WOLF CREEK
NUCLEAR OPERATING CORPORATION

Clay C. Warren
Vice President Operations Support

APR 28 2000

CO 00-0027

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-137
Washington, D. C. 20555

Subject: Docket No. 50-482: Annual Radiological Environmental Operating Report - 1999

Gentlemen:

Enclosed is the Annual Radiological Environmental Operating Report which is being submitted pursuant to Wolf Creek Generating Station (WCGS) Facility Technical Specification 5.6.2. This report covers operation of WCGS for the period of January 1, 1999 to December 31, 1999.

If you should have any questions regarding this submittal, please contact me at (316) 364-4048, or Mr. Karl A. (Tony) Harris at (316) 364-4038.

Very truly yours,

Keith R. Harvey
for

Clay C. Warren

CCW/rlr

Enclosure

cc: J. N. Donohew (NRC), w/e
W. D. Johnson (NRC), w/e
E. W. Merschoff (NRC), w/e
Senior Resident Inspector (NRC), w/e

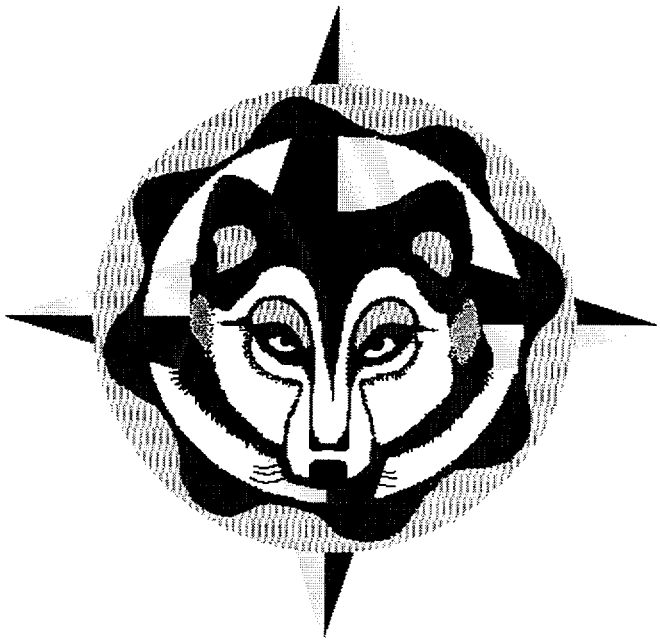
IE25

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

1999 ANNUAL RADIOLOGICAL

ENVIRONMENTAL OPERATING REPORT



APRIL 21, 2000

TABLE OF CONTENTS

List of Tables	ii
List of Figures	iii
Introduction	1
I. Program Description	2
II. Discussion of Results	5
III. Annual Land Use Census Results and Program Revisions	11
IV. Program Deviations	12
V. Interlaboratory Comparison Program Results	13
VI. Comparison to the Radioactive Effluents Release Program	14
Tables	15
Figures	35
Appendix A - Summary Tables	A-1
Appendix B - 1999 Individual Sample Results	B-1
Charcoal Filters	B-2
Air Particulate Filters (gross beta)	B-17
Air Particulate Filters (gamma analysis)	B-32
Surface Water	B-37
Ground Water	B-50
Drinking Water	B-70
Shoreline Sediment	B-88
Fish	B-92
Food/Garden Crops	B-98
Feed and Forage	B-106
Bottom Sediment	B-109
Aquatic Vegetation	B-112
Terrestrial Vegetation	B-115
Soil	B-117

LIST OF TABLES

1	Radiological Environmental Monitoring Program Description	15
2	Sample Location Numbers, Distances and Directions	20
3	Airborne Particulate Gross Beta Analyses	21
4	Airborne Particulate Quarterly Composite Gamma Isotopic Analyses	22
5	First and Second Quarter TLD Results	23
6	Third and Fourth Quarter TLD Results	24
7	Drinking Water Radiological Analyses	25
8	Surface Water Radiological Analyses	26
9	Shoreline Sediment Radiological Analyses	27
10	Milk Radiological Analyses	27
11	Broadleaf Vegetation Radiological Analyses	27
12	Crop Radiological Analyses	28
13	Fish Radiological Analyses	28
14	Bottom Sediment Radiological Analyses	28
15	Aquatic Vegetation Radiological Analyses	29
16	Terrestrial Vegetation Radiological Analyses	29
17	Soil Radiological Analyses	29
18	Land Use Census Data	30
19	Comparison of 1998 and 1999 Land Use Census Milk and Garden Data	31
20	ERA Statistical Summary Proficiency Testing (PT) Program - 1999	32
21	Analytics Cross Check Comparison Program 1999	33
22	Dosimetry Performance Testing Results	34

LIST OF FIGURES

1	Airborne Pathway Sampling Locations	35
2	Direct Radiation Pathway Sampling Locations	36
3	Waterborne Pathway Sampling Locations	37
4	Ingestion Pathway Sampling Locations	38
5	Distant Sampling Locations	39
6	Airborne Gross Beta Weekly Results	40
7	Historical Airborne Smoothed Indicator and Control Gross Beta	41
8	TLD Nearsite Locations and Control Locations	42
9	Variation of Nearsite TLD Averages Expressed as a Ratio to Control Values	43
10	Drinking Water Gross Beta, Historical	44
11	Wolf Creek Lake Surface Water Smoothed Tritium Data	45
12	Cumulative Liquid Effluent Tritium Data	46
13	Cs-137 in Shoreline Sediment (Location Discharge Cove)	47
14	Tritium in Wolf Creek Lake Fish	48
15	Tritium Dose in WCL Surface Water and Released Liquid Tritium Maximum Organ Dose	49

INTRODUCTION

The 1999 Annual Radiological Environmental Operating Report for Wolf Creek Generating Station (WCGS) covers the period from January 1 through December 31, 1999. 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 Radiological Environmental Monitoring Program (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), results of sample analyses, a discussion of monitoring program results, a description of revisions to and deviations from the program, and the results of Interlaboratory Comparison Programs. Individual sample results and a summary of results in the Nuclear Regulatory Commission (NRC) Branch Technical Position specified format are included as appendices.

Plant-related activation, corrosion or fission products were not detected during 1999 in airborne particulate and radioiodine filters, broadleaf vegetation, crops, ground water, soil, terrestrial vegetation, or drinking water.

Activation, corrosion or fission products attributable to plant operation were detected during 1999 in aquatic vegetation, shoreline sediment, bottom sediment, surface water and fish samples.

Nuclides detected in REMP samples were below applicable NRC reporting levels and lower limits of detection were met.

I. PROGRAM DESCRIPTION

Radiological environmental samples were collected according to the schedule in AP 07B-004, Offsite Dose Calculation Manual (Radiological Environmental Monitoring Program). Samples were collected by the WCGS Environmental Management group and were analyzed by Teledyne Brown Engineering Environmental Services of Westwood, New Jersey. Environmental TLDs were processed by Detroit Edison at the Enrico Fermi 2 plant. Table 1 lists sampling pathways and frequencies of sampling and analysis. Table 2 lists each sample location's distance and direction from the plant. Samples in addition to those required by the WCGS ODCM (AP 07B-004) were also obtained.

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

A. Airborne Pathway

Low volume air sampling pumps collected particulate and radioiodine samples on 47 mm glass fiber filters and charcoal canisters, respectively. Weekly, the filters and charcoal canisters were changed out, labeled, and shipped to Teledyne Brown Engineering Environmental Services for analysis. The volume of air sampled was calculated from the average of initial and final flow rates and the total time of collection. Each pump was equipped with a time totalizer that was checked weekly against the elapsed time.

Gross beta analysis of the air particulate samples was performed 72 hours post collection to allow the radon and thoron daughter products to decay.

Weekly air particulate filters were combined into quarterly composites for each location and analyzed for gamma emitting isotopes.

Charcoal canisters were routinely counted in groups of five to determine the presence or absence of I-131. Positive indication of I-131 would have resulted in analysis of each individual charcoal canister.

Air samples were collected from the three sectors with the highest ground level deposition constants (D/Q) (locations 2, 3 and 37), the community of New Strawn (location 32), and a control location at Hartford (location 40). Distances and directions to sampling locations from the plant are listed in Table 2, nearby locations are shown in Figure 1 and distant locations are shown in Figure 5.

B. Direct Radiation Pathway

Panasonic UD-814-AQ TLDs were used during the sample year. The TLDs consist of one lithium-borate element and three calcium sulfate elements in a plastic case.

TLDs were typically positioned roughly 3 to 4 feet above the ground in plastic thermostat boxes. The thermostat boxes protect the TLDs from the elements and tampering. Two TLDs were placed at each designated location. Nearby TLD sample locations are illustrated in Figure 2 and distant locations are shown in Figure 5. Table 2 provides the distance and direction of each location from the plant. Control locations were 39 (Beto Junction) and 40 (Hartford).

C. Waterborne Pathway

All water samples were analyzed to determine whether gamma emitters were present. In addition to gamma 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 quarterly on ground water samples. Water sampling locations are listed in Table 2 and are shown in Figures 3 and 5.

Drinking water was sampled at the water treatment facilities for the towns of Burlington (control location BW-15) and LeRoy (indicator location LW-40). The Burlington facility is located upstream and the LeRoy facility downstream of the confluence of the discharge from Wolf Creek Lake (WCL) and the Neosho River. Composite samples were obtained monthly from automatic samplers at each location that collected about 10 ml of drinking water each hour.

Grab samples were obtained from surface water locations each month. Surface water was sampled from the outfall of John Redmond Reservoir (JRR) as a control (location MUSH) and from the discharge cove (DC) and spillway (SP) of WCL as indicator locations.

Ground water samples were collected quarterly from four locations. Location B-12 is hydrologically upgradient from the site and is used as a control location. Three additional samples, C-10, C-49 and D-65, were obtained from wells hydrologically downgradient from the site as indicator samples. Duplicate samples were obtained from location C-49 and were labeled L-49. These duplicate samples served as a laboratory quality check.

Shoreline sediments were sampled semiannually for gamma analysis at the discharge cove, the Make-up Water Discharge Structure (MUDS) and the Environmental Education Area (EEA) indicator locations and at JRR as a control location.

D. Ingestion Pathway

Because no sampling locations that produce milk for human consumption were identified within five miles of the plant, milk was not collected during the sample year.

Broadleaf vegetation samples were collected monthly if available during the growing season from four gardens. Three indicator gardens (Figure 4) and a control (S-4) garden (Figure 5) were sampled. Gamma isotopic analyses were performed on all samples.

Three crop samples were obtained from two indicator locations downstream of the confluence of Wolf Creek and the Neosho River and one control sample (NR-U1) was obtained upstream. Due to the wet weather, only one indicator sample and the control sample were irrigated with water from the Neosho River. Gamma isotopic analysis was performed on each sample.

Fish were sampled semiannually from the tail waters of JRR (control, Figure 4) and from WCL (indicator, Figure 4) for gamma isotopic analysis. Several species of gamefish and roughfish were sampled. Gamma isotopic analysis was performed on boneless meat portions of the fish. Fish were also analyzed for tritium.

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

Bottom sediment samples were collected semiannually for gamma analysis at the discharge cove indicator location and the JRR control location. These samples were collected as part of a cooperative sampling effort with the Kansas Department of Health and Environment (KDHE).

Aquatic vegetation was collected for gamma analysis from indicator locations at the discharge cove, the discharge cove alternate location and the EEA. These samples were collected as part of a cooperative sampling effort with the KDHE.

Soil was sampled semiannually from two locations, the MUDS and EEA, for gamma isotopic analyses. These samples were collected as part of a cooperative sampling effort with the KDHE.

Terrestrial vegetation was also sampled semiannually from locations MUDS and EEA for gamma isotopic analyses. These samples were collected as part of a cooperative sampling effort with the KDHE.

Sampling locations listed in this section are outlined in Table 2.

II. DISCUSSION OF RESULTS

Analysis results for all pathways are summarized in Appendix A 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 B.

In this section, results are discussed by pathway and analysis type. Monitoring results are compared with control data, preoperational values, sources of radioactivity, and effluent releases when applicable. Trends or seasonal effects are discussed. Associated counting uncertainties for detected activity values contained in Tables 3 through 17 are shown in Appendix B.

A. Airborne Pathway

Results of the weekly gross beta analysis are summarized in Table 3. In addition, Figure 6 graphically illustrates weekly gross beta results for the sample year. Figure 7 represents the historical smoothed averages of indicator and control gross beta data.

Figures 6 and 7 demonstrate how closely the indicator and control locations tracked together. Figure 7 reveals a seasonal cyclic trend in which gross beta values peak in the winter months (December or January) and decrease to a low point in the spring months (May or June).

The gross beta results of 1999 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 1999 weekly gross beta analyses range for indicator locations was 0.010 to 0.048 pCi/m^3, which was within the pre-operational range. Additionally, the annual mean for indicator locations for 1999 (0.025 pCi/m^3) was lower that the annual mean for 1983 (0.032 pCi/m^3) and 1984 (0.028 pCi/m^3).

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

Results of the quarterly gamma analysis of air particulate filter composite analyses are summarized in Table 4. Naturally occurring Be-7 and K-40 were detected as was the case during pre-operational monitoring.

No effects of plant operation were seen via the airborne pathway for the year, and no unusual trends were noted.

B. Direct Radiation Pathway

Quarterly gamma exposures measured at each location are shown in Tables 5 and 6. Measured values have been converted to a standard 90-day quarter.

The highest direct radiation levels of the year were detected at location 47. Location 47 also had the highest TLD measured activity in 1998 (annual mean 0.29 mR/day). The close proximity of location 47 to the Radwaste Building was likely the reason direct radiation levels were higher at this location. (In 1999, the annual mean of all indicator locations was 0.215 mR/day and the annual mean of location 47 was 0.33 mR/day.)

Results from TLDs located near the plant (less than approximately three miles), which would be most affected by changes in plant operation, were combined into quarterly averages. These nearsite averages, using locations 1, 2, 7-14, 18, 26-30, 37 and 38, are compared to control location results (locations 39 and 40) in Figure 8. In addition, variation of the nearsite averages from the control location results is displayed graphically in

Figure 9. These figures also include preoperational data for comparison. The nearsite TLD locations have historically trended higher than the control locations both prior to and after WCGS became operational.

During the sample year, the lab which processes the TLDs (Fermi 2) changed the calibration process from a reference-based element correction factor system to a dose-based element correction factor system. (A reference-based process evaluates the actual element dose response to the response of reference TLDs that are annealed, irradiated and processed under similar conditions. A dose-based process compares the actual element dose response to the known irradiation dose.) Additionally, the lab recognized that there was indication that the readings on some (generally older) TLDs were higher than for newer TLDs and some results were reported artificially high due to inappropriately low calibrations. These minor problems have been resolved (Performance Improvement Request 1999-2672) and may have contributed to the third quarter elevated average of nearsite locations and the percent variation of nearsite averages to control values.

C. Waterborne Pathway

(1) Drinking Water

Results of drinking water radiological analyses are summarized in Table 7. Figure 10 illustrates the historical drinking water gross beta data.

Gross beta activity was detected in all drinking water samples. The annual mean of the control location gross beta activity (6.2 pCi/liter) was higher than the annual mean of the indicator location (6.1 pCi/liter). The 1999 annual means for gross beta activity were lower than those of the pre-operational monitoring year of 1984. (In 1984, the annual mean of the control location gross beta activity was 6.4 pCi/liter and the annual mean of the indicator location gross beta activity was 7.5 pCi/liter.)

Figure 10 illustrates how closely the gross beta results compared for the indicator and control locations. Figure 10 also displays the elevated gross beta activity detected during the month of November. The indicator location detected gross beta activity was 20 pCi/liter, and the control location detected gross beta activity was 19 pCi/liter. Since the gross beta results were elevated at both the control and indicator locations, this detected activity was not considered to be due to plant operation.

Tritium activity was not detected in any indicator location samples; however, it was detected in one sample obtained in April from the control location (180 pCi/liter).

No radionuclides were detected by the I-131 and gamma isotopic analyses.

Activity due to plant operation was not evident in drinking water samples and no unusual trends were noted.

(2) Surface Water

Tritium, attributable to WCGS operation, was detected in all surface water samples collected from WCL during 1999. According to the Radioactive Effluents Release Program, a total of 1172.24 curies of liquid tritium was released during the year. Measured concentrations are shown in Table 8. An adult drinking 2 liters per day of surface water collected from the discharge cove, using the highest detected tritium activity (16,000 pCi/liter), would receive a committed effective dose equivalent of 0.731 mRem per year. (According to the National Council on Radiation Protection and Measurements [NCRP Report No. 94], the estimated total effective dose equivalent rate for a member of the population in the United States from various sources of natural background radiation is 300 mRem per year.) Figure 11 illustrates smoothed tritium data for locations DC and SP from startup in May 1985 through 1999. The cumulative curies of liquid tritium released to WCL is illustrated in Figure 12.

During 1999, the annual mean for detected tritium activity at the discharge cove was 11,550 pCi/liter. It can be seen in Figure 11 that monthly surface water tritium concentrations have trended upward since plant startup. This is expected until the average tritium concentration of the lake reaches equilibrium, which has been estimated at 13,000 pCi/liter.

Tritium activity was also detected in one control location sample (170 pCi/liter) obtained in September.

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

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

(3) Ground Water

During 1999, radioactivity was not detected in ground water samples.

(4) Shoreline Sediment

Naturally occurring nuclides (K-40, Ra-226 and Th-228) were detected in all shoreline sediment samples. One sample from an indicator location (DC) and one sample from a control location (JRR) had naturally occurring Be-7 activity detected. These concentrations were comparable to pre-operational sample results.

Cs-137 activity was detected (88.5 and 286 pCi/kg) in samples obtained from indicator locations DC and EEA. The detected Cs-137 activity was primarily due to fallout; however, a portion of the detected activity was likely due to plant operation since Cs-134 activity was detected at the DC in 1994, and Cs-137 activity has been identified in plant effluents. (The presence of Cs-134 is expected if the occurrence of Cs-137 is related to plant operation. Since Cs-134 has a shorter half-life than Cs-137 [2 years versus 30 years], it is not expected to be found when the presence of Cs-137 is due to fallout.) The Cs-137 concentrations measured were below concentrations measured pre-operationally. (The pre-operational range for Cs-137 detected activity at location DC was 224 pCi/kg to 437 pCi/kg.) This can be seen in Figure 13 which plots both pre-operational and operational concentrations of Cs-137 in shoreline sediment samples from the discharge cove location. Cs-137 activity was also detected (52.2 and 80.3 pCi/kg) in samples obtained from the JRR control location.

Figure 13 illustrates that Cs-137 activity was detected pre-operationally and is routinely detected at the discharge cove. However, Cs-137 activity was not detected in discharge cove samples in 1997. A linear trendline indicates that the level of Cs-137 activity detected in the discharge cove is trending downward. Analysis results are summarized in Table 9.

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) Food and Garden Crops

Gamma analyses of broadleaf vegetation samples during 1999 detected naturally occurring gamma emitters Be-7, K-40 and Th-228.

Cs-137 activity was detected (12.4 pCi/kg) in a sample from indicator location F-1. This detected activity was not considered to be due to plant operation since it was below the range of pre-operational Cs-137 results (13.1 to 47.8 pCi/kg).

Activity attributable to plant operation was not detected. Table 11 shows the results of 1999 analyses.

In addition to broadleaf vegetation, crop samples were collected. One control sample was obtained from cropland upstream of the confluence of Wolf Creek and the Neosho River, and three indicator samples were obtained downstream. The control sample location was irrigated with Neosho River water. Due to the wet summer, only one indicator sample location was irrigated with Neosho River water. Gamma analysis detected naturally occurring K-40 to be present in all of the samples, with no nuclides detected due to plant operation. Results of crop analyses are summarized in Table 12. No unusual trends were noted.

(3) Fish

Analysis results are illustrated in Table 13. Naturally occurring K-40 activity was detected in all fish samples and was within the range seen during the pre-operational monitoring period.

During 1999, fish were also analyzed for tritium. All fish samples taken from WCL had tritium activity detected (6,020 pCi/kg annual mean), and those results are displayed in Figure 14. The detected tritium activity was attributable to plant operation. An adult consuming 21 kilograms of fish, at the maximum measured tritium concentration for 1999 (11,000 pCi/kg) would receive a committed effective dose equivalent of 0.015 mRem. (According to the National Council on Radiation Protection and Measurements [NCRP Report No. 94], the estimated total effective dose equivalent rate for a member of the population in the United States from various sources of natural background radiation is 300 mRem per year.) Tritium activity was not detected in control samples collected from JRR.

Two fish samples collected from WCL contained detectable levels of Cs-137 at concentrations of 21.8 and 40.7 pCi/kg (wet weight). Although fallout Cs-137 is regularly measured in other environmental media and is probably reflected in these values, it is assumed that these concentrations were attributable to operational station releases. Cs-137 activity was not detected in JRR control samples nor was detected in pre-operational indicator samples. An adult consuming 21 kilograms of fish, at the maximum measured Cs-137 concentration

for 1999 (40.7 pCi/kg) would receive a committed effective dose equivalent of 0.040 mRem.

No other radionuclides were detected in fish during the year and no unusual trends were noted.

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

(1) Bottom Sediment

Table 14 shows gamma emitters detected in bottom sediment samples. Naturally occurring nuclides detected include Be-7, K-40, Ra-226, and Th-228.

Co-60 activity (525, 531 and 663 pCi/kg) was detected in all samples obtained from the WCL discharge cove. Co-60 activity was attributable to plant operation and has been identified in plant effluents. Co-60 activity was not detected in pre-operational environmental monitoring and was not detected in samples collected from control location JRR during 1999.

Sb-125 activity (363 pCi/kg) was detected in a sample obtained from the WCL discharge cove. Sb-125 activity was attributable to plant operation and has been identified in plant effluents. Sb-125 activity was not detected in pre-operational environmental monitoring and was not detected in samples collected from control location JRR during 1999.

Cs-137 activity (262, 220 and 307 pCi/kg) was detected in all indicator samples obtained from the WCL discharge cove. Cs-137 activity has also been identified in plant effluents. Since Cs-134 was not present and Cs-137 activity (161 and 129 pCi/kg) was also detected in the control location samples, this activity was primarily due to fallout and not to a newly produced fission product of plant origin. It should be noted that Cs-134 activity has been detected in previous years (1992, 1994 and 1995) thus, a portion of this activity was likely plant-related. Cs-137 activity was detected in pre-operational samples, and the results for 1999 indicator bottom sediment samples were within the pre-operational range. (Cs-137 activity detected in 1981 and 1982 was in the range of 79 to 950 pCi/kg.)

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

(2) Aquatic Vegetation

Table 15 lists gamma emitters detected in aquatic vegetation samples. All samples were obtained from indicator locations. Naturally occurring Be-7, K-40, Ra-226 and Th-228 were detected in samples collected in 1999 and were also detected during pre-operational monitoring.

Co-58 and Co-60 activity was detected in algae samples obtained from the WCL discharge cove. This activity was attributed to plant operation and has been identified as expected in plant effluents. Co-58 and Co-60 were not detected during pre-operational monitoring.

Cs-137 activity was detected in all of the algae samples. This activity was attributed to a combination of plant operation and fallout. (Cs-134 activity was detected in samples obtained during 1998.) Cs-137 activity has been identified in plant effluents and was also identified in pre-operational environmental monitoring.

No other radionuclides were detected in aquatic vegetation samples and no unusual trends were noted.

(3) Terrestrial Vegetation

Grass samples were obtained from the EEA and MUDS. All samples had naturally occurring Be-7 and K-40 activity detected. No other radionuclides were detected. Table 16 reflects gamma emitters detected in terrestrial vegetation samples. No unusual trends were identified.

(4) Soil

Soil samples were also obtained from the EEA and MUDS. Naturally occurring Be-7, K-40, Ra-226 and Th-228 activity was detected. Cs-137 activity was detected in all soil samples. The Cs-137 activity was attributable to fallout since Cs-134 activity was not detected and the activity levels for Cs-137 were within or below the pre-operational range (255 to 2,160 pCi/kg). Table 17 lists the activity detected in soil samples. No unusual trends were identified.

III. ANNUAL LAND USE CENSUS RESULTS AND PROGRAM REVISIONS

Summary

The annual Land Use Census of rural residents within five miles of the WCGS was completed for 1999. No changes were required in the REMP in either the broadleaf vegetation sample locations or milk sample locations. Once again, milk sample locations were not identified. The two broadleaf vegetation locations with the highest calculated annual average D/Q rankings remain the G1.6-QURD1384 and F1.8-14RD1730 locations. AP 07B-004, Offsite Dose Calculation Manual (Radiological Environmental Monitoring Program) specifies that an "alternate location may be used to provide continued monitoring." The third-ranked garden was at location E1.8-QULA1485, and it was again chosen as an alternate sampling location. The residents at G1.6-QURD1384, F1.8-14RD1730, and E1.8-QULA1485 have agreed in the past to allow sampling from their respective gardens. The results and notable changes are summarized and illustrated in Tables 18 and 19.

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 with the 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

Surveys were sent to the rural residents within five miles of WCGS during the first week of August 1999. A follow-up mailing was sent to residents who did not respond. The survey excluded the residents of New Strawn, Burlington and a trailer park just 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. Of the 170 surveys mailed to the rural residents, 151 were returned by mail or completed by conversing with the residents. Nineteen surveys were partially completed with information obtained by driving by the locations.

Results

Table 18 reflects the nearest residences, milk animals and broadleaf gardens. Table 19 lists the changes as compared to the 1998 Land Use Census results for milk animals and gardens producing broadleaf vegetation.

Changes in the nearest residence occurred in five sectors (J, M, N, P and R), and no milk locations were identified. Three location changes were noted for the nearest garden producing broadleaf vegetation.

IV. PROGRAM DEVIATIONS

Airborne Pathway

Two program deviations were identified in this area during 1999; one involving sample pump meters and the other involving a power outage. These deviations are described below.

WCNOC personnel determined through the corrective action program, that the primary reason for inconsistent performance of air sample pumps during the latter part of 1998 was malfunctioning elapsed hour meters. During 1999, air sampler pumps were installed with new hour meters that were different in brand and model. The reliability of the pump hour meters has increased. This change has greatly reduced deviations for this pathway. (Performance Improvement Request 1998-3337)

Location 3: On August 18, 1999, air sample pump 5967 was found inoperable. Pump 5967 was removed from service and replaced with operable pump 5970. Our investigation determined that a power outage had occurred during the sample week, and low voltage had also been experienced during the sample period. These conditions led to the failure of the pump to collect the required sample. (Performance Improvement Request 1999-2856)

Drinking Water

Two program deviations were identified in this area during 1999. These deviations are described below.

Location BW-15 (Burlington): On January 28, 1999, the drinking water sampler was found inoperable. Our investigation indicated that the pump sampler tube was split and a fuse was found to be blown. It was estimated that drinking water was not sampled for two weeks during the sample period which started January 6, 1999. The fuse and pump tube were changed and sampler operation was restored. A grab sample was obtained. The sampler was again checked on February 3, 1999, and was found operable. (Performance Improvement Request 1999-0382)

Location LW-40 (LeRoy): On July 7, 1999, the drinking water sampler was found operational, however, the computer indicated that 97 ten-milliliter samples were missed during the one month sample period. According to the manager of the water treatment facility, the east bay had started leaking and the west bay would be a better source to sample. The sampler intake tubing was moved to the west bay. (Performance Improvement Request 1999-2431)

Milk

No program deviations were identified in this area during 1999. The discussion below is provided for consistency and completeness of this report.

Indicator sample locations were still unavailable within five miles of the plant. Refer to Section III, Annual Land Use Census Results and Program Revisions.

V. INTERLABORATORY COMPARISON PROGRAM RESULTS

Teledyne Brown Engineering Environmental Services is under contract to perform radiological analysis of environmental samples for WCNOC. During 1999, Teledyne participated in the Environmental Resource Associates (ERA) Proficiency Testing Program and the Analytics Cross Check Comparison Program.

Table 20 is a summary of the ERA proficiency testing results. The table lists the date/ID number, nuclide, the known value reported by ERA, the measured value reported by Teledyne Brown Engineering Environmental Services, expected deviation known, control limits, warning limits and performance evaluation.

Table 21 is a summary of the Analytics comparison program results. The table lists sample ID/date, sample medium, nuclide, the measured results reported by Teledyne Brown Engineering Environmental Services, the known results reported by Analytics and the ratio of Teledyne Brown Engineering Environmental Services to the Analytics results.

Table 22 is a summary of statistical results of performance testing of TLDs processed at Enrico Fermi 2 by Detroit Edison, which participated in the National Voluntary Laboratory Accreditation Program.

VI. COMPARISON TO THE RADIOACTIVE EFFLUENTS RELEASE PROGRAM

As described in the sections discussing radioisotopes found in the surface water from WCL, dose that may be received as a result of tritium released from WCGS is consistent with the theoretical doses calculated by the Radioactive Effluent Release Program.

Figure 15 indicates that the dose to a man resulting from drinking surface water from WCL lake was within a reasonable expected value. Dose for the surface water was determined using the December tritium activity detected for each calendar year at the discharge cove. Released tritium maximum organ dose (mRem) values were obtained from Annual Radioactive Effluent Release Reports and are not cumulative (i.e., the values reflected are the totals for the respective years).

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 release. The REMP data indicate the accumulated result of releasing tritium into the cooling lake since the start of plant operation.

TABLE 1

1999 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM DESCRIPTION (SAMPLE COLLECTION REQUIRED BY ODCM)

EXPOSURE PATHWAY/ SAMPLE	NUMBER OF SAMPLES AND SAMPLE LOCATIONS	SAMPLING AND COLLECTION FREQUENCY	TYPE AND FREQUENCY OF ANALYSIS
AIRBORNE	**(See Figures 1 & 5)**		
Radioiodine and Particulates	Samples from five 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 (Locations 2, 3, and 37 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 10-20 miles distant in a low D/Q sector (Location 40 on Figure 5)		

TABLE 1 (Cont)

EXPOSURE PATHWAY/ SAMPLE	NUMBER OF SAMPLES AND SAMPLE LOCATIONS	SAMPLING AND 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, 29-31, 37, 38 and 47 on Figure 2). An outer ring of stations, one in each meteorological sector in the 3-5 mile range from the site (Locations 4-6, 15-17, 19-25, and 33-36 on Figure 2). Five sectors [A, B, D, G, and L] contain an additional station (Locations 2, 3, 10, 14 and 28). The balance of the stations to be placed in special interest areas such as population centers (Locations 23 and 32), nearby residences	Quarterly	Gamma dose quarterly

TABLE 1 (Cont)

EXPOSURE PATHWAY/ SAMPLE	NUMBER OF SAMPLES AND SAMPLE LOCATIONS	SAMPLING AND COLLECTION FREQUENCY	TYPE AND FREQUENCY OF ANALYSIS
DIRECT RADIATION (cont)			
	(many locations are near a residence), schools (Location 23), and in one or two areas to serve as control stations 10-20 miles distant from the site (Locations 39 and 40 on Figure 5).		
WATERBORNE	**(See Figure 3)**		
Surface	One sample upstream (Location MUSH on Figure 3) and one sample downstream (Location DC 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 downgradient of the site (Locations C-10, C-49, and D-65 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 and tritium analysis

TABLE 1 (Cont)

EXPOSURE PATHWAY/ SAMPLE	NUMBER OF SAMPLES AND SAMPLE LOCATIONS	SAMPLING AND COLLECTION FREQUENCY	TYPE AND FREQUENCY OF ANALYSIS
WATERBORNE (cont)			
Drinking	Sample of municipal water supply at an indicator location downstream of the site (Location LW-40 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 Wolf Creek Lake discharge cove; control sample from John Redmond Reservoir (Locations DC and JRR respectively on Figure 3).	Semiannually	Semiannual gamma isotopic analysis
INGESTION	**(See Figures 4 & 5)**		
Milk	Samples from milking animals at three indicator locations within five miles of the site having the highest dose potential (currently there are no locations producing milk for human consumption within five 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	NUMBER OF SAMPLES AND SAMPLE LOCATIONS	SAMPLING AND COLLECTION FREQUENCY	TYPE AND FREQUENCY OF ANALYSIS
INGESTION (cont)			
Fish	Indicator samples of 1-3 recreationally important species from Wolf Creek 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 with highest calculated annual average D/Q (Locations G-1 and F-1 and alternate location E-1); sample of similar broadleaf vegetation from a control location greater than 10 miles from the site in a low D/Q sector (Location S-4 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 (Location NR-D1 and NR-D2 on Figure 5).	At time of harvest	Gamma isotopic analysis on edible portions

TABLE 2
SAMPLE LOCATION NUMBERS, DISTANCES (Miles) AND DIRECTIONS

Location Number	Distance/ Direction	Location Number	Distance/ Direction	Location Number	Distance/ Direction
Air Particulates and Radioiodines					
2	2.7/N				
3	3.0/NNE				
32	3.2/WNW				
37	2.1/NNW				
40	>15.0/WNW				
TLDs					
1	1.4/N	17	3.6/SE	33	3.7/WNW
2	2.7/N	18	3.0/SSE	34	4.0/NW
3	3.0/NNE	19	4.0/SSE	35	4.6/NNW
4	4.0/NNE	20	3.3/S	36	4.2/N
5	4.0/NE	21	3.8/S	37	2.1/NNW
6	4.4/ENE	22	4.1/SSW	38	1.2/NW
7	1.9/NE	23	4.5/SW	39	13.0/N
8	1.6/NNE	24	4.1/WSW	40	>15.0/WNW
9	2.0/ENE	25	3.6/W	41	0.8/NNW
10	2.4/ENE	26	2.6/WSW	42	0.8/SSE
11	1.6/E	27	2.1/SW	43	0.8/WNW
12	1.8/ESE	28	2.8/SW	44	3.0/NNW
13	1.5/SE	29	2.6/SSW	45	1.6/WNW
14	2.6/SE	30	2.2/W	46	1.5/WNW
15	4.5/ESE	31	3.0/WNW	47	.16/S
16	4.2/E	32	3.2/WNW		
Ground water		**Drinking water**		**Surface water**	
B-12	2.2/NNE	BW-15	3.9/SW	MUSH	3.6/W
C-10	2.8/W	LW-40	>10.0/SSE	DC	0.6/WNW
C-49/L-49	2.9/SW			SP	2.9/S
D-65	3.9/S				
Milk		**Broadleaf vegetation**		**Irrigated Crops**	
		F-1	1.8/ESE	NR-U1	4.2/SW
		G-1	1.6/SE	NR-D1	9.2/S
		E-1	1.8/E	NR-D2	>10.0/S
		S-4	>15.0/WNW		
Fish		**Shoreline Soil**		**Aquatic Vegetation/Algae**	
WCL	0.6/WNW	DC	0.6/WNW	DC	0.6/WNW
JRR	4.0/W	JRR	4.0/W	DC ALT	1.5/NW
		EEA	3.0/NNW	EEA	3.0/NNW
		MUDS	1.5/WNW		
Terrestrial Vegetation & Soil				**Bottom Sediment**	
EEA	3.0/NNW			DC	0.6/WNW
MUDS	1.5/WNW			JRR	4.0/W

TABLE 3
Airborne Particulate Gross Beta Analyses
pCi/cubic meter (analysis counting uncertainties reported in Appendix B)

Date		Location				
Beginning	Ending	2	3	32	37	40 (Control)
01/06/1999	01/13/1999	0.033	0.036	0.033	0.035	0.036
01/13/1999	01/20/1999	0.026	0.024	0.026	0.024	0.027
01/20/1999	01/28/1999	0.023	0.022	0.022	0.024	0.024
01/28/1999	02/03/1999	0.023	0.024	0.025	0.027	0.025
02/03/1999	02/10/1999	0.017	0.018	0.018	0.018	0.017
02/10/1999	02/16/1999	0.019	0.021	0.021	0.020	0.020
02/16/1999	02/25/1999	0.020	0.018	0.020	0.019	0.020
02/25/1999	03/03/1999	0.019	0.020	0.018	0.017	0.022
03/03/1999	03/11/1999	0.017	0.013	0.015	0.016	0.014
03/11/1999	03/17/1999	0.021	0.018	0.022	0.017	0.017
03/17/1999	03/23/1999	0.019	0.020	0.022	0.019	0.021
03/23/1999	03/31/1999	0.024	0.024	0.022	0.020	0.027
03/31/1999	04/07/1999	0.018	0.018	0.019	0.016	0.019
04/07/1999	04/14/1999	0.017	0.018	0.016	0.014	0.017
04/14/1999	04/21/1999	0.020	0.017	0.019	0.021	0.019
04/21/1999	04/28/1999	0.012	0.012	0.013	0.014	0.014
04/28/1999	05/05/1999	0.016	0.014	0.013	0.014	0.017
05/05/1999	05/13/1999	0.013	0.013	0.014	0.016	0.015
05/13/1999	05/19/1999	0.018	0.020	0.019	0.018	0.019
05/19/1999	05/26/1999	0.017	0.016	0.015	0.019	0.018
05/26/1999	06/02/1999	0.026	0.020	0.023	0.022	0.022
06/02/1999	06/09/1999	0.016	0.019	0.014	0.017	0.018
06/09/1999	06/17/1999	0.015	0.017	0.015	0.015	0.017
06/17/1999	06/24/1999	0.022	0.024	0.024	0.023	0.022
06/24/1999	06/30/1999	0.012	0.017	0.016	0.016	0.017
06/30/1999	07/07/1999	0.020	0.020	0.020	0.019	0.020
07/07/1999	07/14/1999	0.016	0.020	0.020	0.021	0.021
07/14/1999	07/21/1999	0.020	0.021	0.023	0.022	0.025
07/21/1999	07/28/1999	0.025	0.026	0.028	0.030	0.026
07/28/1999	08/04/1999	0.019	0.021	0.019	0.020	0.018
08/04/1999	08/11/1999	0.036	0.034	0.038	0.044	0.038
08/11/1999	08/18/1999	0.022	0.0098	0.023	0.029	0.024
08/18/1999	08/25/1999	0.029	0.027	0.030	0.031	0.030
08/25/1999	08/31/1999	0.041	0.045	0.045	0.048	0.043
08/31/1999	09/08/1999	0.026	0.028	0.026	0.029	0.029
09/08/1999	09/15/1999	0.023	0.024	0.024	0.025	0.026
09/15/1999	09/22/1999	0.029	0.029	0.027	0.038	0.030
09/22/1999	09/29/1999	0.026	0.028	0.026	0.031	0.027
09/29/1999	10/06/1999	0.021	0.021	0.025	0.025	0.026
10/06/1999	10/14/1999	0.037	0.041	0.040	0.047	0.040
10/14/1999	10/20/1999	0.021	0.027	0.027	0.032	0.028
10/20/1999	10/27/1999	0.032	0.034	0.035	0.038	0.035
10/27/1999	11/03/1999	0.034	0.030	0.036	0.033	0.032
11/03/1999	11/11/1999	0.031	0.037	0.036	0.037	0.036
11/11/1999	11/18/1999	0.044	0.045	0.045	0.045	0.044
11/18/1999	11/24/1999	0.047	0.045	0.048	0.040	0.049
11/24/1999	12/01/1999	0.028	0.029	0.033	0.033	0.032
12/01/1999	12/08/1999	0.036	0.032	0.039	0.036	0.036
12/08/1999	12/15/1999	0.037	0.035	0.037	0.035	0.035
12/15/1999	12/22/1999	0.025	0.021	0.027	0.027	0.022
12/22/1999	12/29/1999	0.032	0.032	0.031	0.032	0.030
12/29/1999	01/05/2000	0.039	0.033	0.040	0.040	0.038

TABLE 4
Airborne Particulate Quarterly Composite Gamma Isotopic Analyses
pCi/cubic meter (analysis counting uncertainties reported in Appendix B)

Location	Quarter	Be-7	K-40
2	1	0.100	
3	1	0.0835	
32	1	0.0742	
37	1	0.0802	
40	1	0.0785	
2	2	0.0936	
3	2	0.108	0.00399
32	2	0.0861	
37	2	0.0877	
40	2	0.0915	
2	3	0.0799	
3	3	0.0767	
32	3	0.0860	
37	3	0.105	
40	3	0.0893	
2	4	0.0698	
3	4	0.0614	
32	4	0.0640	
37	4	0.0760	
40	4	0.0597	

TABLE 5
First and Second Quarter TLD Results
(mR/90 day qtr)

First Quarter			
Location	Days	90 Day Average	2 std dev
1	86.8	21.0	1.5
2	86.8	18.9	1.3
3	86.8	19.1	1.1
4	86.8	20.8	0.7
5	86.8	19.1	1.0
6	86.8	18.2	0.9
7	86.8	18.7	0.7
8	86.8	21.1	0.9
9	86.8	18.0	1.6
10	86.7	20.2	1.0
11	86.8	21.3	1.9
12	86.8	20.0	1.5
13	86.8	20.9	1.5
14	86.8	20.2	1.5
15	86.8	20.3	0.9
16	86.8	19.0	1.0
17	86.8	19.4	2.7
18	86.8	20.6	1.0
19	86.8	20.1	1.3
20	86.8	20.1	0.9
21	86.8	17.5	0.8
22	86.8	20.0	1.5
23	86.0	19.9	1.2
24	86.0	20.0	1.2
25	86.0	16.6	1.5
26	86.0	18.8	1.5
27	86.0	20.0	1.3
28	86.0	17.7	0.6
29	86.0	16.8	1.1
30	86.0	20.0	0.9
31	86.0	19.2	1.6
32	86.0	18.7	0.8
33	86.0	20.9	1.2
34	86.0	20.8	1.0
35	86.8	20.1	2.3
36	86.8	19.6	1.2
37	86.8	18.9	0.9
38	86.8	21.4	2.4
39	86.0	20.0	1.2
40	86.0	17.7	0.2
41	86.8	17.4	1.1
42	85.8	14.4	0.7
43	85.8	13.6	0.9
44	86.9	19.5	1.5
45	86.0	21.8	1.7
46	86.0	20.1	0.9
47	85.8	25.5	0.8

Second Quarter			
Location	Days	90 Day Average	2 std dev
1	97.1	17.7	1.3
2	97.0	15.9	1.3
3	97.0	16.7	0.9
4	97.0	17.6	0.9
5	97.0	16.6	1.1
6	97.0	16.2	1.1
7	97.0	15.8	1.3
8	97.0	18.0	1.7
9	97.0	15.9	0.9
10	97.0	17.7	0.9
11	97.0	18.0	1.4
12	97.0	17.0	0.6
13	97.0	17.8	0.9
14	97.0	17.6	1.1
15	97.0	17.0	1.3
16	97.0	16.9	1.0
17	97.2	16.8	1.3
18	97.2	17.7	1.0
19	97.2	18.3	1.1
20	97.2	17.2	0.8
21	97.2	15.6	0.9
22	97.2	17.3	0.8
23	97.1	16.9	0.5
24	97.1	17.1	1.4
25	97.2	14.4	1.1
26	97.1	16.4	0.6
27	97.1	17.4	0.8
28	97.1	15.2	0.8
29	97.1	14.2	0.6
30	97.2	17.4	0.9
31	97.1	16.5	1.1
32	97.0	16.5	1.2
33	97.1	17.4	1.1
34	97.0	18.0	0.7
35	97.0	17.5	1.5
36	97.0	17.0	1.1
37	97.0	16.4	0.9
38	97.0	21.1	3.3
39	97.0	18.6	0.9
40	97.0	18.7	1.1
41	97.1	17.2	2.4
42	97.1	13.9	1.5
43	97.1	14.3	1.2
44	96.8	20.9	1.4
45	97.2	20.9	2.2
46	97.2	19.4	3.4
47	97.1	29.1	1.2

TABLE 6
Third and Fourth Quarter TLD Results
(mR/90 day qtr)

Third Quarter			
Location	Days	90 Day Average	2 std dev
1	90.9	22.3	1.0
2	90.1	22.3	2.0
3	90.1	24.2	1.0
4	91.0	23.0	1.4
5	91.0	20.7	1.1
6	91.0	22.3	2.6
7	91.0	24.3	4.0
8	91.0	23.5	2.9
9	91.0	22.2	3.9
10	91.0	21.6	1.2
11	91.0	25.1	0.9
12	91.0	22.9	3.5
13	91.0	24.7	1.6
14	91.0	23.3	4.3
15	91.0	21.7	1.2
16	91.0	22.3	1.6
17	90.8	22.1	1.8
18	91.1	21.3	1.1
19	91.1	22.9	1.1
20	91.1	21.9	1.6
21	91.1	19.0	0.8
22	91.1	23.2	2.2
23	90.9	21.3	1.0
24	90.9	23.1	2.2
25	90.8	19.6	1.7
26	90.9	21.0	2.9
27	90.9	24.3	1.0
28	90.9	18.5	1.5
29	90.9	17.6	1.4
30	90.8	21.0	1.9
31	91.0	19.1	2.2
32	89.9	19.2	1.2
33	90.8	21.0	2.4
34	90.9	21.6	1.0
35	91.0	20.5	1.7
36	91.0	19.2	1.8
37	90.1	19.5	1.9
38	90.1	20.8	2.6
39	90.0	20.3	1.0
40	90.0	17.1	1.9
41	90.9	20.3	2.4
42	90.1	14.7	1.4
43	90.1	14.2	1.7
44	90.1	20.8	2.0
45	91.0	22.5	1.3
46	90.9	22.8	1.5
47	90.1	31.8	1.6

Fourth Quarter			
Location	Days	90 Day Average	2 std dev
1	89.3	19.1	1.4
2	90.1	17.3	1.0
3	90.1	18.7	1.0
4	89.2	19.3	1.3
5	89.2	17.9	0.5
6	89.2	17.5	1.3
7	89.3	18.3	0.8
8	89.3	19.8	1.3
9	89.3	17.3	1.0
10	89.3	19.0	0.9
11	89.2	20.6	1.2
12	89.2	19.0	0.8
13	89.3	19.6	0.7
14	89.3	18.9	0.9
15	89.2	19.9	1.6
16	89.2	18.6	1.2
17	89.2	18.6	1.4
18	88.9	19.3	0.9
19	88.9	19.9	1.0
20	89.0	19.1	0.9
21	89.0	16.5	1.0
22	89.0	19.0	0.9
23	90.0	18.2	1.1
24	90.0	18.6	1.5
25	90.0	16.1	1.2
26	90.0	18.9	3.2
27	90.0	18.2	1.7
28	90.0	16.1	0.9
29	90.0	15.1	1.2
30	90.1	18.9	1.6
31	89.9	17.9	0.9
32	91.0	17.6	0.6
33	90.0	19.3	0.6
34	90.0	19.5	1.4
35	89.3	19.1	1.1
36	89.3	20.7	1.3
37	90.1	17.7	1.3
38	90.1	20.7	2.2
39	90.9	18.1	0.8
40	90.9	15.7	1.1
41	89.3	22.0	2.3
42	90.1	14.0	2.7
43	90.1	12.9	1.6
44	90.1	18.7	1.4
45	89.9	22.6	1.8
46	90.0	21.0	4.6
47	90.1	32.2	4.1

TABLE 7
Drinking Water Radiological Analyses
pCi/liter (analysis counting uncertainties reported in Appendix B)

Location	Start Date	Gr-B	H-3
LW40	01/06/1999	4.2	
BW15	01/06/1999	5.9	
BW15 (grab)	01/28/1999	4.0	
LW40	02/03/1999	3.1	
BW15	02/03/1999	4.3	
LW40	03/03/1999	4.9	
BW15	03/03/1999	4.8	
LW40	04/07/1999	3.8	
BW15	04/07/1999	5.3	180
LW40	05/05/1999	4.0	
BW15	05/05/1999	4.9	
LW40	06/02/1999	4.8	
BW15	06/02/1999	5.3	
LW40	07/07/1999	6.6	
BW15	07/07/1999	6.5	
LW40	08/04/1999	6.6	
BW15	08/04/1999	5.4	
LW40	09/01/1999	4.7	
BW15	09/01/1999	4.6	
LW40	10/06/1999	4.5	
BW15	10/06/1999	5.5	
LW40	11/03/1999	20	
BW15	11/03/1999	19	
LW40	12/01/1999	6.0	
BW15	12/01/1999	5.5	

TABLE 8
Surface Water Radiological Analyses
pCi/liter (analysis counting uncertainties reported in Appendix B)

Location	Date	H-3
DC	01/21/1999	10000
SP	01/21/1999	9600
DC	02/18/1999	11000
SP	02/18/1999	11000
DC	03/18/1999	16000
SP	03/18/1999	12000
DC	04/15/1999	13000
SP	04/15/1999	13000
DC	05/20/1999	13000
SP	05/20/1999	12000
DC	06/10/1999	12000
SP	06/10/1999	12000
DC	07/28/1999	10000
SP	07/28/1999	11000
DC	08/19/1999	11000
SP	08/19/1999	11000
DC	09/16/1999	11000
MUSH	09/16/1999	170
SP	09/16/1999	11000
DC	10/21/1999	11000
SP	10/21/1999	11000
DC	11/18/1999	9600
SP	11/18/1999	10000
DC	12/15/1999	11000
SP	12/15/1999	11000

TABLE 9
Shoreline Sediment Radiological Analyses
pCi/kg, dry (analysis counting uncertainties reported in Appendix B)

Location	Date	Be-7	K-40	Cs-137	Ra-226	Th-228
EEA	04/13/1999		5640		1530	654
MUDS	04/30/1999		12200		2830	1140
DC	05/18/1999		6820		1050	688
JRR	06/10/1999		7940	52.2	2230	982
DC	10/01/1999	1520	9000	88.5	2060	1080
JRR	10/01/1999	791	10200	80.3	2210	1390
EEA	11/30/1999		11000	286	1820	1040
MUDS	11/30/1999		9800		2730	1530

TABLE 10
Milk Radiological Analyses
pCi/liter (analysis counting uncertainties reported in Appendix B)

Milk was not collected during 1999.

TABLE 11
Broadleaf Vegetation Radiological Analyses
pCi/kg, wet (analysis counting uncertainties reported in Appendix B)

Type	Location	Date	Be-7	K-40	Cs-137	Th-228
CABBAGE	S-4	05/26/1999	101	3660		
LETTUCE	E-1	05/27/1999	188	6220		
HORSERADISH LEAVES	F-1	05/27/1999	400	3870	12.4	
LETTUCE	E-1	06/30/1999	172	3000		
HORSERADISH LEAVES	F-1	06/30/1999	356	4720		
CABBAGE	G-1	06/30/1999	537	4070		35.8
CABBAGE	S-4	06/30/1999	392	3560		
SQUASH/CORN LEAVES	E-1	07/28/1999	2360	7450		
CABBAGE	S-4	07/28/1999	396	5430		
HORSERADISH LEAVES	F-1	08/25/1999	459	5400		
TURNIP GREENS	G-1	08/25/1999	215	5040		
CABBAGE	S-4	08/25/1999	538	4310		
TURNIP GREENS	G-1	09/22/1999	698	4420		
CABBAGE	S-4	09/22/1999	913	3130		
TURNIP GREENS	G-1	10/27/1999	478	2980		
CABBAGE	S-4	10/27/1999	507	3450		
TURNIP GREENS	G-1	11/30/1999	195	6410		
CARROT GREENS	S-4	11/30/1999	457	8370		
RHUBARB LEAVES	S-4	11/30/1999	513	5980		

TABLE 12
Crop Radiological Analyses
pCi/kg, wet (analysis counting uncertainties reported in Appendix B)

Type	Location	Date	K-40
CORN (irrigated)	NR-U1	11/08/1999	2940
CORN (irrigated)	NR-D1	11/03/1999	2690
CORN (not irrigated)	NR-D2	11/03/1999	2870
SOYBEANS (not irrigated)	NR-D2	11/03/1999	15000

TABLE 13
Fish Radiological Analyses
pCi/kg, wet (analysis counting uncertainties reported in Appendix B)

Species	Location	Date	K-40	Cs-137	H-3
COMMON CARP	JRR	05/18/1999	3410		
CHANNEL CATFISH	JRR	05/18/1999	3080		
SM BASS	WCL	05/26/1999	3620	21.8	10000
FLATHEAD CATFISH	WCL	05/26/1999	3580		11000
CHANNEL CATFISH	WCL	05/26/1999	3300		6500
COMMON CARP	WCL	05/26/1999	2960		6100
FRESHWATER DRUM	JRR	10/01/1999	3330		
WHITE CRAPPIE	JRR	10/01/1999	3330		
CHANNEL CATFISH	JRR	10/01/1999	3110		
CHANNEL CATFISH	WCL	10/12/1999	2960		4500
SM BUFFALO	WCL	10/12/1999	2520		5200
WHITE BASS	WCL	10/12/1999	3360		5500
WIPER	WCL	10/12/1999	3590		3200
WALLEYE	WCL	10/12/1999	3320	40.7	4600
COMMON CARP	WCL	10/12/1999	3040		3600

TABLE 14
Bottom Sediment Radiological Analyses
pCi/kg, dry (analysis counting uncertainties reported in Appendix B)

Location	Date	Be-7	K-40	Co-60	Sb-125	Cs-137	Ra-226	Th-228
DC	05/18/1999	454	10600	525		262	1870	1340
DC	05/18/1999	838	9910	531	363	220	1480	998
JRR	06/24/1999		14900			161	1830	1240
DC	10/01/1999	687	11800	663		307	2460	1130
JRR	10/01/1999	538	15900			129	2180	1430

TABLE 15
Aquatic Vegetation Radiological Analyses
pCi/kg, wet (analysis counting uncertainties reported in Appendix B)

Location	Type	Date	Be-7	K-40	Co-58	Co-60	Cs-137	Ra-226	Th-228
EEA	ALGAE/ DUCKWEED	04/13/1999	465	923			13.4	177	64.4
EEA	CATTAIL/ SMARTWEED	04/13/1999		2110					74
DC	ALGAE	05/18/1999	753	3600	110	37.2	40.1	199	156
DC	ALGAE	05/18/1999	559	3030	37.4	15.9	23		118
DC ALT	AMERICAN LOTUS	10/01/1999	2260	2090				228	

TABLE 16
Terrestrial Vegetation Radiological Analyses
pCi/kg, wet (analysis counting uncertainties reported in Appendix B)

Type	Location	Date	Be-7	K-40
GRASS	EEA	04/13/1999	2690	6810
GRASS	MUDS	04/30/1999	4160	4620
GRASS	EEA	10/20/1999	4720	13900
GRASS	MUDS	11/30/1999	19300	1030

TABLE 17
Soil Radiological Analyses
pCi/kg, dry (analysis counting uncertainties reported in Appendix B)

Location	Date	Be-7	K-40	Cs-137	Ra-226	Th-228
MUDS	06/10/1999	672	11100	195	1780	1330
EEA	06/10/1999	1340	10100	150	1940	1030
EEA	10/20/1999		9210	124	1800	1140
MUDS	11/30/1999		11000	404	1800	1120
EEA	11/30/1999		11500	187	1500	1010

TABLE 18
1999 Land Use Census Data

Location of Nearest:

Sector	Residence	Milk Animal	Broadleaf Garden
A	A2.6-17TE1520	None	None
B	B3.1-QURD1712	None	B3.6-QURD1755
C	C1.9-16RD1655	None	C3.6-RERD1675
D	D2.1-QULA1571	None	D2.1-QULA1571
E	E1.8-QULA1485	None	E1.8-QULA1485
F	F1.6-14RD1711	None	F1.8-14RD1730
G	G1.6-QURD1384	None	G1.6-QURD1384
H	H3.1-12RD1711	None	H4.85-10RD1698
J	J3.3-OXLA1141	None	J3.8-11RD1535
K	K2.6-12LA1439	None	K4.1-NARD1120
L	L2.4-NARD1339	None	L2.6-NARD1309
M	M1.8-NARD1441	None	M2.4-14RD1321
N	N2.5-HW751439	None	N3.1-HW751434
P	P2.7-16RD1255	None	P2.8-HW751534
Q	Q1.4-NALA1574	None	Q3.2-17RD1310
R	R4.4-NARD1891	None	None

Locations are identified based upon the following protocol:
EXAMPLE: A1.4-16RD1525

First letter is based upon sector, thus "A" designates this residence is in sector A.

The number immediately following the first letter designates the distance (in miles) from the powerblock.

The characters following the dash represent a unique identifier based upon location address.

The example is in sector A, 1.4 miles from the plant, at 1525 16th Road.

TABLE 19
Comparison of 1998 and 1999 Land Use Census Milk and Garden Data

SECTOR	1998 MILKING ANIMALS	1999 MILKING ANIMALS	1998 CLOSEST GARDEN PRODUCING BROADLEAF VEGETATION	1999 CLOSEST GARDEN PRODUCING BROADLEAF VEGETATION	D/Q RANKING
A	none	none	none	none	
B	none	none	B3.6-QURD1755	B3.6-QURD1755	4
C	none	none	C1.9-16RD1655	C3.6-RERD1675	14
D	none	none	D2.1-QULA1571	D2.1-QULA1571	10
E	none	none	E1.8-QULA1485	E1.8-QULA1485	3
F	none	none	F1.8-14RD1730	F1.8-14RD1730	2
G	none	none	G1.6-QURD1384	G1.6-QURD1384	1
H	none	none	H4.85-10RD1698	H4.85-10RD1698	13
J	none	none	J3.8-11RD1535	J3.8-11RD1535	9
K	none	none	K4.1-NARD1120	K4.1-NARD1120	12
L	none	none	L2.6-NARD1309	L2.6-NARD1309	8
M	none	none	M2.6-HW751423	M2.4-14RD1321	5
N	none	none	N3.1-HW751434	N3.1-HW751434	11
P	none	none	P4.7-KARD1675	P2.8-HW751534	6
Q	none	none	Q3.2-17RD1310	Q3.2-17RD1310	7
R	none	none	none	none	

NOTE: Underlined entries indicate changes from the 1998 Land Use Census.

TABLE 20
ERA Statistical Summary Proficiency Testing (PT) Program - 1999

Date / TI #s	Nuclide	ERA Known Value (a) (pCi/l)	TBE Result (b) (pCi/l)	Expected Dev. Known (c) (pCi/l)	Control Limits (d) (pCi/l)	Warning Limits (e) (pCi/l)	Performance Evaluation (f)
08/23/99 11811-11813	U(NAT)	12.4	13.0	3.00	7.20-17.6	8.94-15.9	A
08/20/99 11811-11813	Ra-226	7.21	7.37	1.08	5.34-9.08	5.96-8.46	A
08/23/99 11811-11813	Ra-228	4.51	7.17	1.13	2.57-6.45	3.21-5.81	NA (g)
08/24/99 11808-11810	Sr-89	26.6	25.0	5.00	17.9-35.3	20.8-32.4	A
08/24/99 11808-11810	Sr-90	40.2	39.7	5.00	31.5-48.9	34.4-46.0	A
09/15/99 13058-13060	Gr-A	48.6	30.3	12.2	27.7-69.5	34.6-62.6	CE (h)
09/14/99 13061-13063	Gr-B	20.0	22.0	5.00	11.3-28.7	14.2-25.8	A
09/01/99 14425-14427	H-3	6130	5530	613	5090-7170	5420-6840	A

Footnotes:

a) The ERA Known Value is equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation.

b) Average ±1 sigma.

c) Established per the guidelines contained in the EPA's National Standards for Water Proficiency Testing Criteria Document, December 1998, as applicable.

d) Established per the guidelines contained in the EPA's National Standards for Water Proficiency Testing Criteria Document, December 1998, as applicable.

e) Established per the guidelines contained in the EPA's National Standards for Water Proficiency Testing Criteria Document, December 1998, as applicable.

f) A = Acceptable (reported result falls within the warning limits)
NA = Not Acceptable (reported result falls outside of the control limits)
CE = Check for error (reported result falls within the control limits and outside of the warning limits)

g) A calculation error was made by not correcting for Ra-226 content. If this correction is made, an average result of 5.7 pCi/l is obtained which is in the acceptance region.

h) The low value is attributed to greater self-absorption characteristics of the sample matrix compared to those of the calibration matrix. This source of bias is often observed in gross alpha measurements, nevertheless, the average result is within the control region (but also in the warning region).

TABLE 21
Analytics Cross Check Comparison Program 1999

Sample ID/ Date	Medium	Nuclide	Teledyne Brown Engineering Result (a)		Analytics Result (b)		Ratio (c)
E1823-396	Water	Sr-89	60±	5	69±	3	0.87
TI #09576		Sr-90	35±	2	46±	2	0.76
06/24/99							
E1824-396	Water	Gr-A	160±	10	98±	5	1.63(d)
TI #09577		Gr-B	300±	10	290±	15	1.03
06/24/99							
E1825-396	Water	I-131	77±	13	68±	3	1.13
TI #09578		Ce-141	139±	14	134±	7	1.04
06/24/99		Cr-51	162±	42	172±	9	0.94
		Cs-134	86±	9	92±	5	0.93
		Cs-137	167±	17	151±	8	1.11
		Mn-54	77±	8	68±	3	1.13
		Fe-59	40±	9	38±	2	1.05
		Zn-65	113±	12	98±	5	1.15
		Co-60	179±	18	171±	9	1.05
E1826-396	Filter	Ce-141	169±	17	162±	8	1.04
TI #09579		Cr-51	241±	24	208±	10	1.16
06/24/99		Cs-134	105±	10	111±	6	0.95
		Cs-137	211±	21	182±	9	1.16
		Mn-54	96±	10	82±	4	1.17
		Fe-59	55±	8	46±	2	1.20
		Zn-65	144±	14	118±	6	1.22
		Co-60	214±	21	206±	10	1.04
E1827-396	Soil	Ce-141	0.274±	0.027	0.269±	0.013	1.02
TI #09580		Cr-51	0.374±	0.103	0.345±	0.017	1.08
06/24/99		Cs-134	0.200±	0.020	0.184±	0.009	1.09
		Cs-137	0.450±	0.045	0.429±	0.021	1.05
		Mn-54	0.153±	0.015	0.136±	0.007	1.13
		Fe-59	0.118±	0.022	0.077±	0.004	1.53 (e)
		Zn-65	0.206±	0.021	0.196±	0.010	1.05
		Co-60	0.351±	0.035	0.343±	0.017	1.02

Footnotes:

a) Teledyne Results - counting uncertainty is two standard deviations. Units are pCi/liter for water. For gamma results, if two standard deviations are less than 10%, then a 10% counting uncertainty is reported. Units are total pCi for air particulate filters. Units are pCi/gram for soil, which has been added to the program for 1999.

b) Analytics Result - Average ±1 sigma

c) Ratio of Teledyne Brown Engineering to Analytics results. Acceptance criteria are based on USNRC acceptance criteria described in USNRC Procedure 84750 dated March 15, 1994.

d) A high gross alpha result was obtained because the calculation was mistakenly performed using Th-230 counting efficiency. If the normal Am-241 calibration were used, the reported value would have been 110 ± 10 pCi/liter, which is an acceptable value.

e) Random or coincidental summing caused the problem. Two other energy lines can sum a peak on the same energy band causing more counts to be thrown in. The key line was changed and the resulting value was 0.079, which is in agreement with Analytics.

TABLE 22
Dosimetry Performance Testing Results

NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM
PERSONNEL DOSIMETRY PERFORMANCE TESTING
SUMMARY OF STATISTICAL RESULTS

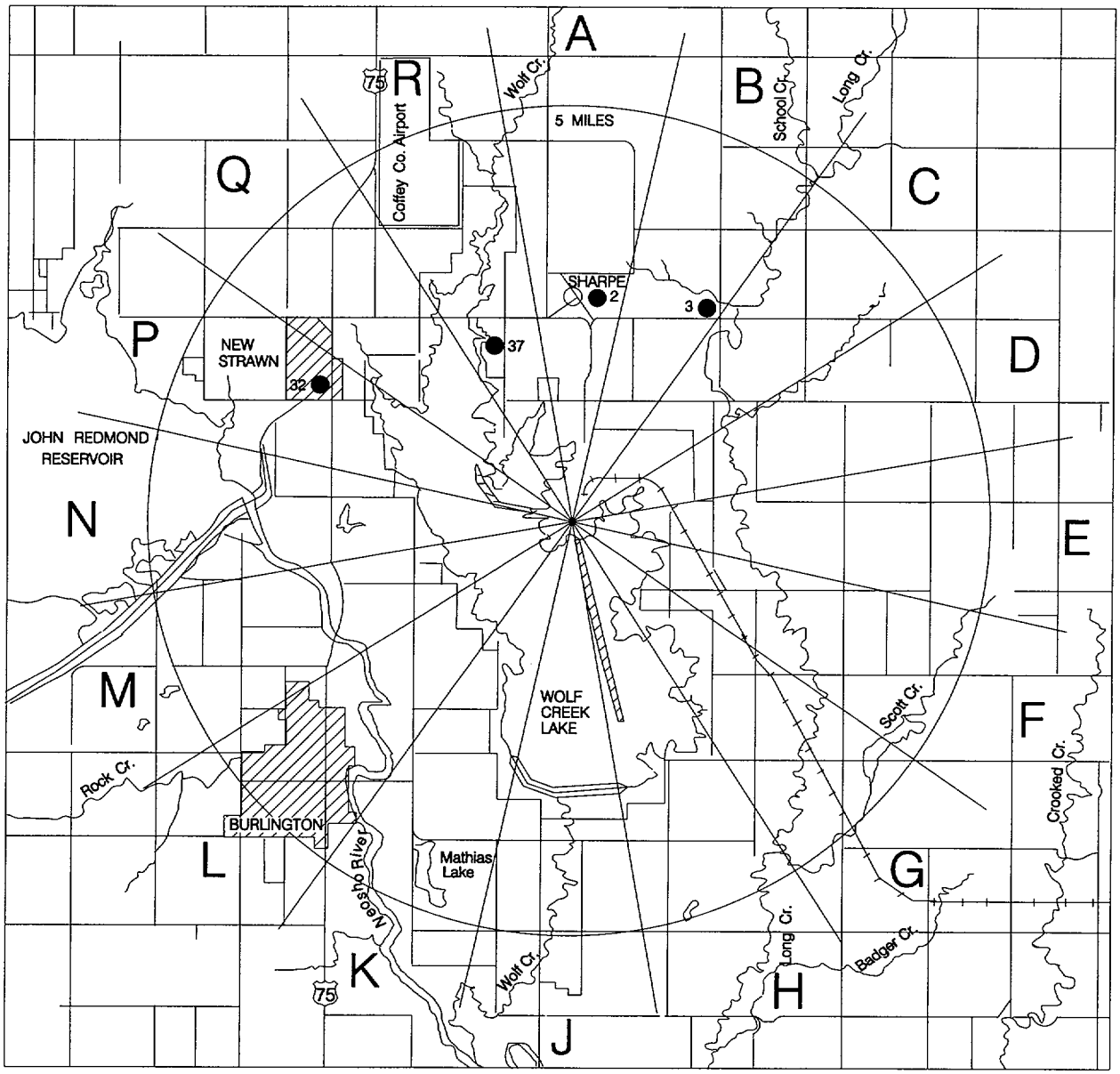
PROCESSOR NAME: DETROIT EDISON COMPANY
PROCESSOR CODE: 100529 B
DOSIMETER DESCRIPTION: PANASONIC UD-802AS/ISA 820
TEST RESULTS FOR QUARTER: 199804
TESTING STATUS: RENEWAL
TYPE OF DOSIMETER WHOLEBODY
REPORT PRINTED: 28 January 1999

CATEGORY	SHALLOW DEPTH B	S	|B| + S	L	DEEP DEPTH B	S	|B| + S	L
01	NO TEST				0.025	0.092	0.117	0.30
02	NO TEST				-0.013	0.123	0.136	0.30
3A	0.060	0.114	0.173	0.50	0.070	0.085	0.155	0.50
3B								
04	NO TEST				0.029	0.110	0.139	0.50
5A					NO TEST			
5B					NO TEST			
5C	0.043	0.086	0.129	0.50	NO TEST			
06	0.087	0.083	0.170	0.50	0.109	0.123	0.232	0.50
07	-0.038	0.087	0.125	0.50	-0.053	0.095	0.148	0.50
08-TOTAL	NO TEST				-0.017	0.086	0.103	0.50
08-NEUTRON	NO TEST				-0.036	0.088	0.124	0.50
09								

B = Bias
S = Standard Deviation
L = Limit

The laboratory successfully completed ANSI N13.11(1993)/NVLAP testing in categories I, II, III(A), IV, V(C), VI, VII and VIII.

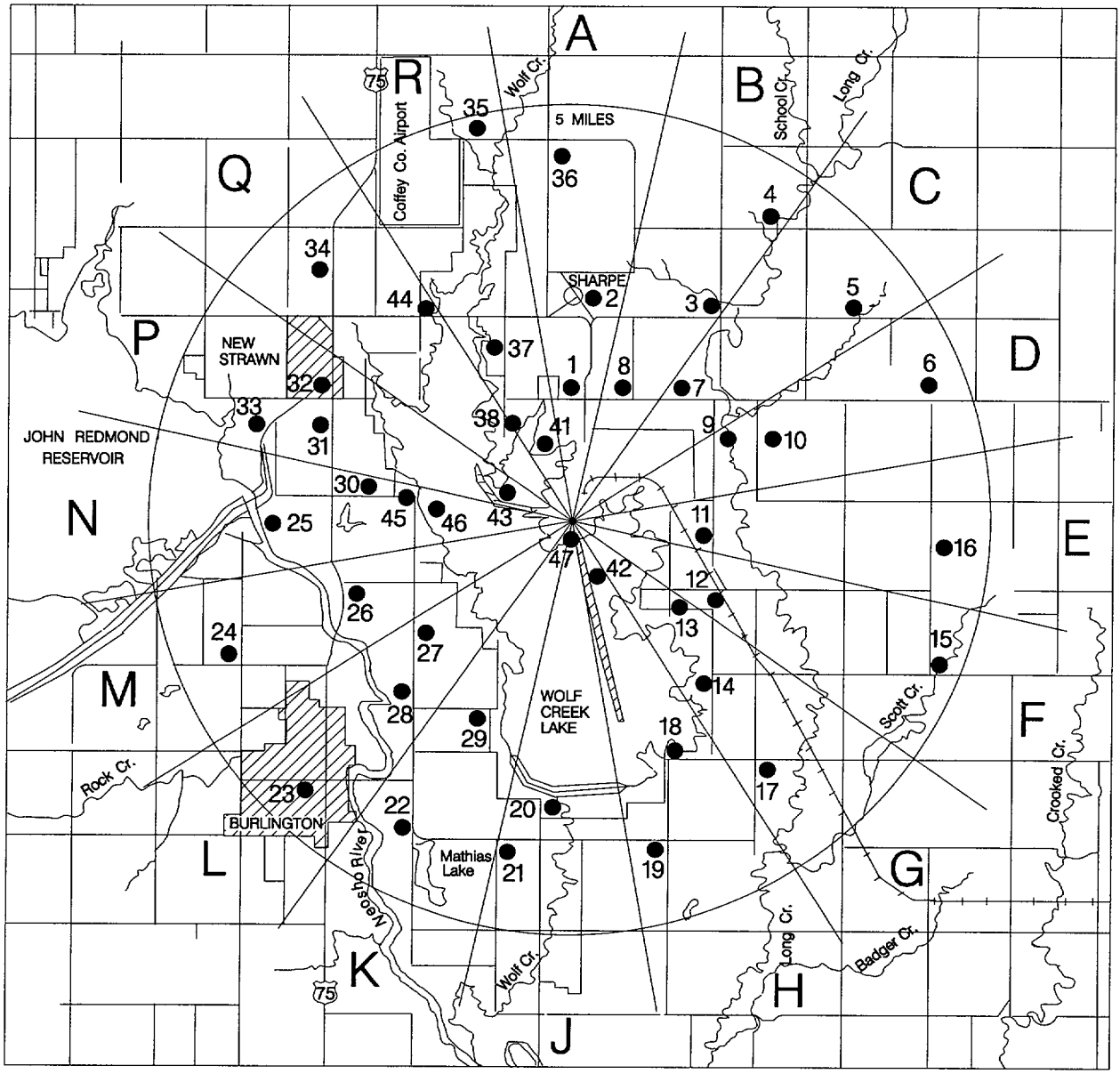
FIGURE 1



AIRBORNE PATHWAY SAMPLING LOCATIONS

● = AIRBORNE PARTICULATE AND RADIOIODINE

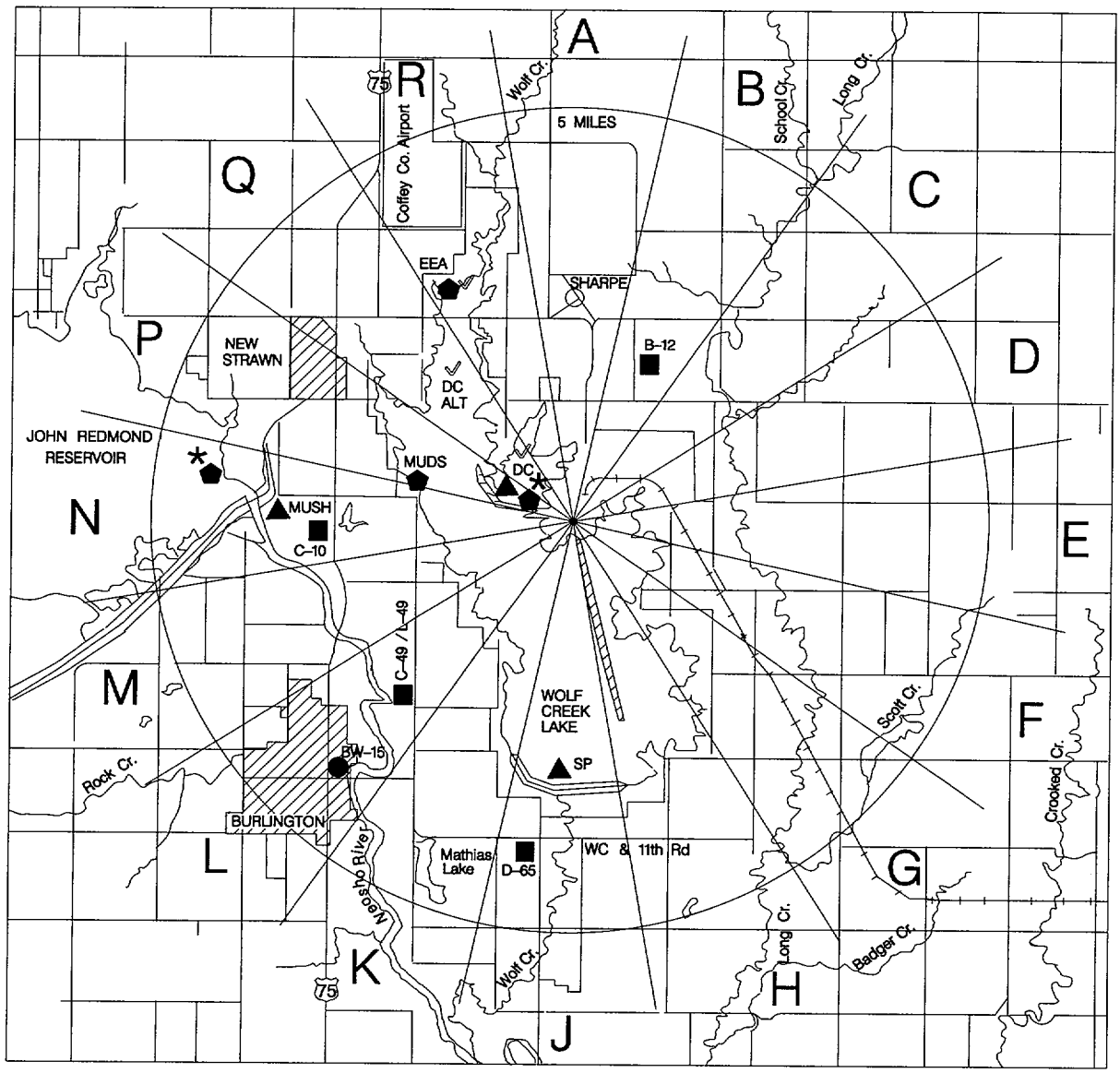
FIGURE 2



DIRECT RADIATION PATHWAY SAMPLING LOCATIONS

● = TLD LOCATIONS

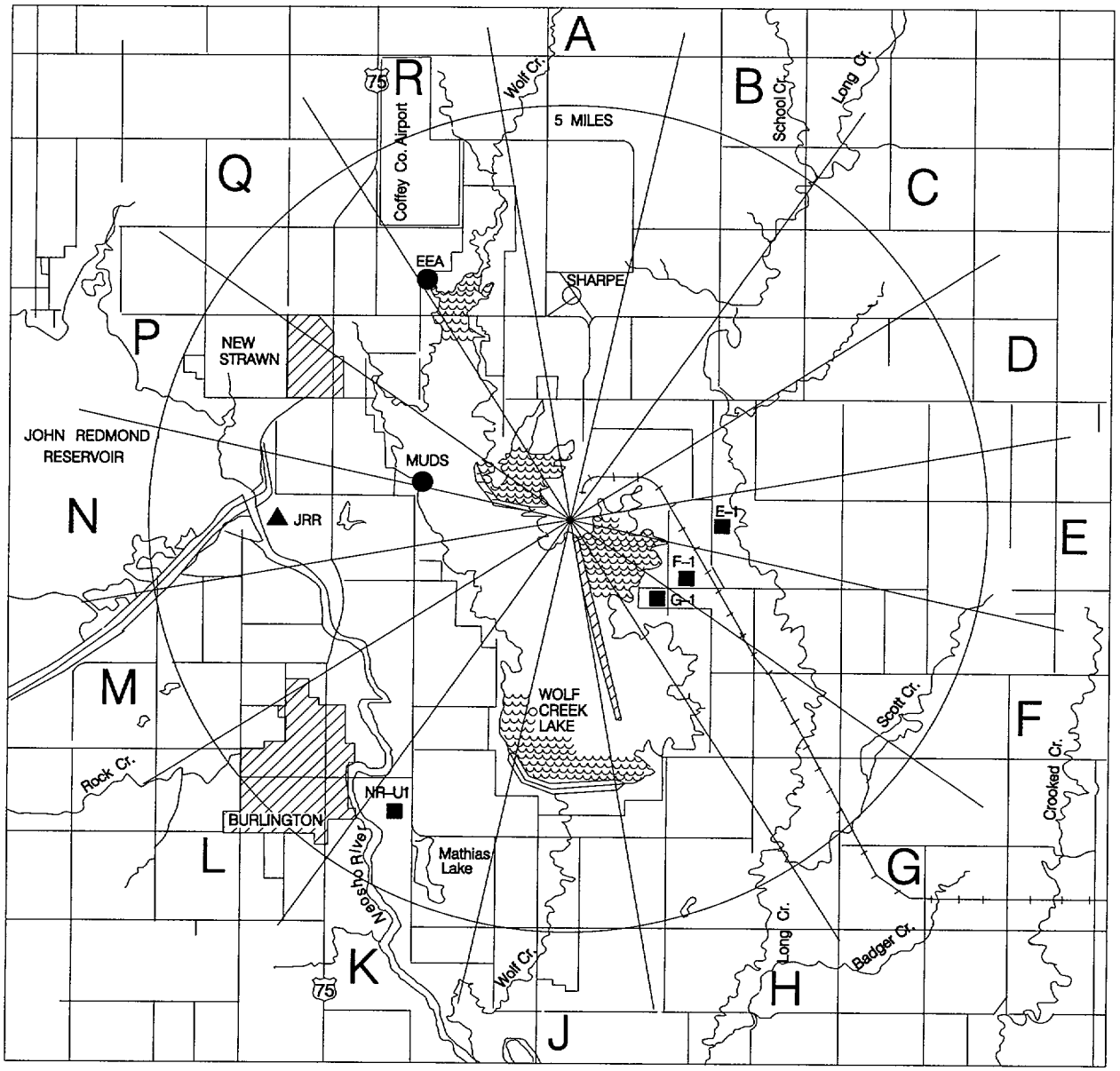
FIGURE 3



WATERBORNE PATHWAY SAMPLING LOCATIONS

● = DRINKING WATER
■ = GROUND WATER
★ = BOTTOM SEDIMENT
▲ = SURFACE WATER
⬟ = SHORELINE SEDIMENT
✓ = AQUATIC VEGETATION / ALGAE

FIGURE 4



INGESTION PATHWAY SAMPLING LOCATIONS

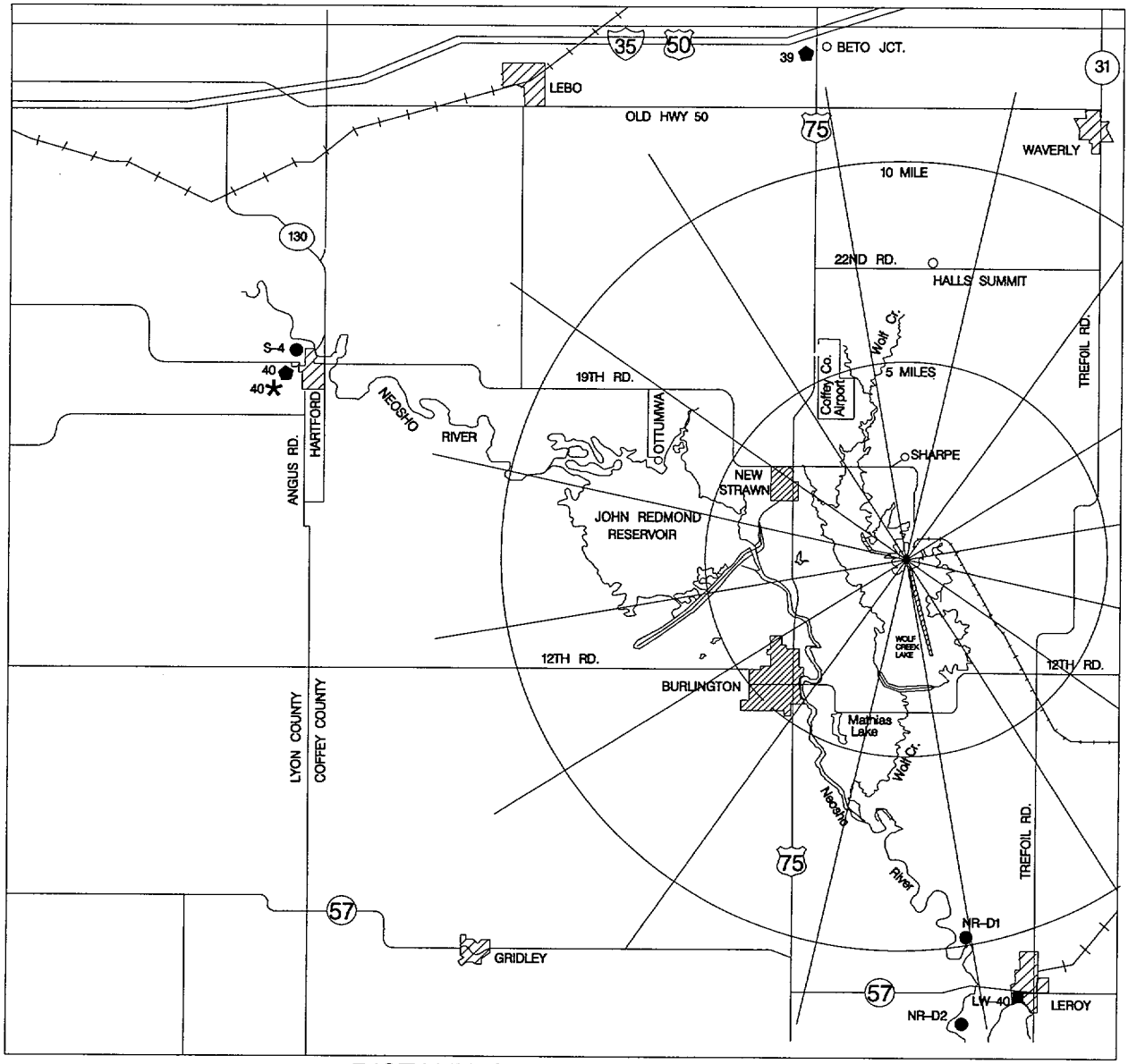
▲ = FISH (JRR)

■ = BROADLEAF VEGETATION / IRRIGATED CROPS

= FISH (WCL)

● = TERRESTRIAL VEGETATION AND SOIL

FIGURE 5



DISTANT SAMPLING LOCATIONS

⬟ = TLD

■ = DRINKING WATER

* = AIRBORNE PARTICULATE & RADIOIODINE

● = BROADLEAF VEGETATION/ IRRIGATED CROPS

FIGURE 6

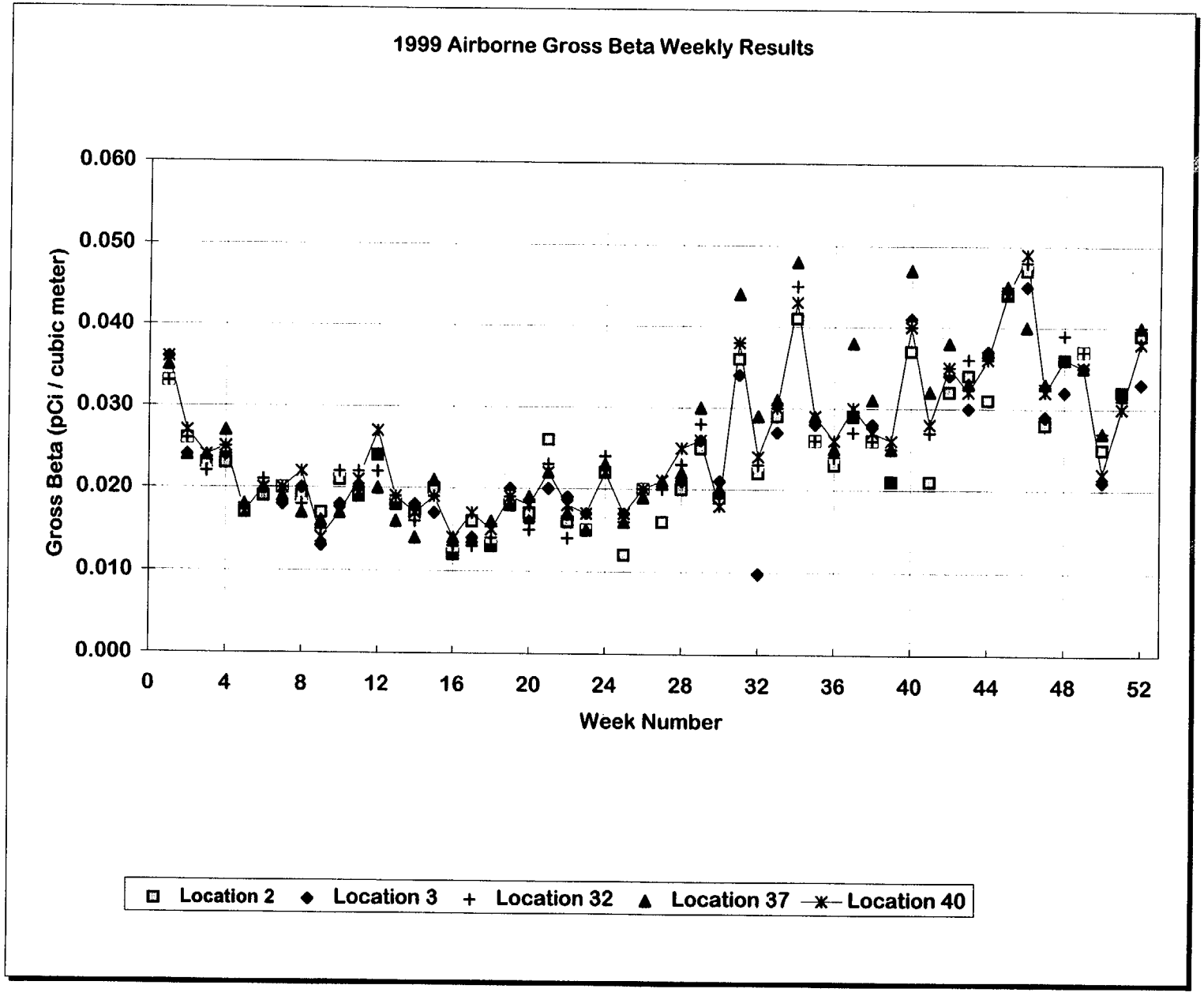

1999 Airborne Gross Beta Weekly Results
Gross Beta (pCi / cubic meter)
0.060
0.050
0.040
0.030
0.020
0.010
0.000
0
4
8
12
16
20
24
28
32
36
40
44
48
52
Week Number
Location 2
Location 3
Location 32
Location 37
Location 40

FIGURE 7

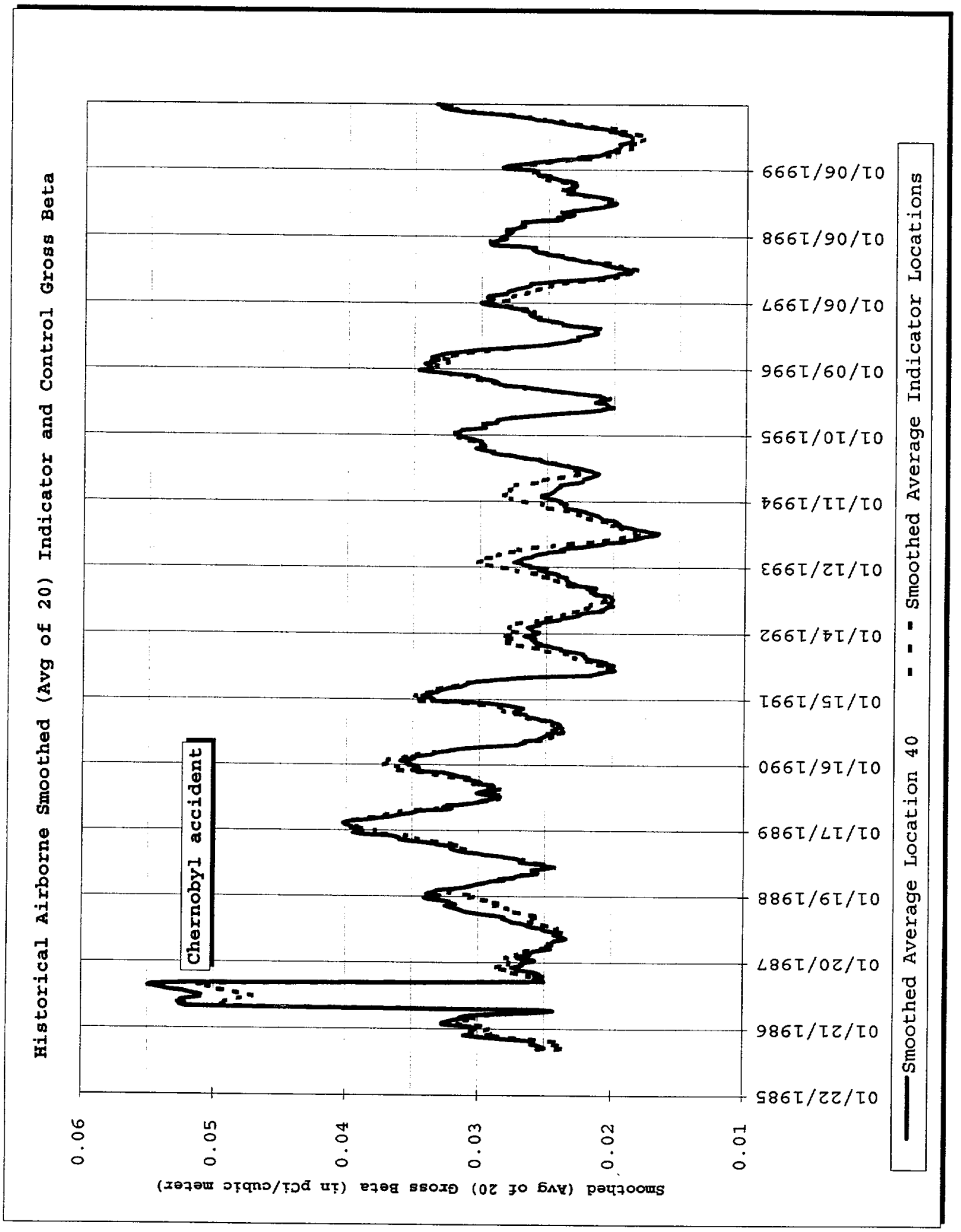

Historical Airborne Smoothed (Avg of 20) Indicator and Control Gross Beta
Smoothed (Avg of 20) Gross Beta (in pCi/cubic meter)
0.06
0.05
0.04
0.03
0.02
0.01
01/22/1985
01/21/1986
01/20/1987
01/19/1988
01/17/1989
01/16/1990
01/15/1991
01/14/1992
01/12/1993
01/11/1994
01/10/1995
01/09/1996
01/06/1997
01/06/1998
01/06/1999
Chernobyl accident
Smoothed Average Location 40
Smoothed Average Indicator Locations

FIGURE 8

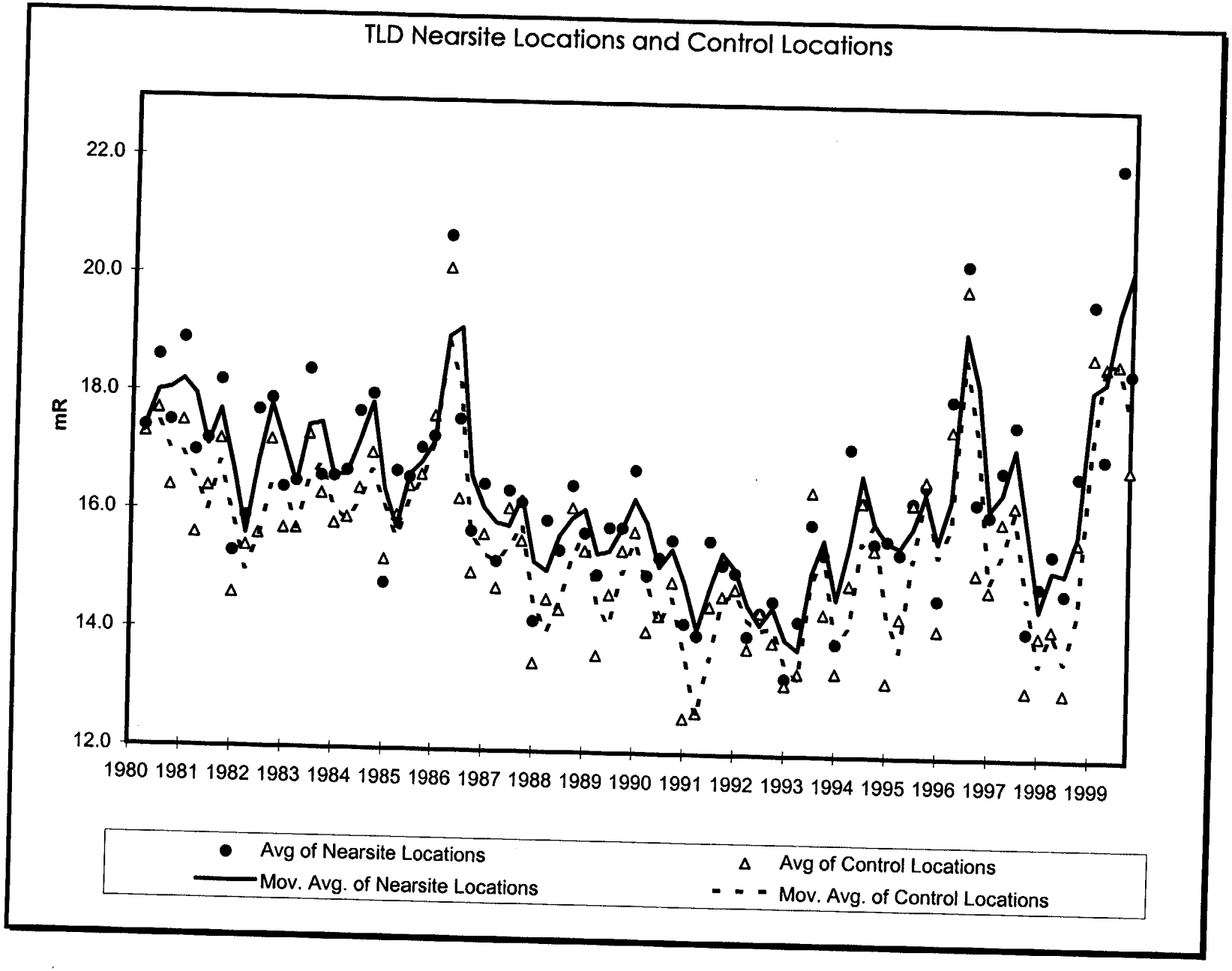
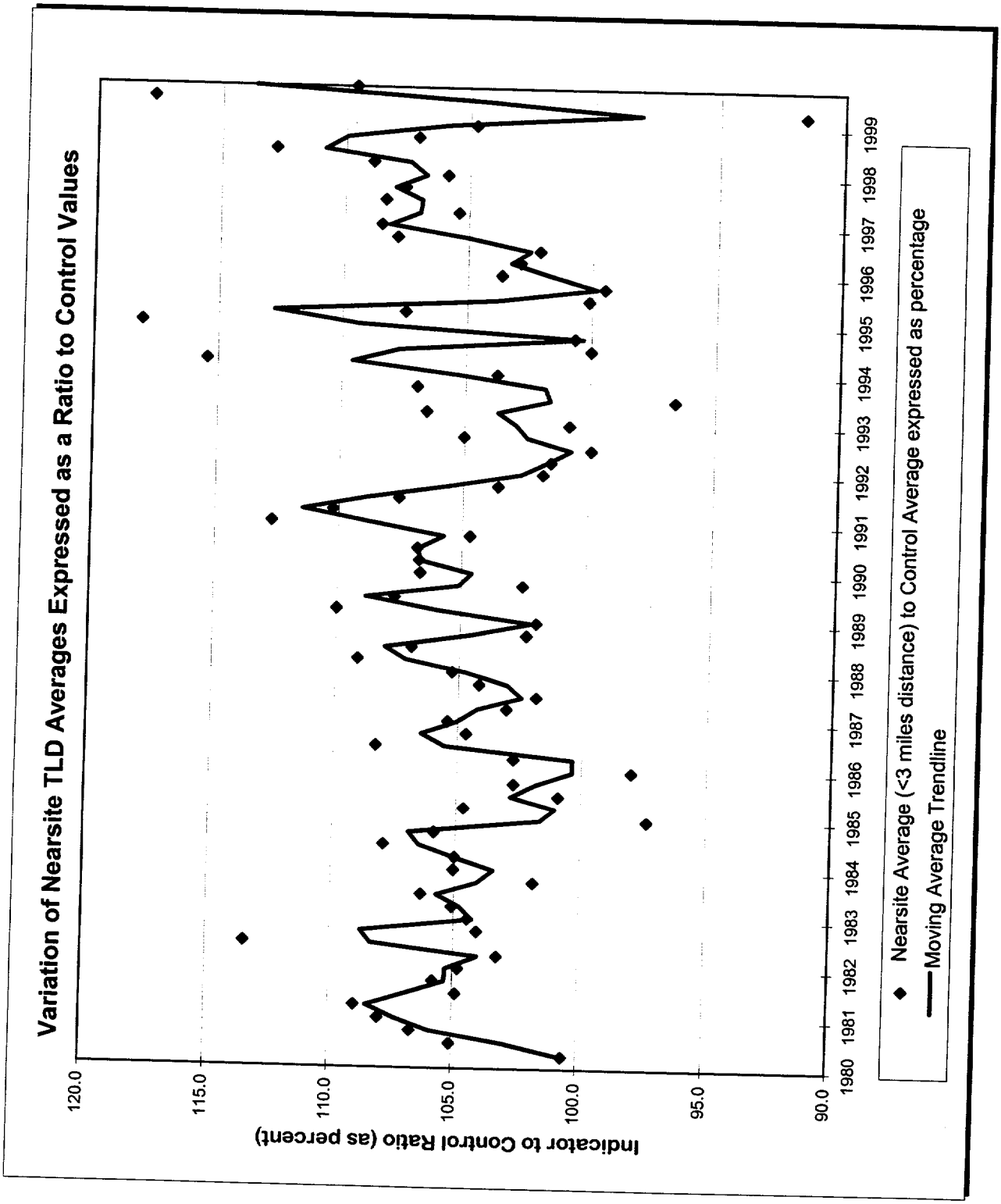

TLD Nearsite Locations and Control Locations
mR
22.0
20.0
18.0
16.0
14.0
12.0
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999
Avg of Nearsite Locations
Mov. Avg. of Nearsite Locations
Avg of Control Locations
Mov. Avg. of Control Locations

FIGURE 9


Variation of Nearsite TLD Averages Expressed as a Ratio to Control Values
Indicator to Control Ratio (as percent)
120.0
115.0
110.0
105.0
100.0
95.0
90.0
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
Nearsite Average (<3 miles distance) to Control Average expressed as percentage
Moving Average Trendline

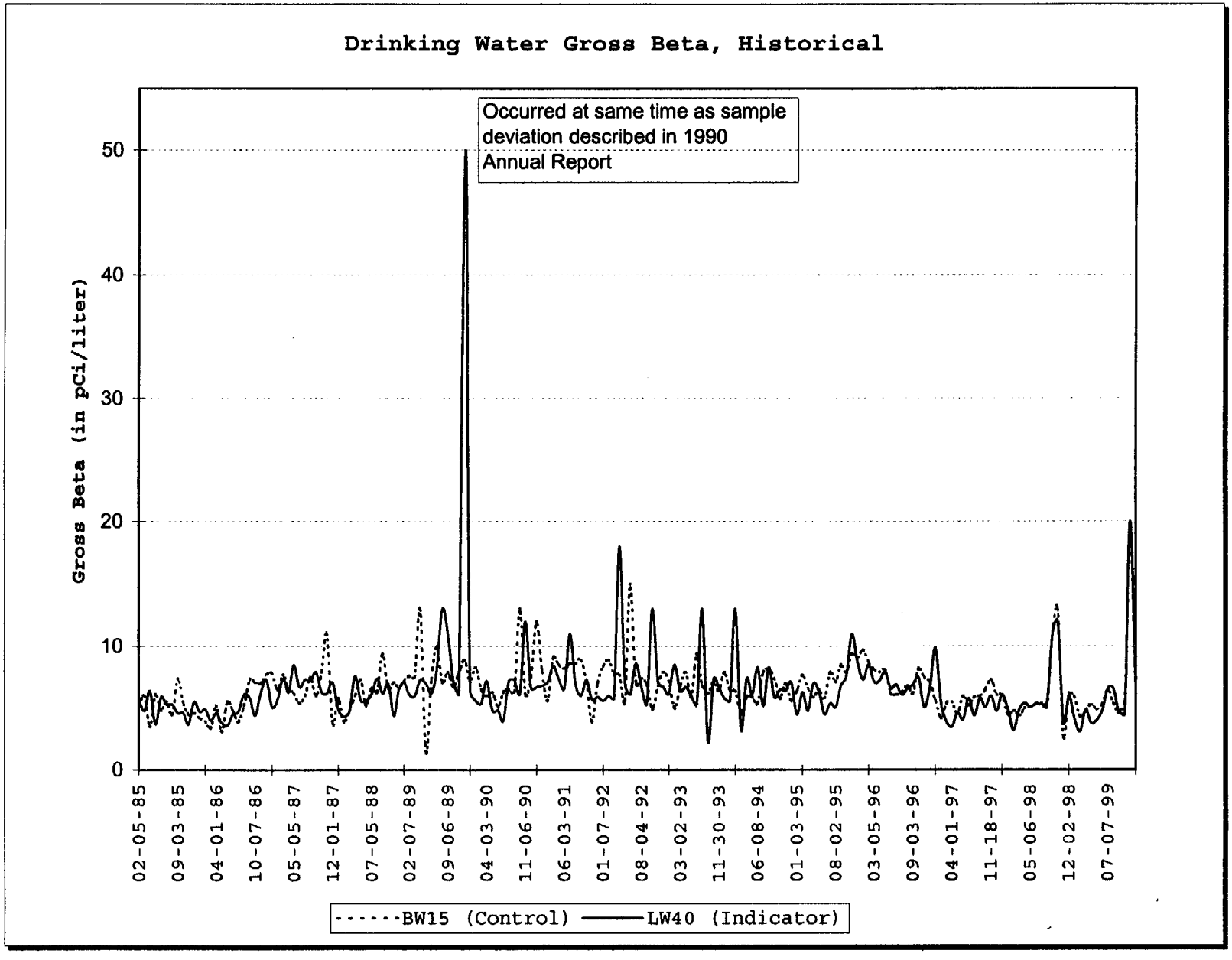

Drinking Water Gross Beta, Historical
Occurred at same time as sample deviation described in 1990 Annual Report
Gross Beta (in pCi/liter)
0
10
20
30
40
50
02-05-85
09-03-85
04-01-86
10-07-86
05-05-87
12-01-87
07-05-88
02-07-89
09-06-89
04-03-90
11-06-90
06-03-91
01-07-92
08-04-92
03-02-93
11-30-93
06-08-94
01-03-95
08-02-95
03-05-96
09-03-96
04-01-97
11-18-97
05-06-98
12-02-98
07-07-99
BW15 (Control)
LW40 (Indicator)

FIGURE 10

FIGURE 11

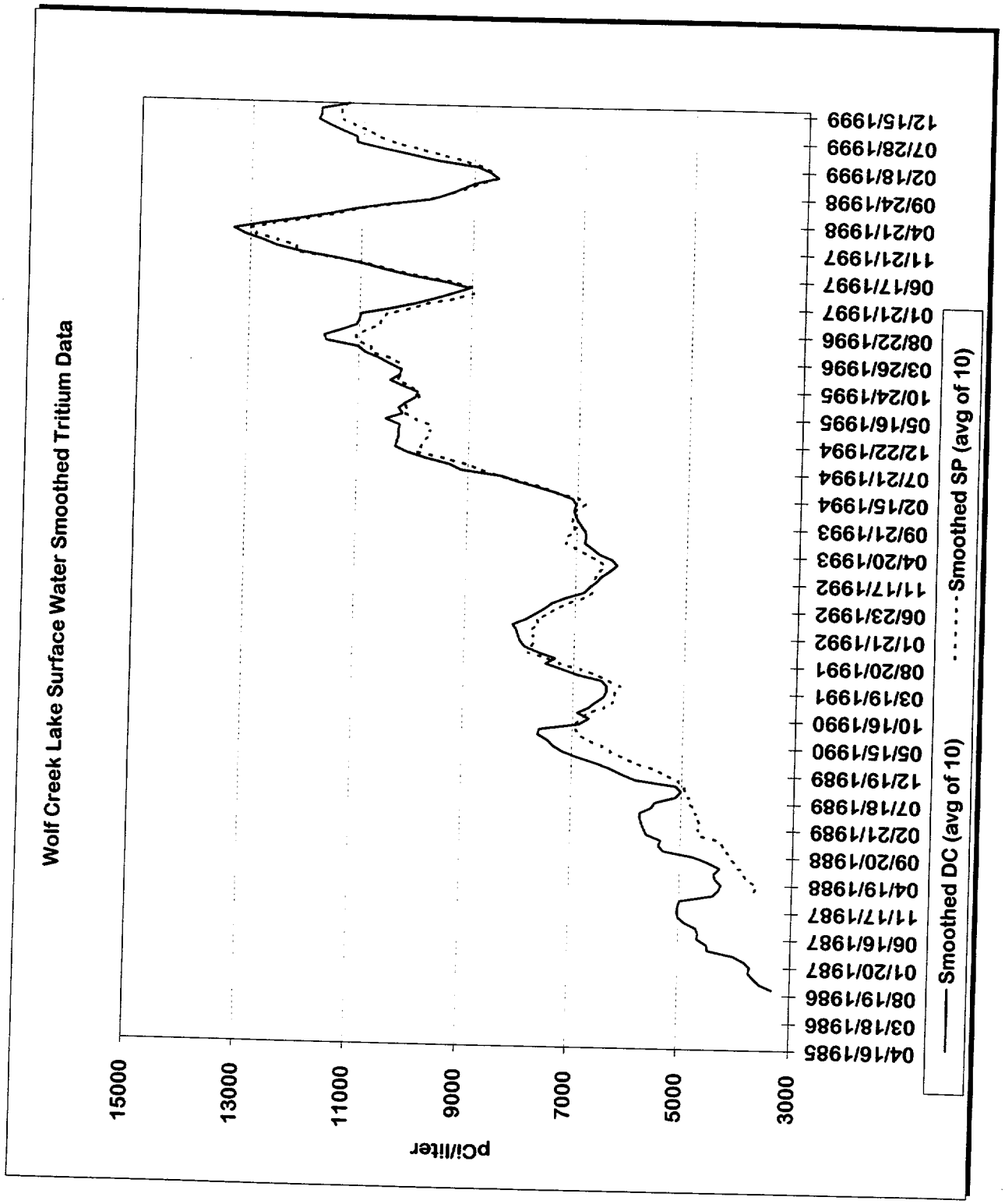

Wolf Creek Lake Surface Water Smoothed Tritium Data
pCi/liter
15000
13000
11000
9000
7000
5000
3000
04/16/1985
03/18/1986
08/19/1986
01/20/1987
06/16/1987
11/17/1987
04/19/1988
09/20/1988
02/21/1989
07/18/1989
12/19/1989
05/15/1990
10/16/1990
03/19/1991
08/20/1991
01/21/1992
06/23/1992
11/17/1992
04/20/1993
09/21/1993
02/15/1994
07/21/1994
12/22/1994
05/16/1995
10/24/1995
03/26/1996
08/22/1996
01/21/1997
06/17/1997
11/21/1997
04/21/1998
09/24/1998
02/18/1999
07/28/1999
12/15/1999
Smoothed DC (avg of 10)
Smoothed SP (avg of 10)

FIGURE 12

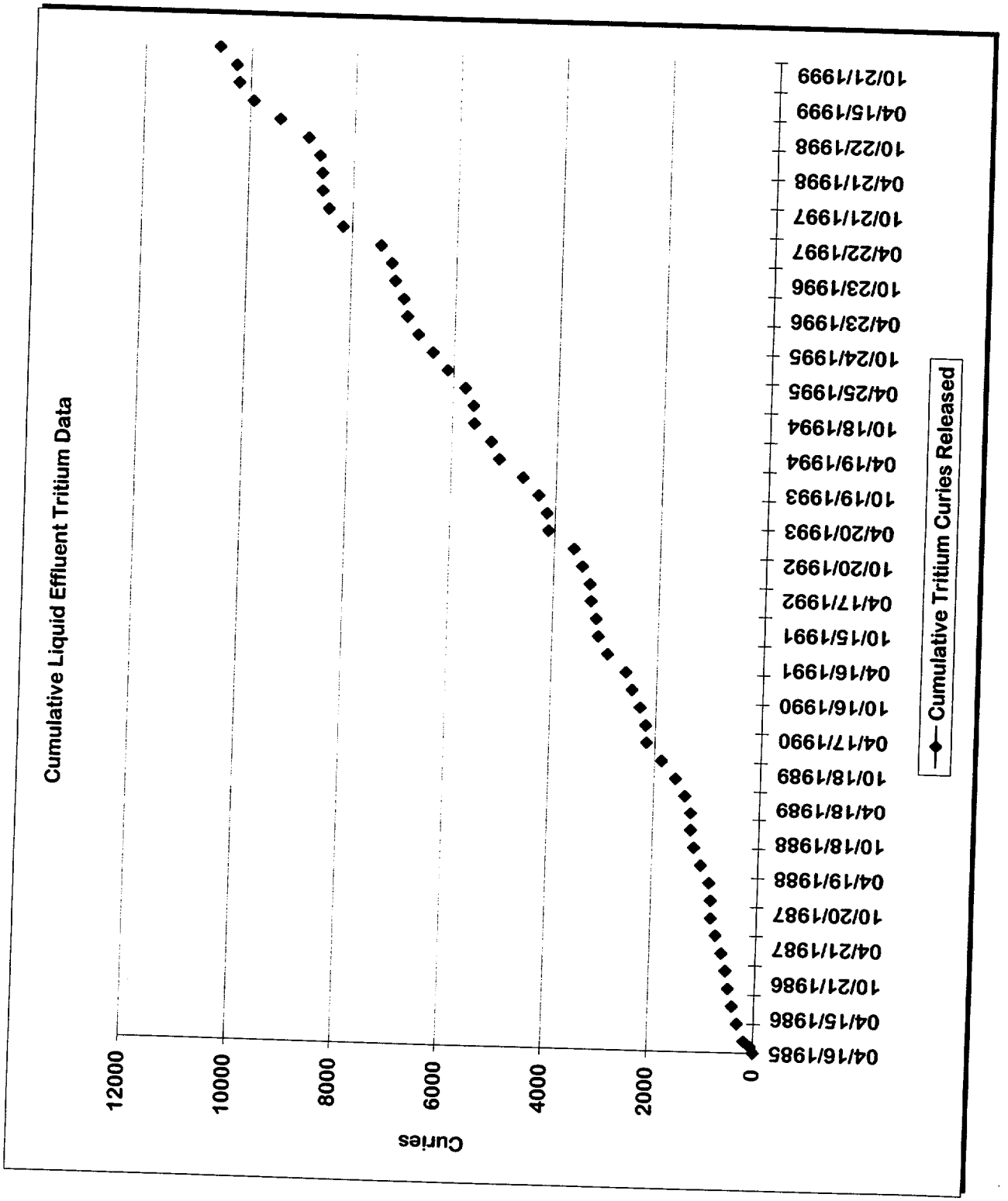
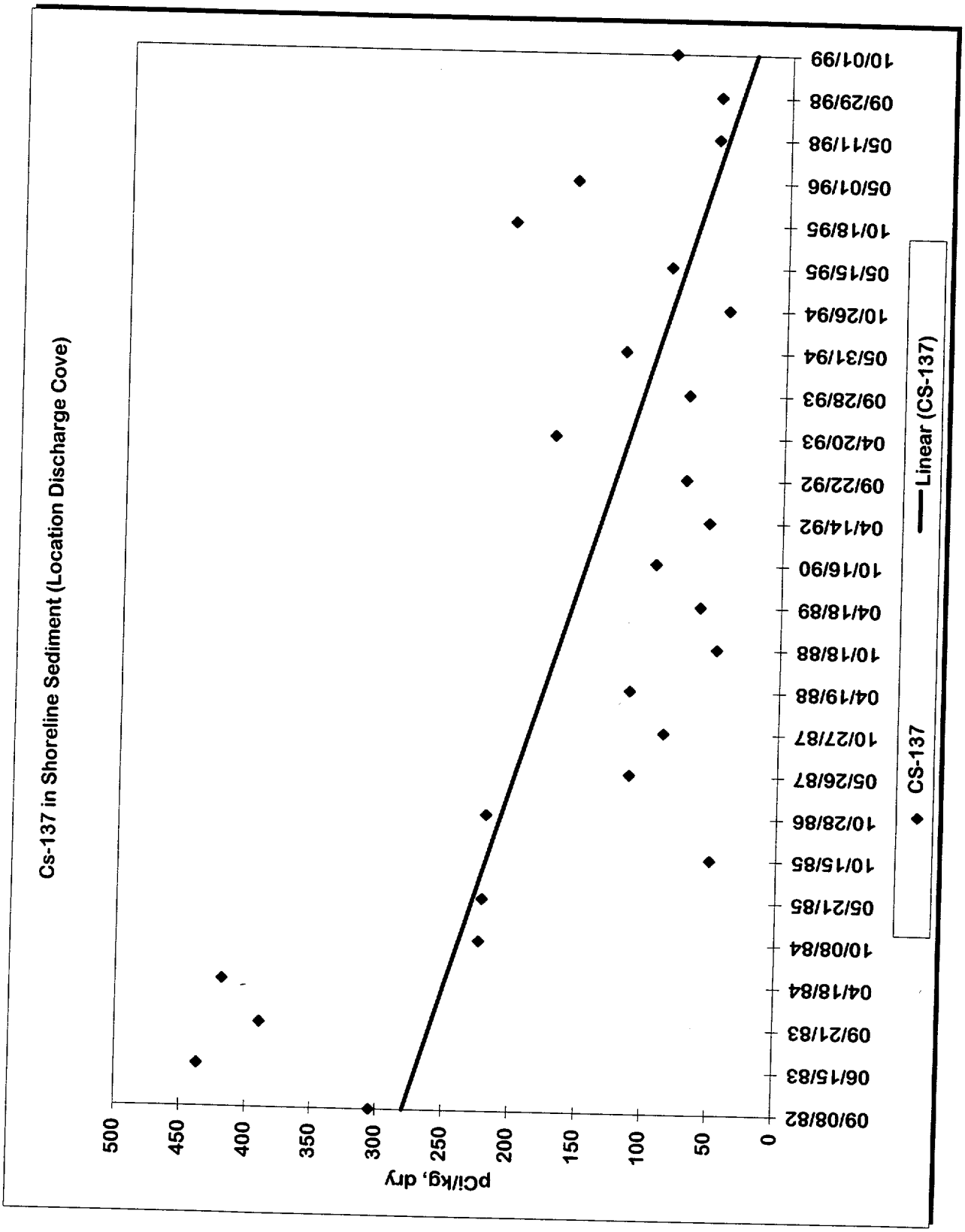

Cumulative Liquid Effluent Tritium Data
Curies
12000
10000
8000
6000
4000
2000
0
04/16/1985
04/15/1986
10/21/1986
04/21/1987
10/20/1987
04/19/1988
10/18/1988
04/18/1989
10/18/1989
04/17/1990
10/16/1990
04/16/1991
10/15/1991
04/17/1992
10/20/1992
04/20/1993
10/19/1993
04/19/1994
10/18/1994
04/25/1995
10/24/1995
04/23/1996
10/23/1996
04/22/1997
10/21/1997
04/21/1998
10/22/1998
04/15/1999
10/21/1999
Cumulative Tritium Curies Released

FIGURE 13


Cs-137 in Shoreline Sediment (Location Discharge Cove)
pCi/kg, dry
500
450
400
350
300
250
200
150
100
50
0
09/08/82
06/15/83
09/21/83
04/18/84
10/08/84
05/21/85
10/15/85
10/28/86
05/26/87
10/27/87
04/19/88
10/18/88
04/18/89
10/16/90
04/14/92
09/22/92
04/20/93
09/28/93
05/31/94
10/26/94
05/15/95
10/18/95
05/01/96
05/11/98
09/29/98
10/01/99
CS-137
Linear (CS-137)

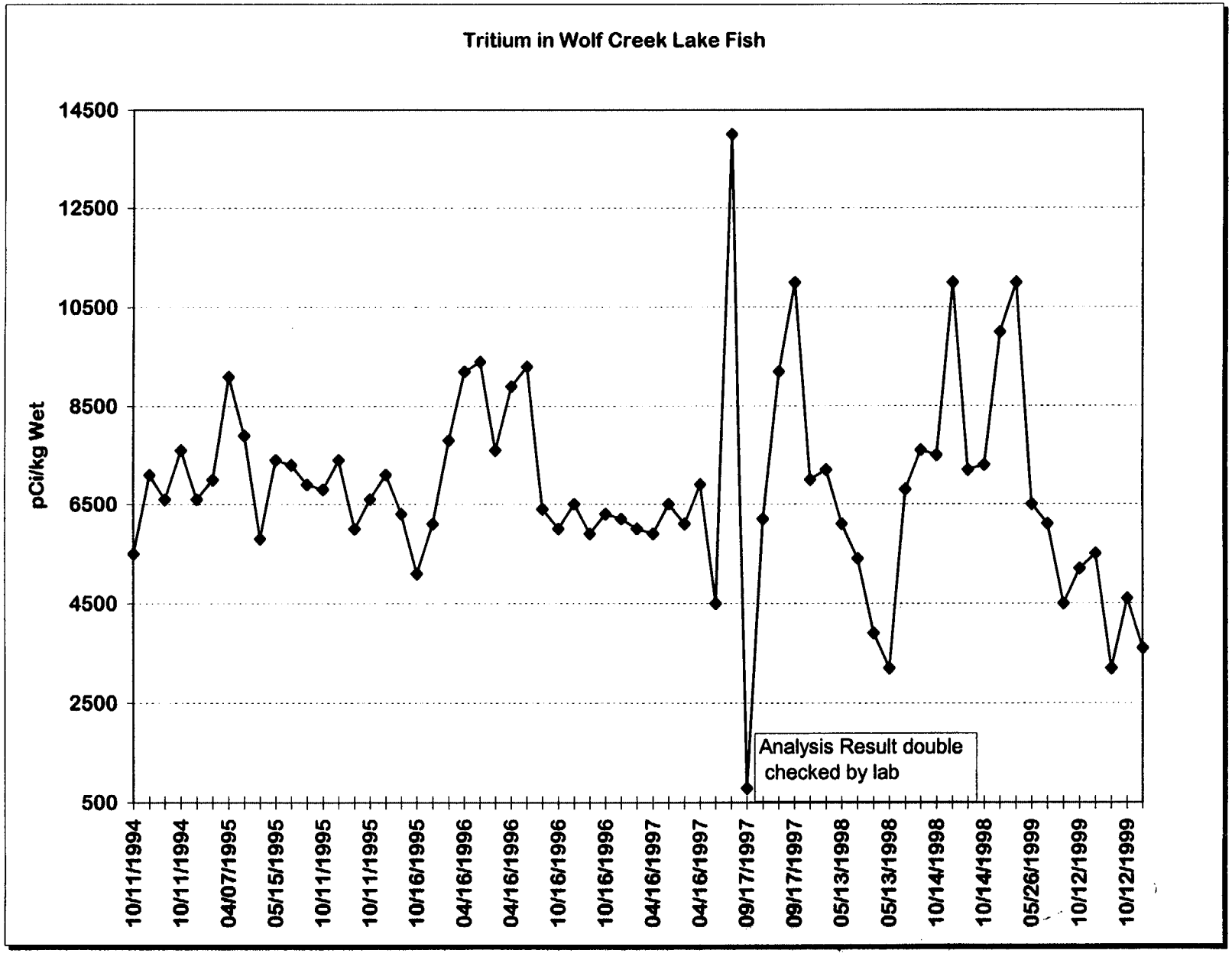

Tritium in Wolf Creek Lake Fish
pCi/kg Wet
14500
12500
10500
8500
6500
4500
2500
500
10/11/1994
10/11/1994
04/07/1995
05/15/1995
10/11/1995
10/11/1995
10/16/1995
04/16/1996
04/16/1996
10/16/1996
10/16/1996
04/16/1997
04/16/1997
09/17/1997
09/17/1997
05/13/1998
05/13/1998
10/14/1998
10/14/1998
05/26/1999
10/12/1999
10/12/1999
Analysis Result double checked by lab

FIGURE 14

Tritium Dose in WCL Surface Water and Released Liquid Tritium Maximum Organ Dose
REMP DOSE
MAX ORGAN DOSE (RELEASED)
ANNUAL DOSE (mRem)
0.600
0.500
0.400
0.300
0.200
0.100
0.000
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
YEAR

FIGURE 15

Appendix A

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 1999

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 **
						Station No. 40	
Air Particulate ($X10^{-3}$ pCi/Cu.M.)	Gross Beta (260)	10	25 (208/208) (9.8-48)	37 2.1 miles NNW	26 (52/52) (14-48)	26 (52/52) (14-49)	0
	I-131 (260)	70	- (0/208)	N/A	N/A	- (0/52)	0
	Gamma (20)						
	Be-7	-	83 (16/16) (61-108)	37 2.1 miles NNW	87 (4/4) (76-105)	80 (4/4) (60-92)	0
	K-40	-	4 (1/16)	3 3.0 miles NNE	4 (1/16)	- (0/4)	0
External Radiation (mR/day)						Stations 39 & 40	
	TLD (376)	-	0.215 (360/360) (0.143-0.358)	47 .16 miles S	0.330 (8/8) (0.284-0.358)	0.203 (16/16) (0.175-0.226)	0
Water Surface (pCi/l)						MUSH	
	Gamma (36)		-(0/24)	N/A	N/A	-(0/12)	0
	Tritium (36)	3000	11383 (24/24) (9600-16000)	DC 0.6 miles WNW	11550 (12/12) (9600-16000)	170 (1/12)	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 1999

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 **
Water Ground (pCi/l)	I-131 (20)	1	-(0/16)	N/A	N/A	B-12 -(0/4)	0
	Gamma (20)		-(0/16)	N/A	N/A	-(0/4)	0
	Tritium (20)	3000	-(0/16)	N/A	N/A	-(0/4)	0
Water Drinking (pCi/l)	I-131 (25)	1	-(0-12)	N/A	N/A	BW-15 -(0/13)	0
	Gross Beta (25)	4	6.1 (12/12) (3.1-20.0)	LW-40 >10.0 miles SSE	6.1 (12/12) (3.1-20.0)	6.2 (13/13) (4.0-19.0)	0
	Gamma (25)		-(0/12)	N/A	N/A	-(0/13)	0
	Tritium (8)	2000	-(0/4)	N/A	N/A	180 (1/4)	0
Shoreline Sediment (pCi/kg dry)	Gamma (8)					JRR	
	Be-7	-	1520 (1/6)	DC 0.6 miles WNW	1520 (1/6)	791 (1/2)	0
	K-40	-	9077 (6/6) (5640-12200)	MUDS 1.5 miles WNW	11000 (2/2) (9800-12200)	9070 (2/2) (7940-10200)	0
	Cs-137	180	187.3 (2/6) (88.5-286)	EEA 3.0 miles NNW	286 (1/2)	66.2 (2/2) (52.2-80.3)	0
	Ra-226	-	2003 (6/6) (1050-2830)	MUDS 1.5 miles WNW	2780 (2/2) (2730-2830)	2220 (2/2) (2210-2230)	0
	Th-228	-	1022 (6/6) (654-1530)	MUDS 1.5 miles WNW	1335 (2/2) (1140-1530)	1186 (2/2) (982-1390)	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 1999

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 **
Fish (pCi/kg wet)	Gamma (15)					JRR	
	K-40	-	3225 (10/10) (2520-3620)	WCL 0.6 miles	3225 (10/10) (2520-3620)	3252 (5/5) (3080-3410)	0
	Cs-137	150	31 (2/10) (21.8-40.7)	WCL 0.6 miles	31 (2/10) (21.8-40.7)	- (0/5)	0
	Tritium (15)	-	6020 (10/10) (3200-11000)	WCL 0.6 miles	6020 (10/10) (3200-11000)	- (0/5)	0
Food and Garden Crops (pCi/kg wet)	Gamma (19)					S-4	
	Be-7	-	551 (11/11) (172-2360)	E-1 1.8 miles E	907 (3/3) (172-2360)	477 (8/8) (101-913)	0
	K-40	-	4871 (11/11) (2980-7450)	E-1 1.8 miles E	5557 (3/3) (3000-7450)	4736 (8/8) (3130-8370)	0
	Cs-137	80	12.4 (1/11)	F-1 1.8 miles ESE	12.4 (1/3)	- (0/8)	0
	Th-228	-	35.8 (1/11)	G-1 1.6 miles SE	35.8 (1/5)	- (0/8)	0
Feed & Forage (pCi/kg wet)	Gamma (4)					NR-U1	
	K-40	-	6853 (3/3) (2690-15000)	NR-D2 >10 miles S	8935 (2/2) (2870-15000)	2940 (1/1)	0

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

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

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

Location of Facility: Coffey County, Kansas Reporting Period: Annual 1999

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 **
Bottom Sediment (pCi/kg dry)	Gamma (5)					JRR	
	Be-7	-	660 (3/3) (454-838)	DC 0.6 miles WNW	660 (3/3) (454-838)	538 (1/2)	0
	K-40	-	10770 (3/3) (9910-11800)	DC 0.6 miles WNW	10770 (3/3) (9910-11800)	15400 (2/2) (14900-15900)	0
	Co-60	-	573 (3/3) (525-663)	DC 0.6 miles WNW	573 (3/3) (525-663)	- (0/2)	0
	Sb-125	-	363 (1/3)	DC 0.6 miles WNW	363 (1/3)	- (0/2)	0
	Cs-137	-	263 (3/3) (220-307)	DC 0.6 miles WNW	263 (3/3) (220-307)	145 (2/2) (129-161)	0
	Ra-226	-	1937 (3/3) (1480-2460)	DC 0.6 miles WNW	1937 (3/3) (1480-2460)	2005 (2/2) (1830-2180)	0
	Th-228	-	1156 (3/3) (998-1340)	DC 0.6 miles WNW	1156 (3/3) (998-1340)	1335 (2/2) (1240-1430)	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 1999

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 **
Vegetation Aquatic (pCi/kg wet)	Gamma (5)					No Control	
	Be-7	-	1009 (4/5) (465-2260)	DC ALT 1.5 miles NW	2260 (1/1)		0
	K-40	-	2351 (5/5) (923-3600)	DC 0.6 miles WNW	3315 (2/2) (3030-3600)		0
	Co-58	-	73.7 (2/5) (37.4-110)	DC 0.6 miles WNW	73.7 (2/2) (37.4-110)		0
	Co-60	-	26.6 (2/5) (15.9-37.2)	DC 0.6 miles WNW	26.6 (2/2) (15.9-37.2)		0
	Cs-137	-	25.5 (3/5) (13.4-40.1)	DC 0.6 miles WNW	31.6 (2/2) (23-40.1)		0
	Ra-226	-	201 (3/5) (177-228)	DC ALT 1.5 miles NW	228 (1/1)		0
	Th-228	-	103.1 (4/5) (64.4-156)	DC 0.6 miles WNW	137 (2/2) (118-156)		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 1999

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 **
Vegetation Terrestrial (pCi/kg wet)	Gamma (4)					No Control	
	Be-7	-	7718 (4/4) (2690-19300)	MUDS 1.5 miles WNW	11730 (2/2) (4160-19300)		0
	K-40	-	6590 (4/4) (1030-13900)	EEA 3.0 miles NNW	10355 (2/2) (6810-13900)		0
Soil (pCi/kg dry)	Gamma (5)					No Control	
	Be-7	-	1006 (2/5) (672-1340)	EEA 3.0 miles NNW	1340 (1/3)		0
	K-40	-	10582 (5/5) (9210-11500)	MUDS 1.5 miles WNW	11050 (2/2) (11000-11100)		0
	Cs-137	-	212 (5/5) (124-404)	MUDS 1.5 miles WNW	300 (2/2) (195-404)		0
	Ra-226	-	1764 (5/5) (1500-1940)	MUDS 1.5 miles WNW	1790 (2/2) (1780-1800)		0
	Th-228	-	1126 (5/5) (1010-1330)	MUDS 1.5 miles WNW	1225 (2/2) (1120-1330)		0

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

Appendix B

1999 Individual Sample Results

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 02

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
0106*	0113	2.80E 08	01/19	L.T. 1. E-02
0106	0113	2.80E 08	01/18	L.T. 2. E-02
0113	0120	2.50E 08	01/25	L.T. 1. E-02
0120	0128	3.40E 08	02/01	L.T. 1. E-02
0128	0203	2.70E 08	02/05	L.T. 9. E-03
0203	0210	3.00E 08	02/16	L.T. 1. E-02
0210	0216	2.60E 08	02/18	L.T. 1. E-02
0216	0225	3.80E 08	02/26	L.T. 7. E-03
0225	0303	2.60E 08	03/05	L.T. 1. E-02
0303	0311	3.50E 08	03/15	L.T. 1. E-02
0311	0317	2.50E 08	03/22	L.T. 3. E-02
0317	0323	2.60E 08	03/24	L.T. 2. E-02
0323	0331	3.50E 08	04/01	L.T. 8. E-03
0331	0407	3.00E 08	04/12	L.T. 1. E-02
0407	0414	3.00E 08	04/15	L.T. 9. E-03
0414	0421	3.00E 08	04/23	L.T. 2. E-02
0421	0428	2.90E 08	04/30	L.T. 1. E-02
0428	0505	3.00E 08	05/08	L.T. 2. E-02
0505	0513	3.40E 08	05/17	L.T. 1. E-02
0513	0519	2.60E 08	05/21	L.T. 1. E-02
0519	0526	3.10E 08	05/28	L.T. 9. E-03
0519*	0526	3.10E 08	06/01	L.T. 2. E-02
0526	0602	3.00E 08	06/07	L.T. 2. E-02
0602	0609	3.10E 08	06/14	L.T. 1. E-02
0609	0617	3.30E 08	06/22	L.T. 1. E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 02

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
0617	0624	3.00E 08	06/29	L.T. 1. E-02
0624	0630	2.60E 08	07/02	L.T. 1. E-02
0630	0707	3.10E 08	07/10	L.T. 1. E-02
0707	0714	2.90E 08	07/15	L.T. 1. E-02
0714	0721	3.00E 08	07/22	L.T. 1. E-02
0721	0728	2.80E 08	07/30	L.T. 2. E-02
0728	0804	2.90E 08	08/07	L.T. 2. E-02
0804	0811	2.90E 08	08/13	L.T. 9. E-03
0811	0818	3.00E 08	08/19	L.T. 1. E-02
0818	0825	3.10E 08	08/27	L.T. 1. E-02
0825	0831	2.60E 08	09/02	L.T. 1. E-02
0831	0908	3.20E 08	09/13	L.T. 2. E-02
0908	0915	3.00E 08	09/17	L.T. 9. E-03
0915	0922	2.90E 08	09/25	L.T. 1. E-02
0922	0929	2.90E 08	10/02	L.T. 2. E-02
0929	1006	3.00E 08	10/10	L.T. 2. E-02
1006	1014	3.30E 08	10/18	L.T. 1. E-02
1006*	1014	3.30E 08	10/19	L.T. 2. E-02
1014	1020	2.60E 08	10/23	L.T. 1. E-02
1020	1027	2.90E 08	10/29	L.T. 1. E-02
1027	1103	2.90E 08	11/08	L.T. 2. E-02
1103	1111	3.40E 08	11/15	L.T. 2. E-02
1111	1118	2.90E 08	11/22	L.T. 2. E-02
1118	1124	2.50E 08	11/29	L.T. 2. E-02
1124	1201	3.00E 08	12/04	L.T. 1. E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 02

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
1201	1208	3.00E 08	12/10	L.T. 1. E-02
1208	1215	3.00E 08	12/20	L.T. 2. E-02
1215	1222	3.00E 08	12/24	L.T. 9. E-03
1222	1229	3.00E 08	01/03	L.T. 1. E-02
1229	0105	3.10E 08	01/07	L.T. 1. E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 03

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
0106	0113	2.90E 08	01/18	L.T. 2. E-02
0113	0120	2.70E 08	01/25	L.T. 1. E-02
0120	0128	3.20E 08	02/01	L.T. 1. E-02
0128	0203	2.60E 08	02/05	L.T. 1. E-02
0203	0210	2.70E 08	02/16	L.T. 2. E-02
0203*	0210	2.70E 08	02/17	L.T. 1. E-02
0210	0216	2.70E 08	02/18	L.T. 1. E-02
0216	0225	4.10E 08	02/26	L.T. 6. E-03
0225	0303	2.70E 08	03/05	L.T. 1. E-02
0303	0311	3.60E 08	03/15	L.T. 1. E-02
0311	0317	2.60E 08	03/22	L.T. 3. E-02
0317	0323	2.70E 08	03/24	L.T. 1. E-02
0323	0331	3.60E 08	04/01	L.T. 8. E-03
0331	0407	3.10E 08	04/12	L.T. 1. E-02
0407	0414	3.00E 08	04/15	L.T. 9. E-03
0414	0421	3.20E 08	04/23	L.T. 1. E-02
0421	0428	2.80E 08	04/30	L.T. 1. E-02
0428	0505	2.70E 08	05/08	L.T. 2. E-02
0505	0513	3.20E 08	05/17	L.T. 1. E-02
0513	0519	2.60E 08	05/21	L.T. 1. E-02
0519	0526	3.10E 08	05/28	L.T. 9. E-03
0526	0602	2.90E 08	06/07	L.T. 2. E-02
0602	0609	3.00E 08	06/14	L.T. 1. E-02
0609	0617	3.20E 08	06/22	L.T. 1. E-02
0617	0624	2.90E 08	06/29	L.T. 1. E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 03

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
0617*	0624	2.90E 08	06/30	L.T. 2. E-02
0624	0630	2.60E 08	07/02	L.T. 1. E-02
0630	0707	3.10E 08	07/10	L.T. 1. E-02
0707	0714	2.90E 08	07/15	L.T. 1. E-02
0714	0721	3.00E 08	07/22	L.T. 1. E-02
0721	0728	2.90E 08	07/30	L.T. 2. E-02
0728	0804	3.00E 08	08/07	L.T. 2. E-02
0804	0811	3.00E 08	08/13	L.T. 9. E-03
0811	0818	3.00E 08	08/19	L.T. 1. E-02
0818	0825	3.10E 08	08/27	L.T. 1. E-02
0825	0831	2.70E 08	09/02	L.T. 1. E-02
0831	0908	3.30E 08	09/13	L.T. 2. E-02
0908	0915	3.10E 08	09/17	L.T. 9. E-03
0915	0922	2.90E 08	09/25	L.T. 1. E-02
0922	0929	3.00E 08	10/02	L.T. 2. E-02
0929	1006	3.10E 08	10/10	L.T. 2. E-02
1006	1014	3.40E 08	10/18	L.T. 1. E-02
1014	1020	2.60E 08	10/23	L.T. 1. E-02
1020	1027	3.00E 08	10/29	L.T. 1. E-02
1027	1103	3.00E 08	11/08	L.T. 2. E-02
1103	1111	3.50E 08	11/15	L.T. 2. E-02
1103*	1111	3.50E 08	11/16	L.T. 1. E-02
1111	1118	3.00E 08	11/22	L.T. 2. E-02
1118	1124	2.60E 08	11/29	L.T. 2. E-02
1124	1201	3.00E 08	12/04	L.T. 1. E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 03

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
1201	1208	3.10E 08	12/10	L.T. 1. E-02
1208	1215	3.00E 08	12/20	L.T. 2. E-02
1215	1222	3.00E 08	12/24	L.T. 9. E-03
1222	1229	3.00E 08	01/03	L.T. 1. E-02
1229	0105	3.10E 08	01/07	L.T. 1. E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 32

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
0106	0113	2.90E 08	01/18	L.T. 2. E-02
0113	0120	2.80E 08	01/25	L.T. 6. E-03
0120	0128	3.20E 08	02/01	L.T. 1. E-02
0128	0203	2.60E 08	02/05	L.T. 1. E-02
0203	0210	2.80E 08	02/16	L.T. 2. E-02
0210	0216	2.70E 08	02/18	L.T. 1. E-02
0216	0225	4.00E 08	02/26	L.T. 6. E-03
0225	0303	2.80E 08	03/05	L.T. 1. E-02
0303	0311	3.70E 08	03/15	L.T. 1. E-02
0303*	0311	3.70E 08	03/16	L.T. 1. E-02
0311	0317	2.60E 08	03/22	L.T. 3. E-02
0317	0323	2.60E 08	03/24	L.T. 2. E-02
0323	0331	3.50E 08	04/01	L.T. 8. E-03
0331	0407	3.00E 08	04/12	L.T. 1. E-02
0407	0414	3.10E 08	04/15	L.T. 9. E-03
0414	0421	3.10E 08	04/23	L.T. 1. E-02
0421	0428	3.00E 08	04/30	L.T. 1. E-02
0428	0505	3.20E 08	05/08	L.T. 1. E-02
0505	0513	3.50E 08	05/17	L.T. 1. E-02
0513	0519	2.60E 08	05/21	L.T. 1. E-02
0519	0526	3.10E 08	05/28	L.T. 9. E-03
0526	0602	2.90E 08	06/07	L.T. 2. E-02
0602	0609	3.10E 08	06/14	L.T. 1. E-02
0609	0617	3.30E 08	06/22	L.T. 1. E-02
0617	0624	2.90E 08	06/29	L.T. 1. E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 32

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
0624	0630	2.60E 08	07/02	L.T. 1. E-02
0630	0707	3.10E 08	07/10	L.T. 1. E-02
0707	0714	2.90E 08	07/15	L.T. 1. E-02
0714	0721	3.10E 08	07/22	L.T. 9. E-03
0714*	0721	3.10E 08	07/24	L.T. 2. E-02
0721	0728	2.90E 08	07/30	L.T. 2. E-02
0728	0804	3.00E 08	08/07	L.T. 2. E-02
0804	0811	3.00E 08	08/13	L.T. 9. E-03
0811	0818	3.00E 08	08/19	L.T. 1. E-02
0818	0825	3.10E 08	08/27	L.T. 1. E-02
0825	0831	2.60E 08	09/02	L.T. 1. E-02
0831	0908	3.40E 08	09/13	L.T. 2. E-02
0908	0915	2.90E 08	09/17	L.T. 1. E-02
0915	0922	2.90E 08	09/25	L.T. 1. E-02
0922	0929	3.00E 08	10/02	L.T. 2. E-02
0929	1006	3.00E 08	10/10	L.T. 2. E-02
1006	1014	3.40E 08	10/18	L.T. 1. E-02
1014	1020	2.70E 08	10/23	L.T. 1. E-02
1020	1027	3.00E 08	10/29	L.T. 1. E-02
1027	1103	2.90E 08	11/08	L.T. 2. E-02
1103	1111	3.50E 08	11/15	L.T. 2. E-02
1111	1118	3.00E 08	11/22	L.T. 2. E-02
1118	1124	2.60E 08	11/29	L.T. 2. E-02
1124	1201	3.10E 08	12/04	L.T. 1. E-02
1201	1208	3.10E 08	12/10	L.T. 1. E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 32

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
1201*	1208	3.10E 08	12/13	L.T. 2. E-02
1208	1215	3.00E 08	12/20	L.T. 2. E-02
1215	1222	2.90E 08	12/24	L.T. 1. E-02
1222	1229	3.10E 08	01/03	L.T. 1. E-02
1229	0105	3.10E 08	01/07	L.T. 1. E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 37

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
0106	0113	3.20E 08	01/18	L.T. 2. E-02
0113	0120	3.10E 08	01/25	L.T. 1. E-02
0120	0128	3.50E 08	02/01	L.T. 1. E-02
0128	0203	2.70E 08	02/05	L.T. 9. E-03
0203	0210	2.90E 08	02/16	L.T. 1. E-02
0210	0216	2.60E 08	02/18	L.T. 1. E-02
0216	0225	3.70E 08	02/26	L.T. 7. E-03
0225	0303	2.60E 08	03/05	L.T. 1. E-02
0303	0311	3.30E 08	03/15	L.T. 1. E-02
0311	0317	2.50E 08	03/22	L.T. 3. E-02
0317	0323	2.60E 08	03/24	L.T. 2. E-02
0323	0331	3.40E 08	04/01	L.T. 8. E-03
0331*	0407	2.80E 08	04/13	L.T. 2. E-02
0331	0407	2.80E 08	04/12	L.T. 2. E-02
0407	0414	2.90E 08	04/15	L.T. 9. E-03
0414	0421	2.90E 08	04/23	L.T. 2. E-02
0421	0428	2.70E 08	04/30	L.T. 1. E-02
0428	0505	2.80E 08	05/08	L.T. 2. E-02
0505	0513	3.10E 08	05/17	L.T. 1. E-02
0513	0519	2.60E 08	05/21	L.T. 1. E-02
0519	0526	3.10E 08	05/28	L.T. 9. E-03
0526	0602	3.00E 08	06/07	L.T. 2. E-02
0602	0609	3.00E 08	06/14	L.T. 1. E-02
0609	0617	3.20E 08	06/22	L.T. 1. E-02
0617	0624	2.80E 08	06/29	L.T. 1. E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 37

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
0624	0630	2.60E 08	07/02	L.T. 1. E-02
0630	0707	3.20E 08	07/10	L.T. 1. E-02
0707	0714	3.00E 08	07/15	L.T. 1. E-02
0714	0721	3.00E 08	07/22	L.T. 1. E-02
0721	0728	3.90E 08	07/30	L.T. 1. E-02
0728	0804	3.20E 08	08/07	L.T. 2. E-02
0804	0811	3.00E 08	08/13	L.T. 9. E-03
0811	0818	3.00E 08	08/19	L.T. 1. E-02
0811*	0818	3.00E 08	08/21	L.T. 2. E-02
0818	0825	3.20E 08	08/27	L.T. 1. E-02
0825	0831	2.70E 08	09/02	L.T. 1. E-02
0831	0908	3.50E 08	09/13	L.T. 2. E-02
0908	0915	3.10E 08	09/17	L.T. 9. E-03
0915	0922	3.00E 08	09/25	L.T. 1. E-02
0922	0929	3.00E 08	10/02	L.T. 2. E-02
0929	1006	3.20E 08	10/10	L.T. 2. E-02
1006	1014	3.40E 08	10/18	L.T. 1. E-02
1014	1020	2.70E 08	10/23	L.T. 1. E-02
1020	1027	3.10E 08	10/29	L.T. 1. E-02
1027	1103	2.90E 08	11/08	L.T. 2. E-02
1103	1111	3.40E 08	11/15	L.T. 2. E-02
1111	1118	2.90E 08	11/22	L.T. 2. E-02
1118	1124	2.60E 08	11/29	L.T. 2. E-02
1124	1201	2.80E 08	12/04	L.T. 1. E-02
1201	1208	3.10E 08	12/10	L.T. 1. E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 37

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
1208	1215	3.00E 08	12/20	L.T. 2. E-02
1215	1222	3.00E 08	12/24	L.T. 9. E-03
1222	1229	3.00E 08	01/03	L.T. 1. E-02
1229*	0105	3.10E 08	01/10	L.T. 1. E-02
1229	0105	3.10E 08	01/07	L.T. 1. E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 40

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
0106	0113	2.90E 08	01/18	L.T. 2. E-02
0113	0120	2.80E 08	01/25	L.T. 1. E-02
0120	0128	3.30E 08	02/01	L.T. 1. E-02
0128	0203	2.60E 08	02/05	L.T. 7. E-03
0203	0210	2.90E 08	02/16	L.T. 1. E-02
0210	0216	2.50E 08	02/18	L.T. 9. E-03
0216	0225	3.70E 08	02/26	L.T. 5. E-03
0225	0303	2.60E 08	03/05	L.T. 8. E-03
0303	0311	3.30E 08	03/15	L.T. 1. E-02
0311	0317	2.40E 08	03/22	L.T. 2. E-02
0317	0323	2.60E 08	03/24	L.T. 1. E-02
0323	0331	3.30E 08	04/01	L.T. 6. E-03
0331	0407	2.80E 08	04/12	L.T. 1. E-02
0407	0414	2.80E 08	04/15	L.T. 7. E-03
0414	0421	2.90E 08	04/23	L.T. 1. E-02
0421	0428	2.70E 08	04/30	L.T. 9. E-03
0428	0505	2.80E 08	05/08	L.T. 1. E-02
0428*	0505	2.80E 08	05/10	L.T. 1. E-02
0505	0513	3.40E 08	05/17	L.T. 1. E-02
0513	0519	2.60E 08	05/21	L.T. 8. E-03
0519	0526	3.10E 08	05/28	L.T. 7. E-03
0526	0602	3.00E 08	06/07	L.T. 1. E-02
0602	0609	3.10E 08	06/14	L.T. 1. E-02
0609	0617	3.30E 08	06/22	L.T. 9. E-03
0617	0624	3.00E 08	06/29	L.T. 1. E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 40

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
0624	0630	2.60E 08	07/02	L.T. 9. E-03
0630	0707	3.10E 08	07/10	L.T. 1. E-02
0707	0714	2.90E 08	07/15	L.T. 8. E-03
0714	0721	3.00E 08	07/22	L.T. 7. E-03
0721	0728	3.00E 08	07/30	L.T. 1. E-02
0728	0804	3.00E 08	08/07	L.T. 1. E-02
0804	0811	3.00E 08	08/13	L.T. 7. E-03
0811	0818	3.00E 08	08/19	L.T. 7. E-03
0818	0825	3.10E 08	08/27	L.T. 8. E-03
0825	0831	2.60E 08	09/02	L.T. 9. E-03
0831	0908	3.30E 08	09/13	L.T. 1. E-02
0908	0915	3.10E 08	09/17	L.T. 7. E-03
0908*	0915	3.10E 08	09/20	L.T. 1. E-02
0915	0922	3.00E 08	09/25	L.T. 1. E-02
0922	0929	3.10E 08	10/02	L.T. 1. E-02
0929	1006	3.00E 08	10/10	L.T. 1. E-02
1006	1014	3.40E 08	10/18	L.T. 1. E-02
1014	1020	2.70E 08	10/23	L.T. 8. E-03
1020	1027	3.00E 08	10/29	L.T. 9. E-03
1027	1103	3.00E 08	11/08	L.T. 1. E-02
1103	1111	3.50E 08	11/15	L.T. 1. E-02
1111	1118	3.00E 08	11/22	L.T. 1. E-02
1118	1124	2.60E 08	11/29	L.T. 2. E-02
1124	1201	3.00E 08	12/04	L.T. 9. E-03
1201	1208	3.10E 08	12/10	L.T. 9. E-03

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Charcoal Filters

STATION NUMBER 40

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	I-131 Activity (pCi/Cu.M.)
1208	1215	3.00E 08	12/20	L.T. 1. E-02
1215	1222	3.00E 08	12/24	L.T. 8. E-03
1222	1229	3.00E 08	01/03	L.T. 1. E-02
1229	0105	3.10E 08	01/07	L.T. 7. E-03

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 02

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
0106*	0113	2.80E 08	01/21	3.6 +-0.4 E-02
0106	0113	2.80E 08	01/20	3.3 +-0.3 E-02
0113	0120	2.50E 08	01/30	2.6 +-0.3 E-02
0120	0128	3.40E 08	02/08	2.3 +-0.3 E-02
0128	0203	2.70E 08	02/11	2.3 +-0.3 E-02
0203	0210	3.00E 08	02/18	1.7 +-0.3 E-02
0210	0216	2.60E 08	02/24	1.9 +-0.3 E-02
0216	0225	3.80E 08	03/02	2.0 +-0.2 E-02
0225	0303	2.60E 08	03/12	1.9 +-0.3 E-02
0303	0311	3.50E 08	03/17	1.7 +-0.2 E-02
0311	0317	2.50E 08	04/02	2.1 +-0.3 E-02
0317	0323	2.60E 08	03/31	1.9 +-0.3 E-02
0323	0331	3.50E 08	04/09	2.4 +-0.3 E-02
0331	0407	3.00E 08	04/16	1.8 +-0.3 E-02
0407	0414	3.00E 08	04/22	1.7 +-0.3 E-02
0414	0421	3.00E 08	05/01	2.0 +-0.3 E-02
0421	0428	2.90E 08	05/07	1.2 +-0.2 E-02
0428	0505	3.00E 08	05/15	1.6 +-0.2 E-02
0505	0513	3.40E 08	05/28	1.3 +-0.2 E-02
0513	0519	2.60E 08	05/27	1.8 +-0.3 E-02
0519	0526	3.10E 08	06/04	1.7 +-0.2 E-02
0519*	0526	3.10E 08	06/04	1.6 +-0.2 E-02
0526	0602	3.00E 08	06/11	2.6 +-0.3 E-02
0602	0609	3.10E 08	06/16	1.6 +-0.2 E-02
0609	0617	3.30E 08	06/23	1.5 +-0.2 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 02

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
0617	0624	3.00E 08	07/06	2.2 +-0.3 E-02
0624	0630	2.60E 08	07/14	1.2 +-0.3 E-02
0630	0707	3.10E 08	07/16	2.0 +-0.3 E-02
0707	0714	2.90E 08	07/23	1.6 +-0.3 E-02
0714	0721	3.00E 08	07/26	2.0 +-0.3 E-02
0721	0728	2.80E 08	08/11	2.5 +-0.3 E-02
0728	0804	2.90E 08	08/18	1.9 +-0.3 E-02
0804	0811	2.90E 08	08/23	3.6 +-0.4 E-02
0811	0818	3.00E 08	08/26	2.2 +-0.3 E-02
0818	0825	3.10E 08	09/07	2.9 +-0.3 E-02
0825	0831	2.60E 08	09/08	4.1 +-0.5 E-02
0831	0908	3.20E 08	09/14	2.6 +-0.3 E-02
0908	0915	3.00E 08	10/05	2.3 +-0.3 E-02
0915	0922	2.90E 08	10/11	2.9 +-0.4 E-02
0922	0929	2.90E 08	10/11	2.6 +-0.3 E-02
0929	1006	3.00E 08	10/20	2.1 +-0.3 E-02
1006	1014	3.30E 08	10/29	3.7 +-0.3 E-02
1006*	1014	3.30E 08	11/01	4.0 +-0.3 E-02
1014	1020	2.60E 08	11/05	2.1 +-0.2 E-02
1020	1027	2.90E 08	11/15	3.2 +-0.3 E-02
1027	1103	2.90E 08	11/16	3.4 +-0.3 E-02
1103	1111	3.40E 08	11/22	3.1 +-0.3 E-02
1111	1118	2.90E 08	12/15	4.4 +-0.4 E-02
1118	1124	2.50E 08	12/14	4.7 +-0.4 E-02
1124	1201	3.00E 08	12/13	2.8 +-0.3 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 02

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
1201	1208	3.00E 08	12/27	3.6 +-0.4 E-02
1208	1215	3.00E 08	12/30	3.7 +-0.4 E-02
1215	1222	3.00E 08	12/30	2.5 +-0.4 E-02
1222	1229	3.00E 08	01/13	3.2 +-0.3 E-02
1229	0105	3.10E 08	01/15	3.9 +-0.4 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 03

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
0106	0113	2.90E 08	01/20	3.6 +-0.3 E-02
0113	0120	2.70E 08	01/30	2.4 +-0.3 E-02
0120	0128	3.20E 08	02/08	2.2 +-0.3 E-02
0128	0203	2.60E 08	02/11	2.4 +-0.3 E-02
0203	0210	2.70E 08	02/18	1.8 +-0.3 E-02
0203*	0210	2.70E 08	02/18	1.6 +-0.3 E-02
0210	0216	2.70E 08	02/24	2.1 +-0.3 E-02
0216	0225	4.10E 08	03/02	1.8 +-0.2 E-02
0225	0303	2.70E 08	03/12	2.0 +-0.3 E-02
0303	0311	3.60E 08	03/17	1.3 +-0.2 E-02
0311	0317	2.60E 08	04/02	1.8 +-0.3 E-02
0317	0323	2.70E 08	03/31	2.0 +-0.3 E-02
0323	0331	3.60E 08	04/09	2.4 +-0.3 E-02
0331	0407	3.10E 08	04/16	1.8 +-0.3 E-02
0407	0414	3.00E 08	04/22	1.8 +-0.3 E-02
0414	0421	3.20E 08	05/01	1.7 +-0.2 E-02
0421	0428	2.80E 08	05/07	1.2 +-0.2 E-02
0428	0505	2.70E 08	05/15	1.4 +-0.3 E-02
0505	0513	3.20E 08	05/28	1.3 +-0.2 E-02
0513	0519	2.60E 08	05/27	2.0 +-0.3 E-02
0519	0526	3.10E 08	06/04	1.6 +-0.2 E-02
0526	0602	2.90E 08	06/11	2.0 +-0.3 E-02
0602	0609	3.00E 08	06/16	1.9 +-0.3 E-02
0609	0617	3.20E 08	06/23	1.7 +-0.3 E-02
0617	0624	2.90E 08	07/06	2.4 +-0.3 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 03

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
0617*	0624	2.90E 08	07/08	2.4 +-0.3 E-02
0624	0630	2.60E 08	07/14	1.7 +-0.3 E-02
0630	0707	3.10E 08	07/16	2.0 +-0.3 E-02
0707	0714	2.90E 08	07/23	2.0 +-0.3 E-02
0714	0721	3.00E 08	07/26	2.1 +-0.3 E-02
0721	0728	2.90E 08	08/11	2.6 +-0.3 E-02
0728	0804	3.00E 08	08/18	2.1 +-0.3 E-02
0804	0811	3.00E 08	08/23	3.4 +-0.3 E-02
0811	0818	3.00E 08	08/26	9.8 +-2.2 E-03
0818	0825	3.10E 08	09/07	2.7 +-0.3 E-02
0825	0831	2.70E 08	09/08	4.5 +-0.5 E-02
0831	0908	3.30E 08	09/14	2.8 +-0.3 E-02
0908	0915	3.10E 08	10/05	2.4 +-0.3 E-02
0915	0922	2.90E 08	10/11	2.9 +-0.4 E-02
0922	0929	3.00E 08	10/11	2.8 +-0.3 E-02
0929	1006	3.10E 08	10/20	2.1 +-0.3 E-02
1006	1014	3.40E 08	10/29	4.1 +-0.3 E-02
1014	1020	2.60E 08	11/02	2.7 +-0.3 E-02
1020	1027	3.00E 08	11/15	3.4 +-0.3 E-02
1027	1103	3.00E 08	11/17	3.0 +-0.3 E-02
1103	1111	3.50E 08	11/22	3.7 +-0.3 E-02
1103*	1111	3.50E 08	11/23	3.4 +-0.3 E-02
1111	1118	3.00E 08	12/15	4.5 +-0.4 E-02
1118	1124	2.60E 08	12/14	4.5 +-0.4 E-02
1124	1201	3.00E 08	12/13	2.9 +-0.3 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 03

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
1201	1208	3.10E 08	12/27	3.2 +-0.4 E-02
1208	1215	3.00E 08	12/30	3.5 +-0.3 E-02
1215	1222	3.00E 08	12/30	2.1 +-0.3 E-02
1222	1229	3.00E 08	01/13	3.2 +-0.3 E-02
1229	0105	3.10E 08	01/15	3.3 +-0.3 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 32

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
0106	0113	2.90E 08	01/20	3.3 +-0.3 E-02
0113	0120	2.80E 08	01/30	2.6 +-0.3 E-02
0120	0128	3.20E 08	02/08	2.2 +-0.3 E-02
0128	0203	2.60E 08	02/11	2.5 +-0.3 E-02
0203	0210	2.80E 08	02/18	1.8 +-0.3 E-02
0210	0216	2.70E 08	02/24	2.1 +-0.3 E-02
0216	0225	4.00E 08	03/02	2.0 +-0.2 E-02
0225	0303	2.80E 08	03/12	1.8 +-0.3 E-02
0303	0311	3.70E 08	03/17	1.5 +-0.2 E-02
0303*	0311	3.70E 08	03/18	1.6 +-0.2 E-02
0311	0317	2.60E 08	04/02	2.2 +-0.3 E-02
0317	0323	2.60E 08	03/31	2.2 +-0.3 E-02
0323	0331	3.50E 08	04/09	2.2 +-0.3 E-02
0331	0407	3.00E 08	04/16	1.9 +-0.3 E-02
0407	0414	3.10E 08	04/22	1.6 +-0.2 E-02
0414	0421	3.10E 08	05/01	1.9 +-0.3 E-02
0421	0428	3.00E 08	05/07	1.3 +-0.2 E-02
0428	0505	3.20E 08	05/15	1.3 +-0.2 E-02
0505	0513	3.50E 08	05/28	1.4 +-0.2 E-02
0513	0519	2.60E 08	05/27	1.9 +-0.3 E-02
0519	0526	3.10E 08	06/04	1.5 +-0.2 E-02
0526	0602	2.90E 08	06/11	2.3 +-0.3 E-02
0602	0609	3.10E 08	06/16	1.4 +-0.2 E-02
0609	0617	3.30E 08	06/23	1.5 +-0.2 E-02
0617	0624	2.90E 08	07/06	2.4 +-0.3 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 32

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
0624	0630	2.60E 08	07/14	1.6 +-0.3 E-02
0630	0707	3.10E 08	07/16	2.0 +-0.3 E-02
0707	0714	2.90E 08	07/23	2.0 +-0.3 E-02
0714	0721	3.10E 08	07/26	2.3 +-0.3 E-02
0714*	0721	3.10E 08	07/27	2.1 +-0.3 E-02
0721	0728	2.90E 08	08/11	2.8 +-0.3 E-02
0728	0804	3.00E 08	08/18	1.9 +-0.3 E-02
0804	0811	3.00E 08	08/23	3.8 +-0.4 E-02
0811	0818	3.00E 08	08/26	2.3 +-0.3 E-02
0818	0825	3.10E 08	09/07	3.0 +-0.3 E-02
0825	0831	2.60E 08	09/08	4.5 +-0.5 E-02
0831	0908	3.40E 08	09/14	2.6 +-0.3 E-02
0908	0915	2.90E 08	10/05	2.4 +-0.3 E-02
0915	0922	2.90E 08	10/11	2.7 +-0.4 E-02
0922	0929	3.00E 08	10/11	2.6 +-0.3 E-02
0929	1006	3.00E 08	10/20	2.5 +-0.3 E-02
1006	1014	3.40E 08	10/29	4.0 +-0.3 E-02
1014	1020	2.70E 08	11/02	2.7 +-0.3 E-02
1020	1027	3.00E 08	11/15	3.5 +-0.3 E-02
1027	1103	2.90E 08	11/16	3.6 +-0.3 E-02
1103	1111	3.50E 08	11/22	3.6 +-0.3 E-02
1111	1118	3.00E 08	12/15	4.5 +-0.4 E-02
1118	1124	2.60E 08	12/14	4.8 +-0.4 E-02
1124	1201	3.10E 08	12/13	3.3 +-0.3 E-02
1201	1208	3.10E 08	12/27	3.9 +-0.4 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 32

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
1201*	1208	3.10E 08	12/28	3.7 +-0.4 E-02
1208	1215	3.00E 08	12/30	3.7 +-0.3 E-02
1215	1222	2.90E 08	12/30	2.7 +-0.4 E-02
1222	1229	3.10E 08	01/13	3.1 +-0.3 E-02
1229	0105	3.10E 08	01/15	4.0 +-0.4 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 37

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
0106	0113	3.20E 08	01/20	3.5 +-0.3 E-02
0113	0120	3.10E 08	01/30	2.4 +-0.3 E-02
0120	0128	3.50E 08	02/08	2.4 +-0.3 E-02
0128	0203	2.70E 08	02/11	2.7 +-0.3 E-02
0203	0210	2.90E 08	02/18	1.8 +-0.3 E-02
0210	0216	2.60E 08	02/24	2.0 +-0.3 E-02
0216	0225	3.70E 08	03/02	1.9 +-0.2 E-02
0225	0303	2.60E 08	03/12	1.7 +-0.3 E-02
0303	0311	3.30E 08	03/17	1.6 +-0.2 E-02
0311	0317	2.50E 08	04/02	1.7 +-0.3 E-02
0317	0323	2.60E 08	03/31	1.9 +-0.3 E-02
0323	0331	3.40E 08	04/09	2.0 +-0.2 E-02
0331*	0407	2.80E 08	04/16	2.1 +-0.3 E-02
0331	0407	2.80E 08	04/16	1.6 +-0.3 E-02
0407	0414	2.90E 08	04/22	1.4 +-0.2 E-02
0414	0421	2.90E 08	05/01	2.1 +-0.3 E-02
0421	0428	2.70E 08	05/07	1.4 +-0.2 E-02
0428	0505	2.80E 08	05/15	1.4 +-0.2 E-02
0505	0513	3.10E 08	05/28	1.6 +-0.3 E-02
0513	0519	2.60E 08	05/27	1.8 +-0.3 E-02
0519	0526	3.10E 08	06/04	1.9 +-0.3 E-02
0526	0602	3.00E 08	06/11	2.2 +-0.3 E-02
0602	0609	3.00E 08	06/16	1.7 +-0.3 E-02
0609	0617	3.20E 08	06/23	1.5 +-0.2 E-02
0617	0624	2.80E 08	07/06	2.3 +-0.3 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 37

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
0624	0630	2.60E 08	07/14	1.6 +-0.3 E-02
0630	0707	3.20E 08	07/16	1.9 +-0.3 E-02
0707	0714	3.00E 08	07/23	2.1 +-0.3 E-02
0714	0721	3.00E 08	07/26	2.2 +-0.3 E-02
0721	0728	2.90E 08	08/11	3.0 +-0.3 E-02
0728	0804	3.20E 08	08/18	2.0 +-0.3 E-02
0804	0811	3.00E 08	08/23	4.4 +-0.4 E-02
0811	0818	3.00E 08	08/26	2.9 +-0.3 E-02
0811*	0818	3.00E 08	08/29	2.7 +-0.3 E-02
0818	0825	3.20E 08	09/07	3.1 +-0.3 E-02
0825	0831	2.70E 08	09/08	4.8 +-0.5 E-02
0831	0908	3.50E 08	09/14	2.9 +-0.3 E-02
0908	0915	3.10E 08	10/05	2.5 +-0.3 E-02
0915	0922	3.00E 08	10/11	3.8 +-0.4 E-02
0922	0929	3.00E 08	10/11	3.1 +-0.3 E-02
0929	1006	3.20E 08	10/20	2.5 +-0.3 E-02
1006	1014	3.40E 08	10/29	4.7 +-0.4 E-02
1014	1020	2.70E 08	11/02	3.2 +-0.3 E-02
1020	1027	3.10E 08	11/15	3.8 +-0.3 E-02
1027	1103	2.90E 08	11/16	3.3 +-0.3 E-02
1103	1111	3.40E 08	11/22	3.7 +-0.3 E-02
1111	1118	2.90E 08	12/15	4.5 +-0.4 E-02
1118	1124	2.60E 08	12/14	4.0 +-0.4 E-02
1124	1201	2.80E 08	12/13	3.3 +-0.3 E-02
1201	1208	3.10E 08	12/27	3.6 +-0.4 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 37

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
1208	1215	3.00E 08	12/30	3.5 +-0.3 E-02
1215	1222	3.00E 08	12/30	2.7 +-0.4 E-02
1222	1229	3.00E 08	01/13	3.2 +-0.3 E-02
1229*	0105	3.10E 08	01/16	4.1 +-0.4 E-02
1229	0105	3.10E 08	01/15	4.0 +-0.4 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 40

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
0106	0113	2.90E 08	01/20	3.6 +-0.3 E-02
0113	0120	2.80E 08	01/30	2.7 +-0.3 E-02
0120	0128	3.30E 08	02/08	2.4 +-0.3 E-02
0128	0203	2.60E 08	02/11	2.5 +-0.3 E-02
0203	0210	2.90E 08	02/18	1.7 +-0.3 E-02
0210	0216	2.50E 08	02/24	2.0 +-0.3 E-02
0216	0225	3.70E 08	03/02	2.0 +-0.2 E-02
0225	0303	2.60E 08	03/12	2.2 +-0.3 E-02
0303	0311	3.30E 08	03/17	1.4 +-0.2 E-02
0311	0317	2.40E 08	04/02	1.7 +-0.3 E-02
0317	0323	2.60E 08	03/31	2.1 +-0.3 E-02
0323	0331	3.30E 08	04/09	2.7 +-0.3 E-02
0331	0407	2.80E 08	04/16	1.9 +-0.3 E-02
0407	0414	2.80E 08	04/22	1.7 +-0.3 E-02
0414	0421	2.90E 08	05/01	1.9 +-0.3 E-02
0421	0428	2.70E 08	05/07	1.4 +-0.2 E-02
0428	0505	2.80E 08	05/15	1.4 +-0.2 E-02
0428*	0505	2.80E 08	05/15	1.7 +-0.3 E-02
0505	0513	3.40E 08	05/28	1.5 +-0.2 E-02
0513	0519	2.60E 08	05/27	1.9 +-0.3 E-02
0519	0526	3.10E 08	06/04	1.8 +-0.2 E-02
0526	0602	3.00E 08	06/11	2.2 +-0.3 E-02
0602	0609	3.10E 08	06/16	1.8 +-0.3 E-02
0609	0617	3.30E 08	06/23	1.7 +-0.2 E-02
0617	0624	3.00E 08	07/06	2.2 +-0.3 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 40

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
0624	0630	2.60E 08	07/14	1.7 +-0.3 E-02
0630	0707	3.10E 08	07/16	2.0 +-0.3 E-02
0707	0714	2.90E 08	07/23	2.1 +-0.3 E-02
0714	0721	3.00E 08	07/26	2.5 +-0.3 E-02
0721	0728	3.00E 08	08/11	2.6 +-0.3 E-02
0728	0804	3.00E 08	08/18	1.8 +-0.3 E-02
0804	0811	3.00E 08	08/23	3.8 +-0.4 E-02
0811	0818	3.00E 08	08/26	2.4 +-0.3 E-02
0818	0825	3.10E 08	09/07	3.0 +-0.3 E-02
0825	0831	2.60E 08	09/08	4.3 +-0.5 E-02
0831	0908	3.30E 08	09/14	2.9 +-0.3 E-02
0908	0915	3.10E 08	10/05	2.6 +-0.3 E-02
0908*	0915	3.10E 08	10/06	2.4 +-0.3 E-02
0915	0922	3.00E 08	10/11	3.0 +-0.4 E-02
0922	0929	3.10E 08	10/11	2.7 +-0.3 E-02
0929	1006	3.00E 08	10/20	2.6 +-0.3 E-02
1006	1014	3.40E 08	10/29	4.0 +-0.3 E-02
1014	1020	2.70E 08	11/02	2.8 +-0.3 E-02
1020	1027	3.00E 08	11/15	3.5 +-0.3 E-02
1027	1103	3.00E 08	11/16	3.2 +-0.3 E-02
1103	1111	3.50E 08	11/22	3.6 +-0.3 E-02
1111	1118	3.00E 08	12/15	4.4 +-0.4 E-02
1118	1124	2.60E 08	12/14	4.9 +-0.4 E-02
1124	1201	3.00E 08	12/13	3.2 +-0.3 E-02
1201	1208	3.10E 08	12/27	3.6 +-0.4 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters

STATION NUMBER 40

Collection Start Date	Collection Stop Date	Volume CC	Mid-Count Date	Gross Beta Activity (pCi/Cu.M.)
1208	1215	3.00E 08	12/30	3.5 +-0.3 E-02
1215	1222	3.00E 08	12/30	2.2 +-0.3 E-02
1222	1229	3.00E 08	01/13	3.0 +-0.3 E-02
1229	0105	3.10E 08	01/15	3.8 +-0.3 E-02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters
Isotopic Analysis on Quarterly Composite
(pCi/ Cu.M.)
STATION NUMBER 02
Gamma Spectrum Analysis
Dates Listed are Collection Start Dates

1229	AIR PARTICULATES	0331	AIR PARTICULATES	0630	AIR PARTICULATES	0929	AIR PARTICULATES
BE-7	1.00+-0.10E-01	BE-7	9.36+-0.94E-02	BE-7	7.99+-0.80E-02	BE-7	6.98+-0.70E-02
K-40	L.T. 8. E-03	K-40	L.T. 8. E-03	K-40	L.T. 1. E-02	K-40	L.T. 8. E-03
MN-54	L.T. 4. E-04	MN-54	L.T. 4. E-04	MN-54	L.T. 5. E-04	MN-54	L.T. 4. E-04
CO-58	L.T. 6. E-04	CO-58	L.T. 5. E-04	CO-58	L.T. 7. E-04	CO-58	L.T. 4. E-04
FE-59	L.T. 2. E-03	FE-59	L.T. 1. E-03	FE-59	L.T. 2. E-03	FE-59	L.T. 9. E-04
CO-60	L.T. 5. E-04	CO-60	L.T. 4. E-04	CO-60	L.T. 5. E-04	CO-60	L.T. 5. E-04
ZN-65	L.T. 1. E-03	ZN-65	L.T. 1. E-03	ZN-65	L.T. 1. E-03	ZN-65	L.T. 1. E-03
ZR-95	L.T. 6. E-04	ZR-95	L.T. 6. E-04	ZR-95	L.T. 7. E-04	ZR-95	L.T. 5. E-04
RU-103	L.T. 9. E-04	RU-103	L.T. 7. E-04	RU-103	L.T. 9. E-04	RU-103	L.T. 6. E-04
RU-106	L.T. 4. E-03	RU-106	L.T. 3. E-03	RU-106	L.T. 5. E-03	RU-106	L.T. 4. E-03
I-131	L.T. 2. E-02	I-131	L.T. 5. E-03	I-131	L.T. 2. E-02	I-131	L.T. 4. E-03
CS-134	L.T. 4. E-04	CS-134	L.T. 4. E-04	CS-134	L.T. 5. E-04	CS-134	L.T. 4. E-04
CS-137	L.T. 4. E-04	CS-137	L.T. 5. E-04	CS-137	L.T. 5. E-04	CS-137	L.T. 4. E-04
BA-140	L.T. 6. E-03	BA-140	L.T. 3. E-03	BA-140	L.T. 5. E-03	BA-140	L.T. 2. E-03
CE-141	L.T. 1. E-03	CE-141	L.T. 1. E-03	CE-141	L.T. 1. E-03	CE-141	L.T. 1. E-03
CE-144	L.T. 3. E-03	CE-144	L.T. 3. E-03	CE-144	L.T. 2. E-03	CE-144	L.T. 3. E-03
RA-226	L.T. 8. E-03	RA-226	L.T. 8. E-03	RA-226	L.T. 7. E-03	RA-226	L.T. 8. E-03
TH-228	L.T. 7. E-04	TH-228	L.T. 7. E-04	TH-228	L.T. 7. E-04	TH-228	L.T. 7. E-04

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters
Isotopic Analysis on Quarterly Composite

(pCi/ Cu.M.)
STATION NUMBER 03
Gamma Spectrum Analysis
Dates Listed are Collection Start Dates

1229	AIR PARTICULATES	0331	AIR PARTICULATES	0630	AIR PARTICULATES	0929	AIR PARTICULATES
BE-7	8.35+-0.83E-02	BE-7	1.08+-0.11E-01	BE-7	7.67+-0.79E-02	BE-7	6.14+-0.61E-02
K-40	L.T. 8. E-03	K-40	3.99+-2.27E-03	K-40	L.T. 9. E-03	K-40	L.T. 7. E-03
MN-54	L.T. 3. E-04	MN-54	L.T. 3. E-04	MN-54	L.T. 5. E-04	MN-54	L.T. 4. E-04
CO-58	L.T. 5. E-04	CO-58	L.T. 4. E-04	CO-58	L.T. 6. E-04	CO-58	L.T. 5. E-04
FE-59	L.T. 1. E-03	FE-59	L.T. 9. E-04	FE-59	L.T. 1. E-03	FE-59	L.T. 1. E-03
CO-60	L.T. 3. E-04	CO-60	L.T. 4. E-04	CO-60	L.T. 5. E-04	CO-60	L.T. 5. E-04
ZN-65	L.T. 8. E-04	ZN-65	L.T. 8. E-04	ZN-65	L.T. 9. E-04	ZN-65	L.T. 1. E-03
ZR-95	L.T. 5. E-04	ZR-95	L.T. 4. E-04	ZR-95	L.T. 7. E-04	ZR-95	L.T. 5. E-04
RU-103	L.T. 8. E-04	RU-103	L.T. 5. E-04	RU-103	L.T. 9. E-04	RU-103	L.T. 6. E-04
RU-106	L.T. 3. E-03	RU-106	L.T. 3. E-03	RU-106	L.T. 4. E-03	RU-106	L.T. 3. E-03
I-131	L.T. 2. E-02	I-131	L.T. 4. E-03	I-131	L.T. 2. E-02	I-131	L.T. 4. E-03
CS-134	L.T. 4. E-04	CS-134	L.T. 4. E-04	CS-134	L.T. 4. E-04	CS-134	L.T. 4. E-04
CS-137	L.T. 4. E-04	CS-137	L.T. 4. E-04	CS-137	L.T. 6. E-04	CS-137	L.T. 4. E-04
BA-140	L.T. 5. E-03	BA-140	L.T. 2. E-03	BA-140	L.T. 6. E-03	BA-140	L.T. 2. E-03
CE-141	L.T. 2. E-03	CE-141	L.T. 1. E-03	CE-141	L.T. 1. E-03	CE-141	L.T. 1. E-03
CE-144	L.T. 3. E-03	CE-144	L.T. 3. E-03	CE-144	L.T. 3. E-03	CE-144	L.T. 3. [illegible]
RA-226	L.T. 9. E-03	RA-226	L.T. 1. E-02	RA-226	L.T. 8. E-03	RA-226	L.T. 9. E-03
TH-228	L.T. 7. E-04	TH-228	L.T. 8. E-04	TH-228	L.T. 7. E-04	TH-228	L.T. 8. E-04

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters
Isotopic Analysis on Quarterly Composite

(pCi/ Cu.M.)
STATION NUMBER 32
Gamma Spectrum Analysis
Dates Listed are Collection Start Dates

1229	AIR PARTICULATES	0331	AIR PARTICULATES	0630	AIR PARTICULATES	0929	AIR PARTICULATES
BE-7	7.42+-0.74E-02	BE-7	8.61+-0.86E-02	BE-7	8.60+-0.86E-02	BE-7	6.40+-0.71E-02
K-40	L.T. 1. E-02	K-40	L.T. 1. E-02	K-40	L.T. 2. E-02	K-40	L.T. 1. E-02
MN-54	L.T. 4. E-04	MN-54	L.T. 4. E-04	MN-54	L.T. 5. E-04	MN-54	L.T. 5. E-04
CO-58	L.T. 5. E-04	CO-58	L.T. 5. E-04	CO-58	L.T. 7. E-04	CO-58	L.T. 6. E-04
FE-59	L.T. 2. E-03	FE-59	L.T. 1. E-03	FE-59	L.T. 2. E-03	FE-59	L.T. 1. E-03
CO-60	L.T. 4. E-04	CO-60	L.T. 4. E-04	CO-60	L.T. 6. E-04	CO-60	L.T. 6. E-04
ZN-65	L.T. 1. E-03	ZN-65	L.T. 9. E-04	ZN-65	L.T. 1. E-03	ZN-65	L.T. 1. E-03
ZR-95	L.T. 7. E-04	ZR-95	L.T. 5. E-04	ZR-95	L.T. 8. E-04	ZR-95	L.T. 5. E-04
RU-103	L.T. 8. E-04	RU-103	L.T. 6. E-04	RU-103	L.T. 1. E-03	RU-103	L.T. 8. E-04
RU-106	L.T. 4. E-03	RU-106	L.T. 4. E-03	RU-106	L.T. 5. E-03	RU-106	L.T. 3. E-03
I-131	L.T. 2. E-02	I-131	L.T. 5. E-03	I-131	L.T. 2. E-02	I-131	L.T. 5. E-03
CS-134	L.T. 5. E-04	CS-134	L.T. 4. E-04	CS-134	L.T. 6. E-04	CS-134	L.T. 6. E-04
CS-137	L.T. 4. E-04	CS-137	L.T. 4. E-04	CS-137	L.T. 6. E-04	CS-137	L.T. 5. E-04
BA-140	L.T. 5. E-03	BA-140	L.T. 3. E-03	BA-140	L.T. 5. E-03	BA-140	L.T. 3. E-03
CE-141	L.T. 1. E-03	CE-141	L.T. 8. E-04	CE-141	L.T. 1. E-03	CE-141	L.T. 1. E-03
CE-144	L.T. 2. E-03	CE-144	L.T. 2. E-03	CE-144	L.T. 3. E-03	CE-144	L.T. 3. E-03
RA-226	L.T. 6. E-03	RA-226	L.T. 6. E-03	RA-226	L.T. 8. E-03	RA-226	L.T. 1. E-02
TH-228	L.T. 6. E-04	TH-228	L.T. 6. E-04	TH-228	L.T. 7. E-04	TH-228	L.T. 8. E-04

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters
Isotopic Analysis on Quarterly Composite
(pCi/ Cu.M.)
STATION NUMBER 37
Gamma Spectrum Analysis
Dates Listed are Collection Start Dates

1229	AIR PARTICULATES	0331	AIR PARTICULATES	0630	AIR PARTICULATES	0929	AIR PARTICULATES
BE-7	8.02+-0.80E-02	BE-7	8.77+-0.88E-02	BE-7	1.05+-0.11E-01	BE-7	7.60+-0.76E-02
K-40	L.T. 8. E-03	K-40	L.T. 1. E-02	K-40	L.T. 6. E-03	K-40	L.T. 9. E-03
MN-54	L.T. 4. E-04	MN-54	L.T. 5. E-04	MN-54	L.T. 4. E-04	MN-54	L.T. 5. E-04
CO-58	L.T. 6. E-04	CO-58	L.T. 5. E-04	CO-58	L.T. 6. E-04	CO-58	L.T. 5. E-04
FE-59	L.T. 1. E-03	FE-59	L.T. 1. E-03	FE-59	L.T. 1. E-03	FE-59	L.T. 1. E-03
CO-60	L.T. 5. E-04	CO-60	L.T. 6. E-04	CO-60	L.T. 5. E-04	CO-60	L.T. 5. E-04
ZN-65	L.T. 8. E-04	ZN-65	L.T. 1. E-03	ZN-65	L.T. 9. E-04	ZN-65	L.T. 1. E-03
ZR-95	L.T. 6. E-04	ZR-95	L.T. 5. E-04	ZR-95	L.T. 5. E-04	ZR-95	L.T. 6. E-04
RU-103	L.T. 8. E-04	RU-103	L.T. 6. E-04	RU-103	L.T. 6. E-04	RU-103	L.T. 7. E-04
RU-106	L.T. 4. E-03	RU-106	L.T. 4. E-03	RU-106	L.T. 4. E-03	RU-106	L.T. 4. E-03
I-131	L.T. 2. E-02	I-131	L.T. 6. E-03	I-131	L.T. 1. E-02	I-131	L.T. 5. E-03
CS-134	L.T. 4. E-04	CS-134	L.T. 5. E-04	CS-134	L.T. 4. E-04	CS-134	L.T. 4. E-04
CS-137	L.T. 6. E-04	CS-137	L.T. 6. E-04	CS-137	L.T. 3. E-04	CS-137	L.T. 5. E-04
BA-140	L.T. 6. E-03	BA-140	L.T. 3. E-03	BA-140	L.T. 6. E-03	BA-140	L.T. 2. E-03
CE-141	L.T. 1. E-03	CE-141	L.T. 1. E-03	CE-141	L.T. 1. E-03	CE-141	L.T. 1. E-03
CE-144	L.T. 2. E-03	CE-144	L.T. 3. E-03	CE-144	L.T. 2. E-03	CE-144	L.T. 3. E-03
RA-226	L.T. 8. E-03	RA-226	L.T. 8. E-03	RA-226	L.T. 7. E-03	RA-226	L.T. 9. E-03
TH-228	L.T. 7. E-04	TH-228	L.T. 8. E-04	TH-228	L.T. 7. E-04	TH-228	L.T. 9. E-04

Wolf Creek Nuclear Operating Corporation

Air Particulate Filters
Isotopic Analysis on Quarterly Composite

(pCi/ Cu.M.)
STATION NUMBER 40
Gamma Spectrum Analysis
Dates Listed are Collection Start Dates

1229	AIR PARTICULATES	0331	AIR PARTICULATES	0630	AIR PARTICULATES	0929	AIR PARTICULATES
BE-7	7.85+-0.79E-02	BE-7	9.15+-0.91E-02	BE-7	8.93+-0.89E-02	BE-7	5.97+-0.60E-02
K-40	L.T. 1. E-02	K-40	L.T. 2. E-02	K-40	L.T. 1. E-02	K-40	L.T. 1. E-02
MN-54	L.T. 5. E-04	MN-54	L.T. 6. E-04	MN-54	L.T. 4. E-04	MN-54	L.T. 5. E-04
CO-58	L.T. 6. E-04	CO-58	L.T. 7. E-04	CO-58	L.T. 5. E-04	CO-58	L.T. 6. E-04
FE-59	L.T. 2. E-03	FE-59	L.T. 2. E-03	FE-59	L.T. 2. E-03	FE-59	L.T. 1. E-03
CO-60	L.T. 4. E-04	CO-60	L.T. 6. E-04	CO-60	L.T. 4. E-04	CO-60	L.T. 5. E-04
ZN-65	L.T. 1. E-03	ZN-65	L.T. 1. E-03	ZN-65	L.T. 1. E-03	ZN-65	L.T. 1. E-03
ZR-95	L.T. 7. E-04	ZR-95	L.T. 7. E-04	ZR-95	L.T. 6. E-04	ZR-95	L.T. 6. E-04
RU-103	L.T. 8. E-04	RU-103	L.T. 9. E-04	RU-103	L.T. 7. E-04	RU-103	L.T. 7. E-04
RU-106	L.T. 4. E-03	RU-106	L.T. 6. E-03	RU-106	L.T. 4. E-03	RU-106	L.T. 4. E-03
I-131	L.T. 2. E-02	I-131	L.T. 7. E-03	I-131	L.T. 1. E-02	I-131	L.T. 5. E-03
CS-134	L.T. 5. E-04	CS-134	L.T. 7. E-04	CS-134	L.T. 4. E-04	CS-134	L.T. 5. E-04
CS-137	L.T. 4. E-04	CS-137	L.T. 7. E-04	CS-137	L.T. 4. E-04	CS-137	L.T. 5. E-04
BA-140	L.T. 7. E-03	BA-140	L.T. 3. E-03	BA-140	L.T. 4. E-03	BA-140	L.T. 2. E-03
CE-141	L.T. 9. E-04	CE-141	L.T. 1. E-03	CE-141	L.T. 9. E-04	CE-141	L.T. 8. E-04
CE-144	L.T. 2. E-03	CE-144	L.T. 3. E-03	CE-144	L.T. 2. E-03	CE-144	L.T. 2. E-03
RA-226	L.T. 6. E-03	RA-226	L.T. 9. E-03	RA-226	L.T. 6. E-03	RA-226	L.T. 6. E-03
TH-228	L.T. 6. E-04	TH-228	L.T. 8. E-04	TH-228	L.T. 6. E-04	TH-228	L.T. 7. E-04

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Surface Water

(pCi/Liter)
STATION NUMBER DC
Gamma Spectrum and Tritium Analysis

SURFACE WATER	0121	SURFACE WATER	0218	SURFACE WATER	0318
BE-7	L.T. 2. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 5. E 01	K-40	L.T. 7. E 01	K-40	L.T. 6. E 01
MN-54	L.T. 2. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 2. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 5. E 00	FE-59	L.T. 6. E 00	FE-59	L.T. 6. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 5. E 00	ZN-65	L.T. 7. E 00	ZN-65	L.T. 6. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 3. E 00	RU-103	L.T. 3. E 00	RU-103	L.T. 4. E 00
RU-106	L.T. 2. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 5. E 00	I-131	L.T. 5. E 00	I-131	L.T. 5. E 00
CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 4. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00	CS-137	L.T. 4. E 00
BA-140	L.T. 4. E 00	BA-140	L.T. 4. E 00	BA-140	L.T. 5. E 00
CE-141	L.T. 6. E 00	CE-141	L.T. 4. E 00	CE-141	L.T. 5. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 7. E 01	RA-226	L.T. 6. E 01	RA-226	L.T. 6. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 5. E 00	TH-228	L.T. 5. E 00
H-3	1.0 +-0.1 E 04	H-3	1.1 +-0.1 E 04	H-3	1.6 +-0.1 E 04

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Surface Water

(pCi/Liter)
STATION NUMBER DC
Gamma Spectrum and Tritium Analysis

SURFACE WATER	0415	SURFACE WATER	0520	SURFACE WATER	0610
BE-7	L.T. 4. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 2. E 01
K-40	L.T. 1. E 02	K-40	L.T. 6. E 01	K-40	L.T. 4. E 01
MN-54	L.T. 4. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 2. E 00
CO-58	L.T. 5. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 2. E 00
FE-59	L.T. 9. E 00	FE-59	L.T. 6. E 00	FE-59	L.T. 6. E 00
CO-60	L.T. 4. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 1. E 01	ZN-65	L.T. 6. E 00	ZN-65	L.T. 6. E 00
ZR-95	L.T. 4. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 2. E 00
RU-103	L.T. 5. E 00	RU-103	L.T. 4. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 4. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 2. E 01
I-131	L.T. 7. E 00	I-131	L.T. 5. E 00	I-131	L.T. 4. E 00
CS-134	L.T. 4. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 5. E 00	CS-137	L.T. 4. E 00	CS-137	L.T. 4. E 00
BA-140	L.T. 6. E 00	BA-140	L.T. 4. E 00	BA-140	L.T. 3. E 00
CE-141	L.T. 8. E 00	CE-141	L.T. 6. E 00	CE-141	L.T. 5. E 00
CE-144	L.T. 3. E 01	CE-144	L.T. 3. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 8. E 01	RA-226	L.T. 8. E 01	RA-226	L.T. 6. E 01
TH-228	L.T. 7. E 00	TH-228	L.T. 6. E 00	TH-228	L.T. 5. E 00
H-3	1.3 +-0.1 E 04	H-3	1.3 +-0.1 E 04	H-3	1.2 +-0.1 E 04

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Surface Water

(pCi/Liter)
STATION NUMBER DC
Gamma Spectrum and Tritium Analysis

SURFACE WATER	0728	SURFACE WATER	0819	SURFACE WATER	0916
BE-7	L.T. 2. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 4. E 01	K-40	L.T. 6. E 01	K-40	L.T. 8. E 01
MN-54	L.T. 2. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 2. E 00	CO-58	L.T. 4. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 5. E 00	FE-59	L.T. 6. E 00	FE-59	L.T. 7. E 00
CO-60	L.T. 2. E 00	CO-60	L.T. 4. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 4. E 00	ZN-65	L.T. 7. E 00	ZN-65	L.T. 6. E 00
ZR-95	L.T. 2. E 00	ZR-95	L.T. 4. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 3. E 00	RU-103	L.T. 4. E 00	RU-103	L.T. 4. E 00
RU-106	L.T. 2. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 6. E 00	I-131	L.T. 9. E 00	I-131	L.T. 7. E 00
CS-134	L.T. 2. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 4. E 00	BA-140	L.T. 6. E 00	BA-140	L.T. 5. E 00
CE-141	L.T. 5. E 00	CE-141	L.T. 8. E 00	CE-141	L.T. 5. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 6. E 01	RA-226	L.T. 7. E 01	RA-226	L.T. 6. E 01
TH-228	L.T. 5. E 00	TH-228	L.T. 7. E 00	TH-228	L.T. 5. E 00
H-3	1.0 +-0.1 E 04	H-3	1.1 +-0.1 E 04	H-3	1.1 +-0.1 E 04

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Surface Water

(pCi/Liter)
STATION NUMBER DC
Gamma Spectrum and Tritium Analysis

SURFACE WATER	1021	SURFACE WATER	1118	SURFACE WATER	1215
BE-7	L.T. 3. E 01	BE-7	L.T. 4. E 01	BE-7	L.T. 2. E 01
K-40	L.T. 6. E 01	K-40	L.T. 9. E 01	K-40	L.T. 4. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 2. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 4. E 00	CO-58	L.T. 2. E 00
FE-59	L.T. 8. E 00	FE-59	L.T. 9. E 00	FE-59	L.T. 5. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 4. E 00	CO-60	L.T. 2. E 00
ZN-65	L.T. 7. E 00	ZN-65	L.T. 7. E 00	ZN-65	L.T. 4. E 00
ZR-95	L.T. 4. E 00	ZR-95	L.T. 4. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 4. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 2. E 01
I-131	L.T. 2. E 01	I-131	L.T. 1. E 01	I-131	L.T. 5. E 00
CS-134	L.T. 3. E 00	CS-134	L.T. 4. E 00	CS-134	L.T. 2. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 4. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 9. E 00	BA-140	L.T. 8. E 00	BA-140	L.T. 4. E 00
CE-141	L.T. 8. E 00	CE-141	L.T. 7. E 00	CE-141	L.T. 5. E 00
CE-144	L.T. 3. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 8. E 01	RA-226	L.T. 7. E 01	RA-226	L.T. 6. E 01
TH-228	L.T. 7. E 00	TH-228	L.T. 6. E 00	TH-228	L.T. 5. E 00
H-3	1.1 +-0.1 E 04	H-3	9.6 +-0.3 E 03	H-3	1.1 +-0.1 E 04

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Surface Water

(pCi/Liter)
STATION NUMBER MUSH
Gamma Spectrum and Tritium Analysis

SURFACE WATER	0121	SURFACE WATER	0218	SURFACE WATER	0318
BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 5. E 01	K-40	L.T. 5. E 01	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 7. E 00	FE-59	L.T. 6. E 00	FE-59	L.T. 7. E 00
CO-60	L.T. 4. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 7. E 00	ZN-65	L.T. 6. E 00	ZN-65	L.T. 6. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 3. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 6. E 00	I-131	L.T. 4. E 00	I-131	L.T. 5. E 00
CS-134	L.T. 4. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 4. E 00	CS-137	L.T. 4. E 00	CS-137	L.T. 4. E 00
BA-140	L.T. 5. E 00	BA-140	L.T. 4. E 00	BA-140	L.T. 5. E 00
CE-141	L.T. 7. E 00	CE-141	L.T. 5. E 00	CE-141	L.T. 6. E 00
CE-144	L.T. 3. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 8. E 01	RA-226	L.T. 7. E 01	RA-226	L.T. 7. E 01
TH-228	L.T. 7. E 00	TH-228	L.T. 6. E 00	TH-228	L.T. 6. E 00
H-3	L.T. 2. E 02	H-3	L.T. 2. E 02	H-3	L.T. 2. E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Surface Water

(pCi/Liter)
STATION NUMBER MUSH
Gamma Spectrum and Tritium Analysis

SURFACE WATER	0415	SURFACE WATER	0520	SURFACE WATER	0610
BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 9. E 01	K-40	L.T. 5. E 01	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 8. E 00	FE-59	L.T. 7. E 00	FE-59	L.T. 6. E 00
CO-60	L.T. 4. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 4. E 00
ZN-65	L.T. 8. E 00	ZN-65	L.T. 7. E 00	ZN-65	L.T. 7. E 00
ZR-95	L.T. 4. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 4. E 00	RU-103	L.T. 4. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 6. E 00	I-131	L.T. 5. E 00	I-131	L.T. 5. E 00
CS-134	L.T. 4. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 4. E 00	CS-137	L.T. 4. E 00	CS-137	L.T. 4. E 00
BA-140	L.T. 5. E 00	BA-140	L.T. 5. E 00	BA-140	L.T. 5. E 00
CE-141	L.T. 6. E 00	CE-141	L.T. 5. E 00	CE-141	L.T. 6. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01
RA-226	L.T. 7. E 01	RA-226	L.T. 7. E 01	RA-226	L.T. 7. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 6. E 00	TH-228	L.T. 7. E 00
H-3	L.T. 2. E 02	H-3	L.T. 2. E 02	H-3	L.T. 2. E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Surface Water

(pCi/Liter)
STATION NUMBER MUSH
Gamma Spectrum and Tritium Analysis

SURFACE WATER	0728	SURFACE WATER	0819	SURFACE WATER	0916
BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 4. E 01	K-40	L.T. 8. E 01	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 6. E 00	FE-59	L.T. 6. E 00	FE-59	L.T. 8. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 4. E 00
ZN-65	L.T. 5. E 00	ZN-65	L.T. 6. E 00	ZN-65	L.T. 6. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 3. E 00	RU-103	L.T. 4. E 00	RU-103	L.T. 4. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 7. E 00	I-131	L.T. 8. E 00	I-131	L.T. 1. E 01
CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00	CS-137	L.T. 4. E 00
BA-140	L.T. 6. E 00	BA-140	L.T. 6. E 00	BA-140	L.T. 6. E 00
CE-141	L.T. 7. E 00	CE-141	L.T. 5. E 00	CE-141	L.T. 9. E 00
CE-144	L.T. 3. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01
RA-226	L.T. 7. E 01	RA-226	L.T. 6. E 01	RA-226	L.T. 8. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 6. E 00	TH-228	L.T. 7. E 00
H-3	L.T. 2. E 02	H-3	L.T. 2. E 02	H-3	1.7 +-1.0 E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Surface Water

(pCi/Liter)

STATION NUMBER MUSH

Gamma Spectrum and Tritium Analysis

SURFACE WATER	1021	SURFACE WATER	1118	SURFACE WATER	1215
BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 5. E 01	K-40	L.T. 5. E 01	K-40	L.T. 4. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 8. E 00	FE-59	L.T. 8. E 00	FE-59	L.T. 6. E 00
CO-60	L.T. 4. E 00	CO-60	L.T. 4. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 8. E 00	ZN-65	L.T. 7. E 00	ZN-65	L.T. 5. E 00
ZR-95	L.T. 4. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 5. E 00	RU-103	L.T. 4. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 2. E 01
I-131	L.T. 1. E 01	I-131	L.T. 1. E 01	I-131	L.T. 6. E 00
CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 4. E 00	CS-137	L.T. 4. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 1. E 01	BA-140	L.T. 7. E 00	BA-140	L.T. 5. E 00
CE-141	L.T. 7. E 00	CE-141	L.T. 7. E 00	CE-141	L.T. 6. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01
RA-226	L.T. 7. E 01	RA-226	L.T. 7. E 01	RA-226	L.T. 7. E 01
TH-228	L.T. 7. E 00	TH-228	L.T. 6. E 00	TH-228	L.T. 6. E 00
H-3	L.T. 3. E 02	H-3	L.T. 2. E 02	H-3	L.T. 2. E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Surface Water

(pCi/Liter)
STATION NUMBER MUSH
Gamma Spectrum and Tritium Analysis

SURFACE WATER DUP	**0610**
BE-7	L.T. 3. E 01
K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00
FE-59	L.T. 7. E 00
CO-60	L.T. 4. E 00
ZN-65	L.T. 7. E 00
ZR-95	L.T. 4. E 00
RU-103	L.T. 4. E 00
RU-106	L.T. 3. E 01
I-131	L.T. 6. E 00
CS-134	L.T. 3. E 00
CS-137	L.T. 4. E 00
BA-140	L.T. 5. E 00
CE-141	L.T. 6. E 00
CE-144	L.T. 2. E 01
RA-226	L.T. 7. E 01
TH-228	L.T. 6. E 00
H-3	1.9 +-1.0 E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Surface Water

(pCi/Liter)
STATION NUMBER SP
Gamma Spectrum and Tritium Analysis

SURFACE WATER	0121	SURFACE WATER	0218	SURFACE WATER	0318
BE-7	L.T. 3. E 01	BE-7	L.T. 2. E 01	BE-7	L.T. 4. E 01
K-40	L.T. 9. E 01	K-40	L.T. 4. E 01	K-40	L.T. 1. E 02
MN-54	L.T. 3. E 00	MN-54	L.T. 2. E 00	MN-54	L.T. 4. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 2. E 00	CO-58	L.T. 4. E 00
FE-59	L.T. 7. E 00	FE-59	L.T. 5. E 00	FE-59	L.T. 9. E 00
CO-60	L.T. 4. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 4. E 00
ZN-65	L.T. 8. E 00	ZN-65	L.T. 5. E 00	ZN-65	L.T. 1. E 01
ZR-95	L.T. 4. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 4. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 3. E 00	RU-103	L.T. 5. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 4. E 01
I-131	L.T. 6. E 00	I-131	L.T. 4. E 00	I-131	L.T. 6. E 00
CS-134	L.T. 4. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 5. E 00
CS-137	L.T. 4. E 00	CS-137	L.T. 4. E 00	CS-137	L.T. 5. E 00
BA-140	L.T. 4. E 00	BA-140	L.T. 3. E 00	BA-140	L.T. 5. E 00
CE-141	L.T. 6. E 00	CE-141	L.T. 5. E 00	CE-141	L.T. 7. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01
RA-226	L.T. 7. E 01	RA-226	L.T. 6. E 01	RA-226	L.T. 8. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 5. E 00	TH-228	L.T. 7. E 00
H-3	9.6 +-0.3 E 03	H-3	1.1 +-0.1 E 04	H-3	1.2 +-0.1 E 04

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Surface Water

(pCi/Liter)
STATION NUMBER SP
Gamma Spectrum and Tritium Analysis

SURFACE WATER	0415	SURFACE WATER	0520	SURFACE WATER	0610
BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 7. E 01	K-40	L.T. 5. E 01	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 6. E 00	FE-59	L.T. 6. E 00	FE-59	L.T. 7. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 6. E 00	ZN-65	L.T. 6. E 00	ZN-65	L.T. 7. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 3. E 00	RU-103	L.T. 3. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 5. E 00	I-131	L.T. 3. E 00	I-131	L.T. 5. E 00
CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 4. E 00	BA-140	L.T. 3. E 00	BA-140	L.T. 5. E 00
CE-141	L.T. 5. E 00	CE-141	L.T. 6. E 00	CE-141	L.T. 5. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 6. E 01	RA-226	L.T. 8. E 01	RA-226	L.T. 6. E 01
TH-228	L.T. 5. E 00	TH-228	L.T. 6. E 00	TH-228	L.T. 6. E 00
H-3	1.3 +-0.1 E 04	H-3	1.2 +-0.1 E 04	H-3	1.2 +-0.1 E 04

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Surface Water

(pCi/Liter)
STATION NUMBER SP
Gamma Spectrum and Tritium Analysis

SURFACE WATER	0728	SURFACE WATER	0819	SURFACE WATER	0916
BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 8. E 01	K-40	L.T. 5. E 01	K-40	L.T. 1. E 02
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 4. E 00
FE-59	L.T. 7. E 00	FE-59	L.T. 8. E 00	FE-59	L.T. 8. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 4. E 00
ZN-65	L.T. 7. E 00	ZN-65	L.T. 7. E 00	ZN-65	L.T. 8. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 4. E 00	ZR-95	L.T. 4. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 4. E 00	RU-103	L.T. 4. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 7. E 00	I-131	L.T. 1. E 01	I-131	L.T. 8. E 00
CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 4. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 4. E 00	CS-137	L.T. 4. E 00
BA-140	L.T. 5. E 00	BA-140	L.T. 7. E 00	BA-140	L.T. 5. E 00
CE-141	L.T. 5. E 00	CE-141	L.T. 9. E 00	CE-141	L.T. 7. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01	CE-144	L.T. 3. E 01
RA-226	L.T. 6. E 01	RA-226	L.T. 8. E 01	RA-226	L.T. 7. E 01
TH-228	L.T. 5. E 00	TH-228	L.T. 7. E 00	TH-228	L.T. 6. E 00
H-3	1.1 +-0.1 E 04	H-3	1.1 +-0.1 E 04	H-3	1.1 +-0.1 E 04

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Surface Water

(pCi/Liter)
STATION NUMBER SP
Gamma Spectrum and Tritium Analysis

SURFACE WATER	1021	SURFACE WATER	1118	SURFACE WATER	1215
BE-7	L.T. 3. E 01	BE-7	L.T. 4. E 01	BE-7	L.T. 2. E 01
K-40	L.T. 8. E 01	K-40	L.T. 1. E 02	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 4. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 4. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 7. E 00	FE-59	L.T. 1. E 01	FE-59	L.T. 6. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 4. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 6. E 00	ZN-65	L.T. 9. E 00	ZN-65	L.T. 6. E 00
ZR-95	L.T. 4. E 00	ZR-95	L.T. 5. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 5. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 4. E 01	RU-106	L.T. 2. E 01
I-131	L.T. 1. E 01	I-131	L.T. 2. E 01	I-131	L.T. 5. E 00
CS-134	L.T. 3. E 00	CS-134	L.T. 5. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 5. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 7. E 00	BA-140	L.T. 9. E 00	BA-140	L.T. 5. E 00
CE-141	L.T. 6. E 00	CE-141	L.T. 9. E 00	CE-141	L.T. 4. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 6. E 01	RA-226	L.T. 8. E 01	RA-226	L.T. 5. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 7. E 00	TH-228	L.T. 5. E 00
H-3	1.1 +-0.1 E 04	H-3	1.0 +-0.1 E 04	H-3	1.1 +-0.1 E 04

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER B-12
Gamma Spectrum Analysis

GROUND WATER	0218	GROUND WATER	0520	GROUND WATER	0819
BE-7	L.T. 3. E 01	BE-7	L.T. 4. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 6. E 01	K-40	L.T. 1. E 02	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 4. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 4. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 6. E 00	FE-59	L.T. 9. E 00	FE-59	L.T. 6. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 4. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 6. E 00	ZN-65	L.T. 9. E 00	ZN-65	L.T. 5. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 5. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 5. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 4. E 01	RU-106	L.T. 2. E 01
I-131	L.T. 6. E 00	I-131	L.T. 7. E 00	I-131	L.T. 9. E 00
CS-134	L.T. 4. E 00	CS-134	L.T. 5. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 4. E 00	CS-137	L.T. 5. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 5. E 00	BA-140	L.T. 6. E 00	BA-140	L.T. 6. E 00
CE-141	L.T. 7. E 00	CE-141	L.T. 7. E 00	CE-141	L.T. 6. E 00
CE-144	L.T. 3. E 01	CE-144	L.T. 3. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 8. E 01	RA-226	L.T. 9. E 01	RA-226	L.T. 7. E 01
TH-228	L.T. 7. E 00	TH-228	L.T. 7. E 00	TH-228	L.T. 6. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER B-12
Gamma Spectrum Analysis

GROUND WATER	1118	GROUND WATER DUP	0520
BE-7	L.T. 3. E 01	BE-7	L.T. 2. E 01
K-40	L.T. 7. E 01	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 2. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 2. E 00
FE-59	L.T. 7. E 00	FE-59	L.T. 5. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 6. E 00	ZN-65	L.T. 5. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 2. E 01
I-131	L.T. 1. E 01	I-131	L.T. 4. E 00
CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 6. E 00	BA-140	L.T. 4. E 00
CE-141	L.T. 6. E 00	CE-141	L.T. 5. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 6. E 01	RA-226	L.T. 6. E 01
TH-228	L.T. 5. E 00	TH-228	L.T. 5. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER B-12
Tritium Analysis

Collection Date:	**H-3**
0218	L.T. 2. E 02
0520*	L.T. 2. E 02
0520	L.T. 2. E 02
0819	L.T. 2. E 02
1118	L.T. 2. E 02

*** Duplicate**

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER B-12
Radiochemical Analysis

Collection Date:	**I-131**
0218	L.T. 2. E-01
0520*	L.T. 5. E-01
0520	L.T. 5. E-01
0819	L.T. 2. E-01
1118	L.T. 5. E-01

*** Duplicate**

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER C-10
Gamma Spectrum Analysis

GROUND WATER	0218	GROUND WATER	0520	GROUND WATER	0819
BE-7	L.T. 2. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 5. E 01	K-40	L.T. 5. E 01	K-40	L.T. 4. E 01
MN-54	L.T. 2. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 5. E 00	FE-59	L.T. 7. E 00	FE-59	L.T. 5. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 5. E 00	ZN-65	L.T. 7. E 00	ZN-65	L.T. 6. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 3. E 00	RU-103	L.T. 3. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 2. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 5. E 00	I-131	L.T. 5. E 00	I-131	L.T. 8. E 00
CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00	CS-137	L.T. 4. E 00
BA-140	L.T. 4. E 00	BA-140	L.T. 5. E 00	BA-140	L.T. 6. E 00
CE-141	L.T. 6. E 00	CE-141	L.T. 6. E 00	CE-141	L.T. 6. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 7. E 01	RA-226	L.T. 7. E 01	RA-226	L.T. 6. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 7. E 00	TH-228	L.T. 5. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER C-10
Gamma Spectrum Analysis

GROUND WATER	1124
BE-7	L.T. 3. E 01
K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00
FE-59	L.T. 7. E 00
CO-60	L.T. 3. E 00
ZN-65	L.T. 6. E 00
ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00
RU-106	L.T. 3. E 01
I-131	L.T. 7. E 00
CS-134	L.T. 3. E 00
CS-137	L.T. 3. E 00
BA-140	L.T. 6. E 00
CE-141	L.T. 5. E 00
CE-144	L.T. 2. E 01
RA-226	L.T. 6. E 01
TH-228	L.T. 6. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER C-10
Tritium Analysis

Collection Date:	**H-3**
0218	L.T. 2. E 02
0520	L.T. 2. E 02
0819	L.T. 2. E 02
1124	L.T. 2. E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway -Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER C-10
Radiochemical Analysis

Collection Date	I-131
0218	L.T. 2. E-01
0520	L.T. 2. E-01
0819	L.T. 2. E-01
1124	L.T. 2. E-01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER C-49
Gamma Spectrum Analysis

GROUND WATER	0218	GROUND WATER	0520	GROUND WATER	0819
BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 9. E 01	K-40	L.T. 7. E 01	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 4. E 00
FE-59	L.T. 7. E 00	FE-59	L.T. 6. E 00	FE-59	L.T. 8. E 00
CO-60	L.T. 4. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 8. E 00	ZN-65	L.T. 7. E 00	ZN-65	L.T. 7. E 00
ZR-95	L.T. 4. E 00	ZR-95	L.T. 4. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 3. E 00	RU-103	L.T. 5. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 6. E 00	I-131	L.T. 5. E 00	I-131	L.T. 1. E 01
CS-134	L.T. 4. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 4. E 00
CS-137	L.T. 4. E 00	CS-137	L.T. 3. E 00	CS-137	L.T. 4. E 00
BA-140	L.T. 5. E 00	BA-140	L.T. 4. E 00	BA-140	L.T. 7. E 00
CE-141	L.T. 6. E 00	CE-141	L.T. 5. E 00	CE-141	L.T. 8. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01
RA-226	L.T. 7. E 01	RA-226	L.T. 6. E 01	RA-226	L.T. 8. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 6. E 00	TH-228	L.T. 7. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER C-49
Gamma Spectrum Analysis

GROUND WATER	1118
BE-7	L.T. 3. E 01
K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00
FE-59	L.T. 8. E 00
CO-60	L.T. 4. E 00
ZN-65	L.T. 7. E 00
ZR-95	L.T. 4. E 00
RU-103	L.T. 4. E 00
RU-106	L.T. 3. E 01
I-131	L.T. 1. E 01
CS-134	L.T. 3. E 00
CS-137	L.T. 3. E 00
BA-140	L.T. 7. E 00
CE-141	L.T. 9. E 00
CE-144	L.T. 3. E 01
RA-226	L.T. 9. E 01
TH-228	L.T. 7. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER C-49
Tritium Analysis

Collection Date:	**H-3**
0218	L.T. 2. E 02
0520	L.T. 2. E 02
0819	L.T. 2. E 02
1118	L.T. 2. E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER C-49
Radiochemical Analysis

Collection Date	I-131
0218	L.T. 2. E-01
0520	L.T. 3. E-01
0819	L.T. 2. E-01
1118	L.T. 7. E-01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER D-65
Gamma Spectrum Analysis

GROUND WATER	0218	GROUND WATER	0520	GROUND WATER	0819
BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 5. E 01	K-40	L.T. 6. E 01	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 6. E 00	FE-59	L.T. 7. E 00	FE-59	L.T. 8. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 7. E 00	ZN-65	L.T. 8. E 00	ZN-65	L.T. 7. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 4. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 3. E 00	RU-103	L.T. 4. E 00	RU-103	L.T. 4. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 5. E 00	I-131	L.T. 5. E 00	I-131	L.T. 1. E 01
CS-134	L.T. 3. E 00	CS-134	L.T. 4. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 4. E 00	CS-137	L.T. 4. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 4. E 00	BA-140	L.T. 5. E 00	BA-140	L.T. 7. E 00
CE-141	L.T. 6. E 00	CE-141	L.T. 7. E 00	CE-141	L.T. 9. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01	CE-144	L.T. 3. E 01
RA-226	L.T. 7. E 01	RA-226	L.T. 8. E 01	RA-226	L.T. 8. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 7. E 00	TH-228	L.T. 7. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER D-65
Gamma Spectrum Analysis

GROUND WATER	1118
BE-7	L.T. 3. E 01
K-40	L.T. 4. E 01
MN-54	L.T. 2. E 00
CO-58	L.T. 3. E 00
FE-59	L.T. 6. E 00
CO-60	L.T. 3. E 00
ZN-65	L.T. 6. E 00
ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00
RU-106	L.T. 2. E 01
I-131	L.T. 1. E 01
CS-134	L.T. 3. E 00
CS-137	L.T. 3. E 00
BA-140	L.T. 6. E 00
CE-141	L.T. 7. E 00
CE-144	L.T. 2. E 01
RA-226	L.T. 7. E 01
TH-228	L.T. 6. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER D-65
Tritium Analysis

Collection Date:	**H-3**
0218	L.T. 2. E 02
0520	L.T. 2. E 02
0819	L.T. 2. E 02
1118	L.T. 2. E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER D-65
Radiochemical Analysis

Collection Date	I-131
0218	L.T. 2. E-01
0520	L.T. 3. E-01
0819	L.T. 2. E-01
1118	L.T. 7. E-01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER L-49
Gamma Spectrum Analysis

GROUND WATER	0218	GROUND WATER	0520	GROUND WATER	0819
BE-7	L.T. 3. E 01	BE-7	L.T. 4. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 6. E 01	K-40	L.T. 1. E 02	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 4. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 4. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 6. E 00	FE-59	L.T. 9. E 00	FE-59	L.T. 6. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 5. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 9. E 00	ZN-65	L.T. 1. E 01	ZN-65	L.T. 5. E 00
ZR-95	L.T. 4. E 00	ZR-95	L.T. 5. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 5. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 4. E 01	RU-106	L.T. 2. E 01
I-131	L.T. 5. E 00	I-131	L.T. 7. E 00	I-131	L.T. 1. E 01
CS-134	L.T. 3. E 00	CS-134	L.T. 5. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 4. E 00	CS-137	L.T. 5. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 5. E 00	BA-140	L.T. 6. E 00	BA-140	L.T. 6. E 00
CE-141	L.T. 5. E 00	CE-141	L.T. 7. E 00	CE-141	L.T. 7. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 6. E 01	RA-226	L.T. 9. E 01	RA-226	L.T. 7. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 8. E 00	TH-228	L.T. 6. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER L-49
Gamma Spectrum Analysis

GROUND WATER	1118
BE-7	L.T. 3. E 01
K-40	L.T. 6. E 01
MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00
FE-59	L.T. 7. E 00
CO-60	L.T. 3. E 00
ZN-65	L.T. 7. E 00
ZR-95	L.T. 4. E 00
RU-103	L.T. 4. E 00
RU-106	L.T. 3. E 01
I-131	L.T. 1. E 01
CS-134	L.T. 3. E 00
CS-137	L.T. 4. E 00
BA-140	L.T. 7. E 00
CE-141	L.T. 6. E 00
CE-144	L.T. 2. E 01
RA-226	L.T. 6. E 01
TH-228	L.T. 6. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER L-49
Tritium Analysis

Collection Date:	**H-3**
0218	L.T. 2. E 02
0520	L.T. 2. E 02
0819	L.T. 2. E 02
1118	L.T. 2. E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Ground Water

(pCi/Liter)
STATION NUMBER L-49
Radiochemical Analysis

Collection Date	I-131
0218	L.T. 2. E-01
0520	L.T. 3. E-01
0819	L.T. 2. E-01
1118	L.T. 6. E-01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)
STATION NUMBER BW15
Gamma Spectrum Analysis

DRINKING WATER	0106 / 0203	DRINKING WATER	0203 / 0303	DRINKING WATER	0303 / 0407
BE-7	L.T. 2. E 01	BE-7	L.T. 2. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 5. E 01	K-40	L.T. 4. E 01	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 2. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 2. E 00	CO-58	L.T. 2. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 6. E 00	FE-59	L.T. 4. E 00	FE-59	L.T. 7. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 2. E 00	CO-60	L.T. 4. E 00
ZN-65	L.T. 6. E 00	ZN-65	L.T. 4. E 00	ZN-65	L.T. 7. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 2. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 3. E 00	RU-103	L.T. 2. E 00	RU-103	L.T. 4. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 2. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 4. E 00	I-131	L.T. 3. E 00	I-131	L.T. 6. E 00
CS-134	L.T. 3. E 00	CS-134	L.T. 2. E 00	CS-134	L.T. 4. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00	CS-137	L.T. 4. E 00
BA-140	L.T. 3. E 00	BA-140	L.T. 2. E 00	BA-140	L.T. 5. E 00
CE-141	L.T. 5. E 00	CE-141	L.T. 4. E 00	CE-141	L.T. 7. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01
RA-226	L.T. 6. E 01	RA-226	L.T. 6. E 01	RA-226	L.T. 7. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 5. E 00	TH-228	L.T. 7. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)

STATION NUMBER BW15

Gamma Spectrum Analysis

DRINKING WATER	0407 / 0505	DRINKING WATER	0505 / 0602	DRINKING WATER	0602 / 0707
BE-7	L.T. 3. E 01	BE-7	L.T. 2. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 5. E 01	K-40	L.T. 5. E 01	K-40	L.T. 4. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 2. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 2. E 00
FE-59	L.T. 6. E 00	FE-59	L.T. 6. E 00	FE-59	L.T. 5. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 2. E 00
ZN-65	L.T. 6. E 00	ZN-65	L.T. 5. E 00	ZN-65	L.T. 5. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 3. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 2. E 01	RU-106	L.T. 2. E 01
I-131	L.T. 6. E 00	I-131	L.T. 6. E 00	I-131	L.T. 6. E 00
CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 4. E 00	CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 4. E 00	BA-140	L.T. 4. E 00	BA-140	L.T. 5. E 00
CE-141	L.T. 6. E 00	CE-141	L.T. 5. E 00	CE-141	L.T. 6. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 7. E 01	RA-226	L.T. 6. E 01	RA-226	L.T. 7. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 5. E 00	TH-228	L.T. 6. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)

STATION NUMBER BW15

Gamma Spectrum Analysis

DRINKING WATER	0707 / 0804	DRINKING WATER	0804 / 0901	DRINKING WATER	0901 / 1006
BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 5. E 01	K-40	L.T. 5. E 01	K-40	L.T. 4. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 2. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 5. E 00	FE-59	L.T. 5. E 00	FE-59	L.T. 6. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 5. E 00	ZN-65	L.T. 6. E 00	ZN-65	L.T. 4. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 3. E 00	RU-103	L.T. 3. E 00	RU-103	L.T. 4. E 00
RU-106	L.T. 2. E 01	RU-106	L.T. 2. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 5. E 00	I-131	L.T. 6. E 00	I-131	L.T. 1. E 01
CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 4. E 00	BA-140	L.T. 4. E 00	BA-140	L.T. 7. E 00
CE-141	L.T. 6. E 00	CE-141	L.T. 6. E 00	CE-141	L.T. 7. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 7. E 01	RA-226	L.T. 7. E 01	RA-226	L.T. 7. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 6. E 00	TH-228	L.T. 6. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)

STATION NUMBER BW15

Gamma Spectrum Analysis

DRINKING WATER	1006 / 1103	DRINKING WATER	1103 / 1201	DRINKING WATER	1201 / 0105
BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 7. E 01	K-40	L.T. 5. E 01	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 4. E 00
FE-59	L.T. 7. E 00	FE-59	L.T. 7. E 00	FE-59	L.T. 7. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 4. E 00
ZN-65	L.T. 6. E 00	ZN-65	L.T. 5. E 00	ZN-65	L.T. 7. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 4. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 4. E 00	RU-103	L.T. 4. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 2. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 1. E 01	I-131	L.T. 2. E 01	I-131	L.T. 7. E 00
CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 4. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 8. E 00	BA-140	L.T. 9. E 00	BA-140	L.T. 6. E 00
CE-141	L.T. 6. E 00	CE-141	L.T. 8. E 00	CE-141	L.T. 8. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01
RA-226	L.T. 6. E 01	RA-226	L.T. 7. E 01	RA-226	L.T. 8. E 01
TH-228	L.T. 5. E 00	TH-228	L.T. 6. E 00	TH-228	L.T. 7. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)
STATION NUMBER BW15
Gamma Spectrum Analysis

DRINKING WATER DUP	**0901** / **1006**
BE-7	L.T. 3. E 01
K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00
FE-59	L.T. 8. E 00
CO-60	L.T. 3. E 00
ZN-65	L.T. 7. E 00
ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00
RU-106	L.T. 3. E 01
I-131	L.T. 2. E 01
CS-134	L.T. 3. E 00
CS-137	L.T. 3. E 00
BA-140	L.T. 9. E 00
CE-141	L.T. 7. E 00
CE-144	L.T. 2. E 01
RA-226	L.T. 6. E 01
TH-228	L.T. 6. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)
STATION NUMBER BW15
Radiochemical Analysis

Start Date:	Stop Date:	GR-B
0106	0203	5.9 +-1.3 E 00
0203	0303	4.3 +-1.2 E 00
0303	0407	4.8 +-1.2 E 00
0407	0505	5.3 +-1.2 E 00
0505	0602	4.9 +-1.2 E 00
0602	0707	5.3 +-1.3 E 00
0707	0804	6.5 +-1.3 E 00
0804	0901	5.4 +-1.3 E 00
0901*	1006	5.9 +-1.8 E 00
0901	1006	4.6 +-1.6 E 00
1006	1103	5.5 +-1.3 E 00
1103	1201	1.9 +-0.4 E 01
1201	0105	5.5 +-1.2 E 00

*** Duplicate**

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)
STATION NUMBER BW15
Tritium Analysis

Start Date:	**Stop Date:**	**H-3**
0106	0407	L.T. 3. E 02
0407	0707	1.8 +-1.0 E 02
0707	1006	L.T. 3. E 02
1006	0105	L.T. 2. E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)
STATION NUMBER BW15
Radiochemical Analysis

Start Date:	Stop Date:	I-131
0106	0203	L.T. 8. E-01
0203	0303	L.T. 7. E-01
0303	0407	L.T. 1. E 00
0407	0505	L.T. 6. E-01
0505	0602	L.T. 1. E 00
0602	0707	L.T. 9. E-01
0707	0804	L.T. 9. E-01
0804	0901	L.T. 7. E-01
0901*	1006	L.T. 5. E-01
0901	1006	L.T. 4. E-01
1006	1103	L.T. 7. E-01
1103	1201	L.T. 3. E-01
1201	0105	L.T. 8. E-01

*** Duplicate**

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)
STATION NUMBER BW15
Gamma Spectrum Analysis (Grab Sample)

DRINKING WATER (GRAB)	**0128**
BE-7	L.T. 2. E 01
K-40	L.T. 4. E 01
MN-54	L.T. 2. E 00
CO-58	L.T. 2. E 00
FE-59	L.T. 5. E 00
CO-60	L.T. 2. E 00
ZN-65	L.T. 4. E 00
ZR-95	L.T. 2. E 00
RU-103	L.T. 3. E 00
RU-106	L.T. 2. E 01
I-131	L.T. 5. E 00
CS-134	L.T. 2. E 00
CS-137	L.T. 2. E 00
BA-140	L.T. 4. E 00
CE-141	L.T. 5. E 00
CE-144	L.T. 2. E 01
RA-226	L.T. 5. E 01
TH-228	L.T. 5. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)
STATION NUMBER BW15
Radiochemical Analysis
(Grab Sample)

Date:	**GR-B**
0128	4.0 +-1.2 E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)
STATION NUMBER BW15
Radiochemical Analysis
(Grab Sample)

Date:	**I-131**
0128	L.T. 5. E-01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)

STATION NUMBER LW40

Gamma Spectrum Analysis

DRINKING WATER	0106 / 0203	DRINKING WATER	0203 / 0303	DRINKING WATER	0303 / 0407
BE-7	L.T. 2. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 6. E 01	K-40	L.T. 4. E 01	K-40	L.T. 8. E 01
MN-54	L.T. 2. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 2. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 5. E 00	FE-59	L.T. 5. E 00	FE-59	L.T. 6. E 00
CO-60	L.T. 2. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 5. E 00	ZN-65	L.T. 6. E 00	ZN-65	L.T. 7. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 3. E 00	RU-103	L.T. 3. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 2. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 3. E 00	I-131	L.T. 4. E 00	I-131	L.T. 5. E 00
CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 3. E 00	BA-140	L.T. 4. E 00	BA-140	L.T. 4. E 00
CE-141	L.T. 4. E 00	CE-141	L.T. 5. E 00	CE-141	L.T. 5. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 5. E 01	RA-226	L.T. 6. E 01	RA-226	L.T. 6. E 01
TH-228	L.T. 5. E 00	TH-228	L.T. 6. E 00	TH-228	L.T. 5. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)

STATION NUMBER LW40

Gamma Spectrum Analysis

DRINKING WATER	0407 / 0505	DRINKING WATER	0505 / 0602	DRINKING WATER	0602 / 0707
BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 9. E 01	K-40	L.T. 8. E 01	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 4. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 7. E 00	FE-59	L.T. 7. E 00	FE-59	L.T. 7. E 00
CO-60	L.T. 4. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 7. E 00	ZN-65	L.T. 6. E 00	ZN-65	L.T. 7. E 00
ZR-95	L.T. 4. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 4. E 00	RU-103	L.T. 4. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 7. E 00	I-131	L.T. 8. E 00	I-131	L.T. 8. E 00
CS-134	L.T. 4. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 4. E 00	CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 6. E 00	BA-140	L.T. 5. E 00	BA-140	L.T. 6. E 00
CE-141	L.T. 6. E 00	CE-141	L.T. 5. E 00	CE-141	L.T. 8. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01
RA-226	L.T. 7. E 01	RA-226	L.T. 6. E 01	RA-226	L.T. 8. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 6. E 00	TH-228	L.T. 6. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)

STATION NUMBER LW40

Gamma Spectrum Analysis

DRINKING WATER	0707 / 0804	DRINKING WATER	0804 / 0901	DRINKING WATER	0901 / 1006
BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 6. E 01	K-40	L.T. 5. E 01	K-40	L.T. 6. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 2. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 7. E 00	FE-59	L.T. 6. E 00	FE-59	L.T. 6. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 3. E 00	CO-60	L.T. 2. E 00
ZN-65	L.T. 7. E 00	ZN-65	L.T. 7. E 00	ZN-65	L.T. 5. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 4. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 2. E 01
I-131	L.T. 6. E 00	I-131	L.T. 7. E 00	I-131	L.T. 1. E 01
CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00	CS-137	L.T. 3. E 00
BA-140	L.T. 6. E 00	BA-140	L.T. 5. E 00	BA-140	L.T. 6. E 00
CE-141	L.T. 5. E 00	CE-141	L.T. 8. E 00	CE-141	L.T. 5. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 6. E 01	RA-226	L.T. 8. E 01	RA-226	L.T. 5. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 7. E 00	TH-228	L.T. 5. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)

STATION NUMBER LW40

Gamma Spectrum Analysis

DRINKING WATER	1006 / 1103	DRINKING WATER	1103 / 1201	DRINKING WATER	1201 / 0105
BE-7	L.T. 3. E 01	BE-7	L.T. 4. E 01	BE-7	L.T. 3. E 01
K-40	L.T. 5. E 01	K-40	L.T. 6. E 01	K-40	L.T. 5. E 01
MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00	MN-54	L.T. 3. E 00
CO-58	L.T. 3. E 00	CO-58	L.T. 4. E 00	CO-58	L.T. 3. E 00
FE-59	L.T. 8. E 00	FE-59	L.T. 9. E 00	FE-59	L.T. 6. E 00
CO-60	L.T. 3. E 00	CO-60	L.T. 4. E 00	CO-60	L.T. 3. E 00
ZN-65	L.T. 6. E 00	ZN-65	L.T. 7. E 00	ZN-65	L.T. 6. E 00
ZR-95	L.T. 3. E 00	ZR-95	L.T. 4. E 00	ZR-95	L.T. 3. E 00
RU-103	L.T. 4. E 00	RU-103	L.T. 5. E 00	RU-103	L.T. 3. E 00
RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01	RU-106	L.T. 3. E 01
I-131	L.T. 1. E 01	I-131	L.T. 2. E 01	I-131	L.T. 5. E 00
CS-134	L.T. 3. E 00	CS-134	L.T. 4. E 00	CS-134	L.T. 3. E 00
CS-137	L.T. 4. E 00	CS-137	L.T. 4. E 00	CS-137	L.T. 4. E 00
BA-140	L.T. 9. E 00	BA-140	L.T. 1. E 01	BA-140	L.T. 5. E 00
CE-141	L.T. 7. E 00	CE-141	L.T. 1. E 01	CE-141	L.T. 6. E 00
CE-144	L.T. 2. E 01	CE-144	L.T. 3. E 01	CE-144	L.T. 2. E 01
RA-226	L.T. 6. E 01	RA-226	L.T. 9. E 01	RA-226	L.T. 7. E 01
TH-228	L.T. 6. E 00	TH-228	L.T. 8. E 00	TH-228	L.T. 6. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)
STATION NUMBER LW40
Radiochemical Analysis

Start Date:	Stop Date:	GR-B
0106	0203	4.2 +-1.2 E 00
0203	0303	3.1 +-0.9 E 00
0303	0407	4.9 +-1.1 E 00
0407	0505	3.8 +-1.1 E 00
0505	0602	4.0 +-1.0 E 00
0602	0707	4.8 +-1.1 E 00
0707	0804	6.6 +-1.2 E 00
0804	0901	6.6 +-1.3 E 00
0901	1006	4.7 +-1.1 E 00
1006	1103	4.5 +-1.1 E 00
1103	1201	2.0 +-0.4 E 01
1201	0105	6.0 +-1.1 E 00

*** Duplicate**

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)
STATION NUMBER LW40
Tritium Analysis

Start Date:	Stop Date:	H-3
0106	0407	L.T. 3. E 02
0407	0707	L.T. 2. E 02
0707	1006	L.T. 3. E 02
1006	0105	L.T. 2. E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Drinking Water

(pCi/Liter)
STATION NUMBER LW40
Radiochemical Analysis

Start Date:	Stop Date:	I-131
0106	0203	L.T. 9. E-01
0203	0303	L.T. 7. E-01
0303	0407	L.T. 1. E 00
0407	0505	L.T. 8. E-01
0505	0602	L.T. 9. E-01
0602	0707	L.T. 1. E 00
0707	0804	L.T. 7. E-01
0804	0901	L.T. 6. E-01
0901	1006	L.T. 1. E 00
1006	1103	L.T. 7. E-01
1103	1201	L.T. 6. E-01
1201	0105	L.T. 8. E-01

*** Duplicate**

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Shoreline Sediment

(pCi/KG DRY)
STATION NUMBER DC
Gamma Spectrum Analysis

0518	SHORELINE SEDIMENT	1001	SHORELINE SEDIMENT
BE-7	L.T. 3. E 02	BE-7	1.52+-0.30E 03
K-40	6.82+-0.68E 03	K-40	9.00+-0.90E 03
MN-54	L.T. 3. E 01	MN-54	L.T. 3. E 01
CO-58	L.T. 3. E 01	CO-58	L.T. 3. E 01
FE-59	L.T. 7. E 01	FE-59	L.T. 7. E 01
CO-60	L.T. 3. E 01	CO-60	L.T. 4. E 01
ZN-65	L.T. 6. E 01	ZN-65	L.T. 7. E 01
ZR-95	L.T. 3. E 01	ZR-95	L.T. 4. E 01
RU-103	L.T. 3. E 01	RU-103	L.T. 4. E 01
RU-106	L.T. 2. E 02	RU-106	L.T. 3. E 02
I-131	L.T. 5. E 01	I-131	L.T. 1. E 02
CS-134	L.T. 3. E 01	CS-134	L.T. 5. E 01
CS-137	L.T. 3. E 01	CS-137	8.85+-3.25E 01
BA-140	L.T. 4. E 01	BA-140	L.T. 8. E 01
CE-141	L.T. 4. E 01	CE-141	L.T. 7. E 01
CE-144	L.T. 2. E 02	CE-144	L.T. 2. E 02
RA-226	1.05+-0.45E 03	RA-226	2.06+-0.54E 03
TH-228	6.88+-0.69E 02	TH-228	1.08+-0.11E 03

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Shoreline Sediment

(pCi/KG DRY)
STATION NUMBER EEA
Gamma Spectrum Analysis

0413	SHORELINE SEDIMENT	1130	SHORELINE SEDIMENT
BE-7	L.T. 3. E 02	BE-7	L.T. 3. E 02
K-40	5.64+-0.56E 03	K-40	1.10+-0.11E 04
MN-54	L.T. 3. E 01	MN-54	L.T. 3. E 01
CO-58	L.T. 3. E 01	CO-58	L.T. 3. E 01
FE-59	L.T. 7. E 01	FE-59	L.T. 7. E 01
CO-60	L.T. 3. E 01	CO-60	L.T. 3. E 01
ZN-65	L.T. 6. E 01	ZN-65	L.T. 1. E 02
ZR-95	L.T. 4. E 01	ZR-95	L.T. 4. E 01
RU-103	L.T. 4. E 01	RU-103	L.T. 4. E 01
RU-106	L.T. 3. E 02	RU-106	L.T. 3. E 02
I-131	L.T. 9. E 01	I-131	L.T. 9. E 01
CS-134	L.T. 4. E 01	CS-134	L.T. 4. E 01
CS-137	L.T. 3. E 01	CS-137	2.86+-0.39E 02
BA-140	L.T. 6. E 01	BA-140	L.T. 7. E 01
CE-141	L.T. 5. E 01	CE-141	L.T. 7. E 01
CE-144	L.T. 2. E 02	CE-144	L.T. 2. E 02
RA-226	1.53+-0.43E 03	RA-226	1.82+-0.57E 03
TH-228	6.54+-0.65E 02	TH-228	1.04+-0.10E 03

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Shoreline Sediment

(pCi/KG DRY)
STATION NUMBER JRR
Gamma Spectrum Analysis

0610	SHORELINE SEDIMENT	1001	SHORELINE SEDIMENT
BE-7	L.T. 2. E 02	BE-7	7.91+-2.00E 02
K-40	7.94+-0.79E 03	K-40	1.02+-0.10E 04
MN-54	L.T. 2. E 01	MN-54	L.T. 3. E 01
CO-58	L.T. 2. E 01	CO-58	L.T. 2. E 01
FE-59	L.T. 5. E 01	FE-59	L.T. 6. E 01
CO-60	L.T. 3. E 01	CO-60	L.T. 2. E 01
ZN-65	L.T. 6. E 01	ZN-65	L.T. 5. E 01
ZR-95	L.T. 3. E 01	ZR-95	L.T. 3. E 01
RU-103	L.T. 3. E 01	RU-103	L.T. 3. E 01
RU-106	L.T. 2. E 02	RU-106	L.T. 2. E 02
I-131	L.T. 7. E 01	I-131	L.T. 8. E 01
CS-134	L.T. 3. E 01	CS-134	L.T. 3. E 01
CS-137	5.22+-2.37E 01	CS-137	8.03+-2.44E 01
BA-140	L.T. 4. E 01	BA-140	L.T. 6. E 01
CE-141	L.T. 4. E 01	CE-141	L.T. 5. E 01
CE-144	L.T. 1. E 02	CE-144	L.T. 2. E 02
RA-226	2.23+-0.38E 03	RA-226	2.21+-0.37E 03
TH-228	9.82+-0.98E 02	TH-228	1.39+-0.14E 03

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Waterborne

Shoreline Sediment

(pCi/KG DRY)
STATION NUMBER MUDS
Gamma Spectrum Analysis

SHORELINE SEDIMENT	0430	SHORELINE SEDIMENT	1130
BE-7	L.T. 3. E 02	BE-7	L.T. 3. E 02
K-40	1.22+-0.12E 04	K-40	9.80+-0.98E 03
MN-54	L.T. 3. E 01	MN-54	L.T. 3. E 01
CO-58	L.T. 3. E 01	CO-58	L.T. 3. E 01
FE-59	L.T. 7. E 01	FE-59	L.T. 7. E 01
CO-60	L.T. 3. E 01	CO-60	L.T. 3. E 01
ZN-65	L.T. 9. E 01	ZN-65	L.T. 7. E 01
ZR-95	L.T. 5. E 01	ZR-95	L.T. 5. E 01
RU-103	L.T. 4. E 01	RU-103	L.T. 4. E 01
RU-106	L.T. 3. E 02	RU-106	L.T. 3. E 02
I-131	L.T. 1. E 02	I-131	L.T. 9. E 01
CS-134	L.T. 5. E 01	CS-134	L.T. 4. E 01
CS-137	L.T. 4. E 01	CS-137	L.T. 4. E 01
BA-140	L.T. 7. E 01	BA-140	L.T. 7. E 01
CE-141	L.T. 7. E 01	CE-141	L.T. 6. E 01
CE-144	L.T. 2. E 02	CE-144	L.T. 2. E 02
RA-226	2.83+-0.58E 03	RA-226	2.73+-0.49E 03
TH-228	1.14+-0.11E 03	TH-228	1.53+-0.15E 03

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Fish

(pCi/KG WET)
STATION NUMBER JRR
Gamma Spectrum and Tritium Analysis

CHANNEL CATFISH	0518	CHANNEL CATFISH	1001	COMMON CARP	0518
BE-7	L.T. 1. E 02	BE-7	L.T. 1. E 02	BE-7	L.T. 9. E 01
K-40	3.08+-0.31E 03	K-40	3.11+-0.31E 03	K-40	3.41+-0.34E 03
MN-54	L.T. 1. E 01	MN-54	L.T. 1. E 01	MN-54	L.T. 1. E 01
CO-58	L.T. 1. E 01	CO-58	L.T. 1. E 01	CO-58	L.T. 1. E 01
FE-59	L.T. 3. E 01	FE-59	L.T. 3. E 01	FE-59	L.T. 2. E 01
CO-60	L.T. 1. E 01	CO-60	L.T. 1. E 01	CO-60	L.T. 1. E 01
ZN-65	L.T. 3. E 01	ZN-65	L.T. 3. E 01	ZN-65	L.T. 2. E 01
ZR-95	L.T. 1. E 01	ZR-95	L.T. 1. E 01	ZR-95	L.T. 1. E 01
RU-103	L.T. 1. E 01	RU-103	L.T. 1. E 01	RU-103	L.T. 1. E 01
RU-106	L.T. 1. E 02	RU-106	L.T. 1. E 02	RU-106	L.T. 9. E 01
I-131	L.T. 2. E 01	I-131	L.T. 3. E 01	I-131	L.T. 2. E 01
CS-134	L.T. 1. E 01	CS-134	L.T. 1. E 01	CS-134	L.T. 1. E 01
CS-137	L.T. 2. E 01	CS-137	L.T. 2. E 01	CS-137	L.T. 1. E 01
BA-140	L.T. 2. E 01	BA-140	L.T. 2. E 01	BA-140	L.T. 2. E 01
CE-141	L.T. 2. E 01	CE-141	L.T. 2. E 01	CE-141	L.T. 2. E 01
CE-144	L.T. 8. E 01	CE-144	L.T. 8. E 01	CE-144	L.T. 9. E 01
RA-226	L.T. 3. E 02	RA-226	L.T. 3. E 02	RA-226	L.T. 3. E 02
TH-228	L.T. 2. E 01	TH-228	L.T. 2. E 01	TH-228	L.T. 2. E 01
H-3	L.T. 2.0 E 02	H-3	L.T. 3. E 02	H-3	L.T. 2.0 E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Fish

(pCi/KG WET)
STATION NUMBER JRR
Gamma Spectrum and Tritium Analysis

FW DRUM	1001	WHITE CRAPPIE	1001
BE-7	L.T. 1. E 02	BE-7	L.T. 1. E 02
K-40	3.33+-0.33E 03	K-40	3.33+-0.33E 03
MN-54	L.T. 1. E 01	MN-54	L.T. 1. E 01
CO-58	L.T. 1. E 01	CO-58	L.T. 1. E 01
FE-59	L.T. 3. E 01	FE-59	L.T. 3. E 01
CO-60	L.T. 1. E 01	CO-60	L.T. 1. E 01
ZN-65	L.T. 3. E 01	ZN-65	L.T. 2. E 01
ZR-95	L.T. 1. E 01	ZR-95	L.T. 1. E 01
RU-103	L.T. 1. E 01	RU-103	L.T. 1. E 01
RU-106	L.T. 1. E 02	RU-106	L.T. 1. E 02
I-131	L.T. 3. E 01	I-131	L.T. 3. E 01
CS-134	L.T. 1. E 01	CS-134	L.T. 1. E 01
CS-137	L.T. 1. E 01	CS-137	L.T. 1. E 01
BA-140	L.T. 2. E 01	BA-140	L.T. 2. E 01
CE-141	L.T. 2. E 01	CE-141	L.T. 3. E 01
CE-144	L.T. 9. E 01	CE-144	L.T. 1. E 02
RA-226	L.T. 3. E 02	RA-226	L.T. 3. E 02
TH-228	L.T. 2. E 01	TH-228	L.T. 2. E 01
H-3	L.T. 3. E 02	H-3	L.T. 3. E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Fish

(pCi/KG WET)
STATION NUMBER WCL
Gamma Spectrum and Tritium Analysis

CHANNEL CATFISH	0526	CHANNEL CATFISH	1012
BE-7	L.T. 1. E 02	BE-7	L.T. 1. E 02
K-40	3.30+-0.33E 03	K-40	2.96+-0.30E 03
MN-54	L.T. 1. E 01	MN-54	L.T. 1. E 01
CO-58	L.T. 1. E 01	CO-58	L.T. 1. E 01
FE-59	L.T. 3. E 01	FE-59	L.T. 3. E 01
CO-60	L.T. 1. E 01	CO-60	L.T. 2. E 01
ZN-65	L.T. 3. E 01	ZN-65	L.T. 3. E 01
ZR-95	L.T. 1. E 01	ZR-95	L.T. 1. E 01
RU-103	L.T. 1. E 01	RU-103	L.T. 2. E 01
RU-106	L.T. 1. E 02	RU-106	L.T. 1. E 02
I-131	L.T. 4. E 01	I-131	L.T. 5. E 01
CS-134	L.T. 1. E 01	CS-134	L.T. 1. E 01
CS-137	L.T. 1. E 01	CS-137	L.T. 1. E 01
BA-140	L.T. 2. E 01	BA-140	L.T. 3. E 01
CE-141	L.T. 2. E 01	CE-141	L.T. 3. E 01
CE-144	L.T. 6. E 01	CE-144	L.T. 1. E 02
RA-226	L.T. 2. E 02	RA-226	L.T. 3. E 02
TH-228	L.T. 2. E 01	TH-228	L.T. 3. E 01
H-3	6.5 +-0.2 E 03	H-3	4.5 +-.2 E 03

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Fish

(pCi/KG WET)
STATION NUMBER WCL
Gamma Spectrum and Tritium Analysis

COMMON CARP	0526	COMMON CARP	1012	COMMON CARP DUP	1012
BE-7	L.T. 1. E 02	BE-7	L.T. 2. E 02	BE-7	L.T. 2. E 02
K-40	2.96+-0.30E 03	K-40	3.04+-0.30E 03	K-40	2.58+-0.28E 03
MN-54	L.T. 1. E 01	MN-54	L.T. 2. E 01	MN-54	L.T. 2. E 01
CO-58	L.T. 2. E 01	CO-58	L.T. 2. E 01	CO-58	L.T. 2. E 01
FE-59	L.T. 4. E 01	FE-59	L.T. 4. E 01	FE-59	L.T. 4. E 01
CO-60	L.T. 1. E 01	CO-60	L.T. 2. E 01	CO-60	L.T. 2. E 01
ZN-65	L.T. 3. E 01	ZN-65	L.T. 4. E 01	ZN-65	L.T. 4. E 01
ZR-95	L.T. 2. E 01	ZR-95	L.T. 2. E 01	ZR-95	L.T. 2. E 01
RU-103	L.T. 2. E 01	RU-103	L.T. 2. E 01	RU-103	L.T. 2. E 01
RU-106	L.T. 1. E 02	RU-106	L.T. 2. E 02	RU-106	L.T. 2. E 02
I-131	L.T. 5. E 01	I-131	L.T. 6. E 01	I-131	L.T. 6. E 01
CS-134	L.T. 2. E 01	CS-134	L.T. 2. E 01	CS-134	L.T. 2. E 01
CS-137	L.T. 2. E 01	CS-137	L.T. 2. E 01	CS-137	L.T. 2. E 01
BA-140	L.T. 3. E 01	BA-140	L.T. 3. E 01	BA-140	L.T. 3. E 01
CE-141	L.T. 3. E 01	CE-141	L.T. 3. E 01	CE-141	L.T. 3. E 01
CE-144	L.T. 9. E 01	CE-144	L.T. 1. E 02	CE-144	L.T. 1. E 02
RA-226	L.T. 3. E 02	RA-226	L.T. 3. E 02	RA-226	L.T. 3. E 02
TH-228	L.T. 2. E 01	TH-228	L.T. 3. E 01	TH-228	L.T. 3. E 01
H-3	6.1 +-0.2 E 03	H-3	3.6 +-.2 E 03	H-3	2.2 +-.2 E 03

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Fish

(pCi/KG WET)
STATION NUMBER WCL
Gamma Spectrum and Tritium Analysis

FLATHEAD CATFISH	0526	SM BASS	0526	SM BUFFALO	1012
BE-7	L.T. 1. E 02	BE-7	L.T. 1. E 02	BE-7	L.T. 1. E 02
K-40	3.58+-0.36E 03	K-40	3.62+-0.36E 03	K-40	2.52+-0.25E 03
MN-54	L.T. 1. E 01	MN-54	L.T. 1. E 01	MN-54	L.T. 1. E 01
CO-58	L.T. 1. E 01	CO-58	L.T. 1. E 01	CO-58	L.T. 1. E 01
FE-59	L.T. 3. E 01	FE-59	L.T. 3. E 01	FE-59	L.T. 3. E 01
CO-60	L.T. 1. E 01	CO-60	L.T. 1. E 01	CO-60	L.T. 1. E 01
ZN-65	L.T. 3. E 01	ZN-65	L.T. 3. E 01	ZN-65	L.T. 3. E 01
ZR-95	L.T. 1. E 01	ZR-95	L.T. 1. E 01	ZR-95	L.T. 1. E 01
RU-103	L.T. 2. E 01	RU-103	L.T. 2. E 01	RU-103	L.T. 1. E 01
RU-106	L.T. 1. E 02	RU-106	L.T. 1. E 02	RU-106	L.T. 1. E 02
I-131	L.T. 5. E 01	I-131	L.T. 4. E 01	I-131	L.T. 4. E 01
CS-134	L.T. 1. E 01	CS-134	L.T. 1. E 01	CS-134	L.T. 1. E 01
CS-137	L.T. 1. E 01	CS-137	2.18+-1.22E 01	CS-137	L.T. 1. E 01
BA-140	L.T. 2. E 01	BA-140	L.T. 3. E 01	BA-140	L.T. 2. E 01
CE-141	L.T. 3. E 01	CE-141	L.T. 3. E 01	CE-141	L.T. 3. E 01
CE-144	L.T. 1. E 02	CE-144	L.T. 8. E 01	CE-144	L.T. 1. E 02
RA-226	L.T. 3. E 02	RA-226	L.T. 3. E 02	RA-226	L.T. 3. E 02
TH-228	L.T. 2. E 01	TH-228	L.T. 2. E 01	TH-228	L.T. 2. E 01
H-3	1.1 +-0.1 E 04	H-3	1.0 +-0.1 E 04	H-3	5.2 +-.2 E 03

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Fish

(pCi/KG WET)
STATION NUMBER WCL
Gamma Spectrum and Tritium Analysis

WALLEYE	1012	WHITE BASS	1012	WIPER	1012
BE-7	L.T. 2. E 02	BE-7	L.T. 1. E 02	BE-7	L.T. 1. E 02
K-40	3.32+-0.37E 03	K-40	3.36+-0.34E 03	K-40	3.59+-0.36E 03
MN-54	L.T. 2. E 01	MN-54	L.T. 1. E 01	MN-54	L.T. 1. E 01
CO-58	L.T. 2. E 01	CO-58	L.T. 1. E 01	CO-58	L.T. 1. E 01
FE-59	L.T. 5. E 01	FE-59	L.T. 3. E 01	FE-59	L.T. 3. E 01
CO-60	L.T. 2. E 01	CO-60	L.T. 1. E 01	CO-60	L.T. 1. E 01
ZN-65	L.T. 5. E 01	ZN-65	L.T. 3. E 01	ZN-65	L.T. 3. E 01
ZR-95	L.T. 2. E 01	ZR-95	L.T. 1. E 01	ZR-95	L.T. 1. E 01
RU-103	L.T. 3. E 01	RU-103	L.T. 2. E 01	RU-103	L.T. 1. E 01
RU-106	L.T. 2. E 02	RU-106	L.T. 1. E 02	RU-106	L.T. 1. E 02
I-131	L.T. 8. E 01	I-131	L.T. 4. E 01	I-131	L.T. 3. E 01
CS-134	L.T. 2. E 01	CS-134	L.T. 1. E 01	CS-134	L.T. 1. E 01
CS-137	4.07+-1.58E 01	CS-137	L.T. 2. E 01	CS-137	L.T. 1. E 01
BA-140	L.T. 4. E 01	BA-140	L.T. 3. E 01	BA-140	L.T. 2. E 01
CE-141	L.T. 4. E 01	CE-141	L.T. 3. E 01	CE-141	L.T. 2. E 01
CE-144	L.T. 2. E 02	CE-144	L.T. 9. E 01	CE-144	L.T. 6. E 01
RA-226	L.T. 5. E 02	RA-226	L.T. 3. E 02	RA-226	L.T. 2. E 02
TH-228	L.T. 4. E 01	TH-228	L.T. 2. E 01	TH-228	L.T. 2. E 01
H-3	4.6 +-.2 E 03	H-3	5.5 +-.3 E 03	H-3	3.2 +-.2 E 03

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Food/Garden Crops

(pCi/KG WET)
STATION NUMBER E-1
Gamma Spectrum Analysis

0527	LETTUCE	0630	LETTUCE	0728	SQUASH/CORN LEAVES
BE-7	1.88+-0.53E 02	BE-7	1.72+-0.40E 02	BE-7	2.36+-0.24E 03
K-40	6.22+-0.62E 03	K-40	3.00+-0.30E 03	K-40	7.45+-0.75E 03
MN-54	L.T. 7. E 00	MN-54	L.T. 6. E 00	MN-54	L.T. 8. E 00
CO-58	L.T. 7. E 00	CO-58	L.T. 6. E 00	CO-58	L.T. 8. E 00
FE-59	L.T. 2. E 01	FE-59	L.T. 1. E 01	FE-59	L.T. 2. E 01
CO-60	L.T. 7. E 00	CO-60	L.T. 6. E 00	CO-60	L.T. 9. E 00
ZN-65	L.T. 2. E 01	ZN-65	L.T. 1. E 01	ZN-65	L.T. 2. E 01
ZR-95	L.T. 7. E 00	ZR-95	L.T. 6. E 00	ZR-95	L.T. 9. E 00
RU-103	L.T. 8. E 00	RU-103	L.T. 6. E 00	RU-103	L.T. 9. E 00
RU-106	L.T. 6. E 01	RU-106	L.T. 5. E 01	RU-106	L.T. 8. E 01
I-131	L.T. 1. E 01	I-131	L.T. 1. E 01	I-131	L.T. 1. E 01
CS-134	L.T. 7. E 00	CS-134	L.T. 6. E 00	CS-134	L.T. 9. E 00
CS-137	L.T. 8. E 00	CS-137	L.T. 6. E 00	CS-137	L.T. 9. E 00
BA-140	L.T. 1. E 01	BA-140	L.T. 7. E 00	BA-140	L.T. 1. E 01
CE-141	L.T. 1. E 01	CE-141	L.T. 9. E 00	CE-141	L.T. 1. E 01
CE-144	L.T. 4. E 01	CE-144	L.T. 3. E 01	CE-144	L.T. 5. E 01
RA-226	L.T. 1. E 02	RA-226	L.T. 1. E 02	RA-226	L.T. 2. E 02
TH-228	L.T. 1. E 01	TH-228	L.T. 9. E 00	TH-228	L.T. 2. E 01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Food/Garden Crops

(pCi/KG WET)
STATION NUMBER F-1
Gamma Spectrum Analysis

0527	HORSERADISH LEAVES	0630	HORSERADISH LEAVES	0825	HORSERADISH LEAVES
BE-7	4.00+-0.65E 02	BE-7	3.56+-0.66E 02	BE-7	4.59+-0.68E 02
K-40	3.87+-0.39E 03	K-40	4.72+-0.47E 03	K-40	5.40+-0.54E 03
MN-54	L.T. 8. E 00	MN-54	L.T. 8. E 00	MN-54	L.T. 9. E 00
CO-58	L.T. 8. E 00	CO-58	L.T. 8. E 00	CO-58	L.T. 9. E 00
FE-59	L.T. 2. E 01	FE-59	L.T. 2. E 01	FE-59	L.T. 2. E 01
CO-60	L.T. 8. E 00	CO-60	L.T. 9. E 00	CO-60	L.T. 9. E 00
ZN-65	L.T. 2. E 01	ZN-65	L.T. 2. E 01	ZN-65	L.T. 2. E 01
ZR-95	L.T. 9. E 00	ZR-95	L.T. 9. E 00	ZR-95	L.T. 9. E 00
RU-103	L.T. 9. E 00	RU-103	L.T. 9. E 00	RU-103	L.T. 1. E 01
RU-106	L.T. 7. E 01	RU-106	L.T. 7. E 01	RU-106	L.T. 8. E 01
I-131	L.T. 2. E 01	I-131	L.T. 2. E 01	I-131	L.T. 2. E 01
CS-134	L.T. 9. E 00	CS-134	L.T. 9. E 00	CS-134	L.T. 1. E 01
CS-137	1.24+-0.69E 01	CS-137	L.T. 9. E 00	CS-137	L.T. 1. E 01
BA-140	L.T. 1. E 01	BA-140	L.T. 1. E 01	BA-140	L.T. 1. E 01
CE-141	L.T. 1. E 01	CE-141	L.T. 1. E 01	CE-141	L.T. 1. E 01
CE-144	L.T. 5. E 01	CE-144	L.T. 5. E 01	CE-144	L.T. 5. E 01
RA-226	L.T. 2. E 02	RA-226	L.T. 1. E 02	RA-226	L.T. 2. E 02
TH-228	L.T. 1. E 01	TH-228	L.T. 1. E 01	TH-228	L.T. 1. E 01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Food/Garden Crops

(pCi/KG WET)
STATION NUMBER G-1
Gamma Spectrum Analysis

0630	CABBAGE	0825	TURNIP GREENS	0922	TURNIP GREENS
BE-7	5.37+-0.54E 02	BE-7	2.15+-0.78E 02	BE-7	6.98+-0.70E 02
K-40	4.07+-0.41E 03	K-40	5.04+-0.50E 03	K-40	4.42+-0.44E 03
MN-54	L.T. 7. E 00	MN-54	L.T. 1. E 01	MN-54	L.T. 8. E 00
CO-58	L.T. 7. E 00	CO-58	L.T. 1. E 01	CO-58	L.T. 8. E 00
FE-59	L.T. 2. E 01	FE-59	L.T. 2. E 01	FE-59	L.T. 2. E 01
CO-60	L.T. 7. E 00	CO-60	L.T. 1. E 01	CO-60	L.T. 8. E 00
ZN-65	L.T. 2. E 01	ZN-65	L.T. 3. E 01	ZN-65	L.T. 2. E 01
ZR-95	L.T. 8. E 00	ZR-95	L.T. 1. E 01	ZR-95	L.T. 8. E 00
RU-103	L.T. 8. E 00	RU-103	L.T. 1. E 01	RU-103	L.T. 9. E 00
RU-106	L.T. 6. E 01	RU-106	L.T. 1. E 02	RU-106	L.T. 7. E 01
I-131	L.T. 1. E 01	I-131	L.T. 2. E 01	I-131	L.T. 1. E 01
CS-134	L.T. 8. E 00	CS-134	L.T. 1. E 01	CS-134	L.T. 9. E 00
CS-137	L.T. 8. E 00	CS-137	L.T. 1. E 01	CS-137	L.T. 8. E 00
BA-140	L.T. 1. E 01	BA-140	L.T. 1. E 01	BA-140	L.T. 9. E 00
CE-141	L.T. 1. E 01	CE-141	L.T. 2. E 01	CE-141	L.T. 1. E 01
CE-144	L.T. 4. E 01	CE-144	L.T. 7. E 01	CE-144	L.T. 5. E 01
RA-226	L.T. 1. E 02	RA-226	L.T. 2. E 02	RA-226	L.T. 1. E 02
TH-228	3.58+-0.69E 01	TH-228	L.T. 2. E 01	TH-228	L.T. 1. E 01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Food/Garden Crops

(pCi/KG WET)
STATION NUMBER G-1
Gamma Spectrum Analysis

1027	TURNIP GREENS	1130	TURNIP GREENS
BE-7	4.78+-0.85E 02	BE-7	1.95+-0.47E 02
K-40	2.98+-0.30E 03	K-40	6.41+-0.64E 03
MN-54	L.T. 1. E 01	MN-54	L.T. 6. E 00
CO-58	L.T. 1. E 01	CO-58	L.T. 6. E 00
FE-59	L.T. 2. E 01	FE-59	L.T. 2. E 01
CO-60	L.T. 1. E 01	CO-60	L.T. 7. E 00
ZN-65	L.T. 2. E 01	ZN-65	L.T. 2. E 01
ZR-95	L.T. 1. E 01	ZR-95	L.T. 6. E 00
RU-103	L.T. 1. E 01	RU-103	L.T. 6. E 00
RU-106	L.T. 9. E 01	RU-106	L.T. 6. E 01
I-131	L.T. 2. E 01	I-131	L.T. 1. E 01
CS-134	L.T. 1. E 01	CS-134	L.T. 7. E 00
CS-137	L.T. 1. E 01	CS-137	L.T. 6. E 00
BA-140	L.T. 1. E 01	BA-140	L.T. 6. E 00
CE-141	L.T. 2. E 01	CE-141	L.T. 9. E 00
CE-144	L.T. 6. E 01	CE-144	L.T. 4. E 01
RA-226	L.T. 2. E 02	RA-226	L.T. 1. E 02
TH-228	L.T. 2. E 01	TH-228	L.T. 1. E 01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Food/Garden Crops

(pCi/KG WET)
STATION NUMBER S-4
Gamma Spectrum Analysis

0526	CABBAGE	0630	CABBAGE	0728	CABBAGE
BE-7	1.01+-0.42E 02	BE-7	3.92+-0.62E 02	BE-7	3.96+-0.56E 02
K-40	3.66+-0.37E 03	K-40	3.56+-0.36E 03	K-40	5.43+-0.54E 03
MN-54	L.T. 6. E 00	MN-54	L.T. 8. E 00	MN-54	L.T. 6. E 00
CO-58	L.T. 7. E 00	CO-58	L.T. 8. E 00	CO-58	L.T. 6. E 00
FE-59	L.T. 2. E 01	FE-59	L.T. 2. E 01	FE-59	L.T. 2. E 01
CO-60	L.T. 6. E 00	CO-60	L.T. 8. E 00	CO-60	L.T. 7. E 00
ZN-65	L.T. 2. E 01	ZN-65	L.T. 2. E 01	ZN-65	L.T. 2. E 01
ZR-95	L.T. 7. E 00	ZR-95	L.T. 8. E 00	ZR-95	L.T. 7. E 00
RU-103	L.T. 7. E 00	RU-103	L.T. 9. E 00	RU-103	L.T. 7. E 00
RU-106	L.T. 5. E 01	RU-106	L.T. 7. E 01	RU-106	L.T. 6. E 01
I-131	L.T. 1. E 01	I-131	L.T. 2. E 01	I-131	L.T. 1. E 01
CS-134	L.T. 7. E 00	CS-134	L.T. 8. E 00	CS-134	L.T. 7. E 00
CS-137	L.T. 7. E 00	CS-137	L.T. 8. E 00	CS-137	L.T. 7. E 00
BA-140	L.T. 1. E 01	BA-140	L.T. 1. E 01	BA-140	L.T. 9. E 00
CE-141	L.T. 1. E 01	CE-141	L.T. 1. E 01	CE-141	L.T. 1. E 01
CE-144	L.T. 4. E 01	CE-144	L.T. 5. E 01	CE-144	L.T. 4. E 01
RA-226	L.T. 1. E 02	RA-226	L.T. 1. E 02	RA-226	L.T. 1. E 02
TH-228	L.T. 1. E 01	TH-228	L.T. 1. E 01	TH-228	L.T. 1. E 01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Food/Garden Crops

(pCi/KG WET)
STATION NUMBER S-4
Gamma Spectrum Analysis

0825	CABBAGE	0922	CABBAGE	1027	CABBAGE
BE-7	5.38+-0.57E 02	BE-7	9.13+-0.91E 02	BE-7	5.07+-0.83E 02
K-40	4.31+-0.43E 03	K-40	3.13+-0.31E 03	K-40	3.45+-0.35E 03
MN-54	L.T. 7. E 00	MN-54	L.T. 9. E 00	MN-54	L.T. 1. E 01
CO-58	L.T. 7. E 00	CO-58	L.T. 9. E 00	CO-58	L.T. 1. E 01
FE-59	L.T. 2. E 01	FE-59	L.T. 2. E 01	FE-59	L.T. 2. E 01
CO-60	L.T. 7. E 00	CO-60	L.T. 9. E 00	CO-60	L.T. 1. E 01
ZN-65	L.T. 2. E 01	ZN-65	L.T. 2. E 01	ZN-65	L.T. 3. E 01
ZR-95	L.T. 7. E 00	ZR-95	L.T. 1. E 01	ZR-95	L.T. 1. E 01
RU-103	L.T. 7. E 00	RU-103	L.T. 1. E 01	RU-103	L.T. 1. E 01
RU-106	L.T. 6. E 01	RU-106	L.T. 8. E 01	RU-106	L.T. 1. E 02
I-131	L.T. 1. E 01	I-131	L.T. 2. E 01	I-131	L.T. 2. E 01
CS-134	L.T. 8. E 00	CS-134	L.T. 1. E 01	CS-134	L.T. 1. E 01
CS-137	L.T. 7. E 00	CS-137	L.T. 1. E 01	CS-137	L.T. 1. E 01
BA-140	L.T. 9. E 00	BA-140	L.T. 1. E 01	BA-140	L.T. 1. E 01
CE-141	L.T. 1. E 01	CE-141	L.T. 2. E 01	CE-141	L.T. 2. E 01
CE-144	L.T. 4. E 01	CE-144	L.T. 6. E 01	CE-144	L.T. 7. E 01
RA-226	L.T. 1. E 02	RA-226	L.T. 2. E 02	RA-226	L.T. 2. E 02
TH-228	L.T. 1. E 01	TH-228	L.T. 2. E 01	TH-228	L.T. 2. E 01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Food/Garden Crops

(pCi/KG WET)
STATION NUMBER S-4
Gamma Spectrum Analysis

1130	CARROT GREENS	1130	RHUBARB LEAVES
BE-7	4.57+-0.66E 02	BE-7	5.13+-0.51E 02
K-40	8.37+-0.84E 03	K-40	5.98+-0.60E 03
MN-54	L.T. 1. E 01	MN-54	L.T. 6. E 00
CO-58	L.T. 1. E 01	CO-58	L.T. 5. E 00
FE-59	L.T. 3. E 01	FE-59	L.T. 1. E 01
CO-60	L.T. 1. E 01	CO-60	L.T. 6. E 00
ZN-65	L.T. 3. E 01	ZN-65	L.T. 1. E 01
ZR-95	L.T. 1. E 01	ZR-95	L.T. 6. E 00
RU-103	L.T. 1. E 01	RU-103	L.T. 6. E 00
RU-106	L.T. 9. E 01	RU-106	L.T. 5. E 01
I-131	L.T. 2. E 01	I-131	L.T. 1. E 01
CS-134	L.T. 1. E 01	CS-134	L.T. 6. E 00
CS-137	L.T. 1. E 01	CS-137	L.T. 6. E 00
BA-140	L.T. 1. E 01	BA-140	L.T. 7. E 00
CE-141	L.T. 2. E 01	CE-141	L.T. 9. E 00
CE-144	L.T. 6. E 01	CE-144	L.T. 3. E 01
RA-226	L.T. 2. E 02	RA-226	L.T. 1. E 02
TH-228	L.T. 2. E 01	TH-228	L.T. 1. E 01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Food/Garden Crops

(pCi/KG WET)
STATION NUMBER S-4 (Duplications)
Gamma Spectrum Analysis

0630	CABBAGE DUP	1027	CABBAGE DUP
BE-7	3.68+-0.55E 02	BE-7	4.99+-0.69E 02
K-40	3.68+-0.37E 03	K-40	3.58+-0.36E 03
MN-54	L.T. 6. E 00	MN-54	L.T. 8. E 00
CO-58	L.T. 6. E 00	CO-58	L.T. 9. E 00
FE-59	L.T. 2. E 01	FE-59	L.T. 2. E 01
CO-60	L.T. 7. E 00	CO-60	L.T. 8. E 00
ZN-65	L.T. 2. E 01	ZN-65	L.T. 2. E 01
ZR-95	L.T. 7. E 00	ZR-95	L.T. 9. E 00
RU-103	L.T. 7. E 00	RU-103	L.T. 9. E 00
RU-106	L.T. 6. E 01	RU-106	L.T. 7. E 01
I-131	L.T. 1. E 01	I-131	L.T. 2. E 01
CS-134	L.T. 7. E 00	CS-134	L.T. 9. E 00
CS-137	L.T. 7. E 00	CS-137	L.T. 9. E 00
BA-140	L.T. 9. E 00	BA-140	L.T. 1. E 01
CE-141	L.T. 1. E 01	CE-141	L.T. 1. E 01
CE-144	L.T. 4. E 01	CE-144	L.T. 5. E 01
RA-226	L.T. 1. E 02	RA-226	L.T. 2. E 02
TH-228	L.T. 1. E 01	TH-228	L.T. 1. E 01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Feed and Forage

(pCi/KG WET)
STATION NUMBER NR-D1
Gamma Spectrum Analysis

CORN (IRRIGATED)	**1103**
BE-7	L.T. 5. E 01
K-40	2.69+-0.27E 03
MN-54	L.T. 5. E 00
CO-58	L.T. 6. E 00
FE-59	L.T. 2. E 01
CO-60	L.T. 5. E 00
ZN-65	L.T. 1. E 01
ZR-95	L.T. 6. E 00
RU-103	L.T. 7. E 00
RU-106	L.T. 5. E 01
I-131	L.T. 2. E 01
CS-134	L.T. 6. E 00
CS-137	L.T. 6. E 00
BA-140	L.T. 1. E 01
CE-141	L.T. 1. E 01
CE-144	L.T. 4. E 01
RA-226	L.T. 1. E 02
TH-228	L.T. 9. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Feed and Forage

(pCi/KG WET)
STATION NUMBER NR-D2
Gamma Spectrum Analysis

CORN (NON-IRRIG)	1103	SOYBEANS (NON-IRRIG	1103
BE-7	L.T. 4. E 01	BE-7	L.T. 6. E 01
K-40	2.87+-0.29E 03	K-40	1.50+-0.15E 04
MN-54	L.T. 4. E 00	MN-54	L.T. 6. E 00
CO-58	L.T. 4. E 00	CO-58	L.T. 7. E 00
FE-59	L.T. 1. E 01	FE-59	L.T. 2. E 01
CO-60	L.T. 4. E 00	CO-60	L.T. 7. E 00
ZN-65	L.T. 1. E 01	ZN-65	L.T. 2. E 01
ZR-95	L.T. 5. E 00	ZR-95	L.T. 7. E 00
RU-103	L.T. 5. E 00	RU-103	L.T. 7. E 00
RU-106	L.T. 4. E 01	RU-106	L.T. 5. E 01
I-131	L.T. 2. E 01	I-131	L.T. 2. E 01
CS-134	L.T. 4. E 00	CS-134	L.T. 7. E 00
CS-137	L.T. 4. E 00	CS-137	L.T. 7. E 00
BA-140	L.T. 8. E 00	BA-140	L.T. 9. E 00
CE-141	L.T. 8. E 00	CE-141	L.T. 9. E 00
CE-144	L.T. 3. E 01	CE-144	L.T. 3. E 01
RA-226	L.T. 8. E 01	RA-226	L.T. 9. E 01
TH-228	L.T. 7. E 00	TH-228	L.T. 8. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Ingestion

Feed and Forage

(pCi/KG WET)
STATION NUMBER NR-U1
Gamma Spectrum Analysis

CORN (IRRIGATED)	1108	CORN (IRRIGATED) DU	1108
BE-7	L.T. 4. E 01	BE-7	L.T. 5. E 01
K-40	2.94+-0.29E 03	K-40	2.89+-0.29E 03
MN-54	L.T. 5. E 00	MN-54	L.T. 5. E 00
CO-58	L.T. 5. E 00	CO-58	L.T. 5. E 00
FE-59	L.T. 1. E 01	FE-59	L.T. 1. E 01
CO-60	L.T. 5. E 00	CO-60	L.T. 6. E 00
ZN-65	L.T. 1. E 01	ZN-65	L.T. 1. E 01
ZR-95	L.T. 5. E 00	ZR-95	L.T. 6. E 00
RU-103	L.T. 6. E 00	RU-103	L.T. 6. E 00
RU-106	L.T. 5. E 01	RU-106	L.T. 5. E 01
I-131	L.T. 1. E 01	I-131	L.T. 2. E 01
CS-134	L.T. 5. E 00	CS-134	L.T. 5. E 00
CS-137	L.T. 5. E 00	CS-137	L.T. 6. E 00
BA-140	L.T. 8. E 00	BA-140	L.T. 9. E 00
CE-141	L.T. 8. E 00	CE-141	L.T. 1. E 01
CE-144	L.T. 3. E 01	CE-144	L.T. 4. E 01
RA-226	L.T. 8. E 01	RA-226	L.T. 1. E 02
TH-228	L.T. 8. E 00	TH-228	L.T. 9. E 00

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Aquatic

Sediment/Silt

(pCi/KG DRY)
STATION NUMBER DC
Gamma Spectrum Analysis

0518	BOTTOM SEDIMENT	1001	BOTTOM SEDIMENT
BE-7	4.54+-2.13E 02	BE-7	6.87+-2.64E 02
K-40	1.06+-0.11E 04	K-40	1.18+-0.12E 04
MN-54	L.T. 4. E 01	MN-54	L.T. 4. E 01
CO-58	L.T. 4. E 01	CO-58	L.T. 4. E 01
FE-59	L.T. 8. E 01	FE-59	L.T. 9. E 01
CO-60	5.25+-0.52E 02	CO-60	6.63+-0.66E 02
ZN-65	L.T. 9. E 01	ZN-65	L.T. 8. E 01
ZR-95	L.T. 5. E 01	ZR-95	L.T. 4. E 01
RU-103	L.T. 4. E 01	RU-103	L.T. 3. E 01
RU-106	L.T. 3. E 02	RU-106	L.T. 3. E 02
I-131	L.T. 7. E 01	I-131	L.T. 1. E 02
CS-134	L.T. 5. E 01	CS-134	L.T. 4. E 01
CS-137	2.62+-0.41E 02	CS-137	3.07+-0.31E 02
BA-140	L.T. 4. E 01	BA-140	L.T. 8. E 01
CE-141	L.T. 6. E 01	CE-141	L.T. 7. E 01
CE-144	L.T. 2. E 02	CE-144	L.T. 2. E 02
RA-226	1.87+-0.54E 03	RA-226	2.46+-0.62E 03
TH-228	1.34+-0.13E 03	TH-228	1.13+-0.11E 03

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Aquatic

Sediment/Silt

(pCi/KG DRY)
STATION NUMBER DC
Gamma Spectrum Analysis

0518	**BOTTOM SEDIMENT 2**	SB-125	3.63+-0.93E 02
BE-7	8.38+-3.04E 02		
K-40	9.91+-0.99E 03		
MN-54	L.T. 4. E 01		
CO-58	L.T. 4. E 01		
FE-59	L.T. 9. E 01		
CO-60	5.31+-0.55E 02		
ZN-65	L.T. 9. E 01		
ZR-95	L.T. 4. E 01		
RU-103	L.T. 4. E 01		
RU-106	L.T. 3. E 02		
I-131	L.T. 8. E 01		
CS-134	L.T. 5. E 01		
CS-137	2.20+-0.41E 02		
BA-140	L.T. 7. E 01		
CE-141	L.T. 7. E 01		
CE-144	L.T. 3. E 02		
RA-226	1.48+-0.59E 03		
TH-228	9.98+-1.00E 02		

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Aquatic

Sediment/Silt

(pCi/KG DRY)
STATION NUMBER JRR
Gamma Spectrum Analysis

0624	BOTTOM SEDIMENT	1001	BOTTOM SEDIMENT
BE-7	L.T. 3. E 02	BE-7	5.38+-2.45E 02
K-40	1.49+-0.15E 04	K-40	1.59+-0.16E 04
MN-54	L.T. 3. E 01	MN-54	L.T. 3. E 01
CO-58	L.T. 3. E 01	CO-58	L.T. 3. E 01
FE-59	L.T. 7. E 01	FE-59	L.T. 8. E 01
CO-60	L.T. 2. E 01	CO-60	L.T. 4. E 01
ZN-65	L.T. 7. E 01	ZN-65	L.T. 8. E 01
ZR-95	L.T. 4. E 01	ZR-95	L.T. 4. E 01
RU-103	L.T. 4. E 01	RU-103	L.T. 4. E 01
RU-106	L.T. 3. E 02	RU-106	L.T. 3. E 02
I-131	L.T. 2. E 02	I-131	L.T. 1. E 02
CS-134	L.T. 4. E 01	CS-134	L.T. 4. E 01
CS-137	1.61+-0.30E 02	CS-137	1.29+-0.28E 02
BA-140	L.T. 8. E 01	BA-140	L.T. 8. E 01
CE-141	L.T. 6. E 01	CE-141	L.T. 6. E 01
CE-144	L.T. 2. E 02	CE-144	L.T. 2. E 02
RA-226	1.83+-0.40E 03	RA-226	2.18+-0.60E 03
TH-228	1.24+-0.12E 03	TH-228	1.43+-0.14E 03

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Aquatic

Vegetation - Aquatic

(pCi/KG WET)
STATION NUMBER DC
Gamma Spectrum Analysis

0518	ALGAE	0518	ALGAE 2
BE-7	7.53+-0.75E 02	BE-7	5.59+-0.90E 02
K-40	3.60+-0.36E 03	K-40	3.03+-0.30E 03
MN-54	L.T. 5. E 00	MN-54	L.T. 1. E 01
CO-58	1.10+-0.11E 02	CO-58	3.74+-0.92E 01
FE-59	L.T. 1. E 01	FE-59	L.T. 2. E 01
CO-60	3.72+-0.52E 01	CO-60	1.59+-0.86E 01
ZN-65	L.T. 1. E 01	ZN-65	L.T. 2. E 01
ZR-95	L.T. 5. E 00	ZR-95	L.T. 1. E 01
RU-103	L.T. 5. E 00	RU-103	L.T. 1. E 01
RU-106	L.T. 5. E 01	RU-106	L.T. 9. E 01
I-131	L.T. 9. E 00	I-131	L.T. 2. E 01
CS-134	L.T. 6. E 00	CS-134	L.T. 1. E 01
CS-137	4.01+-0.55E 01	CS-137	2.30+-0.88E 01
BA-140	L.T. 6. E 00	BA-140	L.T. 2. E 01
CE-141	L.T. 8. E 00	CE-141	L.T. 2. E 01
CE-144	L.T. 3. E 01	CE-144	L.T. 6. E 01
RA-226	1.99+-0.76E 02	RA-226	L.T. 2. E 02
TH-228	1.56+-0.16E 02	TH-228	1.18+-0.12E 02

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Aquatic

Vegetation - Aquatic

(pCi/KG WET)
STATION NUMBER DCAL
Gamma Spectrum Analysis

1001	AM LOTUS	1001	AM LOTUS DUP
BE-7	2.26+-0.23E 03	BE-7	2.25+-0.22E 03
K-40	2.09+-0.21E 03	K-40	1.85+-0.19E 03
MN-54	L.T. 7. E 00	MN-54	L.T. 8. E 00
CO-58	L.T. 7. E 00	CO-58	L.T. 8. E 00
FE-59	L.T. 2. E 01	FE-59	L.T. 2. E 01
CO-60	L.T. 7. E 00	CO-60	L.T. 8. E 00
ZN-65	L.T. 2. E 01	ZN-65	L.T. 2. E 01
ZR-95	L.T. 7. E 00	ZR-95	L.T. 8. E 00
RU-103	L.T. 9. E 00	RU-103	L.T. 9. E 00
RU-106	L.T. 7. E 01	RU-106	L.T. 7. E 01
I-131	L.T. 2. E 01	I-131	L.T. 2. E 01
CS-134	L.T. 8. E 00	CS-134	L.T. 8. E 00
CS-137	L.T. 8. E 00	CS-137	L.T. 8. E 00
BA-140	L.T. 1. E 01	BA-140	L.T. 2. E 01
CE-141	L.T. 1. E 01	CE-141	L.T. 1. E 01
CE-144	L.T. 4. E 01	CE-144	L.T. 5. E 01
RA-226	2.28+-1.14E 02	RA-226	2.03+-1.12E 02
TH-228	L.T. 1. E 01	TH-228	L.T. 1. E 01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Aquatic

Vegetation - Aquatic

(pCi/KG WET)
STATION NUMBER EEA
Gamma Spectrum Analysis

0413	ALGAE/DUCKWEED	0413	CATTAIL/SMARTWEED
BE-7	4.65+-0.46E 02	BE-7	L.T. 1. E 02
K-40	9.23+-0.92E 02	K-40	2.11+-0.21E 03
MN-54	L.T. 4. E 00	MN-54	L.T. 9. E 00
CO-58	L.T. 4. E 00	CO-58	L.T. 9. E 00
FE-59	L.T. 8. E 00	FE-59	L.T. 2. E 01
CO-60	L.T. 4. E 00	CO-60	L.T. 8. E 00
ZN-65	L.T. 8. E 00	ZN-65	L.T. 2. E 01
ZR-95	L.T. 4. E 00	ZR-95	L.T. 1. E 01
RU-103	L.T. 4. E 00	RU-103	L.T. 1. E 01
RU-106	L.T. 3. E 01	RU-106	L.T. 8. E 01
I-131	L.T. 8. E 00	I-131	L.T. 2. E 01
CS-134	L.T. 5. E 00	CS-134	L.T. 9. E 00
CS-137	1.34+-0.34E 01	CS-137	L.T. 1. E 01
BA-140	L.T. 6. E 00	BA-140	L.T. 1. E 01
CE-141	L.T. 6. E 00	CE-141	L.T. 2. E 01
CE-144	L.T. 3. E 01	CE-144	L.T. 6. E 01
RA-226	1.77+-0.58E 02	RA-226	L.T. 2. E 02
TH-228	6.44+-0.64E 01	TH-228	7.40+-1.19E 01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Terrestrial

Vegetation - Terrestrial

(pCi/KG WET)
STATION NUMBER EEA
Gamma Spectrum Analysis

0413	PASTURAGE	1020	PASTURAGE
BE-7	2.69+-0.27E 03	BE-7	4.72+-0.47E 03
K-40	6.81+-0.68E 03	K-40	1.39+-0.14E 04
MN-54	L.T. 1. E 01	MN-54	L.T. 1. E 01
CO-58	L.T. 1. E 01	CO-58	L.T. 1. E 01
FE-59	L.T. 2. E 01	FE-59	L.T. 3. E 01
CO-60	L.T. 1. E 01	CO-60	L.T. 1. E 01
ZN-65	L.T. 2. E 01	ZN-65	L.T. 3. E 01
ZR-95	L.T. 1. E 01	ZR-95	L.T. 1. E 01
RU-103	L.T. 1. E 01	RU-103	L.T. 1. E 01
RU-106	L.T. 9. E 01	RU-106	L.T. 1. E 02
I-131	L.T. 2. E 01	I-131	L.T. 3. E 01
CS-134	L.T. 1. E 01	CS-134	L.T. 1. E 01
CS-137	L.T. 1. E 01	CS-137	L.T. 1. E 01
BA-140	L.T. 1. E 01	BA-140	L.T. 2. E 01
CE-141	L.T. 2. E 01	CE-141	L.T. 2. E 01
CE-144	L.T. 6. E 01	CE-144	L.T. 7. E 01
RA-226	L.T. 2. E 02	RA-226	L.T. 2. E 02
TH-228	L.T. 2. E 01	TH-228	L.T. 2. E 01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Terrestrial

Vegetation - Terrestrial

(pCi/KG WET)
STATION NUMBER MUDS
Gamma Spectrum Analysis

0430	PASTURAGE	1130	PASTURAGE
BE-7	4.16+-0.42E 03	BE-7	1.93+-0.19E 04
K-40	4.62+-0.46E 03	K-40	1.03+-0.30E 03
MN-54	L.T. 1. E 01	MN-54	L.T. 4. E 01
CO-58	L.T. 1. E 01	CO-58	L.T. 5. E 01
FE-59	L.T. 2. E 01	FE-59	L.T. 1. E 02
CO-60	L.T. 1. E 01	CO-60	L.T. 4. E 01
ZN-65	L.T. 2. E 01	ZN-65	L.T. 9. E 01
ZR-95	L.T. 1. E 01	ZR-95	L.T. 5. E 01
RU-103	L.T. 1. E 01	RU-103	L.T. 6. E 01
RU-106	L.T. 9. E 01	RU-106	L.T. 4. E 02
I-131	L.T. 2. E 01	I-131	L.T. 4. E 02
CS-134	L.T. 1. E 01	CS-134	L.T. 4. E 01
CS-137	L.T. 1. E 01	CS-137	L.T. 4. E 01
BA-140	L.T. 2. E 01	BA-140	L.T. 2. E 02
CE-141	L.T. 2. E 01	CE-141	L.T. 9. E 01
CE-144	L.T. 7. E 01	CE-144	L.T. 3. E 02
RA-226	L.T. 2. E 02	RA-226	L.T. 8. E 02
TH-228	L.T. 2. E 01	TH-228	L.T. 7. E 01

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Terrestrial

Soil

(pCi/KG DRY)
STATION NUMBER EEA
Gamma Spectrum Analysis

0610	SOIL	1020	SOIL	1130	SOIL
BE-7	1.34+-0.28E 03	BE-7	L.T. 3. E 02	BE-7	L.T. 3. E 02
K-40	1.01+-0.10E 04	K-40	9.21+-0.92E 03	K-40	1.15+-0.12E 04
MN-54	L.T. 3. E 01	MN-54	L.T. 3. E 01	MN-54	L.T. 3. E 01
CO-58	L.T. 3. E 01	CO-58	L.T. 3. E 01	CO-58	L.T. 3. E 01
FE-59	L.T. 8. E 01	FE-59	L.T. 7. E 01	FE-59	L.T. 8. E 01
CO-60	L.T. 3. E 01	CO-60	L.T. 3. E 01	CO-60	L.T. 4. E 01
ZN-65	L.T. 7. E 01	ZN-65	L.T. 7. E 01	ZN-65	L.T. 8. E 01
ZR-95	L.T. 4. E 01	ZR-95	L.T. 4. E 01	ZR-95	L.T. 4. E 01
RU-103	L.T. 4. E 01	RU-103	L.T. 3. E 01	RU-103	L.T. 4. E 01
RU-106	L.T. 3. E 02	RU-106	L.T. 2. E 02	RU-106	L.T. 3. E 02
I-131	L.T. 1. E 02	I-131	L.T. 9. E 01	I-131	L.T. 8. E 01
CS-134	L.T. 4. E 01	CS-134	L.T. 4. E 01	CS-134	L.T. 4. E 01
CS-137	1.50+-0.34E 02	CS-137	1.24+-0.29E 02	CS-137	1.87+-0.28E 02
BA-140	L.T. 7. E 01	BA-140	L.T. 6. E 01	BA-140	L.T. 6. E 01
CE-141	L.T. 7. E 01	CE-141	L.T. 6. E 01	CE-141	L.T. 6. E 01
CE-144	L.T. 2. E 02	CE-144	L.T. 2. E 02	CE-144	L.T. 2. E 02
RA-226	1.94+-0.57E 03	RA-226	1.80+-0.53E 03	RA-226	1.50+-0.52E 03
TH-228	1.03+-0.10E 03	TH-228	1.14+-0.11E 03	TH-228	1.01+-0.10E 03

Wolf Creek Nuclear Operating Corporation
Exposure Pathway - Terrestrial

Soil

(pCi/KG DRY)
STATION NUMBER MUDS
Gamma Spectrum Analysis

0610	SOIL	1130	SOIL
BE-7	6.72+-2.71E 02	BE-7	L.T. 3. E 02
K-40	1.11+-0.11E 04	K-40	1.10+-0.11E 04
MN-54	L.T. 4. E 01	MN-54	L.T. 3. E 01
CO-58	L.T. 3. E 01	CO-58	L.T. 2. E 01
FE-59	L.T. 7. E 01	FE-59	L.T. 5. E 01
CO-60	L.T. 3. E 01	CO-60	L.T. 2. E 01
ZN-65	L.T. 7. E 01	ZN-65	L.T. 7. E 01
ZR-95	L.T. 4. E 01	ZR-95	L.T. 3. E 01
RU-103	L.T. 4. E 01	RU-103	L.T. 3. E 01
RU-106	L.T. 3. E 02	RU-106	L.T. 2. E 02
I-131	L.T. 8. E 01	I-131	L.T. 6. E 01
CS-134	L.T. 4. E 01	CS-134	L.T. 3. E 01
CS-137	1.95+-0.36E 02	CS-137	4.04+-0.40E 02
BA-140	L.T. 5. E 01	BA-140	L.T. 4. E 01
CE-141	L.T. 6. E 01	CE-141	L.T. 4. E 01
CE-144	L.T. 2. E 02	CE-144	L.T. 2. E 02
RA-226	1.78+-0.55E 03	RA-226	1.80+-0.38E 03
TH-228	1.33+-0.13E 03	TH-228	1.12+-0.11E 03