 6712	10/16/2012	Gr. Beta	14.20 ± 0.89	12.67 ± 0.88	13.44 ± 0.63	Pass
SS-6711, 6712	10/16/2012	Pb-212	0.15 ± 0.06	0.13 ± 0.02	0.14 ± 0.03	Pass
SS-6711, 6712	10/16/2012	Tl-208	0.06 ± 0.02	0.04 ± 0.02	0.05 ± 0.01	Pass
WW-7258, 7259	10/22/2012	H-3	214.69 ± 85.42	314.60 ± 90.25	264.65 ± 62.13	Pass
WW-7655, 7656	10/25/2012	H-3	159.00 ± 86.10	159.00 ± 86.10	159.00 ± 60.88	Pass
WW-7747, 7748	10/25/2012	H-3	156.50 ± 84.70	170.20 ± 85.30	163.35 ± 60.10	Pass
MI-6963, 6964	10/28/2012	K-40	1384.60 ± 111.70	1421.60 ± 107.60	1403.10 ± 77.55	Pass
MI-7174, 7175	11/5/2012	K-40	1283.60 ± 97.45	1293.20 ± 91.37	1288.40 ± 66.79	Pass
SG-7221, 7222	11/9/2012	Pb-214	31.49 ± 0.70	30.11 ± 0.80	30.80 ± 0.53	Pass
DW-30216, 30217	11/9/2012	Gr. Alpha	2.23 ± 0.86	2.31 ± 0.92	2.27 ± 0.63	Pass
DW-30216, 30217	11/9/2012	Ra-226	0.72 ± 0.12	0.82 ± 0.14	0.77 ± 0.09	Pass
DW-30216, 30217	11/9/2012	Ra-228	0.92 ± 0.52	1.26 ± 0.53	1.09 ± 0.37	Pass
MI-7363, 7364	11/13/2012	K-40	1304.40 ± 103.30	1496.10 ± 121.30	1400.25 ± 79.66	Pass
CF-7384, 7385	11/13/2012	K-40	11.75 ± 0.52	10.94 ± 0.59	11.35 ± 0.39	Pass
VE-7489, 7490	11/16/2012	K-40	2.22 ± 0.23	1.91 ± 0.22	2.06 ± 0.16	Pass
AP-7531, 7532	11/21/2012	Be-7	0.19 ± 0.10	0.29 ± 0.17	0.24 ± 0.10	Pass
BS-7573, 7574	11/24/2012	K-40	7.21 ± 0.41	7.57 ± 0.39	7.39 ± 0.28	Pass
LW-7865, 7866	12/5/2012	Gr. Beta	2.16 ± 0.56	1.64 ± 0.62	1.90 ± 0.42	Pass
SG-8095, 8096	12/19/2012	Ac-228	25.15 ± 0.73	25.47 ± 0.54	25.31 ± 0.45	Pass
SG-8095, 8096	12/19/2012	Gamma	26.98 ± 2.72	28.68 ± 2.89	27.83 ± 1.98	Pass

Note: Duplicate analyses are performed on every twentieth sample received in-house. Results are not listed for those analyses with activities that measure below the LLD.

[a] Results are reported in units of pCi/L, except for air filters (pCi/Filter), food products, vegetation, soil, sediment (pCi/g).

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
STW-1670	02/01/12	I-129	9.31 ± 0.31	12.29	8.60 - 15.98	Pass
STSO-1766 [d]	02/01/12	Am-241	88.50 ± 8.30	159.00	111.00 - 207.00	Fail
STSO-1766	02/01/12	Co-57	1352.10 ± 4.00	1179.00	825.00 - 1533.00	Pass
STSO-1766	02/01/12	Co-60	1.70 ± 0.70	1.56	1.00 - 2.00	Pass
STSO-1766	02/01/12	Cs-134	842.20 ± 4.30	828.00	580.00 - 1076.00	Pass
STSO-1766	02/01/12	Cs-137	0.40 ± 0.90	0.00	0.00 - 1.00	Pass
STSO-1766	02/01/12	K-40	1729.60 ± 22.20	1491.00	1044.00 - 1938.00	Pass
STSO-1766	02/01/12	Mn-54	647.60 ± 4.20	558.00	391.00 - 725.00	Pass
STSO-1766	02/01/12	Ni-63	781.50 ± 9.70	862.00	603.00 - 1121.00	Pass
STSO-1766	02/01/12	Pu-238	142.40 ± 9.70	136.00	97.00 - 177.00	Pass
STSO-1766	02/01/12	Pu-239/40	66.10 ± 6.40	65.80	46.10 - 85.50	Pass
STSO-1766	02/01/12	Sr-90	383.20 ± 15.30	392.00	274.00 - 510.00	Pass
STSO-1766	02/01/12	Tc-99	289.60 ± 10.90	374.00	262.00 - 486.00	Pass
STSO-1766	02/01/12	U-233/4	63.20 ± 5.40	68.10	47.70 - 88.50	Pass
STSO-1766	02/01/12	U-238	310.80 ± 12.10	329.00	230.00 - 428.00	Pass
STSO-1766	02/01/12	Zn-65	766.70 ± 6.70	642.00	449.00 - 835.00	Pass
STAP-1772	02/01/12	Am-241	0.062 ± 0.02	0.073	0.051 - 0.10	Pass
STAP-1772	02/01/12	Co-57	0.010 ± 0.01	0.00	0.000 - 1.00	Pass
STAP-1772	02/01/12	Co-60	2.40 ± 0.08	2.18	1.53 - 2.84	Pass
STAP-1772	02/01/12	Cs-134	2.33 ± 0.13	2.38	1.67 - 3.09	Pass
STAP-1772	02/01/12	Cs-137	2.07 ± 0.10	1.79	1.25 - 2.33	Pass
STAP-1772	02/01/12	Mn-54	3.77 ± 0.14	3.24	2.27 - 4.21	Pass
STAP-1772	02/01/12	Pu-238	0.003 ± 0.004	0.002	0.000 - 0.10	Pass
STAP-1772	02/01/12	Pu-239/40	0.098 ± 0.017	0.097	0.07 - 0.13	Pass
STAP-1772	02/01/12	Sr-90	-0.010 ± 0.060	0.000	-0.10 - 0.13	Pass
STAP-1772 [e]	02/01/12	U-233/4	0.016 ± 0.006	0.019	0.013 - 0.024	Pass
STAP-1772	02/01/12	U-238	0.11 ± 0.02	0.12	0.09 - 0.16	Pass
STAP-1772	02/01/12	Zn-65	3.67 ± 0.20	2.99	2.09 - 3.89	Pass
STAP-1773	02/01/12	Gr. Alpha	0.51 ± 0.05	1.20	0.40 - 2.00	Pass
STAP-1773	02/01/12	Gr. Beta	2.75 ± 0.10	2.40	1.20 - 3.60	Pass
STVE-1776	02/01/12	Co-57	14.57 ± 0.28	12.00	8.40 - 15.60	Pass
STVE-1776	02/01/12	Co-60	6.45 ± 0.23	6.05	4.24 - 7.87	Pass
STVE-1776	02/01/12	Cs-134	8.39 ± 0.29	8.43	5.90 - 10.96	Pass
STVE-1776	02/01/12	Cs-137	0.01 ± 0.09	0.00	0.00 - 0.10	Pass
STVE-1776	02/01/12	Mn-54	0.03 ± 0.08	0.00	0.00 - 0.10	Pass
STVE-1776	02/01/12	Zn-65	10.31 ± 0.67	8.90	6.23 - 11.57	Pass
STW-1960	02/01/12	Gr. Alpha	1.68 ± 0.09	2.14	0.64 - 3.64	Pass
STW-1960	02/01/12	Gr. Beta	6.33 ± 0.10	6.36	3.18 - 9.54	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
STW-1964	02/01/12	Am-241	1.28 ± 0.12	1.63	1.14 - 2.12	Pass
STW-1964	02/01/12	Co-57	33.30 ± 0.40	32.90	23.00 - 42.80	Pass
STW-1964	02/01/12	Co-60	23.20 ± 0.40	23.72	16.60 - 30.84	Pass
STW-1964	02/01/12	Cs-134	0.30 ± 3.00	0.00	0.00 - 1.00	Pass
STW-1964	02/01/12	Cs-137	40.10 ± 0.60	39.90	27.90 - 51.90	Pass
STW-1964 [f]	02/01/12	Fe-55	65.10 ± 9.50	81.90	57.30 - 106.50	Pass
STW-1964	02/01/12	H-3	460.00 ± 12.10	437.00	306.00 - 568.00	Pass
STW-1964	02/01/12	K-40	153.00 ± 4.20	142.00	99.00 - 185.00	Pass
STW-1964	02/01/12	Mn-54	32.70 ± 0.60	31.80	22.30 - 41.30	Pass
STW-1964	02/01/12	Ni-63	49.80 ± 2.90	60.00	42.00 - 78.00	Pass
STW-1964	02/01/12	Pu-238	0.58 ± 0.06	0.63	0.44 - 0.82	Pass
STW-1964	02/01/12	Pu-239/40	1.30 ± 0.15	1.34	0.94 - 1.74	Pass
STW-1964	02/01/12	Sr-90	0.10 ± 0.20	0.00	0.00 - 1.00	Pass
STW-1964	02/01/12	Tc-99	23.70 ± 0.80	27.90	19.50 - 36.30	Pass
STW-1964	02/01/12	U-233/4	0.40 ± 0.05	0.39	0.27 - 0.51	Pass
STW-1964	02/01/12	U-238	2.67 ± 0.13	2.76	1.93 - 3.59	Pass
STW-1964	02/01/12	Zn-65	0.01 ± 0.20	0.00	0.00 - 1.00	Pass
STW-5391	08/01/12	I-129	5.73 ± 0.28	6.82	4.77 - 8.87	Pass
STSO-5392	08/01/12	Am-241	129.30 ± 12.70	111.00	78.00 - 144.00	Pass
STSO-5392	08/01/12	Ni-63	376.20 ± 20.60	406.00	284.00 - 528.00	Pass
STSO-5392	08/01/12	Pu-238	118.70 ± 9.30	105.80	74.10 - 137.50	Pass
STSO-5392	08/01/12	Pu-239/40	140.70 ± 9.90	134.00	94.00 - 174.00	Pass
STSO-5392	08/01/12	Sr-90	483.52 ± 16.47	508.00	356.00 - 660.00	Pass
STSO-5392	08/01/12	Tc-99	432.50 ± 23.10	469.00	328.00 - 610.00	Pass
STSO-5394	08/01/12	Co-57	1528.00 ± 4.10	1316.00	921.00 - 1711.00	Pass
STSO-5394	08/01/12	Co-60	592.00 ± 3.20	531.00	372.00 - 690.00	Pass
STSO-5394	08/01/12	Cs-134	933.60 ± 5.82	939.00	657.00 - 1221.00	Pass
STSO-5394	08/01/12	Cs-137	1319.80 ± 5.50	1150.00	805.00 - 1495.00	Pass
STSO-5394	08/01/12	K-40	737.30 ± 17.70	632.00	442.00 - 822.00	Pass
STSO-5394	08/01/12	Mn-54	1083.20 ± 5.20	920.00	644.00 - 1196.00	Pass
STSO-5394	08/01/12	U-233/4	55.80 ± 4.20	60.30	42.20 - 78.40	Pass
STSO-5394	08/01/12	U-238	231.20 ± 8.60	263.00	184.00 - 342.00	Pass
STSO-5394	08/01/12	Zn-65	696.10 ± 7.00	606.00	424.00 - 788.00	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
STVE-5395 [g]	08/01/12	Co-57	7.44 ± 0.17	5.66	3.96 - 7.36	Fail
STVE-5395	08/01/12	Co-60	5.90 ± 0.15	5.12	3.58 - 6.66	Pass
STVE-5395	08/01/12	Cs-134	7.40 ± 0.31	6.51	4.56 - 8.46	Pass
STVE-5395	08/01/12	Cs-137	5.45 ± 0.18	4.38	3.07 - 5.69	Pass
STVE-5395	08/01/12	Mn-54	4.06 ± 0.21	3.27	2.29 - 4.25	Pass
STAP-5398	08/01/12	Gr. Alpha	0.41 ± 0.05	0.97	0.29 - 1.65	Pass
STAP-5398	08/01/12	Gr. Beta	2.11 ± 0.09	1.92	0.96 - 2.88	Pass
STAP-5401 [h]	08/01/12	Am-241	0.12 ± 0.02	0.08	0.05 - 0.10	Fail
STAP-5403	08/01/12	Co-57	1.96 ± 0.05	1.91	1.34 - 2.48	Pass
STAP-5403	08/01/12	Co-60	1.76 ± 0.07	1.73	1.21 - 2.25	Pass
STAP-5403	08/01/12	Cs-134	2.74 ± 0.18	2.74	1.92 - 3.56	Pass
STAP-5403	08/01/12	Cs-137	0.00 ± 0.03	0.00	-0.01 - 0.01	Pass
STAP-5403	08/01/12	Mn-54	2.52 ± 0.10	2.36	1.65 - 3.07	Pass
STAP-5403	08/01/12	Pu-238	0.050 ± 0.015	0.063	0.044 - 0.081	Pass
STAP-5403	08/01/12	Pu-239/40	0.001 ± 0.004	0.00081	0.000 - 0.010	Pass
STAP-5403 [i]	08/01/12	U-233/4	0.009 ± 0.011	0.014	0.010 - 0.018	Fail
STAP-5403	08/01/12	U-238	0.08 ± 0.02	0.10	0.070 - 0.130	Pass
STAP-5403	08/01/12	Zn-65	0.01 ± 0.06	0.00	-0.010 - 0.010	Pass
STW-5445	08/01/12	Fe-55	79.80 ± 4.10	89.30	62.50 - 116.10	Pass
STW-5445	08/01/12	Ni-63	74.30 ± 3.40	66.30	46.40 - 86.20	Pass
STW-5445	08/01/12	U-233/4	0.46 ± 0.05	0.45	0.32 - 0.59	Pass
STW-5445	08/01/12	U-238	3.14 ± 0.14	3.33	2.33 - 4.33	Pass
STW-5445 [j]	08/01/12	Am-241	0.64 ± 0.04	1.06	0.74 - 1.38	Fail

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

[b] Laboratory codes as follows: STW (water), STAP (air filter), STSO (soil), STVE (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] Investigation was inconclusive, there was not enough sample for reanalysis. ERA results (A-7) for the same matrix were acceptable.

[e] No errors found in calculation or procedure, original analysis result; 0.010 ± 0.010 Bq/filter.

[f] Reanalysis results were within limits, but low. ERA results (A-7) for the same matrix were acceptable. The efficiency factor was recalculated for the second round of MAPEP testing. Original analysis results 55.8 ± 12.6 Bq/L.

[g] Result of reanalysis; 6.74 ± 0.15 Bq/sample. Gamma emitters for the vegetation matrix exhibited a high bias, only Co-57 exceeded acceptance limits. Recounted using a geometry more closely matched to the MAPEP sample size.

[h] Result of reanalysis; 0.070 ± 0.013 Bq/filter.

[i] Result of reanalysis; 0.013 ± 0.005 pCi/filter. A larger sample size was used to reduce the counting error.

[j] Result of reanalysis 1.07 ± 0.06 pCi/L. The analyses of the MAPEP sample matrix resulted in recovery factors greater than 100%. A correction was made using recovery based on analysis of blank samples. A new tracer solution is on order, future samples for MAPEP testing will include batch spike and blank samples.

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-1393	03/19/12	Co-60	917.5 ± 7.0	880.0	681.0 - 1100.0	Pass
ERAP-1393	03/19/12	Cs-134	586.6 ± 7.4	656.0	417.0 - 814.0	Pass
ERAP-1393	03/19/12	Cs-137	1255.9 ± 9.4	1130.0	849.0 - 1480.0	Pass
ERAP-1393	03/19/12	Mn-54	< 3.4	0.0	-	Pass
ERAP-1393	03/19/12	Zn-65	1085.2 ± 18.0	897.0	642.0 - 1240.0	Pass
ERAP-1394	03/19/12	Am-241	86.9 ± 2.9	68.8	42.4 - 93.1	Pass
ERAP-1394	03/19/12	Pu-238	70.2 ± 3.6	63.2	43.3 - 83.1	Pass
ERAP-1394	03/19/12	Pu-239/40	66.0 ± 1.0	63.0	45.6 - 82.4	Pass
ERAP-1394	03/19/12	Sr-90	112.5 ± 15.4	89.6	43.8 - 134.0	Pass
ERAP-1394	03/19/12	U-233/4	43.4 ± 0.8	47.5	29.4 - 71.6	Pass
ERAP-1394	03/19/12	U-238	44.0 ± 1.2	47.1	30.4 - 65.1	Pass
ERAP-1394	03/19/12	Uranium	89.1 ± 2.2	96.7	53.5 - 147.0	Pass
ERAP-1396	03/19/12	Gr. Alpha	81.1 ± 1.5	77.8	26.1 - 121.0	Pass
ERAP-1396	03/19/12	Gr. Beta	68.4 ± 0.7	52.5	33.2 - 76.5	Pass
ERSO-1397	03/19/12	Ac-228	1303.4 ± 89.3	1570.0	1010.0 - 2180.0	Pass
ERSO-1397	03/19/12	Am-241	856.0 ± 123.7	938.0	549.0 - 1220.0	Pass
ERSO-1397	03/19/12	Bi-212	1379.2 ± 247.2	1550.0	413.0 - 2280.0	Pass
ERSO-1397	03/19/12	Bi-214	965.2 ± 38.4	1100.0	665.0 - 1590.0	Pass
ERSO-1397	03/19/12	Co-60	3693.6 ± 32.1	3500.0	2370.0 - 4820.0	Pass
ERSO-1397	03/19/12	Cs-134	2257.3 ± 45.4	2180.0	1420.0 - 2620.0	Pass
ERSO-1397	03/19/12	Cs-137	9444.5 ± 58.4	8770.0	6720.0 - 11300.0	Pass
ERSO-1397	03/19/12	K-40	11277.0 ± 275.1	11600.0	8470.0 - 15600.0	Pass
ERSO-1397	03/19/12	Mn-54	< 21.0	0.0	-	Pass
ERSO-1397	03/19/12	Pb-212	1208.4 ± 26.3	1510.0	992.0 - 2110.0	Pass
ERSO-1397	03/19/12	Pb-214	1041.6 ± 46.9	1110.0	647.0 - 1650.0	Pass
ERSO-1397	03/19/12	Pu-238	921.0 ± 112.6	984.0	592.0 - 1360.0	Pass
ERSO-1397	03/19/12	Pu-239/40	1028.0 ± 112.6	879.0	575.0 - 1210.0	Pass
ERSO-1397	03/19/12	Sr-90	8128.0 ± 329.0	8800.0	3360.0 - 13900.0	Pass
ERSO-1397	03/19/12	Th-234	2711.3 ± 253.6	2000.0	632.0 - 3760.0	Pass
ERSO-1397	03/19/12	U-233/4	1859.3 ± 126.6	1960.0	1200.0 - 2510.0	Pass
ERSO-1397	03/19/12	U-238	2003.3 ± 130.3	2000.0	1240.0 - 2540.0	Pass
ERSO-1397	03/19/12	Uranium	3939.5 ± 283.8	4030.0	2190.0 - 5320.0	Pass
ERSO-1397	03/19/12	Zn-65	4200.4 ± 65.9	3650.0	2910.0 - 4850.0	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-1400	03/19/12	Am-241	4194.8 ± 199.5	4540.0	2780.0 - 6040.0	Pass
ERVE-1400	03/19/12	Cm-244	1471.2 ± 113.1	1590.0	779.0 - 2480.0	Pass
ERVE-1400	03/19/12	Co-60	2347.8 ± 47.9	2210.0	1520.0 - 3090.0	Pass
ERVE-1400	03/19/12	Cs-134	2847.5 ± 64.0	2920.0	1880.0 - 3790.0	Pass
ERVE-1400	03/19/12	Cs-137	1503.5 ± 52.5	1340.0	972.0 - 1860.0	Pass
ERVE-1400	03/19/12	K-40	34105.7 ± 745.3	28600.0	20700.0 - 40100.0	Pass
ERVE-1400	03/19/12	Mn-54	< 26.8	0.0	-	Pass
ERVE-1400	03/19/12	Pu-238	2509.0 ± 213.6	2350.0	1400.0 - 3220.0	Pass
ERVE-1400	03/19/12	Pu-239/40	2690.4 ± 208.9	2570.0	1580.0 - 3540.0	Pass
ERVE-1400	03/19/12	Sr-90	7881.5 ± 470.8	8520.0	4860.0 - 11300.0	Pass
ERVE-1400	03/19/12	U-233/4	3149.6 ± 165.2	3610.0	2370.0 - 4640.0	Pass
ERVE-1400	03/19/12	U-238	3203.6 ± 166.5	3580.0	2390.0 - 4550.0	Pass
ERVE-1400	03/19/12	Uranium	6463.7 ± 363.2	7350.0	4980.0 - 9150.0	Pass
ERVE-1400	03/19/12	Zn-65	2701.9 ± 105.5	2310.0	1670.0 - 3240.0	Pass
ERW-1403	03/19/12	Am-241	119.9 ± 3.2	135.0	91.0 - 181.0	Pass
ERW-1403	03/19/12	Fe-55	713.7 ± 127.4	863.0	514.0 - 1170.0	Pass
ERW-1403	03/19/12	Pu-238	131.9 ± 6.4	135.0	99.9 - 168.0	Pass
ERW-1403	03/19/12	Pu-239/40	108.9 ± 10.2	112.0	86.9 - 141.0	Pass
ERW-1403	03/19/12	U-233/4	93.1 ± 7.9	105.0	78.9 - 135.0	Pass
ERW-1403	03/19/12	U-238	96.9 ± 5.5	104.0	79.3 - 128.0	Pass
ERW-1403	03/19/12	Uranium	190.0 ± 13.8	214.0	157.0 - 277.0	Pass
ERW-1405	03/19/12	Co-60	858.7 ± 5.6	875.0	760.0 - 1020.0	Pass
ERW-1405	03/19/12	Cs-134	560.4 ± 4.4	609.0	447.0 - 700.0	Pass
ERW-1405	03/19/12	Cs-137	1239.9 ± 7.4	1250.0	1060.0 - 1500.0	Pass
ERW-1405	03/19/12	Mn-54	< 7.4	0.0	-	Pass
ERW-1405	03/19/12	Sr-90	944.3 ± 26.2	989.0	644.0 - 1310.0	Pass
ERW-1405	03/19/12	Zn-65	786.9 ± 20.6	749.0	624.0 - 945.0	Pass
ERW-1406	03/19/12	Gr. Alpha	85.9 ± 3.0	103.0	36.6 - 160.0	Pass
ERW-1406	03/19/12	Gr. Beta	45.7 ± 1.6	43.7	25.0 - 64.7	Pass
ERW-1409	03/19/12	H-3	9045.0 ± 284.0	9150.0	6130.0 - 13000.0	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: STW (water), STAP (air filter), STSO (soil), STVE (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.

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 2012

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 (324)	0.01	0.029 (270/270) (0.009 - 0.064)	49 0.8 miles NNE	0.031 (54/54) (0.012 - 0.064)	Station 53 0.029 (54/54) (0.011 - 0.064)	0
	Gamma (24) Be-7	-	0.082 (20/20) (0.052 - 0.105)	37 2.0 miles NNW	0.085 (4/4) (0.052 - 0.103)	0.090 (4/4) (0.065 - 0.113)	0
Air Radioiodine (pCi/m^3)	I-131 (324)	0.07	- (0/270)	N/A	N/A	Station 53 - (0/54)	0
Direct Radiation Dosimeters (mR per std. 90-day Qtr.)	Gamma Dose (172)	-	19.5 (164/164) (10.0 – 27.9)	47 0.16 miles S	24.8 (4/4) (19.9 – 27.9)	Stations 39 & 53 18.6 (8/8) (14.7 – 22.2)	0
Surface Water (pCi/l)	Gamma (24)		- (0/12)	N/A	N/A	JRR - (0/12)	0
	Tritium (24)	3,000	11,435 (12/12) (10,037–12,545)	SP 3.2 miles SSE	11,435 (12/12) (10,037–12,545)	- (0/12)	0
	Fe-55 (8)	-	- (0/4)	N/A	N/A	- (0/4)	0
Ground Water (pCi/l)	I-131 (32)	1	- (0/28)	N/A	N/A	B-12 - (0/4)	0
	Gamma (32)		- (0/28)	N/A	N/A	- (0/4)	0
	Tritium (32)	2,000	- (0/28)	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

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

Location of Facility: Coffey County, Kansas Reporting Period: Annual 2012

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 (25)	1	- (0/12)	N/A	N/A	BW-15 - (0/13)	0
	Gross Beta (25)	4	3.0 (12/12) (2.1 – 3.7)	IO-DW 26.1 miles SSE	3.0 (12/12) (2.1 – 3.7)	2.8 (13/13) (1.2 – 4.0)	0
	Gamma (25)		- (0/12)	N/A	N/A	- (0/13)	0
	Tritium (8)	2,000	222 (1/4)	IO-DW 26.1 miles SSE	222 (1/4)	- (0/4)	0
Shoreline Sediment (pCi/kg dry)	Gamma (6)					JRR	
	K-40	-	8,827 (4/4) (6,074 – 12,147)	SC 0.8 miles NNW	12,147 (1/1)	8,298 (2/2) (6,356 – 10,239)	0
	Cs-137	180	155.1 (2/4) (75.8 – 234.3)	EEA 3.0 miles NNW	234.3 (1/1)	- (0/2)	0
Fish (pCi/kg wet)	Gamma (17)					JRR	
	K-40	-	3,149 (9/9) (2,837 – 3,547)	CCL 0.6 miles E to NNW	3,149 (9/9) (2,837 – 3,547)	3,165 (8/8) (2,944 – 3,497)	0
	Tritium (17)	-	7,728 (9/9) (6,808 – 8,948)	CCL 0.6 miles E to NNW	7,728 (9/9) (6,808 – 8,948)	- (0/8)	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

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

Location of Facility: Coffey County, Kansas Reporting Period: Annual 2012

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 **
Food and Garden (pCi/kg wet)	Gamma (30)					D-2	
	Be-7	-	820 (20/21) (212 – 3,348)	Q-6 2.4 miles NW	1,273 (6/6) (212 – 3,348)	524 (6/9) (262 – 764)	0
	K-40	-	5,935 (21/21) (3,868 – 9,300)	B-1 0.8 miles NNE	6,567 (7/7) (4,921 – 9,300)	4,990 (9/9) (3,033 – 5,892)	0
						NR-U1	
Crops (pCi/kg wet)	Gamma (3)						
	K-40	-	8,671 (2/2) (3,033 – 14,309)	NR-D1 8.9 miles S	14,309 (1/1)	2,994 (1/1)	0
Bottom Sediment (pCi/kg dry)	Gamma (19)					JRR	
	K-40	-	9,766 (17/17) (7,502 – 11,301)	EEA 3.0 miles NNW	11,179 (1/1)	10,677 (2/2) (9,398 – 11,955)	0
	Cs-137	-	76 (9/17) (26 – 126)	UHS 0.6 miles E	96 (4/10) (68 – 126)	84 (2/2) (45 – 122)	0
	Fe-55 (14)	-	- (0/14)	N/A	N/A		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

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

Location of Facility: Coffey County, Kansas Reporting Period: Annual 2012

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 (4)					No Control	
	Be-7	-	655 (3/4) (314 – 1,196)	DC-ALT 1.5 miles NW	1,196 (1/1)		0
	K-40	-	2,827 (4/4) (1,925 – 4,601)	EEA 3.0 miles NNW	4,601 (1/1)		0
Terrestrial Vegetation (pCi/kg wet)	Gamma (1)					No Control	
	Be-7	-	1,084 (1/1)	EEA 3.0 miles NNW	1,084 (1/1)		0
	K-40	-	13,379 (1/1)	EEA 3.0 miles NNW	13,379 (1/1)		0
Soil (pCi/kg dry)	Gamma (1)					No Control	
	K-40	-	8,520 (1/1)	EEA 3.0 miles NNW	8,520 (1/1)		0
	Cs-137	-	155 (1/1)	EEA 3.0 miles NNW	155 (1/1)		0
Deer (pCi/kg wet)	Gamma (1)					No Control	
	K-40	-	2,640 (1/1)	A1.5 1.5 miles N	2,640 (1/1)		0
	Tritium (1)	-	916 (1/1)	A1.5 1.5 miles N	916 (1/1)		0

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

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
27-DEC-11	03-JAN-12	305	0.020 +/- 0.004	< 0.010	
03-JAN-12	09-JAN-12	255	0.020 +/- 0.004	< 0.012	
09-JAN-12	16-JAN-12	298	0.020 +/- 0.003	< 0.009	
16-JAN-12	23-JAN-12	314	0.040 +/- 0.004	< 0.011	
23-JAN-12	30-JAN-12	304	0.015 +/- 0.004	< 0.018	
30-JAN-12	06-FEB-12	302	0.019 +/- 0.004	< 0.013	
06-FEB-12	15-FEB-12	388	0.027 +/- 0.003	< 0.013	
15-FEB-12	21-FEB-12	260	0.028 +/- 0.004	< 0.016	
21-FEB-12	27-FEB-12	266	0.013 +/- 0.004	< 0.010	
27-FEB-12	05-MAR-12	291	0.018 +/- 0.004	< 0.011	
27-FEB-12	05-MAR-12	291	0.024 +/- 0.004		Duplicate
05-MAR-12	12-MAR-12	298	0.019 +/- 0.004	< 0.017	
12-MAR-12	19-MAR-12	290	0.017 +/- 0.004	< 0.014	
19-MAR-12	26-MAR-12	302	0.014 +/- 0.004	< 0.010	
19-MAR-12	26-MAR-12	302	0.012 +/- 0.004		Duplicate
26-MAR-12	02-APR-12	299	0.028 +/- 0.004	< 0.012	
02-APR-12	09-APR-12	301	0.022 +/- 0.004	< 0.013	
09-APR-12	16-APR-12	308	0.022 +/- 0.005	< 0.020	
16-APR-12	24-APR-12	347	0.019 +/- 0.004	< 0.016	
24-APR-12	30-APR-12	252	0.027 +/- 0.005	< 0.013	
30-APR-12	08-MAY-12	336	0.019 +/- 0.004	< 0.019	
08-MAY-12	14-MAY-12	255	0.022 +/- 0.005	< 0.011	
08-MAY-12	14-MAY-12	255	0.023 +/- 0.005		Duplicate
14-MAY-12	21-MAY-12	309	0.027 +/- 0.004	< 0.008	
21-MAY-12	29-MAY-12	338	0.022 +/- 0.003	< 0.008	
29-MAY-12	04-JUN-12	237	0.020 +/- 0.005	< 0.011	
04-JUN-12	11-JUN-12	282	0.021 +/- 0.005	< 0.007	
11-JUN-12	18-JUN-12	291	0.020 +/- 0.004	< 0.011	
11-JUN-12	18-JUN-12	291	0.018 +/- 0.004		Duplicate
18-JUN-12	25-JUN-12	278	0.017 +/- 0.004	< 0.013	
25-JUN-12	02-JUL-12	303	0.040 +/- 0.005	< 0.008	
02-JUL-12	09-JUL-12	298	0.023 +/- 0.004	< 0.012	
09-JUL-12	16-JUL-12	296	0.034 +/- 0.005	< 0.018	
16-JUL-12	23-JUL-12	299	0.027 +/- 0.004	< 0.008	
16-JUL-12	23-JUL-12	299	0.028 +/- 0.004		Duplicate
23-JUL-12	30-JUL-12	296	0.026 +/- 0.004	< 0.013	
30-JUL-12	06-AUG-12	294	0.035 +/- 0.005	< 0.011	
06-AUG-12	13-AUG-12	296	0.026 +/- 0.004	< 0.011	
13-AUG-12	20-AUG-12	302	0.024 +/- 0.004	< 0.011	
20-AUG-12	27-AUG-12	298	0.032 +/- 0.004	< 0.014	

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
27-AUG-12	04-SEP-12	334	0.031 +/- 0.004	< 0.020	
04-SEP-12	10-SEP-12	258	0.027 +/- 0.005	< 0.006	
04-SEP-12	10-SEP-12	258	0.029 +/- 0.005		Duplicate
10-SEP-12	17-SEP-12	303	0.025 +/- 0.004	< 0.016	
10-SEP-12	17-SEP-12	303	0.028 +/- 0.004		Duplicate
17-SEP-12	24-SEP-12	307	0.020 +/- 0.004	< 0.006	
24-SEP-12	01-OCT-12	293	0.040 +/- 0.005	< 0.013	
01-OCT-12	08-OCT-12	310	0.033 +/- 0.005	< 0.018	
08-OCT-12	15-OCT-12	310	0.035 +/- 0.004	< 0.014	
15-OCT-12	22-OCT-12	302	0.029 +/- 0.004	< 0.010	
22-OCT-12	29-OCT-12	307	0.028 +/- 0.004	< 0.012	
29-OCT-12	05-NOV-12	309	0.054 +/- 0.005	< 0.011	
05-NOV-12	12-NOV-12	303	0.020 +/- 0.004	< 0.011	
05-NOV-12	12-NOV-12	303	0.026 +/- 0.004		Duplicate
12-NOV-12	19-NOV-12	300	0.063 +/- 0.005	< 0.011	
19-NOV-12	26-NOV-12	307	0.055 +/- 0.005	< 0.015	
26-NOV-12	03-DEC-12	330	0.051 +/- 0.005	< 0.008	
03-DEC-12	10-DEC-12	319	0.032 +/- 0.004	< 0.007	
10-DEC-12	17-DEC-12	300	0.054 +/- 0.005	< 0.018	
17-DEC-12	26-DEC-12	387	0.051 +/- 0.004	< 0.009	
26-DEC-12	31-DEC-12	210	0.042 +/- 0.006	< 0.019	
31-DEC-12	07-JAN-13	313	0.037 +/- 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
27-DEC-11	03-JAN-12	305	0.017 +/- 0.004	< 0.010	
03-JAN-12	09-JAN-12	262	0.022 +/- 0.004	< 0.012	
09-JAN-12	16-JAN-12	304	0.025 +/- 0.004	< 0.009	
16-JAN-12	23-JAN-12	315	0.039 +/- 0.004	< 0.011	
23-JAN-12	30-JAN-12	299	0.017 +/- 0.004	< 0.019	
30-JAN-12	06-FEB-12	305	0.018 +/- 0.004	< 0.013	
06-FEB-12	15-FEB-12	392	0.027 +/- 0.003	< 0.013	
15-FEB-12	21-FEB-12	261	0.030 +/- 0.005	< 0.016	
21-FEB-12	27-FEB-12	259	0.009 +/- 0.004	< 0.010	
27-FEB-12	05-MAR-12	285	0.021 +/- 0.004	< 0.011	
05-MAR-12	12-MAR-12	305	0.018 +/- 0.004	< 0.017	
12-MAR-12	19-MAR-12	292	0.017 +/- 0.004	< 0.014	
19-MAR-12	26-MAR-12	297	0.016 +/- 0.004	< 0.011	
26-MAR-12	02-APR-12	306	0.026 +/- 0.004	< 0.012	
02-APR-12	09-APR-12	306	0.023 +/- 0.004	< 0.012	
09-APR-12	16-APR-12	308	0.019 +/- 0.004	< 0.020	
16-APR-12	24-APR-12	339	0.018 +/- 0.004	< 0.016	
24-APR-12	30-APR-12	255	0.026 +/- 0.005	< 0.013	
30-APR-12	08-MAY-12	337	0.024 +/- 0.004	< 0.019	
08-MAY-12	14-MAY-12	258	0.025 +/- 0.005	< 0.011	
14-MAY-12	21-MAY-12	305	0.024 +/- 0.004	< 0.008	
21-MAY-12	29-MAY-12	339	0.023 +/- 0.004	< 0.009	
29-MAY-12	04-JUN-12	251	0.017 +/- 0.005	< 0.010	
04-JUN-12	11-JUN-12	302	0.020 +/- 0.004	< 0.006	
11-JUN-12	18-JUN-12	305	0.018 +/- 0.004	< 0.011	
18-JUN-12	25-JUN-12	302	0.020 +/- 0.004	< 0.012	
25-JUN-12	02-JUL-12	298	0.045 +/- 0.005	< 0.008	
02-JUL-12	09-JUL-12	298	0.021 +/- 0.004	< 0.012	
09-JUL-12	16-JUL-12	303	0.033 +/- 0.004	< 0.017	
16-JUL-12	23-JUL-12	295	0.029 +/- 0.004	< 0.009	
23-JUL-12	30-JUL-12	298	0.024 +/- 0.004	< 0.013	
30-JUL-12	06-AUG-12	295	0.033 +/- 0.005	< 0.011	
06-AUG-12	13-AUG-12	297	0.025 +/- 0.004	< 0.011	
13-AUG-12	20-AUG-12	298	0.027 +/- 0.004	< 0.011	
20-AUG-12	27-AUG-12	299	0.035 +/- 0.004	< 0.014	
27-AUG-12	04-SEP-12	331	0.034 +/- 0.004	< 0.020	
04-SEP-12	10-SEP-12	256	0.032 +/- 0.005	< 0.006	
10-SEP-12	17-SEP-12	302	0.023 +/- 0.004	< 0.016	
17-SEP-12	24-SEP-12	308	0.020 +/- 0.004	< 0.006	
24-SEP-12	01-OCT-12	296	0.043 +/- 0.005	< 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
24-SEP-12	01-OCT-12	296	0.037 +/- 0.005		Duplicate
01-OCT-12	08-OCT-12	309	0.027 +/- 0.004	< 0.018	
08-OCT-12	15-OCT-12	294	0.034 +/- 0.005	< 0.015	
15-OCT-12	22-OCT-12	307	0.028 +/- 0.004	< 0.010	
22-OCT-12	29-OCT-12	306	0.028 +/- 0.004	< 0.012	
29-OCT-12	05-NOV-12	299	0.054 +/- 0.005	< 0.011	
05-NOV-12	12-NOV-12	305	0.022 +/- 0.004	< 0.011	
12-NOV-12	19-NOV-12	290	0.063 +/- 0.005	< 0.011	
19-NOV-12	26-NOV-12	304	0.056 +/- 0.005	< 0.015	
26-NOV-12	03-DEC-12	295	0.050 +/- 0.005	< 0.009	
03-DEC-12	10-DEC-12	311	0.029 +/- 0.004	< 0.008	
10-DEC-12	17-DEC-12	302	0.056 +/- 0.005	< 0.018	
17-DEC-12	26-DEC-12	384	0.053 +/- 0.004	< 0.009	
26-DEC-12	31-DEC-12	212	0.044 +/- 0.006	< 0.019	
31-DEC-12	07-JAN-13	315	0.046 +/- 0.005	< 0.013	

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
27-DEC-11	03-JAN-12	307	0.015 +/- 0.004	< 0.010	
03-JAN-12	09-JAN-12	255	0.018 +/- 0.004	< 0.012	
09-JAN-12	16-JAN-12	299	0.021 +/- 0.003	< 0.009	
09-JAN-12	16-JAN-12	299	0.021 +/- 0.003		Duplicate
16-JAN-12	23-JAN-12	315	0.042 +/- 0.004	< 0.011	
23-JAN-12	30-JAN-12	301	0.018 +/- 0.004	< 0.019	
30-JAN-12	06-FEB-12	303	0.016 +/- 0.003	< 0.013	
06-FEB-12	15-FEB-12	391	0.024 +/- 0.003	< 0.013	
15-FEB-12	21-FEB-12	259	0.031 +/- 0.005	< 0.016	
21-FEB-12	27-FEB-12	267	0.015 +/- 0.004	< 0.010	
27-FEB-12	05-MAR-12	294	0.022 +/- 0.004	< 0.011	
05-MAR-12	12-MAR-12	300	0.022 +/- 0.004	< 0.017	
12-MAR-12	19-MAR-12	292	0.017 +/- 0.004	< 0.014	
19-MAR-12	26-MAR-12	302	0.014 +/- 0.004	< 0.010	
26-MAR-12	02-APR-12	297	0.029 +/- 0.004	< 0.012	
02-APR-12	09-APR-12	306	0.021 +/- 0.004	< 0.012	
02-APR-12	09-APR-12	306	0.020 +/- 0.004		Duplicate
09-APR-12	16-APR-12	310	0.014 +/- 0.004	< 0.020	
16-APR-12	24-APR-12	360	0.022 +/- 0.004	< 0.015	
24-APR-12	30-APR-12	254	0.029 +/- 0.005	< 0.013	
30-APR-12	08-MAY-12	340	0.019 +/- 0.003	< 0.019	
08-MAY-12	14-MAY-12	260	0.025 +/- 0.005	< 0.011	
14-MAY-12	21-MAY-12	309	0.021 +/- 0.004	< 0.008	
21-MAY-12	29-MAY-12	334	0.024 +/- 0.004	< 0.010	
29-MAY-12	04-JUN-12	254	0.016 +/- 0.005	< 0.010	
04-JUN-12	11-JUN-12	304	0.023 +/- 0.004	< 0.006	
11-JUN-12	18-JUN-12	300	0.021 +/- 0.004	< 0.011	
18-JUN-12	25-JUN-12	300	0.021 +/- 0.004	< 0.012	
25-JUN-12	02-JUL-12	302	0.041 +/- 0.005	< 0.008	
02-JUL-12	09-JUL-12	300	0.025 +/- 0.004	< 0.012	
09-JUL-12	16-JUL-12	299	0.031 +/- 0.004	< 0.018	
16-JUL-12	23-JUL-12	297	0.027 +/- 0.004	< 0.008	
23-JUL-12	30-JUL-12	297	0.028 +/- 0.004	< 0.013	
30-JUL-12	06-AUG-12	296	0.029 +/- 0.004	< 0.011	
06-AUG-12	13-AUG-12	296	0.025 +/- 0.004	< 0.011	
13-AUG-12	20-AUG-12	295	0.026 +/- 0.004	< 0.011	
20-AUG-12	27-AUG-12	298	0.030 +/- 0.004	< 0.014	
27-AUG-12	04-SEP-12	334	0.032 +/- 0.004	< 0.020	
04-SEP-12	10-SEP-12	257	0.026 +/- 0.005	< 0.006	
10-SEP-12	17-SEP-12	301	0.025 +/- 0.004	< 0.016	

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
17-SEP-12	24-SEP-12	310	0.022 +/- 0.004	< 0.006	
24-SEP-12	01-OCT-12	295	0.036 +/- 0.005	< 0.013	
01-OCT-12	08-OCT-12	310	0.032 +/- 0.005	< 0.018	
08-OCT-12	15-OCT-12	302	0.033 +/- 0.004	< 0.015	
15-OCT-12	22-OCT-12	298	0.029 +/- 0.005	< 0.011	
22-OCT-12	29-OCT-12	306	0.024 +/- 0.004	< 0.012	
29-OCT-12	05-NOV-12	302	0.054 +/- 0.005	< 0.011	
05-NOV-12	12-NOV-12	305	0.024 +/- 0.004	< 0.011	
12-NOV-12	19-NOV-12	297	0.060 +/- 0.005	< 0.011	
12-NOV-12	19-NOV-12	297	0.064 +/- 0.005		Duplicate
19-NOV-12	26-NOV-12	305	0.050 +/- 0.005	< 0.015	
26-NOV-12	03-DEC-12	296	0.056 +/- 0.005	< 0.009	
26-NOV-12	03-DEC-12	296	0.050 +/- 0.005		Duplicate
03-DEC-12	10-DEC-12	319	0.029 +/- 0.004	< 0.007	
10-DEC-12	17-DEC-12	299	0.056 +/- 0.005	< 0.018	
17-DEC-12	26-DEC-12	385	0.052 +/- 0.004	< 0.009	
26-DEC-12	31-DEC-12	212	0.043 +/- 0.006	< 0.019	
31-DEC-12	07-JAN-13	318	0.046 +/- 0.005	< 0.013	

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
27-DEC-11	03-JAN-12	306	0.017 +/- 0.004	< 0.010	
27-DEC-11	03-JAN-12	306	0.015 +/- 0.004		Duplicate
03-JAN-12	09-JAN-12	255	0.020 +/- 0.004	< 0.012	
09-JAN-12	16-JAN-12	302	0.022 +/- 0.003	< 0.009	
16-JAN-12	23-JAN-12	316	0.042 +/- 0.004	< 0.011	
23-JAN-12	30-JAN-12	303	0.016 +/- 0.004	< 0.018	
23-JAN-12	30-JAN-12	303	0.016 +/- 0.004		Duplicate
30-JAN-12	06-FEB-12	307	0.022 +/- 0.004	< 0.013	
30-JAN-12	06-FEB-12	307	0.018 +/- 0.004		Duplicate
06-FEB-12	15-FEB-12	389	0.024 +/- 0.003	< 0.013	
15-FEB-12	21-FEB-12	260	0.030 +/- 0.005	< 0.016	
15-FEB-12	21-FEB-12	260	0.028 +/- 0.004		Duplicate
21-FEB-12	27-FEB-12	268	0.014 +/- 0.004	< 0.010	
27-FEB-12	05-MAR-12	295	0.020 +/- 0.004	< 0.010	
05-MAR-12	12-MAR-12	299	0.022 +/- 0.004	< 0.017	
12-MAR-12	19-MAR-12	292	0.019 +/- 0.004	< 0.014	
19-MAR-12	26-MAR-12	304	0.015 +/- 0.004	< 0.010	
26-MAR-12	02-APR-12	299	0.028 +/- 0.004	< 0.012	
02-APR-12	09-APR-12	303	0.020 +/- 0.004	< 0.012	
09-APR-12	16-APR-12	308	0.018 +/- 0.004	< 0.020	
16-APR-12	24-APR-12	343	0.023 +/- 0.004	< 0.016	
24-APR-12	30-APR-12	255	0.027 +/- 0.005	< 0.013	
24-APR-12	30-APR-12	255	0.028 +/- 0.005		Duplicate
30-APR-12	08-MAY-12	345	0.016 +/- 0.003	< 0.019	
08-MAY-12	14-MAY-12	255	0.026 +/- 0.005	< 0.011	
14-MAY-12	21-MAY-12	309	0.024 +/- 0.004	< 0.008	
21-MAY-12	29-MAY-12	331	0.023 +/- 0.004	< 0.010	
29-MAY-12	04-JUN-12	259	0.019 +/- 0.005	< 0.010	
04-JUN-12	11-JUN-12	307	0.025 +/- 0.004	< 0.006	
04-JUN-12	11-JUN-12	307	0.025 +/- 0.004		Duplicate
11-JUN-12	18-JUN-12	303	0.014 +/- 0.004	< 0.011	
18-JUN-12	25-JUN-12	300	0.022 +/- 0.004	< 0.012	
25-JUN-12	02-JUL-12	297	0.041 +/- 0.005	< 0.008	
02-JUL-12	09-JUL-12	301	0.026 +/- 0.004	< 0.012	
09-JUL-12	16-JUL-12	298	0.031 +/- 0.004	< 0.018	
16-JUL-12	23-JUL-12	298	0.030 +/- 0.004	< 0.008	
23-JUL-12	30-JUL-12	296	0.024 +/- 0.004	< 0.013	
30-JUL-12	06-AUG-12	297	0.028 +/- 0.004	< 0.011	
06-AUG-12	13-AUG-12	299	0.027 +/- 0.004	< 0.011	
13-AUG-12	20-AUG-12	299	0.022 +/- 0.004	< 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
20-AUG-12	27-AUG-12	300	0.033 +/- 0.004	< 0.014	
27-AUG-12	04-SEP-12	338	0.031 +/- 0.004	< 0.020	
04-SEP-12	10-SEP-12	260	0.031 +/- 0.005	< 0.006	
10-SEP-12	17-SEP-12	299	0.026 +/- 0.004	< 0.016	
17-SEP-12	24-SEP-12	309	0.022 +/- 0.004	< 0.006	
24-SEP-12	01-OCT-12	298	0.038 +/- 0.005	< 0.013	
01-OCT-12	08-OCT-12	311	0.024 +/- 0.004	< 0.018	
08-OCT-12	15-OCT-12	308	0.034 +/- 0.004	< 0.014	
15-OCT-12	22-OCT-12	308	0.031 +/- 0.004	< 0.010	
22-OCT-12	29-OCT-12	317	0.026 +/- 0.004	< 0.011	
29-OCT-12	05-NOV-12	303	0.052 +/- 0.005	< 0.011	
29-OCT-12	05-NOV-12	303	0.060 +/- 0.005		Duplicate
05-NOV-12	12-NOV-12	303	0.024 +/- 0.004	< 0.011	
12-NOV-12	19-NOV-12	300	0.060 +/- 0.005	< 0.011	
19-NOV-12	26-NOV-12	312	0.053 +/- 0.005	< 0.015	
26-NOV-12	03-DEC-12	291	0.047 +/- 0.005	< 0.009	
03-DEC-12	10-DEC-12	316	0.029 +/- 0.004	< 0.007	
10-DEC-12	17-DEC-12	299	0.053 +/- 0.005	< 0.018	
17-DEC-12	26-DEC-12	389	0.054 +/- 0.004	< 0.009	
26-DEC-12	31-DEC-12	212	0.048 +/- 0.006	< 0.019	
31-DEC-12	07-JAN-13	321	0.045 +/- 0.005	< 0.013	

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
27-DEC-11	03-JAN-12	312	0.016 +/- 0.004	< 0.010	
03-JAN-12	09-JAN-12	260	0.019 +/- 0.004	< 0.012	
09-JAN-12	16-JAN-12	302	0.021 +/- 0.003	< 0.009	
16-JAN-12	23-JAN-12	318	0.045 +/- 0.004	< 0.011	
23-JAN-12	30-JAN-12	302	0.017 +/- 0.004	< 0.018	
30-JAN-12	06-FEB-12	306	0.026 +/- 0.004	< 0.013	
06-FEB-12	15-FEB-12	391	0.026 +/- 0.003	< 0.013	
15-FEB-12	21-FEB-12	264	0.042 +/- 0.005	< 0.016	
21-FEB-12	27-FEB-12	269	0.015 +/- 0.004	< 0.010	
27-FEB-12	05-MAR-12	295	0.023 +/- 0.004	< 0.010	
05-MAR-12	12-MAR-12	300	0.019 +/- 0.004	< 0.017	
12-MAR-12	19-MAR-12	292	0.020 +/- 0.004	< 0.014	
19-MAR-12	26-MAR-12	305	0.012 +/- 0.004	< 0.010	
26-MAR-12	02-APR-12	302	0.034 +/- 0.005	< 0.012	
02-APR-12	09-APR-12	299	0.024 +/- 0.004	< 0.013	
09-APR-12	16-APR-12	305	0.015 +/- 0.004	< 0.020	
16-APR-12	24-APR-12	342	0.018 +/- 0.004	< 0.016	
16-APR-12	24-APR-12	342	0.019 +/- 0.004		Duplicate
24-APR-12	30-APR-12	258	0.030 +/- 0.005	< 0.013	
30-APR-12	08-MAY-12	340	0.019 +/- 0.004	< 0.019	
08-MAY-12	14-MAY-12	259	0.023 +/- 0.005	< 0.011	
14-MAY-12	21-MAY-12	311	0.028 +/- 0.004	< 0.008	
21-MAY-12	29-MAY-12	329	0.026 +/- 0.004	< 0.010	
29-MAY-12	04-JUN-12	256	0.018 +/- 0.005	< 0.010	
04-JUN-12	11-JUN-12	305	0.030 +/- 0.005	< 0.006	
11-JUN-12	18-JUN-12	301	0.019 +/- 0.004	< 0.011	
18-JUN-12	25-JUN-12	303	0.024 +/- 0.004	< 0.012	
25-JUN-12	02-JUL-12	299	0.045 +/- 0.005	< 0.008	
02-JUL-12	09-JUL-12	299	0.024 +/- 0.004	< 0.012	
09-JUL-12	16-JUL-12	296	0.032 +/- 0.005	< 0.018	
16-JUL-12	23-JUL-12	300	0.032 +/- 0.004	< 0.008	
23-JUL-12	30-JUL-12	298	0.030 +/- 0.004	< 0.013	
30-JUL-12	06-AUG-12	297	0.037 +/- 0.005	< 0.011	
30-JUL-12	06-AUG-12	297	0.033 +/- 0.005		Duplicate
06-AUG-12	13-AUG-12	295	0.027 +/- 0.004	< 0.011	
13-AUG-12	20-AUG-12	299	0.023 +/- 0.004	< 0.011	
20-AUG-12	27-AUG-12	298	0.030 +/- 0.004	< 0.014	
20-AUG-12	27-AUG-12	298	0.030 +/- 0.004		Duplicate
27-AUG-12	04-SEP-12	333	0.032 +/- 0.004	< 0.020	
27-AUG-12	04-SEP-12	333	0.033 +/- 0.004		Duplicate

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
04-SEP-12	10-SEP-12	263	0.025 +/- 0.005	< 0.006	
10-SEP-12	17-SEP-12	302	0.023 +/- 0.004	< 0.016	
17-SEP-12	24-SEP-12	305	0.020 +/- 0.004	< 0.006	
17-SEP-12	24-SEP-12	305	0.021 +/- 0.004		Duplicate
24-SEP-12	01-OCT-12	297	0.040 +/- 0.005	< 0.013	
01-OCT-12	08-OCT-12	313	0.030 +/- 0.004	< 0.018	
01-OCT-12	08-OCT-12	313	0.034 +/- 0.005		Duplicate
08-OCT-12	15-OCT-12	304	0.039 +/- 0.005	< 0.015	
15-OCT-12	22-OCT-12	298	0.032 +/- 0.005	< 0.011	
22-OCT-12	29-OCT-12	310	0.028 +/- 0.004	< 0.012	
29-OCT-12	05-NOV-12	310	0.059 +/- 0.005	< 0.011	
05-NOV-12	12-NOV-12	307	0.026 +/- 0.004	< 0.011	
12-NOV-12	19-NOV-12	299	0.064 +/- 0.005	< 0.011	
19-NOV-12	26-NOV-12	311	0.057 +/- 0.005	< 0.015	
26-NOV-12	03-DEC-12	291	0.059 +/- 0.005	< 0.009	
03-DEC-12	10-DEC-12	314	0.034 +/- 0.004	< 0.008	
10-DEC-12	17-DEC-12	299	0.055 +/- 0.005	< 0.018	
17-DEC-12	26-DEC-12	391	0.051 +/- 0.004	< 0.009	
26-DEC-12	31-DEC-12	211	0.044 +/- 0.006	< 0.019	
26-DEC-12	31-DEC-12	211	0.036 +/- 0.006		Duplicate
31-DEC-12	07-JAN-13	307	0.049 +/- 0.005	< 0.013	

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
27-DEC-11	03-JAN-12	305	0.023 +/- 0.004	< 0.010	
03-JAN-12	09-JAN-12	259	0.020 +/- 0.004	< 0.012	
09-JAN-12	16-JAN-12	296	0.021 +/- 0.004	< 0.009	
16-JAN-12	23-JAN-12	309	0.039 +/- 0.004	< 0.011	
23-JAN-12	30-JAN-12	305	0.014 +/- 0.003	< 0.018	
30-JAN-12	06-FEB-12	306	0.018 +/- 0.004	< 0.013	
06-FEB-12	15-FEB-12	386	0.025 +/- 0.003	< 0.013	
15-FEB-12	21-FEB-12	254	0.034 +/- 0.005	< 0.017	
21-FEB-12	27-FEB-12	261	0.011 +/- 0.004	< 0.010	
21-FEB-12	27-FEB-12	261	0.015 +/- 0.004		Duplicate
27-FEB-12	05-MAR-12	291	0.018 +/- 0.004	< 0.011	
05-MAR-12	12-MAR-12	304	0.020 +/- 0.004	< 0.017	
12-MAR-12	19-MAR-12	293	0.023 +/- 0.004	< 0.014	
19-MAR-12	26-MAR-12	302	0.012 +/- 0.004	< 0.010	
26-MAR-12	02-APR-12	299	0.025 +/- 0.004	< 0.012	
02-APR-12	09-APR-12	303	0.020 +/- 0.004	< 0.012	
09-APR-12	16-APR-12	298	0.016 +/- 0.005	< 0.021	
16-APR-12	24-APR-12	351	0.021 +/- 0.004	< 0.016	
24-APR-12	30-APR-12	254	0.028 +/- 0.005	< 0.013	
30-APR-12	08-MAY-12	340	0.016 +/- 0.003	< 0.019	
08-MAY-12	14-MAY-12	256	0.024 +/- 0.005	< 0.011	
14-MAY-12	21-MAY-12	307	0.027 +/- 0.004	< 0.008	
21-MAY-12	29-MAY-12	330	0.026 +/- 0.004	< 0.010	
21-MAY-12	29-MAY-12	330	0.026 +/- 0.004		Duplicate
29-MAY-12	04-JUN-12	257	0.017 +/- 0.005	< 0.010	
04-JUN-12	11-JUN-12	300	0.024 +/- 0.004	< 0.006	
11-JUN-12	18-JUN-12	304	0.019 +/- 0.004	< 0.011	
18-JUN-12	25-JUN-12	299	0.020 +/- 0.004	< 0.012	
18-JUN-12	25-JUN-12	299	0.018 +/- 0.004		Duplicate
25-JUN-12	02-JUL-12	300	0.043 +/- 0.005	< 0.008	
02-JUL-12	09-JUL-12	300	0.021 +/- 0.004	< 0.012	
09-JUL-12	16-JUL-12	297	0.031 +/- 0.005	< 0.018	
16-JUL-12	23-JUL-12	295	0.027 +/- 0.004	< 0.009	
23-JUL-12	30-JUL-12	298	0.024 +/- 0.004	< 0.013	
30-JUL-12	06-AUG-12	295	0.031 +/- 0.005	< 0.011	
06-AUG-12	13-AUG-12	299	0.026 +/- 0.004	< 0.011	
13-AUG-12	20-AUG-12	297	0.024 +/- 0.004	< 0.011	
20-AUG-12	27-AUG-12	300	0.030 +/- 0.004	< 0.014	
27-AUG-12	04-SEP-12	338	0.032 +/- 0.004	< 0.020	
04-SEP-12	10-SEP-12	260	0.025 +/- 0.005	< 0.006	

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
10-SEP-12	17-SEP-12	299	0.020 +/- 0.004	< 0.016	
17-SEP-12	24-SEP-12	315	0.023 +/- 0.004	< 0.006	
24-SEP-12	01-OCT-12	294	0.039 +/- 0.005	< 0.013	
01-OCT-12	08-OCT-12	314	0.025 +/- 0.004	< 0.018	
08-OCT-12	15-OCT-12	291	0.039 +/- 0.005	< 0.015	
15-OCT-12	22-OCT-12	304	0.030 +/- 0.004	< 0.010	
15-OCT-12	22-OCT-12	304	0.030 +/- 0.004		Duplicate
22-OCT-12	29-OCT-12	307	0.028 +/- 0.004	< 0.012	
29-OCT-12	05-NOV-12	299	0.054 +/- 0.005	< 0.011	
05-NOV-12	12-NOV-12	307	0.029 +/- 0.004	< 0.011	
12-NOV-12	19-NOV-12	292	0.064 +/- 0.005	< 0.011	
19-NOV-12	26-NOV-12	299	0.052 +/- 0.005	< 0.015	
26-NOV-12	03-DEC-12	300	0.049 +/- 0.005	< 0.009	
03-DEC-12	10-DEC-12	308	0.032 +/- 0.004	< 0.008	
10-DEC-12	17-DEC-12	301	0.056 +/- 0.005	< 0.018	
17-DEC-12	26-DEC-12	386	0.053 +/- 0.004	< 0.009	
26-DEC-12	31-DEC-12	188	0.042 +/- 0.007	< 0.021	
31-DEC-12	07-JAN-13	304	0.052 +/- 0.005	< 0.013	

Quarterly Air Particulate - Gamma

Location: 002

02-APR-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.073+/-	0.010
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

02-JUL-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.105+/-	0.015
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

01-OCT-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.097+/-	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

31-DEC-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.056+/-	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

*** Duplicate Analysis**

Location: 018

02-APR-12

Nuclide	Concentration (pCi/m³)	
BE-7	0.072+/-	0.016
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

02-JUL-12

Nuclide	Concentration (pCi/m³)	
BE-7	0.096+/-	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

01-OCT-12

Nuclide	Concentration (pCi/m³)	
BE-7	0.089+/-	0.016
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

31-DEC-12

Nuclide	Concentration (pCi/m³)	
BE-7	0.061+/-	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: 032

02-APR-12

Nuclide	Concentration (pCi/m³)	
BE-7	0.074+/-	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

02-JUL-12

Nuclide	Concentration (pCi/m³)	
BE-7	0.098+/-	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

01-OCT-12

Nuclide	Concentration (pCi/m³)	
BE-7	0.087+/-	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

31-DEC-12

Nuclide	Concentration (pCi/m³)	
BE-7	0.059+/-	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

*** Duplicate Analysis**

Location: 037

02-APR-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.088+/-	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

02-JUL-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.103+/-	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

01-OCT-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.096+/-	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

31-DEC-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.052+/-	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**

Location: 049

02-APR-12

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	<	0.002
ZR-NB-95	<	0.001
CS-134	<	0.001
CS-137	<	0.001

02-JUL-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.103+/-	0.016
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

01-OCT-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.094+/-	0.016
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

31-DEC-12

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**

Quarterly Air Particulate - Gamma

Location: 053

02-APR-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.082+/-	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

02-JUL-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.113+/-	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

01-OCT-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.098+/-	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

31-DEC-12

Nuclide	Concentration (pCi/m^3)	
BE-7	0.065+/-	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	Gamma Spectrum & H-3 Concentration (pCi/Liter)		Duplicate Analysis
23-JAN-12	MN-54	<	2.3	
23-JAN-12	CO-58	<	3.7	
23-JAN-12	FE-59	<	5.8	
23-JAN-12	CO-60	<	1.8	
23-JAN-12	ZN-65	<	4.7	
23-JAN-12	ZR-NB-95	<	4.0	
23-JAN-12	I-131	<	4.0	
23-JAN-12	CS-134	<	3.6	
23-JAN-12	CS-137	<	3.8	
23-JAN-12	BA-LA-140	<	3.1	
23-JAN-12	H-3	<	146.0	
27-FEB-12	MN-54	<	1.7	
27-FEB-12	CO-58	<	2.1	
27-FEB-12	FE-59	<	3.4	
27-FEB-12	CO-60	<	2.7	
27-FEB-12	ZN-65	<	2.8	
27-FEB-12	ZR-NB-95	<	1.7	
27-FEB-12	I-131	<	2.8	
27-FEB-12	CS-134	<	2.5	
27-FEB-12	CS-137	<	2.7	
27-FEB-12	BA-LA-140	<	2.2	
27-FEB-12	H-3	<	141.0	
27-FEB-12	FE-55	<	194.0	
26-MAR-12	MN-54	<	2.9	
26-MAR-12	CO-58	<	2.1	
26-MAR-12	FE-59	<	4.1	
26-MAR-12	CO-60	<	3.0	
26-MAR-12	ZN-65	<	2.7	
26-MAR-12	ZR-NB-95	<	2.4	
26-MAR-12	I-131	<	3.6	
26-MAR-12	CS-134	<	3.4	
26-MAR-12	CS-137	<	3.1	
26-MAR-12	BA-LA-140	<	3.0	
26-MAR-12	H-3	<	152.0	
16-APR-12	MN-54	<	2.8	
16-APR-12	CO-58	<	2.6	
16-APR-12	FE-59	<	4.9	
16-APR-12	CO-60	<	1.8	
16-APR-12	ZN-65	<	3.7	
16-APR-12	ZR-NB-95	<	4.0	

Exposure Pathway - Waterborne
Surface Water

Location JRR

Collection Date	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Liter)		Duplicate Analysis
16-APR-12	I-131	<	4.3	
16-APR-12	CS-134	<	2.5	
16-APR-12	CS-137	<	3.2	
16-APR-12	BA-LA-140	<	2.4	
16-APR-12	H-3	<	150.0	
07-MAY-12	MN-54	<	4.0	
07-MAY-12	CO-58	<	3.4	
07-MAY-12	FE-59	<	3.6	
07-MAY-12	CO-60	<	4.2	
07-MAY-12	ZN-65	<	4.8	
07-MAY-12	ZR-NB-95	<	3.1	
07-MAY-12	I-131	<	5.7	
07-MAY-12	CS-134	<	3.6	
07-MAY-12	CS-137	<	2.9	
07-MAY-12	BA-LA-140	<	4.6	
07-MAY-12	H-3	<	148.0	
07-MAY-12	FE-55	<	175.0	
11-JUN-12	MN-54	<	3.1	
11-JUN-12	CO-58	<	3.1	
11-JUN-12	FE-59	<	6.9	
11-JUN-12	CO-60	<	2.6	
11-JUN-12	ZN-65	<	5.5	
11-JUN-12	ZR-NB-95	<	3.5	
11-JUN-12	I-131	<	5.7	
11-JUN-12	CS-134	<	2.8	
11-JUN-12	CS-137	<	3.2	
11-JUN-12	BA-LA-140	<	2.6	
11-JUN-12	H-3	<	140.0	
23-JUL-12	MN-54	<	3.0	
23-JUL-12	CO-58	<	3.7	
23-JUL-12	FE-59	<	5.2	
23-JUL-12	CO-60	<	1.8	
23-JUL-12	ZN-65	<	4.7	
23-JUL-12	ZR-NB-95	<	3.1	
23-JUL-12	I-131	<	5.5	
23-JUL-12	CS-134	<	2.0	
23-JUL-12	CS-137	<	2.9	
23-JUL-12	BA-LA-140	<	3.9	
23-JUL-12	H-3	<	156.0	
20-AUG-12	MN-54	<	6.1	

Exposure Pathway - Waterborne
Surface Water

Location JRR

Collection Date	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Liter)		Duplicate Analysis
20-AUG-12	CO-58	<	5.3	
20-AUG-12	FE-59	<	6.0	
20-AUG-12	CO-60	<	4.5	
20-AUG-12	ZN-65	<	4.1	
20-AUG-12	ZR-NB-95	<	3.6	
20-AUG-12	I-131	<	4.9	
20-AUG-12	CS-134	<	4.1	
20-AUG-12	CS-137	<	3.2	
20-AUG-12	BA-LA-140	<	7.1	
20-AUG-12	H-3	<	150.0	
20-AUG-12	FE-55	<	176.0	
17-SEP-12	MN-54	<	2.9	
17-SEP-12	CO-58	<	1.7	
17-SEP-12	FE-59	<	5.5	
17-SEP-12	CO-60	<	2.8	
17-SEP-12	ZN-65	<	4.6	
17-SEP-12	ZR-NB-95	<	2.9	
17-SEP-12	I-131	<	5.0	
17-SEP-12	CS-134	<	2.3	
17-SEP-12	CS-137	<	2.1	
17-SEP-12	BA-LA-140	<	2.9	
17-SEP-12	H-3	<	154.0	
29-OCT-12	MN-54	<	4.3	
29-OCT-12	CO-58	<	2.2	
29-OCT-12	FE-59	<	6.0	
29-OCT-12	CO-60	<	3.5	
29-OCT-12	ZN-65	<	4.4	
29-OCT-12	ZR-NB-95	<	3.1	
29-OCT-12	I-131	<	5.9	
29-OCT-12	CS-134	<	3.6	
29-OCT-12	CS-137	<	3.0	
29-OCT-12	BA-LA-140	<	2.5	
29-OCT-12	H-3	<	151.0	
14-NOV-12	MN-54	<	3.8	
14-NOV-12	CO-58	<	3.1	
14-NOV-12	FE-59	<	3.5	
14-NOV-12	CO-60	<	3.6	
14-NOV-12	ZN-65	<	4.2	
14-NOV-12	ZR-NB-95	<	3.3	
14-NOV-12	I-131	<	4.8	

Exposure Pathway - Waterborne
Surface Water

Location JRR

Collection Date	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Liter)		Duplicate Analysis
14-NOV-12	CS-134	<	2.9	
14-NOV-12	CS-137	<	3.4	
14-NOV-12	BA-LA-140	<	2.7	
14-NOV-12	H-3	<	142.0	
14-NOV-12	FE-55	<	167.0	
10-DEC-12	MN-54	<	3.6	
10-DEC-12	CO-58	<	2.7	
10-DEC-12	FE-59	<	4.8	
10-DEC-12	CO-60	<	4.0	
10-DEC-12	ZN-65	<	4.2	
10-DEC-12	ZR-NB-95	<	3.7	
10-DEC-12	I-131	<	6.2	
10-DEC-12	CS-134	<	3.1	
10-DEC-12	CS-137	<	4.0	
10-DEC-12	BA-LA-140	<	2.7	
10-DEC-12	H-3	<	150.0	

Exposure Pathway - Waterborne
Surface Water

Location SP

Collection Date	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Liter)			Duplicate Analysis
23-JAN-12	MN-54		<	2.5	
23-JAN-12	CO-58		<	4.1	
23-JAN-12	FE-59		<	5.4	
23-JAN-12	CO-60		<	2.6	
23-JAN-12	ZN-65		<	3.4	
23-JAN-12	ZR-NB-95		<	3.8	
23-JAN-12	I-131		<	4.3	
23-JAN-12	CS-134		<	2.3	
23-JAN-12	CS-137		<	4.0	
23-JAN-12	BA-LA-140		<	3.3	
23-JAN-12	H-3	10,037	+/-	296.0	
27-FEB-12	MN-54		<	3.4	
27-FEB-12	CO-58		<	3.4	
27-FEB-12	FE-59		<	8.5	
27-FEB-12	CO-60		<	3.5	
27-FEB-12	ZN-65		<	1.5	
27-FEB-12	ZR-NB-95		<	3.2	
27-FEB-12	I-131		<	3.9	
27-FEB-12	CS-134		<	4.0	
27-FEB-12	CS-137		<	2.6	
27-FEB-12	BA-LA-140		<	4.6	
27-FEB-12	H-3	11,290	+/-	312.0	
27-FEB-12	FE-55		<	175.0	
26-MAR-12	MN-54		<	2.4	
26-MAR-12	CO-58		<	2.4	
26-MAR-12	FE-59		<	4.5	
26-MAR-12	CO-60		<	1.8	
26-MAR-12	ZN-65		<	2.2	
26-MAR-12	ZR-NB-95		<	1.7	
26-MAR-12	I-131		<	2.5	
26-MAR-12	CS-134		<	2.7	
26-MAR-12	CS-137		<	2.7	
26-MAR-12	BA-LA-140		<	2.1	
26-MAR-12	H-3	12,151	+/-	325.0	
16-APR-12	MN-54		<	1.9	
16-APR-12	CO-58		<	1.7	
16-APR-12	FE-59		<	4.9	
16-APR-12	CO-60		<	1.5	
16-APR-12	ZN-65		<	3.5	
16-APR-12	ZR-NB-95		<	1.7	

Exposure Pathway - Waterborne
Surface Water

Location SP

Collection Date	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Liter)			Duplicate Analysis
16-APR-12	I-131		<	2.5	
16-APR-12	CS-134		<	3.2	
16-APR-12	CS-137		<	2.9	
16-APR-12	BA-LA-140		<	2.3	
16-APR-12	H-3	12,545	+/-	333.0	
07-MAY-12	MN-54		<	3.7	
07-MAY-12	CO-58		<	2.1	
07-MAY-12	FE-59		<	4.1	
07-MAY-12	CO-60		<	2.4	
07-MAY-12	ZN-65		<	4.6	
07-MAY-12	ZR-NB-95		<	4.3	
07-MAY-12	I-131		<	7.3	
07-MAY-12	CS-134		<	3.8	
07-MAY-12	CS-137		<	2.8	
07-MAY-12	BA-LA-140		<	3.5	
07-MAY-12	H-3	11,622	+/-	319.0	
07-MAY-12	FE-55		<	180.0	
11-JUN-12	MN-54		<	2.3	
11-JUN-12	CO-58		<	1.9	
11-JUN-12	FE-59		<	3.9	
11-JUN-12	CO-60		<	2.5	
11-JUN-12	ZN-65		<	1.8	
11-JUN-12	ZR-NB-95		<	2.0	
11-JUN-12	I-131		<	3.8	
11-JUN-12	CS-134		<	1.7	
11-JUN-12	CS-137		<	2.6	
11-JUN-12	BA-LA-140		<	2.3	
11-JUN-12	H-3	11,619	+/-	301.0	
23-JUL-12	MN-54		<	2.2	
23-JUL-12	CO-58		<	2.5	
23-JUL-12	FE-59		<	3.8	
23-JUL-12	CO-60		<	1.7	
23-JUL-12	ZN-65		<	4.4	
23-JUL-12	ZR-NB-95		<	1.8	
23-JUL-12	I-131		<	3.8	
23-JUL-12	CS-134		<	2.0	
23-JUL-12	CS-137		<	2.6	
23-JUL-12	BA-LA-140		<	2.8	
23-JUL-12	H-3	12,145	+/-	331.0	
20-AUG-12	MN-54		<	3.5	

Exposure Pathway - Waterborne
Surface Water

Location SP

Collection Date	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Liter)			Duplicate Analysis
20-AUG-12	CO-58		<	4.1	
20-AUG-12	FE-59		<	9.7	
20-AUG-12	CO-60		<	5.7	
20-AUG-12	ZN-65		<	6.6	
20-AUG-12	ZR-NB-95		<	5.4	
20-AUG-12	I-131		<	6.5	
20-AUG-12	CS-134		<	4.6	
20-AUG-12	CS-137		<	5.2	
20-AUG-12	BA-LA-140		<	5.4	
20-AUG-12	H-3	10,735	+/-	308.0	
20-AUG-12	FE-55		<	174.0	
17-SEP-12	MN-54		<	3.8	Duplicate
17-SEP-12	MN-54		<	2.1	
17-SEP-12	CO-58		<	2.9	Duplicate
17-SEP-12	CO-58		<	2.9	
17-SEP-12	FE-59		<	3.4	Duplicate
17-SEP-12	FE-59		<	4.8	
17-SEP-12	CO-60		<	4.1	Duplicate
17-SEP-12	CO-60		<	3.2	
17-SEP-12	ZN-65		<	4.6	Duplicate
17-SEP-12	ZN-65		<	7.0	
17-SEP-12	ZR-NB-95		<	4.8	Duplicate
17-SEP-12	ZR-NB-95		<	3.8	
17-SEP-12	I-131		<	5.8	Duplicate
17-SEP-12	I-131		<	6.0	
17-SEP-12	CS-134		<	4.0	Duplicate
17-SEP-12	CS-134		<	2.7	
17-SEP-12	CS-137		<	6.4	Duplicate
17-SEP-12	CS-137		<	3.8	
17-SEP-12	BA-LA-140		<	5.0	Duplicate
17-SEP-12	BA-LA-140		<	3.3	
17-SEP-12	H-3	10,817	+/-	310.0	Duplicate
17-SEP-12	H-3	10,909	+/-	311.0	
29-OCT-12	MN-54		<	3.2	
29-OCT-12	CO-58		<	3.0	
29-OCT-12	FE-59		<	4.9	
29-OCT-12	CO-60		<	4.1	
29-OCT-12	ZN-65		<	4.9	
29-OCT-12	ZR-NB-95		<	2.4	
29-OCT-12	I-131		<	6.5	

Exposure Pathway - Waterborne
Surface Water

Location SP

Collection Date	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Liter)			Duplicate Analysis
29-OCT-12	CS-134		<	3.1	
29-OCT-12	CS-137		<	3.9	
29-OCT-12	BA-LA-140		<	3.0	
29-OCT-12	H-3	10,971	+/-	312.0	
14-NOV-12	MN-54		<	3.2	
14-NOV-12	CO-58		<	4.3	
14-NOV-12	FE-59		<	7.6	
14-NOV-12	CO-60		<	4.6	
14-NOV-12	ZN-65		<	5.7	
14-NOV-12	ZR-NB-95		<	3.2	
14-NOV-12	I-131		<	6.7	
14-NOV-12	CS-134		<	4.7	
14-NOV-12	CS-137		<	4.4	
14-NOV-12	BA-LA-140		<	2.3	
14-NOV-12	H-3	11,404	+/-	297.0	
14-NOV-12	FE-55		<	158.0	
10-DEC-12	MN-54		<	3.0	
10-DEC-12	CO-58		<	1.8	
10-DEC-12	FE-59		<	3.0	
10-DEC-12	CO-60		<	3.1	
10-DEC-12	ZN-65		<	3.6	
10-DEC-12	ZR-NB-95		<	3.4	
10-DEC-12	I-131		<	6.4	
10-DEC-12	CS-134		<	3.8	
10-DEC-12	CS-137		<	4.0	
10-DEC-12	BA-LA-140		<	3.5	
10-DEC-12	H-3	11,791	+/-	317.0	

Exposure Pathway - Waterborne
Ground Water

Location B-12

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
27-FEB-12	MN-54	< 3.3	
27-FEB-12	CO-58	< 3.9	
27-FEB-12	FE-59	< 4.9	
27-FEB-12	CO-60	< 2.3	
27-FEB-12	ZN-65	< 3.9	
27-FEB-12	ZR-NB-95	< 2.1	
27-FEB-12	CS-134	< 3.8	
27-FEB-12	CS-137	< 1.9	
27-FEB-12	BA-LA-140	< 1.6	
27-FEB-12	H-3	< 141.0	
27-FEB-12	I-131 (CHEM)	< 0.293	
07-MAY-12	MN-54	< 3.0	
07-MAY-12	CO-58	< 2.5	
07-MAY-12	FE-59	< 4.5	
07-MAY-12	CO-60	< 2.3	
07-MAY-12	ZN-65	< 2.5	
07-MAY-12	ZR-NB-95	< 2.5	
07-MAY-12	CS-134	< 2.0	
07-MAY-12	CS-137	< 2.7	
07-MAY-12	BA-LA-140	< 2.8	
07-MAY-12	H-3	< 148.0	
07-MAY-12	I-131 (CHEM)	< 0.349	
20-AUG-12	MN-54	< 3.8	
20-AUG-12	CO-58	< 2.6	
20-AUG-12	FE-59	< 4.1	
20-AUG-12	CO-60	< 1.9	
20-AUG-12	ZN-65	< 4.1	
20-AUG-12	ZR-NB-95	< 4.1	
20-AUG-12	CS-134	< 2.8	
20-AUG-12	CS-137	< 4.6	
20-AUG-12	BA-LA-140	< 3.6	
20-AUG-12	H-3	< 150.0	
20-AUG-12	I-131 (CHEM)	< 0.307	
14-NOV-12	MN-54	< 3.2	
14-NOV-12	CO-58	< 1.5	
14-NOV-12	FE-59	< 5.1	
14-NOV-12	CO-60	< 4.2	
14-NOV-12	ZN-65	< 3.6	
14-NOV-12	ZR-NB-95	< 3.2	
14-NOV-12	CS-134	< 2.9	
14-NOV-12	CS-137	< 4.0	

Exposure Pathway - Waterborne
Ground Water

Location B-12

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
14-NOV-12	BA-LA-140	< 2.9	
14-NOV-12	H-3	< 142.0	
14-NOV-12	I-131 (CHEM)	< 0.287	

Exposure Pathway - Waterborne
Ground Water

Location C-10

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
27-FEB-12	MN-54	< 2.2	
27-FEB-12	CO-58	< 2.5	
27-FEB-12	FE-59	< 4.6	
27-FEB-12	CO-60	< 2.3	
27-FEB-12	ZN-65	< 2.6	
27-FEB-12	ZR-NB-95	< 2.1	
27-FEB-12	CS-134	< 2.1	
27-FEB-12	CS-137	< 2.8	
27-FEB-12	BA-LA-140	< 1.3	
27-FEB-12	H-3	< 141.0	
27-FEB-12	I-131 (CHEM)	< 0.178	
07-MAY-12	MN-54	< 2.2	
07-MAY-12	CO-58	< 2.0	
07-MAY-12	FE-59	< 4.8	
07-MAY-12	CO-60	< 2.7	
07-MAY-12	ZN-65	< 3.7	
07-MAY-12	ZR-NB-95	< 2.3	
07-MAY-12	CS-134	< 3.0	
07-MAY-12	CS-137	< 2.9	
07-MAY-12	BA-LA-140	< 2.3	
07-MAY-12	H-3	< 148.0	
07-MAY-12	I-131 (CHEM)	< 0.356	
20-AUG-12	MN-54	< 2.2	
20-AUG-12	CO-58	< 2.5	
20-AUG-12	FE-59	< 2.8	
20-AUG-12	CO-60	< 3.4	
20-AUG-12	ZN-65	< 3.6	
20-AUG-12	ZR-NB-95	< 2.6	
20-AUG-12	CS-134	< 2.3	
20-AUG-12	CS-137	< 2.1	
20-AUG-12	BA-LA-140	< 2.3	
20-AUG-12	H-3	< 150.0	
20-AUG-12	I-131 (CHEM)	< 0.243	
14-NOV-12	MN-54	< 3.5	
14-NOV-12	CO-58	< 3.9	
14-NOV-12	FE-59	< 7.3	
14-NOV-12	CO-60	< 2.6	
14-NOV-12	ZN-65	< 4.1	
14-NOV-12	ZR-NB-95	< 2.5	
14-NOV-12	CS-134	< 3.3	
14-NOV-12	CS-137	< 3.1	

Exposure Pathway - Waterborne
Ground Water

Location C-10

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
14-NOV-12	BA-LA-140	< 3.1	
14-NOV-12	H-3	< 142.0	
14-NOV-12	I-131 (CHEM)	< 0.445	

Exposure Pathway - Waterborne
Ground Water

Location C-49

Collection Date	Nuclide	Concentration (pCi/Liter)		Duplicate Analysis
27-FEB-12	MN-54	<	4.1	
27-FEB-12	CO-58	<	4.0	
27-FEB-12	FE-59	<	3.7	
27-FEB-12	CO-60	<	2.2	
27-FEB-12	ZN-65	<	4.6	
27-FEB-12	ZR-NB-95	<	4.6	
27-FEB-12	CS-134	<	3.0	
27-FEB-12	CS-137	<	2.7	
27-FEB-12	BA-LA-140	<	4.0	
27-FEB-12	H-3	<	141.0	
27-FEB-12	I-131 (CHEM)	<	0.244	
07-MAY-12	MN-54	<	3.6	
07-MAY-12	CO-58	<	3.9	
07-MAY-12	FE-59	<	5.6	
07-MAY-12	CO-60	<	2.9	
07-MAY-12	ZN-65	<	6.0	
07-MAY-12	ZR-NB-95	<	2.3	
07-MAY-12	CS-134	<	3.6	
07-MAY-12	CS-137	<	5.0	
07-MAY-12	BA-LA-140	<	1.6	
07-MAY-12	H-3	<	148.0	
07-MAY-12	I-131 (CHEM)	<	0.321	
20-AUG-12	MN-54	<	3.2	
20-AUG-12	CO-58	<	3.7	
20-AUG-12	FE-59	<	6.2	
20-AUG-12	CO-60	<	3.2	
20-AUG-12	ZN-65	<	9.6	
20-AUG-12	ZR-NB-95	<	2.3	
20-AUG-12	CS-134	<	3.4	
20-AUG-12	CS-137	<	4.1	
20-AUG-12	BA-LA-140	<	3.4	
20-AUG-12	H-3	<	150.0	
20-AUG-12	I-131 (CHEM)	<	0.48	
14-NOV-12	MN-54	<	1.9	
14-NOV-12	CO-58	<	1.6	
14-NOV-12	FE-59	<	5.2	
14-NOV-12	CO-60	<	2.5	
14-NOV-12	ZN-65	<	4.4	
14-NOV-12	ZR-NB-95	<	3.6	
14-NOV-12	CS-134	<	2.1	
14-NOV-12	CS-137	<	2.1	

Exposure Pathway - Waterborne
Ground Water

Location C-49

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
14-NOV-12	BA-LA-140	< 3.6	
14-NOV-12	H-3	< 142.0	
14-NOV-12	I-131 (CHEM)	< 0.461	

Exposure Pathway - Waterborne
Ground Water

Location F-1

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
27-FEB-12	MN-54	< 2.7	
27-FEB-12	CO-58	< 1.6	
27-FEB-12	FE-59	< 2.6	
27-FEB-12	CO-60	< 1.9	
27-FEB-12	ZN-65	< 4.4	
27-FEB-12	ZR-NB-95	< 2.5	
27-FEB-12	CS-134	< 2.2	
27-FEB-12	CS-137	< 3.0	
27-FEB-12	BA-LA-140	< 2.0	
27-FEB-12	H-3	< 141.0	
27-FEB-12	I-131 (CHEM)	< 0.177	
07-MAY-12	MN-54	< 1.8	
07-MAY-12	CO-58	< 1.5	
07-MAY-12	FE-59	< 3.0	
07-MAY-12	CO-60	< 0.9	
07-MAY-12	ZN-65	< 3.9	
07-MAY-12	ZR-NB-95	< 3.0	
07-MAY-12	CS-134	< 2.8	
07-MAY-12	CS-137	< 3.0	
07-MAY-12	BA-LA-140	< 1.3	
07-MAY-12	H-3	< 148.0	
07-MAY-12	I-131 (CHEM)	< 0.44	
20-AUG-12	MN-54	< 2.7	
20-AUG-12	CO-58	< 4.1	
20-AUG-12	FE-59	< 7.5	
20-AUG-12	CO-60	< 1.9	
20-AUG-12	ZN-65	< 6.7	
20-AUG-12	ZR-NB-95	< 3.0	
20-AUG-12	CS-134	< 2.4	
20-AUG-12	CS-137	< 3.2	
20-AUG-12	BA-LA-140	< 4.1	
20-AUG-12	H-3	< 150.0	
20-AUG-12	I-131 (CHEM)	< 0.242	
14-NOV-12	MN-54	< 3.2	
14-NOV-12	CO-58	< 2.4	
14-NOV-12	FE-59	< 5.2	
14-NOV-12	CO-60	< 2.6	
14-NOV-12	ZN-65	< 2.6	
14-NOV-12	ZR-NB-95	< 3.3	
14-NOV-12	CS-134	< 3.3	
14-NOV-12	CS-137	< 3.4	

Exposure Pathway - Waterborne
Ground Water

Location F-1

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
14-NOV-12	BA-LA-140	< 2.7	
14-NOV-12	H-3	< 142.0	
14-NOV-12	I-131 (CHEM)	< 0.437	

Exposure Pathway - Waterborne
Ground Water

Location G-2

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
27-FEB-12	MN-54	< 3.0	
27-FEB-12	CO-58	< 2.0	
27-FEB-12	FE-59	< 7.9	
27-FEB-12	CO-60	< 3.5	
27-FEB-12	ZN-65	< 7.5	
27-FEB-12	ZR-NB-95	< 2.6	
27-FEB-12	CS-134	< 3.2	
27-FEB-12	CS-137	< 2.3	
27-FEB-12	BA-LA-140	< 4.1	
27-FEB-12	H-3	< 141.0	
27-FEB-12	I-131 (CHEM)	< 0.35	
07-MAY-12	MN-54	< 2.9	
07-MAY-12	CO-58	< 3.9	
07-MAY-12	FE-59	< 5.7	
07-MAY-12	CO-60	< 4.0	
07-MAY-12	ZN-65	< 6.7	
07-MAY-12	ZR-NB-95	< 3.6	
07-MAY-12	CS-134	< 2.9	
07-MAY-12	CS-137	< 4.1	
07-MAY-12	BA-LA-140	< 3.3	
07-MAY-12	H-3	< 148.0	
07-MAY-12	I-131 (CHEM)	< 0.453	
20-AUG-12	MN-54	< 3.4	
20-AUG-12	CO-58	< 2.7	
20-AUG-12	FE-59	< 4.8	
20-AUG-12	CO-60	< 3.7	
20-AUG-12	ZN-65	< 8.1	
20-AUG-12	ZR-NB-95	< 5.5	
20-AUG-12	CS-134	< 3.5	
20-AUG-12	CS-137	< 2.4	
20-AUG-12	BA-LA-140	< 2.4	
20-AUG-12	H-3	< 150.0	
20-AUG-12	I-131 (CHEM)	< 0.344	
14-NOV-12	MN-54	< 2.8	
14-NOV-12	CO-58	< 2.4	
14-NOV-12	FE-59	< 5.9	
14-NOV-12	CO-60	< 2.5	
14-NOV-12	ZN-65	< 2.6	
14-NOV-12	ZR-NB-95	< 3.9	
14-NOV-12	CS-134	< 2.5	
14-NOV-12	CS-137	< 2.9	

Exposure Pathway - Waterborne
Ground Water

Location G-2

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
14-NOV-12	BA-LA-140	< 3.7	
14-NOV-12	H-3	< 142.0	
14-NOV-12	I-131 (CHEM)	< 0.417	

Exposure Pathway - Waterborne
Ground Water

Location J-1

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
27-FEB-12	MN-54	< 3.5	
27-FEB-12	CO-58	< 3.3	
27-FEB-12	FE-59	< 5.4	
27-FEB-12	CO-60	< 2.3	
27-FEB-12	ZN-65	< 7.2	
27-FEB-12	ZR-NB-95	< 5.1	
27-FEB-12	CS-134	< 2.7	
27-FEB-12	CS-137	< 2.4	
27-FEB-12	BA-LA-140	< 2.5	
27-FEB-12	H-3	< 141.0	
27-FEB-12	I-131 (CHEM)	< 0.241	
07-MAY-12	MN-54	< 2.1	
07-MAY-12	CO-58	< 2.7	
07-MAY-12	FE-59	< 3.8	
07-MAY-12	CO-60	< 1.8	
07-MAY-12	ZN-65	< 5.3	
07-MAY-12	ZR-NB-95	< 2.0	
07-MAY-12	CS-134	< 2.8	
07-MAY-12	CS-137	< 2.9	
07-MAY-12	BA-LA-140	< 2.6	
07-MAY-12	H-3	< 148.0	
07-MAY-12	I-131 (CHEM)	< 0.391	
20-AUG-12	MN-54	< 3.8	
20-AUG-12	CO-58	< 2.7	
20-AUG-12	FE-59	< 3.4	
20-AUG-12	CO-60	< 4.6	
20-AUG-12	ZN-65	< 5.1	
20-AUG-12	ZR-NB-95	< 4.7	
20-AUG-12	CS-134	< 6.3	
20-AUG-12	CS-137	< 4.8	
20-AUG-12	BA-LA-140	< 4.7	
20-AUG-12	H-3	< 150.0	
20-AUG-12	I-131 (CHEM)	< 0.374	
14-NOV-12	MN-54	< 2.2	
14-NOV-12	CO-58	< 2.6	
14-NOV-12	FE-59	< 3.2	
14-NOV-12	CO-60	< 2.6	
14-NOV-12	ZN-65	< 5.2	
14-NOV-12	ZR-NB-95	< 5.2	
14-NOV-12	CS-134	< 2.6	
14-NOV-12	CS-137	< 3.2	

Exposure Pathway - Waterborne
Ground Water

Location J-1

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
14-NOV-12	BA-LA-140	< 4.3	
14-NOV-12	H-3	< 142.0	
14-NOV-12	I-131 (CHEM)	< 0.39	

Exposure Pathway - Waterborne
Ground Water

Location J-2

Collection Date	Nuclide	Concentration (pCi/Liter)		Duplicate Analysis
27-FEB-12	MN-54	<	1.8	
27-FEB-12	CO-58	<	2.2	
27-FEB-12	FE-59	<	6.0	
27-FEB-12	CO-60	<	1.7	
27-FEB-12	ZN-65	<	6.2	
27-FEB-12	ZR-NB-95	<	2.5	
27-FEB-12	CS-134	<	2.1	
27-FEB-12	CS-137	<	2.1	
27-FEB-12	BA-LA-140	<	2.3	
27-FEB-12	H-3	<	141.0	
27-FEB-12	I-131 (CHEM)	<	0.237	
07-MAY-12	MN-54	<	1.8	
07-MAY-12	CO-58	<	2.8	
07-MAY-12	FE-59	<	3.5	
07-MAY-12	CO-60	<	2.5	
07-MAY-12	ZN-65	<	5.4	
07-MAY-12	ZR-NB-95	<	2.9	
07-MAY-12	CS-134	<	2.7	
07-MAY-12	CS-137	<	3.0	
07-MAY-12	BA-LA-140	<	1.9	
07-MAY-12	H-3	<	148.0	
07-MAY-12	I-131 (CHEM)	<	0.338	
20-AUG-12	MN-54	<	2.9	
20-AUG-12	MN-54	<	4.3	Duplicate
20-AUG-12	CO-58	<	3.6	
20-AUG-12	CO-58	<	2.2	Duplicate
20-AUG-12	FE-59	<	4.1	
20-AUG-12	FE-59	<	6.5	Duplicate
20-AUG-12	CO-60	<	2.7	
20-AUG-12	CO-60	<	3.3	Duplicate
20-AUG-12	ZN-65	<	5.8	
20-AUG-12	ZN-65	<	8.3	Duplicate
20-AUG-12	ZR-NB-95	<	2.5	
20-AUG-12	ZR-NB-95	<	4.1	Duplicate
20-AUG-12	CS-134	<	3.1	
20-AUG-12	CS-134	<	3.4	Duplicate
20-AUG-12	CS-137	<	2.9	
20-AUG-12	CS-137	<	4.7	Duplicate
20-AUG-12	BA-LA-140	<	2.4	
20-AUG-12	BA-LA-140	<	4.2	Duplicate
20-AUG-12	H-3	<	150.0	

Exposure Pathway - Waterborne
Ground Water

Location J-2

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
20-AUG-12	H-3	< 150.0	Duplicate
20-AUG-12	I-131 (CHEM)	< 0.343	
20-AUG-12	I-131 (CHEM)	< 0.457	Duplicate
14-NOV-12	MN-54	< 2.5	
14-NOV-12	CO-58	< 1.5	
14-NOV-12	FE-59	< 4.8	
14-NOV-12	CO-60	< 1.6	
14-NOV-12	ZN-65	< 4.7	
14-NOV-12	ZR-NB-95	< 2.4	
14-NOV-12	CS-134	< 2.4	
14-NOV-12	CS-137	< 3.2	
14-NOV-12	BA-LA-140	< 3.0	
14-NOV-12	H-3	< 142.0	
14-NOV-12	I-131 (CHEM)	< 0.399	

Exposure Pathway - Waterborne
Ground Water

Location L-49

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
27-FEB-12	MN-54	< 2.6	
27-FEB-12	CO-58	< 3.0	
27-FEB-12	FE-59	< 3.4	
27-FEB-12	CO-60	< 1.8	
27-FEB-12	ZN-65	< 4.1	
27-FEB-12	ZR-NB-95	< 3.4	
27-FEB-12	CS-134	< 2.8	
27-FEB-12	CS-137	< 3.4	
27-FEB-12	BA-LA-140	< 3.1	
27-FEB-12	H-3	< 141.0	
27-FEB-12	I-131 (CHEM)	< 0.33	
07-MAY-12	MN-54	< 2.5	
07-MAY-12	CO-58	< 1.8	
07-MAY-12	FE-59	< 3.6	
07-MAY-12	CO-60	< 0.8	
07-MAY-12	ZN-65	< 5.2	
07-MAY-12	ZR-NB-95	< 2.8	
07-MAY-12	CS-134	< 2.8	
07-MAY-12	CS-137	< 3.1	
07-MAY-12	BA-LA-140	< 2.2	
07-MAY-12	H-3	< 148.0	
07-MAY-12	I-131 (CHEM)	< 0.313	
20-AUG-12	MN-54	< 2.8	
20-AUG-12	CO-58	< 2.8	
20-AUG-12	FE-59	< 3.5	
20-AUG-12	CO-60	< 2.3	
20-AUG-12	ZN-65	< 4.9	
20-AUG-12	ZR-NB-95	< 2.7	
20-AUG-12	CS-134	< 2.7	
20-AUG-12	CS-137	< 3.0	
20-AUG-12	BA-LA-140	< 1.0	
20-AUG-12	H-3	< 150.0	
20-AUG-12	I-131 (CHEM)	< 0.442	
14-NOV-12	MN-54	< 2.2	
14-NOV-12	CO-58	< 1.1	
14-NOV-12	FE-59	< 3.2	
14-NOV-12	CO-60	< 2.7	
14-NOV-12	ZN-65	< 3.3	
14-NOV-12	ZR-NB-95	< 2.7	
14-NOV-12	CS-134	< 2.4	
14-NOV-12	CS-137	< 2.6	

Exposure Pathway - Waterborne
Ground Water

Location L-49

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
14-NOV-12	BA-LA-140	< 2.3	
14-NOV-12	H-3	< 142.0	
14-NOV-12	I-131 (CHEM)	< 0.259	

Exposure Pathway - Waterborne
Drinking Water

Location BW-15

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
06-FEB-12	MN-54	< 3.3	
06-FEB-12	CO-58	< 4.1	
06-FEB-12	FE-59	< 5.4	
06-FEB-12	CO-60	< 3.4	
06-FEB-12	ZN-65	< 4.1	
06-FEB-12	ZR-NB-95	< 2.7	
06-FEB-12	CS-134	< 4.5	
06-FEB-12	CS-137	< 3.0	
06-FEB-12	BA-LA-140	< 5.1	
06-FEB-12	GROSS BETA	3.346 +/- 0.714	
06-FEB-12	I-131 (CHEM)	< 0.323	
05-MAR-12	MN-54	< 2.7	
05-MAR-12	CO-58	< 1.7	
05-MAR-12	FE-59	< 3.7	
05-MAR-12	CO-60	< 1.4	
05-MAR-12	ZN-65	< 1.7	
05-MAR-12	ZR-NB-95	< 2.4	
05-MAR-12	CS-134	< 1.8	
05-MAR-12	CS-137	< 2.7	
05-MAR-12	BA-LA-140	< 1.4	
05-MAR-12	GROSS BETA	3.154 +/- 0.701	
05-MAR-12	I-131 (CHEM)	< 0.257	
02-APR-12	MN-54	< 2.8	
02-APR-12	CO-58	< 3.2	
02-APR-12	FE-59	< 5.9	
02-APR-12	CO-60	< 2.0	
02-APR-12	ZN-65	< 5.8	
02-APR-12	ZR-NB-95	< 2.3	
02-APR-12	CS-134	< 3.0	
02-APR-12	CS-137	< 2.6	
02-APR-12	BA-LA-140	< 1.8	
02-APR-12	GROSS BETA	2.513 +/- 0.654	
02-APR-12	I-131 (CHEM)	< 0.283	
07-MAY-12	MN-54	< 1.9	
07-MAY-12	CO-58	< 1.5	
07-MAY-12	FE-59	< 3.8	
07-MAY-12	CO-60	< 1.0	
07-MAY-12	ZN-65	< 2.7	
07-MAY-12	ZR-NB-95	< 2.3	
07-MAY-12	CS-134	< 3.1	

Exposure Pathway - Waterborne
Drinking Water

Location BW-15

Collection Date		Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
07-MAY-12		CS-137	< 3.0	
07-MAY-12		BA-LA-140	< 2.6	
07-MAY-12		GROSS BETA	3.388 +/- 0.709	
07-MAY-12		I-131 (CHEM)	< 0.303	
04-JUN-12		MN-54	< 3.6	
04-JUN-12		CO-58	< 2.3	
04-JUN-12		FE-59	< 4.8	
04-JUN-12		CO-60	< 2.6	
04-JUN-12		ZN-65	< 2.7	
04-JUN-12		ZR-NB-95	< 1.7	
04-JUN-12		CS-134	< 2.7	
04-JUN-12		CS-137	< 3.1	
04-JUN-12		BA-LA-140	< 1.3	
04-JUN-12		GROSS BETA	2.076 +/- 0.608	
04-JUN-12		I-131 (CHEM)	< 0.303	
02-JUL-12		MN-54	< 3.0	
02-JUL-12		CO-58	< 1.8	
02-JUL-12		FE-59	< 3.9	
02-JUL-12		CO-60	< 2.4	
02-JUL-12		ZN-65	< 3.3	
02-JUL-12		ZR-NB-95	< 2.2	
02-JUL-12		CS-134	< 1.9	
02-JUL-12		CS-137	< 2.3	
02-JUL-12		BA-LA-140	< 2.2	
02-JUL-12		GROSS BETA	1.834 +/- 0.6	
02-JUL-12		I-131 (CHEM)	< 0.302	
06-AUG-12		MN-54	< 2.8	
06-AUG-12		CO-58	< 3.1	
06-AUG-12		FE-59	< 6.6	
06-AUG-12		CO-60	< 1.9	
06-AUG-12		ZN-65	< 5.1	
06-AUG-12		ZR-NB-95	< 2.3	
06-AUG-12		CS-134	< 3.2	
06-AUG-12		CS-137	< 4.3	
06-AUG-12		BA-LA-140	< 2.8	
06-AUG-12		GROSS BETA	1.239 +/- 0.556	
06-AUG-12		I-131 (CHEM)	< 0.168	
04-SEP-12		MN-54	< 3.2	
04-SEP-12	GRAB	MN-54	< 2.1	
04-SEP-12		CO-58	< 2.0	

Exposure Pathway - Waterborne
Drinking Water

Location BW-15

Collection Date		Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
04-SEP-12	GRAB	CO-58	< 1.8	
04-SEP-12		FE-59	< 7.6	
04-SEP-12	GRAB	FE-59	< 2.4	
04-SEP-12		CO-60	< 3.1	
04-SEP-12	GRAB	CO-60	< 1.8	
04-SEP-12		ZN-65	< 7.6	
04-SEP-12	GRAB	ZN-65	< 3.5	
04-SEP-12		ZR-NB-95	< 4.0	
04-SEP-12	GRAB	ZR-NB-95	< 1.5	
04-SEP-12		CS-134	< 3.4	
04-SEP-12	GRAB	CS-134	< 2.6	
04-SEP-12		CS-137	< 3.8	
04-SEP-12	GRAB	CS-137	< 2.8	
04-SEP-12		BA-LA-140	< 3.7	
04-SEP-12	GRAB	BA-LA-140	< 2.9	
04-SEP-12		GROSS BETA	3.702 +/- 0.739	
04-SEP-12	GRAB	GROSS BETA	4.021 +/- 0.781	
04-SEP-12		I-131 (CHEM)	< 0.304	
04-SEP-12	GRAB	I-131 (CHEM)	< 0.279	
01-OCT-12		MN-54	< 4.2	
01-OCT-12		CO-58	< 3.3	
01-OCT-12		FE-59	< 5.4	
01-OCT-12		CO-60	< 3.3	
01-OCT-12		ZN-65	< 5.8	
01-OCT-12		ZR-NB-95	< 2.6	
01-OCT-12		CS-134	< 4.6	
01-OCT-12		CS-137	< 3.3	
01-OCT-12		BA-LA-140	< 5.6	
01-OCT-12		GROSS BETA	3.150 +/- 0.713	
01-OCT-12		I-131 (CHEM)	< 0.326	
05-NOV-12		MN-54	< 3.8	
05-NOV-12		CO-58	< 2.9	
05-NOV-12		FE-59	< 4.7	
05-NOV-12		CO-60	< 3.6	
05-NOV-12		ZN-65	< 7.0	
05-NOV-12		ZR-NB-95	< 4.6	
05-NOV-12		CS-134	< 2.5	
05-NOV-12		CS-137	< 5.4	
05-NOV-12		BA-LA-140	< 2.9	
05-NOV-12		GROSS BETA	2.935 +/- 0.679	

Exposure Pathway - Waterborne
Drinking Water

Location BW-15

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
05-NOV-12	I-131 (CHEM)	< 0.494	
03-DEC-12	MN-54	< 3.1	
03-DEC-12	CO-58	< 2.2	
03-DEC-12	FE-59	< 5.2	
03-DEC-12	CO-60	< 3.0	
03-DEC-12	ZN-65	< 5.5	
03-DEC-12	ZR-NB-95	< 2.2	
03-DEC-12	CS-134	< 2.5	
03-DEC-12	CS-137	< 3.8	
03-DEC-12	BA-LA-140	< 2.2	
03-DEC-12	GROSS BETA	2.387 +/- 0.656	
03-DEC-12	I-131 (CHEM)	< 0.409	
07-JAN-13	MN-54	< 2.4	
07-JAN-13	CO-58	< 2.1	
07-JAN-13	FE-59	< 3.7	
07-JAN-13	CO-60	< 2.4	
07-JAN-13	ZN-65	< 1.5	
07-JAN-13	ZR-NB-95	< 2.9	
07-JAN-13	CS-134	< 2.3	
07-JAN-13	CS-137	< 2.4	
07-JAN-13	BA-LA-140	< 2.0	
07-JAN-13	GROSS BETA	2.988 +/- 0.715	
07-JAN-13	I-131 (CHEM)	< 0.286	

Exposure Pathway - Waterborne
Drinking Water

Location IO-DW

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
06-FEB-12	MN-54	< 2.8	
06-FEB-12	CO-58	< 2.2	
06-FEB-12	FE-59	< 4.4	
06-FEB-12	CO-60	< 1.2	
06-FEB-12	ZN-65	< 2.7	
06-FEB-12	ZR-NB-95	< 3.0	
06-FEB-12	CS-134	< 2.1	
06-FEB-12	CS-137	< 2.0	
06-FEB-12	BA-LA-140	< 2.8	
06-FEB-12	GROSS BETA	2.906 +/- 0.694	
06-FEB-12	I-131 (CHEM)	< 0.336	
05-MAR-12	MN-54	< 2.5	
05-MAR-12	CO-58	< 2.1	
05-MAR-12	FE-59	< 2.7	
05-MAR-12	CO-60	< 1.0	
05-MAR-12	ZN-65	< 1.5	
05-MAR-12	ZR-NB-95	< 2.7	
05-MAR-12	CS-134	< 2.2	
05-MAR-12	CS-137	< 2.1	
05-MAR-12	BA-LA-140	< 3.1	
05-MAR-12	GROSS BETA	3.565 +/- 0.736	
05-MAR-12	I-131 (CHEM)	< 0.275	
02-APR-12	MN-54	< 2.5	
02-APR-12	CO-58	< 3.3	
02-APR-12	FE-59	< 3.0	
02-APR-12	CO-60	< 1.6	
02-APR-12	ZN-65	< 4.6	
02-APR-12	ZR-NB-95	< 2.6	
02-APR-12	CS-134	< 2.5	
02-APR-12	CS-137	< 2.4	
02-APR-12	BA-LA-140	< 3.8	
02-APR-12	GROSS BETA	2.595 +/- 0.682	
02-APR-12	I-131 (CHEM)	< 0.378	
07-MAY-12	MN-54	< 3.6	
07-MAY-12	CO-58	< 1.6	
07-MAY-12	FE-59	< 2.5	
07-MAY-12	CO-60	< 2.6	
07-MAY-12	ZN-65	< 1.7	
07-MAY-12	ZR-NB-95	< 2.7	
07-MAY-12	CS-134	< 1.0	

Exposure Pathway - Waterborne
Drinking Water

Location IO-DW

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
07-MAY-12	CS-137	< 2.9	
07-MAY-12	BA-LA-140	< 1.3	
07-MAY-12	GROSS BETA	3.237 +/- 0.705	
07-MAY-12	I-131 (CHEM)	< 0.318	
04-JUN-12	MN-54	< 1.6	
04-JUN-12	CO-58	< 1.7	
04-JUN-12	FE-59	< 2.7	
04-JUN-12	CO-60	< 1.2	
04-JUN-12	ZN-65	< 4.2	
04-JUN-12	ZR-NB-95	< 3.5	
04-JUN-12	CS-134	< 2.4	
04-JUN-12	CS-137	< 2.9	
04-JUN-12	BA-LA-140	< 1.4	
04-JUN-12	GROSS BETA	2.788 +/- 0.673	
04-JUN-12	I-131 (CHEM)	< 0.3	
02-JUL-12	MN-54	< 2.0	
02-JUL-12	CO-58	< 2.4	
02-JUL-12	FE-59	< 2.6	
02-JUL-12	CO-60	< 1.6	
02-JUL-12	ZN-65	< 3.1	
02-JUL-12	ZR-NB-95	< 3.0	
02-JUL-12	CS-134	< 2.3	
02-JUL-12	CS-137	< 2.7	
02-JUL-12	BA-LA-140	< 1.9	
02-JUL-12	GROSS BETA	3.000 +/- 0.7	
02-JUL-12	I-131 (CHEM)	< 0.319	
06-AUG-12	MN-54	< 2.9	
06-AUG-12	CO-58	< 3.3	
06-AUG-12	FE-59	< 7.8	
06-AUG-12	CO-60	< 3.0	
06-AUG-12	ZN-65	< 2.4	
06-AUG-12	ZR-NB-95	< 2.2	
06-AUG-12	CS-134	< 3.5	
06-AUG-12	CS-137	< 3.3	
06-AUG-12	BA-LA-140	< 3.6	
06-AUG-12	GROSS BETA	2.062 +/- 0.626	
06-AUG-12	I-131 (CHEM)	< 0.143	
04-SEP-12	MN-54	< 2.6	
04-SEP-12	CO-58	< 3.5	
04-SEP-12	FE-59	< 7.5	

Exposure Pathway - Waterborne
Drinking Water

Location IO-DW

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
04-SEP-12	CO-60	< 2.4	
04-SEP-12	ZN-65	< 6.6	
04-SEP-12	ZR-NB-95	< 3.8	
04-SEP-12	CS-134	< 3.6	
04-SEP-12	CS-137	< 3.3	
04-SEP-12	BA-LA-140	< 3.8	
04-SEP-12	GROSS BETA	3.046 +/- 0.727	
04-SEP-12	I-131 (CHEM)	< 0.194	
01-OCT-12	MN-54	< 1.9	
01-OCT-12	CO-58	< 2.9	
01-OCT-12	FE-59	< 4.5	
01-OCT-12	CO-60	< 1.9	
01-OCT-12	ZN-65	< 2.3	
01-OCT-12	ZR-NB-95	< 1.9	
01-OCT-12	CS-134	< 2.6	
01-OCT-12	CS-137	< 3.2	
01-OCT-12	BA-LA-140	< 3.0	
01-OCT-12	GROSS BETA	3.749 +/- 0.749	
01-OCT-12	I-131 (CHEM)	< 0.321	
05-NOV-12	MN-54	< 3.2	
05-NOV-12	CO-58	< 1.5	
05-NOV-12	FE-59	< 2.8	
05-NOV-12	CO-60	< 1.8	
05-NOV-12	ZN-65	< 5.0	
05-NOV-12	ZR-NB-95	< 1.9	
05-NOV-12	CS-134	< 2.4	
05-NOV-12	CS-137	< 2.4	
05-NOV-12	BA-LA-140	< 1.9	
05-NOV-12	GROSS BETA	3.329 +/- 0.711	
05-NOV-12	I-131 (CHEM)	< 0.36	
03-DEC-12	MN-54	< 2.6	
03-DEC-12	CO-58	< 4.0	
03-DEC-12	FE-59	< 7.7	
03-DEC-12	CO-60	< 3.5	
03-DEC-12	ZN-65	< 6.5	
03-DEC-12	ZR-NB-95	< 2.3	
03-DEC-12	CS-134	< 3.5	
03-DEC-12	CS-137	< 4.8	
03-DEC-12	BA-LA-140	< 2.6	
03-DEC-12	GROSS BETA	3.003 +/- 0.694	

Exposure Pathway - Waterborne
Drinking Water

Location IO-DW

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
03-DEC-12	I-131 (CHEM)	< 0.414	
07-JAN-13	MN-54	< 2.1	
07-JAN-13	CO-58	< 2.5	
07-JAN-13	FE-59	< 1.8	
07-JAN-13	CO-60	< 1.7	
07-JAN-13	ZN-65	< 3.9	
07-JAN-13	ZR-NB-95	< 1.7	
07-JAN-13	CS-134	< 2.1	
07-JAN-13	CS-137	< 2.9	
07-JAN-13	BA-LA-140	< 1.6	
07-JAN-13	GROSS BETA	2.408 +/- 0.635	
07-JAN-13	I-131 (CHEM)	< 0.313	

Exposure Pathway - Waterborne
Drinking Water
Quarterly Tritium Analysis

Location BW-15

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
02-APR-12	H-3	< 143	
02-JUL-12	H-3	< 148	
01-OCT-12	H-3	< 150	
07-JAN-13	H-3	< 137	

Exposure Pathway - Waterborne
Drinking Water
Quarterly Tritium Analysis

Location IO-DW

Collection Date	Nuclide	Concentration (pCi/Liter)	Duplicate Analysis
02-APR-12	H-3	222 +/- 83	
02-JUL-12	H-3	< 148	
01-OCT-12	H-3	< 150	
07-JAN-13	H-3	< 137	
07-JAN-13	H-3	< 137	Duplicate

Exposure Pathway - Waterborne
Shoreline Sediment

Location DC

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
02-MAY-12	K-40	8,464.3 +/- 914.7	
02-MAY-12	MN-54	< 41.1	
02-MAY-12	CO-58	< 49.6	
02-MAY-12	FE-59	< 81.1	
02-MAY-12	CO-60	< 17.2	
02-MAY-12	ZN-65	< 104.5	
02-MAY-12	CS-134	< 35.2	
02-MAY-12	CS-137	< 48.2	
29-NOV-12	K-40	6,047.9 +/- 384.0	Duplicate
29-NOV-12	K-40	6,074.1 +/- 461.5	
29-NOV-12	MN-54	< 17.0	Duplicate
29-NOV-12	MN-54	< 19.5	
29-NOV-12	CO-58	< 16.0	Duplicate
29-NOV-12	CO-58	< 19.0	
29-NOV-12	FE-59	< 23.9	Duplicate
29-NOV-12	FE-59	< 47.3	
29-NOV-12	CO-60	< 7.2	Duplicate
29-NOV-12	CO-60	< 9.5	
29-NOV-12	ZN-65	< 33.9	Duplicate
29-NOV-12	ZN-65	< 33.6	
29-NOV-12	CS-134	< 14.6	Duplicate
29-NOV-12	CS-134	< 13.1	
29-NOV-12	CS-137	< 12.9	Duplicate
29-NOV-12	CS-137	< 17.1	

Exposure Pathway - Waterborne
Shoreline Sediment

Location EEA

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
29-MAY-12	K-40	8,620.8 +/- 993.9	
29-MAY-12	MN-54	< 49.6	
29-MAY-12	CO-58	< 20.8	
29-MAY-12	FE-59	< 65.0	
29-MAY-12	CO-60	< 28.1	
29-MAY-12	ZN-65	< 73.1	
29-MAY-12	CS-134	< 36.3	
29-MAY-12	CS-137	234.3 +/- 58.9	

Exposure Pathway - Waterborne
Shoreline Sediment

Location JRR

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
02-MAY-12	K-40	10,239.0 +/- 678.5	
02-MAY-12	MN-54	< 27.7	
02-MAY-12	CO-58	< 30.4	
02-MAY-12	FE-59	< 67.3	
02-MAY-12	CO-60	< 19.0	
02-MAY-12	ZN-65	< 44.4	
02-MAY-12	CS-134	< 15.5	
02-MAY-12	CS-137	< 24.7	
19-NOV-12	K-40	6,356.2 +/- 415.4	
19-NOV-12	MN-54	< 15.1	
19-NOV-12	CO-58	< 17.8	
19-NOV-12	FE-59	< 46.9	
19-NOV-12	CO-60	< 8.7	
19-NOV-12	ZN-65	< 41.0	
19-NOV-12	CS-134	< 14.2	
19-NOV-12	CS-137	< 16.9	

Exposure Pathway - Waterborne
Shoreline Sediment

Location SC

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
03-OCT-12	K-40	12,147.0 +/- 772.7	
03-OCT-12	MN-54	< 26.8	
03-OCT-12	CO-58	< 29.4	
03-OCT-12	FE-59	< 39.7	
03-OCT-12	CO-60	< 28.0	
03-OCT-12	ZN-65	< 52.6	
03-OCT-12	CS-134	< 20.7	
03-OCT-12	CS-137	75.8 +/- 29.2	

Exposure Pathway - Ingestion
Fish

Location CCL

Collection Date	Sample Description	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Kg Wet)	Duplicate Analysis
22-MAY-12	COMMON CARP	K-40	3,018.2 +/- 361.0	
22-MAY-12	COMMON CARP	MN-54	< 9.5	
22-MAY-12	COMMON CARP	CO-58	< 12.0	
22-MAY-12	COMMON CARP	FE-59	< 19.2	
22-MAY-12	COMMON CARP	CO-60	< 7.1	
22-MAY-12	COMMON CARP	ZN-65	< 24.6	
22-MAY-12	COMMON CARP	I-131	< 13.0	
22-MAY-12	COMMON CARP	CS-134	< 8.9	
22-MAY-12	COMMON CARP	CS-137	< 17.4	
22-MAY-12	COMMON CARP	H-3	8,370.0 +/- 240.0	
22-MAY-12	FRESHWATER DRUM	K-40	3,168.0 +/- 384.9	
22-MAY-12	FRESHWATER DRUM	MN-54	< 9.7	
22-MAY-12	FRESHWATER DRUM	CO-58	< 9.8	
22-MAY-12	FRESHWATER DRUM	FE-59	< 21.8	
22-MAY-12	FRESHWATER DRUM	CO-60	< 11.2	
22-MAY-12	FRESHWATER DRUM	ZN-65	< 27.8	
22-MAY-12	FRESHWATER DRUM	I-131	< 19.9	
22-MAY-12	FRESHWATER DRUM	CS-134	< 14.7	
22-MAY-12	FRESHWATER DRUM	CS-137	< 9.0	
22-MAY-12	FRESHWATER DRUM	H-3	8,151.0 +/- 239.0	
22-MAY-12	SMALLMOUTH BASS	K-40	3,677.2 +/- 392.4	Duplicate
22-MAY-12	SMALLMOUTH BASS	K-40	3,528.9 +/- 372.8	
22-MAY-12	SMALLMOUTH BASS	MN-54	< 13.5	Duplicate
22-MAY-12	SMALLMOUTH BASS	MN-54	< 10.9	
22-MAY-12	SMALLMOUTH BASS	CO-58	< 7.7	Duplicate
22-MAY-12	SMALLMOUTH BASS	CO-58	< 13.5	
22-MAY-12	SMALLMOUTH BASS	FE-59	< 30.3	Duplicate
22-MAY-12	SMALLMOUTH BASS	FE-59	< 21.8	
22-MAY-12	SMALLMOUTH BASS	CO-60	< 12.3	Duplicate
22-MAY-12	SMALLMOUTH BASS	CO-60	< 7.6	
22-MAY-12	SMALLMOUTH BASS	ZN-65	< 20.4	Duplicate
22-MAY-12	SMALLMOUTH BASS	ZN-65	< 27.3	
22-MAY-12	SMALLMOUTH BASS	I-131	< 13.7	Duplicate
22-MAY-12	SMALLMOUTH BASS	I-131	< 12.4	
22-MAY-12	SMALLMOUTH BASS	CS-134	< 13.6	Duplicate
22-MAY-12	SMALLMOUTH BASS	CS-134	< 9.8	
22-MAY-12	SMALLMOUTH BASS	CS-137	< 13.0	Duplicate
22-MAY-12	SMALLMOUTH BASS	CS-137	< 13.8	
22-MAY-12	SMALLMOUTH BASS	H-3	8,850.0 +/- 248.0	Duplicate
22-MAY-12	SMALLMOUTH BASS	H-3	8,948.0 +/- 250.0	
22-MAY-12	SMALLMOUTH BUFFALO	K-40	2,990.3 +/- 407.2	

Exposure Pathway - Ingestion
Fish

Location CCL

Collection Date	Sample Description	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Kg Wet)	Duplicate Analysis
22-MAY-12	SMALLMOUTH BUFFALO	MN-54	< 12.6	
22-MAY-12	SMALLMOUTH BUFFALO	CO-58	< 16.7	
22-MAY-12	SMALLMOUTH BUFFALO	FE-59	< 25.6	
22-MAY-12	SMALLMOUTH BUFFALO	CO-60	< 13.6	
22-MAY-12	SMALLMOUTH BUFFALO	ZN-65	< 31.4	
22-MAY-12	SMALLMOUTH BUFFALO	I-131	< 23.3	
22-MAY-12	SMALLMOUTH BUFFALO	CS-134	< 17.0	
22-MAY-12	SMALLMOUTH BUFFALO	CS-137	< 16.8	
22-MAY-12	SMALLMOUTH BUFFALO	H-3	8,116.0 +/- 225.0	
17-OCT-12	BLUE CATFISH	K-40	3,162.7 +/- 317.8	
17-OCT-12	BLUE CATFISH	MN-54	< 12.4	
17-OCT-12	BLUE CATFISH	CO-58	< 10.8	
17-OCT-12	BLUE CATFISH	FE-59	< 29.4	
17-OCT-12	BLUE CATFISH	CO-60	< 7.7	
17-OCT-12	BLUE CATFISH	ZN-65	< 30.3	
17-OCT-12	BLUE CATFISH	I-131	< 54.3	
17-OCT-12	BLUE CATFISH	CS-134	< 7.8	
17-OCT-12	BLUE CATFISH	CS-137	< 13.3	
17-OCT-12	BLUE CATFISH	H-3	7,269.0 +/- 235.0	
17-OCT-12	COMMON CARP	K-40	3,104.0 +/- 338.9	
17-OCT-12	COMMON CARP	MN-54	< 8.6	
17-OCT-12	COMMON CARP	CO-58	< 9.0	
17-OCT-12	COMMON CARP	FE-59	< 25.8	
17-OCT-12	COMMON CARP	CO-60	< 13.7	
17-OCT-12	COMMON CARP	ZN-65	< 14.4	
17-OCT-12	COMMON CARP	I-131	< 46.3	
17-OCT-12	COMMON CARP	CS-134	< 4.3	
17-OCT-12	COMMON CARP	CS-137	< 7.2	
17-OCT-12	COMMON CARP	H-3	7,670.0 +/- 235.0	
17-OCT-12	WALLEYE	K-40	3,547.3 +/- 317.9	
17-OCT-12	WALLEYE	MN-54	< 12.6	
17-OCT-12	WALLEYE	CO-58	< 11.6	
17-OCT-12	WALLEYE	FE-59	< 37.8	
17-OCT-12	WALLEYE	CO-60	< 11.1	
17-OCT-12	WALLEYE	ZN-65	< 13.6	
17-OCT-12	WALLEYE	I-131	< 42.3	
17-OCT-12	WALLEYE	CS-134	< 11.0	
17-OCT-12	WALLEYE	CS-137	< 14.1	
17-OCT-12	WALLEYE	H-3	6,808.0 +/- 226.0	
17-OCT-12	WHITE BASS	K-40	2,837.2 +/- 309.1	
17-OCT-12	WHITE BASS	MN-54	< 11.6	

Exposure Pathway - Ingestion
Fish

Location CCL

Collection Date	Sample Description	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Kg Wet)	Duplicate Analysis
17-OCT-12	WHITE BASS	CO-58	< 7.8	
17-OCT-12	WHITE BASS	FE-59	< 26.5	
17-OCT-12	WHITE BASS	CO-60	< 11.4	
17-OCT-12	WHITE BASS	ZN-65	< 24.4	
17-OCT-12	WHITE BASS	I-131	< 66.5	
17-OCT-12	WHITE BASS	CS-134	< 10.8	
17-OCT-12	WHITE BASS	CS-137	< 13.5	
17-OCT-12	WHITE BASS	H-3	7,122.0 +/- 231.0	
17-OCT-12	WHITE CRAPPIE	K-40	2,981.2 +/- 311.1	
17-OCT-12	WHITE CRAPPIE	MN-54	< 13.0	
17-OCT-12	WHITE CRAPPIE	CO-58	< 11.6	
17-OCT-12	WHITE CRAPPIE	FE-59	< 16.9	
17-OCT-12	WHITE CRAPPIE	CO-60	< 5.3	
17-OCT-12	WHITE CRAPPIE	ZN-65	< 26.0	
17-OCT-12	WHITE CRAPPIE	I-131	< 51.7	
17-OCT-12	WHITE CRAPPIE	CS-134	< 11.0	
17-OCT-12	WHITE CRAPPIE	CS-137	< 13.7	
17-OCT-12	WHITE CRAPPIE	H-3	7,099.0 +/- 232.0	

Exposure Pathway - Ingestion
Fish

Location JRR

Collection Date	Sample Description	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Kg Wet)	Duplicate Analysis
22-MAY-12	CHANNEL CATFISH	K-40	3,497.2 +/- 360.0	
22-MAY-12	CHANNEL CATFISH	MN-54	< 14.1	
22-MAY-12	CHANNEL CATFISH	CO-58	< 12.9	
22-MAY-12	CHANNEL CATFISH	FE-59	< 21.0	
22-MAY-12	CHANNEL CATFISH	CO-60	< 9.6	
22-MAY-12	CHANNEL CATFISH	ZN-65	< 16.3	
22-MAY-12	CHANNEL CATFISH	I-131	< 17.0	
22-MAY-12	CHANNEL CATFISH	CS-134	< 9.5	
22-MAY-12	CHANNEL CATFISH	CS-137	< 10.7	
22-MAY-12	CHANNEL CATFISH	H-3	< 114.0	
22-MAY-12	COMMON CARP	K-40	3,289.8 +/- 391.4	
22-MAY-12	COMMON CARP	MN-54	< 13.4	
22-MAY-12	COMMON CARP	CO-58	< 11.3	
22-MAY-12	COMMON CARP	FE-59	< 12.4	
22-MAY-12	COMMON CARP	CO-60	< 8.9	
22-MAY-12	COMMON CARP	ZN-65	< 32.8	
22-MAY-12	COMMON CARP	I-131	< 24.0	
22-MAY-12	COMMON CARP	CS-134	< 12.2	
22-MAY-12	COMMON CARP	CS-137	< 8.2	
22-MAY-12	COMMON CARP	H-3	< 118.0	
22-MAY-12	FRESHWATER DRUM	K-40	3,247.8 +/- 348.8	
22-MAY-12	FRESHWATER DRUM	MN-54	< 12.7	
22-MAY-12	FRESHWATER DRUM	CO-58	< 8.6	
22-MAY-12	FRESHWATER DRUM	FE-59	< 21.7	
22-MAY-12	FRESHWATER DRUM	CO-60	< 12.2	
22-MAY-12	FRESHWATER DRUM	ZN-65	< 34.0	
22-MAY-12	FRESHWATER DRUM	I-131	< 13.6	
22-MAY-12	FRESHWATER DRUM	CS-134	< 8.8	
22-MAY-12	FRESHWATER DRUM	CS-137	< 15.6	
22-MAY-12	FRESHWATER DRUM	H-3	< 117.0	
22-MAY-12	SMALLMOUTH BUFFALO	K-40	3,135.4 +/- 361.7	
22-MAY-12	SMALLMOUTH BUFFALO	MN-54	< 11.4	
22-MAY-12	SMALLMOUTH BUFFALO	CO-58	< 7.5	
22-MAY-12	SMALLMOUTH BUFFALO	FE-59	< 20.3	
22-MAY-12	SMALLMOUTH BUFFALO	CO-60	< 11.1	
22-MAY-12	SMALLMOUTH BUFFALO	ZN-65	< 10.3	
22-MAY-12	SMALLMOUTH BUFFALO	I-131	< 15.1	
22-MAY-12	SMALLMOUTH BUFFALO	CS-134	< 10.9	
22-MAY-12	SMALLMOUTH BUFFALO	CS-137	< 14.0	
22-MAY-12	SMALLMOUTH BUFFALO	H-3	< 114.0	
14-NOV-12	BIGMOUTH BUFFALO	K-40	2,968.7 +/- 345.8	

Exposure Pathway - Ingestion
Fish

Location JRR

Collection Date	Sample Description	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Kg Wet)	Duplicate Analysis
14-NOV-12	BIGMOUTH BUFFALO	MN-54	< 11.0	
14-NOV-12	BIGMOUTH BUFFALO	CO-58	< 9.7	
14-NOV-12	BIGMOUTH BUFFALO	FE-59	< 21.7	
14-NOV-12	BIGMOUTH BUFFALO	CO-60	< 10.7	
14-NOV-12	BIGMOUTH BUFFALO	ZN-65	< 13.5	
14-NOV-12	BIGMOUTH BUFFALO	I-131	< 46.3	
14-NOV-12	BIGMOUTH BUFFALO	CS-134	< 9.8	
14-NOV-12	BIGMOUTH BUFFALO	CS-137	< 12.2	
14-NOV-12	BIGMOUTH BUFFALO	H-3	< 110.0	
14-NOV-12	COMMON CARP	K-40	2,944.1 +/- 362.3	
14-NOV-12	COMMON CARP	MN-54	< 10.5	
14-NOV-12	COMMON CARP	CO-58	< 15.0	
14-NOV-12	COMMON CARP	FE-59	< 17.4	
14-NOV-12	COMMON CARP	CO-60	< 15.5	
14-NOV-12	COMMON CARP	ZN-65	< 9.2	
14-NOV-12	COMMON CARP	I-131	< 33.8	
14-NOV-12	COMMON CARP	CS-134	< 10.8	
14-NOV-12	COMMON CARP	CS-137	< 11.2	
14-NOV-12	COMMON CARP	H-3	< 119.0	
14-NOV-12	SMALLMOUTH BUFFALO	K-40	3,129.2 +/- 383.6	
14-NOV-12	SMALLMOUTH BUFFALO	MN-54	< 9.4	
14-NOV-12	SMALLMOUTH BUFFALO	CO-58	< 9.3	
14-NOV-12	SMALLMOUTH BUFFALO	FE-59	< 27.0	
14-NOV-12	SMALLMOUTH BUFFALO	CO-60	< 8.9	
14-NOV-12	SMALLMOUTH BUFFALO	ZN-65	< 25.0	
14-NOV-12	SMALLMOUTH BUFFALO	I-131	< 35.4	
14-NOV-12	SMALLMOUTH BUFFALO	CS-134	< 9.0	
14-NOV-12	SMALLMOUTH BUFFALO	CS-137	< 12.9	
14-NOV-12	SMALLMOUTH BUFFALO	H-3	< 120.0	
14-NOV-12	WHITE CRAPPIE	K-40	3,173.6 +/- 355.7	Duplicate
14-NOV-12	WHITE CRAPPIE	K-40	3,111.5 +/- 376.8	
14-NOV-12	WHITE CRAPPIE	MN-54	< 11.9	Duplicate
14-NOV-12	WHITE CRAPPIE	MN-54	< 16.5	
14-NOV-12	WHITE CRAPPIE	CO-58	< 12.5	Duplicate
14-NOV-12	WHITE CRAPPIE	CO-58	< 9.2	
14-NOV-12	WHITE CRAPPIE	FE-59	< 31.0	Duplicate
14-NOV-12	WHITE CRAPPIE	FE-59	< 29.7	
14-NOV-12	WHITE CRAPPIE	CO-60	< 10.7	Duplicate
14-NOV-12	WHITE CRAPPIE	CO-60	< 6.5	
14-NOV-12	WHITE CRAPPIE	ZN-65	< 23.6	Duplicate
14-NOV-12	WHITE CRAPPIE	ZN-65	< 19.2	

Exposure Pathway - Ingestion
Fish

Location JRR

Collection Date	Sample Description	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Kg Wet)			Duplicate Analysis
14-NOV-12	WHITE CRAPPIE	I-131	<	29.1		Duplicate
14-NOV-12	WHITE CRAPPIE	I-131	<	34.5		
14-NOV-12	WHITE CRAPPIE	CS-134	<	11.0		Duplicate
14-NOV-12	WHITE CRAPPIE	CS-134	<	12.7		
14-NOV-12	WHITE CRAPPIE	CS-137	<	11.2		Duplicate
14-NOV-12	WHITE CRAPPIE	CS-137	<	14.2		
14-NOV-12	WHITE CRAPPIE	H-3	<	118.0		Duplicate
14-NOV-12	WHITE CRAPPIE	H-3	<	118.0		

Exposure Pathway - Ingestion
Food/Garden

Location B-1

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)	Duplicate Analysis
26-MAR-12	HORSERADISH LEAVES	BE-7	< 139.5	
26-MAR-12	HORSERADISH LEAVES	K-40	4,920.5 +/- 405.5	
26-MAR-12	HORSERADISH LEAVES	MN-54	< 9.8	
26-MAR-12	HORSERADISH LEAVES	CO-58	< 8.0	
26-MAR-12	HORSERADISH LEAVES	FE-59	< 30.1	
26-MAR-12	HORSERADISH LEAVES	CO-60	< 10.9	
26-MAR-12	HORSERADISH LEAVES	ZN-65	< 25.9	
26-MAR-12	HORSERADISH LEAVES	ZR-NB-95	< 7.1	
26-MAR-12	HORSERADISH LEAVES	I-131	< 14.6	
26-MAR-12	HORSERADISH LEAVES	CS-134	< 8.4	
26-MAR-12	HORSERADISH LEAVES	CS-137	< 13.1	
16-APR-12	HORSERADISH LEAVES	BE-7	352.2 +/- 193.4	
16-APR-12	HORSERADISH LEAVES	K-40	7,798.0 +/- 569.7	
16-APR-12	HORSERADISH LEAVES	MN-54	< 13.2	
16-APR-12	HORSERADISH LEAVES	CO-58	< 12.3	
16-APR-12	HORSERADISH LEAVES	FE-59	< 38.9	
16-APR-12	HORSERADISH LEAVES	CO-60	< 21.3	
16-APR-12	HORSERADISH LEAVES	ZN-65	< 40.3	
16-APR-12	HORSERADISH LEAVES	ZR-NB-95	< 14.2	
16-APR-12	HORSERADISH LEAVES	I-131	< 31.1	
16-APR-12	HORSERADISH LEAVES	CS-134	< 18.1	
16-APR-12	HORSERADISH LEAVES	CS-137	< 20.9	
30-JUL-12	HORSERADISH LEAVES	BE-7	563.8 +/- 210.7	
30-JUL-12	HORSERADISH LEAVES	K-40	9,300.1 +/- 657.9	
30-JUL-12	HORSERADISH LEAVES	MN-54	< 17.1	
30-JUL-12	HORSERADISH LEAVES	CO-58	< 21.7	
30-JUL-12	HORSERADISH LEAVES	FE-59	< 30.2	
30-JUL-12	HORSERADISH LEAVES	CO-60	< 12.5	
30-JUL-12	HORSERADISH LEAVES	ZN-65	< 43.0	
30-JUL-12	HORSERADISH LEAVES	ZR-NB-95	< 23.0	
30-JUL-12	HORSERADISH LEAVES	I-131	< 24.2	
30-JUL-12	HORSERADISH LEAVES	CS-134	< 11.6	
30-JUL-12	HORSERADISH LEAVES	CS-137	< 19.1	
27-AUG-12	HORSERADISH LEAVES	BE-7	774.8 +/- 180.6	
27-AUG-12	HORSERADISH LEAVES	K-40	6,914.2 +/- 519.4	
27-AUG-12	HORSERADISH LEAVES	MN-54	< 15.6	
27-AUG-12	HORSERADISH LEAVES	CO-58	< 21.2	
27-AUG-12	HORSERADISH LEAVES	FE-59	< 33.6	
27-AUG-12	HORSERADISH LEAVES	CO-60	< 12.6	
27-AUG-12	HORSERADISH LEAVES	ZN-65	< 32.4	
27-AUG-12	HORSERADISH LEAVES	ZR-NB-95	< 19.0	

Exposure Pathway - Ingestion
Food/Garden

Location B-1

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)			Duplicate Analysis
27-AUG-12	HORSERADISH LEAVES	I-131		<	32.1	
27-AUG-12	HORSERADISH LEAVES	CS-134		<	14.0	
27-AUG-12	HORSERADISH LEAVES	CS-137		<	15.9	
24-SEP-12	HORSERADISH LEAVES	BE-7	501.7	+/-	133.2	
24-SEP-12	HORSERADISH LEAVES	K-40	5,347.8	+/-	405.8	
24-SEP-12	HORSERADISH LEAVES	MN-54		<	13.2	
24-SEP-12	HORSERADISH LEAVES	CO-58		<	9.4	
24-SEP-12	HORSERADISH LEAVES	FE-59		<	24.1	
24-SEP-12	HORSERADISH LEAVES	CO-60		<	7.8	
24-SEP-12	HORSERADISH LEAVES	ZN-65		<	22.1	
24-SEP-12	HORSERADISH LEAVES	ZR-NB-95		<	11.2	
24-SEP-12	HORSERADISH LEAVES	I-131		<	30.6	
24-SEP-12	HORSERADISH LEAVES	CS-134		<	9.8	
24-SEP-12	HORSERADISH LEAVES	CS-137		<	12.3	
15-OCT-12	HORSERADISH LEAVES	BE-7	598.2	+/-	186.6	
15-OCT-12	HORSERADISH LEAVES	K-40	5,610.8	+/-	478.3	
15-OCT-12	HORSERADISH LEAVES	MN-54		<	16.0	
15-OCT-12	HORSERADISH LEAVES	CO-58		<	14.6	
15-OCT-12	HORSERADISH LEAVES	FE-59		<	23.5	
15-OCT-12	HORSERADISH LEAVES	CO-60		<	15.1	
15-OCT-12	HORSERADISH LEAVES	ZN-65		<	31.9	
15-OCT-12	HORSERADISH LEAVES	ZR-NB-95		<	19.0	
15-OCT-12	HORSERADISH LEAVES	I-131		<	30.7	
15-OCT-12	HORSERADISH LEAVES	CS-134		<	13.6	
15-OCT-12	HORSERADISH LEAVES	CS-137		<	11.6	
12-NOV-12	HORSERADISH LEAVES	BE-7	695.7	+/-	160.5	
12-NOV-12	HORSERADISH LEAVES	K-40	6,076.0	+/-	421.4	
12-NOV-12	HORSERADISH LEAVES	MN-54		<	14.8	
12-NOV-12	HORSERADISH LEAVES	CO-58		<	7.8	
12-NOV-12	HORSERADISH LEAVES	FE-59		<	29.2	
12-NOV-12	HORSERADISH LEAVES	CO-60		<	10.5	
12-NOV-12	HORSERADISH LEAVES	ZN-65		<	21.2	
12-NOV-12	HORSERADISH LEAVES	ZR-NB-95		<	13.6	
12-NOV-12	HORSERADISH LEAVES	I-131		<	20.5	
12-NOV-12	HORSERADISH LEAVES	CS-134		<	12.4	
12-NOV-12	HORSERADISH LEAVES	CS-137		<	9.0	

Location D-2

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)	Duplicate Analysis
26-MAR-12	RHUBARB	BE-7	262.1 +/- 133.3	
26-MAR-12	RHUBARB	K-40	3,033.2 +/- 374.3	
26-MAR-12	RHUBARB	MN-54	< 15.0	
26-MAR-12	RHUBARB	CO-58	< 15.8	
26-MAR-12	RHUBARB	FE-59	< 23.3	
26-MAR-12	RHUBARB	CO-60	< 11.6	
26-MAR-12	RHUBARB	ZN-65	< 39.6	
26-MAR-12	RHUBARB	ZR-NB-95	< 17.4	
26-MAR-12	RHUBARB	I-131	< 24.7	
26-MAR-12	RHUBARB	CS-134	< 14.9	
26-MAR-12	RHUBARB	CS-137	< 10.7	
16-APR-12	HORSERADISH LEAVES	BE-7	347.8 +/- 163.5	
16-APR-12	HORSERADISH LEAVES	K-40	5,707.9 +/- 417.7	
16-APR-12	HORSERADISH LEAVES	MN-54	< 6.8	
16-APR-12	HORSERADISH LEAVES	CO-58	< 9.5	
16-APR-12	HORSERADISH LEAVES	FE-59	< 29.3	
16-APR-12	HORSERADISH LEAVES	CO-60	< 11.3	
16-APR-12	HORSERADISH LEAVES	ZN-65	< 23.8	
16-APR-12	HORSERADISH LEAVES	ZR-NB-95	< 15.9	
16-APR-12	HORSERADISH LEAVES	I-131	< 22.6	
16-APR-12	HORSERADISH LEAVES	CS-134	< 12.7	
16-APR-12	HORSERADISH LEAVES	CS-137	< 13.0	
29-MAY-12	HORSERADISH LEAVES	BE-7	508.0 +/- 152.2	
29-MAY-12	HORSERADISH LEAVES	K-40	5,891.9 +/- 442.1	
29-MAY-12	HORSERADISH LEAVES	MN-54	< 14.0	
29-MAY-12	HORSERADISH LEAVES	CO-58	< 14.0	
29-MAY-12	HORSERADISH LEAVES	FE-59	< 19.8	
29-MAY-12	HORSERADISH LEAVES	CO-60	< 13.0	
29-MAY-12	HORSERADISH LEAVES	ZN-65	< 42.4	
29-MAY-12	HORSERADISH LEAVES	ZR-NB-95	< 19.8	
29-MAY-12	HORSERADISH LEAVES	I-131	< 28.9	
29-MAY-12	HORSERADISH LEAVES	CS-134	< 14.3	
29-MAY-12	HORSERADISH LEAVES	CS-137	< 14.9	
25-JUN-12	HORSERADISH LEAVES	BE-7	580.9 +/- 241.9	
25-JUN-12	HORSERADISH LEAVES	K-40	5,110.9 +/- 51.0	
25-JUN-12	HORSERADISH LEAVES	MN-54	< 9.7	
25-JUN-12	HORSERADISH LEAVES	CO-58	< 19.5	
25-JUN-12	HORSERADISH LEAVES	FE-59	< 41.7	
25-JUN-12	HORSERADISH LEAVES	CO-60	< 15.5	
25-JUN-12	HORSERADISH LEAVES	ZN-65	< 36.1	
25-JUN-12	HORSERADISH LEAVES	ZR-NB-95	< 14.3	

Exposure Pathway - Ingestion
Food/Garden

Location D-2

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)	Duplicate Analysis
25-JUN-12	HORSERADISH LEAVES	I-131	< 36.1	
25-JUN-12	HORSERADISH LEAVES	CS-134	< 15.6	
25-JUN-12	HORSERADISH LEAVES	CS-137	< 18.9	
30-JUL-12	RHUBARB	BE-7	680.9 +/- 217.5	
30-JUL-12	RHUBARB	K-40	4,342.7 +/- 493.8	
30-JUL-12	RHUBARB	MN-54	< 12.9	
30-JUL-12	RHUBARB	CO-58	< 12.0	
30-JUL-12	RHUBARB	FE-59	< 28.2	
30-JUL-12	RHUBARB	CO-60	< 14.9	
30-JUL-12	RHUBARB	ZN-65	< 29.2	
30-JUL-12	RHUBARB	ZR-NB-95	< 21.7	
30-JUL-12	RHUBARB	I-131	< 37.2	
30-JUL-12	RHUBARB	CS-134	< 17.1	
30-JUL-12	RHUBARB	CS-137	< 18.6	
27-AUG-12	HORSERADISH LEAVES	BE-7	763.6 +/- 160.2	
27-AUG-12	HORSERADISH LEAVES	K-40	5,605.9 +/- 431.6	
27-AUG-12	HORSERADISH LEAVES	MN-54	< 14.0	
27-AUG-12	HORSERADISH LEAVES	CO-58	< 12.5	
27-AUG-12	HORSERADISH LEAVES	FE-59	< 18.0	
27-AUG-12	HORSERADISH LEAVES	CO-60	< 11.9	
27-AUG-12	HORSERADISH LEAVES	ZN-65	< 18.9	
27-AUG-12	HORSERADISH LEAVES	ZR-NB-95	< 12.3	
27-AUG-12	HORSERADISH LEAVES	I-131	< 18.4	
27-AUG-12	HORSERADISH LEAVES	CS-134	< 13.9	
27-AUG-12	HORSERADISH LEAVES	CS-137	< 10.8	
24-SEP-12	KALE	BE-7	< 112.3	
24-SEP-12	KALE	K-40	5,632.8 +/- 404.7	
24-SEP-12	KALE	MN-54	< 10.6	
24-SEP-12	KALE	CO-58	< 7.6	
24-SEP-12	KALE	FE-59	< 25.9	
24-SEP-12	KALE	CO-60	< 6.5	
24-SEP-12	KALE	ZN-65	< 13.0	
24-SEP-12	KALE	ZR-NB-95	< 14.0	
24-SEP-12	KALE	I-131	< 27.7	
24-SEP-12	KALE	CS-134	< 12.9	
24-SEP-12	KALE	CS-137	< 13.2	
15-OCT-12	KALE	BE-7	< 161.2	
15-OCT-12	KALE	K-40	5,292.7 +/- 421.4	
15-OCT-12	KALE	MN-54	< 16.7	
15-OCT-12	KALE	CO-58	< 11.3	
15-OCT-12	KALE	FE-59	< 21.5	

Exposure Pathway - Ingestion
Food/Garden

Location D-2

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)			Duplicate Analysis
15-OCT-12	KALE	CO-60		<	16.8	
15-OCT-12	KALE	ZN-65		<	21.2	
15-OCT-12	KALE	ZR-NB-95		<	12.4	
15-OCT-12	KALE	I-131		<	34.1	
15-OCT-12	KALE	CS-134		<	13.6	
15-OCT-12	KALE	CS-137		<	16.7	
12-NOV-12	KALE	BE-7		<	144.2	
12-NOV-12	KALE	K-40	4,290.3	+/-	381.8	
12-NOV-12	KALE	MN-54		<	9.8	
12-NOV-12	KALE	CO-58		<	8.8	
12-NOV-12	KALE	FE-59		<	22.1	
12-NOV-12	KALE	CO-60		<	7.9	
12-NOV-12	KALE	ZN-65		<	28.0	
12-NOV-12	KALE	ZR-NB-95		<	10.3	
12-NOV-12	KALE	I-131		<	17.4	
12-NOV-12	KALE	CS-134		<	9.1	
12-NOV-12	KALE	CS-137		<	14.3	

Exposure Pathway - Ingestion
Food/Garden

Location H-2

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)	Duplicate Analysis
27-AUG-12	HORSERADISH LEAVES	BE-7	500.3 +/- 150.8	
27-AUG-12	HORSERADISH LEAVES	K-40	5,820.5 +/- 478.8	
27-AUG-12	HORSERADISH LEAVES	MN-54	< 8.6	
27-AUG-12	HORSERADISH LEAVES	CO-58	< 10.0	
27-AUG-12	HORSERADISH LEAVES	FE-59	< 33.3	
27-AUG-12	HORSERADISH LEAVES	CO-60	< 6.9	
27-AUG-12	HORSERADISH LEAVES	ZN-65	< 30.3	
27-AUG-12	HORSERADISH LEAVES	ZR-NB-95	< 15.6	
27-AUG-12	HORSERADISH LEAVES	I-131	< 26.7	
27-AUG-12	HORSERADISH LEAVES	CS-134	< 10.0	
27-AUG-12	HORSERADISH LEAVES	CS-137	< 13.8	
24-SEP-12	HORSERADISH LEAVES	BE-7	526.7 +/- 155.6	Duplicate
24-SEP-12	HORSERADISH LEAVES	BE-7	504.2 +/- 155.0	
24-SEP-12	HORSERADISH LEAVES	K-40	6,913.7 +/- 431.2	Duplicate
24-SEP-12	HORSERADISH LEAVES	K-40	6,823.9 +/- 485.2	
24-SEP-12	HORSERADISH LEAVES	MN-54	< 11.6	Duplicate
24-SEP-12	HORSERADISH LEAVES	MN-54	< 12.9	
24-SEP-12	HORSERADISH LEAVES	CO-58	< 14.3	Duplicate
24-SEP-12	HORSERADISH LEAVES	CO-58	< 6.9	
24-SEP-12	HORSERADISH LEAVES	FE-59	< 21.8	Duplicate
24-SEP-12	HORSERADISH LEAVES	FE-59	< 21.8	
24-SEP-12	HORSERADISH LEAVES	CO-60	< 8.3	Duplicate
24-SEP-12	HORSERADISH LEAVES	CO-60	< 7.5	
24-SEP-12	HORSERADISH LEAVES	ZN-65	< 31.0	Duplicate
24-SEP-12	HORSERADISH LEAVES	ZN-65	< 18.2	
24-SEP-12	HORSERADISH LEAVES	ZR-NB-95	< 12.4	Duplicate
24-SEP-12	HORSERADISH LEAVES	ZR-NB-95	< 10.2	
24-SEP-12	HORSERADISH LEAVES	I-131	< 26.4	Duplicate
24-SEP-12	HORSERADISH LEAVES	I-131	< 19.1	
24-SEP-12	HORSERADISH LEAVES	CS-134	< 8.8	Duplicate
24-SEP-12	HORSERADISH LEAVES	CS-134	< 7.1	
24-SEP-12	HORSERADISH LEAVES	CS-137	< 11.6	Duplicate
24-SEP-12	HORSERADISH LEAVES	CS-137	< 7.3	
15-OCT-12	HORSERADISH LEAVES	BE-7	535.8 +/- 197.4	
15-OCT-12	HORSERADISH LEAVES	K-40	5,549.0 +/- 436.8	
15-OCT-12	HORSERADISH LEAVES	MN-54	< 12.0	
15-OCT-12	HORSERADISH LEAVES	CO-58	< 14.2	
15-OCT-12	HORSERADISH LEAVES	FE-59	< 25.8	
15-OCT-12	HORSERADISH LEAVES	CO-60	< 10.4	
15-OCT-12	HORSERADISH LEAVES	ZN-65	< 18.6	
15-OCT-12	HORSERADISH LEAVES	ZR-NB-95	< 13.9	

Exposure Pathway - Ingestion
Food/Garden

Location H-2

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)			Duplicate Analysis
15-OCT-12	HORSERADISH LEAVES	I-131	<		32.9	
15-OCT-12	HORSERADISH LEAVES	CS-134	<		16.1	
15-OCT-12	HORSERADISH LEAVES	CS-137	<		12.8	
12-NOV-12	HORSERADISH LEAVES	BE-7	921.5	+/-	183.0	
12-NOV-12	HORSERADISH LEAVES	K-40	5,862.3	+/-	439.0	
12-NOV-12	HORSERADISH LEAVES	MN-54	<		11.6	
12-NOV-12	HORSERADISH LEAVES	CO-58	<		10.8	
12-NOV-12	HORSERADISH LEAVES	FE-59	<		26.3	
12-NOV-12	HORSERADISH LEAVES	CO-60	<		13.6	
12-NOV-12	HORSERADISH LEAVES	ZN-65	<		31.3	
12-NOV-12	HORSERADISH LEAVES	ZR-NB-95	<		14.2	
12-NOV-12	HORSERADISH LEAVES	I-131	<		35.9	
12-NOV-12	HORSERADISH LEAVES	CS-134	<		13.1	
12-NOV-12	HORSERADISH LEAVES	CS-137	<		10.7	

Exposure Pathway - Ingestion
Food/Garden

Location N-1

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)			Duplicate Analysis
16-APR-12	HORSERADISH LEAVES	BE-7		<	265.5	Duplicate
16-APR-12	HORSERADISH LEAVES	BE-7	270.2	+/-	139.0	
16-APR-12	HORSERADISH LEAVES	K-40	3,418.6	+/-	466.3	Duplicate
16-APR-12	HORSERADISH LEAVES	K-40	4,372.1	+/-	449.0	
16-APR-12	HORSERADISH LEAVES	MN-54		<	15.4	Duplicate
16-APR-12	HORSERADISH LEAVES	MN-54		<	13.1	
16-APR-12	HORSERADISH LEAVES	CO-58		<	16.0	Duplicate
16-APR-12	HORSERADISH LEAVES	CO-58		<	7.9	
16-APR-12	HORSERADISH LEAVES	FE-59		<	32.3	Duplicate
16-APR-12	HORSERADISH LEAVES	FE-59		<	26.8	
16-APR-12	HORSERADISH LEAVES	CO-60		<	15.8	Duplicate
16-APR-12	HORSERADISH LEAVES	CO-60		<	17.8	
16-APR-12	HORSERADISH LEAVES	ZN-65		<	26.2	Duplicate
16-APR-12	HORSERADISH LEAVES	ZN-65		<	34.9	
16-APR-12	HORSERADISH LEAVES	ZR-NB-95		<	11.5	Duplicate
16-APR-12	HORSERADISH LEAVES	ZR-NB-95		<	18.0	
16-APR-12	HORSERADISH LEAVES	I-131		<	40.2	Duplicate
16-APR-12	HORSERADISH LEAVES	I-131		<	21.8	
16-APR-12	HORSERADISH LEAVES	CS-134		<	16.9	Duplicate
16-APR-12	HORSERADISH LEAVES	CS-134		<	14.4	
16-APR-12	HORSERADISH LEAVES	CS-137		<	21.2	Duplicate
16-APR-12	HORSERADISH LEAVES	CS-137		<	18.2	
29-MAY-12	HORSERADISH LEAVES	BE-7	490.2	+/-	165.4	
29-MAY-12	HORSERADISH LEAVES	K-40	3,868.2	+/-	452.7	
29-MAY-12	HORSERADISH LEAVES	MN-54		<	16.7	
29-MAY-12	HORSERADISH LEAVES	CO-58		<	20.7	
29-MAY-12	HORSERADISH LEAVES	FE-59		<	26.8	
29-MAY-12	HORSERADISH LEAVES	CO-60		<	17.0	
29-MAY-12	HORSERADISH LEAVES	ZN-65		<	36.0	
29-MAY-12	HORSERADISH LEAVES	ZR-NB-95		<	12.4	
29-MAY-12	HORSERADISH LEAVES	I-131		<	25.4	
29-MAY-12	HORSERADISH LEAVES	CS-134		<	13.8	
29-MAY-12	HORSERADISH LEAVES	CS-137		<	13.9	
25-JUN-12	HORSERADISH LEAVES	BE-7	808.3	+/-	192.4	
25-JUN-12	HORSERADISH LEAVES	K-40	6,238.8	+/-	504.7	
25-JUN-12	HORSERADISH LEAVES	MN-54		<	10.9	
25-JUN-12	HORSERADISH LEAVES	CO-58		<	15.2	
25-JUN-12	HORSERADISH LEAVES	FE-59		<	20.0	
25-JUN-12	HORSERADISH LEAVES	CO-60		<	14.2	
25-JUN-12	HORSERADISH LEAVES	ZN-65		<	37.9	
25-JUN-12	HORSERADISH LEAVES	ZR-NB-95		<	21.1	

Exposure Pathway - Ingestion
Food/Garden

Location N-1

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)	Duplicate Analysis
25-JUN-12	HORSERADISH LEAVES	I-131	< 38.2	
25-JUN-12	HORSERADISH LEAVES	CS-134	< 14.2	
25-JUN-12	HORSERADISH LEAVES	CS-137	< 14.1	
30-JUL-12	CANTALOUPE LEAVES	BE-7	1,251.5 +/- 269.3	
30-JUL-12	CANTALOUPE LEAVES	K-40	5,859.8 +/- 616.2	
30-JUL-12	CANTALOUPE LEAVES	MN-54	< 15.4	
30-JUL-12	CANTALOUPE LEAVES	CO-58	< 15.6	
30-JUL-12	CANTALOUPE LEAVES	FE-59	< 40.2	
30-JUL-12	CANTALOUPE LEAVES	CO-60	< 19.3	
30-JUL-12	CANTALOUPE LEAVES	ZN-65	< 21.2	
30-JUL-12	CANTALOUPE LEAVES	ZR-NB-95	< 19.4	
30-JUL-12	CANTALOUPE LEAVES	I-131	< 40.2	
30-JUL-12	CANTALOUPE LEAVES	CS-134	< 17.5	
30-JUL-12	CANTALOUPE LEAVES	CS-137	< 18.0	

Exposure Pathway - Ingestion
Food/Garden

Location Q-6

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)	Duplicate Analysis
29-MAY-12	CORN LEAVES	BE-7	914.2 +/- 183.2	
29-MAY-12	CORN LEAVES	K-40	6,538.0 +/- 507.5	
29-MAY-12	CORN LEAVES	MN-54	< 18.7	
29-MAY-12	CORN LEAVES	CO-58	< 16.3	
29-MAY-12	CORN LEAVES	FE-59	< 33.6	
29-MAY-12	CORN LEAVES	CO-60	< 12.2	
29-MAY-12	CORN LEAVES	ZN-65	< 24.2	
29-MAY-12	CORN LEAVES	ZR-NB-95	< 16.1	
29-MAY-12	CORN LEAVES	I-131	< 30.3	
29-MAY-12	CORN LEAVES	CS-134	< 15.9	
29-MAY-12	CORN LEAVES	CS-137	< 18.6	
25-JUN-12	CORN LEAVES	BE-7	3,347.8 +/- 223.6	
25-JUN-12	CORN LEAVES	K-40	6,701.3 +/- 443.8	
25-JUN-12	CORN LEAVES	MN-54	< 15.4	
25-JUN-12	CORN LEAVES	CO-58	< 10.4	
25-JUN-12	CORN LEAVES	FE-59	< 18.3	
25-JUN-12	CORN LEAVES	CO-60	< 11.3	
25-JUN-12	CORN LEAVES	ZN-65	< 30.5	
25-JUN-12	CORN LEAVES	ZR-NB-95	< 12.1	
25-JUN-12	CORN LEAVES	I-131	< 23.8	
25-JUN-12	CORN LEAVES	CS-134	< 13.2	
25-JUN-12	CORN LEAVES	CS-137	< 15.1	
30-JUL-12	CORN LEAVES	BE-7	2,163.1 +/- 352.9	
30-JUL-12	CORN LEAVES	K-40	6,996.9 +/- 734.2	
30-JUL-12	CORN LEAVES	MN-54	< 26.9	
30-JUL-12	CORN LEAVES	CO-58	< 18.3	
30-JUL-12	CORN LEAVES	FE-59	< 47.6	
30-JUL-12	CORN LEAVES	CO-60	< 13.0	
30-JUL-12	CORN LEAVES	ZN-65	< 42.7	
30-JUL-12	CORN LEAVES	ZR-NB-95	< 24.8	
30-JUL-12	CORN LEAVES	I-131	< 49.7	
30-JUL-12	CORN LEAVES	CS-134	< 27.8	
30-JUL-12	CORN LEAVES	CS-137	< 32.1	
24-SEP-12	CABBAGE	BE-7	212.4 +/- 81.5	
24-SEP-12	CABBAGE	K-40	5,149.1 +/- 319.8	
24-SEP-12	CABBAGE	MN-54	< 8.1	
24-SEP-12	CABBAGE	CO-58	< 10.4	
24-SEP-12	CABBAGE	FE-59	< 26.2	
24-SEP-12	CABBAGE	CO-60	< 9.8	
24-SEP-12	CABBAGE	ZN-65	< 20.2	
24-SEP-12	CABBAGE	ZR-NB-95	< 11.2	

Exposure Pathway - Ingestion
Food/Garden

Location Q-6

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)	Duplicate Analysis
24-SEP-12	CABBAGE	I-131	< 20.0	
24-SEP-12	CABBAGE	CS-134	< 10.1	
24-SEP-12	CABBAGE	CS-137	< 8.0	
15-OCT-12	CABBAGE	BE-7	717.0 +/- 181.1	
15-OCT-12	CABBAGE	K-40	4,058.9 +/- 358.8	
15-OCT-12	CABBAGE	MN-54	< 12.1	
15-OCT-12	CABBAGE	CO-58	< 14.4	
15-OCT-12	CABBAGE	FE-59	< 24.5	
15-OCT-12	CABBAGE	CO-60	< 12.5	
15-OCT-12	CABBAGE	ZN-65	< 21.3	
15-OCT-12	CABBAGE	ZR-NB-95	< 14.6	
15-OCT-12	CABBAGE	I-131	< 26.8	
15-OCT-12	CABBAGE	CS-134	< 11.0	
15-OCT-12	CABBAGE	CS-137	< 10.0	
12-NOV-12	CABBAGE	BE-7	286.1 +/- 134.4	
12-NOV-12	CABBAGE	K-40	4,833.5 +/- 460.6	
12-NOV-12	CABBAGE	MN-54	< 8.5	
12-NOV-12	CABBAGE	CO-58	< 10.8	
12-NOV-12	CABBAGE	FE-59	< 27.1	
12-NOV-12	CABBAGE	CO-60	< 17.5	
12-NOV-12	CABBAGE	ZN-65	< 21.9	
12-NOV-12	CABBAGE	ZR-NB-95	< 11.1	
12-NOV-12	CABBAGE	I-131	< 15.9	
12-NOV-12	CABBAGE	CS-134	< 11.8	
12-NOV-12	CABBAGE	CS-137	< 11.4	

Exposure Pathway - Ingestion
Feed and Forage

Location NR-D1

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)		Duplicate Analysis
19-NOV-12	IRRIGATED SOYBEANS	BE-7	<	77.9	
19-NOV-12	IRRIGATED SOYBEANS	K-40	14,309.0 +/-	346.4	
19-NOV-12	IRRIGATED SOYBEANS	MN-54	<	9.2	
19-NOV-12	IRRIGATED SOYBEANS	CO-58	<	7.2	
19-NOV-12	IRRIGATED SOYBEANS	FE-59	<	28.9	
19-NOV-12	IRRIGATED SOYBEANS	CO-60	<	11.9	
19-NOV-12	IRRIGATED SOYBEANS	ZN-65	<	22.0	
19-NOV-12	IRRIGATED SOYBEANS	ZR-NB-95	<	6.0	
19-NOV-12	IRRIGATED SOYBEANS	I-131	<	22.8	
19-NOV-12	IRRIGATED SOYBEANS	CS-134	<	7.0	
19-NOV-12	IRRIGATED SOYBEANS	CS-137	<	8.6	

Exposure Pathway - Ingestion
Feed and Forage

Location NR-D2

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)		Duplicate Analysis
29-AUG-12	IRRIGATED CORN	BE-7	<	34.1	
29-AUG-12	IRRIGATED CORN	K-40	3,033.4 +/-	252.6	
29-AUG-12	IRRIGATED CORN	MN-54	<	5.9	
29-AUG-12	IRRIGATED CORN	CO-58	<	6.1	
29-AUG-12	IRRIGATED CORN	FE-59	<	6.9	
29-AUG-12	IRRIGATED CORN	CO-60	<	4.3	
29-AUG-12	IRRIGATED CORN	ZN-65	<	5.0	
29-AUG-12	IRRIGATED CORN	ZR-NB-95	<	3.5	
29-AUG-12	IRRIGATED CORN	I-131	<	8.0	
29-AUG-12	IRRIGATED CORN	CS-134	<	8.1	
29-AUG-12	IRRIGATED CORN	CS-137	<	8.7	

Exposure Pathway - Ingestion
Feed and Forage

Location NR-U1

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)		Duplicate Analysis
15-AUG-12	IRRIGATED CORN	BE-7	<	80.8	
15-AUG-12	IRRIGATED CORN	K-40	2,993.5 +/-	270.7	
15-AUG-12	IRRIGATED CORN	MN-54	<	4.9	
15-AUG-12	IRRIGATED CORN	CO-58	<	5.2	
15-AUG-12	IRRIGATED CORN	FE-59	<	7.7	
15-AUG-12	IRRIGATED CORN	CO-60	<	4.0	
15-AUG-12	IRRIGATED CORN	ZN-65	<	4.4	
15-AUG-12	IRRIGATED CORN	ZR-NB-95	<	4.6	
15-AUG-12	IRRIGATED CORN	I-131	<	8.1	
15-AUG-12	IRRIGATED CORN	CS-134	<	7.0	
15-AUG-12	IRRIGATED CORN	CS-137	<	6.9	

Exposure Pathway - Aquatic
Bottom Sediment

Location DC

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
02-MAY-12	K-40	10,035.0 +/- 1,063.0	
02-MAY-12	MN-54	< 43.6	
02-MAY-12	CO-58	< 43.1	
02-MAY-12	FE-59	< 134.8	
02-MAY-12	CO-60	< 30.6	
02-MAY-12	ZN-65	< 96.0	
02-MAY-12	CS-134	< 43.7	
02-MAY-12	CS-137	66.6 +/- 39.0	
02-MAY-12	FE-55	< 15,738.0	
29-NOV-12	K-40	11,192.0 +/- 1,056.0	
29-NOV-12	MN-54	< 46.7	
29-NOV-12	CO-58	< 42.5	
29-NOV-12	FE-59	< 26.6	
29-NOV-12	CO-60	< 42.6	
29-NOV-12	ZN-65	< 61.1	
29-NOV-12	CS-134	< 38.6	
29-NOV-12	CS-137	111.0 +/- 55.6	
29-NOV-12	FE-55	< 14,788.6	

Exposure Pathway - Aquatic
Bottom Sediment

Location EEA

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
11-APR-12	K-40	11,179.0 +/- 566.5	
11-APR-12	MN-54	< 18.5	
11-APR-12	CO-58	< 18.6	
11-APR-12	FE-59	< 31.3	
11-APR-12	CO-60	< 12.6	
11-APR-12	ZN-65	< 29.7	
11-APR-12	CS-134	< 12.2	
11-APR-12	CS-137	49.8 +/- 15.0	

Exposure Pathway - Aquatic
Bottom Sediment

Location ESW 2012-3

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
02-MAY-12	K-40	9,556.1 +/- 1,024.0	
02-MAY-12	MN-54	< 29.3	
02-MAY-12	CO-58	< 52.2	
02-MAY-12	FE-59	< 155.8	
02-MAY-12	CO-60	< 51.1	
02-MAY-12	ZN-65	< 113.0	
02-MAY-12	CS-134	< 31.7	
02-MAY-12	CS-137	< 54.7	
02-MAY-12	FE-55	< 16,760.0	

Exposure Pathway - Aquatic
Bottom Sediment

Location ESW 2012-4

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
08-NOV-12	K-40	7,881.1 +/- 600.4	
08-NOV-12	MN-54	< 31.5	
08-NOV-12	CO-58	< 40.5	
08-NOV-12	FE-59	< 42.2	
08-NOV-12	CO-60	< 20.7	
08-NOV-12	ZN-65	< 53.1	
08-NOV-12	CS-134	< 26.0	
08-NOV-12	CS-137	49.1 +/- 28.7	
08-NOV-12	FE-55	< 14,854.4	

Exposure Pathway - Aquatic
Bottom Sediment

Location JRR

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
02-MAY-12	K-40	11,955.0 +/- 1,125.0	
02-MAY-12	MN-54	< 52.7	
02-MAY-12	CO-58	< 54.8	
02-MAY-12	FE-59	< 76.1	
02-MAY-12	CO-60	< 18.0	
02-MAY-12	ZN-65	< 79.8	
02-MAY-12	CS-134	< 41.4	
02-MAY-12	CS-137	121.8 +/- 54.9	
19-NOV-12	K-40	9,398.0 +/- 590.9	
19-NOV-12	MN-54	< 22.6	
19-NOV-12	CO-58	< 21.7	
19-NOV-12	FE-59	< 76.8	
19-NOV-12	CO-60	< 10.8	
19-NOV-12	ZN-65	< 47.9	
19-NOV-12	CS-134	< 18.4	
19-NOV-12	CS-137	45.4 +/- 23.9	

Exposure Pathway - Aquatic
Bottom Sediment

Location MUDS

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
05-SEP-12	K-40	7,502.3 +/- 470.1	
05-SEP-12	MN-54	< 15.2	
05-SEP-12	CO-58	< 14.8	
05-SEP-12	FE-59	< 15.8	
05-SEP-12	CO-60	< 14.5	
05-SEP-12	ZN-65	< 36.0	
05-SEP-12	CS-134	< 14.2	
05-SEP-12	CS-137	26.4 +/- 15.3	

Exposure Pathway - Aquatic
Bottom Sediment

Location SC

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
15-JUN-12	K-40	10,824.0 +/- 653.6	
15-JUN-12	MN-54	< 33.7	
15-JUN-12	CO-58	< 25.5	
15-JUN-12	FE-59	< 47.2	
15-JUN-12	CO-60	< 15.2	
15-JUN-12	ZN-65	< 40.3	
15-JUN-12	CS-134	< 15.7	
15-JUN-12	CS-137	< 25.0	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2012-10

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
02-MAY-12	K-40	10,751.0 +/- 1,126.0	
02-MAY-12	MN-54	< 50.1	
02-MAY-12	CO-58	< 49.9	
02-MAY-12	FE-59	< 82.2	
02-MAY-12	CO-60	< 10.9	
02-MAY-12	ZN-65	< 50.6	
02-MAY-12	CS-134	< 41.0	
02-MAY-12	CS-137	99.2 +/- 55.8	
02-MAY-12	FE-55	< 17,144.0	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2012-11

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
02-MAY-12	K-40	11,301.0 +/- 944.3	
02-MAY-12	MN-54	< 43.4	
02-MAY-12	CO-58	< 54.1	
02-MAY-12	FE-59	< 144.5	
02-MAY-12	CO-60	< 19.1	
02-MAY-12	ZN-65	< 81.4	
02-MAY-12	CS-134	< 36.7	
02-MAY-12	CS-137	< 47.7	
02-MAY-12	FE-55	< 17,177.0	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2012-12

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
02-MAY-12	K-40	11,131.0 +/- 899.3	
02-MAY-12	MN-54	< 46.5	
02-MAY-12	CO-58	< 43.3	
02-MAY-12	FE-59	< 118.5	
02-MAY-12	CO-60	< 27.6	
02-MAY-12	ZN-65	< 87.8	
02-MAY-12	CS-134	< 36.6	
02-MAY-12	CS-137	91.0 +/- 38.3	
02-MAY-12	FE-55	< 16,736.0	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2012-13

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
08-NOV-12	K-40	8,028.3 +/- 920.1	
08-NOV-12	MN-54	< 53.6	
08-NOV-12	CO-58	< 33.6	
08-NOV-12	FE-59	< 129.0	
08-NOV-12	CO-60	< 39.1	
08-NOV-12	ZN-65	< 84.7	
08-NOV-12	CS-134	< 34.0	
08-NOV-12	CS-137	< 44.4	
08-NOV-12	FE-55	< 14,708.8	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2012-14

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
08-NOV-12	K-40	9,542.0 +/- 926.4	
08-NOV-12	MN-54	< 46.1	
08-NOV-12	CO-58	< 35.6	
08-NOV-12	FE-59	< 71.6	
08-NOV-12	CO-60	< 36.6	
08-NOV-12	ZN-65	< 69.7	
08-NOV-12	CS-134	< 37.6	
08-NOV-12	CS-137	< 41.2	
08-NOV-12	FE-55	< 14,708.8	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2012-15

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
08-NOV-12	K-40	9,676.4 +/- 826.3	
08-NOV-12	MN-54	< 38.3	
08-NOV-12	CO-58	< 50.4	
08-NOV-12	FE-59	< 109.5	
08-NOV-12	CO-60	< 37.6	
08-NOV-12	ZN-65	< 66.6	
08-NOV-12	CS-134	< 36.3	
08-NOV-12	CS-137	< 44.9	
08-NOV-12	FE-55	< 15,003.0	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2012-17

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
08-NOV-12	K-40	9,296.6 +/- 919.7	
08-NOV-12	MN-54	< 37.6	
08-NOV-12	CO-58	< 49.7	
08-NOV-12	FE-59	< 91.5	
08-NOV-12	CO-60	< 37.6	
08-NOV-12	ZN-65	< 71.5	
08-NOV-12	CS-134	< 38.7	
08-NOV-12	CS-137	< 53.7	
08-NOV-12	FE-55	< 15,003.0	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS 2012-9

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
02-MAY-12	K-40	8,403.1 +/- 845.5	
02-MAY-12	MN-54	< 36.9	
02-MAY-12	CO-58	< 49.2	
02-MAY-12	FE-59	< 90.5	
02-MAY-12	CO-60	< 21.7	
02-MAY-12	ZN-65	< 72.0	
02-MAY-12	CS-134	< 28.4	
02-MAY-12	CS-137	< 39.6	
02-MAY-12	FE-55	< 16,396.0	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS HS-3

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
02-MAY-12	K-40	11,127.0 +/- 898.0	Duplicate
02-MAY-12	K-40	10,149.0 +/- 973.3	
02-MAY-12	MN-54	< 42.7	Duplicate
02-MAY-12	MN-54	< 46.2	
02-MAY-12	CO-58	< 52.6	Duplicate
02-MAY-12	CO-58	< 34.2	
02-MAY-12	FE-59	< 78.4	Duplicate
02-MAY-12	FE-59	< 125.9	
02-MAY-12	CO-60	< 34.0	Duplicate
02-MAY-12	CO-60	< 25.0	
02-MAY-12	ZN-65	< 86.0	Duplicate
02-MAY-12	ZN-65	< 64.7	
02-MAY-12	CS-134	< 30.8	Duplicate
02-MAY-12	CS-134	< 37.7	
02-MAY-12	CS-137	72.9 +/- 36.2	Duplicate
02-MAY-12	CS-137	125.8 +/- 68.0	
02-MAY-12	FE-55	< 16,752.0	Duplicate
02-MAY-12	FE-55	< 16,621.0	

Exposure Pathway - Aquatic
Bottom Sediment

Location UHS HS-4

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
08-NOV-12	K-40	9,566.8 +/- 1,050.0	
08-NOV-12	MN-54	< 32.7	
08-NOV-12	CO-58	< 35.1	
08-NOV-12	FE-59	< 77.0	
08-NOV-12	CO-60	< 21.4	
08-NOV-12	ZN-65	< 84.5	
08-NOV-12	CS-134	< 31.5	
08-NOV-12	CS-137	67.5 +/- 33.2	
08-NOV-12	FE-55	< 15,003.0	

Exposure Pathway - Aquatic Vegetation

Location DC-ALT

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)	Duplicate Sample
15-AUG-12	AMERICAN LOTUS	BE-7	1,196.2 +/- 173.8	
15-AUG-12	AMERICAN LOTUS	K-40	2,653.4 +/- 287.5	
15-AUG-12	AMERICAN LOTUS	MN-54	< 9.4	
15-AUG-12	AMERICAN LOTUS	CO-58	< 13.2	
15-AUG-12	AMERICAN LOTUS	FE-59	< 19.8	
15-AUG-12	AMERICAN LOTUS	CO-60	< 10.7	
15-AUG-12	AMERICAN LOTUS	ZN-65	< 20.0	
15-AUG-12	AMERICAN LOTUS	ZR-NB-95	< 9.5	
15-AUG-12	AMERICAN LOTUS	I-131	< 19.8	
15-AUG-12	AMERICAN LOTUS	CS-134	< 12.2	
15-AUG-12	AMERICAN LOTUS	CS-137	< 11.7	

Exposure Pathway - Aquatic Vegetation

Location EEA

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)		Duplicate Sample
12-JUN-12	SPIKERUSH	BE-7	454.7	+/- 76.7	
12-JUN-12	SPIKERUSH	K-40	4,600.8	+/- 225.6	
12-JUN-12	SPIKERUSH	MN-54		< 10.6	
12-JUN-12	SPIKERUSH	CO-58		< 8.2	
12-JUN-12	SPIKERUSH	FE-59		< 21.9	
12-JUN-12	SPIKERUSH	CO-60		< 7.1	
12-JUN-12	SPIKERUSH	ZN-65		< 20.6	
12-JUN-12	SPIKERUSH	ZR-NB-95		< 10.4	
12-JUN-12	SPIKERUSH	I-131		< 27.3	
12-JUN-12	SPIKERUSH	CS-134		< 9.3	
12-JUN-12	SPIKERUSH	CS-137		< 11.0	

Exposure Pathway - Aquatic Vegetation

Location MUDS

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)		Duplicate Sample
05-SEP-12	AMERICAN PONDWEED	BE-7	314.4	+/- 161.8	
05-SEP-12	AMERICAN PONDWEED	K-40	1,925.1	+/- 262.8	
05-SEP-12	AMERICAN PONDWEED	MN-54	<	11.2	
05-SEP-12	AMERICAN PONDWEED	CO-58	<	7.6	
05-SEP-12	AMERICAN PONDWEED	FE-59	<	25.3	
05-SEP-12	AMERICAN PONDWEED	CO-60	<	9.6	
05-SEP-12	AMERICAN PONDWEED	ZN-65	<	18.9	
05-SEP-12	AMERICAN PONDWEED	ZR-NB-95	<	11.9	
05-SEP-12	AMERICAN PONDWEED	I-131	<	32.8	
05-SEP-12	AMERICAN PONDWEED	CS-134	<	9.9	
05-SEP-12	AMERICAN PONDWEED	CS-137	<	12.9	

Exposure Pathway - Aquatic Vegetation

Location SC

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)			Duplicate Sample
29-MAY-12	CATTAILS	BE-7	<		162.8	Duplicate
29-MAY-12	CATTAILS	BE-7	<		139.1	
29-MAY-12	CATTAILS	K-40	2,220.4	+/-	335.0	Duplicate
29-MAY-12	CATTAILS	K-40	2,127.2	+/-	297.4	
29-MAY-12	CATTAILS	MN-54	<		11.6	Duplicate
29-MAY-12	CATTAILS	MN-54	<		12.9	
29-MAY-12	CATTAILS	CO-58	<		6.7	Duplicate
29-MAY-12	CATTAILS	CO-58	<		10.3	
29-MAY-12	CATTAILS	FE-59	<		22.9	Duplicate
29-MAY-12	CATTAILS	FE-59	<		16.4	
29-MAY-12	CATTAILS	CO-60	<		9.4	Duplicate
29-MAY-12	CATTAILS	CO-60	<		9.4	
29-MAY-12	CATTAILS	ZN-65	<		22.0	Duplicate
29-MAY-12	CATTAILS	ZN-65	<		16.2	
29-MAY-12	CATTAILS	ZR-NB-95	<		16.5	Duplicate
29-MAY-12	CATTAILS	ZR-NB-95	<		11.1	
29-MAY-12	CATTAILS	I-131	<		28.1	Duplicate
29-MAY-12	CATTAILS	I-131	<		14.6	
29-MAY-12	CATTAILS	CS-134	<		11.6	Duplicate
29-MAY-12	CATTAILS	CS-134	<		12.4	
29-MAY-12	CATTAILS	CS-137	<		12.9	Duplicate
29-MAY-12	CATTAILS	CS-137	<		14.2	

Exposure Pathway - Terrestrial Vegetation

Location EEA

Collection Date	Sample Description	Nuclide	Gamma Spectrum Concentration (pCi/Kg Wet)	Duplicate Analysis
12-JUN-12	PASTURAGE	BE-7	1,084.4 +/- 181.1	
12-JUN-12	PASTURAGE	K-40	13,379.0 +/- 532.9	
12-JUN-12	PASTURAGE	MN-54	< 15.4	
12-JUN-12	PASTURAGE	CO-58	< 16.9	
12-JUN-12	PASTURAGE	FE-59	< 36.4	
12-JUN-12	PASTURAGE	CO-60	< 17.5	
12-JUN-12	PASTURAGE	ZN-65	< 32.8	
12-JUN-12	PASTURAGE	ZR-NB-95	< 14.3	
12-JUN-12	PASTURAGE	I-131	< 44.4	
12-JUN-12	PASTURAGE	CS-134	< 16.0	
12-JUN-12	PASTURAGE	CS-137	< 17.6	

Exposure Pathway - Terrestrial
Soil

Location EEA

Collection Date	Nuclide	Gamma Spectrum Concentration (pCi/Kg Dry)	Duplicate Analysis
13-MAR-12	K-40	8,520.0 +/- 628.2	
13-MAR-12	MN-54	< 28.3	
13-MAR-12	CO-58	< 26.0	
13-MAR-12	FE-59	< 38.9	
13-MAR-12	CO-60	< 14.9	
13-MAR-12	ZN-65	< 44.5	
13-MAR-12	CS-134	< 19.0	
13-MAR-12	CS-137	155.2 +/- 44.9	

Exposure Pathway - Ingestion
Meat

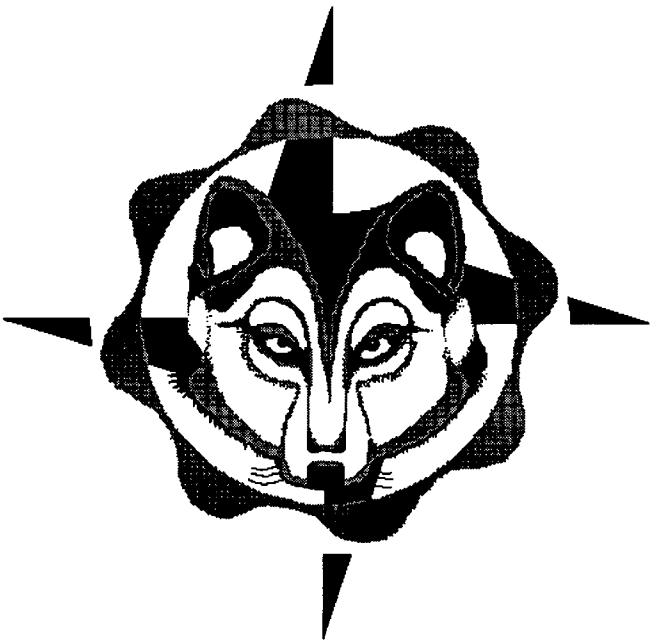
Location A1.5

Collection Date	Sample Description	Nuclide	Gamma Spectrum & H-3 Concentration (pCi/Kg Wet)	Duplicate Analysis
17-SEP-12	DEER	K-40	2,639.5 +/- 258.2	
17-SEP-12	DEER	MN-54	< 10.4	
17-SEP-12	DEER	CO-58	< 8.0	
17-SEP-12	DEER	FE-59	< 20.1	
17-SEP-12	DEER	CO-60	< 8.8	
17-SEP-12	DEER	ZN-65	< 12.9	
17-SEP-12	DEER	CS-134	< 8.3	
17-SEP-12	DEER	CS-137	< 12.8	
17-SEP-12	DEER	H-3	916.0 +/- 93.0	

WOLF CREEK GENERATING STATION

2012 LAND USE CENSUS REPORT

Revision 1



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EXECUTIVE SUMMARY

The 2012 Land Use Census Report has been revised to incorporate information received since the initial report was completed in October 2012.

The annual Land Use Census of rural residents within five miles of the Wolf Creek Generating Station (WCGS) has been completed in 2012 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 A2.60-17TE1520 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. The landowners of these gardens have agreed to participate in the 2013 sample program.

BACKGROUND

Section 5.2, Attachment A, of the ODCM 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" and "the results of the Land Use Census shall be included in the Annual Radiological Environmental Operating Report."

Table 5-1, Attachment A, of the ODCM (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 the ODCM (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, Burlington, and a trailer park north of 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 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

NOTE: A Global Positioning System was used to verify residence distances and sectors.

One change was noted for the nearest occupied residences in each sector. That change occurred in sector R.

Ten changes were noted for the nearest garden producing broadleaf vegetation. These changes are identified in Table 3.

There were no changes regarding milk sample locations. Again, no locations were identified that routinely milked animals for human consumption.

TABLE 1

2012 Land Use Census Data

Location of Nearest:

Sector	Residence	Milking Animals	Broadleaf Garden
A	A2.60-17TE1520	None	A2.60-17TE1520
B	B3.53-QURD1755	None	None
C	C1.92-16RD1655	None	C3.38-17RD1755
D	D2.03-QULA1571	None	D2.33-RERD1520
E	E1.78-QULA1451	None	None
F	F1.84-QULA1419	None	F2.44-RERD1391
G	G3.03-13RD1820	None	None
H	H3.09-12RD1711	None	H4.87-10RD1670
J	J3.70-11RD1540	None	J3.84-11RD1499
K	K2.70-12LA1439	None	K4.10-NARD1120
L	L2.10-NARD1339	None	L2.39-NARD1309
M	M2.34-14RD1330	None	M4.42-LYRD1231
N	N2.08-15RD1350	None	N2.38-RODR9
P	P2.76-HW751534	None	P3.17-WDST425
Q	Q2.35-MILA1619	None	Q2.35-MILA1619
R	R2.08-NALN1650	None	None

Identifiers are based upon the following protocol:

EXAMPLE: A2.60-17TE1520

"A" = Sector A

"2.60" = 2.60 miles from the reactor

"17TE1520" = address

TABLE 2

SECTOR	2011 NEAREST RESIDENCE	2012 NEAREST RESIDENCE
A	A2.60-17TE1520	A2.60-17TE1520
B	B3.53-QURD1755	B3.53-QURD1755
C	C1.92-16RD1655	C1.92-16RD1655
D	D2.03-QULA1571	D2.03-QULA1571
E	E1.78-QULA1451	E1.78-QULA1451
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	M2.34-14RD1330	M2.34-14RD1330
N	N2.08-15RD1350	N2.08-15RD1350
P	P2.76-HW751534	P2.76-HW751534
Q	Q2.35-MILA1619	Q2.35-MILA1619
R	R4.43-NARD1891	R2.08-NALN1650

NOTE: Entries underlined indicate changes from the 2011 Land Use Census.

TABLE 3

2012 Land Use Census Milk and Garden Data

SECTOR	2011 MILKING ANIMALS	2012 MILKING ANIMALS	2011 NEAREST GARDEN PRODUCING BROADLEAF VEGETATION	2012 NEAREST GARDEN PRODUCING BROADLEAF VEGETATION
A	None	None	A4.91-OXRD1940	A2.60-17TE1520
B	None	None	None	None
C	None	None	C4.63-RERD1825	C3.38-17RD1755
D	None	None	D2.41-RERD1541	D2.33-RERD1520
E	None	None	None	None
F	None	None	F2.39-14RD1802	F2.44-RERD1391
G	None	None	G3.77-12RD1831	None
H	None	None	H3.30-QURD1175	H4.87-10RD1670
J	None	None	J4.00-PLRD1080	J3.84-11RD1499
K	None	None	K4.10-NARD1120	K4.10-NARD1120
L	None	None	None	L2.39-NARD1309
M	None	None	M3.10-13LA1290	M4.42-LYRD1231
N	None	None	N2.38-RODR9	N2.38-RODR9
P	None	None	P2.76-HW751534	P3.17-WDST425
Q	None	None	Q2.35-MILA1619	Q2.35-MILA1619
R	None	None	None	None

NOTE: Underlined entries indicate changes from the 2011 Land Use Census.

TABLE 4

Information Used for D/Q Calculations

FROM LAND USE CENSUS			FROM SA-10-004 Eval.					
	DIST	CALC	NEAR	NEAR	FAR	FAR		SECTOR
SECTOR	(MI)	(METERS)	DIST	D / Q	DIST	D / Q	CALC	RANKING
A	2.60	4184	4000	1.76E-09	5000	1.19E-09	1.66E-09	1
B								
C	3.38	5440	5000	3.03E-10	6000	2.23E-10	2.68E-10	11
D	2.33	3750	3000	4.46E-10	4000	2.67E-10	3.12E-10	10
E								
F	2.44	3927	3000	7.22E-10	4000	4.33E-10	4.54E-10	6
G								
H	4.87	7838	7000	3.83E-10	8000	3.09E-10	3.21E-10	9
J	3.84	6180	6000	4.33E-10	7000	3.22E-10	4.13E-10	7
K	4.10	6598	6000	3.82E-10	7000	2.84E-10	3.23E-10	8
L	2.39	3846	3000	1.04E-09	4000	6.24E-10	6.88E-10	4
M	4.42	7113	7000	2.13E-10	8000	1.72E-10	2.08E-10	12
N	2.38	3830	3000	1.25E-09	4000	7.51E-10	8.36E-10	3
P	3.17	5102	5000	4.68E-10	6000	3.44E-10	4.55E-10	5
Q	2.35	3782	3000	1.53E-09	4000	9.17E-10	1.05E-09	2
R								

Originated by: Teresa L. Rice Date: 4/09/13

Verified by: Dan Haines Date: 4/09/13