Wolf Creek Generating Station

Docket No: STN 50-482
Facility Operating License No: NPF-42

ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

Report No: 1

Reporting Period: March 11, 1985 through December 31, 1985

Submitted by:
Kansas Gas and Electric Company

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Introduction

This represents the first Annual Radiological Environmental Operating Report for Kansas Gas and Electric Company's Wolf Creek Generating Station (WCGS), located in Coffey County, Kansas, approximately five miles northeast of Burlington, Kansas. This report covers the period from January 1 to December 31, 1985.

Fuel loading began at WCGS on March 12, 1985. The operational phase of the Radiological Environmental Monitoring Program began with initial criticality on May 22, 1985, with the first detectable quantities of radioactivity reported in plant effluents in June, 1985.

This report contains a description of the Radiological Environmental Monitoring Program conducted by Kansas Gas & Electric (KG&E), results of sample analyses performed by Teledyne Isotopes, a discussion of monitoring program results, a discussion of program deviations and revisions, and a discussion of the results of the EPA Interlaboratory Comparison Program. Individual sample results and a summary of results in the NRC Branch Technical Position specified format are included as appendices to the report.

The impact of the operation of WCGS on the surrounding environment was limited to the detection of small amounts of tritium in surface water and Co-58 in rooted aquatic plant samples in the immediate vicinity of the discharge cove of Wolf Creek Cooling Lake. Both nuclides were reported in liquid effluents during the second, third, and fourth quarters of 1985. No plant related radioactivity was detected at the nearest offsite sampling locations downstream of effluent release points in unrestricted access areas (drinking water location LW-40 at LeRoy, shoreline sediment location NR on the Neosho River, and irrigated crop location NI-D1 near the Neosho River). No measurable impact on human exposure was seen for the liquid pathway during 1985.

No concentrations of radioactivity over Technical Specification reporting levels were seen from either plant related or other sources for any pathway.

I. PROGRAM DESCRIPTION

Radiological environmental samples were collectd according to the schedule in Table 3.12-1 of the Wolf Creek Technical Specifications and Section 4.0 of the Offsite Dose Calculation Manual. All samples were collected by KG&E's Environmental Management Group and sent to Teledyne Isotopes for analysis.

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

Airborne Particulates and Iodine:

Low volume air sampling pumps continuously collected particulate samples on 47mm glass fiber filters; samples were then drawn through charcoal cannisters to collect I-131. Filters and charcoal cannisters were changed out weekly, labeled, and shipped to Teledyne Isotopes for analysis. Total sample volume used to calculate air concentrations was determined from the average of the initial and final sampling flowrate and the total time of collection.

Gross beta analysis of the air particulate samples was performed approximately 72 hours following filter collection to allow decay of radon and thoron daughter products. Each filter was mounted on a stainless steel planchette and counted on an automatic alpha-beta counter.

Weekly air particulate filters were combined into quarterly composites for each location and analyzed for gamma emitting isotopes on a Ge(Li) detector.

Charcoal cannisters were counted in groups of five for qualitative and quantitative determination of the presence or absence of I-131; positive indication of I-131 (which was not detected in 1985) would have been followed by quantitative analysis of individual cannisters.

Air samples were collected from the three sectors with the highest ground level D/Q, the nearby community of New Strawn, and a control location. Distances and directions to sampling locations from the plant site are listed in Table 1; locations are shown in Figure 1 (nearby locations) and Figure 7 (distant locations).

TLD:

The thermoluminescent dosimeters (TLDs) used during 1985 were provided by Teledyne Isotopes. The TLDs consisted of rectangular teflon wafers impregnated with $CaSO_4$:Dy. Prior to placement in the field, the dosimeters were annealed for at least one hour at between 250 and 260 degrees centigrade then placed in polyethylene pouches and holders containing 0.093 inches of copper shielding to filter out low energy radiation. New field dosimeters were exchanged with exposed dosimeters and the exposed dosimeters were returned to Teledyne Isotopes for analysis. Freshly annealed control dosimeters were sent with the exposed TLDs to record transit exposures received during shipment to Teledyne as well as system background of the TLD reader.

Gamma exposures were measured on a Teledyne Model 8300 TLD reader; individual dosimeters were then re-irradiated with a known exposure from a Cs-137 source and read again to determine individual dosimeter calibration factors.

In general, TLDs were located 3-4 feet above the ground on utility poles; they were placed inside either plastic thermostat boxes or fiberglass air particulate sampler housings to protect them from moisture and tampering. Two TLDs were placed at each location to provide duplicate measurements.

TLD locations are shown on Figure 2 (nearsite) and Figure 7 (distant). Table 1 provides distances and directions of each location from the WCGS site.

Water

Monthly composite samples of drinking water were collected by continuously drawing aliquots at two hour intervals. Grab samples of surface water and ground water were collected on a monthly and quarterly basis, respectively. All samples were sent to Teledyne Isotopes for analysis.

All water samples were analyzed on a Ge(Li) detector to determine if gamma emitters were present. In addition to gamma analysis, a radiochemical analysis for I-131 was performed on drinking water and ground water samples. Gross beta analysis was also performed on drinking water samples. All water samples were analyzed for tritium on a quarterly basis by liquid scintillation counting (monthly drinking water and surface water samples were combined into quarterly composites for tritium counting).

Drinking water sampling locations are at the water treatment stations for the towns of Burlington (upstream control location) and Leroy (downstream indicator location). Surface water sampling locations are at the John Redmond Reservoir outfall (control) and the Wolf Creek Cooling Lake discharge cove (indicator). Ground water is sampled from three wells located hydrologically downgradient from Wolf Creek Cooling Lake and from an upgradient control well. All water sampling locations are listed in Table 1 and shown in Figures 3 and 7.

Ingestion:

Milk samples were collected on a semi-monthly basis from April through November (while milk animals were on pasture grass) and on a monthly basis the remainder of the year (when animals were on stored feed). Samples were sent to Teledyne Isotopes where radiochemical analyses for I-131 and gamma analyses were performed on each sample. Locations are shown in Figure 4.

Broadleaf vegetation samples were collected monthly during the growing season. Occasionally alternate sampling locations were used when quantities of vegetation were limited, such as early or late in the growing season or during dry periods. Additionally, a sample of crops irrigated with water from the Neosho River downstream of Wolf Creek Cooling Lake was collected during harvest. The crop was intended for animal consumption only. All vegetation samples were sent to Teledyne Isotopes and analyzed by gamma spectroscopy. Locations are shown in Figure 5.

Fish samples were collected semiannually with several recreationally important species being sampled. Samples of boneless meat portions were sent to Teledyne Isotopes and analyzed by gamma spectroscopy. Locations are shown in Figure 6.

All sampling locations above are listed in Table 1: distant locations are shown in Figure 7. (Fish sampling locations may vary somewhat from Figure 6 according to sample availability.)

Shoreline Sediment & Aquatic Vegetation:

Semiannual shoreline sediment samples were collected from the Neosho river below the Wolf Creek-Neosho confluence and from a more conservative location on Wolf Creek Cooling Lake. Gamma analysis was performed by Teledyne Isotopes on each sample. Sampling Locations are listed in Table 1 and shown on Figures 6 and 7.

Although not required by the routine monitoring program, aquatic vegetation samples composed of rooted aquatic plants and algae were collected from the discharge cove area (location DC on Figure 6) of Wolf Creek Cooling Lake. Gamma isotopic analysis was performed on each sample.

II. DISCUSSION OF RESULTS

Analysis results for all pathways are summarized in Appendix A using the format described in NRC Radiological Assessment Branch Technical Position, Revision 1, November 1979; results for individual samples are listed in Appendix B.

In this section, results are discussed by pathway and analysis type. Operational results are related to control location results, preoperational values, sources of radioactivity, and effluent releases when applicable. Trends or seasonal effects seen in the data are also discussed.

Airborne Particulates and Iodine:

Results of weekly gross beta analyses of air particulate filters are listed for each location in Table 2. The averages of the four indicator locations near the site are also compared to control location values in Figure 8. The graph shows no identifiable variation from the preoperational range of 0.0064 to 0.084 pCi/m^3 (excluding high results obtained following an atmospheric nuclear weapon test by China in 1980) and no significant increase in the indicator location results following plant operation.

Two obvious peaks, one in February before fuel loading and the other in late November are evident in Figure 8. Such peaks appear seasonally during winter and early spring months. Preoperational gamma analysis of individual air filters have demonstrated that elevated levels of cosmically produced Be-7 are primarily responsible for these peaks.

Gross beta analysis of air particulate samples is known to be a sensitive indicator of airborne radioactivity levels. (Concentrations increased to a maximum of 0.43 pCi/m^3, over ten times higher than normal background levels, following the Chinese atmospheric nuclear weapon test in October of 1980.) No increase or effect due to plant operation is indicated by operational results.

This conclusion is further confirmed from gamma analysis results of quarterly air particulate filter composites. The only radionuclides detected were Be-7 (cosmically produced) and, occasionally, K-40 (a naturally occuring terrestrial radionuclide), both at concentrations comparable to preoperational levels (see Table 3).

Gamma analysis of charcoal cannisters for I-131 revealed no detectable concentrations at either indicator or control locations.

In summary, no contribution of airborne radioactivity due to plant operation was identified for 1985. All radioactivity detected was attributable to terrestrial nuclides, cosmically produced nuclides, or fallout from previous weapons tests.

TLDs:

Quarterly gamma exposures measured at each location for 1985 are shown in Table 4. Values are the average of results for two dosimeters at each location, normalized to a 90-day standard quarter. TLD results are considered operational beginning began with second quarter data for 1985 since effluent releases did not begin until June.

Results from TLDs located near the plant site (less than approximately three miles distant), which would be most sensitive to changes due to plant operation, were combined into quarterly averages. These nearsite averages, using locations 1, 2, 7, 8, 9, 10, 11, 12, 13, 14, 18, 26, 27, 28, 29, 30, 37, and 38, are compared to control TLD results in Figure 9. In addition, variation of the nearsite averages from the control location results are plotted graphically in Figure 10. (Figures 9 and 10 also include preoperational data for comparison.) No increase is seen in nearsite gamma exposures over control location values.

The operational gamma exposure rate at each location was plotted along with the preoperational average and range in Figure 11. It can be seen that operational exposure rates are well within the preoperational range, with no significant variation from the preoperational average.

No changes to area gamma exposure rates as a result of plant operation were identified. Measured gamma exposures were attributable to a combination of terrestrial and fallout gamma emitters and cosmic radiation.

Drinking Water:

Results of gross beta analysis of drinking water samples are listed in Table 5; Figure 12 depicts these results graphically along with preoperational values for comparison.

No significant difference between the indicator and control locations was found. Additionally, no increase over preoperational concentrations was evident, as is seen in Figure 12. No effect due to plant operation is identified in drinking water samples by gross beta analysis.

This conclusion is confirmed by the results of I-131, tritium, and gamma isotopic analyses; no other radionuclides were seen at detectable levels.

Surface Water:

No gamma emitters were detected in surface water samples for 1985; however, tritium was detected in the fourth quarter sample from Wolf Creek Cooling Lake near the circulating water discharge point (location DC on Figure 3) at a concentration of 1600 $\pm$ 500 pCi/liter. The sample was reanalyzed for confirmation with a more sensitive analysis technique giving a result of 2000 $\pm$ 130 pCi/liter.

Although some tritium occurs naturally in water, it is assumed that much of the measured concentration was attributable to plant operation, since no tritium was detected in the fourth quarter control sample (detection limit = 700 pCi/liter) and no tritium was found in any preoperational surface water sample. This also correlates well to plant liquid effluent releases, reported as 0.137, 48.3, and 103.1 Ci of tritium for the second, third, and fourth quarter of 1985, respectively.

Although Wolf Creek Cooling Lake is not used as a source of drinking water, a hypothetical dose calculation assuming ingestion of water with an average tritium concentration of 2000 pCi/liter gives a maximum dose of 0.052 mrem (whole body dose to a child) for one quarter. The composite drinking water samples from the Neosho River at LW-40, downstream from the outfall of Wolf Creek Cooling Lake, contained no detectable tritium during this time, as has already been noted above in the discussion on drinking water results. Therefore, no public exposure to detectable tritium occurred for the year.

Although a single indication of tritium is not sufficient for projecting trends, this pathway will be monitored closely in the future to identify potential problems.

Ground Water:

The only radionuclides detected in ground water samples was K-40 during the fourth quarter at the control location. K-40 is a naturally occurring terrestrial radionuclide and has occasionally been detected in preoperational samples (as have Ra-226 and tritium).

No I-131, tritium, or other gamma emitters were detected during the year.

No effect on ground water due to plant operation was identified.

Milk:

All milk samples analyzed for 1985 contained naturally occurring K-40 at concentrations consistent with preoperational levels. Yearly average concentrations ranged from 1140 to 1312 pCi/liter for cow's milk; goat's milk from location P-2 generally contained 20-40% higher concentrations, averaging 1614 pCi/liter.

Two of the 68 milk samples collected also contained detectable Cs-137 from fallout. Concentrations of 7.26 and 7.19 pCi/liter at location F-1 and P-2, respectively, were measured in the samples collected on 2/12/85, prior to fuel load. This is consistent with preoperational experience in which Cs-137, Th-228, and I-131 have been detected in milk.

Radiochemical analysis for I-131 revealed no detectable concentrations in any sample.

No effects on area milk production due to plant operation were seen for the year.

Food & Garden Crops:

Gamma analysis of broadleaf vegetation samples revealed naturally occurring gamma emitters K-40 and Be-7 at concentrations comparable to preoperational background levels (see Table 6).

Cs-137 was also detected in samples from locations A-1 and Q-2 during May. Concentrations were 0.0270 pCi/gram (wet weight) at location A-1 and 0.0128 pCi/gram at location Q-2.

As is the case for other pathways, these concentrations of Cs-137 are attributed to fallout. The range of fallout Cs-137 seen in preoperational samples was 0.0131 to 0.0478 pCi/gram. Also, Cs-137 was not released in airborne plant effluents during the second quarter. Finally, Cs-134 was not detected, although it would be expected in comparable quantities if the occurrance of Cs-137 was related to plant operation (Cs-134 decays with a shorter halflife than Cs-137; detection of Cs-137 alone indicates older fallout as opposed to newly produced fission products).

Although broadleaf vegetation is a fairly sensitive indicator of airborne radioactivity (with Nb/Zr-95, Ce-141, Ce-144, and Th-228 having been seen in preoperational samples), results show no contribution due to plant operation.

In addition to broadleaf vegetation, a sample of corn was collected which was irrigated with water from the Neosho River below the Wolf Creek Cooling Lake outfall. The crop was intended for animal consumption only. Gamma analysis revealed naturally occurring K-40 to be present in the sample, with no nuclides detected due to plant operation.

Fish:

K-40 was found in all fish samples collected with an average concentration of 3.2 pCi/gram (wet weight) for Wolf Creek Cooling Lake and 3.6 pCi/gram at the control location. These concentrations were within the range seen during the preoperational period.

No other gamma emitters were detected and no effects related to plant operation were identified.

Shoreline Sediments:

Gamma analysis of shoreline sediment samples detected naturally occurring terrestrial radionuclides K-40, Ra-226, and Th-228, cosmically produced Be-7, and Cs-137, attributable to fallout for the same reasons as were discussed in the section on food and garden crops. Concentrations in both indicator and control location samples were consistent with levels seen during the preoperational period (see Table 7).

Although location DC should be an especially conservative indicator location, no radionuclides released in effluents were seen in any samples, and no effects of plant operation were identified.

Aquatic Vegetation:

Although not required by the specified routine monitoring program, algae and rooted aquatic plant samples were collected from Wolf Creek Cooling Lake during 1985. Results of gamma isotopic analysis are shown in Table 8.

In addition to Be-7, K-40, Cs-137, and Th-228, attributable to natural sources or fallout as described in previous sections, Co-58, an activation product, was also detected in the rooted aquatic plant sample from October. Releases of 0.0134, 13.2, and 63.2 mCi of Co-58, reported in liquid effluents for the second, third, and fourth quarters of 1985, respectively, were probably responsible for its presence in this sample. Co-58 was not detected in preoperational samples from either indicator or control locations.

It should be noted that the measured concentration was near the detection limit for this nuclide and that rooted aquatic plants are not a direct pathway to human exposure. However, since this sampling pathway appears to be a sensitive indicator of plant related effluents, it has been added to the routine operational monitoring program.

Although the single result does not make trend projection possible, analysis results will be followed closely in the future to identify potential problems.

III. Annual Land Use Survey Results and Program Revisions

The 1985 Annual Land Use Survey was completed in November. Information was collected using a combination of mailed survey forms, telephone contacts, and door to door contacts. Results of the survey, showing the distances to the nearest residences, milk producing animals, and vegetable gardens within five miles of the plant site, are given in Table 9.

Milk animals were located in four sectors, listed in the table. Three changes from the previous survey were identified. Milk producers in sectors C and E (northeast and east of the plant) had sold animals, leaving no milk producing locations out to five miles in those sectors. Additionally, a new location was identified 2.3 miles ENE of the plant (sector D), although only young animals were at this location which were not producing milk at the time of the survey. The annual average D/Q at this location was lower than at current sampling locations, so that no revisions to the monitoring program would be required even if milk should become available at this location.

Gardens growing broadleaf vegetables were located within five miles of the plant in all sectors. Six changes were identified from the previous survey, as noted in Table 9. One change involved the identification in sector D (ENE of the plant site) of a new garden at a distance of 2.3 miles, slightly nearer than the previous location at 2.4 miles. The other five changes were to adjust the nearest garden locations in sectors H, K, M, P, and Q to greater distances than identified by the previous survey, due to either deletion of the previous garden or a more accurate distance measurement. No changes to broadleaf vegetation sampling locations were necessary as a result of these adjustments.

Program revisions were made during 1985 involving changes to milk and broadleaf vegetation sampling locations and addition of the aquatic vegetation pathway to the routine monitoring program.

Milk sampling location C-11 was deleted from the program in January because milk animals were sold at this location. No other milk producing locations were available within five miles of the plant and the remaining sampling locations satisfied Technical Specification requirements; therefore, no replacement locations were added.

Broadleaf vegetation sampling location Q-1 was deleted from the program because the resident moved; location Q-2 was deleted because the resident did not plant a fall garden and had no plans for planting a garden in 1986. Location G-1 was added as a replacement, providing a third sampling location to the routine program.

Finally, due to detection of Co-58 in a sample of rooted aquatic vegetation in 1985, this pathway was added to the routine monitoring program in December. Semiannual samples of aquatic vegetation or algae will be collected from the discharge cove area, since this pathway appears to be a potentially sensitive indicator of radioactivity in liquid effluents.

It should be noted that dose calculations are performed for airborne and liquid pathways for a hypothetical individual at the exclusion area boundary in the highest X/Q and D/Q sector (for airborne pathways) and at the circulating water discharge point (for liquid pathways). Calculated doses are therefore conservative, and not affected by changes in residence, milk animal, and broadleaf vegetation locations identified by the Annual Land Use Survey.

IV. MONITORING PROGRAM DEVIATIONS

Deviations from the 1985 sampling schedule are described below by pathway, along with causes for the deviations and necessary corrective actions.

Airborne Particulates and Iodine

Location 37, (6/7/85 - 6/11/85): A partial sample was collected because the sampler air pump was not started for the first three days of the sampling period. The resulting small sample volume also reduced the detection sensitivity for radioiodine, yielding a detection limit of 70 pCi/m^3, slightly above the desired value of 60 pCi/m^3. This was due to an operator oversight and is not expected to recur. No corrective action is planned.

TLD

Location 14, (first quarter): The TLDs at this location were placed in the field eight days later than the other TLDs (1/10/85 instead of 1/2/85) because the utility pole on which they had been located was removed and a new location had to be found.

Drinking Water

Location LW-40, (January): A grab sample was taken on 2/5/85 in lieu of the specified composite sample for January because of a compositor malfunction leading to inadequate sample volume. Readjusting the volume control on the compositor corrected the problem.

Location BW-15 and LW-40, (April): The specified detection limit for I-131 was not achieved because an incorrectly filled out shipment form led to a delay in the I-131 radiochemical analysis. From gamma isotopic analysis, LLDs of 20 pCi/liter and 10 pCi/liter for locations BW-15 and LW-40, respectively, were achieved rather than the 1.0 pCi/liter specified. Corrective action was taken to insure that personnel were familiar with the correct procedure for filling out shipment forms; in addition, the analysis laboratory will notify KG&E in the future if requested analyses appear to deviate from the routine program.

Location LW-40, (July): A partial composite was collected for approximately the first half of the month rather than the entire month because the sampling line became clogged and backpressure dislodged the line from the sampling pump. Corrective action was taken to replace the sampling line with new Tygon tubing and clean the sample intake fixture. Personnel were also cautioned to visually inspect the sampling assembly when collecting samples to prevent a recurrence of this type of malfunction.

Location LW-40, (September): Although I-131, tritium, and gamma isotopic analyses were performed, insufficient sample remained for a gross beta analysis to be performed because a second I-131 analysis depleted the sample volume. Since no systematic problem was identified with either sample collection or sample analysis procedures, and because consistent, adequate results are obtained on a routine basis, no corrective action is planned. Further action will be considered if a recurring problem is identified.

Milk

Location F-1, (second half of April through first half of June) and Location Q-5, (August through the end of 1985): Samples were unavailable because cows were dry at these locations. Unavailability of these sample was temporary and there were no alternate milk sampling locations within five miles of the plant site, therefore no corrective actions were taken. Such unavailability is expected to recur since milk production at most locations is marginal and locations are relatively few in number.

V. EPA Interlaboratory Comparison Program Results

Teledyne Isotopes, contracted to perform analysis of radiological environmental samples for KG&E, participated in the EPA Interlaboratory Comparison Program during 1985.

Table 10 shows intercomparison test results for the year. The table lists the sample number and date, the sample media, the nuclide or analysis type, the known value reported by the EPA, the measured value reported by Teledyne Isotopes (based on triplicate analysis), and the normalized deviation from the known. (The normalized deviation is determined by the difference in the measured result from the EPA reported known, divided by the standard error of the mean as a measure of the degree of precision. A normalized deviation larger than $\pm$ 3.0 prompts followup action to identify the cause of the discrepancy.) Results are listed in the table only for sample media and analyses types performed for KG&E.

Of the 42 sample analyses listed, only one, a gross beta analysis of a mixed alpha/beta liquid sample for 4/19/85, exceeded a normalized deviation of 3.0. Followup investigation determined that a conversion factor developed to correct for nuclides with low beta energies had not been applied to a mixed beta sample containing low energy beta emitters.

No major problem was identified for any sample medium or specific analysis. Past experience shows that corrective actions have been initiated promptly when necessary. Overall performance of the analysis laboratory, as seen in the intercomparison results, indicates good control of quality of analyses.

TABLES

TABLE 1: SAMPLING LOCATION NUMBERS, DISTANCES (miles) AND DIRECTIONS

TLD and Air Particulate

Location Number	Distance/ Direction	Location Number	Distance/ Direction	Location Number	Distance/ Direction	Location Number	Distance/ Direction
1	1.4/N	11	1.6/E	21	3.8/S	31	3.0/WNW
2	2.7/N	12	1.8/ESE	22	4.1/SSW	32	3.2/WNW
3	3.0/NNE	13	1.5/SE	23	4.5/SW	33	3.7/WNW
4	4.0/NNE	14	2.6/SE	24	4.1/WSW	34	4.0/NW
5	4.0/NE	15	4.5/ESE	25	3.6/W	35	4.6/NNW
6	4.4/ENE	16	4.2/E	26	2.6/WSW	36	4.2/N
7	1.9/NE	17	3.6/SE	27	2.1/SW	37	2.1/NNW
8	1.6/NNE	18	3.2/SSE	28	2.8/SW	38	1.2/NW
9	2.0/ENE	19	4.0/SSE	29	2.6/SSW	39	13.0/N
10	2.4/ENE	20	3.3/S	30	2.2/W	40	15.0/WNW

Groundwater

B-12	2.2/NNE
C-10	2.8/W
C-49	2.9/SW
D-65	3.9/S

Drinking Water

BW-15	3.9/SW
LW-40	10/SSE

Surface Water

MUSH	3.6/W
DC	0.6 WNW

Milk and Food Products

A-1	1.3/N
C-11	4.5/NE
F-1	1.3/ESE
G-1	1.4/SE
P-2	2.9/WNW
Q-1	1.2/NW
Q-2	1.4/NW
Q-5	3.4/NW
R-1	2.2/NNW
S-3	>15.0/WNW
S-4	15.0/WNW

Fish

DC	0.6/WNW
JRR	4/W

Shoreline Sedments

DC	0.6/WNW
JRR	4/W
NR	6.5/S

Aquatic Vegetation

DC	0.6/WNW

Irrigated Crops

NR-D1	9.2/S

Table 2: 1985 GROSS BETA ANALYSIS RESULTS FOR AIR PARTICULATE SAMPLES

(pCi/CU. METER)

					INDICATOR		CONTROL
Month	LOC 2	LOC 3	LOC 32	LOC 37	AVERAGE	STD DEV	LOC 40
JAN	0.029	0.032	0.030	0.035	0.032	0.003	0.032
	0.025	0.030	0.028	0.030	0.028	0.002	0.033
	0.026	0.025	0.027	0.029	0.027	0.002	0.027
	0.017	0.022	0.019	0.022	0.020	0.002	0.025
FEB	0.026	0.032	0.021	0.027	0.027	0.005	0.028
	0.065	0.070	0.048	0.071	0.064	0.011	0.065
	0.034	0.032	0.029	0.031	0.032	0.002	0.030
	0.022	0.020	0.021	0.022	0.021	0.001	0.024
MAR	0.024	0.025	0.022	0.026	0.024	0.002	0.021
	0.020	0.017	0.027	0.025	0.022	0.005	0.023
	0.020	0.017	0.019	0.021	0.019	0.002	0.019
	0.022	0.023	0.023	0.026	0.024	0.002	0.024
	0.015	0.019	0.020	0.021	0.019	0.003	0.020
APR	0.018	0.017	0.022	0.020	0.019	0.002	0.018
	0.028	0.023	0.022	0.025	0.025	0.003	0.025
	0.021	0.017	0.023	0.025	0.022	0.003	0.022
	0.023	0.017	0.023	0.024	0.022	0.003	0.023
MAY	0.026	0.022	0.027	0.025	0.025	0.002	0.022
	0.025	0.024	0.027	0.025	0.025	0.001	0.026
	0.019	0.019	0.020	0.022	0.020	0.001	0.020
	0.031	0.022	0.028	0.030	0.028	0.004	0.027
	0.025	0.018	0.020	0.021	0.021	0.003	0.024
JUN	0.025	0.019	0.018	0.029	0.023	0.005	0.019
	0.021	0.018	0.019	0.020	0.020	0.001	0.020
	0.019	0.018	0.023	0.020	0.020	0.002	0.022
	0.021	0.018	0.027	0.024	0.023	0.004	0.024
JUL	0.02	0.029	0.034	0.033	0.029	0.006	0.031
	0.026	0.026	0.032	0.032	0.029	0.003	0.032
	0.033	0.019	0.033	0.036	0.030	0.008	0.032
	0.027	0.020	0.023	0.024	0.024	0.003	0.025
AUG	0.018	0.015	0.022	0.027	0.021	0.005	0.025
	0.036	0.022	0.027	0.029	0.029	0.006	0.027
	0.023	0.021	0.024	0.019	0.022	0.002	0.030
	0.027	0.019	0.021	0.025	0.023	0.004	0.022
	0.036	0.018	0.032	0.035	0.030	0.008	0.035
SEPT	0.026	0.013	0.023	0.025	0.022	0.006	0.025
	0.031	0.026	0.029	0.030	0.029	0.002	0.031
	0.029	0.017	0.018	0.020	0.021	0.005	0.016
	0.022	0.016	0.020	0.020	0.020	0.003	0.020
OCT	0.022	0.015	0.020	0.023	0.020	0.004	0.023
	0.019	0.020	0.017	0.020	0.019	0.001	0.016
	0.023	0.021	0.022	0.025	0.023	0.002	0.029
	0.024	0.029	0.024	0.024	0.025	0.003	0.023
NOV	0.031	0.030	0.030	0.039	0.033	0.004	0.032
	0.018	0.014	0.009	0.021	0.015	0.005	0.017
	0.025	0.014	0.022	0.026	0.022	0.005	0.024
	0.047	0.036	0.041	0.045	0.042	0.005	0.042
	0.059	0.054	0.046	0.056	0.054	0.006	0.061
DEC	0.060	0.058	0.058	0.064	0.060	0.003	0.062
	0.045	0.045	0.037	0.039	0.042	0.004	0.043
	0.044	0.045	0.042	0.039	0.043	0.003	0.043
	0.018	0.020	0.017	0.016	0.018	0.002	0.018

TABLE 3: GAMMA ANALYSIS RESULTS OF AIR PARTICULATE COMPOSITE SAMPLES

(pCi/m^3)

Location:		2	3	32	37	40(control)
Be-7	1 QTR	0.0777	0.0756	0.0885	0.0839	0.0693
	2 QTR	0.0872	0.0733	0.106	0.0985	0.0934
	3 QTR	0.100	0.0400	0.0801	0.0795	0.0926
	4 QTR	0.0686	0.0629	0.0684	0.0709	0.0788
		Preoperational range (0.0388 - 0.1170)				
K-40	1 QTR	---	0.00557	---	---	---
	2 QTR	---	---	0.0197	---	---
	3 QTR	---	---	---	---	0.00635
	4 QTR	0.00827	---	---	---	---

Table 4: 1985 KG&E TLD RESULTS
(mR/90 DAYS)

LOCATION	QTR 1	QTR 2	QTR 3	QTR 4
1	14.7	17.1	18.1	17.6
2	14.4	15.8	16.2	16.6
3	14.3	16.2	16.3	18.7
4	16.6	17.3	17.7	17.5
5	15.0	15.8	17.8	16.7
6	14.2	16.1	14.7	17.5
7	12.8	15.2	15.8	14.9
8	14.1	16.5	16.2	16.7
9	14.7	15.9	15.7	16.5
10	17.0	17.4	17.1	17.7
11	15.8	18.9	18.2	18.7
12	14.7	17.4	18.8	17.6
13	14.8	17.6	17.0	17.6
14	15.5	17.8	18.0	17.5
15	15.0	16.9	17.6	17.4
16	15.3	17.6	17.6	20.5
17	14.8	17.6	18.0	17.6
18	16.5	17.7	17.9	19.1
19	16.1	17.2	18.2	18.9
20	15.2	17.8	18.3	18.4
21	12.8	14.7	13.8	16.3
22	14.7	16.4	16.6	17.6
23	14.1	16.7	16.2	18.2
24	15.3	17.0	16.5	17.0
25	11.9	13.4	13.4	14.0
26	14.7	15.6	15.7	16.1
27	15.2	17.0	17.4	17.5
28	12.7	14.3	13.9	15.3
29	12.5	14.8	14.4	15.7
30	14.3	16.1	15.3	16.1
31	15.7	16.8	16.6	17.1
32	15.1	16.8	16.5	16.5
33	14.8	17.9	17.8	17.4
34	15.7	17.4	17.5	18.0
35	13.8	16.2	16.6	16.7
36	15.0	16.6	18.2	16.9
37	15.1	16.6	15.5	16.9
38	15.7	18.5	17.5	18.9
39	16.7	16.9	17.8	17.3
40	13.7	15.0	15.1	16.0

TABLE 5: GROSS BETA ANALYSIS RESULTS OF DRINKING WATER SAMPLES

(pCi/liter)

Month	Location LW-40 (Indicator)	Location BW-15 (Control)
JAN	5.6	5.1
FEB	4.8	5.2
MAR	6.4	6.0
APR	3.7	3.5
MAY*	5.9	6.1
JUN	5.3	4.8
JUL	5.3	5.5
AUG	4.6	4.5
SEP	**	7.4
OCT	4.6	5.4
NOV	3.7	4.5
DEC	5.5	4.6

Range of Preoperational Values: 4.1 - 10.0 pCi/liter

* Operational Results began with initial criticality on 5/22/85

** Results not available, see Section IV, "Monitoring Program Deviations"

TABLE 6: GAMMA ANALYSIS RESULTS OF BROADLEAF VEGETATION SAMPLES

(pCi/gm - wet weight)

Location:		A - 1	Q - 2	R - 1	S - 4(Control)
Nuclide	Month				
Be-7	MAY	0.511	0.377	0.466	0.325
	JUN	0.641	---	0.970	1.64
	JUL	0.319	0.355	---	0.351
	AUG	0.434	0.195	---	0.416
	SEP	0.522	---	---	1.07
	OCT	0.488	---	---	0.491
	NOV	---	---	---	0.439
K-40	MAY	4.35	1.75	4.96	5.94
	JUN	4.60	---	4.40	5.64
	JUL	3.63	2.42	2.19	3.79
	AUG	2.69	2.34	---	5.55
	SEP	3.69	---	---	4.84
	OCT	3.28	---	---	3.91
	NOV	---	---	---	3.01
Cs-137	MAY	0.0270	0.0128	---	---
	JUN	---	---	---	---
	JUL	---	---	---	---
	AUG	---	---	---	---
	SEP	---	---	---	---
	OCT	---	---	---	---
	NOV	---	---	---	---

TABLE 7: GAMMA ANALYSIS RESULTS OF SHORELINE SEDIMENT SAMPLES

(pCi/gram-dry weight)

Indicator Location (Date)	Be-7	K-40	Cs-137	Ra-226	Th-228
DC (5/21)	<0.4	11.9	0.222	1.97	1.36
NR (6/28)	<0.4	15.6	0.711	3.34	1.37
DC (10/15)	0.541	12.0	0.0504	3.14	1.70
NR (11/18)	<0.6	14.4	0.264	2.07	1.37
Indicator Location Average	0.541	13.5	0.31	2.6	1.5
Control Location JRR (6/28)	<0.3	10.4	0.171	2.65	1.65
Preoperational Average	0.511	11.2	0.42	2.2	1.3

TABLE 8: GAMMA ANALYSIS RESULTS OF AQUATIC VEGETATION SAMPLES

(pCi/gram - wet weight)

Sample Type (Date)	Be-7	K-40	Co-58	Cs-137	Th-228
Algae (5/21/85)*	1.68	3.56	---	0.0133	0.0587
Rooted Aquatic Plants (5/21/85)*	0.234	3.29	---	0.0485	0.154
Rooted Aquatic Plants (10/15/85)	0.541	2.36	0.047	0.0144	0.0536

* Since initial criticality was on 5/22/85 and detectable effluents were not released until June, these samples are considered preoperational.

TABLE 9

RESULTS OF 1985 LAND USE SURVEY

SECTOR	DIRECTION FROM PLANT	DISTANCE (MILES) TO NEAREST		
		RESIDENCE	MILK ANIMAL	GARDEN
A	N	1.3	None	1.3
B	NNE	3.0*	None	3.0
C	NE	1.7	None*	1.7
D	ENE	1.9	2.3*	2.3*
E	E	1.7	None*	1.7
F	ESE	1.5	1.3	1.5
G	SE	1.4	None	1.4
H	SSE	2.9	None	3.0*
J	S	3.3	None	3.3
K	SSW	3.9*	None	4.0*
L	SW	2.1	None	2.5
M	WSW	1.8	None	3.1*
N	W	2.1*	None	2.7
P	WNW	2.9*	2.9	3.0*
Q	NW	1.4*	3.4	1.4*
R	NNW	2.0**	None	2.2

* Indicates Change from 1984 Data.

** Part-time residence.

TABLE 10

RESULTS OF EPA INTERLABORATORY COMPARISON TESTS

SAMPLE NUMBER	DATE	SAMPLE TYPE	NUCLIDE	EPA RESULTS (±1σ)	TELEDYNE RESULTS (±1σ)	NORMALIZED DEVIATION
363	01/18/85	Water	Gr. Beta	15 ± 5	15 ± 1	0.10
365	01/25/85	Food	I-131	35 ± 6	26 ± 2	-2.50
			Cs-137	29 ± 5	31 ± 3	0.69
			K	1382 ± 120	1393 ± 32	0.16
366	02/08/85	Water	Co-60	20 ± 5	19 ± 2	-0.50
			Zn-65	55 ± 5	57 ± 2	0.70
			Cs-134	35 ± 5	37 ± 4	0.80
			Cs-137	25 ± 5	31 ± 2	2.00
367	02/02/85	Water	H-3	3796 ± 366	3933 ± 58	0.60
368	03/01/85	Milk	I-131	9.0 ± 0.9	8 ± 1	-1.90
370	04/05/85	Water	I-131	7.5 ± 0.8	6.7 ± 0.6	-1.80
372	04/12/85	Water	H-3	3559 ± 364	3367 ± 321	-0.90
374	03/29/85	Air Filter	Gr. Beta	36 ± 5	37 ± 3	0.23
			Cs-137	6 ± 5	6 ± 0	0.00
375	05/24/85	Water	Gr. Beta	11 ± 5	12.7 ± 0.6	0.58
376	04/19/85	Water	Gr. Beta	72 ± 5	92 ± 3	7.04
			Co-60	15 ± 5	20 ± 2	1.73
			Cs-134	15 ± 5	15 ± 1	-0.11
			Cs-137	12 ± 5	16 ± 3	1.50
378	06/14/85	Water	H-3	2416 ± 351	2367 ± 115	-0.24
379	06/07/85	Water	Co-60	14 ± 5	16 ± 1	0.58
			Zn-65	47 ± 5	48 ± 3	0.46
			Ru-106	62 ± 5	54 ± 3	-2.88
			Cs-134	35 ± 5	33 ± 4	-0.69
			Cs-137	20 ± 5	23 ± 2	1.15
381	07/19/85	Water	Gr. Beta	8 ± 5	4.3 ± 0.6	-1.27
383	06/28/85	Milk	I-131	11 ± 6	9 ± 1	-0.58
			Cs-137	11 ± 5	11 ± 3	0.00
			K	1525 ± 76	1540 ± 35	0.34
385	08/16/85	Water	H-3	4480 ± 448	4433 ± 153	-0.18
386	08/09/85	Water	I-131	33 ± 6	37 ± 2	1.05

TABLE 10
RESULTS OF EPA INTERLABORATORY COMPARISON TESTS (Con't)

SAMPLE NUMBER	DATE	SAMPLE TYPE	NUCLIDE	EPA RESULTS (±1 σ)	TELEDYNE RESULTS (±1 σ)	NORMALIZED DEVIATION
388	07/26/85	Food	I-131	35 ± 6	37 ± 2	0.67
			Cs-137	29 ± 5	31 ± 1	0.69
			K	1514 ± 76	1633 ± 51	2.72
390	09/20/85	Water	Gr. Beta	8 ± 5	4 ± 0	-1.38
391	08/30/85	Air Filter	Gr. Beta	44 ± 5	43 ± 3	-0.34
			Cs-137	8 ± 5	10 ± 1	0.69
392	10/11/85	Water	H-3	1974 ± 345	2133 ± 208	0.80
394	10/04/85	Water	Co-60	20 ± 5	18 ± 3	-0.81
			Zn-65	19 ± 5	25 ± 3	2.19
			Cs-134	20 ± 5	18 ± 3	-0.58
			Cs-137	20 ± 5	22 ± 1	0.81

FIGURES

Figure 1: Airborne Particulate and Radioiodine Sampling Locations

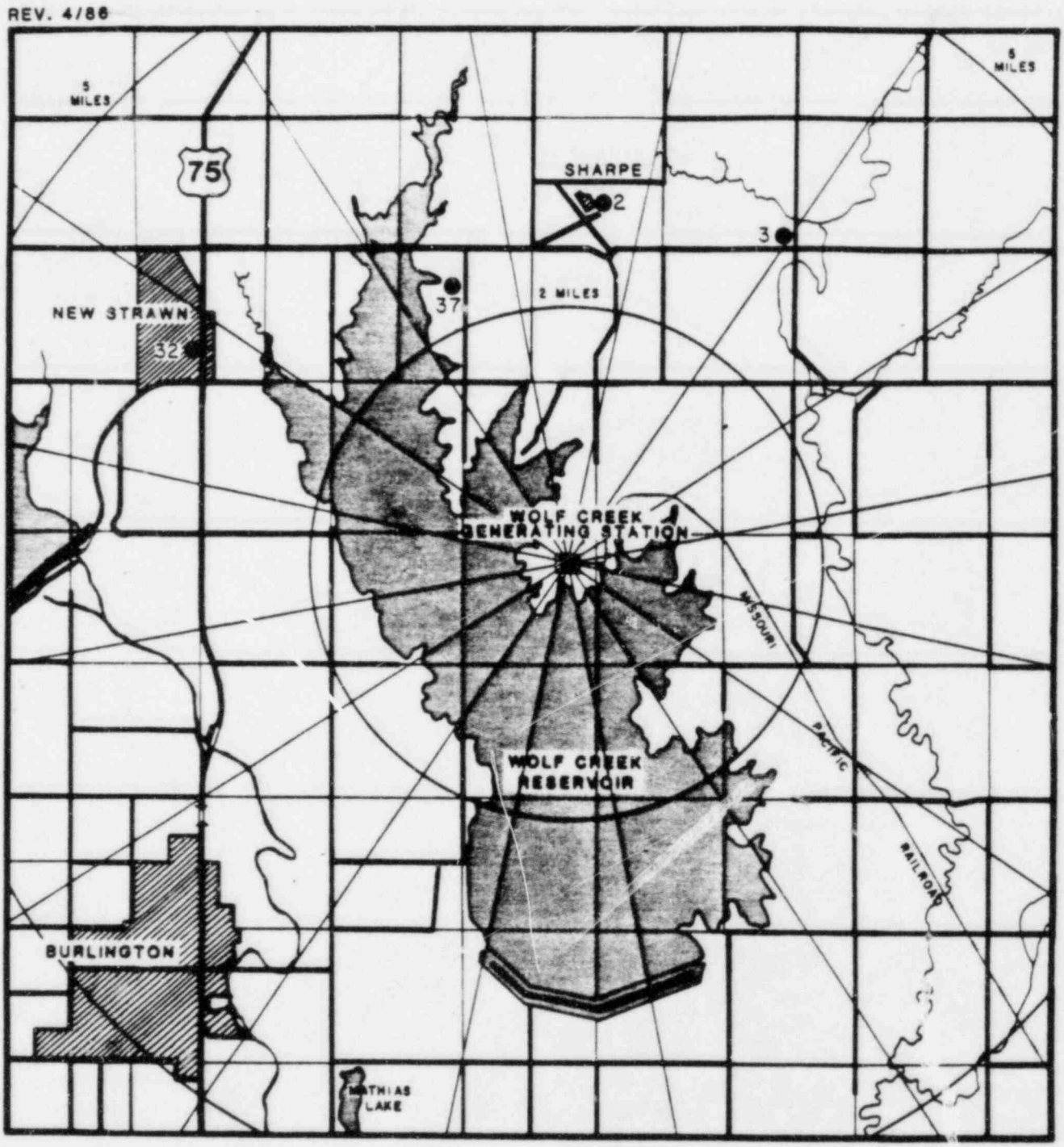


Figure 2: TLD Locations

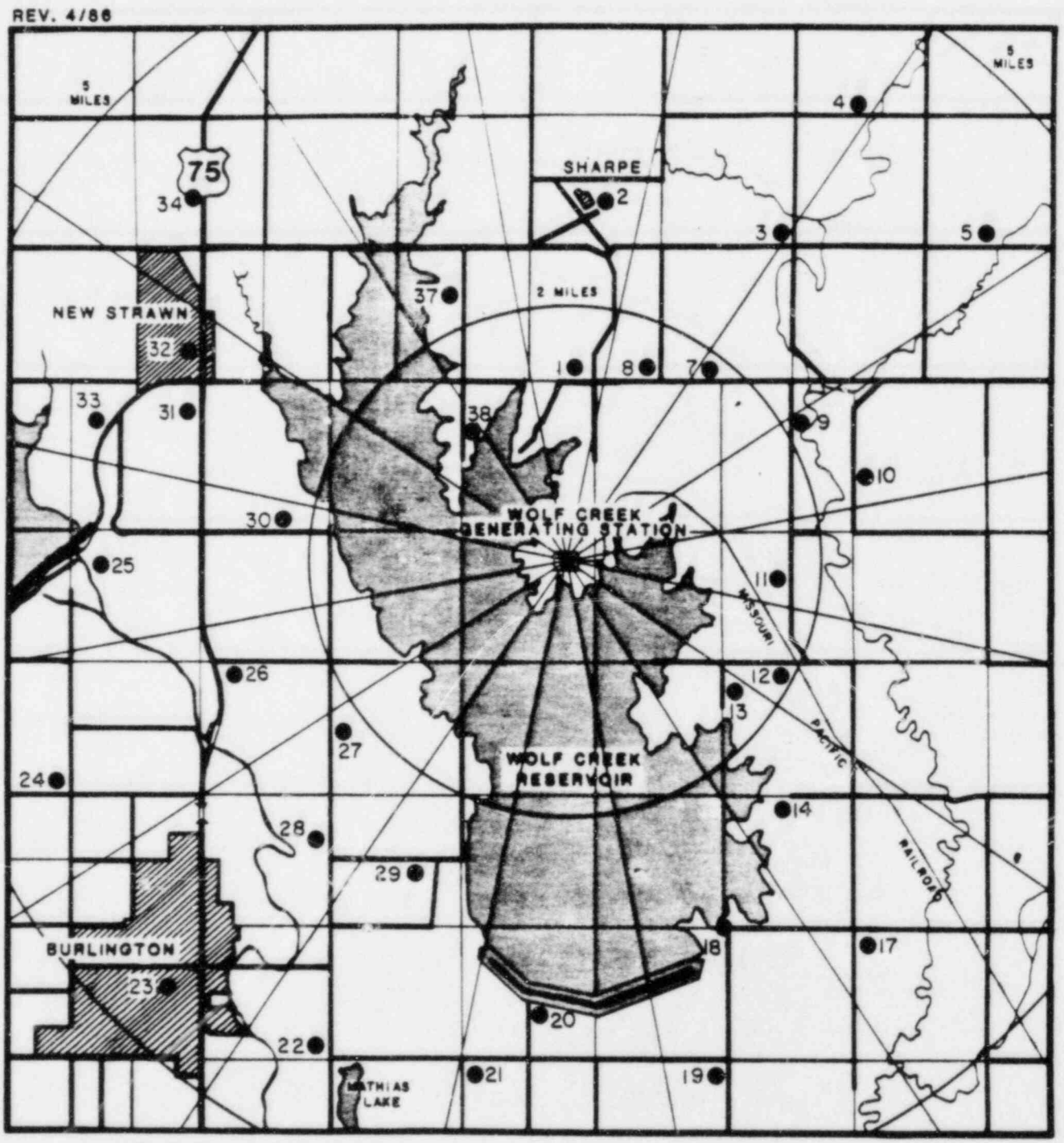


Figure 3: Water Sampling Locations

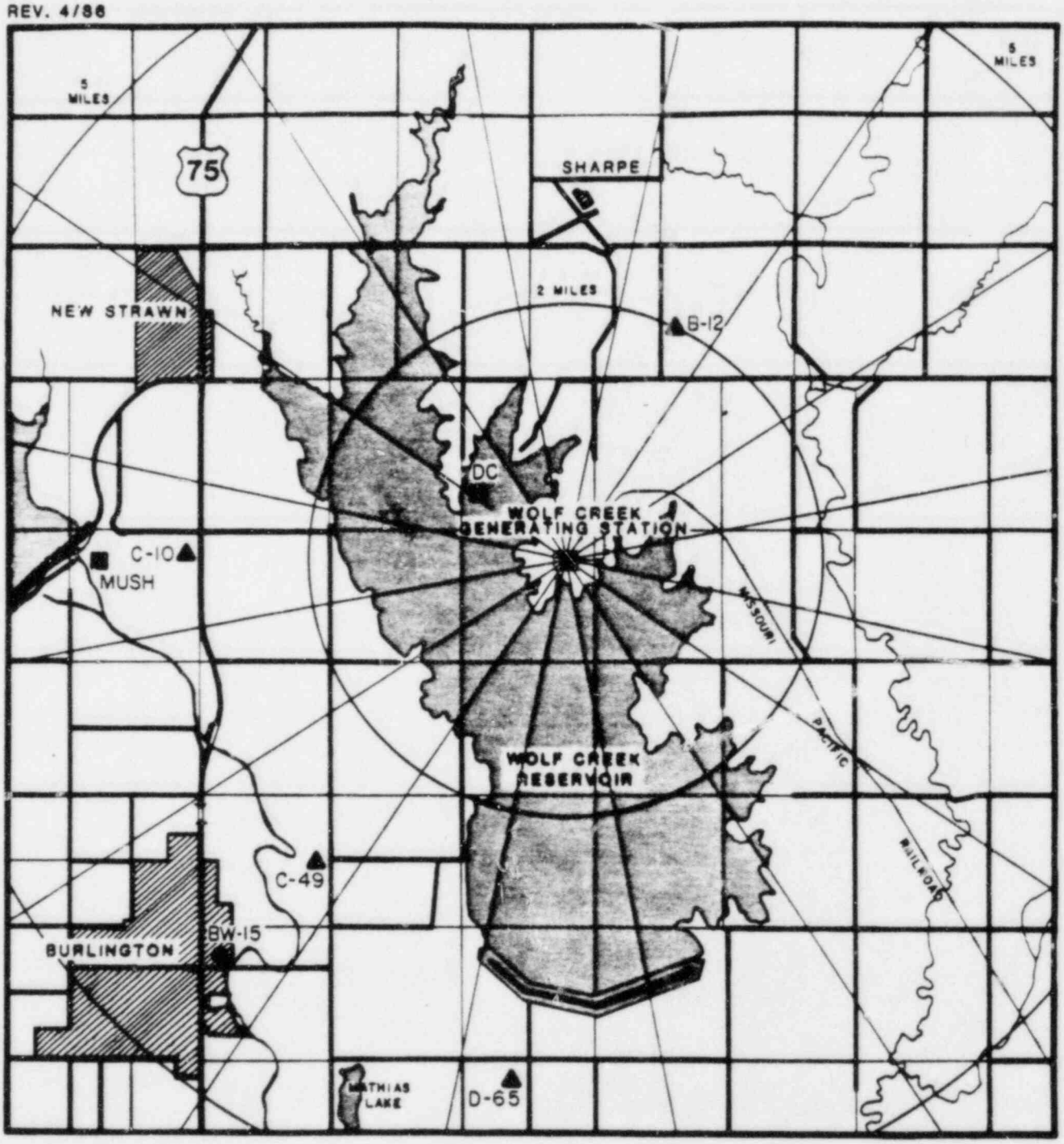
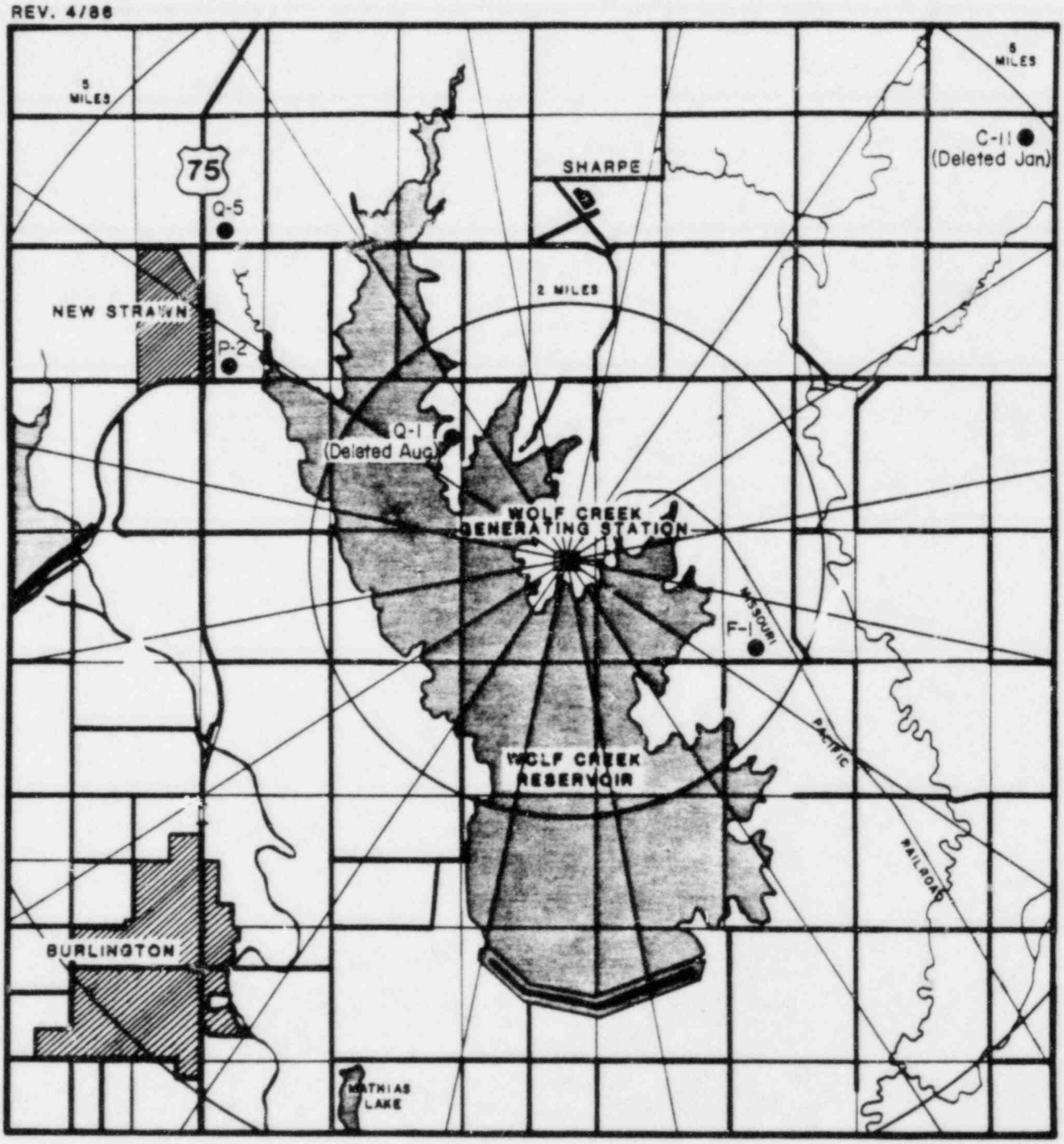
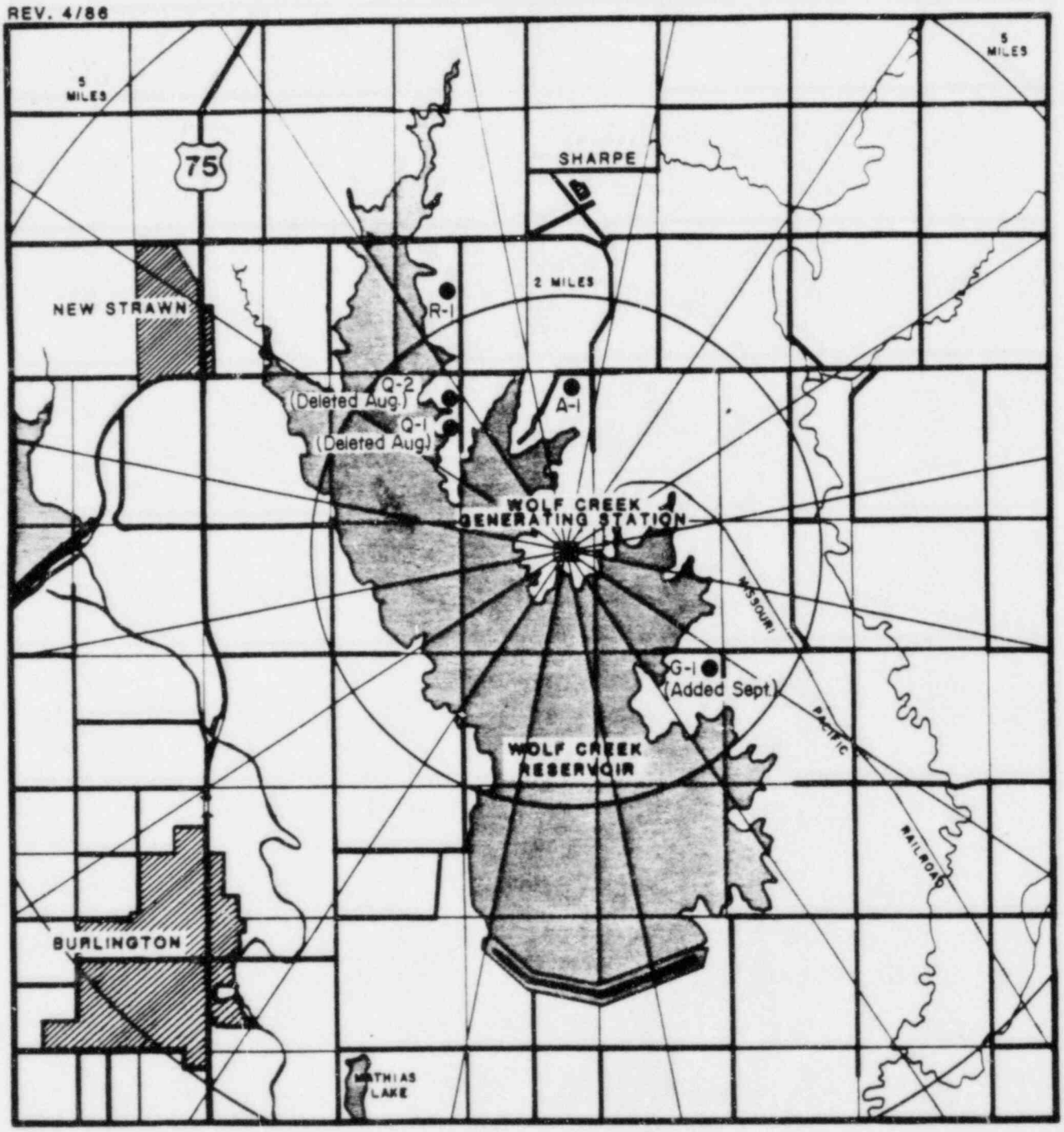


Figure 4: Milk Sampling Locations



●- MILK SAMPLING LOCATIONS

Figure 5: Broadleaf Vegetation Sampling Locations



●-BROADLEAF VEGETATION SAMPLING LOCATIONS

Figure 6: Fish, Shoreline Sediments, and Aquatic Vegetation Sampling Locations

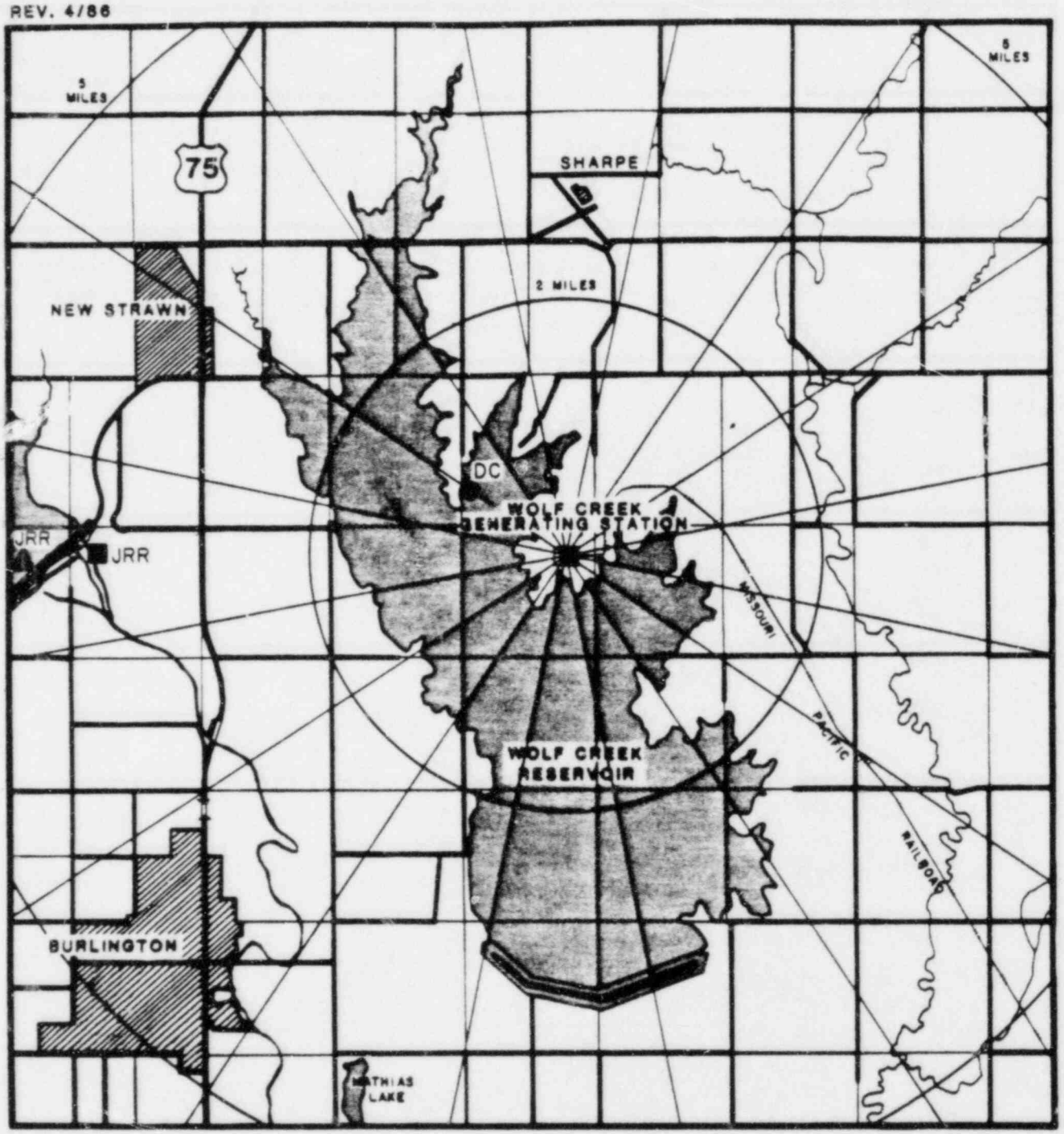


Figure 7: Distant Sampling Locations

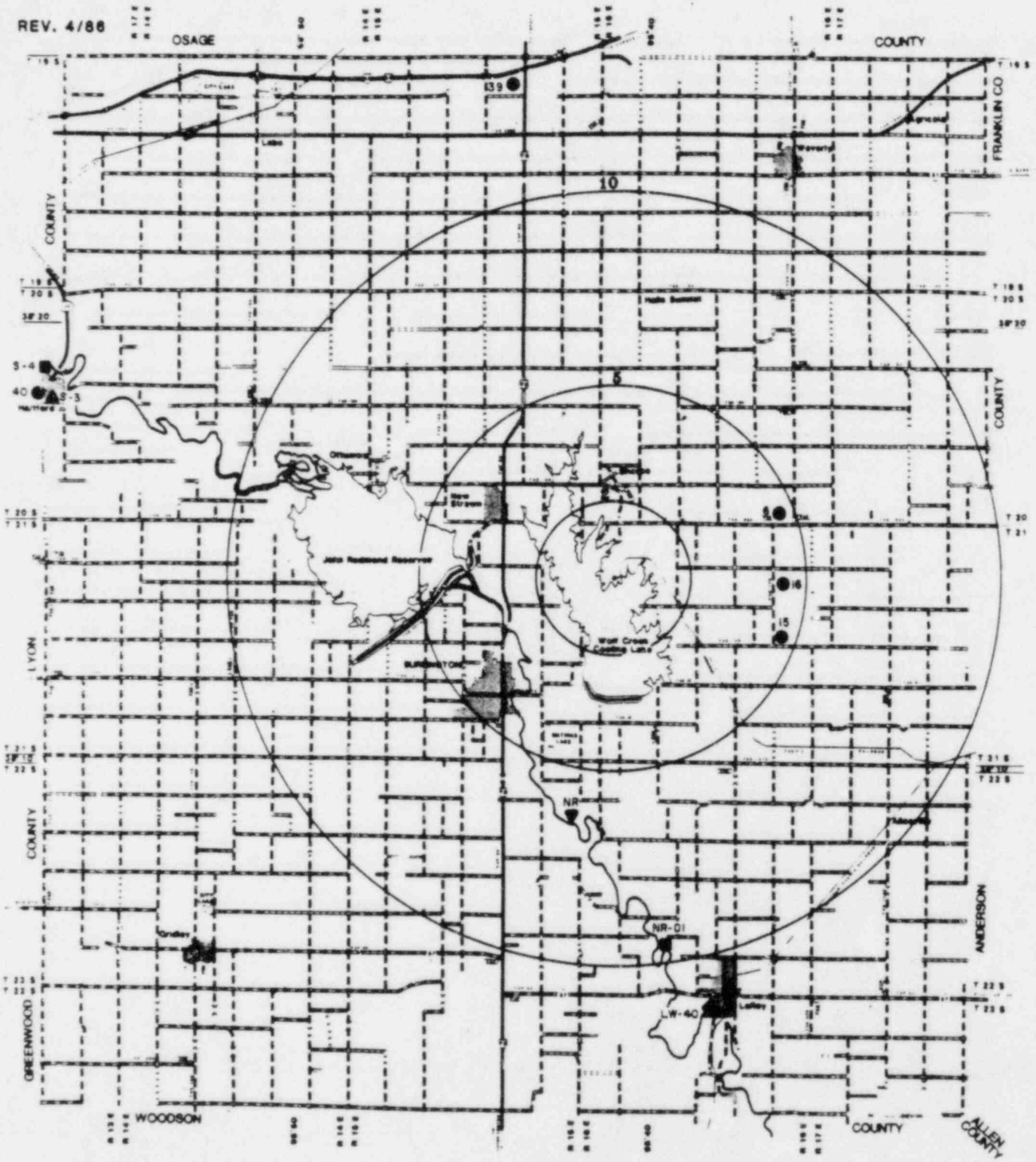


Figure 8

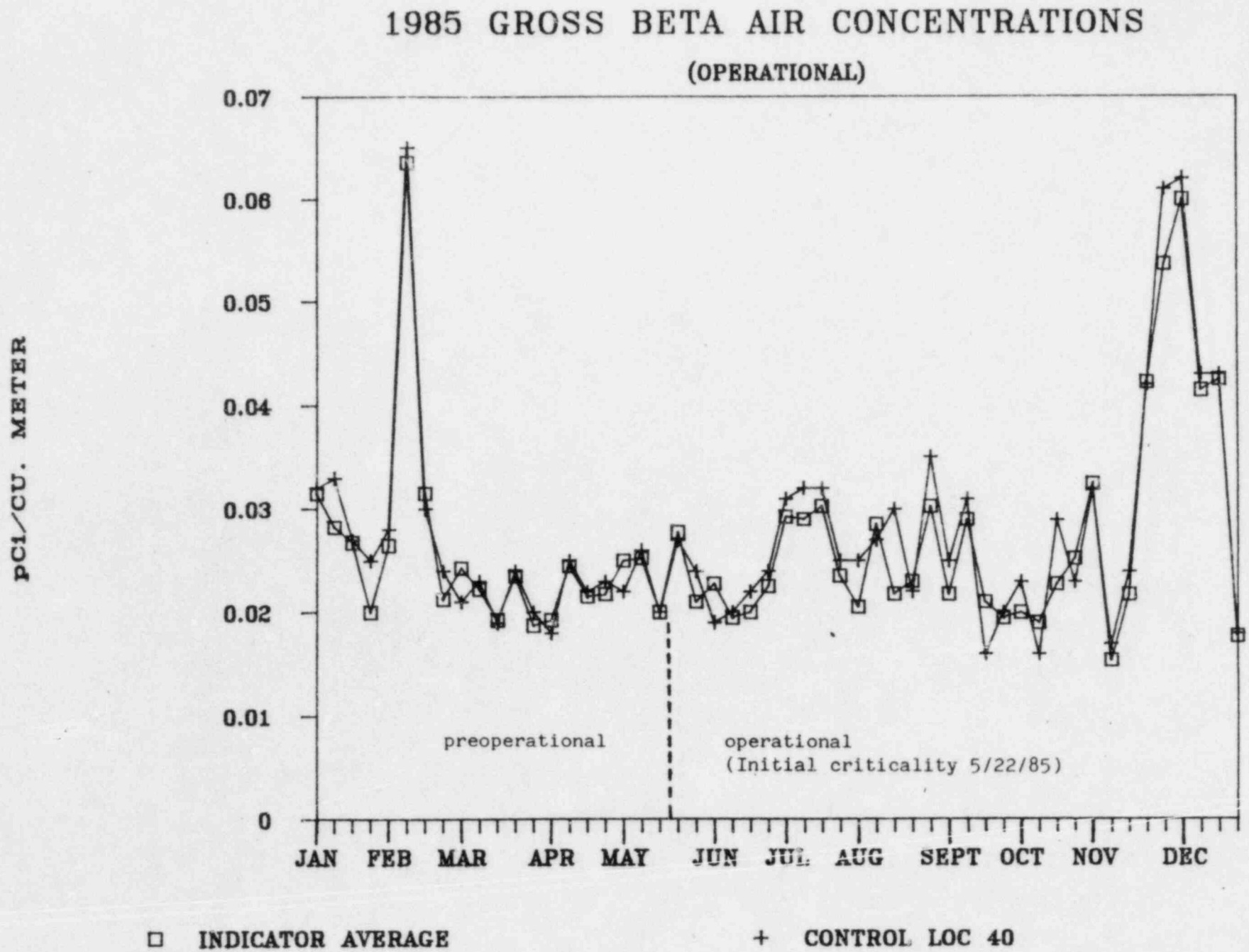

1985 GROSS BETA AIR CONCENTRATIONS
(OPERATIONAL)
pCi/CU. METER
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
preoperational
operational
(Initial criticality 5/22/85)
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEPT
OCT
NOV
DEC
□ INDICATOR AVERAGE
+ CONTROL LOC 40

Figure 9

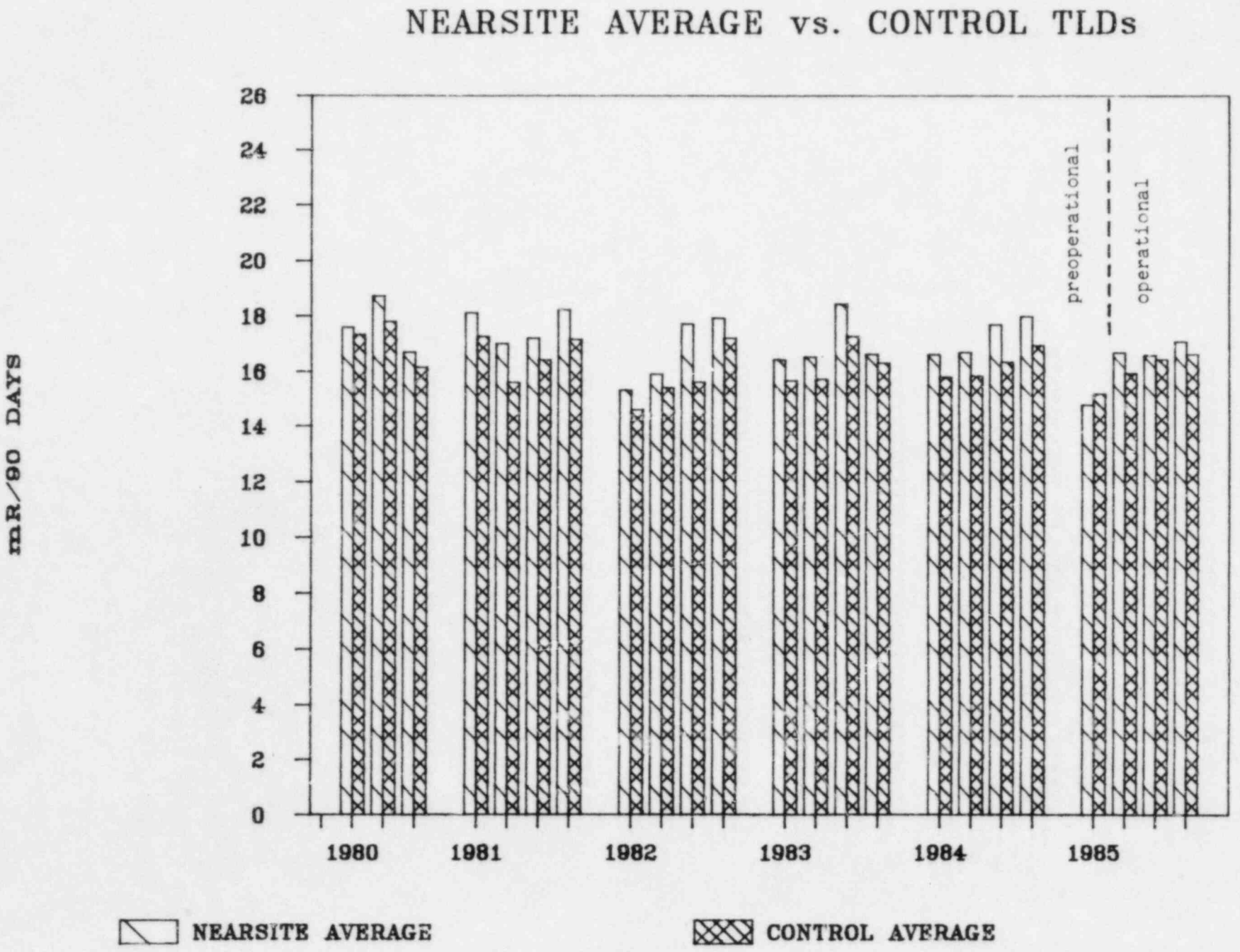

NEARSITE AVERAGE vs. CONTROL TLDs
mR/90 DAYS
26
24
22
20
18
16
14
12
10
8
6
4
2
0
1980
1981
1982
1983
1984
1985
preoperational
operational
NEARSITE AVERAGE
CONTROL AVERAGE

Figure 10

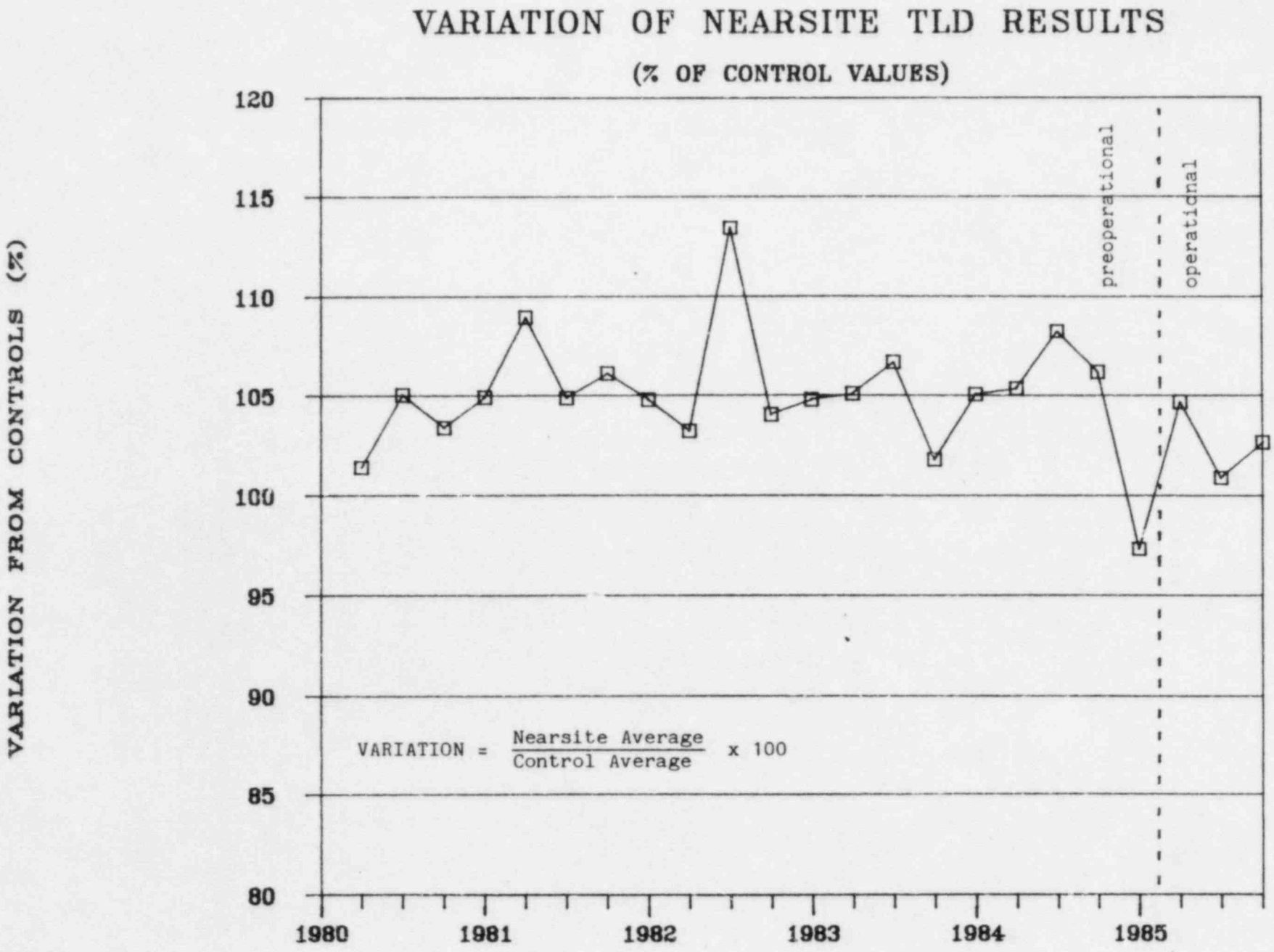

VARIATION OF NEARSITE TLD RESULTS
(% OF CONTROL VALUES)
VARIATION FROM CONTROLS (%)
120
115
110
105
100
95
90
85
80
1980
1981
1982
1983
1984
1985
preoperational
operational
VARIATION = Nearsite Average / Control Average x 100

Figure 11

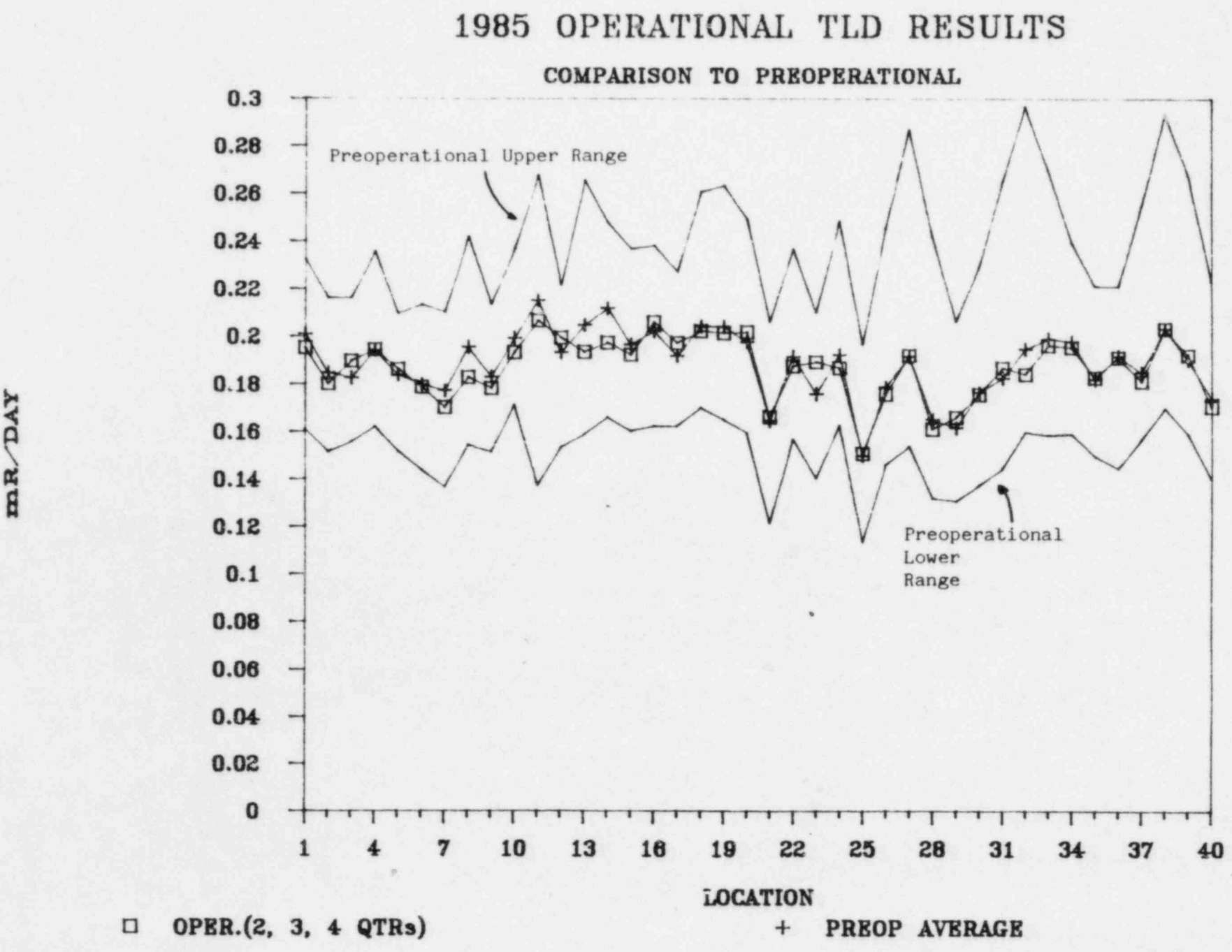
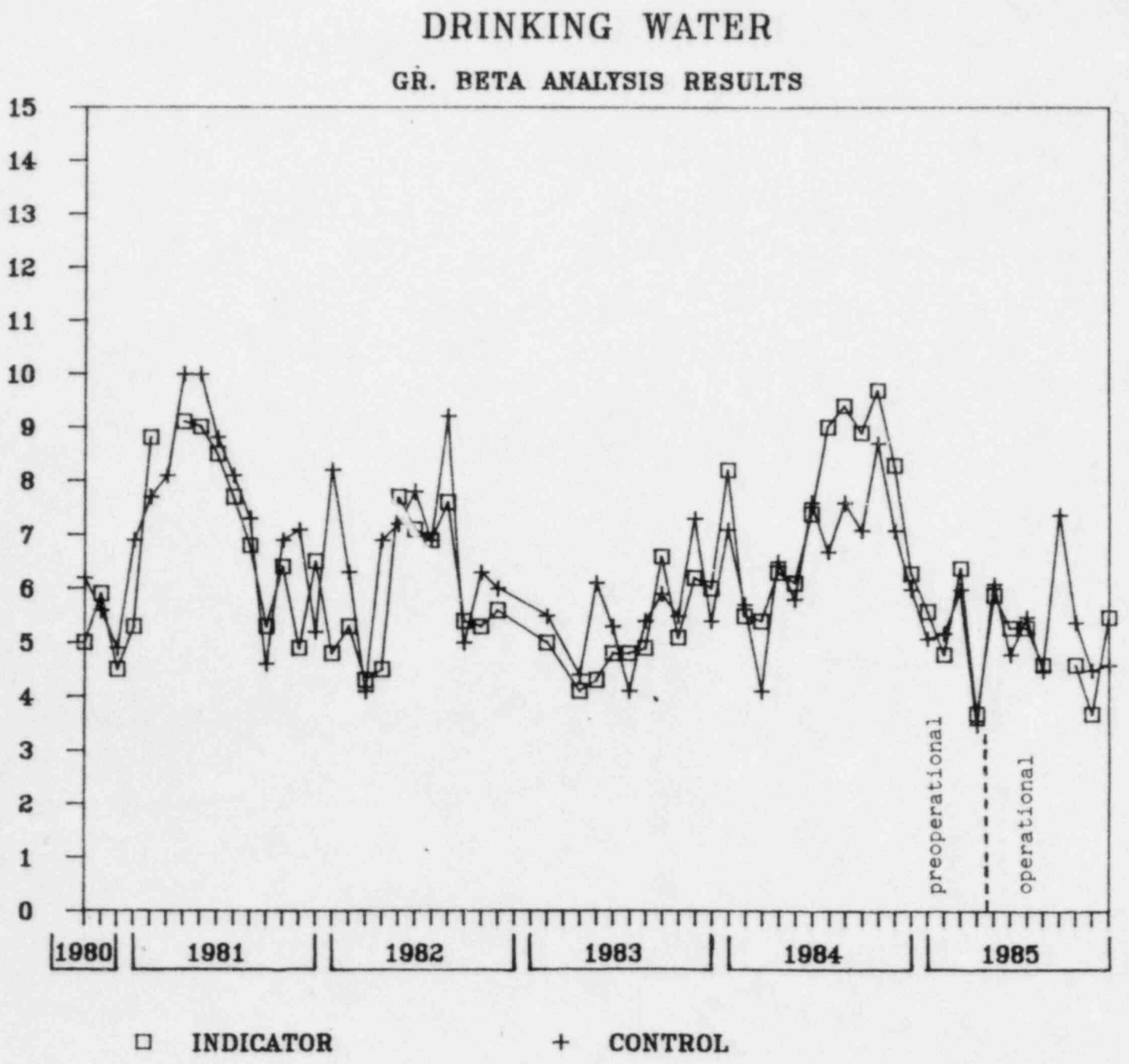

1985 OPERATIONAL TLD RESULTS
COMPARISON TO PREOPERATIONAL
Preoperational Upper Range
Preoperational Lower Range
mR/DAY
0.3
0.28
0.26
0.24
0.22
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
1
4
7
10
13
16
19
22
25
28
31
34
37
40
LOCATION
□ OPER.(2, 3, 4 QTRs)
+ PREOP AVERAGE

Figure 12


DRINKING WATER
GR. BETA ANALYSIS RESULTS
pCi/LITER
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
1980
1981
1982
1983
1984
1985
preoperational
operational
INDICATOR
CONTROL

APPENDICES

1985 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

WOLF CREEK GENERATING STATION

Prepared by

TELEDYNE ISOTOPES
50 Van Buren Avenue
Westwood, New Jersey

Prepared for

Kansas Gas and Electric Company

TABLE OF CONTENTS: APPENDICES

APPENDIX A: SUMMARY TABLES

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY

Name of Facility Kansas Gas and Electric Docket No. SIN 50-482

Location of Facility Coffey County, Kansas (County, State) Reporting Period Annual 1985

Medium or Pathway Sampled (Unit of Measurement)	Analysis and Total Number of Analysis Performed	Lower Limit of Detection (LLD)	All Indicator Locations ** Mean (f) **Range	Location with Highest Annual Mean Name Distance and Directions	**Mean (f) **Range	Control Locations **Mean (f) **Range	Number of Nonroutine Reported Measurements**
					Station No. 40		
Air Particulate ($X10^{-3}$ pCi/Cu. M.)	Gross (260) Beta	3	27(208/208) (8.5-71)	37 2.1 miles NNW	29(52/52) (16-71)	28/(52/52) (16-65)	0
	Gamma (20)						
	Be-7	1	79(16/16) (40-106)	32 2.8 miles WNW	86(4/4) (68-106)	84(4/4) (69-93)	0
	K-40	24	11(3/16) (5.6-20)	32 2.8 miles WNW	20(1/4) -	6.4(1/4) -	0
					Stations 39 and 40		
External Radiation (mR/day)	TLD Quarterly (320)	0.05	0.18(304/304) (0.13-0.23)	11 1.6 miles E	0.20(8/8) (0.17-0.21)	0.18(16/16) (0.15-0.20)	0

* Nominal Lower Limit of Detection (LLD)

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

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY

Name of Facility Kansas Gas and Electric Docket No. STN 50-482

Location of Facility Coffey County, Kansas Reporting Period Annual 1985
(County, State)

Medium or Pathway Sampled (Unit of Measurement)	Analysis and Total Number of Analysis Performed	Lower Limit of Detection (LLD)	All Indicator Locations ** Mean (f) **Range	Location with Highest Annual Mean Name Distance and Directions	**Mean (f) **Range	Control Locations **Mean (f) **Range	Number of Nonroutine Reported Measurements**
Water Drinking (pCi/ℓ)	I-131 (24)	0.5	-(0/12) -	N/A	N/A	BW-15 -(0/12) -	0
	Gross Beta (23)	2	5.0(11/11) (3.7-6.4)	BW-15 3.9 miles SW	5.2(12/12) (3.5-7.4)	5.2(12/12) (3.5-7.4)	0
	Gamma (24)	--	-(0/12) -	N/A	N/A	-(0/12) -	0
	Tritium (8)	1000	-(0/4) -	N/A	N/A	-(0/4) -	0
Water, Ground (pCi/ℓ)	I-131 (16)	0.5	-(0/12) -	N/A	N/A	B-12 -(0/4) -	0
	Gamma (16) K-40	60	-(0/12) -	B-12 2.2 miles NE	72(1/4) -	72(1/4) -	0
	Tritium (16)	1000	-(0/12) -	N/A	N/A	-(0/4) -	0
Water, Surface (pCi/ℓ)	Gamma (24)	--	-(0/12) -	N/A	N/A	Mush -(0/12) -	0
	Tritium (8)	1000	1600(1/4) -	DC 0.6 miles WNW	1600(1/4) -	-(0/4) -	0

* Nominal Lower Limit of Detection (LLD)

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

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY

Name of Facility Kansas Gas and Electric Docket No. STN 50-482

Location of Facility Coffey County, Kansas (County, State) Reporting Period Annual 1985

Medium or Pathway Sampled (Unit of Measurement)	Analysis and Total Number of Analysis Performed	Lower Limit of Detection (LLD)	All Indicator Locations ** Mean (f) **Range	Location with Highest Annual Mean Name Distance and Directions	**Mean (f) **Range	Control Locations **Mean (f) **Range	Number of Nonroutine Reported Measurements**
Fish (pCi/g) (wet weight)	Gamma (10) K-40	0.5	3.2(8/8) (2.7-3.5)	JRR 4 miles W	3.6(2/2) (3.5-3.7)	J. Redmond Reservoir 3.6(2/2) (3.5-3.7)	0
Food and Garden Crops (pCi/g wet weight)	Gamma (19) Be-7	0.1	0.48(11/12) (0.20-0.97)	S-4 15 miles WNW	0.68(7/7) (0.33-1.6)	S-4 0.68(7/7) (0.33-1.6)	0
	K-40	0.5	3.4(12/12) (1.8-5.0)	S-4 15 miles WNW	4.7(7/7) (3.0-5.9)	4.7(7/7) (3.0-5.9)	0
	Cs-137	0.02	0.020(2/12) (0.013-0.027)	A-1 1.3 miles N	0.027(1/6) -	-(0/7) -	0

* Nominal Lower Limit of Detection (LLD)

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

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY

Name of Facility Kansas Gas and Electric Docket No. STN 50-482

Location of Facility Coffey County, Kansas (County, State) Reporting Period Annual 1985

Medium or Pathway Sampled (Unit of Measurement)	Analysis and Total Number of Analysis Performed	Lower Limit of Detection (LLD)	All Indicator Locations ** Mean (f) **Range	Location with Highest Annual Mean Name Distance and Directions	**Mean (f) **Range	Control Locations **Mean (f) **Range	Number of Nonroutine Reported Measurements**
Irrigated Crops (pCi/g wet weight)	Gamma (1) K-40	0.5	2.6(1/1) -	NR-D1 9.2 miles S	2.6(1/1) -	NONE -	0

* Nominal Lower Limit of Detection (LLD)

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

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY

Name of Facility Kansas Gas and Electric Docket No. STN 50-482

Location of Facility Coffey County, Kansas (County, State) Reporting Period Annual 1985

Medium or Pathway Sampled (Unit of Measurement)	Analysis and Total Number of Analysis Performed	Lower Limit of Detection (LLD)	All Indicator Locations ** Mean (f) **Range	Location with Highest Annual Mean Name Distance and Directions	**Mean (f) **Range	Control Locations **Mean (f) **Range	Number of Nonroutine Reported Measurements**
						Station S-3	
Milk (pCi/liter)	I-131(68)	0.2	-(0/48) -	N/A	N/A	-(0/20) -	0
	Gamma (68)						
	K-40	100	1345(48/48) (779-1930)	P-2 2.9 miles WNW	1614(20/20) (1320-1930)	1312(20/20) (1140-1760)	0
	Cs-137	5	7.2(2/48) (7.2-7.3)	F-1 1.3 miles ESE	7.3(1/20) -	-(0/20) -	0
Shoreline Sediment (pCi/g (dry weight)	Gamma(7)					J. Redmond Reservoir	
	Be-7	0.4	0.54(1/4) -	DC 0.6 miles WNW	0.54(1/2) -	-(0/1) -	0
	K-40	0.5	13.5(4/4) (11.9-15.6)	NR 6.5 miles S	15.0(2/2) (14.4-15.6)	10.4(1/1) -	0
	Cs-137	0.06	0.31(4/4) (0.050-0.71)	NR 6.5 miles S	0.49(2/2) (0.26-0.71)	0.17(1/1) -	0
	Ra-226	0.5	2.6(4/4) (2.0-3.3)	NR 6.5 miles S	2.7(2/2) (2.1-3.3)	2.7(1/1) -	0
	Th-228	0.04	1.5(4/4) (1.4-1.7)	JRR 4 MILES W	1.7(1/1) -	1.7(1/1) -	0

* Nominal Lower Limit of Detection (LLD)

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

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM SUMMARY

Name of Facility Kansas Gas and Electric Docket No. STN 50-482

Location of Facility Coffey County, Kansas Reporting Period Annual 1985
(County, State)

Medium or Pathway Sampled (Unit of Measurement)	Analysis and Total Number of Analysis Performed	Lower Limit of Detection (LLD)	All Indicator Locations ** Mean (f) **Range	Location with Highest Annual Mean Name Distance and Directions	**Mean (f) **Range	Control Locations **Mean (f) **Range	Number of Nonroutine Reported Measurements**
Vegetation, Aquatic (pCi/g wet weight)	Gamma (3) Be-7	0.1	0.82(3/3) (0.23-1.7)	DC 0.6 miles WNW	0.82(3/3) (0.23-1.7)	NONE -	0
	K-40	0.5	3.1(3/3) (2.4-3.6)	DC 0.6 miles WNW	3.1(3/3) (2.4-3.6)	-	0
	Co-58	0.02	0.047(1/3) -	DC 0.6 miles WNW	0.047(1/3) -	-	0
	Cs-137	0.02	0.025(3/3) (0.013-0.049)	DC 0.6 miles WNW	0.025(3/3) (0.013-0.049)	-	0
	Th-228	0.04	0.089(3/3) (0.054-0.15)	DC 0.6 miles WNW	0.089(3/3) (0.054-0.15)	-	0

* Nominal Lower Limit of Detection (LLD)

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

APPENDIX B: DATA TABLES

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - AIRBORNE
AIR PARTICULATE & CHARCOAL FILTERS

STATION NUMBER 32

COLL. TIME START DATE	COLL. TIME STOP DATE	VOLUME	UNITS	AP FILTER GROSS BETA (PCI/CU. M)	MID-COUNT TIME DATE TIME	CHARCOAL FILTER I-131 (PCI/CU. M)
01/02	01/08	2.34E 08	CC	2.9 +-0.5 E-02	01/11	L.T. 4. E-02
01/08	01/15	2.84E 08	CC	2.5 +-0.4 E-02	01/19	L.T. 2. E-02
01/15	01/22	2.82E 08	CC	2.6 +-0.4 E-02	01/24	L.T. 4. E-02
01/22	01/29	2.85E 08	CC	1.7 +-0.3 E-02	02/01	L.T. 3. E-02
01/22	01/29	3.00E 08	CC	(a)	02/01	L.T. 3. E-02
01/29	02/05	2.85E 08	CC	2.6 +-0.4 E-02	02/08	L.T. 4. E-02
02/05	02/12	2.82E 08	CC	6.5 +-0.5 E-02 (b)	02/16	L.T. 2. E-02
02/12	02/19	2.87E 08	CC	3.4 +-0.4 E-02	02/21	L.T. 4. E-02
02/19	02/26	2.93E 08	CC	2.2 +-0.3 E-02	02/28	L.T. 2. E-02
02/26	03/05	2.91E 08	CC	2.4 +-0.4 E-02	03/08	L.T. 3. E-02
03/05	03/12	2.87E 08	CC	2.0 +-0.3 E-02	03/16	L.T. 3. E-02
03/12	03/19	2.88E 08	CC	2.0 +-0.3 E-02	03/21	L.T. 4. E-02
03/19	03/26	2.85E 08	CC	2.2 +-0.3 E-02	03/28	L.T. 4. E-02
03/26	04/02	2.87E 08	CC	1.5 +-0.3 E-02	04/05	L.T. 4. E-02
04/02	04/09	2.96E 08	CC	1.8 +-0.3 E-02	04/12	L.T. 3. E-02
04/09	04/16	2.82E 08	CC	2.8 +-0.4 E-02	04/18	L.T. 3. E-02
04/16	04/24	3.14E 08	CC	2.1 +-0.3 E-02	04/26	L.T. 2. E-02
04/24	04/30	2.38E 08	CC	2.3 +-0.4 E-02	05/02	L.T. 3. E-02
04/30	05/07	2.77E 08	CC	2.6 +-0.3 E-02	05/09	L.T. 4. E-02
04/30	05/07	2.77E 08	CC	(a)	05/13	L.T. 3. E-02
05/07	05/14	2.86E 08	CC	2.5 +-0.3 E-02	05/16	L.T. 4. E-02
05/14	05/21	2.75E 08	CC	1.9 +-0.3 E-02	05/23	L.T. 4. E-02
05/21	05/28	2.77E 08	CC	3.1 +-0.4 E-02	05/31	L.T. 3. E-02
05/28	06/04	2.73E 08	CC	2.5 +-0.4 E-02	06/06	L.T. 4. E-02
06/04	06/11	2.77E 08	CC	2.5 +-0.3 E-02	06/13	L.T. 4. E-02
06/11	06/18	2.70E 08	CC	2.1 +-0.3 E-02	06/20	L.T. 4. E-02
06/18	06/25	2.73E 08	CC	1.9 +-0.3 E-02	06/28	L.T. 3. E-02
06/25	07/02	2.83E 08	CC	2.1 +-0.3 E-02	07/05	L.T. 4. E-02
07/02	07/09	2.80E 08	CC	2.1 +-0.3 E-02	07/13	L.T. 3. E-02
07/09	07/16	2.68E 08	CC	2.6 +-0.4 E-02	07/20	L.T. 3. E-02
07/16	07/23	2.85E 08	CC	3.3 +-0.4 E-02	07/26	L.T. 3. E-02
07/23	07/30	2.94E 08	CC	2.7 +-0.3 E-02	08/01	L.T. 3. E-02
07/30	08/06	2.82E 08	CC	1.8 +-0.3 E-02	08/08	L.T. 3. E-02
08/06	08/13	2.59E 08	CC	3.6 +-0.4 E-02	08/15	L.T. 5. E-02
08/13	08/20	2.63E 08	CC	2.3 +-0.4 E-02	08/22	L.T. 3. E-02
08/20	08/27	2.67E 08	CC	2.7 +-0.3 E-02	08/29	L.T. 4. E-02
08/27	09/03	2.78E 08	CC	3.6 +-0.4 E-02	09/06	L.T. 2. E-02 (c)

(a) Duplicate analysis
(b) Counted twice to confirm the higher than usual activity.
(c) TI 36852 was light in color and showed very little deposition of particulate matter.

KANSAS GAS AND ELECTRIC CO
P O BOX 203
EXPOSURE PATHWAY - AIRBORNE
AIR PARTICULATE & CHARCOAL FILTERS

STATION NUMBER C2

COLL. TIME START DATE	COLL. TIME STOP DATE	VOLUME	UNITS	AP FILTER GROSS BETA (PCI/CU. M)	MID-COUNT TIME DATE TIME	CHARCOAL FILTER I-131 (PCI/CU. M)
08/27	09/03	2.78E 08	CC	(a)	09/06	L.T. 2. E-02
09/03	09/10	2.57E 08	CC	2.6 +-0.3 E-02	09/13	L.T. 3. E-02
09/10	09/17	2.62E 08	CC	3.1 +-0.4 E-02	09/19	L.T. 5. E-02
09/17	09/24	2.70E 08	CC	2.9 +-0.4 E-02	09/26	L.T. 3. E-02
09/24	10/01	2.80E 08	CC	2.2 +-0.3 E-02	10/03	L.T. 3. E-02
10/01	10/08	2.76E 08	CC	2.2 +-0.3 E-02	10/10	L.T. 4. E-02
10/08	10/15	2.90E 08	CC	1.9 +-0.3 E-02	10/18	L.T. 3. E-02
10/15	10/22	3.07E 08	CC	2.3 +-0.3 E-02	10/24	L.T. 2. E-02
10/22	10/29	3.04E 08	CC	2.4 +-0.3 E-02	11/02	L.T. 3. E-02
10/29	11/05	3.08E 08	CC	3.1 +-0.3 E-02	11/09	L.T. 2. E-02
11/05	11/12	3.16E 08	CC	1.8 +-0.3 E-02	11/17	L.T. 3. E-02
11/12	11/19	3.09E 08	CC	2.5 +-0.3 E-02	11/21	L.T. 4. E-02
11/19	11/26	3.12E 08	CC	4.7 +-0.4 E-02	12/02	L.T. 4. E-02
11/26	12/03	3.18E 08	CC	5.9 +-0.5 E-02	12/05	L.T. 4. E-02
12/03	12/10	3.29E 08	CC	6.0 +-0.4 E-02	12/13	L.T. 2. E-02
12/10	12/17	3.05E 08	CC	4.5 +-0.4 E-02	12/19	L.T. 3. E-02
12/17	12/24	3.09E 08	CC	4.4 +-0.4 E-02	12/27	L.T. 3. E-02
12/24	12/31	3.13E 08	CC	1.8 +-0.3 E-02	01/03	L.T. 3. E-02

(a) Duplicate analysis

KANSAS GAS AND ELECTRIC CO
P O BOX 209
EXPOSURE PATHWAY - AIRBORNE
AIR PARTICULATE & CHARCOAL FILTERS

STATION NUMBER 03

COLL. START DATE	COLL. STOP DATE	VOLUME	UNITS	AP FILTER GROSS BETA (PCI/CU. M)	MID-COUNT TIME DATE	TIME	CHARCOAL FILTER I-131 (PCI/CU. M)
01/02	01/08	2.51E 03	CC	3.2 +-0.5 E-02	01/11	L.T.	4. E-02
01/08	01/15	3.03E 03	CC	3.0 +-0.4 E-02	01/19	L.T.	2. E-02
01/15	01/22	3.02E 03	CC	2.5 +-0.4 E-02	01/24	L.T.	4. E-02
01/22	01/29	3.00E 03	CC	2.2 +-0.3 E-02	02/01	L.T.	3. E-02
01/29	02/05	3.05E 03	CC	3.2 +-0.4 E-02	02/08	L.T.	3. E-02
02/05	02/12	3.07E 03	CC	7.0 +-0.5 E-02 (b)	02/16	L.T.	2. E-02
02/12	02/19	3.12E 03	CC	3.2 +-0.4 E-02	02/21	L.T.	4. E-02
02/19	02/26	3.08E 03	CC	2.0 +-0.3 E-02	02/28	L.T.	2. E-02
02/26	03/05	3.01E 03	CC	2.5 +-0.3 E-02	03/08	L.T.	3. E-02
03/05	03/12	2.92E 03	CC	1.7 +-0.3 E-02	03/16	L.T.	3. E-02
03/12	03/19	3.03E 03	CC	1.7 +-0.3 E-02	03/21	L.T.	4. E-02
03/19	03/26	2.99E 03	CC	2.3 +-0.3 E-02	03/28	L.T.	4. E-02
03/26	04/02	2.92E 03	CC	1.9 +-0.3 E-02	04/05	L.T.	4. E-02
04/02	04/09	3.07E 03	CC	1.7 +-0.3 E-02	04/13	L.T.	3. E-02
04/02	04/09	3.07E 03	CC	(a)	04/15	L.T.	5. E-02
04/09	04/16	3.08E 03	CC	2.3 +-0.3 E-02	04/18	L.T.	3. E-02
04/16	04/24	3.53E 03	CC	1.7 +-0.3 E-02	04/26	L.T.	2. E-02
04/24	04/30	2.78E 03	CC	1.7 +-0.3 E-02	05/02	L.T.	3. E-02
04/30	05/07	3.17E 03	CC	2.2 +-0.3 E-02	05/09	L.T.	4. E-02
05/07	05/14	3.27E 03	CC	2.4 +-0.3 E-02	05/16	L.T.	3. E-02
05/14	05/21	3.25E 03	CC	1.9 +-0.3 E-02	05/23	L.T.	4. E-02
05/21	05/28	3.16E 03	CC	2.2 +-0.3 E-02	05/31	L.T.	3. E-02
05/28	06/04	3.18E 03	CC	1.8 +-0.3 E-02	06/06	L.T.	4. E-02
06/04	06/11	3.32E 03	CC	1.9 +-0.3 E-02	06/13	L.T.	4. E-02
06/11	06/18	3.46E 03	CC	1.8 +-0.3 E-02	06/20	L.T.	3. E-02
06/18	06/25	3.17E 03	CC	1.8 +-0.3 E-02	06/28	L.T.	3. E-02
06/25	07/02	3.33E 03	CC	1.8 +-0.3 E-02	07/05	L.T.	3. E-02
07/02	07/09	3.26E 03	CC	2.9 +-0.3 E-02	07/13	L.T.	3. E-02
07/09	07/16	2.98E 03	CC	2.6 +-0.3 E-02	07/20	L.T.	3. E-02
07/16	07/23	3.05E 03	CC	1.9 +-0.3 E-02	07/26	L.T.	2. E-02
07/23	07/30	3.34E 03	CC	2.0 +-0.3 E-02	08/01	L.T.	3. E-02
07/30	08/06	3.17E 03	CC	1.5 +-0.3 E-02	08/08	L.T.	3. E-02
08/06	08/13	2.84E 03	CC	2.2 +-0.3 E-02	08/15	L.T.	4. E-02
08/13	08/20	2.93E 03	CC	2.1 +-0.3 E-02	08/22	L.T.	3. E-02
08/20	08/27	2.92E 03	CC	1.9 +-0.3 E-02	08/29	L.T.	4. E-02
08/27	09/03	2.88E 03	CC	1.8 +-0.3 E-02	09/06	L.T.	2. E-02
09/03	09/10	2.87E 03	CC	1.3 +-0.3 E-02	09/13	L.T.	2. E-02

(a) Duplicate analysis
(b) Counted twice to confirm the higher than usual activity.

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - AIRBORNE
AIR PARTICULATE & CHARCOAL FILTERS

STATION NUMBER 03

COLL. TIME START DATE	COLL. TIME STOP DATE	VOLUME	UNITS	AP FILTER GROSS BETA (PCI/CU. M)	MID-COUNT TIME DATE TIME	CHARCOAL FILTER I-131 (PCI/CU. M)
09/10	09/17	2.87E 08	CC	2.6 +-0.4 E-02	09/19	L.T. 4. E-02
09/17	09/24	3.01E 08	CC	1.7 +-0.3 E-02	09/26	L.T. 3. E-02
09/24	10/01	3.05E 08	CC	1.6 +-0.3 E-02	10/03	L.T. 3. E-02
10/01	10/08	2.97E 08	CC	1.5 +-0.3 E-02	10/10	L.T. 4. E-02
10/08	10/15	2.95E 08	CC	2.3 +-0.3 E-02	10/18	L.T. 2. E-02
10/15	10/22	3.25E 08	CC	2.1 +-0.3 E-02	10/24	L.T. 2. E-02
10/22	10/29	3.11E 08	CC	2.9 +-0.3 E-02	11/02	L.T. 3. E-02
10/29	11/05	3.18E 08	CC	3.0 +-0.3 E-02	11/09	L.T. 2. E-02
11/05	11/12	3.16E 08	CC	1.4 +-0.2 E-02	11/17	L.T. 3. E-02
11/12	11/19	3.04E 08	CC	1.4 +-0.2 E-02	11/21	L.T. 4. E-02
11/12	11/19	3.04E 08	CC	(a)	11/22	L.T. 2. E-02
11/19	11/26	2.92E 08	CC	3.6 +-0.4 E-02	12/02	L.T. 4. E-02
11/26	12/03	2.88E 08	CC	5.4 +-0.5 E-02	12/05	L.T. 4. E-02
12/03	12/10	2.93E 08	CC	5.8 +-0.5 E-02	12/13	L.T. 2. E-02
12/10	12/17	2.86E 08	CC	4.5 +-0.4 E-02	12/19	L.T. 3. E-02
12/17	12/24	2.79E 08	CC	4.5 +-0.4 E-02	12/27	L.T. 3. E-02
12/24	12/31	2.93E 08	CC	2.0 +-0.3 E-02	01/03	L.T. 3. E-02

(a) Duplicate analysis

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - AIRBORNE
AIR PARTICULATE & CHARCOAL FILTERS

STATION NUMBER 32

COLL. START DATE	TIME STOP DATE	VOLUME	UNITS	AP FILTER GROSS BETA (PCI/CU. M)	MID-COUNT TIME DATE TIME	CHARCOAL FILTER I-131 (PCI/CU. M)
01/02	01/08	2.46E 08	CC	3.0 +-0.4 E-02	01/11	L.T. 4. E-02
01/08	01/15	2.93E 08	CC	2.8 +-0.4 E-02	01/15	L.T. 2. E-02
01/15	01/22	2.96E 08	CC	2.7 +-0.4 E-02	01/24	L.T. 4. E-02
01/22	01/29	2.96E 08	CC	1.9 +-0.3 E-02	02/01	L.T. 3. E-02
01/29	02/05	3.01E 08	CC	2.1 +-0.3 E-02	02/08	L.T. 3. E-02
02/05	02/12	2.92E 08	CC	4.8 +-0.4 E-02 (b)	02/16	L.T. 2. E-02
02/12	02/19	2.87E 08	CC	2.9 +-0.4 E-02	02/21	L.T. 4. E-02
02/19	02/26	2.97E 08	CC	2.1 +-0.3 E-02	02/28	L.T. 2. E-02
02/26	03/05	3.05E 08	CC	2.2 +-0.3 E-02	03/08	L.T. 3. E-02
03/05	03/12	2.95E 08	CC	2.7 +-0.4 E-02	03/16	L.T. 3. E-02
03/05	03/12	2.95E 08	CC	(a)	03/18	L.T. 4. E-02
03/12	03/19	2.98E 08	CC	1.9 +-0.3 E-02	03/21	L.T. 4. E-02
03/19	03/26	2.93E 08	CC	2.3 +-0.3 E-02	03/28	L.T. 4. E-02
03/26	04/02	2.99E 08	CC	2.0 +-0.3 E-02	04/05	L.T. 4. E-02
04/02	04/09	3.02E 08	CC	2.2 +-0.3 E-02	04/13	L.T. 3. E-02
04/09	04/16	3.01E 08	CC	2.2 +-0.3 E-02	04/18	L.T. 3. E-02
04/16	04/24	3.25E 08	CC	2.3 +-0.3 E-02	04/26	L.T. 2. E-02
04/24	04/30	2.64E 08	CC	2.3 +-0.4 E-02	05/02	L.T. 3. E-02
04/30	05/07	3.00E 08	CC	2.7 +-0.3 E-02	05/09	L.T. 4. E-02
05/07	05/14	3.03E 08	CC	2.7 +-0.3 E-02	05/16	L.T. 4. E-02
05/14	05/21	2.95E 08	CC	2.0 +-0.3 E-02	05/23	L.T. 4. E-02
05/21	05/28	3.02E 08	CC	2.8 +-0.3 E-02	05/31	L.T. 3. E-02
05/28	06/04	3.04E 08	CC	2.0 +-0.3 E-02	06/06	L.T. 4. E-02
06/04	06/11	3.07E 08	CC	1.8 +-0.3 E-02	06/13	L.T. 4. E-02
06/11	06/18	3.20E 08	CC	1.9 +-0.3 E-02	06/20	L.T. 3. E-02
06/18	06/25	2.88E 08	CC	2.3 +-0.3 E-02	06/28	L.T. 3. E-02
06/25	07/02	3.11E 08	CC	2.7 +-0.3 E-02	07/05	L.T. 4. E-02
07/02	07/09	2.93E 08	CC	3.4 +-0.4 E-02	07/13	L.T. 3. E-02
07/09	07/16	2.90E 08	CC	3.2 +-0.4 E-02	07/20	L.T. 3. E-02
07/16	07/23	3.00E 08	CC	3.3 +-0.4 E-02	07/26	L.T. 2. E-02
07/23	07/30	3.07E 08	CC	2.3 +-0.3 E-02	08/01	L.T. 3. E-02
07/23	07/30	3.07E 08	CC	(a)	08/03	L.T. 3. E-02
07/30	08/06	3.06E 08	CC	2.2 +-0.3 E-02	08/08	L.T. 3. E-02
08/06	08/13	2.91E 08	CC	2.7 +-0.4 E-02	08/15	L.T. 4. E-02
08/13	08/20	2.99E 08	CC	2.4 +-0.3 E-02	08/22	L.T. 2. E-02
08/20	08/27	2.95E 08	CC	2.1 +-0.3 E-02	08/29	L.T. 4. E-02
08/27	09/03	3.11E 08	CC	3.2 +-0.4 E-02	09/06	L.T. 2. E-02

(a) Duplicate analysis
(b) Counted twice to confirm higher than usual activity.

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - AIRBORNE
AIR PARTICULATE & CHARCOAL FILTERS

STATION NUMBER 32

COLL. START DATE	TIME STOP DATE	VOLUME	UNITS	AP FILTER GROSS BETA (PCI/CU. M)	MID-COUNT TIME DATE TIME	CHARCOAL FILTER I-131 (PCI/CU. M)
09/03	09/10	2.96E 08	CC	2.3 +-0.3 E-02	09/13	L.T. 2. E-02
09/10	09/17	2.98E 08	CC	2.9 +-0.4 E-02	09/19	L.T. 4. E-02
09/17	09/24	2.98E 08	CC	1.8 +-0.3 E-02	09/26	L.T. 3. E-02
09/24	10/01	3.05E 08	CC	2.0 +-0.3 E-02	10/03	L.T. 3. E-02
10/01	10/08	2.95E 08	CC	2.0 +-0.3 E-02	10/10	L.T. 4. E-02
10/08	10/15	3.13E 08	CC	1.7 +-0.3 E-02	10/18	L.T. 2. E-02
10/15	10/22	3.22E 08	CC	2.2 +-0.3 E-02	10/24	L.T. 2. E-02
10/22	10/29	3.22E 08	CC	2.4 +-0.3 E-02	11/02	L.T. 2. E-02
10/29	11/05	3.11E 08	CC	3.0 +-0.3 E-02	11/09	L.T. 2. E-02
11/05	11/12	3.24E 08	CC	8.5 +-2.0 E-03	11/17	L.T. 3. E-02
11/12	11/19	3.11E 08	CC	2.2 +-0.3 E-02	11/21	L.T. 4. E-02
11/19	11/26	3.12E 08	CC	4.1 +-0.4 E-02	12/02	L.T. 4. E-02
11/26	12/03	3.15E 08	CC	4.6 +-0.4 E-02	12/05	L.T. 4. E-02
12/03	12/10	3.28E 08	CC	5.8 +-0.4 E-02	12/13	L.T. 2. E-02
12/10	12/17	3.10E 08	CC	3.7 +-0.4 E-02	12/19	L.T. 3. E-02
12/17	12/24	3.13E 08	CC	4.2 +-0.4 E-02	12/27	L.T. 3. E-02
12/24	12/31	3.22E 08	CC	1.7 +-0.3 E-02	01/03	L.T. 3. E-02

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - AIRBORNE
AIR PARTICULATE & CHARCOAL FILTERS

STATION NUMBER 37

COLL. TIME START DATE	COLL. TIME STOP DATE	VOLUME	UNITS	AP FILTER GROSS BETA (PCI/CU. M)	MID-COUNT TIME DATE TIME	CHARCOAL FILTER I-131 (PCI/CU. M)
01/02	01/08	2.46E 08	CC	3.5 +-0.5 E-02	01/11	L.T. 4. E-02
01/08	01/15	2.99E 08	CC	3.0 +-0.4 E-02	01/15	L.T. 2. E-02
01/15	01/22	2.97E 08	CC	2.9 +-0.4 E-02	01/24	L.T. 4. E-02
01/22	01/29	3.00E 08	CC	2.2 +-0.3 E-02	02/01	L.T. 3. E-02
01/29	02/05	3.06E 08	CC	2.7 +-0.4 E-02	02/08	L.T. 3. E-02
02/05	02/12	3.00E 08	CC	7.1 +-0.5 E-02 (b)	02/16	L.T. 2. E-02
02/05	02/12	3.00E 08	CC	(a)	02/15	L.T. 5. E-02
02/12	02/19	3.02E 08	CC	3.1 +-0.4 E-02	02/21	L.T. 4. E-02
02/19	02/26	3.03E 08	CC	2.2 +-0.3 E-02	02/26	L.T. 2. E-02
02/26	03/05	3.02E 08	CC	2.6 +-0.3 E-02	03/08	L.T. 3. E-02
03/05	03/12	3.07E 08	CC	2.5 +-0.3 E-02	03/16	L.T. 3. E-02
03/12	03/19	3.03E 08	CC	2.1 +-0.3 E-02	03/21	L.T. 4. E-02
03/19	03/26	2.95E 08	CC	2.6 +-0.4 E-02	03/28	L.T. 4. E-02
03/26	04/02	2.95E 08	CC	2.1 +-0.3 E-02	04/05	L.T. 4. E-02
04/02	04/09	3.20E 08	CC	2.0 +-0.3 E-02	04/13	L.T. 2. E-02
04/09	04/16	2.96E 08	CC	2.5 +-0.3 E-02	04/18	L.T. 3. E-02
04/16	04/24	3.36E 08	CC	2.5 +-0.3 E-02	04/26	L.T. 2. E-02
04/24	04/30	2.64E 08	CC	2.4 +-0.4 E-02	05/02	L.T. 3. E-02
04/30	05/07	2.97E 08	CC	2.5 +-0.3 E-02	05/09	L.T. 4. E-02
05/07	05/14	3.07E 08	CC	2.5 +-0.3 E-02	05/16	L.T. 4. E-02
05/14	05/21	2.85E 08	CC	2.2 +-0.3 E-02	05/23	L.T. 4. E-02
05/21	05/28	2.82E 08	CC	3.0 +-0.4 E-02	05/31	L.T. 3. E-02
05/28	06/04	2.93E 08	CC	2.1 +-0.3 E-02	06/06	L.T. 4. E-02
05/28	06/04	2.93E 08	CC	(a)	06/08	L.T. 1. E-02
06/07	06/11	1.70E 08	CC	2.9 +-0.5 E-02	06/13	L.T. 7. E-02
06/11	06/18	3.05E 08	CC	2.0 +-0.3 E-02	06/20	L.T. 4. E-02
06/18	06/25	2.91E 08	CC	2.0 +-0.3 E-02	06/28	L.T. 3. E-02
06/25	07/02	2.93E 08	CC	2.4 +-0.3 E-02	07/05	L.T. 4. E-02
07/02	07/09	3.12E 08	CC	3.3 +-0.4 E-02	07/13	L.T. 3. E-02
07/09	07/16	2.98E 08	CC	3.2 +-0.4 E-02	07/20	L.T. 3. E-02
07/16	07/23	3.06E 08	CC	3.6 +-0.4 E-02	07/26	L.T. 2. E-02
07/23	07/30	3.05E 08	CC	2.4 +-0.3 E-02	08/01	L.T. 3. E-02
07/30	08/06	3.01E 08	CC	2.7 +-0.4 E-02	08/08	L.T. 3. E-02
08/06	08/13	2.92E 08	CC	2.9 +-0.4 E-02	08/15	L.T. 4. E-02
08/13	08/20	2.98E 08	CC	1.5 +-0.3 E-02	08/22	L.T. 2. E-02
08/20	08/27	3.06E 08	CC	2.5 +-0.3 E-02	08/29	L.T. 4. E-02

(a) Duplicate analysis
(b) Counted twice to confirm higher than usual activity.

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - AIRBORNE
AIR PARTICULATE & CHARCOAL FILTERS

STATION NUMBER 37

COLL. TIME START DATE	COLL. TIME STOP DATE	VOLUME	UNITS	AP FILTER GROSS BETA (PCI/CU. M)	MID-COUNT TIME DATE TIME	CHARCOAL FILTER I-131 (PCI/CU. M)
08/27	09/03	2.95E 08	CC	3.5 +-0.4 E-02	09/06	L.T. 2. E-02
09/03	09/10	2.91E 08	CC	2.5 +-0.3 E-02	09/13	L.T. 2. E-02
09/10	09/17	2.97E 08	CC	3.0 +-0.4 E-02	09/19	L.T. 4. E-02
09/17	09/24	2.96E 08	CC	2.0 +-0.3 E-02	09/26	L.T. 3. E-02
09/17	09/24	2.96E 08	CC	(a)	09/27	L.T. 2. E-02
09/24	10/01	2.96E 08	CC	2.3 +-0.3 E-02	10/03	L.T. 3. E-02
10/01	10/08	2.99E 08	CC	2.3 +-0.3 E-02	10/10	L.T. 4. E-02
10/08	10/15	2.75E 08	CC	2.0 +-0.3 E-02	10/18	L.T. 3. E-02
10/15	10/22	2.81E 08	CC	2.5 +-0.3 E-02	10/24	L.T. 2. E-02
10/22	10/29	2.88E 08	CC	2.4 +-0.3 E-02	11/02	L.T. 3. E-02
10/29	11/05	2.78E 08	CC	3.9 +-0.4 E-02	11/05	L.T. 2. E-02
11/05	11/12	2.77E 08	CC	2.1 +-0.3 E-02	11/17	L.T. 4. E-02
11/12	11/19	2.82E 08	CC	2.6 +-0.3 E-02	11/21	L.T. 4. E-02
11/19	11/26	3.08E 08	CC	4.5 +-0.4 E-02	12/02	L.T. 4. E-02
11/26	12/03	3.03E 08	CC	5.6 +-0.5 E-02	12/05	L.T. 4. E-02
12/03	12/10	3.08E 08	CC	6.4 +-0.5 E-02	12/13	L.T. 2. E-02
12/10	12/17	3.00E 08	CC	3.9 +-0.4 E-02	12/19	L.T. 3. E-02
12/17	12/24	3.04E 08	CC	3.9 +-0.4 E-02	12/27	L.T. 3. E-02
12/17	12/24	3.04E 08	CC	(a)	12/27	L.T. 1. E-02
12/24	12/31	3.03E 08	CC	1.6 +-0.3 E-02	01/03	L.T. 3. E-02

(a) Duplicate analysis

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - AIRBORNE
AIR PARTICULATE & CHARCOAL FILTERS

STATION NUMBER 40

COLL. TIME START DATE	COLL. TIME STOP DATE	VOLUME	UNITS	AP FILTER GROSS BETA (PCI/CU. M)		MID-COUNT TIME DATE TIME	CHARCOAL FILTER I-131 (PCI/CU. M)
01/02	01/08	2.51E 08	CC	3.2 +-0.5 E-02		01/11	L.T. 2. E-02
01/08	01/15	2.88E 08	CC	3.3 +-0.4 E-02		01/15	L.T. 1. E-02
01/08	01/15	2.88E 08	CC	(a)		01/21	L.T. 4. E-02
01/15	01/22	2.88E 08	CC	2.7 +-0.4 E-02		01/24	L.T. 2. E-02
01/22	01/29	2.90E 08	CC	2.5 +-0.4 E-02		02/01	L.T. 2. E-02
01/29	02/05	3.00E 08	CC	2.8 +-0.4 E-02		02/04	L.T. 2. E-02
02/05	02/12	2.88E 08	CC	6.5 +-0.5 E-02	(b)	02/11	L.T. 1. E-02
02/12	02/19	2.93E 08	CC	3.0 +-0.4 E-02		02/21	L.T. 2. E-02
02/19	02/26	2.95E 08	CC	2.4 +-0.3 E-02		02/28	L.T. 1. E-02
02/26	03/05	3.03E 08	CC	2.1 +-0.3 E-02		03/08	L.T. 2. E-02
03/05	03/12	3.02E 08	CC	2.3 +-0.3 E-02		03/16	L.T. 1. E-02
03/12	03/19	2.95E 08	CC	1.9 +-0.3 E-02		03/21	L.T. 2. E-02
03/19	03/26	2.86E 08	CC	2.4 +-0.4 E-02		03/28	L.T. 2. E-02
03/26	04/02	2.87E 08	CC	2.0 +-0.3 E-02		04/05	L.T. 2. E-02
04/02	04/09	3.02E 08	CC	1.8 +-0.3 E-02		04/13	L.T. 1. E-02
04/09	04/16	3.04E 08	CC	2.5 +-0.3 E-02		04/18	L.T. 2. E-02
04/16	04/24	3.38E 08	CC	2.2 +-0.3 E-02		04/26	L.T. 2. E-02
04/24	04/30	2.60E 08	CC	2.3 +-0.4 E-02		05/02	L.T. 2. E-02
04/30	05/07	2.99E 08	CC	2.2 +-0.3 E-02		05/09	L.T. 2. E-02
05/07	05/14	3.05E 08	CC	2.6 +-0.3 E-02		05/16	L.T. 2. E-02
05/14	05/21	2.96E 08	CC	2.0 +-0.3 E-02		05/23	L.T. 2. E-02
05/21	05/28	3.06E 08	CC	2.7 +-0.3 E-02		05/31	L.T. 2. E-02
05/28	06/04	3.04E 08	CC	2.4 +-0.3 E-02		06/06	L.T. 2. E-02
06/04	06/11	3.00E 08	CC	1.9 +-0.3 E-02		06/13	L.T. 2. E-02
06/11	06/18	3.12E 08	CC	2.0 +-0.3 E-02		06/20	L.T. 2. E-02
06/18	06/25	2.97E 08	CC	2.2 +-0.3 E-02		06/27	L.T. 2. E-02
06/25	07/02	3.16E 08	CC	2.4 +-0.3 E-02		07/05	L.T. 2. E-02
06/25	07/02	3.16E 08	CC	(a)		07/08	L.T. 3. E-02
07/02	07/09	2.91E 08	CC	3.1 +-0.4 E-02		07/13	L.T. 2. E-02
07/09	07/16	3.03E 08	CC	3.2 +-0.4 E-02		07/20	L.T. 2. E-02
07/16	07/23	2.99E 08	CC	3.2 +-0.4 E-02		07/26	L.T. 1. E-02
07/23	07/30	3.00E 08	CC	2.5 +-0.3 E-02		08/01	L.T. 2. E-02
07/30	08/06	2.97E 08	CC	2.5 +-0.3 E-02		08/08	L.T. 2. E-02
08/06	08/13	2.96E 08	CC	2.7 +-0.4 E-02		08/15	L.T. 2. E-02
08/13	08/20	2.94E 08	CC	3.0 +-0.4 E-02		08/22	L.T. 2. E-02
08/20	08/27	2.93E 08	CC	2.2 +-0.3 E-02		08/29	L.T. 2. E-02
08/27	09/03	3.13E 08	CC	3.5 +-0.4 E-02		09/06	L.T. 1. E-02

(a) Duplicate analysis
(b) Counted twice to confirm higher than usual activity.

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - AIRBORNE
AIR PARTICULATE & CHARCOAL FILTERS

STATION NUMBER 40

COLL. START DATE	COLL. STOP DATE	VOLUME	UNITS	AP FILTER GROSS BETA (PCI/CU. M)	MID-COUNT TIME DATE TIME	CHARCOAL FILTER I-131 (PCI/CU. M)
09/03	09/10	2.96E 08	CC	2.5 +-0.3 E-02	09/13	L.T. 1. E-02
09/10	09/17	3.03E 08	CC	3.1 +-0.4 E-02	09/19	L.T. 2. E-02
09/17	09/24	3.11E 08	CC	1.6 +-0.3 E-02	09/26	L.T. 2. E-02
09/24	10/01	3.05E 08	CC	2.0 +-0.3 E-02	10/03	L.T. 2. E-02
10/01	10/08	3.01E 08	CC	2.3 +-0.3 E-02	10/10	L.T. 2. E-02
10/08	10/15	2.96E 08	CC	1.6 +-0.3 E-02	10/18	L.T. 1. E-02
10/15	10/22	2.84E 08	CC	2.9 +-0.3 E-02	10/24	L.T. 2. E-02
10/15	10/22	2.84E 08	CC	(a)	10/25	L.T. 2. E-02
10/22	10/29	3.01E 08	CC	2.3 +-0.3 E-02	11/02	L.T. 1. E-02
10/29	11/05	2.88E 08	CC	3.2 +-0.4 E-02	11/09	L.T. 1. E-02
11/05	11/12	3.02E 08	CC	1.7 +-0.3 E-02	11/17	L.T. 2. E-02
11/12	11/19	2.93E 08	CC	2.4 +-0.3 E-02	11/21	L.T. 2. E-02
11/19	11/26	2.86E 08	CC	4.2 +-0.4 E-02	12/02	L.T. 2. E-02
11/26	12/03	2.88E 08	CC	6.1 +-0.5 E-02	12/05	L.T. 2. E-02
12/03	12/10	2.94E 08	CC	6.2 +-0.5 E-02	12/13	L.T. 2. E-02
12/10	12/17	2.81E 08	CC	4.3 +-0.4 E-02	12/19	L.T. 2. E-02
12/17	12/24	2.83E 08	CC	4.3 +-0.4 E-02	12/27	L.T. 2. E-02
12/24	12/31	2.93E 08	CC	1.8 +-0.3 E-02	01/03	L.T. 2. E-02

(a) Duplicate analysis

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - AIRBORNE
COMPOSITE AIR PARTICULATE FILTERS
(PCI/CU. M)
STATION NUMBER 02

DATE COLLECTED	01/02-04/02	04/02-07/02	04/02-07/02	07/02-10/01	10/01-12/31
GAMMA SPECTRUM ANALYSIS					
BE-7	7.77+-1.19E-02	8.72+-1.23E-02	8.54+-1.85E-02	1.03+-0.10E-01	6.86+-0.76E-02
K-40	L.T. 3. E-02	L.T. 3. E-02	L.T. 8. E-03	L.T. 2. E-02	8.27+-4.54E-03
MN-54	L.T. 8. E-04	L.T. 9. E-04	L.T. 4. E-04	L.T. 8. E-04	L.T. 5. E-04
CO-58	L.T. 1. E-03	L.T. 1. E-03	L.T. 4. E-04	L.T. 8. E-04	L.T. 6. E-04
FE-59	L.T. 3. E-03	L.T. 3. E-03	L.T. 1. E-03	L.T. 2. E-03	L.T. 1. E-03
CO-60	L.T. 9. E-04	L.T. 1. E-03	L.T. 5. E-04	L.T. 8. E-04	L.T. 5. E-04
ZN-65	L.T. 2. E-03	L.T. 2. E-03	L.T. 8. E-04	L.T. 2. E-03	L.T. 1. E-03
ZR-95	L.T. 1. E-03	L.T. 1. E-03	L.T. 5. E-04	L.T. 1. E-03	L.T. 6. E-04
RU-103	L.T. 1. E-03	L.T. 1. E-03	L.T. 6. E-04	L.T. 1. E-03	L.T. 7. E-04
RU-106	L.T. 8. E-03	L.T. 7. E-03	L.T. 3. E-03	L.T. 7. E-03	L.T. 4. E-03
I-131	L.T. 2. E-02	L.T. 8. E-03	L.T. 5. E-03	L.T. 8. E-03	L.T. 5. E-03
CS-134	L.T. 1. E-03	L.T. 9. E-04	L.T. 4. E-04	L.T. 8. E-04	L.T. 5. E-04
CS-137	L.T. 9. E-04	L.T. 9. E-04	L.T. 4. E-04	L.T. 8. E-04	L.T. 5. E-04
BA-140	L.T. 6. E-03	L.T. 4. E-03	L.T. 2. E-03	L.T. 4. E-03	L.T. 3. E-03
CE-141	L.T. 2. E-03	L.T. 2. E-03	L.T. 1. E-03	L.T. 1. E-03	L.T. 1. E-03
CE-144	L.T. 5. E-03	L.T. 4. E-03	L.T. 3. E-03	L.T. 3. E-03	L.T. 3. E-03
RA-226	L.T. 1. E-02	L.T. 1. E-02	L.T. 9. E-03	L.T. 8. E-03	L.T. 9. E-03
TH-228	L.T. 1. E-03	L.T. 1. E-03	L.T. 8. E-04	L.T. 1. E-03	L.T. 9. E-04

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - AIRBORNE
COMPOSITE AIR PARTICULATE FILTERS
(PCI/CU. M)
STATION NUMBER 03

DATE COLLECTED	01/02-04/02	04/02-07/02	07/02-10/01	10/01-12/31	10/01-12/31 (a)
GAMMA SPECTRUM ANALYSIS					
BE-7	7.5E+-0.89E-02	7.33+-0.73E-02	4.C9+-3.63E-02	6.29+-0.75E-02	5.96+-0.69E-02
K-40	5.57+-3.21E-03	L.T. 5. E-03	L.T. 2. E-02	L.T. 1. E-02	L.T. 1. E-02
MN-54	L.T. 5. E-04	L.T. 4. E-04	L.T. 6. E-04	L.T. 4. E-04	L.T. 5. E-04
CO-58	L.T. 6. E-04	L.T. 5. E-04	L.T. 6. E-04	L.T. 6. E-04	L.T. 5. E-04
FE-59	L.T. 2. E-03	L.T. 1. E-03	L.T. 2. E-03	L.T. 1. E-03	L.T. 1. E-03
CO-60	L.T. 5. E-04	L.T. 4. E-04	L.T. 6. E-04	L.T. 4. E-04	L.T. 6. E-04
ZN-65	L.T. 1. E-03	L.T. 1. E-03	L.T. 1. E-03	L.T. 1. E-03	L.T. 1. E-03
ZR-95	L.T. 7. E-04	L.T. 5. E-04	L.T. 7. E-04	L.T. 5. E-04	L.T. 6. E-04
RU-103	L.T. 6. E-04	L.T. 5. E-04	L.T. 6. E-04	L.T. 7. E-04	L.T. 8. E-04
RU-106	L.T. 4. E-03	L.T. 4. E-03	L.T. 5. E-03	L.T. 4. E-03	L.T. 4. E-03
I-131	L.T. 8. E-03	L.T. 4. E-03	L.T. 5. E-03	L.T. 5. E-03	L.T. 5. E-03
CS-134	L.T. 5. E-04	L.T. 4. E-04	L.T. 5. E-04	L.T. 5. E-04	L.T. 5. E-04
CS-137	L.T. 5. E-04	L.T. 5. E-04	L.T. 6. E-04	L.T. 4. E-04	L.T. 5. E-04
BA-140	L.T. 3. E-03	L.T. 2. E-03	L.T. 2. E-03	L.T. 3. E-03	L.T. 2. E-03
CE-141	L.T. 1. E-03	L.T. 1. E-03	L.T. 1. E-03	L.T. 1. E-03	L.T. 1. E-03
CE-144	L.T. 3. E-03	L.T. 3. E-03	L.T. 3. E-03	L.T. 3. E-03	L.T. 3. E-03
RA-226	L.T. 9. E-03	L.T. 7. E-03	L.T. 7. E-03	L.T. 9. E-03	L.T. 8. E-03
TH-228	L.T. 8. E-04	L.T. 8. E-04	L.T. 7. E-04	L.T. 9. E-04	L.T. 8. E-04

(a) Duplicate analysis

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - AIRBORNE
COMPOSITE AIR PARTICULATE FILTERS
(PCI/CU. M)
STATION NUMBER 32

DATE COLLECTED	01/02-04/02	04/02-07/02	07/02-10/01	10/01-12/31
GAMMA SPECTRUM ANALYSIS				
BE-7	8.85+-3.51E-02	1.06+-0.12E-01	8.01+-0.80E-02	6.84+-3.92E-02
K-40	L.T. 1. E-02	1.57+-0.81E-02	L.T. 9. E-03	L.T. 2. E-02
MN-54	L.T. 5. E-04	L.T. 9. E-04	L.T. 3. E-04	L.T. 8. E-04
CO-58	L.T. 6. E-04	L.T. 9. E-04	L.T. 4. E-04	L.T. 9. E-04
FE-59	L.T. 2. E-03	L.T. 2. E-03	L.T. 9. E-04	L.T. 2. E-03
CO-60	L.T. 6. E-04	L.T. 1. E-03	L.T. 3. E-04	L.T. 9. E-04
ZN-65	L.T. 1. E-03	L.T. 2. E-03	L.T. 1. E-03	L.T. 2. E-03
ZR-95	L.T. 7. E-04	L.T. 1. E-03	L.T. 6. E-04	L.T. 1. E-03
RU-103	L.T. 9. E-04	L.T. 1. E-03	L.T. 5. E-04	L.T. 1. E-03
RU-106	L.T. 4. E-03	L.T. 8. E-03	L.T. 4. E-03	L.T. 7. E-03
I-131	L.T. 1. E-02	L.T. 8. E-03	L.T. 5. E-03	L.T. 8. E-03
CS-134	L.T. 6. E-04	L.T. 9. E-04	L.T. 4. E-04	L.T. 9. E-04
CS-137	L.T. 5. E-04	L.T. 8. E-04	L.T. 5. E-04	L.T. 8. E-04
BA-140	L.T. 3. E-03	L.T. 4. E-03	L.T. 2. E-03	L.T. 4. E-03
CE-141	L.T. 1. E-03	L.T. 2. E-03	L.T. 1. E-03	L.T. 1. E-03
CE-144	L.T. 3. E-03	L.T. 5. E-03	L.T. 3. E-03	L.T. 4. E-03
RA-226	L.T. 1. E-02	L.T. 1. E-02	L.T. 8. E-03	L.T. 1. E-02
TH-228	L.T. 1. E-03	L.T. 1. E-03	L.T. 1. E-03	L.T. 1. E-03

KANSAS GAS AND ELECTRIC Co.
P O BOX 208
EXPOSURE PATHWAY - AIRBORNE
COMPOSITE AIR PARTICULATE FILTERS
(PCI/CU. M)
STATION NUMBER 37

DATE COLLECTED	01/02-04/02	04/02-07/02	07/02-10/01	10/01-12/31
GAMMA SPECTRUM ANALYSIS				
BE-7	6.35+-1.10E-02	9.85+-0.94E-02	7.95+-1.85E-02	7.09+-0.71E-02
K-40	L.T. 2. E-02	L.T. 1. E-02	L.T. 1. E-02	L.T. 8. E-03
MN-54	L.T. 6. E-04	L.T. 4. E-04	L.T. 5. E-04	L.T. 4. E-04
CO-58	L.T. 9. E-04	L.T. 6. E-04	L.T. 9. E-04	L.T. 4. E-04
FE-59	L.T. 3. E-03	L.T. 1. E-03	L.T. 1. E-03	L.T. 1. E-03
CO-60	L.T. 8. E-04	L.T. 6. E-04	L.T. 5. E-04	L.T. 6. E-04
ZN-65	L.T. 2. E-03	L.T. 9. E-04	L.T. 1. E-03	L.T. 1. E-03
ZR-95	L.T. 9. E-04	L.T. 6. E-04	L.T. 7. E-04	L.T. 5. E-04
RU-103	L.T. 1. E-03	L.T. 7. E-04	L.T. 3. E-04	L.T. 6. E-04
RU-106	L.T. 7. E-03	L.T. 4. E-03	L.T. 5. E-03	L.T. 3. E-03
I-131	L.T. 1. E-02	L.T. 5. E-03	L.T. 6. E-03	L.T. 4. E-03
CS-134	L.T. 8. E-04	L.T. 5. E-04	L.T. 5. E-04	L.T. 4. E-04
CS-137	L.T. 6. E-04	L.T. 6. E-04	L.T. 5. E-04	L.T. 5. E-04
BA-140	L.T. 5. E-03	L.T. 3. E-03	L.T. 3. E-03	L.T. 2. E-03
CE-141	L.T. 2. E-03	L.T. 1. E-03	L.T. 1. E-03	L.T. 1. E-03
CE-144	L.T. 4. E-03	L.T. 3. E-03	L.T. 3. E-03	L.T. 3. E-03
RA-226	L.T. 1. E-02	L.T. 9. E-03	L.T. 1. E-02	L.T. 8. E-03
TH-228	L.T. 1. E-03	L.T. 9. E-04	L.T. 1. E-03	L.T. 9. E-04

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - AIRBORNE
COMPOSITE AIR PARTICULATE FILTERS
(PCI/CU. M)
STATION NUMBER 46

DATE COLLECTED	01/02-04/02	04/02-07/02	07/02-10/01	10/01-12/31
GAMMA SPECTRUM ANALYSIS				
BE-7	6.53+-3.73E-02	9.34+-0.93E-02	3.26+-0.93E-02	7.88+-1.28E-02
K-40	L.T. 9. E-03	L.T. 9. E-03	6.35+-3.55E-03	L.T. 3. E-02
MN-54	L.T. 4. E-04	L.T. 4. E-04	L.T. 4. E-04	L.T. 8. E-04
CO-58	L.T. 5. E-04	L.T. 4. E-04	L.T. 5. E-04	L.T. 1. E-03
FE-59	L.T. 1. E-03	L.T. 1. E-03	L.T. 2. E-03	L.T. 3. E-03
CO-60	L.T. 6. E-04	L.T. 4. E-04	L.T. 4. E-04	L.T. 1. E-03
ZN-65	L.T. 1. E-03	L.T. 1. E-03	L.T. 1. E-03	L.T. 2. E-03
ZR-95	L.T. 5. E-04	L.T. 6. E-04	L.T. 6. E-04	L.T. 1. E-03
RU-103	L.T. 6. E-04	L.T. 6. E-04	L.T. 7. E-04	L.T. 1. E-03
RU-106	L.T. 4. E-03	L.T. 4. E-03	L.T. 4. E-03	L.T. 8. E-03
I-131	L.T. 8. E-03	L.T. 5. E-03	L.T. 5. E-03	L.T. 8. E-03
CS-134	L.T. 5. E-04	L.T. 4. E-04	L.T. 4. E-04	L.T. 1. E-03
CS-137	L.T. 5. E-04	L.T. 5. E-04	L.T. 5. E-04	L.T. 9. E-04
BA-140	L.T. 3. E-03	L.T. 2. E-03	L.T. 2. E-03	L.T. 4. E-03
CE-141	L.T. 1. E-03	L.T. 1. E-03	L.T. 1. E-03	L.T. 2. E-03
CE-144	L.T. 3. E-03	L.T. 3. E-03	L.T. 3. E-03	L.T. 5. E-03
RA-226	L.T. 9. E-03	L.T. 8. E-03	L.T. 9. E-03	L.T. 1. E-02
TH-228	L.T. 1. E-03	L.T. 8. E-04	L.T. 9. E-04	L.T. 1. E-03

KANSAS GAS AND ELECTRIC CO.
PO BOX 208 - 1985
EXPOSURE PATHWAY - AIRBORNE
THERMOLUMINESCENT DOSIMETERS
(net mR/day) Set 1

STATION NUMBER	FIRST QUARTER 01/02/85-04/02/85	SECOND QUARTER 04/02/85-07/02/85	THIRD QUARTER 07/02/85-10/01/85	FOURTH QUARTER 10/01/85-01/08/86
STA-01	0.164 ± 0.004	0.198 ± 0.01	0.205 ± 0.007	0.203 ± 0.006
STA-02	0.163 ± 0.009	0.171 ± 0.003	0.177 ± 0.004	0.186 ± 0.008
STA-03	0.162 ± 0.004	0.187 ± 0.007	0.180 ± 0.003	0.198 ± 0.008
STA-04	0.186 ± 0.01	0.196 ± 0.003	0.195 ± 0.007	0.200 ± 0.006
STA-05	0.168 ± 0.007	0.177 ± 0.009	0.208 ± 0.008	0.190 ± 0.007
STA-06	0.160 ± 0.003	0.182 ± 0.007	0.167 ± 0.004	0.188 ± 0.01
STA-07	0.148 ± 0.003	0.171 ± 0.006	0.173 ± 0.01	0.177 ± 0.005
STA-08	0.154 ± 0.02	0.181 ± 0.008	0.177 ± 0.008	0.189 ± 0.006
STA-09	0.164 ± 0.003	0.178 ± 0.004	0.169 ± 0.003	0.188 ± 0.001
STA-10	0.206 ± 0.002	0.197 ± 0.01	0.184 ± 0.004	0.202 ± 0.01
STA-11	0.176 ± 0.007	0.212 ± 0.006	0.199 ± 0.004	0.205 ± 0.002
STA-12	0.163 ± 0.004	0.190 ± 0.006	0.213 ± 0.005	0.200 ± 0.006
STA-13	0.169 ± 0.006	0.192 ± 0.006	0.189 ± 0.007	0.201 ± 0.004
STA-14	0.177 ± 0.002 (a)	0.199 ± 0.01	0.192 ± 0.005	0.200 ± 0.003
STA-15	0.172 ± 0.006	0.188 ± 0.007	0.190 ± 0.01	0.199 ± 0.002
STA-16	0.177 ± 0.009	0.207 ± 0.006	0.191 ± 0.008	0.240 ± 0.02
STA-17	0.163 ± 0.003	0.208 ± 0.02	0.201 ± 0.01	0.200 ± 0.006
STA-18	0.192 ± 0.006	0.201 ± 0.002	0.195 ± 0.008	0.217 ± 0.007
STA-19	0.181 ± 0.004	0.193 ± 0.009	0.216 ± 0.01	0.219 ± 0.01
STA-20	0.171 ± 0.006	0.200 ± 0.006	0.176 ± 0.002	0.217 ± 0.006

(a) TLD for station 14 was in the field from 01/10/85 to 04/02/85.

KANSAS GAS AND ELECTRIC CO.
PO BOX 208 - 1985
EXPOSURE PATHWAY - AIRBORNE
THERMOLUMINESCENT DOSIMETERS
(net mR/day) Set 1

STATION NUMBER	FIRST QUARTER 01/02/85-04/02/85	SECOND QUARTER 04/02/85-07/02/85	THIRD QUARTER 07/02/85-10/01/85	FOURTH QUARTER 10/01/85-01/08/86
STA-21	0.146 ± 0.04	0.167 ± 0.003	0.151 ± 0.005	0.184 ± 0.006
STA-22	0.162 ± 0.006	0.184 ± 0.007	0.179 ± 0.007	0.207 ± 0.01
STA-23	0.156 ± 0.002	0.188 ± 0.002	0.171 ± 0.005	0.222 ± 0.02
STA-24	0.172 ± 0.003	0.192 ± 0.006	0.189 ± 0.003	0.193 ± 0.004
STA-25	0.138 ± 0.004	0.151 ± 0.006	0.141 ± 0.007	0.168 ± 0.005
STA-26	0.176 ± 0.01	0.169 ± 0.002	0.171 ± 0.003	0.186 ± 0.01
STA-27	0.174 ± 0.008	0.191 ± 0.01	0.191 ± 0.005	0.206 ± 0.005
STA-28	0.146 ± 0.007	0.155 ± 0.003	0.157 ± 0.004	0.185 ± 0.006
STA-29	0.140 ± 0.003	0.164 ± 0.003	0.165 ± 0.004	0.184 ± 0.01
STA-30	0.163 ± 0.004	0.177 ± 0.006	0.177 ± 0.005	0.185 ± 0.01
STA-31	0.188 ± 0.008	0.189 ± 0.008	0.182 ± 0.004	0.203 ± 0.002
STA-32	0.174 ± 0.009	0.186 ± 0.003	0.188 ± 0.004	0.189 ± 0.005
STA-33	0.164 ± 0.004	0.199 ± 0.002	0.203 ± 0.003	0.203 ± 0.005
STA-34	0.182 ± 0.008	0.195 ± 0.008	0.191 ± 0.008	0.209 ± 0.008
STA-35	0.150 ± 0.003	0.177 ± 0.009	0.179 ± 0.004	0.187 ± 0.005
STA-36	0.169 ± 0.003	0.186 ± 0.009	0.199 ± 0.004	0.190 ± 0.005
STA-37	0.159 ± 0.006	0.182 ± 0.003	0.177 ± 0.005	0.190 ± 0.005
STA-38	0.173 ± 0.003	0.205 ± 0.008	0.193 ± 0.007	0.208 ± 0.005
STA-39	0.171 ± 0.003	0.187 ± 0.007	0.203 ± 0.01	0.199 ± 0.006
STA-40	0.154 ± 0.009	0.165 ± 0.01	0.167 ± 0.01	0.185 ± 0.005

(a) Construction activities required early removal.

KANSAS GAS AND ELECTRIC CO.
PO BOX 208 - 1985
EXPOSURE PATHWAY - AIRBORNE
THERMOLUMINESCENT DOSIMETERS
(net mR/day) Set 2

STATION NUMBER	FIRST QUARTER 01/02/85-04/02/85	SECOND QUARTER 04/02/85-07/02/85	THIRD QUARTER 07/02/85-10/01/85	FOURTH QUARTER 10/01/85-01/08/86
STA-01	0.161 ± 0.008	0.181 ± 0.007	0.198 ± 0.009	0.191 ± 0.009
STA-02	0.156 ± 0.001	0.180 ± 0.004	0.182 ± 0.005	0.187 ± 0.004
STA-03	0.156 ± 0.003	0.174 ± 0.004	0.181 ± 0.007	0.222 ± 0.004
STA-04	0.183 ± 0.02	0.189 ± 0.007	0.199 ± 0.005	0.193 ± 0.006
STA-05	0.166 ± 0.002	0.175 ± 0.006	0.187 ± 0.009	0.185 ± 0.005
STA-06	0.154 ± 0.004	0.175 ± 0.01	0.159 ± 0.004	0.204 ± 0.02
STA-07	0.137 ± 0.002	0.167 ± 0.004	0.178 ± 0.008	0.159 ± 0.004
STA-08	0.159 ± 0.006	0.180 ± 0.006	0.182 ± 0.007	0.185 ± 0.005
STA-09	0.161 ± 0.004	0.176 ± 0.003	0.179 ± 0.004	0.183 ± 0.005
STA-10	0.171 ± 0.006	0.190 ± 0.003	0.196 ± 0.007	0.196 ± 0.006
STA-11	0.174 ± 0.003	0.208 ± 0.002	0.205 ± 0.01	0.214 ± 0.01
STA-12	0.162 ± 0.004	0.196 ± 0.007	0.205 ± 0.007	0.196 ± 0.006
STA-13	0.159 ± 0.003	0.199 ± 0.006	0.189 ± 0.008	0.195 ± 0.007
STA-14	0.166 ± 0.002 (a)	0.197 ± 0.007	0.208 ± 0.005	0.193 ± 0.01
STA-15	0.160 ± 0.003	0.188 ± 0.002	0.201 ± 0.007	0.192 ± 0.007
STA-16	0.162 ± 0.003	0.184 ± 0.006	0.199 ± 0.008	0.216 ± 0.02
STA-17	0.166 ± 0.006	0.184 ± 0.002	0.200 ± 0.02	0.195 ± 0.007
STA-18	0.173 ± 0.007	0.191 ± 0.009	0.202 ± 0.01	0.211 ± 0.03
STA-19	0.176 ± 0.006	0.188 ± 0.008	0.189 ± 0.007	0.206 ± 0.008
STA-20	0.167 ± 0.006	0.196 ± 0.002	0.231 ± 0.008	0.195 ± 0.004

(a) TLD for station 14 was in the field from 01/10/85 to 04/02/85.

KANSAS GAS AND ELECTRIC CO.
PO BOX 208 - 1985
EXPOSURE PATHWAY - AIRBORNE
THERMOLUMINESCENT DOSIMETERS
(net mR/day) Set 2

STATION NUMBER	FIRST QUARTER 01/02/85-04/02/85	SECOND QUARTER 04/02/85-07/02/85	THIRD QUARTER 07/02/85-10/01/85	FOURTH QUARTER 10/01/85-01/08/86
STA-21	0.138 ± 0.004	0.159 ± 0.006	0.157 ± 0.005	0.182 ± 0.003
STA-22	0.164 ± 0.007	0.180 ± 0.003	0.189 ± 0.009	0.189 ± 0.003
STA-23	0.157 ± 0.004	0.184 ± 0.002	0.188 ± 0.009	0.186 ± 0.003
STA-24	0.168 ± 0.01	0.185 ± 0.007	0.177 ± 0.008	0.188 ± 0.001
STA-25	0.127 ± 0.003	0.147 ± 0.003	0.157 ± 0.007	0.145 ± 0.005
STA-26	0.150 ± 0.009	0.178 ± 0.002	0.178 ± 0.008	0.176 ± 0.01
STA-27	0.163 ± 0.006	0.187 ± 0 002	0.196 ± 0.01	0.186 ± 0.005
STA-28	0.137 ± 0.007	0.164 ± 0.008	0.152 ± 0.002	0.159 ± 0.002
STA-29	0.138 ± 0.006	0.165 ± 0.003	0.156 ± 0.008	0.168 ± 0.002
STA-30	0.154 ± 0.001	0.180 ± 0.006	0.164 ± 0.003	0.176 ± 0.005
STA-31	0.161 ± 0.003	0.184 ± 0.007	0.186 ± 0.003	0.182 ± 0.001
STA-32	0.160 ± 0.003	0.187 ± 0.004	0.179 ± 0.004	0.182 ± 0.005
STA-33	0.164 ± 0.006	0.188 ± 0.004	0.192 ± 0.007	0.188 ± 0.005
STA-34	0.166 ± 0.004	0.192 ± 0.009	0.197 ± 0.008	0.194 ± 0.002
STA-35	0.157 ± 0.006	0.182 ± 0.004	0.189 ± 0.007	0.187 ± 0.007
STA-36	0.164 ± 0.01	0.182 ± 0.001	0.205 ± 0.02	0.190 ± 0.006
STA-37	0.176 ± 0.007	0.186 ± 0.004	0.168 ± 0.007	0.189 ± 0.004
STA-38	0.174 ± 0.007	0.207 ± 0.004	0.196 ± 0.005	0.216 ± 0.003
STA-39	0.200 ± 0.003	0.189 ± 0.004	0.191 ± 0.005	0.189 ± 0.004
STA-40	0.149 ± 0.006	0.169 ± 0.002	0.168 ± 0.01	0.175 ± 0.003

(a) Construction activities required early removal.

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - DRINKING
(PCI/LITER)
STATION NUMBER BW15

DATE COLLECTED	01/02-02/05	01/02-04/02	02/05-03/05	03/05-04/02	04/02-05/07
RADIOCHEMICAL ANALYSIS					
GR-B	5.1 +-1.4 E 00	NR	5.2 +-1.3 E 00	6.0 +-1.2 E 00	3.5 +-1.2 E 00
I-131	L.T. 4. E-01	NR	L.T. 4. E-01	L.T. 5. E-01	NR
GAMMA SPECTRUM ANALYSIS					
BE-7	L.T. 4. E 01	NR	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01
K-40	L.T. 5. E 01	NR	L.T. 5. E 01	L.T. 6. E 01	L.T. 6. E 01
MN-54	L.T. 4. E 00	NR	L.T. 3. E 00	L.T. 4. E 00	L.T. 4. E 00
CO-58	L.T. 3. E 00	NR	L.T. 3. E 00	L.T. 3. E 00	L.T. 3. E 00
FE-59	L.T. 7. E 00	NR	L.T. 8. E 00	L.T. 9. E 00	L.T. 8. E 00
CO-60	L.T. 4. E 00	NR	L.T. 3. E 00	L.T. 4. E 00	L.T. 3. E 00
ZN-65	L.T. 8. E 00	NR	L.T. 7. E 00	L.T. 8. E 00	L.T. 8. E 00
ZR-95	L.T. 4. E 00	NR	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
RU-103	L.T. 5. E 00	NR	L.T. 5. E 00	L.T. 5. E 00	L.T. 5. E 00
RU-106	L.T. 3. E 01	NR	L.T. 3. E 01	L.T. 3. E 01	L.T. 3. E 01
I-131	L.T. 2. E 01	NR	L.T. 2. E 01	L.T. 2. E 01	L.T. 2. E 01
CS-134	L.T. 4. E 00	NR	L.T. 4. E 00	L.T. 3. E 00	L.T. 3. E 00
CS-137	L.T. 4. E 00	NR	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
BA-140	L.T. 1. E 01	NR	L.T. 9. E 00	L.T. 9. E 00	L.T. 8. E 00
CE-141	L.T. 8. E 00	NR	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01
CE-144	L.T. 3. E 01	NR	L.T. 4. E 01	L.T. 3. E 01	L.T. 3. E 01
RA-226	L.T. 7. E 01	NR	L.T. 1. E 02	L.T. 9. E 01	L.T. 9. E 01
TH-228	L.T. 7. E 00	NR	L.T. 8. E 00	L.T. 8. E 00	L.T. 8. E 00
TRITIUM ANALYSIS					
H-3	NR	L.T. 2. E 03	NR	NR	NR

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - DRINKING
(PCI/LITER)
STATION NUMBER dk15

DATE COLLECTED	04/02-07/02	05/07-06/04	06/04-07/02	07/02-10/01	08/06-09/03	07/02-08/06
RADIOCHEMICAL ANALYSIS						
GR-B	NR	6.1 +-1.4 E 00	4.8 +-1.3 E 00	NR	4.5 +-1.3 E 00	5.5 +-1.2 E 00
I-131	NR	L.T. 2. E-01	L.T. 5. E-01	NR	L.T. 5. E-01	L.T. 3. E-01
GAMMA SPECTRUM ANALYSIS						
BE-7	NR	L.T. 4. E 01	L.T. 4. E 01	NR	L.T. 4. E 01	L.T. 5. E 01
K-40	NR	L.T. 1. E 02	L.T. 6. E 01	NR	L.T. 6. E 01	L.T. 1. E 02
MN-54	NR	L.T. 4. E 00	L.T. 4. E 00	NR	L.T. 4. E 00	L.T. 5. E 00
CO-58	NR	L.T. 4. E 00	L.T. 4. E 00	NR	L.T. 4. E 00	L.T. 5. E 00
FE-59	NR	L.T. 8. E 00	L.T. 7. E 00	NR	L.T. 8. E 00	L.T. 1. E 01
CO-60	NR	L.T. 4. E 00	L.T. 4. E 00	NR	L.T. 5. E 00	L.T. 5. E 00
ZN-65	NR	L.T. 8. E 00	L.T. 8. E 00	NR	L.T. 8. E 00	L.T. 1. E 01
ZR-95	NR	L.T. 4. E 00	L.T. 4. E 00	NR	L.T. 4. E 00	L.T. 6. E 00
RU-103	NR	L.T. 5. E 00	L.T. 5. E 00	NR	L.T. 4. E 00	L.T. 7. E 00
RU-106	NR	L.T. 3. E 01	L.T. 3. E 01	NR	L.T. 4. E 01	L.T. 5. E 01
I-131	NR	L.T. 1. E 01	L.T. 6. E 00	NR	L.T. 6. E 00	L.T. 2. E 01
CS-134	NR	L.T. 4. E 00	L.T. 4. E 00	NR	L.T. 5. E 00	L.T. 5. E 00
CS-137	NR	L.T. 4. E 00	L.T. 4. E 00	NR	L.T. 5. E 00	L.T. 5. E 00
BA-140	NR	L.T. 7. E 00	L.T. 5. E 00	NR	L.T. 6. E 00	L.T. 1. E 01
CE-141	NR	L.T. 8. E 00	L.T. 7. E 00	NR	L.T. 8. E 00	L.T. 1. E 01
CE-144	NR	L.T. 3. E 01	L.T. 3. E 01	NR	L.T. 4. E 01	L.T. 4. E 01
RA-226	NR	L.T. 9. E 01	L.T. 9. E 01	NR	L.T. 9. E 01	L.T. 1. E 02
TH-228	NR	L.T. 6. E 00	L.T. 7. E 00	NR	L.T. 9. E 00	L.T. 1. E 01
TRITIUM ANALYSIS						
H-3	L.T. 7. E 02	NR	NR	L.T. 7. E 02	NR	

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - DRINKING
(PCI/LITER)
STATION NUMBER BW15

DATE COLLECTED	05/03-10/01	10/31-01/08	10/01-11/05	11/05-12/03	12/03/85-01/08/86
RADIOCHEMICAL ANALYSIS					
GR-B	7.4 +-1.6 E 00	NR	5.4 +-1.3 E 00	4.5 +-1.9 E 00	4.6 ± 1.4 E 00
I-131	L.T. 5. E-01	NR	L.T. 2. E-01	L.T. 5. E-01	L.T. 2. E-01
GAMMA SPECTRUM ANALYSIS					
BE-7	L.T. 3. E 01	NR	L.T. 4. E 01	L.T. 3. E 01	L.T. 3. E 01
K-40	L.T. 6. E 01	NR	L.T. 6. E 01	L.T. 5. E 01	L.T. 6. E 01
MN-54	L.T. 3. E 00	NR	L.T. 3. E 00	L.T. 3. E 00	L.T. 3. E 00
CO-58	L.T. 3. E 00	NR	L.T. 4. E 00	L.T. 3. E 00	L.T. 3. E 00
FE-59	L.T. 7. E 00	NR	L.T. 7. E 00	L.T. 6. E 00	L.T. 7. E 00
CO-60	L.T. 3. E 00	NR	L.T. 4. E 00	L.T. 3. E 00	L.T. 4. E 00
ZN-65	L.T. 7. E 00	NR	L.T. 8. E 00	L.T. 6. E 00	L.T. 8. E 00
ZR-95	L.T. 4. E 00	NR	L.T. 4. E 00	L.T. 3. E 00	L.T. 4. E 00
RU-103	L.T. 4. E 00	NR	L.T. 5. E 00	L.T. 3. E 00	L.T. 4. E 00
RU-106	L.T. 3. E 01	NR	L.T. 3. E 01	L.T. 3. E 01	L.T. 3. E 01
I-131	L.T. 7. E 00	NR	L.T. 9. E 00	L.T. 5. E 00	L.T. 8. E 00
CS-134	L.T. 4. E 00	NR	L.T. 4. E 00	L.T. 3. E 00	L.T. 4. E 00
CS-137	L.T. 4. E 01	NR	L.T. 4. E 00	L.T. 3. E 00	L.T. 4. E 00
BA-140	L.T. 4. E 00	NR	L.T. 6. E 00	L.T. 4. E 00	L.T. 5. E 00
CE-141	L.T. 8. E 00	NR	L.T. 9. E 00	L.T. 6. E 00	L.T. 8. E 00
CE-144	L.T. 3. E 01	NR	L.T. 4. E 01	L.T. 3. E 01	L.T. 3. E 01
RA-226	L.T. 1. E 02	NR	L.T. 1. E 02	L.T. 8. E 01	L.T. 9. E 01
TH-228	L.T. 8. E 00	NR	L.T. 9. E 00	L.T. 6. E 00	L.T. 8. E 00
TRITIUM ANALYSIS					
H-3	NR	L.T. 3. E 02	NR	NR	NR

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
NAME - DRINKING
(PCI/LITER)
STATION NUMBER - DW40

DATE COLLECTED	02/05	02/05-03/05	02/05-04/02	03/05-04/02	04/02-05/07
RADIOCHEMICAL ANALYSIS					
GR-B	5.6 +-1.5 E 00	4.9 +-1.3 E 00	NR	6.4 +-1.2 E 00	3.7 +-1.3 E 00
I-131	L.T. 4. E-01	L.T. 4. E-01	NR	L.T. 9. E-01	NR
GAMMA SPECTRUM ANALYSIS					
BE-7	L.T. 3. E 01	L.T. 3. E 01	NR	L.T. 4. E 01	L.T. 4. E 01
K-40	L.T. 4. E 01	L.T. 6. E 01	NR	L.T. 6. E 01	L.T. 6. E 01
MN-54	L.T. 3. E 00	L.T. 4. E 00	NR	L.T. 3. E 00	L.T. 4. E 00
CO-58	L.T. 3. E 00	L.T. 3. E 00	NR	L.T. 4. E 00	L.T. 3. E 00
FE-59	L.T. 7. E 00	L.T. 8. E 00	NR	L.T. 9. E 00	L.T. 8. E 00
CO-60	L.T. 5. E 00	L.T. 4. E 00	NR	L.T. 4. E 00	L.T. 5. E 00
ZN-65	L.T. 7. E 00	L.T. 7. E 00	NR	L.T. 8. E 00	L.T. 8. E 00
ZR-95	L.T. 4. E 00	L.T. 4. E 00	NR	L.T. 4. E 00	L.T. 4. E 00
RU-103	L.T. 4. E 00	L.T. 5. E 00	NR	L.T. 5. E 00	L.T. 5. E 00
RU-106	L.T. 3. E 01	L.T. 3. E 01	NR	L.T. 4. E 01	L.T. 3. E 01
I-131	L.T. 1. E 01	L.T. 1. E 01	NR	L.T. 2. E 01	L.T. 1. E 01
CS-134	L.T. 3. E 00	L.T. 4. E 00	NR	L.T. 4. E 00	L.T. 3. E 00
CS-137	L.T. 3. E 00	L.T. 4. E 00	NR	L.T. 4. E 00	L.T. 4. E 00
BA-140	L.T. 8. E 00	L.T. 8. E 00	NR	L.T. 1. E 01	L.T. 8. E 00
CE-141	L.T. 7. E 00	L.T. 1. E 01	NR	L.T. 1. E 01	L.T. 1. E 01
CE-144	L.T. 2. E 01	L.T. 3. E 01	NR	L.T. 3. E 01	L.T. 3. E 01
RA-226	L.T. 6. E 01	L.T. 1. E 02	NR	L.T. 9. E 01	L.T. 9. E 01
TH-228	L.T. 6. E 00	L.T. 9. E 00	NR	L.T. 9. E 00	L.T. 8. E 00
TRITIUM ANALYSIS					
H-3	NR	NR	L.T. 2. E 02	NR	NR

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - DRINKING
(PCI/LITER)
STATION NUMBER LW40

DATE COLLECTED	04/02-07/02	05/07-06/04	06/04-07/03	07/02-10/01	08/07-09/04	07/03-08/06
RADIOCHEMICAL ANALYSIS						
GR-B	NR	5.9 +-1.4 E 00	5.3 +-1.2 E 00	NR	4.6 +-1.3 E 00	5.5 +-1.3 E 00
I-131	NR	L.T. 3. E-01	L.T. 5. E-01	NR	L.T. 5. E-01	L.T. 2. E-01
GAMMA SPECTRUM ANALYSIS						
BE-7	NR	L.T. 5. E 01	L.T. 5. E 01	NR	L.T. 6. E 01	L.T. 4. E 01
K-40	NR	L.T. 7. E 01	L.T. 1. E 02	NR	L.T. 2. E 02	L.T. 4. E 01
MN-54	NR	L.T. 4. E 00	L.T. 5. E 00	NR	L.T. 6. E 00	L.T. 3. E 00
CO-58	NR	L.T. 5. E 00	L.T. 5. E 00	NR	L.T. 6. E 00	L.T. 4. E 00
FE-59	NR	L.T. 1. E 01	L.T. 1. E 01	NR	L.T. 1. E 01	L.T. 8. E 00
CO-60	NR	L.T. 5. E 00	L.T. 6. E 00	NR	L.T. 6. E 00	L.T. 3. E 00
ZN-65	NR	L.T. 9. E 00	L.T. 1. E 01	NR	L.T. 1. E 01	L.T. 7. E 00
ZR-95	NR	L.T. 5. E 00	L.T. 6. E 00	NR	L.T. 6. E 00	L.T. 4. E 00
RU-103	NR	L.T. 6. E 00	L.T. 6. E 00	NR	L.T. 7. E 00	L.T. 5. E 00
RU-106	NR	L.T. 4. E 01	L.T. 5. E 01	NR	L.T. 5. E 01	L.T. 3. E 01
I-131	NR	L.T. 1. E 01	L.T. 9. E 00	NR	L.T. 1. E 01	L.T. 1. E 01
CS-134	NR	L.T. 5. E 00	L.T. 6. E 00	NR	L.T. 7. E 00	L.T. 4. E 00
CS-137	NR	L.T. 6. E 00	L.T. 5. E 00	NR	L.T. 6. E 00	L.T. 3. E 00
BA-140	NR	L.T. 8. E 00	L.T. 6. E 00	NR	L.T. 7. E 00	L.T. 8. E 00
CE-141	NR	L.T. 1. E 01	L.T. 1. E 01	NR	L.T. 1. E 01	L.T. 7. E 00
CE-144	NR	L.T. 4. E 01	L.T. 5. E 01	NR	L.T. 6. E 01	L.T. 3. E 01
RA-226	NR	L.T. 1. E 02	L.T. 1. E 02	NR	L.T. 2. E 02	L.T. 7. E 01
TH-228	NR	L.T. 9. E 00	L.T. 1. E 01	NR	L.T. 1. E 01	L.T. 7. E 00
TRITIUM ANALYSIS						
H-3	L.T. 7. E 02	NR	NR	L.T. 7. E 02	NR	

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - DRINKING
(PCI/LITER)
STATION NUMBER LW40

DATE COLLECTED	05/04-10/01	10/01-01/08	10/01-11/05	11/05-12/03	12/03/85-01/08/86
RADIOCHEMICAL ANALYSIS					
GR-B	NR (a)	NR	4.6 +-1.4 E 00	3.7 +-1.3 E 00	5.5 ± 1.5 E 00
I-131	L.T. 3. E-01	NR	L.T. 3. E-01	L.T. 4. E-01	L.T. 2. E-01
GAMMA SPECTRUM ANALYSIS					
BE-7	L.T. 3. E 01	NR	L.T. 5. E 01	L.T. 3. E 01	L.T. 4. E 01
K-40	L.T. 5. E 01	NR	L.T. 9. E 01	L.T. 4. E 01	L.T. 5. E 01
MN-54	L.T. 3. E 00	NR	L.T. 5. E 00	L.T. 3. E 00	L.T. 3. E 00
CO-58	L.T. 3. E 00	NR	L.T. 5. E 00	L.T. 2. E 00	L.T. 4. E 00
FE-59	L.T. 7. E 00	NR	L.T. 1. E 01	L.T. 6. E 00	L.T. 7. E 00
CO-60	L.T. 3. E 00	NR	L.T. 5. E 00	L.T. 3. E 00	L.T. 4. E 00
ZN-65	L.T. 7. E 00	NR	L.T. 9. E 00	L.T. 7. E 00	L.T. 9. E 00
ZR-95	L.T. 3. E 00	NR	L.T. 6. E 00	L.T. 3. E 00	L.T. 4. E 00
RU-103	L.T. 4. E 00	NR	L.T. 6. E 00	L.T. 3. E 00	L.T. 4. E 00
RU-106	L.T. 3. E 01	NR	L.T. 5. E 01	L.T. 3. E 01	L.T. 3. E 01
I-131	L.T. 8. E 00	NR	L.T. 1. E 01	L.T. 5. E 00	L.T. 8. E 00
CS-134	L.T. 4. E 00	NR	L.T. 5. E 00	L.T. 3. E 00	L.T. 4. E 00
CS-137	L.T. 4. E 00	NR	L.T. 5. E 00	L.T. 3. E 00	L.T. 4. E 00
BA-140	L.T. 4. E 00	NR	L.T. 8. E 00	L.T. 4. E 00	L.T. 4. E 00
CE-141	L.T. 8. E 00	NR	L.T. 1. E 01	L.T. 6. E 00	L.T. 8. E 00
CE-144	L.T. 3. E 01	NR	L.T. 4. E 01	L.T. 3. E 01	L.T. 3. E 01
RA-226	L.T. 1. E 02	NR	L.T. 1. E 02	L.T. 8. E 01	L.T. 1. E 02
TH-228	L.T. 8. E 00	NR	L.T. 1. E 01	L.T. 8. E 00	L.T. 8. E 00
TRITIUM ANALYSIS					
H-3	NR	L.T. 8. E 02	NR	NR	NR

(a) This sample had to be analyzed a second time (which depleted the sample) for I-131. Thus, there was no sample available for the gross beta analysis.

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - GROUND
(PCI/LITER)
STATION NUMBER E-12

DATE COLLECTED	02/19	05/21	08/20	11/19
RADIOCHEMICAL ANALYSIS				
I-131	L.T. 2. E-01	L.T. 2. E-01	L.T. 2. E-01	L.T. 3. E-01
GAMMA SPECTRUM ANALYSIS				
BE-7	L.T. 4. E 01	L.T. 3. E 01	L.T. 3. E 01	L.T. 5. E 01
K-40	L.T. 8. E 01	L.T. 4. E 01	L.T. 4. E 01	7.22E+00 ± 3.88E-01
MN-54	L.T. 4. E 00	L.T. 3. E 00	L.T. 3. E 00	L.T. 5. E 00
CO-58	L.T. 5. E 00	L.T. 3. E 00	L.T. 3. E 00	L.T. 5. E 00
FE-59	L.T. 9. E 00	L.T. 7. E 00	L.T. 6. E 00	L.T. 1. E 01
CO-60	L.T. 4. E 00	L.T. 3. E 00	L.T. 3. E 00	L.T. 5. E 00
ZN-65	L.T. 1. E 01	L.T. 6. E 00	L.T. 5. E 00	L.T. 1. E 01
ZR-95	L.T. 5. E 00	L.T. 3. E 00	L.T. 3. E 00	L.T. 5. E 00
RU-103	L.T. 6. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 6. E 00
RU-106	L.T. 4. E 01	L.T. 3. E 01	L.T. 3. E 01	L.T. 4. E 01
I-131	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01	L.T. 1. E 01
CS-134	L.T. 5. E 00	L.T. 3. E 00	L.T. 3. E 00	L.T. 5. E 00
CS-137	L.T. 6. E 00	L.T. 3. E 00	L.T. 3. E 00	L.T. 5. E 00
BA-140	L.T. 8. E 00	L.T. 6. E 00	L.T. 5. E 00	L.T. 7. E 00
CE-141	L.T. 9. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 1. E 01
CE-144	L.T. 4. E 01	L.T. 2. E 01	L.T. 3. E 01	L.T. 4. E 01
RA-226	L.T. 1. E 02	L.T. 7. E 01	L.T. 8. E 01	L.T. 1. E 02
TH-228	L.T. 9. E 00	L.T. 6. E 00	L.T. 7. E 00	L.T. 1. E 01
TRITIUM ANALYSIS				
H-3	L.T. 7. E 02	L.T. 8. E 02	L.T. 8. E 02	L.T. 8. E 02

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - GROUND
(PCI/LITER)
STATION NUMBER C-10

DATE COLLECTED	02/15	05/21	08/20	12/17
RADIOCHEMICAL ANALYSIS				
I-131	L.T. 2. E-01	L.T. 2. E-01	L.T. 2. E-01	L.T. 2. E-01
GAMMA SPECTRUM ANALYSIS				
BE-7	L.T. 7. E 01	L.T. 3. E 01	L.T. 3. E 01	L.T. 4. E 01
K-40	L.T. 5. E 01	L.T. 5. E 01	L.T. 5. E 01	L.T. 6. E 01
MN-54	L.T. 7. E 00	L.T. 3. E 00	L.T. 3. E 00	L.T. 4. E 00
CO-58	L.T. 7. E 00	L.T. 3. E 00	L.T. 3. E 00	L.T. 4. E 00
FE-59	L.T. 1. E 01	L.T. 7. E 00	L.T. 6. E 00	L.T. 9. E 00
CO-60	L.T. 6. E 00	L.T. 3. E 00	L.T. 3. E 00	L.T. 4. E 00
ZN-65	L.T. 1. E 01	L.T. 6. E 00	L.T. 5. E 00	L.T. 8. E 00
ZR-95	L.T. 8. E 00	L.T. 3. E 00	L.T. 3. E 00	L.T. 5. E 00
RU-103	L.T. 9. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00
RU-106	L.T. 6. E 01	L.T. 3. E 01	L.T. 2. E 01	L.T. 4. E 01
I-131	L.T. 2. E 01	L.T. 1. E 01	L.T. 9. E 00	L.T. 5. E 00
CS-134	L.T. 8. E 00	L.T. 3. E 00	L.T. 3. E 00	L.T. 4. E 00
CS-137	L.T. 7. E 00	L.T. 3. E 00	L.T. 3. E 00	L.T. 5. E 00
BA-140	L.T. 1. E 01	L.T. 6. E 00	L.T. 5. E 00	L.T. 7. E 00
CE-141	L.T. 2. E 01	L.T. 8. E 00	L.T. 8. E 00	L.T. 8. E 00
CE-144	L.T. 7. E 01	L.T. 3. E 01	L.T. 3. E 01	L.T. 3. E 01
RA-226	L.T. 2. E 02	L.T. 9. E 01	L.T. 8. E 01	L.T. 9. E 01
TH-228	L.T. 1. E 01	L.T. 7. E 00	L.T. 7. E 00	L.T. 7. E 00
TRITIUM ANALYSIS				
H-3	L.T. 7. E 02	L.T. 9. E 02	L.T. 8. E 02	L.T. 7. E 02

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - GROUND
(PCI/LITER)
STATION NUMBER C-45

DATE COLLECTED	02/19	05/21	08/20	11/19
RADIOCHEMICAL ANALYSIS				
I-131	L.T. 2. E-01	L.T. 2. E-01	L.T. 2. E-01	L.T. 2. E-01
GAMMA SPECTRUM ANALYSIS				
BE-7	L.T. 6. E 01	L.T. 5. E 01	L.T. 4. E 01	L.T. 4. E 01
K-40	L.T. 9. E 01	L.T. 7. E 01	L.T. 1. E 02	L.T. 5. E 01
MN-54	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
CO-58	L.T. 6. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00
FE-59	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01	L.T. 8. E 00
CO-60	L.T. 6. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00
ZN-65	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01	L.T. 7. E 00
ZR-95	L.T. 6. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 4. E 00
RU-103	L.T. 7. E 00	L.T. 6. E 00	L.T. 5. E 00	L.T. 4. E 00
RU-106	L.T. 5. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 3. E 01
I-131	L.T. 2. E 01	L.T. 2. E 01	L.T. 1. E 01	L.T. 2. E 00
CS-134	L.T. 6. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 4. E 00
CS-137	L.T. 6. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
BA-140	L.T. 9. E 00	L.T. 7. E 00	L.T. 8. E 00	L.T. 7. E 00
CE-141	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 7. E 00
CE-144	L.T. 5. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 3. E 01
RA-226	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 8. E 01
TH-228	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00	L.T. 8. E 00
TRITIUM ANALYSIS				
H-3	L.T. 7. E 02	L.T. 8. E 02	L.T. 8. E 02	L.T. 8. E 02

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - GROUND
(PCI/LITER)
STATION NUMBER C-65

DATE COLLECTED	02/15	02/15 (a)	05/21	08/20	08/20 (a)
RADIOCHEMICAL ANALYSIS					
I-131	L.T. 3. E-01	L.T. 3. E-01	L.T. 2. E-01	L.T. 3. E-01	L.T. 3. E-01
GAMMA SPECTRUM ANALYSIS					
BE-7	L.T. 5. E 01	L.T. 4. E 01	L.T. 3. E 01	L.T. 4. E 01	L.T. 6. E 01
K-40	L.T. 2. E 02	L.T. 1. E 02	L.T. 4. E 01	L.T. 6. E 01	L.T. 9. E 01
MN-54	L.T. 5. E 00	L.T. 4. E 00	L.T. 3. E 00	L.T. 4. E 00	L.T. 5. E 00
CO-58	L.T. 5. E 00	L.T. 4. E 00	L.T. 3. E 00	L.T. 4. E 00	L.T. 6. E 00
FE-59	L.T. 1. E 01	L.T. 9. E 00	L.T. 6. E 00	L.T. 8. E 00	L.T. 1. E 01
CO-60	L.T. 5. E 00	L.T. 4. E 00	L.T. 3. E 00	L.T. 5. E 00	L.T. 6. E 00
ZN-65	L.T. 1. E 01	L.T. 9. E 00	L.T. 6. E 00	L.T. 8. E 00	L.T. 1. E 01
ZR-95	L.T. 6. E 00	L.T. 5. E 00	L.T. 3. E 00	L.T. 4. E 00	L.T. 6. E 00
RU-103	L.T. 6. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 7. E 00
RU-106	L.T. 5. E 01	L.T. 4. E 01	L.T. 2. E 01	L.T. 3. E 01	L.T. 5. E 01
I-131	L.T. 8. E 00	L.T. 7. E 00	L.T. 8. E 00	L.T. 1. E 01	L.T. 2. E 01
CS-134	L.T. 6. E 00	L.T. 5. E 00	L.T. 3. E 00	L.T. 4. E 00	L.T. 6. E 00
CS-137	L.T. 5. E 00	L.T. 5. E 00	L.T. 3. E 00	L.T. 5. E 00	L.T. 5. E 00
BA-140	L.T. 6. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 8. E 00	L.T. 9. E 00
CE-141	L.T. 1. E 01	L.T. 9. E 00	L.T. 7. E 00	L.T. 9. E 00	L.T. 1. E 01
CE-144	L.T. 4. E 01	L.T. 4. E 01	L.T. 2. E 01	L.T. 3. E 01	L.T. 4. E 01
RA-226	L.T. 1. E 02	L.T. 1. E 02	L.T. 8. E 01	L.T. 9. E 01	L.T. 1. E 02
TH-228	L.T. 1. E 01	L.T. 9. E 00	L.T. 6. E 00	L.T. 8. E 00	L.T. 1. E 01
TRITIUM ANALYSIS					
H-3	L.T. 7. E 02	L.T. 7. E 02	L.T. 8. E 02	L.T. 8. E 02	L.T. 8. E 02

(a) Duplicate analysis

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - GROUND
(PCI/LITER)
STATION NUMBER C-65

DATE COLLECTED	11/15			11/19 (a)		
RADIOCHEMICAL ANALYSIS						
I-131	L.T.	4.	E-01	L.T.	4.	E-01
GAMMA SPECTRUM ANALYSIS						
BE-7	L.T.	6.	E 01	L.T.	4.	E 01
K-40	L.T.	2.	E 02	L.T.	1.	E 02
MN-54	L.T.	7.	E 00	L.T.	4.	E 00
CO-58	L.T.	7.	E 00	L.T.	4.	E 00
FE-59	L.T.	1.	E 01	L.T.	9.	E 00
CO-60	L.T.	6.	E 00	L.T.	5.	E 00
ZN-65	L.T.	1.	E 01	L.T.	9.	E 00
ZR-95	L.T.	7.	E 00	L.T.	5.	E 00
RU-103	L.T.	8.	E 00	L.T.	5.	E 00
RU-106	L.T.	6.	E 01	L.T.	4.	E 01
I-131	L.T.	1.	E 01	L.T.	1.	E 01
CS-134	L.T.	8.	E 00	L.T.	5.	E 00
CS-137	L.T.	7.	E 00	L.T.	5.	E 00
BA-140	L.T.	9.	E 00	L.T.	8.	E 00
CE-141	L.T.	1.	E 01	L.T.	1.	E 01
CE-144	L.T.	5.	E 01	L.T.	4.	E 01
RA-226	L.T.	1.	E 02	L.T.	1.	E 02
TH-228	L.T.	1.	E 01	L.T.	9.	E 00
TRITIUM ANALYSIS						
H-3	L.T.	8.	E 02	L.T.	8.	E 02

(a) Duplicate analysis

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - SURFACE
(PCI/LITER)
STATION NUMBER LC

DATE COLLECTED	01/22	01/22-03/19	02/19	03/19	04/16
GAMMA SPECTRUM ANALYSIS					
BE-7	L.T. 4. E 01	NR	L.T. 6. E 01	L.T. 4. E 01	L.T. 4. E 01
K-40	L.T. 6. E 01	NR	L.T. 9. E 01	L.T. 5. E 01	L.T. 6. E 01
MN-54	L.T. 4. E 00	NR	L.T. 6. E 00	L.T. 3. E 00	L.T. 4. E 00
CO-58	L.T. 3. E 00	NR	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00
FE-59	L.T. 8. E 00	NR	L.T. 1. E 01	L.T. 8. E 00	L.T. 8. E 00
CO-60	L.T. 4. E 00	NR	L.T. 6. E 00	L.T. 3. E 00	L.T. 4. E 00
ZN-65	L.T. 7. E 00	NR	L.T. 1. E 01	L.T. 6. E 00	L.T. 8. E 00
ZR-95	L.T. 4. E 00	NR	L.T. 6. E 00	L.T. 4. E 00	L.T. 4. E 00
RU-103	L.T. 4. E 00	NR	L.T. 7. E 00	L.T. 4. E 00	L.T. 5. E 00
RU-106	L.T. 3. E 01	NR	L.T. 5. E 01	L.T. 3. E 01	L.T. 4. E 01
I-131	L.T. 5. E 00	NR	L.T. 1. E 01	L.T. 5. E 00	L.T. 1. E 01
CS-134	L.T. 4. E 00	NR	L.T. 7. E 00	L.T. 4. E 00	L.T. 4. E 00
CS-137	L.T. 4. E 00	NR	L.T. 6. E 00	L.T. 4. E 00	L.T. 4. E 00
BA-140	L.T. 5. E 00	NR	L.T. 8. E 00	L.T. 6. E 00	L.T. 9. E 00
CE-141	L.T. 8. E 00	NR	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01
CE-144	L.T. 3. E 01	NR	L.T. 5. E 01	L.T. 4. E 01	L.T. 3. E 01
RA-226	L.T. 9. E 01	NR	L.T. 1. E 02	L.T. 1. E 02	L.T. 9. E 01
TH-228	L.T. 8. E 00	NR	L.T. 1. E 01	L.T. 9. E 00	L.T. 9. E 00
TRITIUM ANALYSIS					
H-3	NR	L.T. 8. E 02	NR	NR	NR

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - SURFACE
(PCI/LITER)
STATION NUMBER CC

DATE COLLECTED	04/16-06/18	05/21	06/16	07/16	08/20
GAMMA SPECTRUM ANALYSIS					
BE-7	NR	L.T. 3. E 01	L.T. 8. E 01	L.T. 7. E 01	L.T. 6. E 01
K-40	NR	L.T. 5. E 01	L.T. 2. E 02	L.T. 2. E 02	L.T. 1. E 02
MN-54	NR	L.T. 3. E 00	L.T. 7. E 00	L.T. 6. E 00	L.T. 6. E 00
CO-58	NR	L.T. 3. E 00	L.T. 7. E 00	L.T. 6. E 00	L.T. 6. E 00
FE-59	NR	L.T. 6. E 00	L.T. 2. E 01	L.T. 1. E 01	L.T. 1. E 01
CO-60	NR	L.T. 3. E 00	L.T. 7. E 00	L.T. 6. E 00	L.T. 5. E 00
ZN-65	NR	L.T. 5. E 00	L.T. 2. E 01	L.T. 1. E 01	L.T. 1. E 01
ZR-95	NR	L.T. 3. E 00	L.T. 8. E 00	L.T. 7. E 00	L.T. 6. E 00
RU-103	NR	L.T. 4. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 8. E 00
RU-106	NR	L.T. 3. E 01	L.T. 6. E 01	L.T. 6. E 01	L.T. 5. E 01
I-131	NR	L.T. 9. E 00	L.T. 3. E 01	L.T. 3. E 01	L.T. 2. E 01
CS-134	NR	L.T. 3. E 00	L.T. 7. E 00	L.T. 7. E 00	L.T. 6. E 00
CS-137	NR	L.T. 3. E 00	L.T. 7. E 00	L.T. 6. E 00	L.T. 6. E 00
BA-140	NR	L.T. 5. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00
CE-141	NR	L.T. 7. E 00	L.T. 2. E 01	L.T. 2. E 01	L.T. 1. E 01
CE-144	NR	L.T. 3. E 01	L.T. 7. E 01	L.T. 6. E 01	L.T. 6. E 01
RA-226	NR	L.T. 7. E 01	L.T. 2. E 02	L.T. 2. E 02	L.T. 1. E 02
TH-228	NR	L.T. 7. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01
TRITIUM ANALYSIS					
H-3	L.T. 7. E 02	NR	NR	NR	NR

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - SURFACE
(PCI/LITER)
STATION NUMBER CC

DATE COLLECTED	07/16-09/17	09/17	10/14	11/19	11/19 (a)
GAMMA SPECTRUM ANALYSIS					
BE-7	NR	L.T. 4. E 01	L.T. 5. E 01	L.T. 3. E 01	L.T. 7. E 01
K-40	NR	L.T. 1. E 02	L.T. 7. E 01	L.T. 9. E 01	L.T. 2. E 02
MN-54	NR	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 7. E 00
CO-58	NR	L.T. 4. E 00	L.T. 5. E 00	L.T. 3. E 00	L.T. 7. E 00
FE-59	NR	L.T. 9. E 00	L.T. 1. E 01	L.T. 8. E 00	L.T. 2. E 01
CO-60	NR	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 6. E 00
ZN-65	NR	L.T. 9. E 00	L.T. 1. E 01	L.T. 7. E 00	L.T. 1. E 01
ZR-95	NR	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 8. E 00
RU-103	NR	L.T. 5. E 00	L.T. 7. E 00	L.T. 5. E 00	L.T. 9. E 00
RU-106	NR	L.T. 4. E 01	L.T. 4. E 01	L.T. 3. E 01	L.T. 6. E 01
I-131	NR	L.T. 1. E 01	L.T. 2. E 01	L.T. 1. E 01	L.T. 3. E 01
CS-134	NR	L.T. 4. E 00	L.T. 5. E 00	L.T. 3. E 00	L.T. 7. E 00
CS-137	NR	L.T. 4. E 00	L.T. 6. E 00	L.T. 3. E 00	L.T. 7. E 00
BA-140	NR	L.T. 6. E 00	L.T. 1. E 01	L.T. 8. E 00	L.T. 2. E 01
CE-141	NR	L.T. 8. E 00	L.T. 1. E 01	L.T. 5. E 00	L.T. 2. E 01
CE-144	NR	L.T. 3. E 01	L.T. 4. E 01	L.T. 3. E 01	L.T. 5. E 01
RA-226	NR	L.T. 9. E 01	L.T. 1. E 02	L.T. 9. E 01	L.T. 1. E 02
TH-228	NR	L.T. 8. E 00	L.T. 9. E 00	L.T. 8. E 00	L.T. 1. E 02
TRITIUM ANALYSIS					
H-3	L.T. 7. E 02	NR	NR	NR	NR

(a) Duplicate analysis

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - SURFACE
(PCI/LITER)
STATION NUMBER CC

DATE COLLECTED	10/14-12/17	12/17	
GAMMA SPECTRUM ANALYSIS			
BE-7	NR	L.T. 4. E 01	
K-40	NR	L.T. 1. E 02	
MN-54	NR	L.T. 4. E 00	
CO-58	NR	L.T. 5. E 00	
FE-59	NR	L.T. 1. E 01	
CO-60	NR	L.T. 4. E 00	
ZN-65	NR	L.T. 1. E 01	
ZR-95	NR	L.T. 5. E 00	
RU-103	NR	L.T. 5. E 00	
RU-106	NR	L.T. 4. E 01	
I-131	NR	L.T. 1. E 01	
CS-134	NR	L.T. 5. E 00	
CS-137	NR	L.T. 5. E 00	
BA-140	NR	L.T. 7. E 00	
CE-141	NR	L.T. 1. E 01	
CE-144	NR	L.T. 4. E 01	
RA-226	NR	L.T. 1. E 02	
TH-228	NR	L.T. 9. E 00	
TRITIUM ANALYSIS			
H-3	1.6 +-0.5 E 03	NR	

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - SURFACE
(PCI/LITER)
STATION NUMBER MUSK

DATE COLLECTED	01/22	01/22-03/19	02/19	03/19	04/16
GAMMA SPECTRUM ANALYSIS					
BE-7	L.T. 3. E 01	NR	L.T. 6. E 01	L.T. 4. E 01	L.T. 4. E 01
K-40	L.T. 6. E 01	NR	L.T. 2. E 02	L.T. 8. E 01	L.T. 6. E 01
MN-54	L.T. 3. E 00	NR	L.T. 7. E 00	L.T. 4. E 00	L.T. 3. E 00
CO-58	L.T. 3. E 00	NR	L.T. 7. E 00	L.T. 4. E 00	L.T. 4. E 00
FE-59	L.T. 6. E 00	NR	L.T. 1. E 01	L.T. 7. E 00	L.T. 8. E 00
CO-60	L.T. 4. E 00	NR	L.T. 6. E 00	L.T. 4. E 00	L.T. 4. E 00
ZN-65	L.T. 7. E 00	NR	L.T. 1. E 01	L.T. 7. E 00	L.T. 8. E 00
ZR-95	L.T. 4. E 00	NR	L.T. 7. E 00	L.T. 4. E 00	L.T. 4. E 00
RU-103	L.T. 4. E 00	NR	L.T. 8. E 00	L.T. 4. E 00	L.T. 5. E 00
RU-106	L.T. 3. E 01	NR	L.T. 6. E 01	L.T. 4. E 01	L.T. 3. E 01
I-131	L.T. 5. E 00	NR	L.T. 2. E 01	L.T. 5. E 00	L.T. 1. E 01
CS-134	L.T. 3. E 00	NR	L.T. 7. E 00	L.T. 4. E 00	L.T. 4. E 00
CS-137	L.T. 5. E 00	NR	L.T. 7. E 00	L.T. 4. E 00	L.T. 4. E 00
BA-140	L.T. 4. E 00	NR	L.T. 1. E 01	L.T. 7. E 00	L.T. 8. E 00
CE-141	L.T. 7. E 00	NR	L.T. 1. E 01	L.T. 8. E 00	L.T. 9. E 00
CE-144	L.T. 3. E 01	NR	L.T. 5. E 01	L.T. 3. E 01	L.T. 3. E 01
RA-226	L.T. 9. E 01	NR	L.T. 1. E 02	L.T. 9. E 01	L.T. 9. E 01
TH-228	L.T. 8. E 00	NR	L.T. 1. E 01	L.T. 9. E 00	L.T. 8. E 00
TRITIUM ANALYSIS					
H-3	NR	L.T. 8. E 02	NR	NR	NR

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - SURFACE
(PCI/LITER)
STATION NUMBER M-55

DATE COLLECTED	04/16-06/18	05/21	06/18	07/16	08/20
GAMMA SPECTRUM ANALYSIS					
BE-7	NR	L.T. 3. E 01	L.T. 5. E 01	L.T. 6. E 01	L.T. 4. E 01
K-40	NR	L.T. 5. E 01	L.T. 1. E 02	L.T. 2. E 02	L.T. 6. E 01
MN-54	NR	L.T. 3. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 4. E 00
CO-58	NR	L.T. 3. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 4. E 00
FE-59	NR	L.T. 7. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00
CO-60	NR	L.T. 3. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 4. E 00
ZN-65	NR	L.T. 6. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 8. E 00
ZR-95	NR	L.T. 3. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 4. E 00
RU-103	NR	L.T. 4. E 00	L.T. 6. E 00	L.T. 8. E 00	L.T. 5. E 00
RU-106	NR	L.T. 3. E 01	L.T. 4. E 01	L.T. 5. E 01	L.T. 4. E 01
I-131	NR	L.T. 9. E 00	L.T. 2. E 01	L.T. 2. E 01	L.T. 1. E 01
CS-134	NR	L.T. 3. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 4. E 00
CS-137	NR	L.T. 3. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 5. E 00
BA-140	NR	L.T. 6. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00
CE-141	NR	L.T. 7. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 8. E 00
CE-144	NR	L.T. 3. E 01	L.T. 4. E 01	L.T. 5. E 01	L.T. 3. E 01
RA-226	NR	L.T. 8. E 01	L.T. 1. E 02	L.T. 1. E 02	L.T. 8. E 01
TH-228	NR	L.T. 7. E 00	L.T. 9. E 00	L.T. 1. E 01	L.T. 7. E 00
TRITIUM ANALYSIS					
H-3	L.T. 7. E 02	NR	NR	NR	NR

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - SURFACE
(PCI/LITER)
STATION NUMBER MUSE

DATE COLLECTED	07/16-09/17	09/17	10/14	11/19	12/17
GAMMA SPECTRUM ANALYSIS					
BE-7	NR	L.T. 5. E 01	L.T. 3. E 01	L.T. 4. E 01	L.T. 4. E 01
K-40	NR	L.T. 1. E 02	L.T. 2. E 02	L.T. 5. E 01	L.T. 6. E 01
MN-54	NR	L.T. 5. E 00	L.T. 7. E 00	L.T. 3. E 00	L.T. 5. E 00
CO-58	NR	L.T. 5. E 00	L.T. 7. E 00	L.T. 4. E 00	L.T. 5. E 00
FE-59	NR	L.T. 1. E 01	L.T. 2. E 01	L.T. 8. E 00	L.T. 1. E 01
CO-60	NR	L.T. 5. E 00	L.T. 7. E 00	L.T. 4. E 00	L.T. 4. E 00
ZN-65	NR	L.T. 1. E 01	L.T. 2. E 01	L.T. 7. E 00	L.T. 1. E 01
ZR-95	NR	L.T. 6. E 00	L.T. 9. E 00	L.T. 4. E 00	L.T. 5. E 00
RU-103	NR	L.T. 6. E 00	L.T. 1. E 01	L.T. 5. E 00	L.T. 5. E 00
RU-106	NR	L.T. 4. E 01	L.T. 7. E 01	L.T. 3. E 01	L.T. 4. E 01
I-131	NR	L.T. 2. E 01	L.T. 3. E 01	L.T. 1. E 01	L.T. 8. E 00
CS-134	NR	L.T. 5. E 00	L.T. 8. E 00	L.T. 4. E 00	L.T. 5. E 00
CS-137	NR	L.T. 5. E 00	L.T. 7. E 00	L.T. 4. E 00	L.T. 6. E 00
BA-140	NR	L.T. 8. E 00	L.T. 1. E 01	L.T. 5. E 00	L.T. 8. E 00
CE-141	NR	L.T. 1. E 01	L.T. 2. E 01	L.T. 5. E 00	L.T. 8. E 00
CE-144	NR	L.T. 4. E 01	L.T. 7. E 01	L.T. 3. E 01	L.T. 3. E 01
RA-226	NR	L.T. 1. E 02	L.T. 2. E 02	L.T. 9. E 01	L.T. 9. E 01
TH-228	NR	L.T. 1. E 01	L.T. 2. E 01	L.T. 8. E 00	L.T. 8. E 00
TRITIUM ANALYSIS					
H-3	L.T. 7. E 02	NR	NR	NR	NR

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - WATERBORNE
WATER - SURFACE
(PCI/LITER)
STATION NUMBER MUSE

DATE COLLECTED 10/14-12/17

GAMMA SPECTRUM ANALYSIS

BE-7	NR
K-40	NR
MN-54	NR
CO-58	NR
FE-59	NR
CO-60	NR
ZN-65	NR
ZR-95	NR
RU-103	NR
RU-106	NR
I-131	NR
CS-134	NR
CS-137	NR
BA-140	NR
CE-141	NR
CE-144	NR
RA-226	NR
TH-228	NR

TRITIUM ANALYSIS

H-3	L.T. 7. E 02

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
F I S H
(PCI/GM WET)
STATION NUMBER JKR

DATE COLLECTED	06/24	11/18
GAMMA SPECTRUM ANALYSIS	ROUGH FISH	GAME FISH
BE-7	L.T. 2. E-01	L.T. 7. E-02
K-40	3.65+-0.37E 00	3.52+-0.35E 00
MN-54	L.T. 2. E-02	L.T. 7. E-03
CO-58	L.T. 3. E-02	L.T. 7. E-03
FE-59	L.T. 7. E-02	L.T. 2. E-02
CO-60	L.T. 2. E-02	L.T. 7. E-03
ZN-65	L.T. 5. E-02	L.T. 2. E-02
ZR-95	L.T. 3. E-02	L.T. 8. E-03
RU-103	L.T. 3. E-02	L.T. 9. E-03
RU-106	L.T. 2. E-01	L.T. 6. E-02
I-131	L.T. 2. E-01	L.T. 3. E-02
CS-134	L.T. 2. E-02	L.T. 7. E-03
CS-137	L.T. 2. E-02	L.T. 7. E-03
BA-140	L.T. 1. E-01	L.T. 1. E-02
CE-141	L.T. 7. E-02	L.T. 2. E-02
CE-144	L.T. 2. E-01	L.T. 6. E-02
RA-226	L.T. 5. E-01	L.T. 2. E-01
TH-228	L.T. 5. E-02	L.T. 1. E-02

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
F I S H
(PCI/GM WET)
STATION NUMBER WCCL

DATE COLLECTED	03/25	03/29	05/08	06/13	06/13
GAMMA SPECTRUM ANALYSIS	GAME FISH	ROUGH FISH	ROUGH FISH	GAME FISH	ROUGH FISH
BE-7	L.T. 2. E-01	L.T. 1. E-01	L.T. 1. E-01	L.T. 1. E-01	L.T. 1. E-01
K-40	3.33+-0.33E 00	3.25+-0.33E 00	3.52+-0.35E 00	3.07+-0.31E 00	3.22+-0.32E 00
MN-54	L.T. 2. E-02	L.T. 1. E-02	L.T. 9. E-03	L.T. 1. E-02	L.T. 1. E-02
CO-58	L.T. 2. E-02	L.T. 1. E-02	L.T. 1. E-02	L.T. 2. E-02	L.T. 2. E-02
FE-59	L.T. 4. E-02	L.T. 3. E-02	L.T. 3. E-02	L.T. 4. E-02	L.T. 4. E-02
CO-60	L.T. 2. E-02	L.T. 1. E-02	L.T. 9. E-03	L.T. 1. E-02	L.T. 1. E-02
ZN-65	L.T. 4. E-02	L.T. 3. E-02	L.T. 2. E-02	L.T. 3. E-02	L.T. 3. E-02
ZR-95	L.T. 2. E-02	L.T. 2. E-02	L.T. 1. E-03	L.T. 2. E-02	L.T. 2. E-02
RU-103	L.T. 3. E-02	L.T. 2. E-02	L.T. 2. E-02	L.T. 2. E-02	L.T. 2. E-02
RU-106	L.T. 2. E-01	L.T. 1. E-01	L.T. 8. E-02	L.T. 1. E-01	L.T. 1. E-01
I-131	L.T. 8. E-02	L.T. 4. E-02	L.T. 2. E-01	L.T. 1. E-01	L.T. 1. E-01
CS-134	L.T. 2. E-02	L.T. 2. E-02	L.T. 1. E-02	L.T. 1. E-02	L.T. 1. E-02
CS-137	L.T. 2. E-02	L.T. 1. E-02	L.T. 9. E-03	L.T. 1. E-02	L.T. 2. E-02
BA-140	L.T. 4. E-02	L.T. 3. E-02	L.T. 5. E-02	L.T. 5. E-02	L.T. 5. E-02
CE-141	L.T. 5. E-02	L.T. 3. E-02	L.T. 3. E-02	L.T. 4. E-02	L.T. 4. E-02
CE-144	L.T. 2. E-01	L.T. 1. E-01	L.T. 6. E-02	L.T. 1. E-01	L.T. 1. E-01
RA-226	L.T. 5. E-01	L.T. 3. E-01	L.T. 2. E-01	L.T. 3. E-01	L.T. 3. E-01
TH-228	L.T. 4. E-02	L.T. 3. E-02	L.T. 2. E-02	L.T. 2. E-02	L.T. 3. E-02

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
F I S H
(PCI/GM WET)
STATION NUMBER WOOL

DATE COLLECTED	07/11	07/11 (a)	08/08	10/11
GAMMA SPECTRUM ANALYSIS	GAME FISH	GAME FISH	GAME FISH	ROUGH FISH
BE-7	L.T. 2. E-01	L.T. 2. E-01	L.T. 2. E-01	L.T. 1. E-01
K-40	3.37+-0.34E 00	2.52+-0.30E 00	3.10+-0.33E 00	2.69+-0.27E 00
MN-54	L.T. 1. E-02	L.T. 2. E-02	L.T. 3. E-02	L.T. 8. E-03
CO-58	L.T. 2. E-02	L.T. 2. E-02	L.T. 3. E-02	L.T. 8. E-03
FE-59	L.T. 5. E-02	L.T. 5. E-02	L.T. 6. E-02	L.T. 2. E-02
CO-60	L.T. 2. E-02	L.T. 2. E-02	L.T. 3. E-02	L.T. 9. E-03
ZN-65	L.T. 4. E-02	L.T. 4. E-02	L.T. 6. E-02	L.T. 2. E-02
ZR-95	L.T. 2. E-02	L.T. 2. E-02	L.T. 3. E-02	L.T. 1. E-02
RU-103	L.T. 2. E-02	L.T. 3. E-02	L.T. 3. E-02	L.T. 1. E-02
RU-106	L.T. 1. E-01	L.T. 1. E-01	L.T. 2. E-01	L.T. 7. E-02
I-131	L.T. 1. E-01	L.T. 3. E-01	L.T. 8. E-02	L.T. 1. E-01
CS-134	L.T. 2. E-02	L.T. 2. E-02	L.T. 3. E-02	L.T. 8. E-03
CS-137	L.T. 2. E-02	L.T. 2. E-02	L.T. 3. E-02	L.T. 9. E-03
BA-140	L.T. 5. E-02	L.T. 8. E-02	L.T. 5. E-02	L.T. 3. E-02
CE-141	L.T. 4. E-02	L.T. 6. E-02	L.T. 5. E-02	L.T. 3. E-02
CE-144	L.T. 1. E-01	L.T. 2. E-01	L.T. 2. E-01	L.T. 7. E-02
RA-226	L.T. 4. E-01	L.T. 5. E-01	L.T. 5. E-01	L.T. 2. E-01
TH-228	L.T. 3. E-02	L.T. 4. E-02	L.T. 5. E-02	L.T. 2. E-02

(a) Duplicate analysis

KANSAS GAS AND ELECTRIC CO
P O BOX 208

FOOD
(PCI/GM WET)
STATION NUMBER A-1

GAMMA SPECTRUM ANALYSIS	ESCAROLE	LETTUCE	SPINACH	BROAD LEAF
DATE COLLECTED	05/30	06/25	07/30	09/24
BE-7	5.11+-1.32E-01	6.41+-1.42E-01	3.19+-0.94E-01	5.22+-1.29E-01
K-40	4.35+-0.44E 00	4.60+-0.46E 00	3.83+-0.36E 00	3.65+-0.37E 00
MN-54	L.T. 1. E-02	L.T. 2. E-02	L.T. 1. E-02	L.T. 2. E-02
CO-58	L.T. 1. E-02	L.T. 1. E-02	L.T. 1. E-02	L.T. 2. E-02
FE-59	L.T. 3. E-02	L.T. 3. E-02	L.T. 2. E-02	L.T. 3. E-02
CO-60	L.T. 2. E-02	L.T. 2. E-02	L.T. 1. E-02	L.T. 2. E-02
ZN-65	L.T. 3. E-02	L.T. 4. E-02	L.T. 3. E-02	L.T. 4. E-02
ZR-95	L.T. 1. E-02	L.T. 2. E-02	L.T. 1. E-02	L.T. 2. E-02
RU-103	L.T. 2. E-02	L.T. 2. E-02	L.T. 1. E-02	L.T. 2. E-02
RU-106	L.T. 1. E-01	L.T. 1. E-01	L.T. 1. E-01	L.T. 2. E-01
I-131	L.T. 5. E-02	L.T. 3. E-02	L.T. 2. E-02	L.T. 2. E-02
CS-134	L.T. 2. E-02	L.T. 2. E-02	L.T. 1. E-02	L.T. 2. E-02
CS-137	2.70+-1.23E-02	L.T. 2. E-02	L.T. 1. E-02	L.T. 2. E-02
BA-140	L.T. 3. E-02	L.T. 2. E-02	L.T. 1. E-02	L.T. 2. E-02
CE-141	L.T. 3. E-02	L.T. 3. E-02	L.T. 3. E-02	L.T. 3. E-02
CE-144	L.T. 1. E-01	L.T. 1. E-01	L.T. 1. E-01	L.T. 1. E-01
RA-226	L.T. 3. E-01	L.T. 4. E-01	L.T. 3. E-01	L.T. 4. E-01
TH-228	L.T. 3. E-02	L.T. 3. E-02	L.T. 3. E-02	L.T. 3. E-02

KANSAS GAS AND ELECTRIC CO
P O BOX 208 FOOD

(PCI/GM WET)
STATION NUMBER A-1

DATE COLLECTED	08/27	10/31
GAMMA SPECTRUM ANALYSIS	GREENS	SWISS CHARD
BE-7	4.34+-1.18E-01	4.48+-1.37E-01
K-40	2.65+-0.27E 00	3.28+-0.33E 00
MN-54	L.T. 1. E-02	L.T. 2. E-02
CO-58	L.T. 1. E-02	L.T. 2. E-02
FE-59	L.T. 3. E-02	L.T. 4. E-02
CO-60	L.T. 1. E-02	L.T. 2. E-02
ZN-65	L.T. 3. E-02	L.T. 3. E-02
ZR-95	L.T. 1. E-02	L.T. 2. E-02
RU-103	L.T. 2. E-02	L.T. 2. E-02
RU-106	L.T. 1. E-01	L.T. 1. E-01
I-131	L.T. 3. E-02	L.T. 6. E-02
CS-134	L.T. 1. E-02	L.T. 2. E-02
CS-137	L.T. 1. E-02	L.T. 2. E-02
BA-140	L.T. 2. E-02	L.T. 3. E-02
CE-141	L.T. 2. E-02	L.T. 4. E-02
CE-144	L.T. 9. E-02	L.T. 1. E-01
RA-226	L.T. 3. E-01	L.T. 4. E-01
TH-228	L.T. 2. E-02	L.T. 3. E-02

KANSAS GAS AND ELECTRIC CO
P O BOX 208

FOOD

(PCI/GM WET)
STATION NUMBER C-2

DATE COLLECTED	05/30	07/30	08/27
GAMMA SPECTRUM ANALYSIS	TURNIP	BROAD LEAF	GREENS
BE-7	3.77+-0.89E-01	3.55+-1.53E-01	1.55+-0.85E-01
K-40	1.75+-0.18E 00	2.42+-0.24E 00	2.34+-0.23E 00
MN-54	L.T. 8. E-03	L.T. 2. E-02	L.T. 1. E-02
CO-58	L.T. 9. E-03	L.T. 2. E-02	L.T. 1. E-02
FE-59	L.T. 2. E-02	L.T. 3. E-02	L.T. 2. E-02
CO-60	L.T. 9. E-03	L.T. 2. E-02	L.T. 9. E-03
ZN-65	L.T. 2. E-02	L.T. 4. E-02	L.T. 2. E-02
ZR-95	L.T. 1. E-02	L.T. 2. E-02	L.T. 1. E-02
RU-103	L.T. 1. E-02	L.T. 2. E-02	L.T. 1. E-02
RU-106	L.T. 8. E-02	L.T. 2. E-01	L.T. 9. E-02
I-131	L.T. 3. E-02	L.T. 3. E-02	L.T. 3. E-02
CS-134	L.T. 1. E-02	L.T. 2. E-02	L.T. 1. E-02
CS-137	1.28+-0.75E-02	L.T. 2. E-02	L.T. 1. E-02
BA-140	L.T. 2. E-02	L.T. 2. E-02	L.T. 1. E-02
CE-141	L.T. 2. E-02	L.T. 3. E-02	L.T. 3. E-02
CE-144	L.T. 7. E-02	L.T. 1. E-01	L.T. 1. E-01
RA-226	L.T. 2. E-01	L.T. 4. E-01	L.T. 3. E-01
TH-228	L.T. 2. E-02	L.T. 3. E-02	L.T. 2. E-02

KANSAS GAS AND ELECTRIC CO
P O BOX 208

FOOD

(PCI/GM WET)
STATION NUMBER A-1

DATE COLLECTED	05/30	06/25	07/30
GAMMA SPECTRUM ANALYSIS	KALE	CABBAGE	CABBAGE
BE-7	4.66+-0.59E-01	9.70+-2.12E-01	L.T. 2. E-01
K-40	4.56+-0.50E 00	4.40+-0.44E 00	2.19+-0.23E 00
MN-54	L.T. 1. E-03	L.T. 2. E-02	L.T. 2. E-02
CO-58	L.T. 1. E-02	L.T. 2. E-02	L.T. 2. E-02
FE-59	L.T. 3. E-02	L.T. 4. E-02	L.T. 4. E-02
CO-60	L.T. 1. E-02	L.T. 2. E-02	L.T. 2. E-02
ZN-65	L.T. 3. E-02	L.T. 4. E-02	L.T. 4. E-02
ZR-95	L.T. 1. E-02	L.T. 2. E-02	L.T. 2. E-02
RU-103	L.T. 1. E-02	L.T. 2. E-02	L.T. 2. E-02
RU-106	L.T. 8. E-02	L.T. 2. E-01	L.T. 2. E-01
I-131	L.T. 3. E-02	L.T. 4. E-02	L.T. 3. E-02
CS-134	L.T. 1. E-02	L.T. 2. E-02	L.T. 2. E-02
CS-137	L.T. 1. E-02	L.T. 2. E-02	L.T. 2. E-02
BA-140	L.T. 2. E-02	L.T. 2. E-02	L.T. 2. E-02
CE-141	L.T. 2. E-02	L.T. 4. E-02	L.T. 4. E-02
CE-144	L.T. 8. E-02	L.T. 2. E-01	L.T. 2. E-01
RA-226	L.T. 2. E-01	L.T. 5. E-01	L.T. 4. E-01
TH-228	L.T. 2. E-02	L.T. 4. E-02	L.T. 4. E-02

KANSAS GAS AND ELECTRIC CO
P O BOX 208

FOOD

(PCI/GM WET)
STATION NUMBER S-4

DATE COLLECTED	05/30	06/25	07/30	09/24	11/26
GAMMA SPECTRUM ANALYSIS	KALE	BROAD LEAF	LETTUCE	KALE	KALE
BE-7	3.25+-1.33E-01	1.64+-0.20E 00	3.51+-1.80E-01	1.07+-0.14E 00	4.39+-1.42E-01
K-40	5.54+-0.55E 00	5.65+-0.57E 00	3.79+-0.38E 00	4.84+-0.48E 00	3.01+-0.30E 00
MN-54	L.T. 2. E-02	L.T. 2. E-02	L.T. 2. E-02	L.T. 2. E-02	L.T. 1. E-02
CO-58	L.T. 2. E-02	L.T. 2. E-02	L.T. 2. E-02	L.T. 2. E-02	L.T. 1. E-02
FE-59	L.T. 4. E-02	L.T. 4. E-02	L.T. 5. E-02	L.T. 4. E-02	L.T. 3. E-02
CO-60	L.T. 2. E-02	L.T. 2. E-02	L.T. 3. E-02	L.T. 2. E-02	L.T. 2. E-02
ZN-65	L.T. 4. E-02	L.T. 4. E-02	L.T. 5. E-02	L.T. 4. E-02	L.T. 4. E-02
ZR-95	L.T. 2. E-02	L.T. 2. E-02	L.T. 2. E-02	L.T. 2. E-02	L.T. 2. E-02
RU-103	L.T. 2. E-02	L.T. 2. E-02	L.T. 3. E-02	L.T. 2. E-02	L.T. 2. E-02
RU-106	L.T. 1. E-01	L.T. 1. E-01	L.T. 2. E-01	L.T. 2. E-01	L.T. 1. E-01
I-131	L.T. 6. E-02	L.T. 4. E-02	L.T. 3. E-02	L.T. 3. E-02	L.T. 3. E-02
CS-134	L.T. 2. E-02	L.T. 2. E-02	L.T. 2. E-02	L.T. 2. E-02	L.T. 2. E-02
CS-137	L.T. 2. E-02	L.T. 2. E-02	L.T. 3. E-02	L.T. 2. E-02	L.T. 2. E-02
BA-140	L.T. 3. E-02	L.T. 2. E-02	L.T. 3. E-02	L.T. 2. E-02	L.T. 2. E-02
CE-141	L.T. 4. E-02	L.T. 4. E-02	L.T. 4. E-02	L.T. 3. E-02	L.T. 3. E-02
CE-144	L.T. 1. E-01	L.T. 1. E-01	L.T. 2. E-01	L.T. 1. E-01	L.T. 1. E-01
RA-226	L.T. 4. E-01	L.T. 4. E-01	L.T. 5. E-01	L.T. 4. E-01	L.T. 3. E-01
TH-228	L.T. 3. E-02	L.T. 4. E-02	L.T. 5. E-02	L.T. 3. E-02	L.T. 3. E-02

KANSAS GAS AND ELECTRIC CO
P O BOX 208

FOOD

(PCI/GM WET)

STATION NUMBER S-4

DATE COLLECTED	06/27	10/25
GAMMA SPECTRUM ANALYSIS	KALE	SWISS CHARD
BE-7	4.16+-1.12E-01	4.91+-2.10E-01
K-40	5.55+-0.56E 00	3.51+-0.35E 00
MN-54	L.T. 1. E-02	L.T. 2. E-02
CO-58	L.T. 1. E-02	L.T. 2. E-02
FE-59	L.T. 3. E-02	L.T. 5. E-02
CO-60	L.T. 2. E-02	L.T. 3. E-02
ZN-65	L.T. 3. E-02	L.T. 5. E-02
ZR-95	L.T. 1. E-02	L.T. 2. E-02
RU-103	L.T. 1. E-02	L.T. 3. E-02
RU-106	L.T. 1. E-01	L.T. 2. E-01
I-131	L.T. 3. E-02	L.T. 9. E-02
CS-134	L.T. 1. E-02	L.T. 2. E-02
CS-137	L.T. 2. E-02	L.T. 3. E-02
BA-140	L.T. 2. E-02	L.T. 5. E-02
CE-141	L.T. 3. E-02	L.T. 6. E-02
CE-144	L.T. 1. E-01	L.T. 2. E-01
RA-226	L.T. 3. E-01	L.T. 5. E-01
TH-228	L.T. 3. E-02	L.T. 4. E-02

KANSAS GAS AND ELECTRIC CO.

PO BOX 208 - WATER

IRRIGATED CROP

STATION NR-D1

(pCi/gm wet)

DATE COLLECTED:	IRR CROP.-CORN 12/23
GAMMA SPECTRUM ANALYSIS:	
BE-7	L.T. 1. E-01
K-40	2.59± 0.26E 00
MN-54	L.T. 1. E-02
CO-58	L.T. 1. E-02
FE-59	L.T. 3. E-02
CO-60	L.T. 1. E-02
ZN-65	L.T. 3. E-02
ZR-95/NB-95	L.T. 1. E-02
RU-103	L.T. 2. E-02
RU-106	L.T. 1. E-02
I-131	L.T. 6. E-02
CS-134	L.T. 1. E-02
CS-137	L.T. 1. E-02
BA-140/LA-140	L.T. 3. E-02
CE-141	L.T. 2. E-02
CE-144	L.T. 8. E-02
RA-226	L.T. 2. E-01
TH-228	L.T. 2. E-02

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
MILK
(PCI/LITER)
STATION NUMBER C-11

DATE COLLECTED	01/08
RADIOCHEMICAL ANALYSIS	
I-131	L.T. 3. E-01
GAMMA SPECTRUM ANALYSIS	
BE-7	L.T. 6. E 01
K-40	1.22+-0.12E 03
MN-54	L.T. 6. E 00
CO-58	L.T. 6. E 00
FE-59	L.T. 1. E 01
CO-60	L.T. 6. 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. 6. E 01
I-131	L.T. 9. E 00
CS-134	L.T. 6. E 00
CS-137	L.T. 7. E 00
BA-140	L.T. 6. E 00
CE-141	L.T. 1. E 01
CE-144	L.T. 5. E 01
RA-226	L.T. 1. E 02
TH-228	L.T. 2. E 01

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
M I L K
(PCI/LITER)
STATION NUMBER F-1

DATE COLLECTED	01/08	02/12	03/12	04/09
RADIOCHEMICAL ANALYSIS				
I-131	L.T. 4. E-01	L.T. 3. E-01	L.T. 2. E-01	L.T. 2. E-01
GAMMA SPECTRUM ANALYSIS				
BE-7	L.T. 4. E 01	L.T. 4. E 01	L.T. 5. E 01	L.T. 3. E 01
K-40	1.20E+-0.12E 03	1.09E+-0.11E 03	1.08E+-0.11E 03	7.79E+-0.78E 02
MN-54	L.T. 4. E 00	L.T. 3. E 00	L.T. 5. E 00	L.T. 3. E 00
CO-58	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00
FE-59	L.T. 8. E 00	L.T. 9. E 00	L.T. 1. E 01	L.T. 8. E 00
CO-60	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00
ZN-65	L.T. 9. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 8. E 00
ZR-95	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00
RU-103	L.T. 5. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 4. E 00
RU-106	L.T. 4. E 01	L.T. 3. E 01	L.T. 4. E 01	L.T. 3. E 01
I-131	L.T. 6. E 00	L.T. 9. E 00	L.T. 1. E 01	L.T. 8. E 00
CS-134	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00
CS-137	L.T. 5. E 00	7.26E+-3.72E 00	L.T. 6. E 00	L.T. 4. E 00
BA-140	L.T. 4. E 00	L.T. 5. E 00	L.T. 7. E 00	L.T. 5. E 00
CE-141	L.T. 8. E 00	L.T. 7. E 00	L.T. 9. E 00	L.T. 6. E 00
CE-144	L.T. 4. E 01	L.T. 3. E 01	L.T. 4. E 01	L.T. 3. E 01
RA-226	L.T. 1. E 02	L.T. 8. E 01	L.T. 1. E 02	L.T. 1. E 02
TH-228	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01	L.T. 8. E 00

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
M I L K
(PCI/LITER)
STATION NUMBER E-1

DATE COLLECTED	06/25	07/09	08/13	08/27	09/10	07/23
RADIOCHEMICAL ANALYSIS						
I-131	L.T. 2. E-01	L.T. 3. E-01	L.T. 3. E-01	L.T. 2. E-01	L.T. 2. E-01	L.T. 3. E-01
GAMMA SPECTRUM ANALYSIS						
BE-7	L.T. 4. E 01	L.T. 5. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 3. E 01
K-40	1.16+-0.12E 03	1.11+-0.11E 03	1.30+-0.13E 03	1.30+-0.13E 03	1.09+-0.11E 03	1.14+-0.11E 03
MN-54	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 3. E 00	L.T. 4. E 00
CO-58	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
FE-59	L.T. 8. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01	L.T. 8. E 00	L.T. 9. E 00
CO-60	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00
ZN-65	L.T. 9. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00
ZR-95	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
RU-103	L.T. 4. E 00	L.T. 7. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00
RU-106	L.T. 3. E 01	L.T. 5. E 01	L.T. 3. E 01	L.T. 3. E 01	L.T. 4. E 01	L.T. 3. E 01
I-131	L.T. 7. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 8. E 00	L.T. 9. E 00	L.T. 7. E 00
CS-134	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
CS-137	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
BA-140	L.T. 6. E 00	L.T. 6. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 5. E 00
CE-141	L.T. 8. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 7. E 00	L.T. 7. E 00	L.T. 8. E 00
CE-144	L.T. 3. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 3. E 01	L.T. 3. E 01	L.T. 3. E 01
RA-226	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 8. E 01	L.T. 8. E 01	L.T. 9. E 01
TH-228	L.T. 8. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 7. E 00	L.T. 8. E 00	L.T. 8. E 00

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
M I L K
(PCI/LITER)
STATION NUMBER F-1

DATE COLLECTED	09/24	10/08	10/22	11/12	11/26	12/10
RADIOCHEMICAL ANALYSIS						
I-131	L.T. 3. E-01	L.T. 2. E-01	L.T. 2. E-01	L.T. 3. E-01	L.T. 2. E-01	L.T. 2. E-01
GAMMA SPECTRUM ANALYSIS						
BE-7	L.T. 3. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 3. E 01	L.T. 4. E 01
K-40	1.16+-0.12E 03	1.23+-0.12E 03	1.17+-0.18E 03	1.11+-0.11E 03	1.07+-0.11E 03	1.24+-0.12E 03
MN-54	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
CO-58	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
FE-59	L.T. 8. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 8. E 00	L.T. 8. E 00	L.T. 9. E 00
CO-60	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00
ZN-65	L.T. 9. E 00	L.T. 9. E 00	L.T. 9. E 00	L.T. 9. E 00	L.T. 1. E 01	L.T. 1. E 01
ZR-95	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
RU-103	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00
RU-106	L.T. 3. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 3. E 01
I-131	L.T. 5. E 00	L.T. 7. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 7. E 00	L.T. 8. E 00
CS-134	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
CS-137	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
BA-140	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 5. E 00
CE-141	L.T. 7. E 00	L.T. 7. E 00	L.T. 8. E 00	L.T. 1. E 01	L.T. 8. E 00	L.T. 7. E 00
CE-144	L.T. 3. E 01	L.T. 3. E 01	L.T. 3. E 01	L.T. 4. E 01	L.T. 3. E 01	L.T. 3. E 01
RA-226	L.T. 9. E 01	L.T. 8. E 01	L.T. 9. E 01	L.T. 1. E 02	L.T. 9. E 01	L.T. 8. E 01
TH-228	L.T. 8. E 00	L.T. 8. E 00	L.T. 8. E 00	L.T. 8. E 00	L.T. 8. E 00	L.T. 8. E 00

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
M I L K (GOAT)
(PCI/LITER)
STATION NUMBER P-2

DATE COLLECTED	01/08	02/12	03/12	03/12 (a)	04/09
RADIOCHEMICAL ANALYSIS					
I-131	L.T. 3. E-01	L.T. 3. E-01	L.T. 3. E-01	L.T. 3. E-01	L.T. 2. E-01
GAMMA SPECTRUM ANALYSIS					
BE-7	L.T. 4. E 01	L.T. 4. E 01	L.T. 7. E 01	L.T. 4. E 01	L.T. 5. E 01
K-40	1.53+-0.15E 03	1.37+-0.14E 03	1.54+-0.15E 03	1.56+-0.16E 03	1.44+-0.14E 03
MN-54	L.T. 4. E 00	L.T. 4. E 00	L.T. 7. E 00	L.T. 4. E 00	L.T. 6. E 00
CO-58	L.T. 4. E 00	L.T. 4. E 00	L.T. 7. E 00	L.T. 4. E 00	L.T. 6. E 00
FE-59	L.T. 1. E 01	L.T. 9. E 00	L.T. 2. E 01	L.T. 1. E 01	L.T. 1. E 01
CO-60	L.T. 4. E 00	L.T. 5. E 00	L.T. 7. E 00	L.T. 4. E 00	L.T. 6. E 00
ZN-65	L.T. 1. E 01	L.T. 1. E 01	L.T. 2. E 01	L.T. 1. E 01	L.T. 1. E 01
ZR-95	L.T. 4. E 00	L.T. 4. E 00	L.T. 8. E 00	L.T. 4. E 00	L.T. 6. E 00
RU-103	L.T. 4. E 00	L.T. 5. E 00	L.T. 9. E 00	L.T. 5. E 00	L.T. 7. E 00
RU-106	L.T. 4. E 01	L.T. 3. E 01	L.T. 7. E 01	L.T. 4. E 01	L.T. 5. E 01
I-131	L.T. 6. E 00	L.T. 9. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01
CS-134	L.T. 5. E 00	L.T. 4. E 00	L.T. 8. E 00	L.T. 4. E 00	L.T. 7. E 00
CS-137	L.T. 5. E 00	7.19+-4.11E 00	L.T. 8. E 00	L.T. 5. E 00	L.T. 6. E 00
BA-140	L.T. 5. E 00	L.T. 6. E 00	L.T. 8. E 00	L.T. 5. E 00	L.T. 8. E 00
CE-141	L.T. 8. E 00	L.T. 8. E 00	L.T. 2. E 01	L.T. 1. E 01	L.T. 1. E 01
CE-144	L.T. 3. E 01	L.T. 3. E 01	L.T. 7. E 01	L.T. 4. E 01	L.T. 5. E 01
RA-226	L.T. 9. E 01	L.T. 9. E 01	L.T. 2. E 02	L.T. 1. E 02	L.T. 1. E 02
TH-228	L.T. 5. E 00	L.T. 8. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01

(a) Duplicate analysis

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
MILK (GOAT)
(PCI/LITER)
STATION NUMBER P-2

DATE COLLECTED	04/24	05/14	05/28	06/11	06/25	07/23
RADIOCHEMICAL ANALYSIS						
I-131	L.T. 3. E-01	L.T. 3. E-01	L.T. 3. E-01	L.T. 2. E-01	L.T. 2. E-01	L.T. 2. E-01
GAMMA SPECTRUM ANALYSIS						
BE-7	L.T. 5. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 5. E 01	L.T. 4. E 01
K-40	1.56+-0.16E 03	1.61+-0.16E 03	1.72+-0.17E 03	1.78+-0.18E 03	1.46+-0.15E 03	1.53+-0.15E 03
MN-54	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00
CO-58	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00
FE-59	L.T. 1. E 01	L.T. 9. E 00	L.T. 9. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01
CO-60	L.T. 6. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 5. E 00
ZN-65	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01
ZR-95	L.T. 5. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 5. E 00
RU-103	L.T. 6. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 5. E 00
RU-106	L.T. 5. E 01	L.T. 3. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 5. E 01	L.T. 4. E 01
I-131	L.T. 9. E 00	L.T. 9. E 00	L.T. 9. E 00	L.T. 8. E 00	L.T. 1. E 01	L.T. 8. E 00
CS-134	L.T. 6. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 5. E 00
CS-137	L.T. 7. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00
BA-140	L.T. 6. E 00	L.T. 6. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 8. E 00	L.T. 6. E 00
CE-141	L.T. 1. E 01	L.T. 7. E 00	L.T. 9. E 00	L.T. 7. E 00	L.T. 1. E 01	L.T. 8. E 00
CE-144	L.T. 4. E 01	L.T. 3. E 01	L.T. 4. E 01	L.T. 3. E 01	L.T. 5. E 01	L.T. 3. E 01
RA-226	L.T. 1. E 02	L.T. 8. E 01	L.T. 1. E 02	L.T. 8. E 01	L.T. 1. E 02	L.T. 9. E 01
TH-228	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01	L.T. 9. E 00

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
MILK (GOAT)
(PCI/LITER)
STATION NUMBER P-2

DATE COLLECTED	07/09	08/13	08/27	09/10	09/24
RADIOCHEMICAL ANALYSIS					
I-131	L.T. 3. E-01	L.T. 3. E-01	L.T. 2. E-01	L.T. 3. E-01	L.T. 2. E-01
GAMMA SPECTRUM ANALYSIS					
BE-7	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01
K-40	1.70+-0.17E 03	1.76+-0.18E 03	1.70+-0.17E 03	1.58+-0.16E 03	1.51+-0.15E 03
MN-54	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
CO-58	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
FE-59	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 9. E 00
CO-60	L.T. 4. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00
ZN-65	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00	L.T. 9. E 00
ZR-95	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00
RU-103	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 4. E 00
RU-106	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01
I-131	L.T. 8. E 00	L.T. 8. E 00	L.T. 9. E 00	L.T. 1. E 02	L.T. 5. E 00
CS-134	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00
CS-137	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 5. E 00
BA-140	L.T. 5. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 4. E 00
CE-141	L.T. 8. E 00	L.T. 9. E 00	L.T. 9. E 00	L.T. 1. E 01	L.T. 8. E 00
CE-144	L.T. 3. E 01	L.T. 3. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 3. E 01
RA-226	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02
TH-228	L.T. 8. E 00	L.T. 9. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 9. E 00

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
M I L K (GOAT)
(PCI/LITER)
STATION NUMBER P-2

DATE COLLECTED	10/08	10/22	11/12	11/26	11/26 (a)	12/10
RADIOCHEMICAL ANALYSIS						
I-131	L.T. 3. E-01	L.T. 2. E-01	L.T. 3. E-01	L.T. 3. E-01	L.T. 4. E-01	L.T. 2. E-01
GAMMA SPECTRUM ANALYSIS						
BE-7	L.T. 4. E 01	L.T. 3. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 6. E 01	L.T. 4. E 01
K-40	1.82+-0.18E 03	1.72+-0.17E 03	1.32+-0.13E 03	1.60+-0.16E 03	1.60+-0.16E 03	1.62+-0.16E 03
MN-54	L.T. 4. E 00	L.T. 4. E 00	L.T. 3. E 00	L.T. 4. E 00	L.T. 7. E 00	L.T. 4. E 00
CO-58	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 7. E 00	L.T. 4. E 00
FE-59	L.T. 1. E 01	L.T. 9. E 00	L.T. 3. E 00	L.T. 8. E 00	L.T. 2. E 01	L.T. 1. E 01
CO-60	L.T. 4. E 00	L.T. 4. E 00	L.T. 3. E 00	L.T. 5. E 00	L.T. 7. E 00	L.T. 4. E 00
ZN-65	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 5. E 00	L.T. 2. E 01	L.T. 1. E 01
ZR-95	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 8. E 00	L.T. 4. E 00
RU-103	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 8. E 00	L.T. 5. E 00
RU-106	L.T. 4. E 01	L.T. 3. E 01	L.T. 3. E 01	L.T. 4. E 01	L.T. 6. E 01	L.T. 4. E 01
I-131	L.T. 8. E 00	L.T. 5. E 00	L.T. 8. E 00	L.T. 5. E 00	L.T. 1. E 01	L.T. 9. E 00
CS-134	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 8. E 00	L.T. 4. E 00
CS-137	L.T. 5. E 00	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 7. E 00	L.T. 5. E 00
BA-140	L.T. 6. E 00	L.T. 3. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 1. E 01	L.T. 6. E 00
CE-141	L.T. 9. E 00	L.T. 7. E 00	L.T. 9. E 00	L.T. 7. E 00	L.T. 1. E 01	L.T. 9. E 00
CE-144	L.T. 4. E 01	L.T. 3. E 01	L.T. 3. E 01	L.T. 3. E 01	L.T. 5. E 01	L.T. 4. E 01
RA-226	L.T. 1. E 02	L.T. 9. E 01	L.T. 1. E 02	L.T. 9. E 01	L.T. 2. E 02	L.T. 1. E 02
TH-228	L.T. 9. E 00	L.T. 8. E 00	L.T. 8. E 00	L.T. 9. E 00	L.T. 1. E 01	L.T. 9. E 00

(a) Duplicate analysis

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
M I L K
(PCI/LITER)
STATION NUMBER G-5

DATE COLLECTED	01/08	02/12	03/12	04/09	04/24
RADIOCHEMICAL ANALYSIS					
I-131	L.T. 4. E-01	L.T. 2. E-01	L.T. 3. E-01	L.T. 2. E-01	L.T. 3. E-01
GAMMA SPECTRUM ANALYSIS					
BE-7	L.T. 3. E 01	L.T. 4. E 01	L.T. 5. E 01	L.T. 5. E 01	L.T. 5. E 01
K-40	1.35+-0.14E 03	1.24+-0.12E 03	1.37+-0.14E 03	1.03+-0.10E 03	1.19+-0.12E 03
MN-54	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 5. E 00
CO-58	L.T. 3. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 5. E 00
FE-59	L.T. 8. E 00	L.T. 9. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01
CO-60	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 5. E 00
ZN-65	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01
ZR-95	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 5. E 00
RU-103	L.T. 4. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 6. E 00
RU-106	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 5. E 01	L.T. 5. E 01
I-131	L.T. 5. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01	L.T. 9. E 00
CS-134	L.T. 4. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 6. E 00
CS-137	L.T. 5. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 7. E 00	L.T. 6. E 00
BA-140	L.T. 4. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 8. E 00	L.T. 7. E 00
CE-141	L.T. 6. E 00	L.T. 9. E 00	L.T. 9. E 00	L.T. 1. E 01	L.T. 1. E 01
CE-144	L.T. 3. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01
RA-226	L.T. 8. E 01	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02
TH-228	L.T. 8. E 00	L.T. 9. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
M I L K
(PCI/LITER)
STATION NUMBER C-5

DATE COLLECTED	05/14	05/28	06/11	06/25	07/09	07/23
RADIOCHEMICAL ANALYSIS						
I-131	L.T. 3. E-01	L.T. 3. E-01	L.T. 2. E-01	L.T. 2. E-01	L.T. 3. E-01	L.T. 3. E-01
GAMMA SPECTRUM ANALYSIS						
BE-7	L.T. 9. E 01	L.T. 6. E 01	L.T. 4. E 01	L.T. 5. E 01	L.T. 4. E 01	L.T. 5. E 01
K-40	1.20+-0.12E 03	1.15+-0.12E 03	1.10+-0.11E 03	1.04+-0.10E 03	1.24+-0.12E 03	5.25+-0.53E 02
MN-54	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 5. E 00
CO-58	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 5. E 00
FE-59	L.T. 9. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01
CO-60	L.T. 4. E 00	L.T. 7. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 6. E 00
ZN-65	L.T. 9. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01
ZR-95	L.T. 5. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 6. E 00
RU-103	L.T. 5. E 00	L.T. 7. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 6. E 00
RU-106	L.T. 4. E 01	L.T. 5. E 01	L.T. 4. E 01	L.T. 5. E 01	L.T. 4. E 01	L.T. 5. E 01
I-131	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00	L.T. 9. E 00	L.T. 7. E 00	L.T. 1. E 01
CS-134	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 6. E 00
CS-137	L.T. 5. E 00	L.T. 6. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 6. E 00
BA-140	L.T. 8. E 00	L.T. 7. E 00	L.T. 6. E 00	L.T. 7. E 00	L.T. 5. E 00	L.T. 7. E 00
CE-141	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01
CE-144	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 3. E 01	L.T. 4. E 01
RA-226	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02
TH-228	L.T. 9. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
M I L K
(PCI/LITER)
STATION NUMBER S-3

DATE COLLECTED	01/08	01/08 (a)	02/12	03/12	04/09
RADIOCHEMICAL ANALYSIS					
I-131	L.T. 3. E-01	L.T. 2. E-01	L.T. 3. E-01	L.T. 3. E-01	L.T. 2. E-01
GAMMA SPECTRUM ANALYSIS					
BE-7	L.T. 3. E 01	L.T. 3. E 01	L.T. 6. E 01	L.T. 4. E 01	L.T. 5. E 01
K-40	1.54+-0.15E 03	1.38+-0.14E 03	1.22+-0.12E 03	1.32+-0.13E 03	1.16+-0.12E 03
MN-54	L.T. 4. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 5. E 00
CO-58	L.T. 4. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 5. E 00
FE-59	L.T. 8. E 00	L.T. 9. E 00	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01
CO-60	L.T. 4. E 00	L.T. 4. E 00	L.T. 7. E 00	L.T. 4. E 00	L.T. 5. E 00
ZN-65	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01
ZR-95	L.T. 4. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 5. E 00
RU-103	L.T. 4. E 00	L.T. 4. E 00	L.T. 8. E 00	L.T. 4. E 00	L.T. 6. E 00
RU-106	L.T. 4. E 01	L.T. 4. E 01	L.T. 5. E 01	L.T. 3. E 01	L.T. 5. E 01
I-131	L.T. 5. E 00	L.T. 7. E 00	L.T. 1. E 01	L.T. 7. E 00	L.T. 1. E 01
CS-134	L.T. 4. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 6. E 00
CS-137	L.T. 4. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 7. E 00
BA-140	L.T. 5. E 00	L.T. 5. E 00	L.T. 9. E 00	L.T. 5. E 00	L.T. 7. E 00
CE-141	L.T. 7. E 00	L.T. 7. E 00	L.T. 1. E 01	L.T. 6. E 00	L.T. 1. E 01
CE-144	L.T. 3. E 01	L.T. 3. E 01	L.T. 5. E 01	L.T. 3. E 01	L.T. 4. E 01
RA-226	L.T. 9. E 01	L.T. 9. E 01	L.T. 1. E 02	L.T. 9. E 01	L.T. 1. E 02
TH-228	L.T. 9. E 00	L.T. 8. E 00	L.T. 1. E 01	L.T. 8. E 00	L.T. 9. E 00

(a) Duplicate analysis

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
M I L K
(PCI/LITER)
STATION NUMBER S-3

DATE COLLECTED	04/24	05/14	05/28	06/11	06/25	07/23
RADIOCHEMICAL ANALYSIS						
I-131	L.T. 2. E-01	L.T. 3. E-01	L.T. 3. E-01	L.T. 2. E-01	L.T. 2. E-01	L.T. 3. E-01
GAMMA SPECTRUM ANALYSIS						
BE-7	L.T. 7. E 01	L.T. 6. E 01	L.T. 4. E 01	L.T. 6. E 01	L.T. 5. E 01	L.T. 4. E 01
K-40	1.28+-0.13E 03	1.14+-0.11E 03	1.32+-0.13E 03	1.33+-0.13E 03	1.25+-0.13E 03	1.27+-0.13E 03
MN-54	L.T. 7. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 4. E 00
CO-58	L.T. 7. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 5. E 00	L.T. 5. E 00	L.T. 4. E 00
FE-59	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00
CO-60	L.T. 7. E 00	L.T. 7. E 00	L.T. 5. E 00	L.T. 7. E 00	L.T. 6. E 00	L.T. 4. E 00
ZN-65	L.T. 2. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01
ZR-95	L.T. 8. E 00	L.T. 6. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 5. E 00	L.T. 4. E 00
RU-103	L.T. 9. E 00	L.T. 7. E 00	L.T. 4. E 00	L.T. 7. E 00	L.T. 6. E 00	L.T. 5. E 00
RU-106	L.T. 7. E 01	L.T. 5. E 01	L.T. 4. E 01	L.T. 5. E 01	L.T. 5. E 01	L.T. 4. E 01
I-131	L.T. 1. E 01	L.T. 1. E 01	L.T. 3. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 8. E 00
CS-134	L.T. 9. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 4. E 00
CS-137	L.T. 8. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 5. E 00
BA-140	L.T. 9. E 00	L.T. 8. E 00	L.T. 5. E 00	L.T. 7. E 00	L.T. 7. E 00	L.T. 5. E 00
CE-141	L.T. 2. E 01	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00
CE-144	L.T. 7. E 01	L.T. 4. E 01	L.T. 3. E 01	L.T. 4. E 01	L.T. 4. E 01	L.T. 4. E 01
RA-226	L.T. 2. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02
TH-228	L.T. 2. E 01	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
M I L K
(PCI/LITER)
STATION NUMBER S-3

DATE COLLECTED	07/09	08/13	08/27	09/10	09/24
RADIOCHEMICAL ANALYSIS					
I-131	L.T. 3. E-01	L.T. 4. E-01	L.T. 2. E-01	L.T. 2. E-01	L.T. 3. E-01
GAMMA SPECTRUM ANALYSIS					
BE-7	L.T. 7. E 01	L.T. 6. E 01	L.T. 5. E 01	L.T. 4. E 01	L.T. 6. E 01
K-40	1.24+-0.12E 03	1.30+-0.13E 03	1.17+-0.12E 03	1.38+-0.14E 03	1.43+-0.14E 03
MN-54	L.T. 6. E 00	L.T. 6. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 7. E 00
CO-58	L.T. 7. E 00	L.T. 6. E 00	L.T. 5. E 00	L.T. 4. E 00	L.T. 7. E 00
FE-59	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01
CO-60	L.T. 6. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 5. E 00	L.T. 7. E 00
ZN-65	L.T. 2. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 5. E 00	L.T. 2. E 01
ZR-95	L.T. 7. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 7. E 00
RU-103	L.T. 8. E 00	L.T. 7. E 00	L.T. 7. E 00	L.T. 4. E 00	L.T. 7. E 00
RU-106	L.T. 6. E 01	L.T. 5. E 01	L.T. 5. E 01	L.T. 3. E 01	L.T. 6. E 01
I-131	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00	L.T. 9. E 00
CS-134	L.T. 8. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 7. E 00
CS-137	L.T. 7. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 7. E 00
BA-140	L.T. 1. E 01	L.T. 9. E 00	L.T. 8. E 00	L.T. 5. E 00	L.T. 7. E 00
CE-141	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01
CE-144	L.T. 5. E 01	L.T. 5. E 01	L.T. 4. E 01	L.T. 3. E 01	L.T. 5. E 01
RA-226	L.T. 2. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 2. E 02
TH-228	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - INGESTION
M I L K
(PCI/LITER)
STATION NUMBER S-3

DATE COLLECTED	10/05	10/22	11/12	11/12 (a)	11/26	12/10
RADIOCHEMICAL ANALYSIS						
I-131	L.T. 2. E-01	L.T. 3. E-01	L.T. 5. E-01	L.T. 4. E-01	L.T. 2. E-01	L.T. 3. E-01
GAMMA SPECTRUM ANALYSIS						
BE-7	L.T. 5. E 01	L.T. 3. E 01	L.T. 5. E 01	L.T. 7. E 01	L.T. 4. E 01	L.T. 6. E 01
K-40	1.28+-0.13E 03	1.29+-0.13E 03	1.76+-0.18E 03	1.62+-0.16E 03	1.32+-0.13E 03	1.28+-0.13E 03
MN-54	L.T. 5. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 5. E 00
CO-58	L.T. 5. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 4. E 00	L.T. 6. E 00
FE-59	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01
CO-60	L.T. 6. E 00	L.T. 5. E 00	L.T. 6. E 00	L.T. 7. E 00	L.T. 5. E 00	L.T. 7. E 00
ZN-65	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01	L.T. 1. E 01
ZR-95	L.T. 5. E 00	L.T. 4. E 00	L.T. 7. E 00	L.T. 6. E 00	L.T. 5. E 00	L.T. 6. E 00
RU-103	L.T. 6. E 00	L.T. 4. E 00	L.T. 7. E 00	L.T. 8. E 00	L.T. 4. E 00	L.T. 7. E 00
RU-106	L.T. 5. E 01	L.T. 3. E 01	L.T. 5. E 01	L.T. 6. E 01	L.T. 3. E 01	L.T. 5. E 01
I-131	L.T. 1. E 01	L.T. 5. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01
CS-134	L.T. 6. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 6. E 00	L.T. 5. E 00	L.T. 6. E 00
CS-137	L.T. 6. E 00	L.T. 4. E 00	L.T. 6. E 00	L.T. 7. E 00	L.T. 4. E 00	L.T. 6. E 00
BA-140	L.T. 7. E 00	L.T. 4. E 00	L.T. 8. E 00	L.T. 9. E 00	L.T. 5. E 00	L.T. 8. E 00
CE-141	L.T. 1. E 01	L.T. 7. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01
CE-144	L.T. 4. E 01	L.T. 3. E 01	L.T. 5. E 01	L.T. 5. E 01	L.T. 3. E 01	L.T. 4. E 01
RA-226	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02	L.T. 1. E 02
TH-228	L.T. 1. E 01	L.T. 8. E 00	L.T. 1. E 01	L.T. 1. E 01	L.T. 9. E 00	L.T. 1. E 01

(a) Duplicate analysis

KANSAS GAS AND ELECTRIC CO
P O BOX 208 SHORELINE SEDIMENT

(PCI/GM DRY)
STATION NUMBER JAK

DATE COLLECTED 06/26

GAMMA SPECTRUM ANALYSIS	SHORELINE SED.
BE-7	L.T. 3. E-01
K-40	1.04+-0.10E 01
MN-54	L.T. 3. E-02
CO-58	L.T. 3. E-02
FE-59	L.T. 7. E-02
CO-60	L.T. 3. E-02
ZN-65	L.T. 7. E-02
ZR-95	L.T. 4. E-02
RU-103	L.T. 4. E-02
RU-106	L.T. 3. E-01
I-131	L.T. 9. E-02
CS-134	L.T. 4. E-02
CS-137	1.71+-0.35E-01
BA-140	L.T. 8. E-02
CE-141	L.T. 6. E-02
CE-144	L.T. 2. E-01
RA-226	2.65+-0.56E 00
TH-228	1.65+-0.17E 00

KANSAS GAS AND ELECTRIC CO
P O BOX 208

SHORELINE SEDIMENT

(PCI/GM DRY)
STATION NUMBER CC

DATE COLLECTED	05/21	10/15
GAMMA SPECTRUM ANALYSIS	SHORELINE SED.	SHORELINE SED.
BE-7	L.T. 4. E-01	5.41+-1.85E-01
K-40	1.15+-0.12E 01	1.20+-0.12E 01
MN-54	L.T. 4. E-02	L.T. 2. E-02
CO-58	L.T. 4. E-02	L.T. 3. E-02
FE-59	L.T. 1. E-01	L.T. 5. E-02
CO-60	L.T. 3. E-02	L.T. 2. E-02
ZN-65	L.T. 8. E-02	L.T. 5. E-02
ZR-95	L.T. 5. E-02	L.T. 3. E-02
RU-103	L.T. 5. E-02	L.T. 3. E-02
RU-106	L.T. 3. E-01	L.T. 2. E-01
I-131	L.T. 4. E-01	L.T. 1. E-01
CS-134	L.T. 4. E-02	L.T. 3. E-02
CS-137	2.22+-0.38E-01	5.04+-1.40E-02
BA-140	L.T. 2. E-01	L.T. 7. E-02
CE-141	L.T. 9. E-02	L.T. 6. E-02
CE-144	L.T. 2. E-01	L.T. 2. E-01
RA-226	1.57+-0.55E 00	3.14+-0.46E 00
TH-228	1.36+-0.14E 00	1.70+-0.17E 00

KANSAS GAS AND ELECTRIC CO
P O BOX 208

SHORELINE SEDIMENT

(PCI/GM DRY)

STATION NUMBER NP

DATE COLLECTED	08/28	11/18
GAMMA SPECTRUM ANALYSIS	SHORELINE SED.	SHORELINE SED.
BE-7	L.T. 4. E-01	L.T. 6. E-01
K-40	1.56+-0.16E 01	1.44+-0.14E 01
MN-54	L.T. 5. E-02	L.T. 5. E-02
CO-58	L.T. 5. E-02	L.T. 6. E-02
FE-59	L.T. 1. E-01	L.T. 1. E-01
CO-60	L.T. 4. E-02	L.T. 5. E-02
ZN-65	L.T. 1. E-01	L.T. 1. E-01
ZR-95	L.T. 6. E-02	L.T. 6. E-02
RU-103	L.T. 5. E-02	L.T. 7. E-02
RU-106	L.T. 4. E-01	L.T. 4. E-01
I-131	L.T. 1. E-01	L.T. 5. E-01
CS-134	L.T. 6. E-02	L.T. 6. E-02
CS-137	7.11+-0.71E-01	2.64+-0.49E-01
BA-140	L.T. 1. E-01	L.T. 2. E-01
CE-141	L.T. 8. E-02	L.T. 1. E-01
CE-144	L.T. 3. E-01	L.T. 3. E-01
RA-226	3.34+-0.75E 00	2.67+-0.71E 00
TH-228	1.37+-0.14E 00	1.37+-0.14E 00

KANSAS GAS AND ELECTRIC CO
P O BOX 208
EXPOSURE PATHWAY - AQUATIC
VEGETATION - AQUATIC
(PCI/GM WET)
STATION NUMBER CC

DATE COLLECTED	05/21 (a)	05/21 (a)	10/15 (a)
GAMMA SPECTRUM ANALYSIS	ALGAE	ROOTED AQUATIC	ROOTED AQUATIC
BE-7	1.66+-0.17E 00	2.34+-1.28E-01	5.41+-0.86E-01
K-40	3.5e+-0.3eE 00	3.25+-0.33E 00	2.36+-0.24E 00
MN-54	L.T. 6. E-03	L.T. 1. E-02	L.T. 6. E-03
CO-58	L.T. 7. E-03	L.T. 2. E-02	4.70+-0.89E-02
FE-59	L.T. 2. E-02	L.T. 4. E-02	L.T. 2. E-02
CO-60	L.T. 8. E-03	L.T. 1. E-02	L.T. 7. E-03
ZN-65	L.T. 2. E-02	L.T. 3. E-02	L.T. 2. E-02
ZR-95	L.T. 9. E-04	L.T. 2. E-02	L.T. 9. E-03
RU-103	L.T. 9. E-03	L.T. 2. E-02	L.T. 1. E-02
RU-106	L.T. 6. E-02	L.T. 1. E-01	L.T. 6. E-02
I-131	L.T. 3. E-02	L.T. 6. E-02	L.T. 4. E-02
CS-134	L.T. 8. E-03	L.T. 2. E-02	L.T. 8. E-03
CS-137	1.33+-0.61E-02	4.85+-1.38E-02	1.44+-1.5eE-02
BA-140	L.T. 1. E-02	L.T. 3. E-02	L.T. 3. E-02
CE-141	L.T. 2. E-02	L.T. 3. E-02	L.T. 2. E-02
CE-144	L.T. 6. E-02	L.T. 1. E-01	L.T. 6. E-02
RA-226	L.T. 2. E-01	L.T. 3. E-01	L.T. 2. E-01
TH-228	5.87+-0.53E-02	1.54+-0.16E-01	5.36+-0.79E-02

(a) State split

KANSAS GAS AND ELECTRIC COMPANY

GLENN L. KOESTER
VICE PRESIDENT - NUCLEAR

April 30, 1986

Mr. R. D. Martin, Regional Administrator
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

KMLNRC 86-077
Re: Docket No. STN 50-482
Subj: Annual Radiological Environmental Operating Report

Dear Mr. Martin:

Enclosed is the Annual Radiological Environmental Operating Report which is being submitted pursuant to Wolf Creek Generating Station Technical Specification 6.9.1.6. This report covers the operation of Wolf Creek Generating Station for the period of March 11, 1985, to December 31, 1985.

Yours very truly,

Glenn L Koester

Glenn L. Koester
Vice President - Nuclear

GLK:see

cc: PO'Connor (2)
JCummins
Document Control Desk (18)

IE25
1/18