William S. Orser
Senior Vice President

Detroit Edison

Fermi 2
6400 North Dixie Highway
Newport, Michigan 48166
(313) 586-5201

Nuclear Operations

April 30, 1992
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U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Reference: Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43

Subject: Annual Radiological Environmental Operating Report

Pursuant to section 6.9.1.7 of the Technical Specifications, please find attached the 1991 Annual Radiological Environmental Operating Report for Fermi 2.

If you should have any questions or comments regarding this report, please contact Joseph Pendergast, Compliance Engineer, at (313) 586-1682.

Sincerely,

cc: T. G. Colburn (w/encl.)
A. B. Davis (w/encl.)
M. P. Phillips (w/encl.)
S. Stasek (w/encl.)
Region III (w/encl.)

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1991 ANNUAL RADIOLOGICAL ENVIRONMENTAL MONITORING REPORT

Detroit
Edison
Company

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The Annual Radiological Environmental Monitoring Report is a detailed report on the Radiological Environmental Monitoring Program (REMP) conducted at Detroit Edison's Fermi 2 from January 1 through December 31, 1991.

In 1991, more than 1000 environmental samples were collected for the REMP. These samples represented direct radiation; atmospheric, terrestrial, and aquatic environments; and Lake Erie surface water and municipal drinking water supplies. More than 2000 laboratory analyses were performed on these environmental samples. The results showed that radioactivity levels were not significantly increased from the radioactivity levels detected prior to the operation of the plant.

Direct radiation measurements were taken at 63 locations using thermoluminescent dosimeters. The average quarterly dose was 13.6 mrem/standard quarter and is consistent with ambient radiation levels measured prior to the operation of the plant.

Atmospheric monitoring results for 1991 were within the same range as measurements made prior to the operation of the plant. No radioactivity attributable to the operation of Fermi 2 was detected in any atmospheric samples during 1991.

Terrestrial monitoring of leafy garden vegetables, milk, and grass showed naturally occurring radioactivity and radioactivity associated with past weapons testing and the nuclear accident at Chernobyl (U.S.S.R.). The radioactivity levels detected were consistent with the preoperational and, with the exception of 1986, the year of the accident at Chernobyl, prior operational levels.

Aquatic monitoring includes analysis of fish samples, shoreline sediment samples, and lake bottom sediment samples. One lake bottom sediment sample, taken about 200 feet offshore of the Fermi 2 liquid discharge point, showed radioactivity attributable to liquid discharges from Fermi 2. This finding is not unexpected given the proximity of the sample location to the liquid effluent discharge point, and the amount of radioactivity in this sample is not large: It is less than the amount of natural radioactivity seen in other sediment samples in 1991. Since this activity is on the lake bottom offshore from Fermi 2 it is almost inaccessible to the public. All other sample media from the Fermi 2 REMP program showed radioactivity levels that were consistent with levels detected prior to the operation of the plant.

Drinking water, surface water, and groundwater monitoring results were consistent with the results obtained prior to the operation of the plant. None of the 1991 water samples showed detectable radioactivity due to the operation of Fermi 2.

The maximum dose to a member of the general public due to radioactivity released as gaseous effluents was less than 0.1% of the annual limit.

The maximum dose to a member of the general public due to radioactivity released as liquid effluents was less than 0.1% of the annual limit.

Comparisons of 1991 environmental data, pre-1991 data, and preoperational data showed that the operation of Fermi 2 had no significant radiological impact upon the environment.

In October of 1991, sediment samples were collected in the cooling water discharge canal as part of the Fermi 1 Environmental Monitoring Program. These samples showed low concentrations of Mn-54, Co-60, Zn-65, and Cs-137. Given that Mn-54 and Zn-65 have short half lives (approximately 250 days), and that the last discharge from Fermi 1 was made in June 1975, it is unlikely that these radioisotopes in these samples resulted from the operation of Fermi 1. Detroit Edison believes that the radioactivity in these sediments is the result of the recirculation of plant liquid effluent releases. Detroit Edison is conducting additional sampling and monitoring to evaluate the recirculation of liquid releases. The evaluation of this additional sampling and monitoring will be provided when it is complete.

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

INTRODUCTION

The purpose of the Radiological Environmental Monitoring Program (REMP) is to assess the environmental impact of operating Fermi 2. This program also provides the verification of the effluent monitoring program during routine operation of the plant and serves as an in place sampling network in the event of an accidental release. Monitoring stations are placed at pre-determined locations which measure any effects from operating the plant, and at control locations which are beyond the influence of the plant. At Fermi 2, the monitoring program is designed to measure radiation exposure to the public.

Exposure to the public can occur through direct pathways such as inhalation or immersion, or indirectly through the food chain. These exposure pathways are monitored using thermoluminescent dosimeters (TLDs), and by the collection of air, milk, garden produce, water, fish, and sediment samples.

Direct exposure by inhalation or immersion is measured both by TLDs and by collection of air samples. TLDs continuously monitor the radiation environment and provide a direct measurement of ambient gamma radiation levels. The locations of both the TLD and air sampling sites were chosen with respect to the meteorology and population distribution around Fermi 2. Air samples are collected through a particulate filter and an activated charcoal filter in tandem using continuously running air samplers. The particulate filters are analyzed individually for gross beta activity and composited for gamma spectrum analysis. The charcoal filters are analyzed for Iodine-131 (I-131).

Radionuclides can enter the food chain through atmospheric or liquid discharges from the plant. Radionuclides released to the atmosphere, such as I-131, may be deposited on agricultural land and then ingested by dairy cows or goats, becoming concentrated in the animal's milk. Radionuclides can also become incorporated in garden produce such as green leafy vegetables.

Monitoring for radionuclides due to liquid discharges includes collection of surface and drinking water, fish and sediment samples. These samples are collected upstream of the plant discharge as a control location, and at the discharge and downstream of the discharge as an indicator location.

Fish are sampled semiannually and the species collected correspond to those that may be consumed by the local population. Fish are good indicators because they tend to concentrate radionuclides by ingestion and provide an effective mechanism for integrating the variable concentrations of radionuclides in the water over extended periods.

Sediments are also collected semiannually. Sediment, in the vicinity of the liquid radwaste discharge, represents the most likely site for accumulation of radionuclides in the aquatic environment and, with long-lived radionuclides, a gradual increase in radioactivity concentration is expected over time. Sediments, therefore, provides a long-term indication of change that may appear in other sample media (i.e., water and fish samples).

PREOPERATIONAL PROGRAM

All nuclear power plants are required by the Nuclear Regulatory Commission (NRC) to conduct radiological environmental monitoring before construction of a facility. This preoperational program at Fermi 2 was aimed at collecting data needed to identify critical pathways, and determine the existing levels of radiation and radioactive products occurring naturally and from man-made sources in the vicinity of the plant.

Fermi 2 began its preoperational program seven years (1978) before the plant began producing power in 1985. The data accumulated during those years established a baseline for which to compare operational data. The program consisted of monitoring air, drinking water, surface water, lake sediments, milk, vegetables, fish, and direct radiation in the environment in the vicinity of Fermi 2. The elements that made up the preoperational monitoring program are still in effect today.

OPERATIONAL PROGRAM

The preoperational program became the operational program in June of 1985 when initial criticality was achieved for the Fermi 2 reactor. The sampling and analysis program in the operational phase continuously monitors direct radiation, radioactivity in air, lake sediments and water, drinking water, groundwater, cow and goat milk, and local garden vegetables.

QUALITY ASSURANCE

An important part of the environmental monitoring program at Fermi 2 is Quality Assurance (QA). QA is the program which provides a method to check the adequacy and validity of the monitoring program. It accomplishes this by independent annual audits by qualified personnel, strict adherence to written procedures, and good record keeping practices. The QA program is designed to identify possible deficiencies in the REMP so that corrective actions can be initiated promptly

The QA program at Fermi 2 is conducted in accordance with the guidelines specified in NRC Regulatory Guide 4.15, "Quality Assurance for Radiological Monitoring Programs".

Detroit Edison requires its contract analytical laboratory to participate in the United States Environmental Protection Agency's (EPA) crosscheck program. In the EPA crosscheck program, participant laboratories receive from the EPA environmental samples of known activity for analysis. After the samples have been analyzed by the laboratory, the EPA reports the known activity of the samples to the laboratory. The laboratory's results are compared to the EPA reported concentrations to determine any deviations. In 1991, Teledyne Isotopes correctly analyzed, within one standard deviation, 92% of the EPA crosscheck samples. Of the six samples which did not fall within this range, four were within two standard deviations, and two were within three standard deviations of the EPA values. Participation in this program provides assurance that the laboratory is capable of meeting accepted criteria for radioactivity analysis. The results of the 1991 EPA crosscheck program are tabulated in Appendix A.

TERRESTRIAL MONITORING PROGRAM

TERRESTRIAL MONITORING PROGRAM

INTRODUCTION

The terrestrial monitoring portion of the REMP provides for a continuous surveillance of the non-aquatic environment surrounding Fermi 2. The program consists of monitoring the atmosphere, milk, grass, and vegetables for radioactivity that might originate from the operation of the plant. The program also monitors direct radiation in the environment surrounding Fermi 2. The following sections discuss the type and frequency of terrestrial sampling, analyses performed, and a comparison of 1991 data to previous operational and preoperational data.

DIRECT RADIATION

Detroit Edison uses thermoluminescent dosimeters (TLDs) to measure direct gamma radiation in the invirons of Fermi 2. Teledyne Isotopes environmental TLDs are presently being used to measure direct radiation. These dosimeters are 25% by weight Calcium Sulfate encased in Teflon. The TLDs are thoroughly tested to comply with NRC Regulatory Guide 4.13 and American National Standards Institute's (ANSI) publication N545-1975, which assure accurate measurements under varying environmental conditions before being placed in the field. While in the field, these TLDs are exposed to background radiation and, if measurable, gaseous effluents and direct radiation from Fermi 2. Environmental TLDs are exchanged and processed on a quarterly basis. Indicator TLDs are located within a ten mile radius of the plant and control TLDs are located greater than ten miles.

The average exposure for indicator TLDs during the preoperational program was 17.3 mRem/Std Qtr and 17.5 mRem/Std Qtr for control TLDs. The annual average exposure for indicator TLDs ranged from 13.6 mRem/Std Qtr to 21.0 mRem/Std Qtr. The annual average exposure for control TLDs ranged from 15.5 mRem/Std Qtr to 21.9 mRem/Std Qtr.

From 1985 to 1990 the average exposure for indicator TLDs was 16.6 mRem/Std Qtr and 17.4 mRem/Std Qtr for control TLDs. The annual average exposure for indicator TLDs ranged from 14.7 mRem/Std Qtr to 20.3 mRem/Std Qtr. The annual average exposure means for control TLDs ranged from 13.9 mRem/Std Qtr to 22.2 mRem/Std Qtr. As Figure 3-1 shows, the operational period from 1985 to 1990 was consistent with the preoperational program.

In 1991, the TLD monitoring program included sixty-three (63) TLDs. The indicator TLDs had an average exposure of 13.6 mRem/Std Qtr and ranged from 9.5 to 18.6 mRem/Std Qtr. The control TLDs had an average exposure of 13.4 mRem/Std Qtr and ranged from 11.5 to 15.1 mRem/Std Qtr. As Figure 3-1 shows, the average exposure for indicator and control TLDs was slightly lower than previous years, including preoperational years.

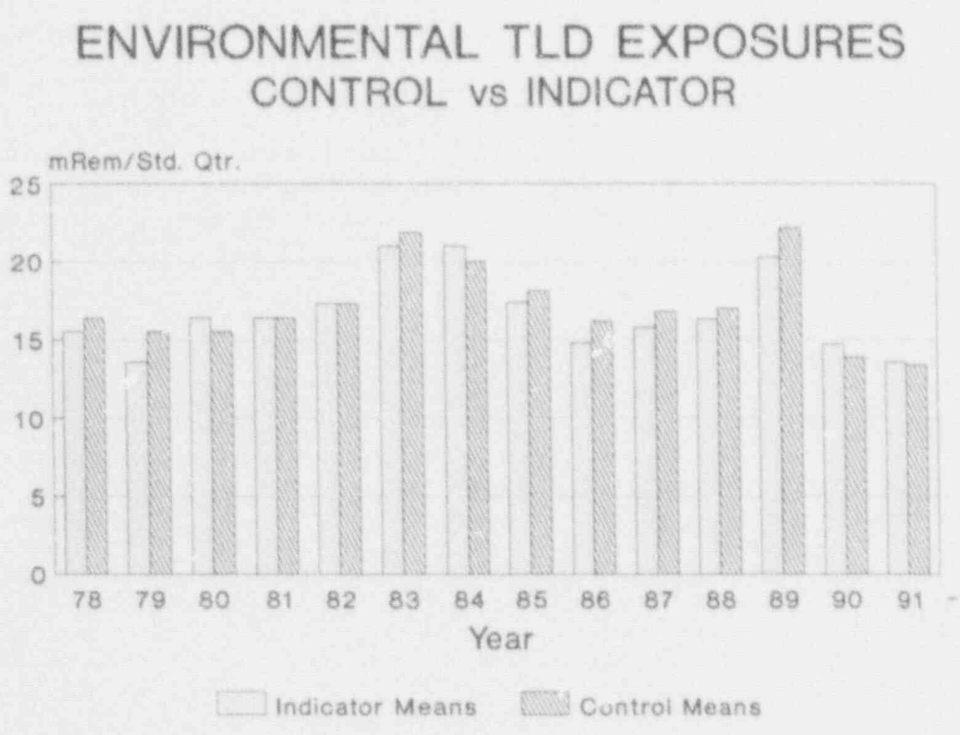


Figure 3-1

AIR SAMPLING

Detroit Edison continuously samples the atmosphere surrounding Fermi 2 for radioactivity. Air sampling began in 1979, during the preoperational program. At each sampling location a mechanical air sampler is used to draw a continuous volume of air through two filters designed to collect particulates and radioiodines. Air samples are collected weekly and analyzed for gross beta and Iodine-131 activities. The particulate filters for each sampling location are combined on a quarterly basis to form a "composite sample" and are analyzed for Strontium 89/90 and gamma emitting isotopes. There are four indicator sampling locations which were selected based on an evaluation of the predominant wind directions. A fifth sampling location is approximately 14 miles west of the plant and is considered to be a control location unaffected by the operation of the plant.

During the preoperational program, excluding the year 1981, the average gross beta for indicator air samples was 2.6E-2 pCi/cubic meter and ranged from 2.0E-2 to 4.0E-2 pCi/cubic meter. The average gross beta for the control samples was 2.5E-2 pCi/cubic meter and ranged from 1.9E-2 to 3.5E-2 pCi/cubic meter.

In late 1980, the Peoples Republic of China conducted an atmospheric nuclear weapon test. The fallout from this test was detected in Fermi 2 environmental air samples in 1981. The average gross beta for 1981 was 1.6E-1 pCi/cubic meter for indicator samples and 2.4E-1 pCi/cubic meter for control samples. Gamma spectroscopic analyses of the particulate filters revealed Cs-137, Ce-141, Ce-144, Ru-103, Ru-106, Zr-95, Nb-95, Mn-54, and Sb-125 in the atmosphere as a result of this test.

From 1985 to 1990 the average gross beta for indicator samples was 2.5E-2 pCi/cubic meter and ranged from 2.1E-2 pCi/cubic meter to 3.4E-2 pCi/cubic meter. The average gross beta for the control samples was 2.4E-2 pCi/cubic meter and ranged from 2.0E-2 pCi/cubic meter to 3.3E-2 pCi/cubic meter. In 1986, as shown in Figure 3-2, there was a slight increase in gross beta activity and a 2.7E-1 pCi/cubic meter "spike" in the Iodine-131 activity. These elevated activity levels have been attributed to the nuclear accident at Chernobyl (U.S.S.R.) on April 26, 1986. For the operational period from 1985 to 1991, excluding 1986, the air sampling data is consistent with the preoperational data.

ENVIRONMENTAL AIR SAMPLING
AVERAGE GROSS BETA and I-131

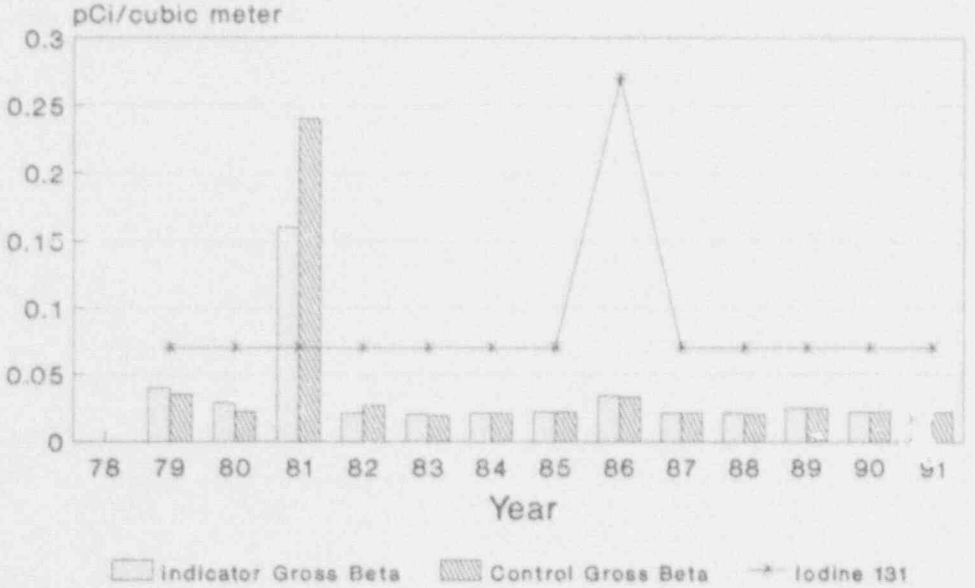


Figure 3-2

During 1991, two hundred and fifty-nine (259) particulate air filters were collected and analyzed for gross beta activity and two hundred and fifty-eight (258) charcoal filters were collected and analyzed for I-131. The average gross beta for indicator samples was 2.2E-2 pCi/cubic meter and ranged from 6.1E-3 to 3.4E-2 pCi/cubic meter. The average gross beta for control samples was also 2.2E-2 pCi/cubic meter and ranged from 1.1E-2 to 3.9E-2 pCi/cubic meter. The monthly average gross beta is shown in figure 3-3. The extremely small variations in the monthly gross beta averages are attributable to atmopheric factors such as wind patterns, percipitation, dust loading, pollen count, etc. None of the charcoal filters collected showed detectable levels of I-131.

Twenty (20) quarterly particulate filter composites were prepared and analyzed for Sr-89/90 and gamma emitting isotopes. Only naturally occurring K-40 and Be-7 were detected in these samples.

AIRBORNE PARTICULATE GROSS BETA
FOR 1991

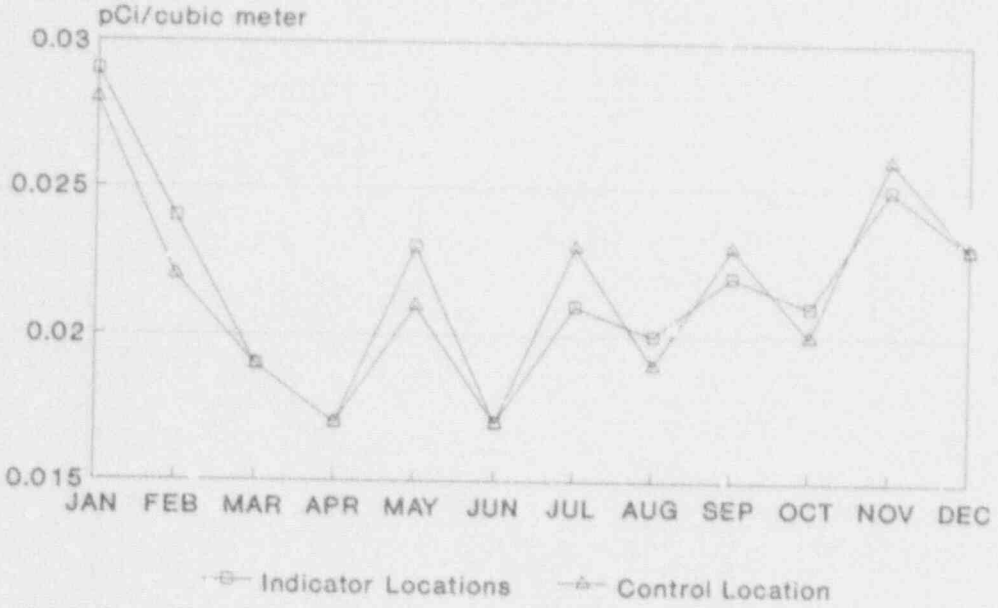


Figure 3-3

MILK AND GRASS SAMPLING

The milk and grass sampling portion of the REMP is perhaps the most important aspect of the program. This is because a major radiation exposure pathway to the public can be the consumption of milk from local grazing animals (dairy cows or goats).

Milk is collected from two indicator locations and one control location semimonthly when animals are on pasture and monthly at other times. The milk is analyzed for I-131, gamma emitting isotopes, and Sr-89/90.

Milk sampling began in 1979 in the preoperational program. During this time period milk samples were only analyzed for I-131 and gamma emitting isotopes. From 1979 to 1984 Cs-137 and naturally occurring K-40 were the only isotopes detected in milk samples.

During the operational period between 1985 and 1987, milk samples were also only analyzed for I-131 and gamma emitting isotopes. In 1986, after the nuclear accident at Chernobyl (U.S.S.R.) I-131 and Cs-137 were detected in both indicator and control milk samples. The analysis for Sr-89/90 began in 1988 and Sr-90 is now routinely detected in both indicator and control milk samples. The presence of Sr-90 in milk and other environmental samples is due to past atmospheric nuclear weapons testing. Naturally occurring K-40 was also detected in milk samples during this period. For the operational period from 1985 to 1990, excluding 1986, the milk sample data is consistent with the preoperational data.

During 1991, fifty-seven (57) milk samples were collected and analyzed for I-131, gamma emitting isotopes, and Sr-89/90. Naturally occurring K-40 was detected in both indicator and control samples in all fifty-seven samples. Both indicator and control samples had an average K-40 concentration of 1.3E+3 pCi/l. Sr-90 was also detected in both indicator and control milk samples. Cs-137 was detected in one indicator sample and can be attributed to past atmospheric nuclear weapons testing or to statistical variance in sample counting. Since Cs-137 has never been detected in any gaseous effluent sample from Fermi 2, and since the pathway from Fermi 2 to milk would be the deposition of gaseous effluents on the ground, it would appear that none of the Cs-137 activity in milk is due to Fermi 2 effluents. For 1991, the milk sampling data is consistent with prior operational data and preoperational data.

In 1970, the concentration of Sr-90 in local milk was 6 pCi/liter according to the Michigan Department of Health's "Milk Surveillance", Radiation Data and Reports, Vol. 11-15, 1970-1974. Figure 3-4 shows the calculated decay curve for the 1970 concentration of Sr-90 and the average concentrations since 1988. Figure 3-4 shows the inventory of Sr-90 in the local environment is decreasing with time and closely follows the calculated decay curve. This would suggest that the inventory of Sr-90 in the environment is due to past atmospheric nuclear weapons testing.

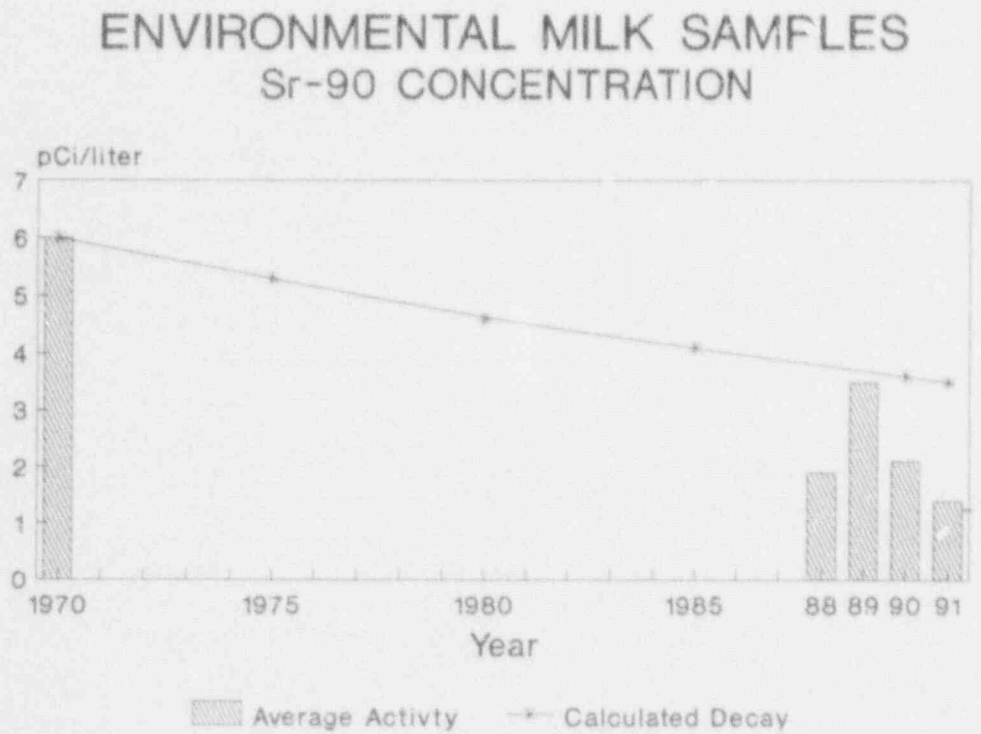


Figure 3-4

In addition to milk sampling, grass samples, when available, are collected at the control location and near the critical receptor's location during each sampling period and are analyzed for I-131 and gamma emitting isotopes. Grass samples are collected, instead of milk, adjacent to the critical receptor's location because the individuals at this residence do not participate in the REMP program.

Grass sampling began in 1985 in the operational program. During the operational period between 1985 and 1990, naturally occurring K-40 was detected in both indicator and control grass samples. Cs-137 was also detected in both indicator and control samples and had an average concentration of 5.5E+1 pCi/kg wet. In 1986, after the nuclear accident at Chernobyl (U.S.S.R.) I-131, Cs-134 and Cs-137 were detected in both indicator and control grass samples.

During 1991, twenty-four (24) grass samples were taken and analyzed for I-131 and gamma emitting isotopes. Naturally occurring K-40 and Be-7 were detected in both indicator and control grass samples. Cs-137 was also detected in both indicator and control samples. Two out of twelve indicator samples showed positive activity for Cs-137 and averaged 4.7E+1 pCi/kg wet. One control sample showed activity for Cs-137 at a concentration of 1.2E+1 pCi/kg wet. The presence of Cs-137 in grass samples is due to past atmospheric nuclear weapons testing and the nuclear accident at Chernobyl (U.S.S.R.). For 1991, the grass sample data is consistent with previous years.

GARDEN SAMPLING PROGRAM

Fermi 2 collects samples of leafy vegetables from indicator locations identified by the Annual Land Use Census. Samples are also collected at a control location that is at a distance and direction which is considered to be unaffected by plant operations. Samples are collected once a month during the growing season (June through September) and are analyzed for I-131 and gamma emitting isotopes.

Vegetable sampling started in 1982. During the preoperational program, only naturally occurring K-40 was detected in both indicator and control vegetable samples. During the operational period from 1985 to 1990, only naturally occurring K-40 was detected in both indicator and control vegetable samples.

During 1991, twenty-two (22) vegetable samples were collected and analyzed for I-131 and gamma emitting isotopes. Naturally occurring K-40 and Be-7 were detected in both indicator and control vegetable samples. One indicator sample showed activity for Cs-137 with a concentration of 1.2E+1 pCi/kg wet. The presence of Cs-137 in vegetable samples can be attributed to past atmospheric nuclear weapons testing and possibly to the nuclear accident at Chernobyl (U.S.S.R.). Since Cs-137 has never been detected in any gaseous effluent sample from Fermi 2, and since the pathway from Fermi 2 to vegetables would be the desposition of gaseous effluents on the ground, it appears that none of the Cs-137 activity in vegetables is due to Fermi 2 effluents. For 1991, the vegetable sample data is consistent with prior operational data and preoperational data.

AQUATIC MONITORING PROGRAM

AQUATIC MONITORING PROGRAM

INTRODUCTION

The aquatic monitoring portion of the REMP provides a continuous surveillance of Lake Erie, on which the plant site borders. The program consists of monitoring raw municipal drinking water, surface water, groundwater, lake sediments, and fish for radioactivity due to the operation of the plant. The following sections discuss the type and frequency of aquatic sampling, analyses performed, and a comparison of 1991 data to previous operational and preoperational data.

DRINKING WATER SAMPLING

Detroit Edison continuously monitors drinking water at one control location and one indicator location using automatic compositing samplers. In this program composite sample aliquots are collected at time intervals that are very short (hourly) relative to the compositing period (monthly) in order to assure obtaining a representative sample. Indicator water samples are obtained at the Monroe water intake located approximately 1.1 miles south of the plant. Detroit municipal water is used for the control samples and are obtained at the Allen Park water intake located approximately 18.6 miles north of the plant. Drinking water samples are collected on a monthly basis and analyzed for gross beta, strontium 89/90, and gamma emitting isotopes. The monthly samples for each location are combined on a quarterly basis to form a quarterly composite sample and are analyzed for tritium.

Drinking water sampling began in 1979 and the samples were only analyzed for gross beta, gamma emitting isotopes, and tritium. The average annual gross beta for indicator drinking water samples, excluding 1981, during the preoperational program was 3.4E+0 pCi/liter and ranged from 2.1E+0 to 4.3E+0 pCi/liter. The average annual gross beta for control drinking water samples during this time period was 3.5E+0 pCi/liter and ranged from 2.9E+0 to 4.5E+0 pCi/liter. In 1980 and 1983 Cs-137 was detected at levels ranging from 5.4E+0 pCi/liter to 1.9E+1 pCi/liter. Tritium was also detected during the preoperational program and had an annual average of 3.2E+2 pCi/liter and ranged from 2.6E+2 to 4.5E+2 pCi/liter.

DRINKING WATER SAMPLES
AVERAGE ANNUAL GROSS BETA

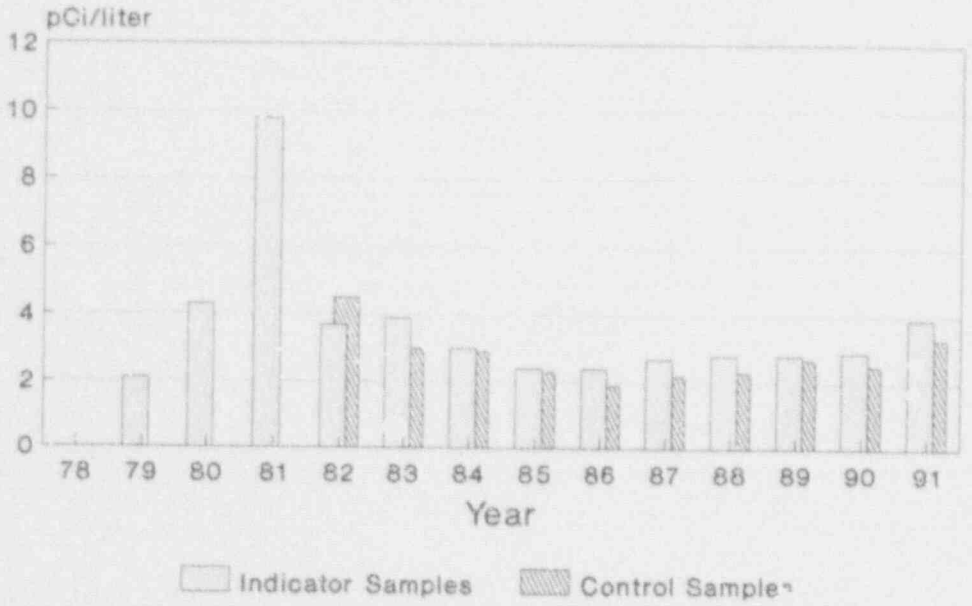


Figure 4-1

In 1981, as shown in Figure 4-1, the average gross beta was 9.8E+0 pCi/liter for indicator water samples. This anomalous gross beta activity is a direct result of an atmospheric nuclear weapon test conducted by the Peoples Republic of China in late 1980.

From 1985 to 1990, the average annual gross beta activity for indicator drinking water samples was 2.7E+0 pCi/liter and ranged from 2.4E+0 to 2.9E+0 pCi/liter. The average annual gross beta for control drinking water samples was 2.3E+0 pCi/liter and ranged from 1.9E+0 to 2.7E+0 pCi/liter. The analysis for Sr-89/90 began in 1988 and Sr-90 has been detected in both indicator and control samples. The average annual Sr-90 activity for indicator samples was 8.4E-1 pCi/liter and ranged from 4.8E-1 to 1.2E+0 pCi/liter. The average annual Sr-90

activity for control samples was 7.5E-1 pCi/liter and ranged from 7.1E-1 to 8.0E-1 pCi/liter. Tritium was also detected in both indicator and control drinking water samples during this time period. The average annual tritium activity for indicator samples was 2.8E+2 pCi/liter and ranged from 2.2E+2 to 3.9E+2 pCi/liter. The average annual tritium activity for control samples was 3.0E+2 pCi/liter and ranged from 2.7E+2 to 3.9E+2 pCi/liter. For the operational period from 1985 to 1990, the drinking water sample data is consistent with the preoperational data.

In 1991, twenty-four (24) drinking water samples were collected and analyzed for gross beta, gamma emitting isotopes, Sr-89/90, and tritium. The average annual gross beta for indicator samples was 3.9E+0 and ranged from 3.0E+0 to 5.1E+0 pCi/liter. The average annual gross beta for control samples was 3.3E+0 pCi/liter and ranged from 2.4E+0 to 4.2E+0 pCi/liter. No gamma emitting isotopes were detected in drinking water samples during 1991. Sr-90 was detected in both indicator and control samples. One indicator sample had a Sr-90 activity of 5.0E-1 pCi/liter. The average annual Sr-90 activity for control samples was 7.6E-1 pCi/liter and ranged from 5.5E-1 to 9.3E-1 pCi/liter. The presence of Sr-90 in drinking water samples is due to past atmospheric nuclear weapons testing. Eight (8) quarterly composite drinking water samples were prepared and analyzed for tritium. No tritium activity was detected in drinking water samples for 1991. For 1991, the drinking water ·ple data is consistent with prior operational data and preoperational data bec ·itium is only rarely detected in drinking water samples.

SURFACE WATER SAMPLING

Detroit Edison continuously monitors surface water at two locations using automatic composite samplers. As with drinking water, surface water aliquots are collected at time intervals that are very short (hourly) relative to the compositing period (monthly) in order to assure obtaining a representative sample. Indicator surface water samples are obtained at the Fermi 1 water intake which is approximately 0.3 miles south south east from Fermi 2. The control surface water samples are obtained from Trenton Channel Power Plant's cooling water intake on the Detroit River which is approximately 11.7 miles north north east of Fermi 2. Surface water samples are collected on a monthly basis

and analyzed for strontium 89/90 and gamma emitting isotopes. The monthly samples for each location are combined on a quarterly basis to form a quarterly composite sample and are analyzed for tritium.

Surface water sampling began in 1979 and the samples were only analyzed for gamma emitting isotopes, and tritium. During this preoperational program no gamma emitting isotopes, except for naturally occurring K-40, were detected. Tritium was detected in both indicator and control samples during this time period and had an annual average of 3.2E+2 pCi/liter and ranged from 2.2E+2 to 4.1E+2 pCi/liter.

From 1985 to 1989, no gamma emitting isotopes were detected in surface water samples. Sr-90 was detected in both indicator and control samples. The average annual Sr-90 activity for indicator samples was 1.6E+0 pCi/liter and ranged from 8.3E-1 to 2.4E+0 pCi/liter. One control sample had a Sr-90 activity of 7.6E-1 pCi/liter. Tritium also was detected in both indicator and control samples for this time period. The average annual tritium activity for indicator samples was 2.3E+2 pCi/liter and ranged from 1.6E+2 to 3.1E+2 pCi/liter. One control sample had a tritium activity of 2.4E+2. In 1990, two indicator samples showed detectable activity for Cs-137 at an average concentration of 1.2E+1 pCi/liter and ranged from 9.7E+0 to 1.5E+1 pCi/liter.

In 1991, twenty-four (24) surface water samples were collected and analyzed for gamma emitting isotopes, Sr-89/90, and tritium. Naturally occurring K-40 was the only gamma emitting isotope that was detected in surface water samples. Sr-90 was detected in one indicator sample at a concentration of 5.3E-1 pCi/liter. The presence of Sr-90 in surface water samples is due to past atmospheric nuclear weapons testing. Eight (8) quarterly composite surface water samples were prepared and analyzed for tritium. No tritium activity was detected in surface water samples for 1991. For 1991, the surface water sampling data is consistent with prior operational data and preoperational data.

GROUNDWATER SAMPLING

Groundwater is collected on a quarterly basis from four wells surrounding Fermi 2. The groundwater is analyzed for gamma emitting isotopes and tritium. The subsurface hydrology of the local area is such that groundwater flows towards Lake Erie. For this reason, sampling location GW-4 which is located approximately 0.6 miles west north west is least likely to be affected by the operation of the plant.

Groundwater sampling began in 1987. From 1987 to 1989 no radioactivity was detected in groundwater samples. In 1990, one control sample had a Cs-137 activity of 7.71E+0 pCi/liter and one indicator sample had a tritium activity of 9.9E+1 pCi/liter.

In 1991, sixteen (16) groundwater samples were collected and analyzed for gamma emitting isotopes and tritium. Naturally occurring K-40 was the only gamma emitting isotope detected in groundwater samples. No tritium was detected in groundwater samples. For 1991, the groundwater sample data is consistent with prior operational data and preoperational data.

SEDIMENT SAMPLING

Lake Erie shoreline and bottom sediments from five locations are collected on a semiannual basis and are analyzed for gamma emitting isotopes and strontium 89/90. There is one control location and four indicator locations. The control sample is collected near the Trenton Channel Power Plant's cooling water intake. The indicator samples are collected at Estral Beach, near the Fermi liquid discharge area, the shoreline at the end of Pointe aux Peaux, and Indian Trails Community Beach.

During the preoperational program there was not a control location and samples were only analyzed for gamma emitting isotopes. During the preoperational program, except for naturally occurring isotopes, only Cs-137 was detected in sediment samples. For this time period the average Cs-137 concentration was 3.3E+2 pCi/kg and ranged from 5.0E+1 to 6.6E+2 pCi/kg.

From 1985 to 1990, the average annual Cs-137 concentration for indicator samples was 2.0E+2 pCi/kg and ranged from 2.6E+1 to 3.6E+2. One control sample had a Cs-137 concentration of 1.1E+2 for this time period. The analysis for Sr-89/90 began in 1988 and Sr-90 has been detected in both indicator and control samples. The average annual Sr-90 activity for indicator samples was 1.3E+2 pCi/kg and ranged from 1.0E+2 to 1.6E+2 pCi/kg. The average annual Sr-90 activity for control samples was 2.7E+2 pCi/kg and ranged from 2.3E+2 to 3.1E+2 pCi/kg. In 1990, the Spring sample taken at the Fermi 2 discharge line S-2 showed activity for plant related isotopes (Mn-54, Co-60, and Zn-65) and was a result of liquid effluent from Fermi 2.

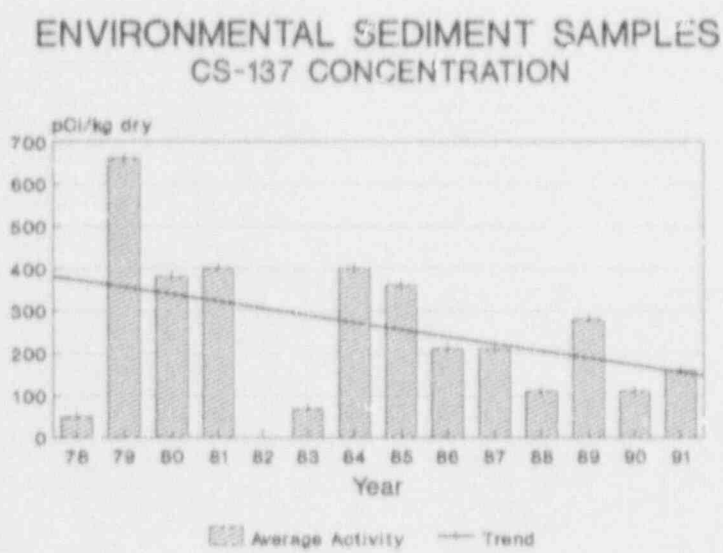


Figure 4-2

Figure 4-2 shows the concentration of Cs-137 in sediment samples from 1978 to 1991 appears to be decreasing with time. The line shown in this figure is a computer generated best fit trend line. This would verify that the inventory of Cs-137 in lake sediments is due to past atmospheric nuclear weapons testing.

In 1991, ten (10) sediment samples were collected and analyzed for gamma emitting isotopes and strontium 89/90. Naturally occurring K-40 and Th-228 were detected in both indicator and control sediment samples. Cs-137 was detected in both indicator and control sediment samples. One indicator sample showed a Cs-137 concentration of 6.5E+1 pCi/kg and two control samples had an average concentration of 1.6E+2 pCi/kg and ranged from 1.5E+2 to 1.6E+2 pCi/kg. Sr-90 was detected in one indicator sample at a concentration of 2.8E+1 pCi/kg. The presence of Cs-137 and Sr-90 in sediment samples is due to past atmospheric nuclear weapons testing.

As in 1990, the Spring 1991 sediment sample taken at the Fermi 2 discharge line S-2 showed detectable activity for plant related isotopes (Mn-54, Co-60, and Co-58). The concentration of Mn-54 was 1.9E+2 pCi/kg, Co-60 was 1.4E+2 pCi/kg and Co-58 was 8.5E+1 pCi/kg. These plant related isotopes are the direct result of liquid effluents being discharged into Lake Erie from Fermi 2. This activity is consistent with the activity released in liquid effluents. The fall 1991 samples did not show plant related activity at any location including S-2. For 1991, the sediment sample data is consistent with prior operational data and preoperational data.

FISH SAMPLING

Samples of fish are collected from Lake Erie at three locations on a semiannual basis. There are two control locations and one indicator location. The two control locations are offshore of Celeron Island and Brest Bay. The indicator location is approximately 1200 feet offshore of the Fermi 2 liquid discharge. Edible portions of the fish are analyzed for gamma emitting isotopes and strontium 89/90.

During the preoperational program only naturally occurring isotopes and Cs-137 were detected. The average Cs-137 concentration for indicator samples was 3.5E+1 pCi/kg and 4.2E+1 pCi/kg for control samples. Preoperational fish samples were only analyzed for gamma emitting isotopes.

From 1985 to 1990, the average Cs-137 concentration for indicator samples was 5.2E+1 pCi/kg and ranged from 2.0E+1 to 7.2E+1 pCi/kg. The average Cs-137 concentration for control samples was 5.5E+1 pCi/kg and ranged from 2.5E+1 to

9.7E+1 pCi/kg. The analysis for Sr-89/90 began in 1990 and Sr-90 was detected in both indicator and control samples. The average Sr-90 concentration for indicator samples was 1.3E+2 pCi/kg and ranged from 8.8E+0 to 3.4E+2 pCi/kg. The average Sr-90 concentration for control samples was 7.7E+1pCi/kg and ranged from 1.4E+0 to 3.9E+2 pCi/kg.

In 1991, twenty-three (23) fish samples were collected and analyzed for gamma emitting isotopes and strontium 89/90. The only gamma emitting isotope detected in these samples was naturally occurring K-40. Sr-90 was detected in both indicator and control fish samples. The average concentration of Sr-90 for indicator samples was 2.7E+1 pCi/kg and ranged from 6.9E+0 to 5.3E+1 pCi/kg. The average concentration of Sr-90 for control samples was also 2.7E+1 pCi/kg and ranged from 1.4E+1 to 6.4E+1 pCi/kg. For 1991, the fish sample data is consistent with prior operational data and preoperational data.

LAND USE CENSUS

LAND USE CENSUS

An annual Land Use Census is conducted by Detroit Edison in order to update information used to estimate radiation dose to the public and to determine if any modifications to the Radiological Environmental Monitoring Program are necessary. This information ensures that these programs are as accurate as possible. The Land Use Census is required by Title 10 of the Code of Federal Regulations, Part 50, Appendix I and Fermi 2 Technical Specifications 3/4.12.2.

The Land Use Census is conducted a maxium distance of 5 miles from Fermi 2, and identifies the locations of the nearest milk producing animals, the nearest residence, and the nearest garden (greater than 50 square meters and containing broad leaf vegetation) in each of the 16 meteorological sectors. Gardens greater than 50 square meters is the minimum size required to produce the quantity (26 kg/year) of leafy vegetables assumed in Regulatory Guide 1.109 for the consumption by a child. To determine this minimum garden size, the following assumptions were made: (1) 20% of the garden is used for growing broad leaf vegetation (i.e., lettuce and cabbage), and (2) a vegetation yield of 2 kg/square meter.

1991 LAND USE CENSUS RESULTS

The Land Use Census was conducted during the month of August in 1991. The census data was obtained by driving all roads within a five mile radius and in some cases performing door-to-door surveys. The data was then compared with the 1990 data to determine any changes in the local area. Minor changes were found the 1991 data when compared to the 1990 data. These changes were determined to be insignificant. The information gathered during the 1991 Land Use Census is tabulated and presented in tables 5-1 through 5-3.

TABLE 5-1 RESIDENCES

Year	Sector	Address	Distance (Miles)	Change (Miles)
1991	NE	6760 Lakeshore	1.1	NC
1990	NE	6760 Lakeshore	1.1	
1991	NNE	6500 Brancheau	1.0	NC
1990	NNE	6500 Brancheau	1.0	
1991	N	6200 Blanchett	1.1	NC
1990	N	6200 Blanchett	1.1	
1991	NNW	5701 Post	1.1	NC
1990	NNW	5701 Post	1.1	
1991	NW	6577 Leroux	1.0	−0.1*
1990	NW	6577 Leroux	1.1	
1991	WNW	6200 Langton	0.7	NC
1990	WNW	6200 Langton	0.7	
1991	W	6001 Toll	1.1	NC
1990	W	6001 Toll	1.1	
1991	WSW	4981 Pte. Aux Peaux	1.4	−0.1
1990	WSW	4771 Pte. Aux Peaux	1.5	
1991	SW	5194 Pte. Aux Peaux	1.3	+0.1
1990	SW	4981 Pte. Aux Peaux	1.2	
1991	SSW	5820 Pte. Aux Peaux	1.0	NC
1990	SSW	5820 Pte. Aux Peaux	1.0	
1991	S	4934 Long	1.0	NC
1990	S	4834 Long	1.0	
	ESE – SSE	Lake Erie		

NC – No Change
* Difference due to recalculation of distance and azimuth by Detroit Edison Company Cartographer

TABLE 5-2 GARDENS

Year	Sector	Address	Distance (Miles)	Change (Miles)
1991	NE	7491 Sovey	2.0	+0.8
1990	NE	6940 Lakeshore	1.2	
1991*	NNE	6441 Brancheau	1.1	NC
1990*	NNE	6441 Brancheau	1.1	
1991*	NNE	7806 Labo	4.0	NC
1990*	NNE	7806 Labo	4.0	
1991*	NNE	9501 Turnpike Hwy.	4.0	NC
1990*	NNE	9501 Turnpike Hwy.	4.0	
1991	N	6372 Trombly	2.0	+0.8
1990	N	6244 Brancheau	1.2	
1991	NNW	5846 Trombly	1.3	+0.2
1990	NNW	5701 Post	1.1	
1991	NW	7335 Forest	1.7	+0.2
1990	NW	5131 Post	1.5	
1991	WNW	6170 Leroux	1.3	-0.4
1990	WNW	6834 Dixie Hwy	1.7	
1991*	WNW	8200 Geirman (control)	14.6	NC
1990*	WNW	8200 Geirman (control)	14.6	
1991	W	5681 Toll	1.6	NC
1990	W	5900 Leroux	1.6	
1991	WSW	5111 Spaulding	2.4	NC
1990	WSW	5053 Spaulding	2.4	
1991	SW	4828 Elm	1.5	+0.1
1990	SW	4995 Elm	1.4	
1991	SSW	5823 Shady Lane	1.4	-0.2
1990	SSW	4326 C Street	1.6	
1991	S	6348 Sterling	1.3	+0.1
1990	S	6233 Highland	1.2	
	ESE – SSE	Lake Erie		

NC – No Change
* Participants in REMP sampling program.

TABLE 5-3 MILK LOCATIONS

Year	Sector	Address	Distance (Miles)	Findings
1991	NE	No Identified Locations		NA
1990	NE	No Identified Locations		NA
1991	NNE	No Identified Locations		NA
1990	NNE	No Identified Locations		NA
1991	N	No Identified Locations		NA
1990	N	No Identified Locations		NA
1991	NNW	No Identified Locations		NA
1990	NNW	No Identified Locations		NA
1991*	NW	3239 Newport Rd	4.3	Cows
1990*	NW	3239 Newport Rd	4.3	Cows
1991*	NW	2705 Labo	5.4	Cows
1990*	NW	2705 Labo	5.4	Cows
1991#	WNW	4262 Post	2.1	Goats
1990#	WNW	4262 Post	2.2	Goats
1991	W	No Identified Locations		
1990	W	5904 Mentel	4.5	Goats
1990	W	6551 N. Stonycreek	4.7	Goats
1990	W	1972 Nadeau	3.3	Goats
1991	WSW	No Identified Locations		NA
1990	WSW	No Identified Locations		NA
1991	SW	No Identified Locations		NA
1990	SW	No Identified Locations		NA
1991	SSW	No Identified Locations		NA
1990	SSW	No Identified Locations		NA
1991	S	No Identified Locations		NA
1990	S	No Identified Locations		NA
	ESE – SSE	Lake Erie		

– Critical Receptor
* – Participated in Fermi 2 REMP
NA – No Milk Animals

PROGRAM EXECUTION

1991 Program Execution

In 1991, the major deviations from scheduled REMP activities were the loss of TLDs due to theft, the loss of one air particulate sample due to sample equipment failure, the loss of two charcoal cartridges due to cartridge failure and sample equipment failure, seasonal unavailability of grass samples, and drinking water equipment malfunctions. The following list all deviations and corrective actions from the normal sampling schedule for 1991. These deviations did not have a significant impact on the execution of the REMP.

Environmental TLDs

All TLDs are placed in the field in inconspicuous locations to minimize the loss of TLDs due to pilferage. During 1991, two hundred fifty two (252) TLDs were placed in the field and eight (8) were found missing. This represents a 96.8 per cent successful collection rate.

On 01/24/91 T-17 was found missing during weekly air sample exchange and was replaced with a spare TLD.

On 04/02/91, during the quarterly TLD exchange the following TLDs were found missing and were replaced: T-8, T-55, T-59

On 05/07/91, during routine sampling T-3 was found missing due to utility pole replacement. The TLD was replaced on the new pole with a spare.

On 08/16/91, during the mid-quarter TLD inspection, the following TLDs were found missing and replaced with spares: T-11, T-24

On 10/08/91, during routine sampling T-11 was found missing and was replaced with a spare. T-11 was also relocated to the corner of Milliman and Jefferson, one pole south of the original location.

Air Sampling

During 1991, five hundred twenty (520) air samples were scheduled to be collected and two were not collected. This represents a 99.5 per cent successful collection rate for the year.

On 06/19/91, the charcoal cartridge at API-1 came apart during weekly exchange and was unable to be analyzed. All cartridges are now inspected visually for manufacture's defects prior to use.

On 10/09/91, during filter exchange API-1 was found inoperable due to a blown fuse and the sample had insufficient volume to be analyzed. The fuse was replaced during filter exchange.

On 08/21/91, during filter exchange API-1 was found inoperable due to a blown fuse and the sample had sufficient volume to be analyzed. The fuse was replaced during filter exchange.

During the week of 12/22/91, all air samples had a sample period of eight (8) days due to the holiday season.

Milk Sampling

During 1991, fifty-seven (57) milk samples, including the three from M-4, were collected. This represents a 100 per cent successful collection rate for the year.

Starting on 04/04/91, duplicate milk samples were taken at each location. This enhancement to the program was instituted as a quality control check of the lab.

On 06/20/91, milk sampling location M-4 (Roelant Farm, 3.9 mi., NNE) was added to the REMP program as an enhancement. However, the cow was sold and only three samples were obtained from this location.

Grass Sampling

During 1991, thirty-six (36) grass samples were scheduled to be collected and twelve were not collected due to seasonal unavailability. It should be noted that when grass samples were not available the milk producing animals were not in the pastures grazing. For all scheduled samples this represents a 66.6 per cent successful collection rate for the year.

Grass samples are scheduled to be collected with milk samples at sample locations M-7 and M-8 throughout the year. However, grass is not always available due to the local climate. Grass samples were not available during the following sampling periods: 01/10/91, 02/07/91, 03/07/91, 04/04/91, 11/14/91, and 12/12/91.

Water Sampling

Chromium-51 (Cr-51) analysis was added to the water sampling program as a program enhancement because this isoptope is a major constituent of Fermi 2's liquid radwaste.

Drinking Water Sampling

During the year drinking water sampler DW-1 was modified to provide a reliable and a fully representative sample. The original sampling equipment consisted of a mechanical timer connected to a solenoid operated valve. The time which the solenoid valve was open was not adjustable. Once per hour the timer would energize the solenoid and open the valve to sample the water in the system. The amount of the sample (aliquot) was controlled using a needle valve in the sample line. Due to fluctuating plant system pressure (20 to 50 psi), and needle valve fouling, a fully representative sample was not always obtainable.

In March of 1991, the mechanical timer and solenoid valve were replaced with a positive displacement sampling pump (Masterflex sampler). This sampling pump provides a representative sample. But due to the fluctuating plant pressure the tygon tubing, used to draw the sample, over time became fatigued and would spilt.

The sampling equipment was modified to include a pressure regulating valve in line with the sampler. The pressure regulator is set at approximately 6 psi to prevent tubing failure. Also, a digital intervalometer (timer) has been installed to operate the pump at precise intervals. The system was setup to sample hourly and provide a five gallon monthly composited sample. This system has provided a reliable representative sample since it was installed. During 1991, of the twenty four (24) drinking water samples collected, four (4) were considered partial samples and fifteen (15) were considered to be less than fully representative. This represents a 21 per cent successful collection rate for the year.

On 01/28/91, the drinking water samples collected at locations DW-1 and DW-2 for the month of January is considered to be less than fully representative due to flow rate adjustments during the month.

On 02/18/91, a grab sample was taken at location DW-1 due to equipment malfunction. The sample was sent to the lab to be composited with the scheduled monthly sample.

On 02/25/91, the drinking water sample collected at location DW-1 for the month of February was considered a partial sample due to the grab sample taken on 02/18/91 and considered to be less than fully representative due to flow rate adjustments during the month.

On 03/11/91, a grab sample was taken at location DW-1 due to equipment malfunction. The sample was sent to the lab to be composited with the scheduled monthly sample.

On 03/25/91, the drinking water sample collected at location DW-1 for the month of March was considered a partial sample due to the grab sample taken on 03/11/91 and considered to be less than fully representative due to flow rate adjustments during the month.

On 03/25/91, the drinking water sample collected at location DW-2 for the month of March was considered to be less than fully representative due to flow rate adjustments during the month.

On 04/01/91, a grab sample was taken at location DW-1 due to equipment malfunction. The sample was sent to the lab to be composited with the scheduled monthly sample.

On 04/16/91, a grab sample was taken at location DW-1 due to equipment malfunction. The sample was sent to the lab to be composited with the scheduled monthly sample.

On 04/29/91, the drinking water sample collected at location DW-1 for the month of April was considered a partial sample due to the grab samples taken on 04/01/91 and 04/16/91 and considered to be less than fully representative due to flow rate adjustments during the month.

On 04/29/91, the drinking water sample collected at location DW-2 for the month of April was considered to be less than fully representative due to flow rate adjustments during the month.

On 05/28/91, the drinking water samples collected at locations DW-1 and DW-2 for the month of May was considered to be less than fully representative due to flow rate adjustments during the month.

On 06/24/91, the drinking water samples collected at locations DW-1 and DW-2 for the month of June was considered to be less than fully representative due to sample flow rate adjustments during the month.

On 07/29/91, the drinking water samples collected at locations DW-1 and DW-2 for the month of July was considered to be less than fully representative due to sample flow rate adjustments during the month.

On 08/05/91, a grab sample was taken at location DW-1 since the valve on sampling line had been inadvertently shut by water plant personnel during maintenance. The sample was sent to the lab to be composited with the scheduled monthly sample.

On 08/19/91, a grab sample was taken at location DW-1 due to a blown fuse on the sampling equipment. The sample was sent to the lab to be composited with the scheduled monthly sample.

On 08/28/91, the drinking water sample collected at location DW-1 for the month of August was considered a partial sample due to the grab samples taken on 08/05/91 and 08/19/91.

On 10/29/91, the drinking water sample collected at location DW-2 for the month of October was considered to be less than fully representative due to sample flow rate adjustments during the month.

On 12/30/91, the drinking water samples collected at locations DW-1 and DW-2 for the month of December was considered to be less than fully representative due to sample flow rate adjustments during the month.

Surface Water Sampling

During 1991, twenty four (24) surface water samples were collected and four (4) were considered to be less than fully representative samples. This represents a 83 per cent successful collection rate for the year.

On 01/28/91, the surface water sample collected at location SW-1 for the month of January was considered to be less than fully representative due to corrosion in sample line. Corrosion was removed and sample flow rate returned to normal.

On 01/28/91, the surface water sample collected at location SW-2 for the month of January was considered to be less than fully representative due to ice in the sample line. The ice was removed and sample flow rate returned to normal.

On 02/25/91, the surface water sample collected at location SW-1 for the month of February was considered to be less than fully representative due to reduction in sample flow rate to compensate for smaller size collection container.

On 12/30/91, the surface water sample collected at location SW-2 for the month of December was considered to be less than fully representative due to ice in the sample line. The ice was removed and sample flow rate returned to normal.

Laboratory Deviations

One fish sample (Carp) collected at location F-2 on 10/11/91 had a Minimum Detectable Activity (MDA) above the required Lower Limit of Detection (LLD) for Fe-59. The MDA was <280 pCi/kg and the required LLD is <260 pCi/kg. This deviation was due to a fluctuation in the background count rate at the laboratory. There was no sample available for recounting when it was determined that the Lower Limit of Detection (LLD) had not been met.

PROGRAM SUMMARY

Table 7-1 Radiological Environmental Monitoring Program Summary

Name of Facility: Fermi 2 Docket No.: 50-341 Reporting Period: January – December 1991
Location of Facility: 30 miles southeast of Detroit, Michigan (Frenchtown Township)

Sample Type (Units)	Type and Number of Analysis	LLD	Indicator Locations Mean and Range	Location with Highest Annual Mean		Control Locations Mean and Range	Number of Non-routine Results
				Location	Mean and Range		
Gamma (TLD) Background (mRem/Std Qtr)	Gamma Radiation 249	1.0E+0	13.6 (233/233) 9.5 to 18.6	T-49 (Indicator)	17.8 (4/4) 16.6 to 18.6	13.4 (16/16) 11.5 to 15.1	None
Airborne Particulates (pCi/cu.m.)	GB 259	1.0E-2	2.2E-2 (207/207) 6.1E-3 to 3.4E-2	API-5 (Indicator)	2.3E-2 (52/52) 1.3E-2 to 3.4E-2	2.2E-2 (52/52) 1.1E-2 to 3.9E-2	None
	GS 20						
	BE-7	N/A	6.6E-2 (15/16) 2.6E-2 to 1.1E-1	API-1 (Indicator)	6.5E-2 (4/4) 3.2E-2 to 8.5E-2	6.9E-2 (4/4) 3.3E-2 to 9.8E-2	None
	K-40	N/A	1.2E-2 (1/16)	API-3 (Indicator)	1.2E-2 (1/4)	<MDA	None
	MN-54	N/A	<MDA			<MDA	None
	CO-58	N/A	<MDA			<MDA	None
	FE-59	N/A	<MDA			<MDA	None
	CO-60	N/A	<MDA			<MDA	None
	ZN-65	N/A	<MDA			<MDA	None
	ZR/NB-95	N/A	<MDA			<MDA	None
	RU-103	N/A	<MDA			<MDA	None
	RU-106	N/A	<MDA			<MDA	None
	CS-134	5.0E-2	<MDA			<MDA	None
	CS-137	6.0E-2	<MDA			<MDA	None
	BA/LA-140	N/A	<MDA			<MDA	None
	CE-141	N/A	<MDA			<MDA	None
	CE-144	N/A	<MDA			<MDA	None
	RA-226	N/A	<MDA			<MDA	None
	TH-228	N/A	<MDA			<MDA	None
	SR-89 20	N/A	<MDA			<MDA	None
	SR-90	N/A	<MDA			<MDA	None
Airborne Iodine (pCi/cu.m.)	I-131 258	7.0E-2	<MDA			<MDA	None

Table 7-1 Radiological Environmental Monitoring Program Summary (cont.)

Name of Facility: Fermi 2 Docket No.: 50-341 Reporting Period: January – December 1991
Location of Facility: 30 miles southeast of Detroit, Michigan (Frenchtown Township)

Sample Type (Units)	Type and Number of Analysis	LLD	Indicator Locations Mean and Range	Location with Highest Annual Mean		Control Locations Mean and Range	Number of Non-routine Results
				Location	Mean and Range		
Milk (pCi/l)	I-131 57	1.0E+0	<MDA			<MDA	None
	SR-89 57	N/A	<MDA			<MDA	None
	SR-90	N/A	1.4E+0 (29/39) 3.3E-1 to 2.4E+0	M-3 (Indicator)	1.7E+0 (13/18) 1.1E+0 to 2.4E+0	1.1E+0 (16/18) 3.6E-1 to 5.5E+0	None
	GS 57					<MDA	None
	BE-7	N/A	<MDA			1.3E+3 (18/18) 8.2E+2 to 1.5E+3	None
	K-40	N/A	1.3E+3 (39/39) 1.1E+3 to 1.7E+3	M-3 (Indicator)	1.4E+3 (18/18) 1.2E+3 to 1.7E+3		
	MN-54	N/A	<MDA			<MDA	None
	CO-58	N/A	<MDA			<MDA	None
	FE-59	N/A	<MDA			<MDA	None
	CO-60	N/A	<MDA			<MDA	None
	ZN-65	N/A	<MDA			<MDA	None
	ZR/NB-95	N/A	<MDA			<MDA	None
	RU-103	N/A	<MDA			<MDA	None
	RU-106	N/A	<MDA			<MDA	None
	CS-134	1.5E+1	<MDA			<MDA	None
	CS-137	1.8E+1	6.6E+0 (1/39)	M-2 (Indicator)	6.6E+0 (1/18)	<MDA	None
	BA/LA-140	1.5E+1	<MDA			<MDA	None
	CE-141	N/A	<MDA			<MDA	None
	CE-144	N/A	<MDA			<MDA	None
	RA-226	N/A	<MDA			<MDA	None
	TH-228	N/A	<MDA			<MDA	None
Grass (pCi/kg wet)	I-131 24	6.0E+1	<MDA			<MDA	None
	GS 24					4.9E+2 (11/12) 1.5E+2 to 1.1E+3	None
	BE-7	N/A	1.2E+3 (11/12) 6.7E+2 to 2.7E+3	M-7 (Indicator)	1.2E+3 (11/12) 6.7E+2 to 2.7E+3	7.0E+3 (12/12) 4.6E+3 to 1.2E+4	None
	K-40	N/A	9.5E+3 (12/12) 5.0E+3 to 1.4E+4	M-7 (Indicator)	9.5E+3 (12/12) 5.0E+3 to 1.4E+4	<MDA	None
	MN-54	N/A	<MDA				

Table 7-1 Radiological Environmental Monitoring Program Summary (cont.)

Name of Facility: Fermi 2 Docket No.: 50-341 Reporting Period: January – December 1991
Location of Facility: 30 miles southeast of Detroit, Michigan (Frenchtown Township)

Sample Type (Units)	Type and Number of Analysis	LLD	Indicator Locations Mean and Range	Location with Highest Annual Mean		Control Locations Mean and Range	Number of Non-routine Results
				Location	Mean and Range		
Grass (cont.) (pCi/kg wet)	CO-58	N/A	<MDA			<MDA	None
	FE-59	N/A	<MDA			<MDA	None
	CO-60	N/A	<MDA			<MDA	None
	ZN-65	N/A	<MDA			<MDA	None
	ZR/NB-95	N/A	<MDA			<MDA	None
	RU-103	N/A	<MDA			<MDA	None
	RU-106	N/A	<MDA			<MDA	None
	CS-134	6.0E+1	<MDA			<MDA	None
	CS-137	8.0E+1	4.7E+1 (2/12) 2.0E+1 to 7.4E+1	M-7 (Indicator)	4.7E+1 (2/12) 2.0E+1 to 7.4E+1	1.2E+1 (1/12)	None
	BA/LA-140	N/A	<MDA			<MDA	None
	CE-141	N/A	<MDA			<MDA	None
	CE-144	N/A	<MDA			<MDA	None
	RA-226	N/A	<MDA			<MDA	None
	TH-228	N/A	<MDA			<MDA	None
Vegetables (pCi/kg wet)	I-131 22	6.0E+1	<MDA			<MDA	None
	GS 22						None
	BE-7	N/A	9.7E+1 (7/16) 1.7E+1 to 5.2E+2	FP-6 (Control)	4.2E+2 (2/6) 2.8E+2 to 5.5E+2	4.2E+2 (2/6) 2.8E+2 to 5.5E+2	None
	K-40	N/A	3.9E+3 (16/16) 4.5E+2 to 7.9E+3	FP-5 (Indicator)	4.8E+3 (6/6) 3.0E+3 to 6.5E+3	4.2E+3 (6/6) 2.6E+3 to 6.0E+3	None
	MN-54	N/A	<MDA			<MDA	None
	CO-58	N/A	<MDA			<MDA	None
	FE-59	N/A	<MDA			<MDA	None
	CO-60	N/A	<MDA			<MDA	None
	ZN-65	N/A	<MDA			<MDA	None
	ZR/NB-95	N/A	<MDA			<MDA	None
	RU-103	N/A	<MDA			<MDA	None
	RU-106	N/A	<MDA			<MDA	None
	CS-134	6.0E+1	<MDA			<MDA	None
	CS-137	8.0E+1	1.2E+1 (1/16)	FP-2 (Indicator)	1.2E+1 (1/16)	MDA	None

Table 7-1 Radiological Environmental Monitoring Program Summary (cont.)

Name of Facility: Fermi 2 Docket No.: 50-341 Reporting Period: January – December 1991
Location of Facility: 30 miles southeast of Detroit, Michigan (Frenchtown Township)

Sample Type (Units)	Type and Number of Analysis	LLD	Indicator Locations Mean and Range	Location with Highest Annual Mean		Control Locations Mean and Range	Number of Non-routine Results
				Location	Mean and Range		
Vegetables (cont.) (pCi/kg wet)	BA/LA-140	N/A	<MDA			<MDA	None
	CE-141	N/A	<MDA			<MDA	None
	CE-144	N/A	<MDA			<MDA	None
	RA-226	N/A	<MDA			<MDA	None
	TH-228	N/A	<MDA			<MDA	None
Drinking Water (pCi/l)	GB 24	4.0E+0	3.9E+0 (12/12) 3.0E+0 to 5.1E+0	DW-1 (Indicator)	3.9E+0 (12/12) 3.0E+0 to 5.1E+0	3.3E+0 (12/12) 2.4E+0 to 4.2E+0	None None
	GS 24						
	BE-7	N/A	<MDA			<MDA	None
	K-40	N/A	<MDA			<MDA	None
	CR-51	N/A	<MDA			<MDA	None
	MN-54	1.5E+1	<MDA			<MDA	None
	CO-58	1.5E+1	<MDA			<MDA	None
	FE-59	3.0E+1	<MDA			<MDA	None
	CO-60	1.5E+1	<MDA			<MDA	None
	ZN-65	3.0E+1	<MDA			<MDA	None
	ZR/NB-95	1.5E+1	<MDA			<MDA	None
	RU-103	N/A	<MDA			<MDA	None
	RU-106	N/A	<MDA			<MDA	None
	CS-134	1.5E+1	<MDA			<MDA	None
	CS-137	1.8E+1	<MDA			<MDA	None
	BA/LA-140	1.5E+1	<MDA			<MDA	None
	CE-141	N/A	<MDA			<MDA	None
	CE-144	N/A	<MDA			<MDA	None
	RA-226	N/A	<MDA			<MDA	None
	TH-228	N/A	<MDA			<MDA	None
	H-3 8	2.0E+3	<MDA			<MDA	None
	SR-89 24	N/A	<MDA			<MDA	None
	SR-90	N/A	5.0E-1 (1/12)	DW-2 (Control)	7.6E-1 (4/12) 5.6E-1 to 9.3E-1	7.6E-1 (4/12) 5.6E-1 to 9.3E-1	None

Table 7-1 Radiological Environmental Monitoring Program Summary (cont.)

Name of Facility: Fermi 2 Docket No.: 50-341 Reporting Period: January – December 1991
Location of Facility: 30 miles southeast of Detroit, Michigan (Frenchtown Township)

Sample Type (Units)	Type and Number of Analysis	LLD	Indicator Locations Mean and Range	Location with Highest Annual Mean		Control Locations Mean and Range	Number of Non-routine Results
				Location	Mean and Range		
Surface Water (pCi/l)	GS 24						
	BE-7	N/A	<MDA			<MDA	None
	K-40	N/A	8.8E+1 (1/12)	SW-1 (Indicator)	8.8E+1 (1/12)	7.0E+1 (1/12)	None
	CR-51	N/A	<MDA			<MDA	None
	MN-54	1.5E+1	<MDA			<MDA	None
	CO-58	1.5E+1	<MDA			<MDA	None
	FE-59	3.0E+1	<MDA			<MDA	None
	CO-60	1.5E+1	<MDA			<MDA	None
	ZN-65	3.0E+1	<MDA			<MDA	None
	ZR/NB-95	1.5E+1	<MDA			<MDA	None
	RU-103	N/A	<MDA			<MDA	None
	RU-106	N/A	<MDA			<MDA	None
	CS-134	1.5E+1	<MDA			<MDA	None
	CS-137	1.8E+1	<MDA			<MDA	None
	BA/LA-140	1.5E+1	<MDA			<MDA	None
	CE-141	N/A	<MDA			<MDA	None
	CE-144	N/A	<MDA			<MDA	None
	RA-226	N/A	<MDA			<MDA	None
	TH-228	N/A	<MDA			<MDA	None
	H-3 8	2.0E+3	<MDA			<MDA	None
	SR-89 24	N/A	<MDA			<MDA	None
	SR-90	N/A	5.3E-1 (1/12)	SW-1 (Indicator)	5.3E-1 (1/12)	<MDA	None
Groundwater (pCi/l)	GS 16						
	BE-7	N/A	<MDA			<MDA	None
	K-40	N/A	<MDA	GW-4 (Control)	1.7E+2 (1/4)	1.7E+2 (1/4)	None
	CR-51	N/A	<MDA			<MDA	None
	MN-54	1.5E+1	<MDA			<MDA	None
	CO-58	1.5E+1	<MDA			<MDA	None
	FE-59	3.0E+1	<MDA			<MDA	None
	CO-60	1.5E+1	<MDA			<MDA	None

Table 7-1 Radiological Environmental Monitoring Program Summary (cont.)

Name of Facility: Fermi 2 Docket No.: 50-341 Reporting Period: January - December 1991
Location of Facility: 30 miles southeast of Detroit, Michigan (Frenchtown Township)

Sample Type (Units)	Type and Number of Analysis	LLD	Indicator Locations Mean and Range	Location with Highest Annual Mean		Control Locations Mean and Range	Number of Non-routine Results
				Location	Mean and Range		
Groundwater (cont.) (pCi/l)	ZN-65	3.0E+1	<MDA			<MDA	None
	ZR/NB-95	1.5E+1	<MDA			<MDA	None
	RU-103	N/A	<MDA			<MDA	None
	RU-106	N/A	<MDA			<MDA	None
	CS-134	1.5E+1	<MDA			<MDA	None
	CS-137	1.8E+1	<MDA			<MDA	None
	BA/LA-140	1.5E+1	<MDA			<MDA	None
	CE-141	N/A	<MDA			<MDA	None
	CE-144	N/A	<MDA			<MDA	None
	RA-226	N/A	<MDA			<MDA	None
	TH-228	N/A	<MDA			<MDA	None
	H-3 16	2.0E+3	<MDA			<MDA	None
Sediment (pCi/kg dry)	GS 10						
	BE-7	N/A	<MDA			<MDA	None
	K-40	N/A	1.1E+4 (8/8) 9.8E+3 to 1.2E+4	S-4 (Indicator)	1.2E+4 (2/2) 1.2E+4 to 1.2E+4	1.2E+4 (2/2) 1.1E+4 to 1.2E+4	None
	MN-54	N/A	1.9E+2 (1/8)	S-2 (Indicator)	1.9E+2 (1/8)	<MDA	None
	CO-58	N/A	8.5E+1 (1/8)	S-2 (Indicator)	8.5E+1 (1/8)	<MDA	None
	FE-59	N/A	<MDA			<MDA	None
	CO-60	N/A	1.4E+2 (1/8)	S-2 (Indicator)		<MDA	None
	ZN-65	N/A	<MDA			<MDA	None
	ZR/NB-95	N/A	<MDA			<MDA	None
	RU-103	N/A	<MDA			<MDA	None
	RU-106	N/A	<MDA			<MDA	None
	CS-134	1.5E+2	<MDA			<MDA	None
	CS-137	1.8E+2	6.5E+1 (1/8)	S-5 (Control)	1.6E+2 (2/2) 1.5E+2 to 1.6E+2	1.6E+2 (2/2) 1.5E+2 to 1.6E+2	None
	BA/LA-140	N/A	<MDA			<MDA	None
	CE-141	N/A	<MDA			<MDA	None
	CE-144	N/A	<MDA			<MDA	None

Table 7-1 Radiological Environmental Monitoring Program Summary (cont.)

Name of Facility: Fermi 2 Docket No.: 50-341 Reporting Period: January – December 1991
Location of Facility: 30 miles southeast of Detroit, Michigan (Frenchtown Township)

Sample Type (Units)	Type and Number of Analysis	LLD	Indicator Locations Mean and Range	Location with Highest Annual Mean		Control Locations Mean and Range	Number of Non-routine Results
				Location	Mean and Range		
Sediment (cont.) (pCi/kg dry)	RA-226	N/A	7.1E+2 (3/8) 5.4E+2 to 9.9E+2	S-2 (Indicator)	9.9E+2 (1/2)	8.8E+2 (2/2) 7.5E+2 to 1.0E+3	None
	TH-228	N/A	2.4E+2 (8/8) 1.5E+2 to 4.1E+2	S-5 (Control)	4.3E+2 (2/2) 3.7E+2 to 4.9E+2	4.3E+2 (2/2) 3.7E+2 to 4.9E+2	None
	SR-89 10	N/A	<MDA				
	SR-90	N/A	2.8E+1 (1/8)	S-2 (Indicator)	2.8E+1 (1/2)	<MDA	None
Fish (pCi/kg wet)	GS 23					<MDA	None
	BE-7	N/A	<MDA			2.9E+3 (14/14)	None
	K-40	N/A	2.8E+3 (9/9) 1.8E+3 to 3.5E+3	F-3 (Control)	2.9E+3 (5/5) 2.4E+3 to 3.2E+3	2.4E+3 to 4.0E+3	
	MN-54	1.3E+2	<MDA			<MDA	None
	CO-58	1.3E+2	<MDA			<MDA	None
	FE-59	2.6E+2	<MDA			<MDA	None
	CO-60	1.3E+2	<MDA			<MDA	None
	ZN-65	2.6E+2	<MDA			<MDA	None
	ZR/NB-95	N/A	<MDA			<MDA	None
	RU-103	N/A	<MDA			<MDA	None
	RU-106	N/A	<MDA			<MDA	None
	CS-134	1.3E+2	<MDA			<MDA	None
	CS-137	1.5E+2	<MDA			<MDA	None
	BA/LA-140	N/A	<MDA			<MDA	None
	CE-141	N/A	<MDA			<MDA	None
	CE-144	N/A	<MDA			<MDA	None
	RA-226	N/A	<MDA			<MDA	None
	TH-228	N/A	<MDA			<MDA	None
	SR-89 23	N/A	<MDA			2.7E+1 (13/14)	None
	SR-90	N/A	2.7E+1 (9/9) 6.9E+0 to 5.3E+1	F-1 (Control)	3.5E+1 (8/9) 1.4E+1 to 6.4E+1	1.4E+1 to 6.4E+1	None

Table 7-1 Radiological Environmental Monitoring Program Summary (cont.)

Name of Facility: Fermi 2 Docket No.: 50-341 Reporting Period: January - December 1991
Location of Facility: 30 miles southeast of Detroit, Michigan (Frenchtown Township)

GB = gross beta; GS = gamma scan
LLD = Fermi 2 Technical Specifications LLD: nominal lower limit of detection based on 4.66 sigma error for background sample.
<MDA = Less than the lab's minimum detectable activity which is less than the LLD.
Mean and range based upon detectable measurements only. Fraction of detectable measurements at specified locations is indicated in parentheses (F).
Locations are specified by Fermi 2 code and are described in section 8.0 Sampling Locations.
Non-routine results are those which are reportable according to Fermi 2 Technical Specifications.

Note: Other nuclides were considered in analysis results, but only those identifiable were reported in addition to Tech Spec listed nuclides.

SAMPLING LOCATIONS

Table 8-1 Direct Radiation

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx)	Description	Type
T1	NE/38	1.3 mi	Pole on Lakeshore in Estral Beach. Twenty three poles S of Lakeview.	I
T2	NNE/22	1.2 mi	Tree at the termination of Brancho St.	I
T3	N/9	1.1 mi	Pole on NW corner of Swan Boat Club's fence.	I
T4	NNW/337	0.6 mi	On Site Boundary Fence by API #2 on Toll Rd.	I
T5	NW/313	0.6 mi	On Site Boundary Fence by API #3 on Toll Rd.	I
T6	WNW/293	0.6 mi	Pole on NE corner of Bridge over Toll Rd.	I
T7	W/270	14.2 mi	Pole behind Doty Farm at 7512 N Custer Rd.	C
T8	NW/305	1.9 mi	Pole on NE corner of Dixie Hwy. and Post Rd.	I
T9	NNW/334	1.5 mi	Pole on NW corner of Trombley and Swan View Rd.	I
T10	N/6	2.1 mi	Pole on S side of Masserant two poles W of Chinavare.	I
T11	NNE/23	6.3 mi	Pole on NE corner of Milliman and US Turnpike.	I
T12	NNE/29	6.3 mi	Pole near tree in the N area of parking lot at Pointe Mouillee Game Area Field Office	I

I = Indicator C = Control

Table 8-1 Direct Radiation (cont.)

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx)	Description	Type
T13	N/356	4.1 mi	Pole on SW corner of Labo and Dixie Hwy.	I
T14	NNW/337	4.4 mi	Pole on SE corner of Labo and Brandon near RR tracks.	I
T15	NW/315	3.9 mi	On pole behind Newport Post Office.	I
T16	WNW/283	4.9 mi	Pole on SE corner of War and Post Rds.	I
T17	W/271	4.9 mi	Pole on NE corner of Nadeau and Laprad near mobile home park.	I
T18	WSW/247	4.8 mi	Pole on SE corner of Mentel and Hurd Rds.	I
T19	SW/236	5.2 mi	First pole E of Fermi siren on Waterworks Rd at the NE corner of Sterling State Park Rd and Waterworks (in Sterling State Park).	I
T20	WSW/257	2.7 mi	Pole on S side of Williams Rd, eight poles W of Dixie Hwy.	I
T21	WSW/239	2.8 mi	Pole on N side of Pearl at Parkview in Woodland Beach.	I
T22	S/172	1.2 mi	Pole on N side of Pointe Aux Peaux two poles W of Long.	I
T23	SSW/195	1.1 mi	Pole on S side of Pointe Aux Peaux, one pole W of Huron next to vent pipe.	I

I = Indicator C = Control

Table 8–1 Direct Radiation (cont.)

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Type
T24	SW/225	1.2 mi	On fence post W of Fermi Gate along Pointe Aux Peaux Rd.	I
T25	WSW/251	1.5 mi	Pole on Toll Rd., thirteen poles S of Fermi Dr.	I
T26	WSW/259	1.1 mi	Pole on Toll Rd, six poles S of Fermi Dr.	I
T27	SW/225	6.8 mi	Pole on NE corner of McMillan and East Front St.	I
T28	SW/229	10.7 mi	Pole on SE corner of Mortar Creek and LaPlaisance.	C
T29	WSW/237	10.3 mi	Pole on E side of S Dixie, one pole S of Albain.	C
T30	WSW/247	7.8 mi	Pole on north side of St. Mary's Park parking lot at Elm and Monroe St.	I
T31	WSW/255	9.6 mi	1st pole W of entrance to Milton "Pat" Munson Recreational Reserve on North Custer Rd.	C
T32	WNW/295	10.3 mi	Pole on corner of Stony Creek and Finzel Rds.	I
T33	NW/317	9.2 mi	Pole on W side of Grafton Rd. First Pole N of Ash and Grafton intersection.	I
T34	NNW/338	9.7 mi	Pole on E side of Port Creek, first pole S of Will–Carleton Rd.	I

I = Indicator C = Control

Table 8-1 Direct Radiation (cont.)

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx)	Description	Type
T35	N/359	6.9 mi	Pole on S Side of S Huron River Dr. across from Race St.	I
T36	N/358	9.1 mi	Pole on NE corner of Gibraltar and Cahill Rds.	I
T37	NNE/21	9.8 mi	Pole on S corner of Adams and Gibraltar across from Humbug Marina.	I
T38	WNW/294	1.7 mi	On pole at the residence on 6594 N. Dixie Highway	I
T39	S/176	0.3 mi	SE corner of Protected Area Fence (PAF).	I
T40	S/170	0.3 mi	Midway along OBA on PAF.	I
T41	SSE/161	0.2 mi	Midway between OBA and Shield Wall on PAF.	I
T42	SSE/149	0.2 mi	Midway along Shield Wall on PAF.	I
T43	SE/131	0.1 mi	Midway between Shield Wall and Aux Boilers on PAF.	I
T44	ESE/109	0.1 mi	Opposite OSSF door on PAF.	I
T45	E/86	0.1 mi	NE Corner of PAF.	I
T46	ENE/67	0.2 mi	NE side of barge slip on fence.	I
T47	S/185	0.1 mi	South of Turbine Bldg. rollup door on PAF.	I
T48	SW/235	0.2 mi	30 ft. from corner of AAP on PAF.	I

I = Indicator C = Control

Table 8-1 Direct Radiation (cont.)

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx)	Description	Type
T49	WSW/251	1.1 mi	Corner of Site Boundary fence north of NOC along Critical Path Rd.	I
T50	W/270	0.9 mi	Site Boundary fence near main gate by the south Bullit Street sign.	I
T51	N/3	0.4 mi	Site Boundary fence north of north Cooling Tower.	I
T52	NNE/20	0.4 mi	Site Boundary fence at the corner of Arson and Tower.	I
T53	NE/55	0.2 mi	Site Boundary fence east of South Cooling Tower.	I
T54	S/189	0.3 mi	Pole next to Fermi 2 Visitors Center.	I
T55	WSW/251	3.3 mi	Pole on south side of Nadeau east of Sodt Elementary School.	I
T56	WSW/255	4.9 mi	Pole at entrance to Jefferson Middle School on Stony Creek Rd.	I
T57	W/260	2.7 mi	Pole on north side of William Rd. across from Jefferson High School entrance.	I
T58	WSW/249	4.9 mi	Pole west of Hurd Elementary School sign.	I
T59	NW/325	2.6 mi	Pole north of St. Charles Church entrance on Dixie Hwy.	I

I = Indicator C = Control

Table 8-1 Direct Radiation (cont.)

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx)	Description	Type
T60	NNW/341	2.5 mi	1st pole north of North Elementary School's entrance on Dixie Hwy.	I
T61	W/268	10.1 mi	Pole at SW corner of Stewart and Raisinville Rds.	I
T62	SW/232	9.7 mi	Pole at NE corner of Albain and Hull Rds.	I
T63	WSW/245	9.6 mi	Pole at NE corner of Dunbar and Telegraph Rds.	I

I = Indicator C = Control

Table 8–2 Air Particulate/Air Iodine Sample Locations

Station Number	Meteorological Sector/Azimuth Degrees	Distance from Reactor (Approx)	Description	Media	Frequency
API–1	NE/39	1.4 mi	Estral Beach Pole on Lakeshore, 18 Poles S of Lakeview (Nearest Community with highest χ/Q)	Radioiodine Particulates	W W
API–2	NNW/337	0.6 mi	Site Boundry and Toll Road, on Site Fence by T–4	Radioiodine Particulates	W W
API–3	NW/313	0.6 mi	Site Boundry and Toll Road, on Site Fence by T–5	Radioiodine Particulates	W W
API–4	W/270	14.1 mi	Pole, behind Doty Farm – 7512 N Custer Road (Control)	Radioiodine Particulates	W W
API–5	S/191	1.2 mi	Corner of Erie St and Pointe Aux Peaux Rds	Radioiodine Particulates	W W

W = weekly

Table 8–3 Milk/Grass Sample Locations

Station Number	Meteorological Sector/Azimuth Degrees	Distance from Reactor (Approx)	Description	Media	Frequency
M–2	NW/319	5.4 mi	Reaume Farm – 2705 E Labo	Milk	M–SM
M–3	NW/317	4.2 mi	Yoas Farm – 3239 Newport Rd	Milk	M–SM
M–4	NNE/21	3.9 mi	9501 Turnpike Highway	Milk	M–SM
M–7	WNW/301	2.1 mi	Webb Farm – 4362 Post Rd	Grass	M–SM
M–8	WNW/289	9.9 mi	Calder Dairy – 9334 Finzel Rd (Control)	Milk/Grass	M–SM

M = monthly
SM = semimonthly when animals are grazing

Table 8–4 Vegetable Garden Sample Locations

Station Number	Meteorological Sector/Azimuth Degress	Distance from Reactor (Approx)	Description	Media	Frequency
FP–1	NNE/21	3.9 mi	9501 Turnpike Highway	Leafy Vegetables	M (when available)
FP–3	NNE/12	1.1 mi	6441 Brancheau	Leafy Vegetables	M (when available)
FP–5	NNE/19	4.4 mi	7806 Labo	Leafy Vegetables	M (when available)
FP–6	WNW/290	14.5 mi	8200 Geirman (Control)	Leafy Vegetables	M (when available)

M = monthly

Table 8–5 Water Sample Locations

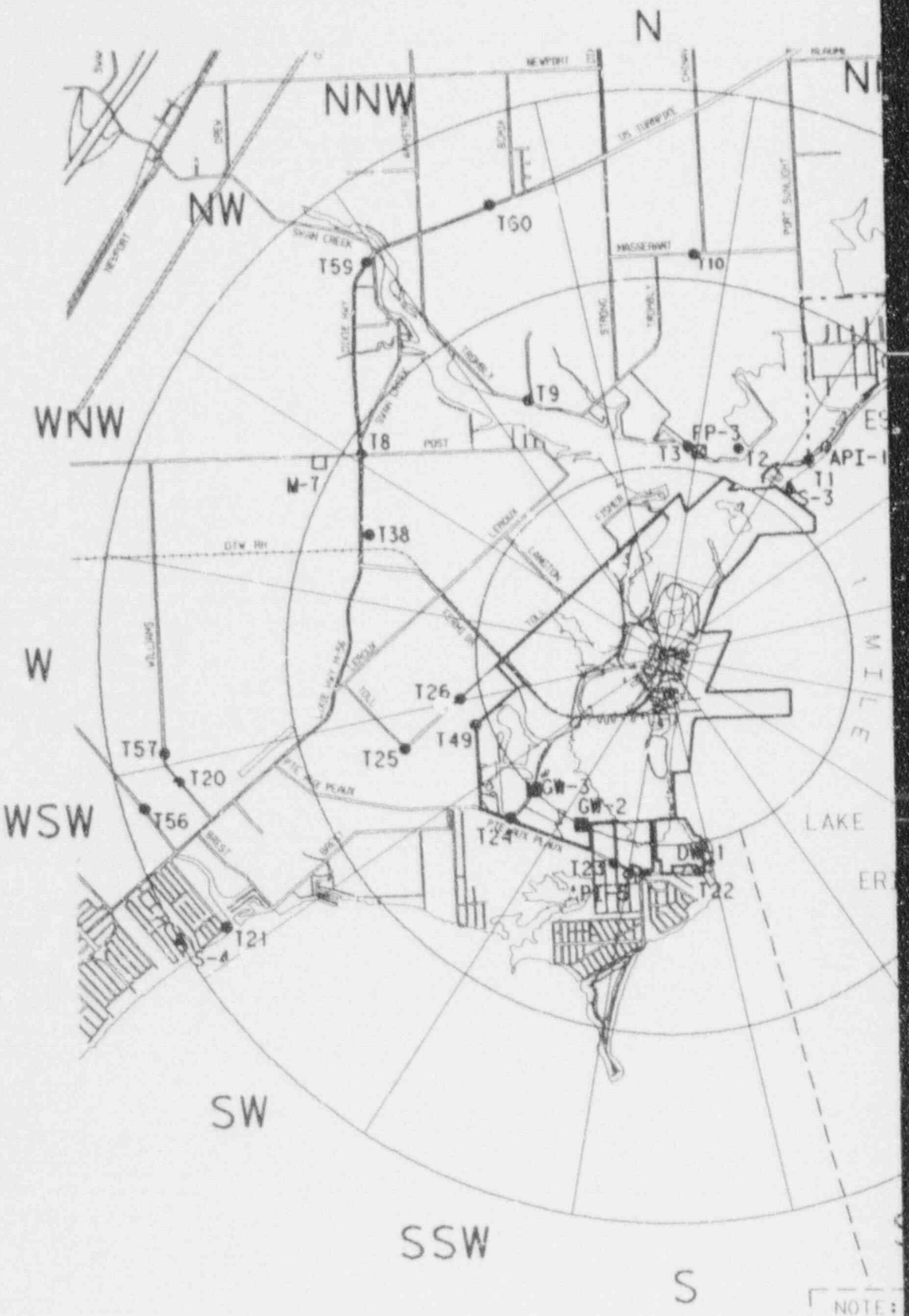
Station Number	Meteorological Sector/Azimuth Degrees	Distance from Reactor (Approx)	Description	Media	Frequency
DRINKING WATER					
DW–1	S/174	1.1 mi	Monroe Water Station N Side of Pointe Aux Peaux 1/2 Block W of Long Rd	Drinking Water	M
DW–2	N/8	18.6 mi	Detroit Water Station 14700 Moran Rd, Allen Park (Control)	Drinking Water	M
SURFACE WATER					
SW–1	SSE/160	0.3 mi	Fermi 1 Raw Lake Water Intake Structure	Surface Water	M
SW–2	NNE/20	11.7 mi	DECo's Trenton Channel Power Plant Intake Structure (Screenhouse #1) (Control)	Surface Water	M
SITE WELLS					
GW–1	S/175	0.4 mi	Approx 100 ft W of Lake Erie, EF–1 Parking lot near gas fired peakers	Groundwater	Q
GW–2	SSW/208	1.0 mi	4 ft S of Pointe Aux Peaux (PAP) Rd Fence 427 ft W of where PAP crosses over Stoney Point's Western Dike	Groundwater	Q
GW–3	SW/226	1.0 mi	143 ft W of PAP Rd Gate, 62 ft N of PAP Rd Fence	Groundwater	Q
GW–4	WNW/299	0.6 mi	42 ft S of Langton Rd, 6 ft E of Toll Rd Fence	Groundwater	Q

M = monthly Q = quarterly

Table 8–6 Fish and Sediment Locations

Station Number	Meteorological Sector/Azimuth Degrees	Distance from Reactor (Approx)	Description	Media	Frequency
SEDIMENTS					
S–1	SSE/165	0.9 mi	Pointe Aux Peaux, Shoreline to 500 ft offshore sighting directly to Land Base Water Tower	Sediment	SA
S–2	E/81	0.2 mi	Fermi 2 Discharge, approx 200 ft offshore	Sediment	SA
S–3	NE/39	1.1 mi	Estral Beach, approx 200 ft offshore, off North shoreline where Swan Creek and Lake Erie meet	Sediment	SA
S–4	WSW/241	3.0 mi	Indian Trails Community Beach	Sediment	SA
S–5	NNE/20	11.7 mi	DECo's Trenton Channel Power Plant intake area (Control)	Sediment	SA
FISH					
F–1	NNE/31	9.5 mi	Celeron Island (Control)	Fish	SA
F–2	E/86	0.4 mi	Fermi 2 Discharge (approx 1200 ft offshore)	Fish	SA
F–3	WSW/238	4.8 mi	Brest Bay Marina Area (Control)	Fish	SA

SA = semiannually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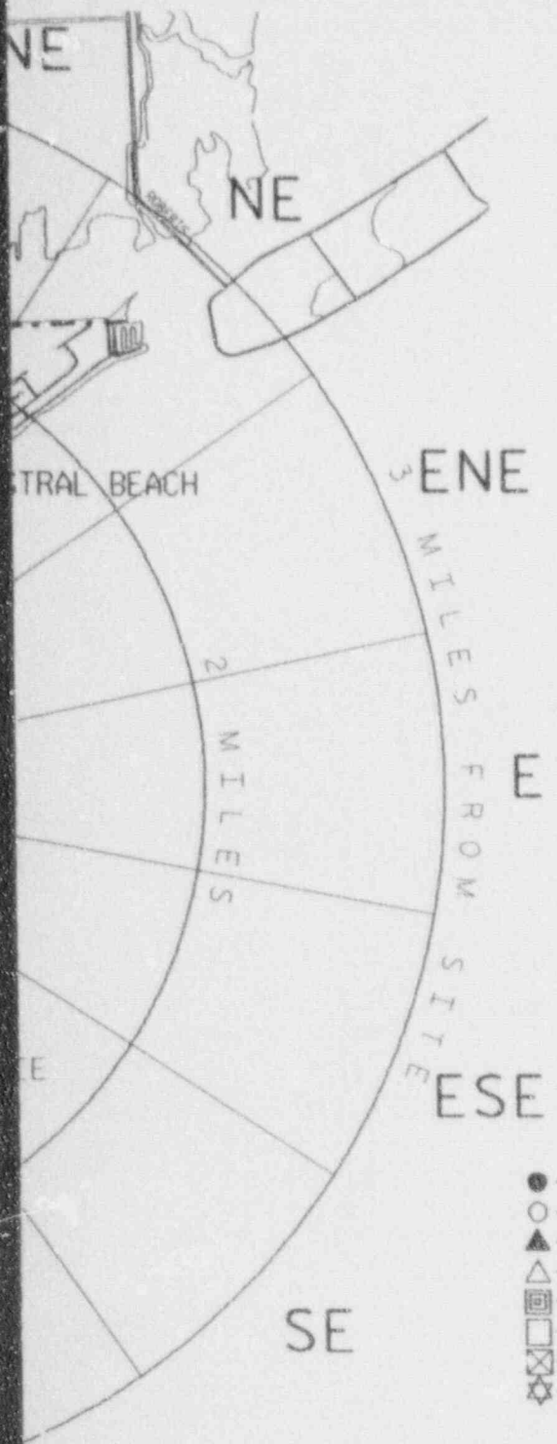
NW
WNW
W
WSW
SW
SSW
S
T60
T59
T10
T9
T8
T3
T2
T1
FP-3
API-1
M-7
T38
T26
T49
T25
T57
T20
T56
T24
T23
T22
T21
GW-3
GW-2
LAKE
NOTE:
FOR D
SEE F



0 1

SCALE IN MILES

LEGEND

- ●-T- DIRECT RADIATION
- ○-API- AIR PARTICULATES/AIR IODINE
- ▲-S- SEDIMENTS
- △-DW/SW- DRINKING WATER/SURFACE WATER
- ▣-GW- GROUND WATER
- □-M- MILK
- ⊠-FP- FOOD PRODUCTS
- ✡-F- FISH

TAIL OF STIE
G. 4

FIGURE 1
SAMPLING LOCATIONS
BY STATION NUMBER
(SITE AREA)

9205040231-01

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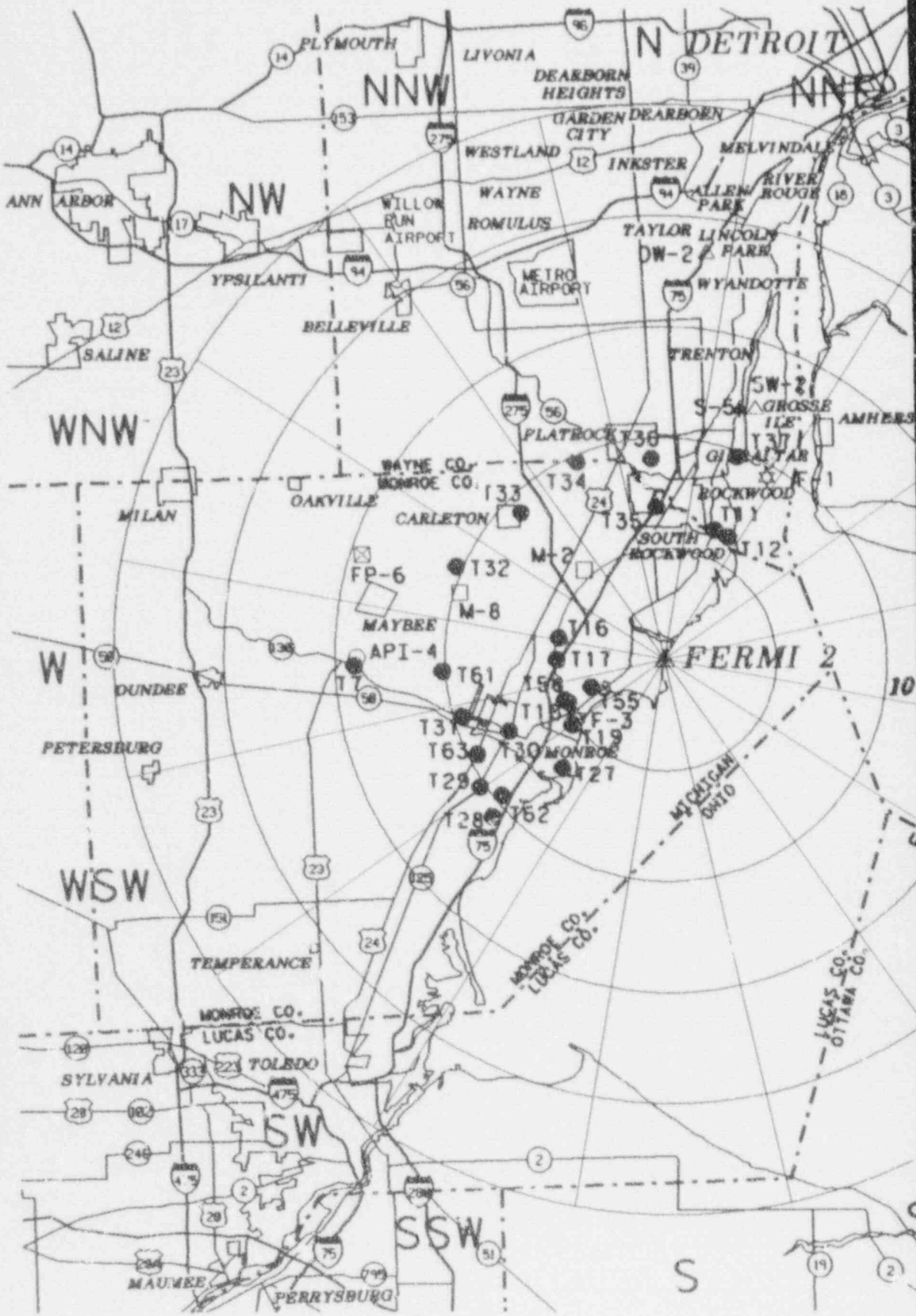

N
NNE
NNW
NW
WNW
W
WSW
SW
SSW
S
PLYMOUTH
LIVONIA
DEARBORN HEIGHTS
GARDEN CITY
DEARBORN
WESTLAND
INKSTER
MELVINDALE
ANN ARBOR
WILLOW RUN AIRPORT
WAYNE
ROMULUS
ALLEN PARK
RIVER ROUGE
TAYLOR
LINCOLN PARK
YPSILANTI
METRO AIRPORT
WYANDOTTE
BELLEVILLE
SALINE
TRENTON
GROSSE ILE
AMHERS
PLATROCK
GIBRALTAR
WAYNE CO.
MONROE CO.
OAKVILLE
ROCKWOOD
MILAN
CARLETON
SOUTH ROCKWOOD
FP-6
M-2
M-8
MAYBEE
API-4
FERMI 2
DUNDEE
PETERSBURG
MONROE
MICHIGAN
OHIO
TEMPERANCE
MONROE CO.
LUCAS CO.
TOLEDO
SYLVANIA
MAUMEE
PERRYSBURG
OTTAWA CO.
T32
T33
T34
T35
T36
T37
T12
T16
T17
T61
T55
T19
T63
T30
T27
T29
T28
T62
T31
F-3
DW-2
SW-2
S-5
10

5 0 5 10

SCALE IN MILES

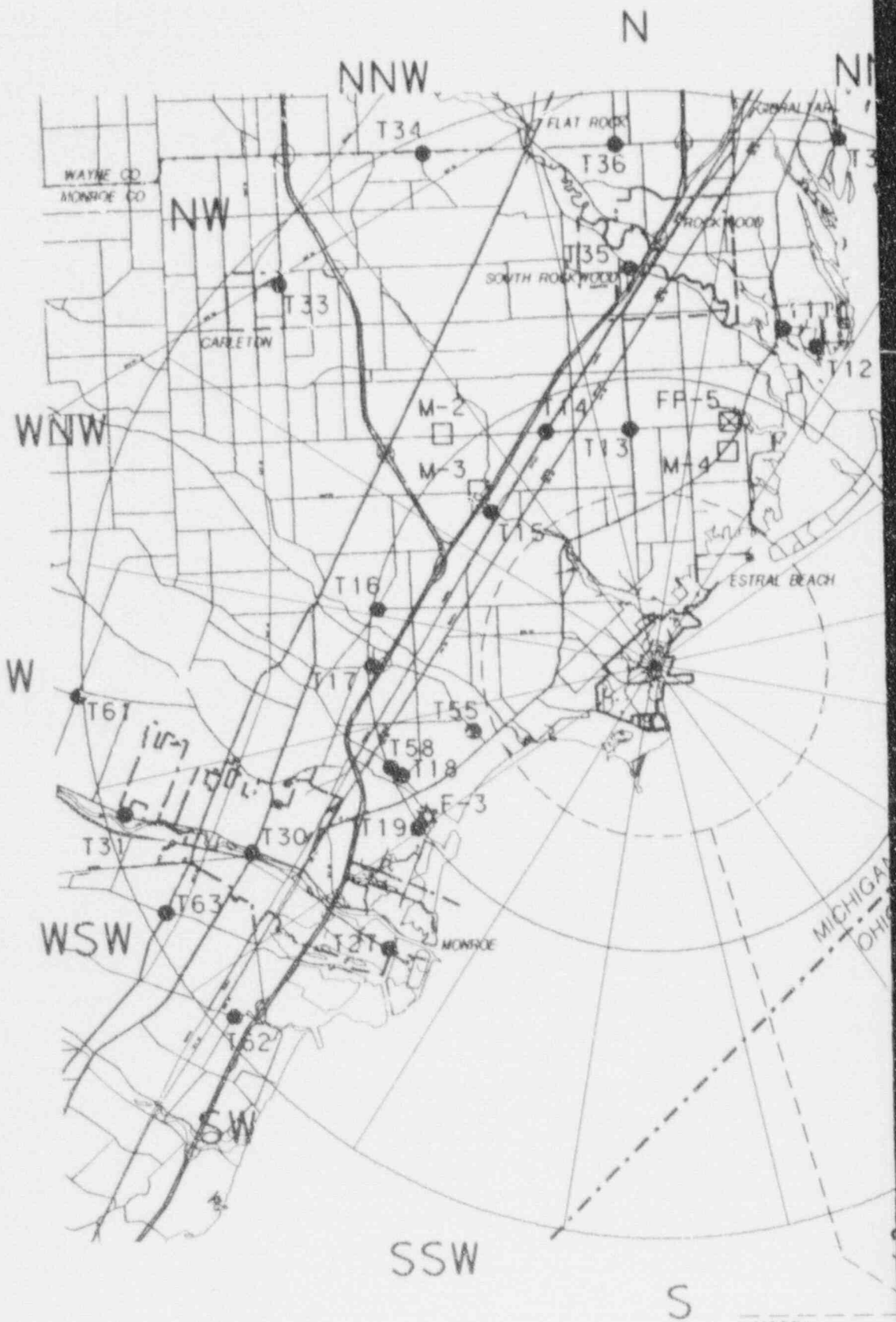
LEGEND

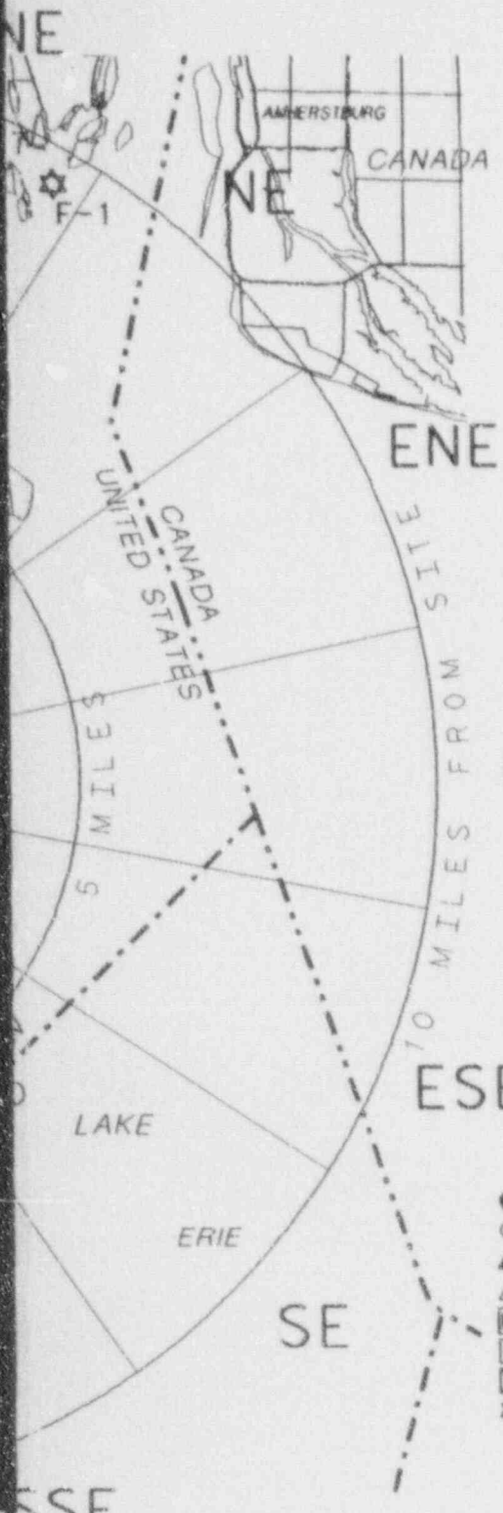
- -T- DIRECT RADIATION
- -API- AIR PARTICULATES OR AIR IODINE
- -S- SEDIMENTS
- -DW/SW- DRINKING WATER/SURFACE WATER
- -GW- GROUND WATER
- -M- MILK
- -FP- FOOD PRODUCTS
- -F- FISH

FIGURE 2
SAMPLING LOCATIONS
BY STATION NUMBER
(GREATER THAN 10 MILES)

9205040231-02

REVISED BY IG & GS APRIL 1992


N
NNW
NW
WNW
W
WSW
SW
SSW
S
T34
T36
T35
T33
T12
T14
T13
T15
T16
T17
T61
T55
T58
T18
T19
T30
T31
T63
T21
T62
M-2
M-3
M-4
FP-5
F-3
FLAT ROCK
ROCKWOOD
SOUTH ROCKWOOD
CARLETON
ESTRAL BEACH
MONROE
WAYNE CO
MONROE CO
MICHIGA
OHI
NOTE:
FOR SITE ARE
FOR GREATER
FOR LESS THA



1 0 1 2 3

SCALE IN MILES

LEGEND

- ●-T- DIRECT RADIATION
- ○-API- AIR PARTICULATES/AIR IODINE
- ▲-S- SEDIMENTS
- △-DW/SW- DRINKING WATER/SURFACE WATER
- ▣-GW- GROUND WATER
- □-M- MILK
- ⊠-FP- FOOD PRODUCTS
- ✡-F- FISH

A, SEE FIG.1.
THAN 5 MILES, SEE FIG.2.
N 10 MILES, SEE FIG.3.

FIGURE 3
SAMPLING LOCATIONS
BY STATION NUMBER
(LESS THAN 10 MILES)

9205040231-03

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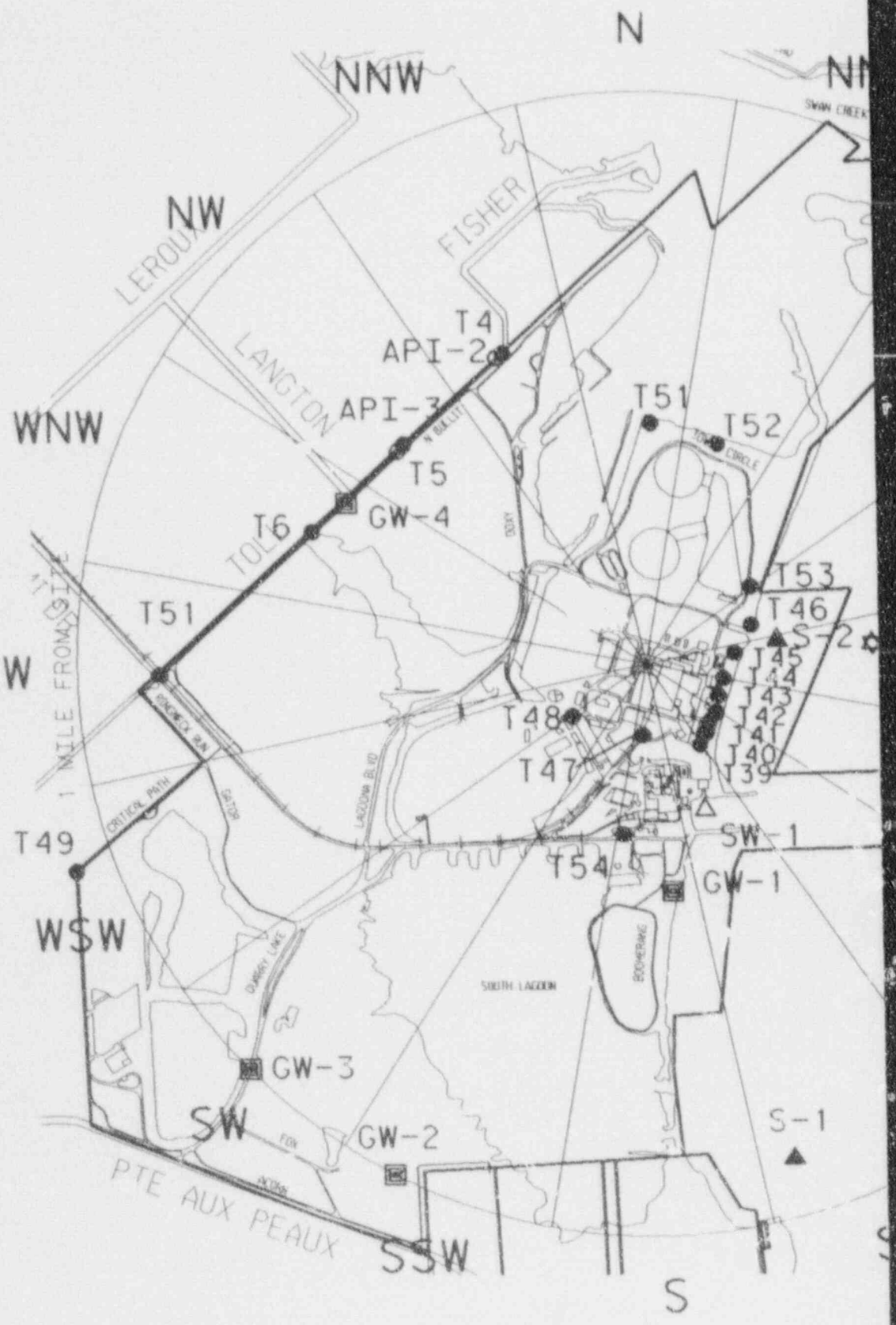
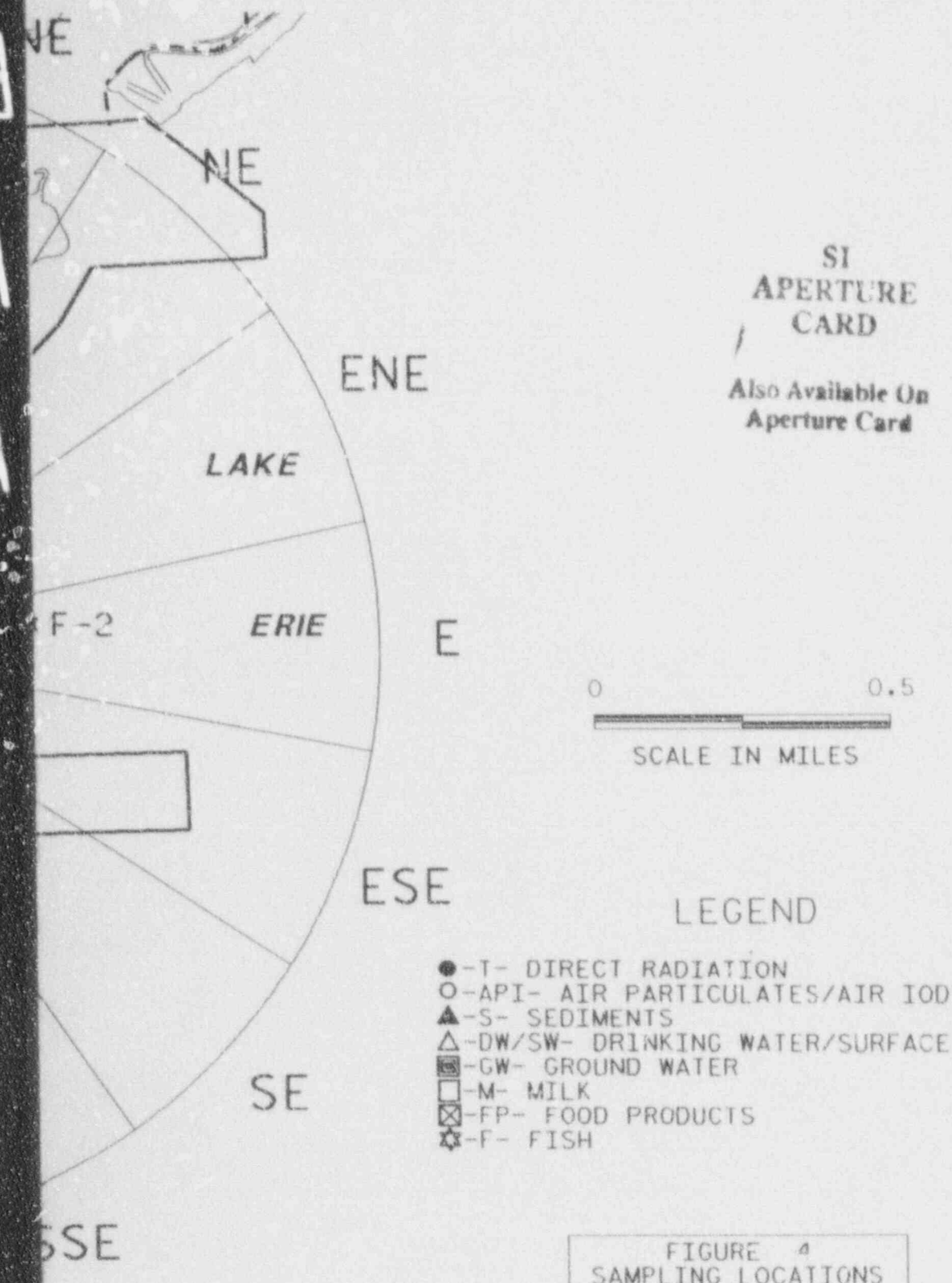

N
NNW
NW
WNW
W
WSW
SW
SSW
S
LEROUX
FISHER
LANGTON
TOLE
T4
API-2
API-3
T5
GW-4
T6
T51
T52
T53
T46
S-2
J45
J44
J43
J42
J41
J40
J39
T48
T47
T54
SW-1
GW-1
T49
GW-3
GW-2
S-1
PTE AUX PEAUX
1 MILE FROM SITE
SOUTH LAGOON
BOOMERANG



0 0.5

SCALE IN MILES

LEGEND

- ●-T- DIRECT RADIATION
- O-API- AIR PARTICULATES/AIR IODINE
- ▲-S- SEDIMENTS
- △-DW/SW- DRINKING WATER/SURFACE WATER
- ▨-GW- GROUND WATER
- □-M- MILK
- ⊠-FP- FOOD PRODUCTS
- ✡-F- FISH

FIGURE 4
SAMPLING LOCATIONS
BY STATION NUMBER
SITE AREA-LAKE ERIE

9205040231-04

REVISED BY IG & GS APRIL 1992

DATA TABLES

FERMI 2

TLD ANALYSIS
(mRem/Std Qtr)

STATION NUMBER	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
T01	12.2 ± 0.4	10.9 ± 0.5	12.7 ± 0.3	12.7 ± 0.7
T02	14.8 ± 0.5	13.4 ± 0.7	14.6 ± 1.4	14.9 ± 0.6
T03	11.8 ± 0.4	10.3 ± 0.3 *	10.9 ± 0.4	11.7 ± 0.8
T04	12.4 ± 0.4	10.9 ± 0.5	14.1 ± 0.5	13.5 ± 0.6
T05	13.4 ± 0.5	12.6 ± 0.2	14.0 ± 0.9	13.8 ± 0.6
T06	13.0 ± 0.4	11.9 ± 0.2	13.0 ± 0.5	13.6 ± 0.4
T07	14.2 ± 0.9	13.0 ± 0.7	15.1 ± 0.8	14.1 ± 0.3
T08	*	13.1 ± 0.4	13.7 ± 0.8	13.8 ± 0.3
T09	13.0 ± 0.6	12.4 ± 0.9	13.3 ± 0.7	13.1 ± 0.7
T10	14.3 ± 0.5	12.8 ± 0.3	15.4 ± 0.9	14.3 ± 0.2
T11	11.5 ± 0.3	10.0 ± 0.6	11.0 ± 1.0 *	13.0 ± 1.7 *
T12	11.8 ± 0.3	10.0 ± 0.5	11.7 ± 0.3	11.9 ± 1.0
T13	14.8 ± 0.9	13.6 ± 0.6	15.3 ± 1.2	14.1 ± 1.0
T14	14.3 ± 1.2	13.7 ± 0.1	14.6 ± 1.1	14.4 ± 0.7
T15	13.8 ± 0.6	13.5 ± 0.8	14.3 ± 1.3	13.7 ± 0.7
T16	14.7 ± 0.9	12.6 ± 0.5	14.2 ± 1.0	13.3 ± 0.6
T17	13.6 ± 0.7 *	11.1 ± 1.4	11.9 ± 0.5	11.7 ± 0.4
T18	14.2 ± 0.2	12.5 ± 0.5	13.6 ± 0.8	13.2 ± 0.5
T19	15.8 ± 0.4	13.9 ± 0.8	16.1 ± 1.1	14.7 ± 0.6
T20	15.7 ± 0.8	14.4 ± 0.5	15.6 ± 1.1	15.2 ± 0.6
T21	13.7 ± 1.1	12.3 ± 0.4	12.8 ± 0.5	12.7 ± 0.6
T22	14.7 ± 0.7	12.6 ± 0.6	14.6 ± 1.2	13.8 ± 0.7
T23	14.6 ± 0.6	14.0 ± 0.5	14.5 ± 0.9	14.5 ± 0.6
T24	14.7 ± 1.5	12.0 ± 0.2	12.1 ± 0.8 *	12.7 ± 0.5
T25	17.3 ± 0.9	14.5 ± 2.7	18.0 ± 1.2	15.8 ± 0.5
T26	16.5 ± 1.1	15.1 ± 0.9	16.4 ± 0.9	15.7 ± 0.2
T27	12.0 ± 0.5	10.7 ± 0.3	11.8 ± 0.6	11.6 ± 1.0
T28	13.2 ± 0.7	11.5 ± 0.4	14.4 ± 1.1	12.6 ± 0.5
T29	13.6 ± 1.5	12.3 ± 0.5	13.6 ± 0.5	13.2 ± 0.6
T30	12.7 ± 0.7	10.6 ± 0.6	12.1 ± 0.4	11.6 ± 0.6
T31	13.5 ± 1.0	12.2 ± 0.6	14.3 ± 1.1	12.9 ± 0.2
T32	14.3 ± 0.8	13.7 ± 0.4	14.1 ± 0.7	13.4 ± 0.4
T33	13.4 ± 0.3	11.9 ± 0.1	13.0 ± 0.8	12.6 ± 0.6
T34	13.4 ± 0.9	11.2 ± 0.4	13.5 ± 0.7	12.2 ± 0.3
T35	13.4 ± 0.6	11.2 ± 0.8	12.6 ± 0.6	12.4 ± 0.6
T36	14.7 ± 1.4	12.6 ± 0.7	13.5 ± 1.2	13.9 ± 0.2
T37	14.0 ± 0.2	11.9 ± 0.7	13.7 ± 1.1	13.1 ± 0.9

* For details of lost/missing TLDs see section 6 (Program Execution)

FERMI 2

TLD ANALYSIS
(mRem/Std Qtr)

STATION NUMBER	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
T38	14.8 ± 0.8	13.0 ± 0.4	14.5 ± 0.5	14.3 ± 0.7
T39	14.9 ± 0.7	9.5 ± 0.8	15.2 ± 1.0	15.0 ± 0.8
T40	13.1 ± 1.8	9.8 ± 0.3	13.0 ± 0.7	13.4 ± 0.7
T41	16.7 ± 0.9	10.8 ± 0.3	16.5 ± 1.0	18.0 ± 0.6
T42	15.8 ± 1.0	10.6 ± 0.7	14.4 ± 1.2	16.2 ± 1.1
T43	17.1 ± 0.7	9.7 ± 1.5	17.5 ± 0.5	18.1 ± 0.9
T44	16.1 ± 0.3	10.1 ± 0.2	15.7 ± 0.4	17.3 ± 0.9
T45	14.3 ± 0.4	9.8 ± 0.4	13.0 ± 0.7	14.6 ± 0.5
T46	13.4 ± 0.7	10.4 ± 0.5	12.7 ± 0.7	14.2 ± 0.3
T47	18.5 ± 0.5	11.2 ± 0.4	16.1 ± 0.9	18.2 ± 1.3
T48	15.0 ± 0.3	11.1 ± 0.1	13.3 ± 0.7	14.6 ± 0.2
T49	17.9 ± 0.8	16.6 ± 0.3	18.6 ± 1.5	18.0 ± 0.9
T50	15.3 ± 1.0	13.4 ± 0.5	14.3 ± 0.8	14.6 ± 0.5
T51	12.0 ± 1.0	10.3 ± 0.4	10.9 ± 0.5	11.7 ± 0.5
T52	12.9 ± 0.2	10.5 ± 0.4	12.1 ± 0.2	12.3 ± 0.6
T53	14.9 ± 1.2	11.4 ± 1.0	14.1 ± 0.8	13.4 ± 0.2
T54	13.6 ± 1.0	10.9 ± 0.4	12.1 ± 0.3	12.2 ± 0.4
T55	*	13.3 ± 1.9	16.1 ± 1.1	14.8 ± 0.5
T56	14.4 ± 0.6	12.3 ± 0.2	13.8 ± 1.1	13.5 ± 0.3
T57	17.8 ± 1.5	14.6 ± 0.8	16.6 ± 1.3	15.9 ± 0.6
T58	14.8 ± 1.1	12.4 ± 1.9	13.8 ± 1.5	13.0 ± 0.1
T59	*	12.3 ± 0.5	13.7 ± 1.9	13.3 ± 0.6
T60	15.0 ± 0.9	13.4 ± 0.7	14.4 ± 2.3	14.5 ± 0.5
T61	14.6 ± 1.2	12.7 ± 0.6	14.1 ± 0.9	14.1 ± 0.5
T62	16.0 ± 1.1	13.8 ± 1.0	15.8 ± 2.1	14.7 ± 0.6
T63	12.8 ± 1.4	11.4 ± 0.6	12.0 ± 0.9	12.6 ± 0.6

* For details of lost/missing TLDs see section 6 (Program Execution)

FERMI 2

AIR PARTICULATE ANALYSIS

FIRST QUARTER
Gross Beta (pCi/cu.m.)

Date Collected	API-1	API-2	API-3	API-4	API-5
01/02/91	2.7E-02 ± 4.0E-03	2.7E-02 ± 4.0E-03	2.6E-02 ± 3.0E-03	2.6E-02 ± 4.0E-03	2.8E-02 ± 4.0E-03
01/09/91	3.0E-02 ± 4.0E-03	3.1E-02 ± 4.0E-03	2.9E-02 ± 3.0E-03	2.7E-02 ± 4.0E-03	2.7E-02 ± 4.0E-03
01/16/91	3.3E-02 ± 3.0E-03	3.2E-02 ± 3.0E-03	2.9E-02 ± 3.0E-03	3.1E-02 ± 3.0E-03	3.4E-02 ± 3.0E-03
01/23/91	3.1E-02 ± 3.0E-03	2.7E-02 ± 3.0E-03	2.5E-02 ± 3.0E-03	2.5E-02 ± 3.0E-03	2.8E-02 ± 3.0E-03
01/30/91	3.3E-02 ± 3.0E-03	3.0E-02 ± 3.0E-03	2.9E-02 ± 3.0E-03	2.9E-02 ± 3.0E-03	2.7E-02 ± 3.0E-03
02/06/91	3.0E-02 ± 3.0E-03	2.6E-02 ± 3.0E-03	2.7E-02 ± 3.0E-03	2.7E-02 ± 3.0E-03	3.2E-02 ± 4.0E-03
02/13/91	2.6E-02 ± 3.0E-03	2.6E-02 ± 3.0E-03	2.7E-02 ± 3.0E-03	2.6E-02 ± 3.0E-03	2.8E-02 ± 3.0E-03
02/20/91	1.7E-02 ± 3.0E-03	1.6E-02 ± 3.0E-03	1.8E-02 ± 3.0E-03	1.8E-02 ± 3.0E-03	2.1E-02 ± 3.0E-03
02/27/91	2.2E-02 ± 3.0E-03	1.9E-02 ± 3.0E-03	2.1E-02 ± 3.0E-03	1.8E-02 ± 3.0E-03	2.0E-02 ± 3.0E-03
03/06/91	2.2E-02 ± 3.0E-03	2.4E-02 ± 3.0E-03	2.3E-02 ± 3.0E-03	2.2E-02 ± 3.0E-03	2.6E-02 ± 3.0E-03
03/13/91	2.1E-02 ± 3.0E-03	2.3E-02 ± 3.0E-03	2.5E-02 ± 3.0E-03	2.1E-02 ± 3.0E-03	2.2E-02 ± 3.0E-03
03/20/91	1.2E-02 ± 2.0E-03	1.0E-02 ± 2.0E-03	1.0E-02 ± 2.0E-03	1.2E-02 ± 2.0E-03	1.4E-02 ± 3.0E-03
03/27/91	1.9E-02 ± 3.0E-03	1.8E-02 ± 3.0E-03	1.7E-02 ± 3.0E-03	2.0E-02 ± 3.0E-03	2.2E-02 ± 3.0E-03

Note: API-4 is the control location and API-1, API-2, API-3 and API-5 are indicator locations

FERMI 2

AIR PARTICULATE ANALYSIS

SECOND QUARTER
Gross Beta (pCi/cu.m.)

Date Collected	API–1	API–2	API–3	API–4	API–5
04/03/91	2.3E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03	1.7E–02 ± 2.0E–03	2.1E–02 ± 3.0E–03	2.3E–02 ± 3.0E–03
04/10/91	2.1E–02 ± 3.0E–03	2.1E–02 ± 3.0E–03	1.9E–02 ± 3.0E–03	1.8E–02 ± 3.0E–03	1.9E–02 ± 3.0E–03
04/17/91	1.3E–02 ± 2.0E–03	1.5E–02 ± 3.0E–03	1.5E–02 ± 2.0E–03	1.6E–02 ± 3.0E–03	1.6E–02 ± 3.0E–03
04/24/91	1.2E–02 ± 2.0E–03	1.3E–02 ± 2.0E–03	1.1E–02 ± 2.0E–03	1.1E–02 ± 2.0E–03	1.5E–02 ± 2.0E–03
05/01/91	2.0E–02 ± 3.0E–03	2.3E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03	2.6E–02 ± 3.0E–03
05/08/91	3.1E–02 ± 7.0E–03	2.8E–02 ± 6.0E–03	3.1E–02 ± 6.0E–03	3.0E–02 ± 7.0E–03	2.8E–02 ± 7.0E–03
05/15/91	2.4E–02 ± 3.0E–03	2.1E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03	2.2E–02 ± 3.0E–03	2.3E–02 ± 3.0E–03
05/22/91	1.9E–02 ± 3.0E–03	2.2E–02 ± 3.0E–03	1.6E–02 ± 3.0E–03	1.8E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03
05/29/91	1.9E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03	1.7E–02 ± 2.0E–03	1.7E–02 ± 2.0E–03	2.2E–02 ± 3.0E–03
06/05/91	1.3E–02 ± 3.0E–03	1.4E–02 ± 3.0E–03	1.4E–02 ± 3.0E–03	1.4E–02 ± 3.0E–03	1.8E–02 ± 3.0E–03
06/12/91	1.3E–02 ± 3.0E–03	1.6E–02 ± 3.0E–03	1.1E–02 ± 2.0E–03	1.5E–02 ± 3.0E–03	1.6E–02 ± 3.0E–03
06/19/91	2.6E–02 ± 3.0E–03	1.4E–02 ± 3.0E–03	1.4E–02 ± 3.0E–03	1.6E–02 ± 3.0E–03	1.6E–02 ± 3.0E–03
06/26/91	2.1E–02 ± 3.0E–03	1.9E–02 ± 3.0E–03	1.8E–02 ± 3.0E–03	2.2E–02 ± 3.0E–03	2.1E–02 ± 3.0E–03

Note: API–4 is the control location and API–1, API–2, API–3 and API–5 are indicator locations

FERMI 2

AIR PARTICULATE ANALYSIS

THIRD QUARTER
Gross Beta (pCi/cu.m.)

Date Collected	API–1	API–2	API–3	API–4	API–5
07/03/91	1.8E–02 ± 3.0E–03	1.7E–02 ± 3.0E–03	1.6E–02 ± 2.0E–03	2.2E–02 ± 3.0E–03	2.3E–02 ± 3.0E–03
07/10/91	2.4E–02 ± 4.0E–03	2.2E–02 ± 3.0E–03	1.8E–02 ± 3.0E–03	2.1E–02 ± 3.0E–03	2.4E–02 ± 3.0E–03
07/17/91	1.9E–02 ± 3.0E–03	2.1E–02 ± 3.0E–03	2.1E–02 ± 3.0E–03	2.3E–02 ± 3.0E–03	2.1E–02 ± 3.0E–03
07/24/91	2.8E–02 ± 3.0E–03	3.1E–02 ± 3.0E–03	2.9E–02 ± 3.0E–03	3.2E–02 ± 3.0E–03	3.3E–02 ± 4.0E–03
07/31/91	1.2E–02 ± 2.0E–03	1.3E–02 ± 2.0E–03	6.1E–03 ± 1.7E–03	1.7E–02 ± 3.0E–03	1.4E–02 ± 2.0E–03
08/07/91	1.5E–02 ± 3.0E–03	1.5E–02 ± 3.0E–03	1.7E–02 ± 3.0E–03	1.7E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03
08/14/91	1.7E–02 ± 3.0E–03	1.9E–02 ± 3.0E–03	1.8E–02 ± 3.0E–03	1.9E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03
08/21/91	2.7E–02 ± 4.0E–03	2.4E–02 ± 3.0E–03	2.2E–02 ± 3.0E–03	1.9E–02 ± 3.0E–03	2.4E–02 ± 3.0E–03
08/28/91	2.2E–02 ± 3.0E–03	2.1E–02 ± 3.0E–03	1.9E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03	2.1E–02 ± 3.0E–03
09/04/91	2.0E–02 ± 3.0E–03	2.4E–02 ± 3.0E–03	2.5E–02 ± 3.0E–03	2.8E–02 ± 3.0E–03	2.3E–02 ± 3.0E–03
09/11/91	2.3E–02 ± 3.0E–03	2.4E–02 ± 3.0E–03	2.3E–02 ± 3.0E–03	2.4E–02 ± 3.0E–03	2.8E–02 ± 3.0E–03
09/18/91	2.2E–02 ± 3.0E–03	2.5E–02 ± 3.0E–03	2.3E–02 ± 3.0E–03	2.7E–02 ± 3.0E–03	2.6E–02 ± 3.0E–03
09/25/91	1.7E–02 ± 3.0E–03	1.4E–02 ± 2.0E–03	1.5E–02 ± 2.0E–03	1.4E–02 ± 2.0E–03	1.3E–02 ± 3.0E–03

Note: API–4 is the control location and API–1, API–2, API–3 and API–5 are indicator locations

FERMI 2

AIR PARTICULATE ANALYSIS

FOURTH QUARTER
Gross Beta (pCi/cu.m.)

Date Collected	API–1	API–2	API–3	API–4	API–5
10/02/91	2.1E–02 ± 3.0E–03	1.6E–02 ± 3.0E–03	1.7E–02 ± 2.0E–03	1.8E–02 ± 3.0E–03	2.2E–02 ± 3.0E–03
10/09/91	*	1.9E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03	2.3E–02 ± 3.0E–03
10/16/91	1.8E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03	1.8E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03	2.4E–02 ± 3.0E–03
10/23/91	2.6E–02 ± 3.0E–03	2.5E–02 ± 3.0E–03	2.5E–02 ± 3.0E–03	2.6E–02 ± 3.0E–03	2.8E–02 ± 3.0E–03
10/30/91	1.9E–02 ± 3.0E–03	1.4E–02 ± 2.0E–03	1.9E–02 ± 3.0E–03	1.8E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03
11/06/91	3.2E–02 ± 4.0E–03	3.0E–02 ± 3.0E–03	2.6E–02 ± 3.0E–03	2.9E–02 ± 4.0E–03	3.2E–02 ± 4.0E–03
11/13/91	2.3E–02 ± 3.0E–03	1.9E–02 ± 3.0E–03	2.0E–02 ± 3.0E–03	1.9E–02 ± 3.0E–03	1.8E–02 ± 2.0E–03
11/20/91	3.2E–02 ± 4.0E–03	3.1E–02 ± 3.0E–03	3.1E–02 ± 3.0E–03	3.9E–02 ± 4.0E–03	3.0E–02 ± 3.0E–03
11/27/91	1.8E–02 ± 3.0E–03	1.4E–02 ± 2.0E–03	1.8E–02 ± 3.0E–03	1.6E–02 ± 3.0E–03	1.8E–02 ± 3.0E–03
12/04/91	2.1E–02 ± 3.0E–03	1.8E–02 ± 3.0E–03	1.8E–02 ± 3.0E–03	2.1E–02 ± 3.0E–03	2.1E–02 ± 3.0E–03
12/11/91	2.9E–02 ± 3.0E–03	2.6E–02 ± 3.0E–03	2.8E–02 ± 3.0E–03	2.6E–02 ± 3.0E–03	2.5E–02 ± 3.0E–03
12/18/91	2.9E–02 ± 3.0E–03	3.0E–02 ± 3.0E–03	3.2E–02 ± 3.0E–03	2.9E–02 ± 3.0E–03	3.0E–02 ± 3.0E–03
12/26/91	1.4E–02 ± 3.0E–03	1.8E–02 ± 3.0E–03	1.7E–02 ± 3.0E–03	1.5E–02 ± 3.0E–03	1.4E–02 ± 3.0E–03

* See section 6 (Program Execution) for details of lost sample.

Note: API–4 is the control location and API–1, API–2, API–3 and API–5 are indicator locations

FERMI 2

AIR PARTICULATE QUARTERLY COMPOSITE ANALYSIS

API-1 (Indicator)
(pCi/cu. m.)

Nuclide	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
SR-89	< 1.0E-03	< 4.0E-04	< 2.0E-03	< 1.0E-03
SR-90	< 1.0E-04	< 4.0E-05	< 4.0E-04	< 2.0E-04
BE-7	6.2E-02 ± 6.6E-03	3.2E-02 ± 3.3E-03	8.5E-02 ± 9.1E-03	8.2E-02 ± 1.1E-02
K-40	< 7.0E-03	< 3.0E-03	< 9.0E-03	< 1.0E-02
MN-54	< 4.0E-04	< 1.0E-04	< 5.0E-04	< 6.0E-04
CO-58	< 4.0E-04	< 2.0E-04	< 7.0E-04	< 6.0E-04
FE-59	< 9.0E-04	< 7.0E-04	< 2.0E-03	< 2.0E-03
CO-60	< 5.0E-04	< 1.0E-04	< 5.0E-04	< 5.0E-04
ZN-65	< 6.0E-04	< 3.0E-04	< 1.0E-03	< 1.0E-03
ZR/NB-95	< 5.0E-04	< 2.0E-04	< 7.0E-04	< 8.0E-04
RU-103	< 5.0E-04	< 3.0E-04	< 9.0E-04	< 1.0E-03
RU-106	< 3.0E-03	< 1.0E-03	< 4.0E-03	< 4.0E-03
CS-134	< 4.0E-04	< 1.0E-04	< 4.0E-04	< 5.0E-04
CS-137	< 4.0E-04	< 1.0E-04	< 4.0E-04	< 4.0E-04
BA/LA-140	< 3.0E-03	< 5.0E-03	< 1.0E-02	< 2.0E-02
CE-141	< 1.0E-03	< 7.0E-04	< 2.0E-03	< 2.0E-03
CE-144	< 2.0E-03	< 1.0E-03	< 3.0E-03	< 3.0E-03
RA-226	< 8.0E-03	< 3.0E-03	< 8.0E-03	< 9.0E-03
TH-228	< 7.0E-04	< 2.0E-04	< 7.0E-04	< 8.0E-04

FERMI 2

AIR PARTICULATE QUARTERLY COMPOSITE ANALYSIS

API–2 (indicator)
(pCi/cu. m.)

Nuclide	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
SR–89	< 1.0E–03	< 4.0E–04	< 8.0E–04	< 9.0E–04
SR–90	< 2.0E–04	< 3.0E–05	< 3.0E–04	< 1.0E–04
BE–7	7.0E–02 ± 8.7E–03	2.6E–02 ± 3.3E–03	1.1E–01 ± 1.3E–02	9.8E–02 ± 1.5E–02
K–40	< 1.0E–02	< 5.0E–03	< 1.0E–02	< 1.0E–02
MN–54	< 5.0E–04	< 2.0E–04	< 5.0E–04	< 6.0E–04
CO–58	< 6.0E–04	< 2.0E–04	< 8.0E–04	< 8.0E–04
FE–59	< 1.0E–03	< 8.0E–04	< 2.0E–03	< 3.0E–03
CO–60	< 6.0E–04	< 2.0E–04	< 6.0E–04	< 6.0E–04
ZN–65	< 1.0E–03	< 4.0E–04	< 1.0E–03	< 1.0E–03
ZR/NB–95	< 7.0E–04	< 3.0E–04	< 9.0E–04	< 1.0E–03
RU–103	< 8.0E–04	< 4.0E–04	< 1.0E–03	< 1.0E–03
RU–106	< 5.0E–03	< 2.0E–03	< 5.0E–03	< 5.0E–03
CS–134	< 5.0E–04	< 2.0E–04	< 6.0E–04	< 7.0E–04
CS–137	< 6.0E–04	< 2.0E–04	< 7.0E–04	< 5.0E–04
BA/LA–140	< 3.0E–03	< 4.0E–03	< 1.0E–02	< 2.0E–02
CE–141	< 2.0E–03	< 7.0E–04	< 3.0E–03	< 3.0E–03
CE–144	< 5.0E–03	< 1.0E–03	< 5.0E–03	< 5.0E–03
RA–226	< 1.0E–02	< 3.0E–03	< 1.0E–02	< 1.0E–02
TH–228	< 1.0E–03	< 2.0E–04	< 1.0E–03	< 1.0E–03

FERMI 2

AIR PARTICULATE QUARTERLY COMPOSITE ANALYSIS

API-3 (Indicator)
(pCi/cu. m.)

Nuclide	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
SR-89	< 2.0E-03	< 4.0E-04	< 9.0E-04	< 1.0E-01
SR-90	< 1.0E-04	< 4.0E-05	< 3.0E-04	< 4.0E-04
BE-7	5.9E-02 ± 6.7E-03	3.1E-02 ± 3.3E-03	8.4E-02 ± 1.0E-02	8.2E-02 ± 1.1E-02
K-40	1.2E-02 ± 4.5E-03	< 2.0E-03	< 2.0E-02	< 8.0E-03
MN-54	< 5.0E-04	< 1.0E-04	< 6.0E-04	< 5.0E-04
CO-58	< 6.0E-04	< 1.0E-04	< 8.0E-04	< 7.0E-04
FE-59	< 2.0E-03	< 5.0E-04	< 2.0E-03	< 3.0E-03
CO-60	< 5.0E-04	< 2.0E-04	< 5.0E-04	< 6.0E-04
ZN-65	< 1.0E-03	< 3.0E-04	< 1.0E-03	< 1.0E-03
ZR/NB-95	< 7.0E-04	< 2.0E-04	< 8.0E-04	< 8.0E-04
RU-103	< 8.0E-04	< 3.0E-04	< 1.0E-03	< 1.0E-03
RU-106	< 5.0E-03	< 1.0E-03	< 5.0E-03	< 5.0E-03
CS-134	< 5.0E-04	< 1.0E-04	< 5.0E-04	< 5.0E-04
CS-137	< 5.0E-04	< 1.0E-04	< 6.0E-04	< 5.0E-04
BA/LA-140	< 3.0E-03	< 5.0E-03	< 1.0E-02	< 2.0E-02
CE-141	< 9.0E-04	< 6.0E-04	< 2.0E-03	< 2.0E-03
CE-144	< 2.0E-03	< 9.0E-04	< 2.0E-03	< 3.0E-03
RA-226	< 7.0E-03	< 2.0E-03	< 7.0E-03	< 1.0E-02
TH-228	< 8.0E-04	< 2.0E-04	< 7.0E-04	< 8.0E-04

FERMI 2

AIR PARTICULATE QUARTERLY COMPOSITE ANALYSIS

API-4 (Control)
(pCi/cu. m.)

Nuclide	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
SR-89	< 1.0E-03	< 3.0E-04	< 7.0E-04	< 9.0E-04
SR-90	< 1.0E-04	< 2.0E-05	< 2.0E-04	< 1.0E-04
BE-7	6.6E-02 ± 8.0E-03	3.3E-02 ± 3.5E-03	9.8E-02 ± 1.0E-02	7.8E-02 ± 1.1E-02
K-40	< 1.0E-02	< 2.0E-03	< 1.0E-02	< 1.0E-02
MN-54	< 5.0E-04	< 1.0E-04	< 5.0E-04	< 5.0E-04
CO-58	< 6.0E-04	< 2.0E-04	< 7.0E-04	< 1.0E-03
FE-59	< 2.0E-03	< 5.0E-04	< 2.0E-03	< 2.0E-03
CO-60	< 5.0E-04	< 2.0E-04	< 6.0E-04	< 6.0E-04
ZN-65	< 1.0E-03	< 4.0E-04	< 1.0E-03	< 1.0E-03
ZR/NB-95	< 7.0E-04	< 2.0E-04	< 8.0E-04	< 1.0E-03
RU-103	< 8.0E-04	< 3.0E-04	< 1.0E-03	< 2.0E-03
RU-106	< 5.0E-03	< 1.0E-03	< 5.0E-03	< 5.0E-03
CS-134	< 6.0E-04	< 2.0E-04	< 5.0E-04	< 5.0E-04
CS-137	< 7.0E-04	< [illegible]0E-04	< 7.0E-04	< 8.0E-04
BA/LA-140	< 2.0E-03	< [illegible]-03	< 1.0E-02	< 2.0E-02
CE-141	< 1.0E-03	< 5.0E-04	< 2.0E-03	< 2.0E-03
CE-144	< 3.0E-03	< [illegible]0E-04	< 3.0E-03	< 3.0E-03
RA-226	< 3.0E-03	< 2.0E-03	< 8.0E-03	< 9.0E-03
TH-228	< 9.0E-04	< [illegible]04	< 9.0E-04	< 1.0E-03

FERMI 2

AIR PARTICULATE QUARTERLY COMPOSITE ANALYSIS

API-5 (Indicator)
(pCi/cu. m.)

Nuclide	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
SR-89	< 2.0E-03	< 5.0E-04	< 2.0E-03	< 9.0E-04
SR-90	< 2.0E-04	< 3.0E-05	< 6.0E-04	< 2.0E-04
BE-7	7.0E-02 ± 9.4E-03	3.1E-02 ± 3.1E-03	< 2.0E-02	6.8E-02 ± 1.1E-02
K-40	< 2.0E-02	< 2.0E-03	< 1.0E-02	< 9.0E-03
MN-54	< 7.0E-04	< 1.0E-04	< 7.0E-04	< 4.0E-04
CO-58	< 8.0E-04	< 2.0E-04	< 8.0E-04	< 7.0E-04
FE-59	< 2.0E-03	< 5.0E-04	< 2.0E-03	< 2.0E-03
CO-60	< 8.0E-04	< 1.0E-04	< 7.0E-04	< 6.0E-04
ZN-65	< 1.0E-03	< 3.0E-04	< 2.0E-03	< 1.0E-03
ZR/NB-95	< 9.0E-04	< 2.0E-04	< 9.0E-04	< 8.0E-04
RU-103	< 1.0E-03	< 3.0E-04	< 1.0E-03	< 1.0E-03
RU-106	< 6.0E-03	< 1.0E-03	< 5.0E-03	< 4.0E-03
CS-134	< 7.0E-04	< 1.0E-04	< 6.0E-04	< 4.0E-04
CS-137	< 9.0E-04	< 1.0E-04	< 9.0E-04	< 5.0E-04
BA/LA-140	< 4.0E-03	< 3.0E-03	< 1.0E-02	< 1.0E-02
CE-141	< 2.0E-03	< 3.0E-04	< 2.0E-03	< 2.0E-03
CE-144	< 1.0E-03	< 5.0E-04	< 4.0E-03	< 3.0E-03
RA-226	< 1.0E-02	< 1.0E-03	< 9.0E-03	< 9.0E-03
TH-228	< 1.0E-03	< 1.0E-04	< 1.0E-03	< 8.0E-04

FERMI 2

AIR IODINE ANALYSIS

FIRST QUARTER
I-131 (pCi/cu.m.)

Date Collected	API-1	API-2	API-3	API-4	API-5
01/02/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02
01/09/91	< 4.0E-02	< 4.0E-02	< 4.0E-02	< 4.0E-02	< 3.0E-02
01/16/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 2.0E-02
01/23/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 2.0E-02
01/30/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 2.0E-02
02/06/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02
02/13/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02
02/20/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
02/27/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02
03/06/91	< 5.0E-02	< 5.0E-02	< 4.0E-02	< 4.0E-02	< 3.0E-02
03/13/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 2.0E-02
03/20/91	< 3.0E-02	< 3.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02
03/27/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02

SECOND QUARTER
I-131 (pCi/cu.m.)

Date Collected	API-1	API-2	API-3	API-4	API-5
04/03/91	< 3.0E-02	< 3.0E-02	< 2.0E-02	< 3.0E-02	< 2.0E-02
04/10/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
04/17/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
04/24/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
05/01/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02
05/08/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02
05/15/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
05/22/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
05/29/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02
06/05/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 7.0E-03
06/12/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02
06/19/91	*	< 2.0E-02	< 1.0E-02	< 2.0E-02	< 2.0E-02
06/26/91	< 3.0E-02	< 3.0E-02	< 2.0E-02	< 3.0E-02	< 2.0E-02

* See section 6 (Program Execution) for details of lost sample.

FERMI 2

AIR IODINE ANALYSIS

THIRD QUARTER
I-131 (pCi/cu.m.)

Date Collected	API-1	API-2	API-3	API-4	API-5
07/03/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 1.0E-02
07/10/91	< 3.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02
07/17/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 1.0E-02
07/24/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
07/31/91	< 4.0E-02	< 4.0E-02	< 3.0E-02	< 4.0E-02	< 1.0E-02
08/07/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
08/14/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
08/21/91	< 3.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02
08/28/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02
09/04/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
09/11/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
09/18/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
09/25/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02

FOURTH QUARTER
I-131 (pCi/cu.m.)

Date Collected	API-1	API-2	API-3	API-4	API-5
10/02/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
10/09/91	*	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
10/16/91	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02
10/23/91	< 3.0E-02	< 2.0E-02	< 2.0E-02	< 2.0E-02	< 1.0E-02
10/30/91	< 3.0E-02	< 3.0E-02	< 2.0E-02	< 3.0E-02	< 2.0E-02
11/06/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 1.0E-02
11/13/91	< 3.0E-02	< 3.0E-02	< 2.0E-02	< 3.0E-02	< 9.0E-03
11/20/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 2.0E-02
11/27/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 2.0E-02
12/04/91	< 4.0E-02	< 4.0E-02	< 4.0E-02	< 4.0E-02	< 2.0E-02
12/11/91	< 4.0E-02	< 4.0E-02	< 3.0E-02	< 4.0E-02	< 1.0E-02
12/18/91	< 4.0E-02	< 4.0E-02	< 4.0E-02	< 4.0E-02	< 2.0E-02
12/26/91	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 3.0E-02	< 1.0E-02
01/02/92	< 4.0E-02	< 4.0E-02	< 3.0E-02	< 4.0E-02	< 1.0E-02

* See section 6 (Program Execution) for details of lost sample.

FERMI 2

MILK ANALYSIS

M–2 (Indicator)
(pCi/l)

Nuclide	01/10/91	02/07/91	03/07/91	04/04/91
SR–89	< 2.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
SR–90	9.4E–01 ± 1.4E–01	1.2E+00 ± 2.0E–01	1.1E+00 ± 6.0E–01	1.6E+00 ± 2.0E–01
I–131	< 2.0E–01	< 2.0E–01	< 2.0E–01	< 2.0E–01
BE–7	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 4.0E+01
K–40	1.3E+03 ± 1.3E+02	1.4E+03 ± 1.4E+02	1.4E+03 ± 1.4E+02	1.2E+03 ± 1.2E+02
MN–54	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 3.0E+00
CO –58	< 4.0E+00	< 4.0E+00	< 3.0E+00	< 4.0E+00
FE–59	< 9.0E+00	< 8.0E+00	< 8.0E+00	< 8.0E 00
CO–60	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
ZN–65	< 9.0E+00	< 1.0E+01	< 9.0E+00	< 1.0E+01
ZR/NB–95	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
RU–103	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
RU–106	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 4.0E+01
CS–134	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
CS–137	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 5.0E+00
BA/LA–140	< 5.0E+00	< 5.0E+00	< 5.0E+00	< 5.0E+00
CE–141	< 7.0E+00	< 6.0E+00	< 6.0E+00	< 9.0E+00
CE–144	< 3.0E+01	< 2.0E+01	< 2.0E+01	< 4.0E+01
RA–226	< 8.0E+01	< 7.0E+01	< 7.0E+01	< 1.0E+02
TH–228	< 7.0E+00	< 7.0E+00	< 7.0E+00	< 9.0E+00

FERMI 2

MILK ANALYSIS

M–2 (Indicator)
(pCi/l)

Nuclide	05/09/91	05/23/91	06/06/91	06/20/91
SR–89	< 2.0E+00	< 2.0E+00	< 6.0E+00	< 3.0E+00
SR–90	< 7.0E–01	< 2.0E–01	< 1.0E–01	1.2E+00 ± 2.0E–01
I–131	< 2.0E–01	< 2.0E–01	< 1.0E–01	< 1.0E–01
BE–7	< 3.0E+01	< 3.0E+01	< 4.0E+01	< 4.0E+01
K–40	1.3E+03 ± 1.3E+02	1.2E+03 ± 1.2E+02	1.1E+03 ± 1.1E+02	1.3E+03 ± 1.3E+02
MN–54	< 4.0E+00	< 4.0E+00	< 3.0E+00	< 4.0E+00
CO–58	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
FE–59	< 1.0E+01	< 1.0E+01	< 8.0E+00	< 1.0E+01
CO–60	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
ZN–65	< 9.0E+00	< 9.0E+00	< 9.0E+00	< 9.0E+00
ZR/NB–95	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
RU–103	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 5.0E+00
RU–106	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
CS–134	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
CS–137	< 4.0E+00	< 4.0E+00	6.6E+00 ± 3.8E+00	< 4.0E+00
BA/LA–140	< 6.0E+00	< 7.0E+00	< 8.0E+00	< 8.0E+00
CE–141	< 7.0E+00	< 8.0E+00	< 7.0E+00	< 8.0E+00
CE–144	< 2.0E+01	< 3.0E+01	< 2.0E+01	< 3.0E+01
RA–226	< 7.0E+01	< 8.0E+01	< 7.0E+01	< 8.0E+01
TH–228	< 7.0E+00	< 7.0E+00	< 7.0E+00	< 7.0E+00

FERMI 2

MILK ANALYSIS

M–2 (Indicator)
(pCi/l)

Nuclide	07/03/91	07/18/91	08/01/91	08/15/91
SR–89	< 4.0E+00	< 3.0E+00	< 3.0E+00	< 3.0E+00
SR–90	1.8E+00 ± 2.0E–01	< 2.0E–01	3.3E–01 ± 1.8E–01	< 8.0E–01
I–131	< 3.0E–01	< 1.0E–01	< 1.0E–01	< 1.0E–01
BE–7	< 3.0E+01	< 4.0E+01	< 3.0E+01	< 4.0E+01
K–40	1.2E+03 ± 1.2E+02	1.3E+03 ± 1.3E+02	1.3E+03 ± 1.3E+02	1.3E+03 ± 1.3E+02
MN–54	< 3.0E+00	< 4.0E+00	< 4.0E+00	< 3.0E+00
CO–58	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
FE–59	< 1.0E+01	< 9.0E+00	< 1.0E+01	< 1.0E+01
CO–60	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
ZN–65	< 8.0E+00	< 9.0E+00	< 9.0E+00	< 9.0E+00
ZR/NB–95	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
RU–103	< 5.0E+00	< 4.0E+00	< 4.0E+00	< 5.0E+00
RU–106	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
CS–134	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
CS–137	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
BA/LA–140	< 1.0E+01	< 9.0E+00	< 7.0E+00	< 9.0E+00
CE–141	< 9.0E+00	< 7.0E+00	< 7.0E+00	< 7.0E+00
CE–144	< 2.0E+01	< 2.0E+01	< 2.0E+01	< 2.0E+01
RA–226	< 7.0E+01	< 7.0E+01	< 7.0E+01	< 7.0E+01
TH–228	< 7.0E+00	< 7.0E+00	< 7.0E+00	< 7.0E+00

FERMI 2

MILK ANALYSIS

M–2 (Indicator)
(pCi/l)

Nuclide	09/05/91	09/19/91	10/03/91	10/17/91
SR–89	< 4.0E+00	< 4.0E+00	< 3.0E+00	< 4.0E+00
SR–90	1.4E+00 ± 2.0E–01	6.9E–01 ± 2.0E–01	7.3E–01 ± 2.0E–01	7.3E–01 ± 2.4E–01
I–131	< 1.0E–01	< 2.0E–01	< 1.0E–01	< 1.0E–01
BE–7	< 3.0E+01	< 3.0E+01	< 4.0E+01	< 3.0E+01
K–40	1.3E+03 ± 1.3E+02	1.1E+03 ± 1.1E+02	1.4E+03 ± 1.4E+02	1.4E+03 ± 1.4E+02
MN–54	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
CO–58	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
FE–59	< 9.0E+00	< 7.0E+00	< 9.0E+00	< 1.0E+01
CO–60	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
ZN–65	< 9.0E+00	< 8.0E+00	< 1.0E+01	< 8.0E+00
ZR/NB–95	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
RU–103	< 4.0E+00	< 3.0E+00	< 5.0E+00	< 4.0E+00
RU–106	< 3.0E+01	< 3.0E+01	< 4.0E+01	< 3.0E–01
CS–134	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
CS–137	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
BA/LA–140	< 6.0E+00	< 5.0E+00	< 6.0E+00	< 6.0E+00
CE–141	< 7.0E+00	< 5.0E+00	< 7.0E+00	< 7.0E+00
CE–144	< 2.0E+01	< 2.0E+01	< 2.0E+01	< 3.0E+01
RA–226	< 7.0E+01	< 6.0E+01	< 7.0E+01	< 7.0E+01
TH–228	< 6.0E+00	< 5.0E+00	< 7.0E+00	< 7.0E+00

FERMI 2

MILK ANALYSIS

M-2 (Indicator)
(pCi/l)

Nuclide	11/14/91	12/12/91
SR-89	< 5.0E+00	< 5.0E+00
SR-90	1.3E+00 ± 3.0E-01	1.3E+00 ± 3.0E-01
I-131	< 1.0E-01	< 3.0E-01
BE-7	< 3.0E+01	< 3.0E+01
K-40	1.3E+03 ± 1.3E+02	1.3E+03 ± 1.3E+02
MN-54	< 4.0E+00	< 3.0E+00
CO-58	< 4.0E+00	< 3.0E+00
FE-59	< 9.0E+00	< 8.0E+00
CO-60	< 4.0E+00	< 4.0E+00
ZN-65	< 8.0E+00	< 8.0E+00
ZR/NB-95	< 4.0E+00	< 4.0E+00
RU-103	< 4.0E+00	< 4.0E+00
RU-106	< 3.0E+01	< 3.0E+01
CS-134	< 4.0E+00	< 3.0E+00
CS-137	< 4.0E+00	< 3.0E+00
BA/LA-140	< 5.0E+00	< 5.0E+00
CE-141	< 6.0E+00	< 7.0E+00
CE-144	< 2.0E+01	< 3.0E+01
RA-226	< 7.0E+01	< 7.0E+01
TH-228	< 7.0E+00	< 6.0E+00

FERMI 2

MILK ANALYSIS

M-3 (Indicator)
(pCi/l)

Nuclide	01/10/91	02/07/91	03/07/91	04/04/91
SR-89	< 3.0E+00	< 3.0E+00	< 5.0E+00	< 2.0E+00
SR-90	2.2E+00 ± 2.0E-01	2.0E+00 ± 2.0E-01	1.6E+00 ± 8.0E-01	1.2E+00 ± 2.0E-01
I-131	< 2.0E-01	< 2.0E-01	< 2.0E-01	< 2.0E-01
BE-7	< 3.0E+01	< 4.0E+01	< 4.0E+01	< 3.0E+01
K-40	1.3E+03 ± 1.3E+02	1.4E+03 ± 1.4E+02	1.3E+03 ± 1.3E+02	1.4E+03 ± 1.4E+02
MN-54	< 3.0E+00	< 5.0E+00	< 5.0E+00	< 3.0E+00
CO-58	< 3.0E+00	< 5.0E+00	< 5.0E+00	< 3.0E+00
FE-59	< 9.0E+00	< 1.0E+01	< 1.0E+01	< 8.0E+00
CO-60	< 4.0E+00	< 6.0E+00	< 6.0E+00	< 4.0E+00
ZN-65	< 9.0E+00	< 1.0E+01	< 1.0E+01	< 8.0E+00
ZR/NB-95	< 4.0E+00	< 5.0E+00	< 5.0E+00	< 3.0E+00
RU-103	< 4.0E+00	< 5.0E+00	< 5.0E+00	< 4.0E+00
RU-106	< 3.0E+01	< 4.0E+01	< 4.0E+01	< 3.0E+01
CS-134	< 4.0E+00	< 5.0E+00	< 5.0E+00	< 4.0E+00
CS-137	< 4.0E+00	< 5.0E+00	< 5.0E+00	< 5.0E+00
BA/LA-140	< 5.0E+00	< 8.0E+00	< 6.0E+00	< 5.0E+00
CE-141	< 7.0E+00	< 1.0E+01	< 1.0E+01	< 6.0E+00
CE-144	< 3.0E+01	< 5.0E+01	< 4.0E+01	< 3.0E+01
RA-226	< 8.0E+01	< 1.0E+02	< 1.0E+02	< 7.0E+01
TH-228	< 7.0E+00	< 1.0E+01	< 1.0E+01	< 7.0E+00

FERMI 2

MILK ANALYSIS

M-3 (Indicato)
(pCi/l)

Nuclide	05/09/91	05/23/91	06/06/91	06/20/91
SR-89	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
SR-90	< 1.0E+00	< 1.0E-01	< 5.0E-01	< 2.0E-01
I-131	< 1.0E-01	< 2.0E-01	< 1.0E-01	< 1.0E-01
BE-7	< 3.0E+01	< 4.0E+01	< 3.0E+01	< 3.0E+01
K-40	1.2E+03 ± 1.2E+02	1.3E+03 ± 1.3E+02	1.2E+03 ± 1.2E+02	1.2E+03 ± 1.2E+02
MN-54	< 4.0E+00	< 4.0E+00	< 3.0E+00	< 3.0E+00
CO-58	< 4.0E+00	< 4.0E+00	< 3.0E+00	< 3.0E+00
FE-59	< 9.0E+00	< 9.0E+00	< 1.0E+01	< 8.0E+00
CO-60	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
ZN-65	< 8.0E+00	< 9.0E+00	< 8.0E+00	< 8.0E+00
ZR/NB-95	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 3.0E+00
RU-103	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
RU-106	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
CS-134	< 3.0E+00	< 4.0E+00	< 3.0E+00	< 3.0E+00
CS-137	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 5.0E+00
BA/LA-140	< 8.0E+00	< 8.0E+00	< 6.0E+00	< 7.0E+00
CE-141	< 7.0E+00	< 7.0E+00	< 7.0E+00	< 7.0E+00
CE-144	< 3.0E+01	< 2.0E+01	< 2.0E+01	< 2.0E+01
RA-226	< 7.0E+01	< 7.0E+01	< 7.0E+01	< 7.0E+01
TH-228	< 7.0E+00	< 7.0E+00	< 7.0E+00	< 6.0E+00

FERMI 2

MILK ANALYSIS

M-3 (Indicator)
(pCi/l)

Nuclide	07/03/91	07/18/91	08/01/91	08/15/91
SR-89	< 3.0E+00	< 5.0E+00	< 3.0E+00	< 3.0E+00
SR-90	1.2E+00 ± 2.0E-01	1.8E+00 ± 3.0E-01	2.4E+00 ± 2.0E-01	1.8E+00 ± 2.0E-01
I-131	< 3.0E-01	< 1.0E-01	< 1.0E-01	< 1.0E-01
BE-7	< 4.0E+01	< 4.0E+01	< 4.0E+01	< 4.0E+01
K-40	1.4E+03 ± 1.3E+02	1.7E+03 ± 1.7E+02	1.5E+03 ± 1.5E+02	1.5E+03 ± 1.5E+02
MN-54	< 3.0E+00	< 4.0E+00	< 4.0E+00	< 3.0E+00
CO-58	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
FE-59	< 1.0E+01	< 1.0E+01	< 1.0E+01	< 1.0E+01
CO-60	< 5.0E+00	< 5.0E+00	< 4.0E+00	< 4.0E+00
ZN-65	< 1.0E+01	< 1.0E+01	< 9.0E+00	< 9.0E+00
ZR/NB-95	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
RU-103	< 5.0E+00	< 5.0E+00	< 5.0E+00	< 5.0E+00
RU-106	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
CS-134	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
CS-137	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
BA/LA-140	< 8.0E+00	< 8.0E+00	< 8.0E+00	< 8.0E+00
CE-141	< 8.0E+00	< 8.0E+00	< 7.0E+00	< 1.0E+01
CE-144	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
RA-226	< 8.0E+01	< 7.0E+01	< 8.0E+01	< 8.0E+01
TH-228	< 7.0E+00	< 7.0E+00	< 7.0E+00	< 7.0E+00

FERMI 2

MILK ANALYSIS

M-3 (Indicator)
(pCi/l)

Nuclide	09/05/91	09/19/91	10/03/91	10/17/91
SR-89	< 2.0E+00	< 3.0E+00	< 2.0E+00	< 3.0E+00
SR-90	1.3E+00 ± 6.0E-01	1.1E+00 ± 2.0E-01	2.0E+00 ± 2.0E-01	1.4E+00 ± 2.0E-01
I-131	< 1.0E-01	< 1.0E-01	< 1.0E-01	< 1.0E-01
BE-7	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 4.0E+01
K-40	1.2E+03 ± 1.2E+02	1.5E+03 ± 1.5E+02	1.5E+03 ± 1.5E+02	1.4E+03 ± 1.4E+02
MN-54	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
CO-58	< 3.0E+00	< 3.0E+00	< 3.0E+00	< 4.0E+00
FE-59	< 9.0E+00	< 8.0E+00	< 1.0E+01	< 9.0E+00
CO-60	< 4.0E+00	< 3.0E+00	< 5.0E+00	< 4.0E+00
ZN-65	< 9.0E+00	< 7.0E+00	< 9.0E+00	< 1.0E+01
ZR/NB-95	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
RU-103	< 4.0E+00	< 4.0E+00	< 5.0E+00	< 4.0E+00
RU-106	< 3.0E+01	< 3.0E+01	< 2.0E+01	< 3.0E+01
CS-134	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
CS-137	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
BA/LA-140	< 7.0E+00	< 4.0E+00	< 6.0E+00	< 7.0E+00
CE-141	< 7.0E+00	< 5.0E+00	< 7.0E+00	< 8.0E+00
CE-144	< 2.0E+01	< 2.0E+01	< 3.0E+01	< 3.0E+01
RA-226	< 7.0E+01	< 5.0E+01	< 8.0E+01	< 8.0E+01
TH-228	< 7.0E+00	< 6.0E+00	< 7.0E+00	< 7.0E+00

FERMI 2

MILK ANALYSIS

M-3 (indicator)
(pCi/l)

Nuclide	11/14/91	12/12/91
SR-89	< 2.0E+00	< 4.0E+00
SR-90	< 7.0E-01	1.8E+00 ± 2.0E-01
I-131	< 2.0E-01	< 2.0E-01
BE-7	< 3.0E+01	< 3.0E+00
K-40	1.3E+03 ± 1.3E+02	1.3E+03 ± 1.3E+02
MN-54	< 4.0E+00	< 4.0E+00
CO-58	< 4.0E+00	< 3.0E+00
FE-59	< 9.0E+00	< 8.0E+00
CO-60	< 5.0E+00	< 4.0E+00
ZN-65	< 1.0E+01	< 8.0E+00
ZR/NB-95	< 4.0E+00	< 4.0E+00
RU-103	< 4.0E+00	< 4.0E+00
RU-106	< 3.0E+01	< 3.0E+01
CS-134	< 4.0E+00	< 4.0E+00
CS-137	< 4.0E+00	< 4.0E+00
BA/LA-140	< 6.0E+00	< 6.0E+00
CE-141	< 7.0E+00	< 8.0E+00
CE-144	< 3.0E+01	< 3.0E+01
RA-226	< 8.0E+01	< 9.0E+01
TH-228	< 7.0E+00	< 8.0E+00

FERMI 2

MILK ANALYSIS

M-4 (Indicator)
(pCi/l)

Nuclide	06/20/91	07/03/91	07/18/91
SR-89	< 5.0E+00	< 3.0E+00	< 2.0E+00
SR-90	2.1E+00 ± 4.0E-01	5.6E-01 ± 2.5E-01	9.1E-01 ± 1.6E-01
I-131	< 1.0E+01	< 2.0E+01	< 1.0E+01
BE-7	< 3.0E+01	< 3.0E+01	< 4.0E+01
K-40	1.4E+03 ± 1.4E+02	1.3E+03 ± 1.3E+02	1.5E+03 ± 1.5E+02
MN-54	< 3.0E+00	< 3.0E+00	< 4.0E+00
CO-58	< 4.0E+00	< 3.0E+00	< 4.0E+00
FE-59	< 9.0E+00	< 8.0E+00	< 9.0E+00
CO-60	< 4.0E+00	< 4.0E+00	< 5.0E+00
ZN-65	< 9.0E+00	< 7.0E+00	< 9.0E+00
ZR/NB-95	< 4.0E+00	< 3.0E+00	< 4.0E+00
RU-103	< 4.0E+00	< 4.0E+00	< 5.0E+00
RU-106	< 3.0E+01	< 3.0E+01	< 4.0E+01
CS-134	< 4.0E+00	< 3.0E+00	< 4.0E+00
CS-137	< 4.0E+00	< 4.0E+00	< 4.0E+00
BA/LA-140	< 7.0E+00	< 7.0E+00	< 8.0E+00
CE-141	< 8.0E+00	< 6.0E+00	< 9.0E+00
CE-144	< 3.0E+01	< 2.0E+01	< 3.0E+01
RA-226	< 7.0E+01	< 7.0E+01	< 9.0E+01
TH-228	< 7.0E+00	< 6.0E+00	< 7.0E+00

Note: Only three samples collected, see section 6 (Program Execution) for details

FERMI 2

MILK ANALYSIS

M–8 (Control)
(pCi/l)

Nuclide	01/10/91	02/07/91	03/07/91	04/04/91
SR–89	< 2.0E+00	< 4.0E+00	< 3.0E+00	< 2.0E+00
SR–90	1.1E+00 ± 2.0E–01	3.9E–01 ± 2.4E–01	6.5E–01 ± 1.4E–01	9.0E–01 ± 1.9E–01
I–131	< 2.0E+01	< 2.0E+01	< 1.0E+01	< 2.0E+01
BE–7	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 4.0E+01
K–40	1.3E+03 ± 1.3E+02	1.4E+03 ± 1.4E+02	1.5E+03 ± 1.5E+02	1.3E+03 ± 1.3E+02
MN–54	< 4.0E+00	< 4.0E+00	< 3.0E+00	< 4.0E+00
CO–58	< 3.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
FE–59	< 9.0E+00	< 9.0E+00	< 9.0E+00	< 1.0E+01
CO–60	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 5.0E+00
ZN–65	< 9.0E+00	< 9.0E+00	< 9.0E+00	< 1.0E+01
ZR/NB–95	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 5.0E+00
RU–103	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 5.0E+00
RU–106	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 4.0E+01
CS–134	< 4.0E+00	< 4.0E+00	< 3.0E+00	< 5.0E+00
CS–137	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 6.0E+00
BA/LA–140	< 5.0E+00	< 5.0E+00	< 5.0E+00	< 7.0E+00
CE–141	< 7.0E+00	< 6.0E+00	< 6.0E+00	< 8.0E+00
CE–144	< 3.0E+01	< 2.0E+01	< 3.0E+01	< 3.0E+01
RA–226	< 9.0E+01	< 8.0E+01	< 7.0E+01	< 9.0E+01
TH–228	< 7.0E+00	< 7.0E+00	< 7.0E+00	< 1.0E+01

FERMI 2

MILK ANALYSIS

M-8 (Control)
(pCi/l)

Nuclide	05/09/91	05/23/91	06/06/91	06/20/91
SR-89	< 2.0E+00	< 2.0E+00	< 6.0E+00	< 5.0E+00
SR-90	< 7.0E-01	5.4E-01 ± 2.3E-01	5.7E-01 ± 3.2E-01	5.5E+00 ± 4.0E-01
I-131	< 1.0E-01	< 2.0E-01	< 1.0E-01	< 1.0E-01
BE-7	< 4.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
K-40	1.5E+03 ± 1.5E+02	1.4E+03 ± 1.4E+02	1.4E+03 ± 1.4E+02	1.3E+03 ± 1.2E+02
MN-54	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
CO-58	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
FE-59	< 1.0E+01	< 1.0E+01	< 1.0E+01	< 9.0E+00
CO-60	< 5.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
ZN-65	< 1.0E+01	< 9.0E+00	< 1.0E+01	< 9.0E+00
ZR/NB-95	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
RU-103	< 5.0E+00	< 4.0E+00	< 5.0E+00	< 4.0E+00
RU-106	< 4.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
CS-134	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
CS-137	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
BA/LA-140	< 7.0E+00	< 7.0E+00	< 8.0E+00	< 7.0E+00
CE-141	< 8.0E+00	< 7.0E+00	< 8.0E+00	< 8.0E+00
CE-144	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
RA-226	< 8.0E+01	< 7.0E+01	< 8.0E+01	< 9.0E+01
TH-228	< 7.0E+00	< 7.0E+00	< 7.0E+00	< 7.0E+00

FERMI 2

MILK ANALYSIS

M-8 (Control)
(pCi/l)

Nuclide	07/03/91	07/18/91	08/01/91	08/15/91
SR-89	< 2.0E+00	< 3.0E+00	< 2.0E+00	< 2.0E+00
SR-90	1.1E+00 ± 2.0E-01	1.5E+00 ± 2.0E-01	3.6E-01 ± 1.8E-01	< 6.0E-01
I-131	< 2.0E-01	< 1.0E-01	< 1.0E-01	< 1.0E-01
BE-7	< 3.0E+01	< 4.0E+01	< 3.0E+01	< 4.0E+01
K-40	1.4E+03 ± 1.4E+02	1.4E+03 ± 1.4E+02	8.2E+02 ± 8.2E+01	1.3E+03 ± 1.3E+02
MN-54	< 3.0E+00	< 4.0E+00	< 3.0E+00	< 4.0E+00
CO-58	< 3.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
FE-59	< 9.0E+00	< 1.0E+01	< 9.0E+00	< 1.0E+01
CO-60	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
ZN-65	< 9.0E+00	< 1.0E+01	< 8.0E+00	< 1.0E+01
ZR/NB-95	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 5.0E+00
RU-103	< 4.0E+00	< 5.0E+00	< 4.0E+00	< 5.0E+00
RU-106	< 3.0E+01	< 4.0E+01	< 3.0E+01	< 4.0E+01
CS-134	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
CS-137	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
BA/LA-140	< 7.0E+00	< 8.0E+00	< 8.0E+00	< 8.0E+00
CE-141	< 9.0E+00	< 9.0E+00	< 9.0E+00	< 1.0E+01
CE-144	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 4.0E+01
RA-226	< 8.0E+01	< 8.0E+01	< 8.0E+01	< 1.0E+02
TH-228	< 7.0E+00	< 7.0E+00	< 7.0E+00	< 9.0E+00

FERMI 2

MILK ANALYSIS

M-8 (Control)
(pCi/l)

Nuclide	09/05/91	09/19/91	10/03/91	10/17/91
SR-89	< 5.0E+00	< 3.0E+00	< 3.0E+00	< 3.0E+00
SR-90	1.4E+00 ± 3.0E-01	6.8E-01 ± 1.7E-01	8.0E-01 ± 2.1E-01	1.3E+00 ± 2.0E-01
I-131	< 1.0E-01	< 1.0E-01	< 1.0E-01	< 1.0E-01
BE-7	< 4.0E+01	< 3.0E+01	< 4.0E+01	< 3.0E+01
K-40	1.3E+03 ± 1.3E+02	1.3E+03 ± 1.3E+02	1.3E+03 ± 1.3E+02	1.3E+03 ± 1.3E+02
MN-54	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
CO-58	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
FE-59	< 1.0E+01	< 8.0E+00	< 1.0E+01	< 1.0E+01
CO-60	< 5.0E+00	< 4.0E+00	< 5.0E+00	< 4.0E+00
ZN-65	< 9.0E+00	< 9.0E+00	< 1.0E+01	< 9.0E+00
ZR/NB-95	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
RU-103	< 5.0E+00	< 4.0E+00	< 5.0E+00	< 4.0E+00
RU-106	< 4.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
CS-134	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
CS-137	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
BA/LA-140	< 8.0E+00	< 5.0E+00	< 7.0E+00	< 7.0E+00
CE-141	< 8.0E+00	< 6.0E+00	< 8.0E+00	< 8.0E+00
CE-144	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
RA-226	< 8.0E+01	< 7.0E+01	< 8.0E+01	< 8.0E+01
TH-228	< 7.0E+00	< 6.0E+00	< 7.0E+00	< 7.0E+00

FERMI 2

MILK ANALYSIS

M–8 (Control)
(pCi/l)

Nuclide	11/14/91	12/12/91
SR–89	< 2.0E+00	< 2.0E+00
SR–90	4.2E–01 ± 1.3E–01	3.6E–01 ± 1.4E–01
I–131	< 2.0E–01	< 1.0E–01
BE–7	< 3.0E+01	< 3.0E+01
K–40	1.2E+03 ± 1.2E+02	1.3E+03 ± 1.3E+02
MN–54	< 4.0E+00	< 3.0E+00
CO–58	< 4.0E+00	< 3.0E+00
FE–59	< 9.0E+00	< 7.0E+00
CO–60	< 4.0E+00	< 4.0E+00
ZN–65	< 9.0E+00	< 7.0E+00
ZR/NB–95	< 4.0E+00	< 3.0E+00
RU–103	< 4.0E+00	< 3.0E+00
RU–106	< 3.0E+01	< 3.0E+01
CS–134	< 4.0E+00	< 3.0E+00
CS–137	< 4.0E+00	< 4.0E+00
BA/LA–140	< 5.0E+00	< 5.0E+00
CE–141	< 8.0E+00	< 6.0E+00
CE–144	< 3.0E+01	< 2.0E+01
RA–226	< 8.0E+01	< 6.0E+01
TH–228	< 7.0E+00	< 5.0E+00

FERMI 2

GRASS ANALYSIS

M–7 (Indicator)
(pCi/g wet)

Nuclide	05/09/91	05/23/91	06/06/91	06/20/91
I–131	< 2.0E+00	< 9.0E+00	< 5.0E+00	< 3.0E+00
BE–7	7.4E+02 ± 1.0E+02	7.4E+02 ± 1.2E+02	1.2E+03 ± 2.1E+02	1.3E+03 ± 2.0E+02
K–40	1.0E+04 ± 1.0E+03	9.3E+03 ± 9.3E+02	7.6E+03 ± 7.6E+02	1.2E+04 ± 1.2E+03
MN–54	< 1.0E+01	< 1.0E+01	< 2.0E+01	< 2.0E+01
CO–58	< 1.0E+01	< 1.0E+01	< 2.0E+01	< 2.0E+01
FE–59	< 3.0E+01	< 3.0E+01	< 6.0E+01	< 7.0E+01
CO–60	< 1.0E+01	< 1.0E+01	< 2.0E+01	< 2.0E+01
ZN–65	< 3.0E+01	< 3.0E+01	< 5.0E+01	< 6.0E+01
ZR/NB–95	< 1.0E+01	< 1.0E+01	< 3.0E+01	< 2.0E+01
RU–103	< 1.0E+01	< 1.0E+01	< 3.0E+01	< 3.0E+01
RU–106	< 9.0E+01	< 1.0E+02	< 2.0E+02	< 2.0E+02
CS–134	< 1.0E+01	< 1.0E+01	< 2.0E+01	< 2.0E+01
CS–137	< 1.0E+01	2.0E+01 ± 9.0E+00	< 3.0E+01	< 2.0E+01
BA/LA–140	< 3.0E+01	< 3.0E+01	< 5.0E+01	< 6.0E+01
CE–141	< 2.0E+01	< 2.0E+01	< 5.0E+01	< 5.0E+01
CE–144	< 6.0E+01	< 7.0E+01	< 2.0E+02	< 1.0E+02
RA–226	< 2.0E+02	< 2.0E+02	< 5.0E+02	< 4.0E+02
TH–228	< 2.0E+01	< 2.0E+01	< 4.0E+01	< 4.0E+01

Note: See section 6 (Program Execution) for samples not collected.

FERMI 2

GRASS ANALYSIS

M–7 (Indicator)
(pCi/kg wet)

Nuclide	07/03/91	07/18/91	08/01/91	08/15/91
I–131	< 3.0E+00	< 2.0E+00	< 5.0E+00	< 1.0E+01
BE–7	1.1E+03 ± 1.2E+02	7.8E+02 ± 1.3E+02	1.0E+03 ± 2.4E+02	1.6E+03 ± 5.0E+02
K–40	1.3E+04 ± 1.3E+03	1.2E+04 ± 1.2E+03	1.4E+04 ± 1.4E+03	8.4E+03 ± 8.4E+02
MN–54	< 1.0E+01	< 1.0E+01	< 2.0E+01	< 5.0E+01
CO–58	< 1.0E+01	< 1.0E+01	< 3.0E+01	< 6.0E+01
FE–59	< 4.0E+01	< 5.0E+01	< 7.0E+01	< 1.0E+02
CO–60	< 1.0E+01	< 1.0E+01	< 2.0E+01	< 5.0E+01
ZN–65	< 3.0E+01	< 3.0E+01	< 6.0E+01	< 1.0E+02
ZR/NB–95	< 1.0E+01	< 2.0E+01	< 3.0E+01	< 6.0E+01
RU–103	< 2.0E+01	< 2.0E+01	< 3.0E+01	< 8.0E+01
RU–106	< 1.0E+02	< 1.0E+02	< 2.0E+02	< 5.0E+02
CS–134	< 1.0E+01	< 1.0E+01	< 2.0E+01	< 5.0E+01
CS–137	< 1.0E+01	< 1.0E+01	< 2.0E+01	7.4E+01 ± 3.9E+01
BA/LA–140	< 3.0E+01	< 7.0E+01	< 9.0E+01	< 2.0E+02
CE–141	< 3.0E+01	< 3.0E+01	< 5.0E+01	< 1.0E+02
CE–144	< 8.0E+01	< 8.0E+01	< 1.0E+02	< 3.0E+02
RA–226	< 2.0E+02	< 2.0E+02	< 4.0E+02	< 1.0E+02
TH–228	< 2.0E+01	< 2.0E+01	< 4.0E+01	< 9.0E+01

Note: See section 6 (Program Execution) for samples not collected.

FERMI 2

GRASS ANALYSIS

M–7 (Indicator)
(pCi/kg wet)

Nuclide	09/05/91	09/19/91	10/03/91	10/17/91
I–131	< 4.0E+00	< 6.0E+00	< 3.0E+00	< 9.0E+00
BE–7	6.7E+02 ± 1.7E+02	< 2.0E+02	1.1E+03 ± 5.5E+02	2.7E+03 ± 5.3E+02
K–40	7.9E+03 ± 7.9E+02	5.0E+03 ± 5.0E+02	7.7E+03 ± 7.6E+02	7.5E+03 ± 7.5E+02
MN–54	< 2.0E+01	< 2.0E+01	< 5.0E+01	< 5.0E+01
CO–58	< 2.0E+01	< 2.0E+01	< 6.0E+01	< 6.0E+01
FE–59	< 5.0E+01	< 5.0E+01	< 1.0E+02	< 1.0E+02
CO–60	< 2.0E+01	< 2.0E+01	< 5.0E+01	< 6.0E+01
ZN–65	< 4.0E+01	< 4.0E+01	< 1.0E+02	< 1.0E+02
ZR/NB–95	< 2.0E+01	< 2.0E+01	< 6.0E+01	< 6.0E+01
RU–103	< 2.0E+01	< 3.0E+01	< 8.0E+01	< 7.0E+01
RU–106	< 2.0E+02	< 2.0E+02	< 5.0E+02	< 5.0E+02
CS–134	< 2.0E+01	< 2.0E+01	< 5.0E+01	< 5.0E+01
CS–137	< 2.0E+01	< 2.0E+01	< 6.0E+01	< 6.0E+01
BA/LA–140	< 4.0E+01	< 6.0E+01	< 2.0E+02	< 1.0E+02
CE–[illegible]	< 4.0E+01	< 5.0E+01	< 1.0E+02	< 1.0E+02
CE–144	< 1.0E+02	< 1.0E+02	< 4.0E+02	< 4.0E+02
RA–226	< 4.0E+02	< 4.0E+02	< 1.0E+03	< 1.0E+03
TH–228	< 4.0E+01	< 4.0E+01	< 1.0E+02	< 1.0E+02

Note: See section 6 (Program Execution) for samples not collected.

FERMI 2

GRASS ANALYSIS

M–8 (Control)
(pCi/kg wet)

Nuclide	05/09/91	05/23/91	06/06/91	06/20/91
I–131	< 3.0E+00	< 6.0E+00	< 6.0E+00	< 2.0E+00
BE–7	2.1E+02 ± 4.9E+01	1.5E+02 ± 8.2E+01	4.3E+02 ± 1.5E+02	7.4E+02 ± 1.6E+02
K–40	4.6E+03 ± 4.6E+02	6.4E+03 ± 6.4E+02	4.8E+03 ± 4.8E+02	7.1E+03 ± 7.1E+02
MN–54	< 5.0E+00	< 9.0E+00	< 2.0E+01	< 2.0E+01
CO–58	< 5.0E+00	< 1.0E+01	< 2.0E+01	< 2.0E+01
FE–59	< 2.0E+01	< 3.0E+01	< 5.0E+01	< 5.0E+01
CO–60	< 6.0E+00	< 1.0E+01	< 2.0E+01	< 2.0E+01
ZN–65	< 1.0E+01	< 3.0E+01	< 4.0E+01	< 4.0E+01
ZR/NB–95	< 6.0E+00	< 1.0E+01	< 2.0E+01	< 2.0E+01
RU–103	< 7.0E+00	< 1.0E+01	< 2.0E+01	< 2.0E+01
RU–106	< 4.0E+01	< 9.0E+01	< 2.0E+02	< 1.0E+02
CS–134	< 5.0E+00	< 1.0E+01	< 2.0E+01	< 2.0E+01
CS–137	1.2E+01 ± 5.7E+00	< 1.0E+01	< 2.0E+01	< 2.0E+01
BA/LA–140	< 1.0E+01	< 2.0E+01	< 4.0E+01	< 7.0E+01
CE–141	< 1.0E+01	< 2.0E+01	< 4.0E+01	< 5.0E+01
CE–144	< 4.0E+01	< 6.0E+01	< 1.0E+02	< 1.0E+02
RA–226	< 9.0E+01	< 2.0E+02	< 4.0E+02	< 4.0E+02
TH–228	< 9.0E+00	< 2.0E+01	< 3.0E+01	< 3.0E+01

Note: See section 6 (Program Execution) for samples not collected.

FERMI 2

GRASS ANALYSIS

M-8 (Control)
(pCi/kg wet)

Nuclide	07/03/91	07/18/91	08/01/91	08/15/91
I-131	< 4.0E+00	< 2.0E+00	< 7.0E+00	< 8.0E+00
BE-7	4.5E+02 ± 7.5E+01	2.6E+02 ± 6.6E+01	3.9E+02 ± 1.4E+02	2.5E+02 ± 1.3E+02
K-40	8.0E+03 ± 8.3E+02	8.1E+03 ± 8.1E+02	1.2E+04 ± 1.2E+03	6.7E+03 ± 6.7E+02
MN-54	< 8.0E+00	< 7.0E+00	< 1.0E+01	< 1.0E+01
CO-58	< 1.0E+01	< 8.0E+00	< 2.0E+01	< 1.0E+01
FE-59	< 3.0E+01	< 3.0E+01	< 5.0E+01	< 4.0E+01
CO-60	< 9.0E+00	< 7.0E+00	< 2.0E+01	< 1.0E+01
ZN-65	< 2.0E+01	< 2.0E+01	< 4.0E+01	< 3.0E+01
ZR/NB-95	< 1.0E+01	< 9.0E+00	< 2.0E+01	< 2.0E+01
RU-103	< 1.0E+01	< 1.0E+01	< 2.0E+01	< 2.0E+01
RU-106	< 7.0E+01	< 6.0E+01	< 1.0E+02	< 1.0E+02
CS-134	< 9.0E+00	< 7.0E+00	< 1.0E+01	< 1.0E+01
CS-137	< 9.0E+00	< 7.0E+00	< 2.0E+01	< 1.0E+01
BA/LA-140	< 2.0E+01	< 4.0E+01	< 6.0E+01	< 5.0E+01
CE-141	< 2.0E+01	< 2.0E+01	< 4.0E+01	< 4.0E+01
CE-144	< 7.0E+01	< 4.0E+01	< 9.0E+01	< 9.0E+01
RA-226	< 2.0E+02	< 1.0E+02	< 3.0E+02	< 3.0E+02
TH-228	< 2.0E+01	< 1.0E+01	< 3.0E+01	< 2.0E+01

Note: See section 6 (Program Execution) for samples not collected.

FERMI 2

GRASS ANALYSIS

M–8 (Control)
(pCi/kg wet)

Nuclide	09/05/91	09/19/91	10/03/91	10/17/91
I–131	< 4.0E+00	< 2.0E+00	< 4.0E+00	< 4.0E+00
BE–7	3.8E+02 ± 1.6E+02	1.1E+03 ± 3.0E+02	< 5.0E+02	1.0E+03 ± 3.1E+02
K–40	5.3E+03 ± 5.3E+02	7.0E+03 ± 7.0E+02	6.3E+03 ± 6.3E+02	7.6E+03 ± 7.5E+02
MN–54	< 2.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
CO–58	< 2.0E+01	< 3.0E+01	< 4.0E+01	< 3.0E+01
FE–59	< 5.0E+01	< 8.0E+01	< 9.0E+01	< 9.0E+01
CO–60	< 2.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
ZN–65	< 4.0E+01	< 7.0E+01	< 7.0E+01	< 8.0E+01
ZR/NB–95	< 2.0E+01	< 3.0E+01	< 4.0E+01	< 4.0E+01
RU–103	< 2.0E+01	< 4.0E+01	< 5.0E+01	< 5.0E+01
RU–106	< 2.0E+02	< 3.0E+02	< 3.0E+02	< 3.0E+02
CS–134	< 2.0E+01	< 3.0E+01	< 3.0E+01	< 4.0E+01
CS–137	< 2.0E+01	< 3.0E+01	< 3.0E+01	< 4.0E+01
BA/LA–140	< 4.0E+01	< 9.0E+01	< 1.0E+02	< 1.0E+02
CE–141	< 4.0E+01	< 8.0E+01	< 1.0E+02	< 9.0E+01
CE–144	< 1.0E+02	< 2.0E+02	< 3.0E+02	< 3.0E+02
RA–226	< 4.0E+02	< 7.0E+02	< 8.0E+02	< 8.0E+02
TH–228	< 4.0E+01	< 6.0E+01	< 7.0E+01	< 7.0E+01

Note: See section 6 (Program Execution) for samples not collected.

FERMI 2

VEGETABLE ANALYSIS

FP–1 (Indicator)
(pCi/kg wet)

Nuclide	Cabbage 07/30/91	Swiss Chard 07/30/91	Cabbage 08/29/91	Broccoli 08/29/91
I–131	< 3.0E+00	< 3.0E+00	< 1.0E+01	< 7.0E+00
SE–7	< 3.0E+02	< 2.0E+02	< 7.0E+01	5.2E+02 ± 7.7E+01
K–40	3.6E+03 ± 3.7E+02	7.9E+03 ± 7.9E+02	3.1E+03 ± 3.1E+02	4.5E+03 ± 4.5E+02
MN–54	< 2.0E+01	< 2.0E+01	< 6.0E+00	< 8.0E+00
CO–58	< 3.0E+01	< 2.0E+01	< 7.0E+00	< 9.0E+00
FE–59	< 8.0E+01	< 5.0E+01	< 2.0E+01	< 2.0E+01
CO–60	< 3.0E+01	< 2.0E+01	< 6.0E+00	< 8.0E+00
ZN–65	< 6.0E+01	< 4.0E+01	< 2.0E+01	< 2.0E+01
ZR/NB–95	< 3.0E+01	< 2.0E+01	< 7.0E+00	< 1.0E+01
RU–103	< 4.0E+01	< 3.0E+01	< 9.0E+00	< 1.0E+01
RU–106	< 2.0E+02	< 1.0E+02	< 5.0E+01	< 7.0E+01
CS–134	< 3.0E+01	< 2.0E+01	< 6.0E+00	< 8.0E+00
CS–137	< 3.0E+01	< 2.0E+01	< 6.0E+00	< 8.0E+00
BA/LA–140	< 1.0E+02	< 7.0E+01	< 2.0E+01	< 3.0E+01
CE–141	< 8.0E+01	< 6.0E+01	< 1.0E+01	< 2.0E+01
CE–144	< 2.0E+02	< 1.0E+	< 4.0E+01	< 5.0E+01
RA–226	< 5.0E+02	4.0E	< 1.0E+02	< 1.0E+02
TH–228	< 5.0E+01	< 3.0E	< 9.0E+00	< 1.0E+01

FERMI 2

VEGETABLE ANALYSIS

FP-1 (Indicator)
(pCi/kg wet)

Nuclide	Swiss Chard 08/29/91	
I-131	9.0E+00	
BE-7	2.8E+02	± 6.4E+01
K-40	3.2E+03	± 3.2E+02
MN-54	7.0E+00	
CO-58	8.0E+00	
FE-59	2.0E+01	
CO-60	7.0E+00	
ZN-65	2.0E+01	
ZR/NB-95	9.0E+00	
RU-103	1.0E+01	
RU-106	6.0E+01	
CS-134	7.0E+00	
CS-137	7.0E+00	
BA/LA-140	3.0E+01	
CE-141	2.0E+01	
CE-144	6.0E+01	
RA-226	2.0E+02	
TH-228	1.0E+01	

FERMI 2

VEGETABLE ANALYSIS

FP-2 (Indicator)
(pCi/kg wet)

Nuclide	Cabbage 08/29/91	Broccoli 08/29/91
I-131	< 1.0E+01	< 1.0E+01
BE-7	4.0E+02 ± 4.7E+01	2.1E+02 ± 6.8E+01
K-40	2.4E+03 ± 2.4E+02	3.2E+03 ± 3.2E+02
MN-54	< 4.0E+00	< 7.0E+00
CO-58	< 5.0E+00	< 8.0E+00
FE-59	< 1.0E+01	< 2.0E+01
CO-60	< 4.0E+00	< 7.0E+00
ZN-65	< 1.0E+01	< 2.0E+01
ZR/NB-95	< 5.0E+00	< 9.0E+00
RU-103	< 7.0E+00	< 1.0E+01
RU-106	< 4.0E+01	< 6.0E+01
CS-134	< 5.0E+00	< 7.0E+00
CS-137	1.2E+01 ± 4.5E+00	< 8.0E+00
BA/LA-140	< 2.0E+01	< 3.0E+01
CE-141	< 1.0E+01	< 2.0E+01
CE-144	< 3.0E+01	< 5.0E+01
RA-226	< 9.0E+01	< 1.0E+02
TH-228	< 9.0E+00	< 1.0E+01

TABLE 2

VEGETABLE ANALYSIS

FP–3 (Indicator)
(pCi/kg wet)

Nuclide	Broccoli 07/30/91	Cabbage 07/30/91	Lettuce 07/30/91
I–131	< 4.0E+00	< 5.0E+00	< 4.0E+00
BE–7	< 4.0E+01	< 3.0E+02	< 2.0E+02
K–40	4.5E+02 ± 4.5E+01	2.3E+03 ± 2.5E+02	2.5E+03 ± 2.5E+02
MN–54	< 4.0E+00	< 2.0E+01	< 2.0E+01
CO–58	< 4.0E+00	< 2.0E+01	< 2.0E+01
FE–59	< 1.0E+01	< 6.0E+01	< 5.0E+01
CO–60	< 4.0E+00	< 2.0E+01	< 2.0E+01
ZN–65	< 8.0E+00	< 5.0E+01	< 4.0E+01
ZR/NB–95	< 5.0E+00	< 3.0E+01	< 2.0E+01
RU–103	< 6.0E+00	< 4.0E+01	< 3.0E+01
RU–106	< 3.0E+01	< 2.0E+02	< 2.0E+02
CS–134	< 4.0E+00	< 2.0E+01	< 2.0E+01
CS–137	< 4.0E+00	< 3.0E+01	< 2.0E+01
BA/LA–140	< 2.0E+01	< 1.0E+02	< 9.0E+01
CE–141	< 8.0E+00	< 6.0E+01	< 5.0E+01
CE–144	< 2.0E+01	< 1.0E+02	< 1.0E+02
RA–226	< 6.0E+01	< 4.0E+02	< 3.0E+02
TH–228	< 6.0E+00	< 4.0E+01	< 3.0E+01

FERMI 2

VEGETABLE ANALYSIS

FP-5 (Indicator)
(pCi/kg wet)

Nuclide	Swiss Chard 07/30/91	Broccoli 07/30/91	Cabbage 07/30/91	Cabbage 08/29/91
I-131	< 2.0E+00	< 4.0E+00	< 5.0E+00	< 1.0E+01
BE-7	< 2.0E+02	< 2.0E+02	< 2.0E+02	1.7E+02 ± 5.9E+01
K-40	5.4E+03 ± 5.4E+02	3.7E+03 ± 3.7E+02	5.8E+03 ± 5.8E+02	3.0E+03 ± 3.0E+02
MN-54	< 2.0E+01	< 1.0E+01	< 1.0E+01	< 6.0E+00
CO-58	< 2.0E+01	< 1.0E+01	< 1.0E+01	< 8.0E+00
FE-59	< 5.0E+01	< 4.0E+01	< 4.0E+01	< 2.0E+01
CO-60	< 2.0E+01	< 2.0E+01	< 1.0E+01	< 7.0E+00
ZN-65	< 4.0E+01	< 3.0E+01	< 3.0E+01	< 2.0E+01
ZR/NB-95	< 2.0E+01	< 2.0E+01	< 2.0E+01	< 9.0E+00
RU-103	< 2.0E+01	< 2.0E+01	< 2.0E+01	< 1.0E+01
RU-106	< 1.0E+02	< 1.0E+02	< 1.0E+02	< 6.0E+01
CS-134	< 2.0E+01	< 2.0E+01	< 1.0E+01	< 7.0E+00
CS-137	< 2.0E+01	< 2.0E+01	< 1.0E+01	< 7.0E+00
BA/LA-140	< 8.0E+01	< 8.0E+01	< 5.0E+01	< 3.0E+01
CE-141	< 4.0E+01	< 5.0E+01	< 4.0E+01	< 2.0E+01
CE-144	< 1.0E+02	< 1.0E+02	< 9.0E+01	< 5.0E+01
RA-226	< 3.0E+02	< 3.0E+02	< 3.0E+02	< 1.0E+02
TH-228	< 2.0E+01	< 3.0E+01	< 2.0E+01	< 1.0E+01

FERMI 2

VEGETABLE ANALYSIS

FP–5 (Indicator)
(pCi/kg wet)

Nuclide	Broccoli 08/29/91	Swiss Chard 08/29/91
I–131	< 6.0E+00	< 7.0E+00
BE–7	1.7E+02 ± 7.7E+01	3.8E+02 ± 8.0E+01
K–40	6.5E+03 ± 6.5E+02	4.2E+03 ± 4.1E+02
MN–54	< 9.0E+00	< 7.0E+00
CO–58	< 1.0E+01	< 9.0E+00
FE–59	< 3.0E+01	< 2.0E+01
CO–60	< 9.0E+00	< 8.0E+00
ZN–65	< 2.0E+01	< 2.0E+01
ZR/NB–95	< 1.0E+01	< 9.0E+00
RU–103	< 1.0E+01	< 1.0E+01
RU–106	< 7.0E+01	< 6.0E+01
CS–134	< 9.0E+00	< 7.0E+00
CS–137	< 9.0E+00	< 7.0E+00
BA/LA–140	< 4.0E+01	< 3.0E+01
CE–141	< 3.0E+01	< 2.0E+01
CE–144	< 7.0E+01	< 6.0E+01
RA–226	< 2.0E+02	< 1.0E+02
TH–228	< 2.0E+01	< 1.0E+01

FERMI 2

VEGETABLE ANALYSIS

FP-6 (Indicator)
(pCi/kg wet)

Nuclide	Rhubarb 07/30/91	Cabbage 07/30/91	Broccoli 07/30/91	Cabbage 08/29/91
I-131	< 5.0E+00	< 4.0E+00	< 6.0E+00	< 1.0E+01
BE-7	< 1.0E+02	< 1.0E+02	< 1.0E+02	< 6.0E+01
K-40	3.6E+03 ± 3.6E+02	4.3E+03 ± 4.3E+02	6.0E+03 ± 6.0E+02	2.6E+03 ± 2.6E+02
MN-54	< 1.0E+01	< 1.0E+01	< 1.0E+01	< 4.0E+00
CO-58	< 1.0E+01	< 1.0E+01	< 1.0E+01	< 5.0E+00
FE-59	< 4.0E+01	< 4.0E+01	< 3.0E+01	< 2.0E+01
CO-60	< 1.0E+01	< 2.0E+01	< 1.0E+01	< 5.0E+00
ZN-65	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 1.0E+01
ZR/NB-95	< 1.0E+01	< 2.0E+01	< 1.0E+01	< 5.0E+00
RU-103	< 2.0E+01	< 2.0E+01	< 2.0E+01	< 7.0E+00
RU-106	< 1.0E+02	< 1.0E+02	< 1.0E+02	< 4.0E+01
CS-134	< 1.0E+01	< 1.0E+01	< 1.0E+01	< 4.0E+00
CS-137	< 1.0E+01	< 1.0E+01	< 1.0E+01	< 4.0E+00
BA/LA-140	< 6.0E+01	< 7.0E+01	< 5.0E+01	< 2.0E+01
CE-141	< 4.0E+01	< 3.0E+01	< 3.0E+01	< 1.0E+01
CE-144	< 9.0E+01	< 6.0E+01	< 8.0E+01	< 3.0E+01
RA-226	< 2.0E+02	< 2.0E+02	< 2.0E+02	< 7.0E+01
TH-228	< 2.0E+01	< 2.0E+01	< 2.0E+01	< 7.0E+00

FERMI 2

VEGETABLE ANALYSIS

FP-6 (Indicator)
(pCi/kg wet)

Nuclide	Broccoli 08/29/91	Rhubarb 08/29/91
I-131	< 9.0E+00	< 7.0E+00
BE-7	2.8E+02 ± 1.4E+02	5.5E+02 ± 1.1E+02
K-40	4.6E+03 ± 4.6E+02	4.2E+03 ± 4.2E+02
MN-54	< 1.0E+01	< 1.0E+01
CO-58	< 2.0E+01	< 1.0E+01
FE-59	< 4.0E+01	< 3.0E+01
CO-60	< 1.0E+01	< 1.0E+01
ZN-65	< 3.0E+01	< 2.0E+01
ZR/NB-95	< 2.0E+01	< 1.0E+01
RU-103	< 2.0E+01	< 2.0E+01
RU-106	< 1.0E+02	< 9.0E+01
CS-134	< 2.0E+01	< 1.0E+01
CS-137	< 2.0E+01	< 1.0E+01
BA/LA-140	< 6.0E+01	< 5.0E+01
CE-141	< 4.0E+01	< 3.0E+01
CE-144	< 9.0E+01	< 8.0E+01
RA-226	< 3.0E+02	< 2.0E+02
TH-228	< 3.0E+01	< 2.0E+01

FERMI 2

DRINKING WATER ANALYSIS

DW-1 (Indicator)
(pCi/l)

Nuclide	01/28/91 *	02/25/91 *	03/25/91 *	04/29/91 *
Gross Beta	4.9E+00 ± 1.1E+00	3.4E+00 ± 1.1E+00	4.1E+00 ± 1.0E+00	4.9E+00 ± 1.1E+00
SR-89	< 2.0E+00	< 3.0E+00	< 3.0E+00	< 2.0E+00
SR-90	< 9.0E-01	< 8.0E-01	< 8.0E-01	< 5.0E-01
BE-7	< 3.0E+01	< 4.0E+01	< 4.0E+01	< 3.0E+01
K-40	< 4.0E+01	< 6.0E+01	< 5.0E+01	< 4.0E+01
CR-51	*	*	*	< 3.0E+01
MN-54	< 3.0E+00	< 3.0E+00	< 3.0E+00	< 3.0E+00
CO-58	< 3.0E+00	< 3.0E+00	< 3.0E+00	< 3.0E+00
FE-59	< 6.0E+00	< 8.0E+00	< 9.0E+00	< 6.0E+00
CO-60	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
ZN-65	< 6.0E+00	< 6.0E+00	< 8.0E+00	< 6.0E+00
ZR/NB-95	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
RU-103	< 4.0E+00	< 5.0E+00	< 5.0E+00	< 3.0E+00
RU-106	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 2.0E+01
CS-134	< 3.0E+00	< 3.0E+00	< 3.0E+00	< 3.0E+00
CS-137	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
BA/LA-140	< 8.0E+00	< 1.0E+01	< 1.0E+01	< 7.0E+00
CE-141	< 8.0E+00	< 9.0E+00	< 8.0E+00	< 6.0E+00
CE-144	< 3.0E+01	< 2.0E+01	< 2.0E+01	< 2.0E+01
RA-226	< 7.0E+01	< 6.0E+01	< 7.0E+01	< 6.0E+01
TH-228	< 6.0E+00	< 5.0E+00	< 7.0E+00	< 5.0E+00

* See section 6 (Program Execution) for C-51 analysis, partial and less than fully representative sampling.

FERMI 2

DRINKING WATER ANALYSIS

DW-1 (Indicator)
(pCi/l)

Nuclide	05/28/91 *	06/24/91 *	07/29/91 *	08/28/91 *
Gross Beta	3.0E+00 ± 9.0E-01	3.2E+00 ± 9.0E-01	5.1E+00 ± 1.0E+00	3.6E+00 ± 9.0E-01
SR-89	< 2.0E+00	< 2.0E+00	< 1.0E+00	< 2.0E+00
SR-90	< 5.0E-01	< 7.0E-01	< 4.0E-01	5.0E-01 ± 3.5E-01
BE-7	< 4.0E+01	< 5.0E+01	< 3.0E+01	< 4.0E+01
K-40	< 9.0E+01	< 1.0E+02	< 1.0E+02	< 1.0E+02
CR-51	< 4.0E+01	< 6.0E+01	< 4.0E+01	< 4.0E+01
MN-54	< 3.0E+00	< 4.0E+00	< 3.0E+00	< 4.0E+00
CO-58	< 4.0E+00	< 5.0E+00	< 4.0E+00	< 4.0E+00
FE-59	< 9.0E+00	< 1.0E+01	< 8.0E+00	< 9.0E+00
CO-60	< 3.0E+00	< 4.0E+00	< 3.0E+00	< 4.0E+00
ZN-65	< 7.0E+00	< 9.0E+00	< 7.0E+00	< 8.0E+00
ZR/NB-95	< 4.0E+00	< 5.0E+00	< 4.0E+00	< 4.0E+00
RU-103	< 5.0E+00	< 6.0E+00	< 4.0E+00	< 5.0E+00
RU-106	< 3.0E+01	< 4.0E+01	< 3.0E+01	< 3.0E+01
CS-134	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
CS-137	< 3.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
BA/LA-140	< 1.0E+01	< 1.0E+01	< 1.0E+01	< 6.0E+00
CE-141	< 8.0E+00	< 1.0E+01	< 7.0E+00	< 8.0E+00
CE-144	< 2.0E+01	< 3.0E+01	< 2.0E+01	< 3.0E+01
RA-226	< 6.0E+01	< 8.0E+01	< 7.0E+01	< 8.0E+01
TH-228	< 6.0E+00	< 7.0E+00	< 6.0E+00	< 7.0E+00

* See section 6 (Program Execution) for partial and less than fully representative sampling.

FERMI 2

DRINKING WATER ANALYSIS

DW-1 (Indicator)
(pCi/l)

Nuclide	09/29/91	10/29/91	11/24/91	12/30/91 *
Gross Beta	3.4E+00 ± 9.0E-01	3.1E+00 ± 9.0E-01	3.0E+00 ± 1.0E+00	4.5E+00 ± 1.5E+00
SR-89	< 4.0E+00	< 2.0E+00	< 2.0E+00	< 2.0E+00
SR-90	< 1.0E+00	< 7.0E-01	< 5.0E-01	< 8.0E-01
BE-7	< 4.0E+01	< 3.0E+01	< 4.0E+01	< 3.0E+01
K-40	< 8.0E+01	< 5.0E+01	< 9.0E+01	< 6.0E+01
CR-51	< 4.0E+01	< 4.0E+01	< 5.0E+01	< 5.0E+01
MN-54	< 3.0E+00	< 3.0E+00	< 3.0E+00	< 3.0E+00
CO-58	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
FE-59	< 8.0E+00	< 8.0E+00	< 9.0E+00	< 8.0E+00
CO-60	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
ZN-65	< 7.0E+00	< 7.0E+00	< 8.0E+00	< 7.0E+00
ZR/NB-95	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
RU-103	< 5.0E+00	< 4.0E+00	< 5.0E+00	< 5.0E+00
RU-106	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
CS-134	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
CS-137	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
BA/LA-140	< 1.0E+01	< 9.0E+00	< 1.0E+01	< 1.0E+01
CE-141	< 8.0E+00	< 7.0E+00	< 8.0E+00	< 1.0E+01
CE-144	< 2.0E+01	< 2.0E+01	< 2.0E+01	< 3.0E+01
RA-226	< 6.0E+01	< 6.0E+01	< 7.0E+01	< 8.0E+01
TH-228	< 5.0E+00	< 6.0E+00	< 6.0E+00	< 7.0E+00

* See section 6 (Program Execution) for less than fully representative sampling.

FERMI 2

DRINKING WATER ANALYSIS

DW–2 (Control)
(pCi/l)

Nuclide	01/28/91 *	02/25/91	03/25/91 *	04/23/91 *
Gross Beta	3.6E+00 ± 9.0E–01	3.7E+00 ± 9.0E–01	4.0E+00 ± 1.0E+00	4.2E+00 ± 1.0E+00
SR–89	< 2.0E+00	< 2.0E+00	< 2.0E+00	< 3.0E+00
SR–90	< 6.0E–01	9.3E–01 ± 4.0E–01	< 7.0E–01	< 6.0E–01
BE–7	< 3.0E+01	< 4.0E+01	< 5.0E+01	< 3.0E+01
K–40	< 5.0E+01	< 6.0E+01	< 9.0E+01	< 4.0E+01
CR–51	*	*	*	< 3.0E+01
MN–54	< 3.0E+00	< 4.0E+00	< 4.0E+00	< 3.0E+00
CO–58	< 3.0E+00	< 4.0E+00	< 5.0E+00	< 3.0E+00
FE–59	< 7.0E+00	< 9.0E+00	< 1.0E+01	< 7.0E+00
CO–60	< 3.0E+00	< 4.0E+00	< 4.0E+00	< 3.0E+00
ZN–65	< 6.0E+00	< 7.0E+00	< 8.0E+00	< 6.0E+00
ZR/NB–95	< 4.0E+00	< 4.0E+00	< 5.0E+00	< 3.0E+00
RU–103	< 4.0E+00	< 5.0E+00	< 6.0E+00	< 3.0E+00
RU–106	< 3.0E+01	< 3.0E+01	< 4.0E+01	< 2.0E+01
CS–134	< 3.0E+00	< 4.0E+00	< 4.0E+00	< 3.0E+00
CS–137	< 3.0E+00	< 4.0E+00	< 4.0E+00	< 3.0E+00
BA/LA–140	< 1.0E+01	< 1.0E+01	< 1.0E+01	< 7.0E+00
CE–141	< 9.0E+00	< 1.0E+01	< 1.0E+01	< 7.0E+00
CE–144	< 3.0E+01	< 4.0E+01	< 4.0E+01	< 2.0E+01
RA–226	< 8.0E+01	< 1.0E+02	< 9.0E+01	< 6.0E+01
TH–228	< 7.0E+00	< 9.0E+00	< 8.0E+00	< 5.0E+00

* See section 6 (Program Execution) for details of C–51 analysis and less than fully representative sampling.

FERMI 2

DRINKING WATER ANALYSIS

DW-2 (Control)
(pCi/l)

Nuclide	05/28/91 *	06/24/91 *	07/29/91 *	08/28/91
Gross Beta	2.9E+00 ± 9.0E-01	3.1E+00 ± 9.0E-01	3.3E+00 ± 9.0E-01	3.2E+00 ± 9.0E-01
SR-89	< 2.0E+00	< 2.0E+00	< 3.0E+00	< 1.0E+00
SR-90	8.5E-01 ± 4.0E-01	< 4.0E-01	< 1.0E+00	5.6E-01 ± 3.2E-01
BE-7	< 5.0E+01	< 4.0E+01	< 3.0E+01	< 3.0E+01
K-40	< 2.0E+02	< 1.0E+02	< 4.0E+01	< 5.0E+01
CR-51	< 6.0E+01	< 5.0E+01	< 3.0E+01	< 3.0E+01
MN-54	< 4.0E+00	< 4.0E+00	< 2.0E+00	< 2.0E+00
CO-58	< 5.0E+00	< 4.0E+00	< 3.0E+00	< 3.0E+00
FE-59	< 1.0E+01	< 1.0E+01	< 6.0E+00	< 6.0E+00
CO-60	< 4.0E+00	< 4.0E+00	< 3.0E+00	< 3.0E+00
ZN-65	< 1.0E+01	< 9.0E+00	< 5.0E+00	< 5.0E+00
ZR/NB-95	< 5.0E+00	< 5.0E+00	< 3.0E+00	< 3.0E+00
RU-103	< 6.0E+00	< 6.0E+00	< 3.0E+00	< 3.0E+00
RU-106	< 4.0E+01	< 4.0E+01	< 2.0E+01	< 2.0E+01
CS-134	< 5.0E+00	< 4.0E+00	< 3.0E+00	< 3.0E+00
CS-137	< 5.0E+00	< 4.0E+00	< 3.0E+00	< 3.0E+00
BA/LA-140	< 1.0E+01	< 1.0E+01	< 8.0E+00	< 4.0E+00
CE-141	< 1.0E+01	< 1.0E+01	< 6.0E+00	< 6.0E+00
CE-144	< 4.0E+01	< 4.0E+01	< 2.0E+01	< 2.0E+01
RA-226	< 1.0E+02	< 1.0E+02	< 5.0E+01	< 6.0E+01
TH-228	< 9.0E+00	< 8.0E+00	< 5.0E+00	< 6.0E+00

* See section 6 (Program Execution) for details of less than fully representative sampling.

FERMI 2

DRINKING WATER ANALYSIS

DW-2 (Control)
(pCi/l)

Nuclide	09/29/91	10/29/91 *	11/24/91	12/30/91
Gross Beta	2.4E+00 ± 8.0E-01	3.7E+00 ± 9.0E-01	2.6E+00 ± 9.0E-01	2.9E+00 ± 9.0E-01
SR-89	< 4.0E+00	< 2.0E+00	< 2.0E+00	< 2.0E+00
SR-90	< 1.0E+00	< 6.0E-01	< 5.0E-01	7.0E-01 ± 4.3E-01
BE-7	< 4.0E+01	< 3.0E+01	< 4.0E+01	< 4.0E+01
K-40	< 5.0E+01	< 5.0E+01	< 6.0E+01	< 6.0E+01
CR-51	< 5.0E+01	< 4.0E+01	< 5.0E+01	< 5.0E+01
MN-54	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
CO-58	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
FE-59	< 8.0E+00	< 8.0E+00	< 8.0E+00	< 9.0E+00
CO-60	< 3.0E+00	< 4.0E+00	< 4.0E+00	< 3.0E+00
ZN-65	< 6.0E+00	< 6.0E+00	< 8.0E+00	< 7.0E+00
ZR/NB-95	< 4.0E+00	< 4.0E+00	< 5.0E+00	< 4.0E+00
RU-103	< 5.0E+00	< 4.0E+00	< 5.0E+00	< 5.0E+00
RU-106	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
CS-134	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
CS-137	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
BA/LA-140	< 1.0E+01	< 1.0E+01	< 1.0E+01	< 1.0E+01
CE-141	< 9.0E+00	< 8.0E+00	< 1.0E+01	< 1.0E+01
CE-144	< 3.0E+01	< 2.0E+01	< 3.0E+01	< 4.0E+01
RA-226	< 7.0E+01	< 7.0E+01	< 8.0E+01	< 1.0E+02
TH-228	< 7.0E+00	< 6.0E+00	< 7.0E+00	< 8.0E+00

* See section 6 (Program Execution) for details of less than fully representative sampling.

FERMI 2

SURFACE WATER ANALYSIS

SW-1 (Indicator)
(pCi/l)

Nuclide	01/28/91 *	02/25/91 *	03/25/91	04/29/91
SR-89	< 2.0E+00	< 1.0E+00	< 2.0E+00	< 3.0E+00
SR-90	< 5.0E-01	< 4.0E-01	< 1.0E+00	< 5.0E-01
BE-7	< 4.0E+01	< 5.0E+01	< 5.0E+01	< 3.0E+01
K-40	< 1.0E+02	< 9.0E+01	< 1.0E+02	< 3.0E+01
CR-51	*	*	*	< 3.0E+01
MN-54	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 2.0E+00
CO-58	< 4.0E+00	< 5.0E+00	< 5.0E+00	< 3.0E+00
FE-59	< 9.0E+00	< 1.0E+01	< 1.0E+01	< 7.0E+00
CO-60	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 3.0E+00
ZN-65	< 8.0E+00	< 9.0E+00	< 1.0E+01	< 6.0E+00
ZR/NB-95	< 4.0E+00	< 6.0E+00	< 5.0E+00	< 3.0E+00
RU-103	< 5.0E+00	< 7.0E+00	< 6.0E+00	< 3.0E+00
RU-106	< 3.0E+01	< 4.0E+01	< 4.0E+01	< 3.0E+01
CS-134	< 4.0E+00	< 4.0E+00	< 5.0E+00	< 3.0E+00
CS-137	< 4.0E+00	< 5.0E+00	< 5.0E+00	< 4.0E+00
BA/LA-140	< 9.0E+00	< 1.0E+01	< 1.0E+01	< 7.0E+00
CE-141	< 9.0E+00	< 1.0E+01	< 1.0E+01	< 6.0E+00
CE-144	< 3.0E+01	< 4.0E+01	< 3.0E+01	< 2.0E+01
RA-226	< 8.0E+01	< 1.0E+02	< 9.0E+01	< 6.0E+01
TH-228	< 6.0E+00	< 8.0E+00	< 7.0E+00	< 5.0E+00

* See section 6 (Program Execution) for details of Cr-51 analysis and less than fully representative sampling.

FERMI 2

SURFACE WATER ANALYSIS

SW-1 (Indicator)
(pCi/l)

Nuclide	05/28/91	06/24/91	07/29/91	08/26/91
SR-89	< 2.0E+00	< 2.0E+00	< 2.0E+00	< 1.0E+00
SR-90	5.3E-01 ± 3.1E-01	< 5.0E+01	< 1.0E+00	< 4.0E-01
BE-7	< 5.0E+01	< 5.0E+01	< 3.0E+01	< 3.0E+01
K-40	8.8E+01 ± 3.1E+01	< 1.0E+02	< 4.0E+01	< 5.0E+01
CR-51	< 5.0E+01	< 6.0E+01	< 3.0E+01	< 3.0E+01
MN-54	< 4.0E+00	< 4.0E+00	< 2.0E+00	< 3.0E+00
CO-58	< 5.0E+00	< 5.0E+00	< 3.0E+00	< 3.0E+00
FE-59	< 1.0E+01	< 1.0E+01	< 6.0E+00	< 6.0E+00
CO-60	< 4.0E+00	< 4.0E+00	< 3.0E+00	< 3.0E+00
ZN-65	< 8.0E+00	< 1.0E+01	< 5.0E+00	< 6.0E+00
ZR/NB-95	< 5.0E+00	< 5.0E+00	< 3.0E+00	< 3.0E+00
RU-103	< 6.0E+00	< 6.0E+00	< 3.0E+00	< 4.0E+00
RU-106	< 4.0E+01	< 4.0E+01	< 2.0E+01	< 3.0E+01
CS-134	< 4.0E+00	< 5.0E+00	< 3.0E+00	< 3.0E+00
CS-137	< 4.0E+00	< 5.0E+00	< 3.0E+00	< 3.0E+00
BA/LA-140	< 1.0E+01	< 1.5E+01	< 8.0E+00	< 5.0E+00
CE-141	< 1.0E+01	< 1.0E+01	< 7.0E+00	< 7.0E+00
CE-144	< 3.0E+01	< 3.0E+01	< 2.0E+01	< 3.0E+01
RA-226	< 8.0E+01	< 8.0E+01	< 6.0E+01	< 7.0E+01
TH-228	< 7.0E+00	< 7.0E+00	< 5.0E+00	< 6.0E+00

FERMI 2

SURFACE WATER ANALYSIS

SW–1 (Indicator)
(pCi/l)

Nuclide	09/29/91	10/29/91	11/24/91	12/30/91
SR–89	< 4.0E+00	< 2.0E+00	< 2.0E+00	< 2.0E+00
SR–90	< 1.0E+00	< 7.0E–01	< 7.0E–01	< 4.0E–01
BE–7	< 4.0E+01	< 4.0E+01	< 4.0E+01	< 4.0E+01
K–40	< 1.0E+02	< 5.0E+01	< 5.0E+01	< 5.0E+01
CR–51	< 5.0E+01	< 4.0E+01	< 4.0E+01	< 4.0E+01
MN–54	< 4.0E+00	< 3.0E+00	< 3.0E+00	< 3.0E+00
CO–58	< 4.0E+00	< 3.0E+00	< 3.0E+00	< 3.0E+00
FE–59	< 1.0E+01	< 8.0E+00	< 9.0E+00	< 8.0E+00
CO–60	< 4.0E+00	< 3.0E+00	< 3.0E+00	< 4.0E+00
ZN–65	< 8.0E+00	< 7.0E+00	< 7.0E+00	< 6.0E+00
ZR/NB–95	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
RU–103	< 6.0E+00	< 5.0E+00	< 4.0E+00	< 5.0E+00
RU–106	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
CS–134	< 4.0E+00	< 3.0E+00	< 3.0E+00	< 3.0E+00
CS–137	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
BA/LA–140	< 1.0E+01	< 1.0E+01	< 1.0E+01	< 1.0E+01
CE–141	< 1.0E+01	< 8.0E+00	< 8.0E+00	< 8.0E+00
CE–144	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 2.0E+01
RA–226	< 8.0E+01	< 7.0E+01	< 7.0E+01	< 7.0E+01
TH–228	< 6.0E+00	< 6.0E+00	< 6.0E+00	< 6.0E+00

FERMI 2

SURFACE WATER ANALYSIS

SW-2 (Control)
(pCi/l)

Nuclide	01/28/91 *	02/25/91	03/25/91	04/29/91
SR-89	< 2.0E+00	< 2.0E+00	< 2.0E+00	< 2.0E+00
SR-90	< 5.0E-01	< 4.0E-01	< 8.0E-01	< 1.0E+00
BE-7	< 4.0E+01	< 5.0E+01	< 4.0E+01	< 4.0E+01
K-40	< 1.0E+02	< 1.0E+02	< 1.0E+02	< 1.0E+02
CR-51	*	*	*	< 4.0E+01
MN-54	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
CO-58	< 4.0E+00	< 5.0E+00	< 5.0E+00	< 4.0E+00
FE-59	< 9.0E+00	< 1.0E+01	< 1.0E+01	< 9.0E+00
CO-60	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
ZN-65	< 9.0E+00	< 1.0E+01	< 9.0E+00	< 8.0E+00
ZR/NB-95	< 4.0E+00	< 5.0E+00	< 5.0E+00	< 4.0E+00
RU-103	< 5.0E+00	< 6.0E+00	< 6.0E+00	< 5.0E+00
RU-106	< 4.0E+01	< 4.0E+01	< 4.0E+01	< 3.0E+01
CS-134	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
CS-137	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
BA/LA-140	< 1.0E+01	< 1.0E+01	< 1.0E+01	< 9.0E+00
CE-141	< 9.0E+00	< 1.0E+01	< 1.0E+01	< 9.0E+00
CE-144	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
RA-226	< 8.0E+01	< 8.0E+01	< 8.0E+01	< 8.0E+01
TH-228	< 7.0E+00	< 7.0E+00	< 7.0E+00	< 7.0E+00

* See section 6 (Program Execution) for details of C-51 analysis and less than fully representative sampling.

FERMI 2

SURFACE WATER ANALYSIS

SW-2 (Control)
(pCi/l)

Nuclide	05/28/91	06/24/91	07/29/91	08/28/91
SR-89	< 2.0E+00	< 2.0E+00	< 3.0E+00	< 2.0E+00
SR-90	< 6.0E-01	< 3.0E-01	< 1.0E+00	< 5.0E-01
BE-7	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
K-40	7.0E+01 ± 2.3E+01	< 5.0E+01	< 4.0E+01	< 9.0E+01
CR-51	< 4.0E+01	< 4.0E+01	< 3.0E+01	< 3.0E+01
MN-54	< 3.0E+00	< 3.0E+00	< 2.0E+00	< 3.0E+00
CO-58	< 4.0E+00	< 3.0E+00	< 3.0E+00	< 3.0E+00
FE-59	< 9.0E+00	< 7.0E+00	< 7.0E+00	< 7.0E+00
CO-60	< 3.0E+00	< 3.0E+00	< 3.0E+00	< 3.0E+00
ZN-65	< 7.0E+00	< 6.0E+00	< 6.0E+00	< 7.0E+00
ZR/NB-95	< 4.0E+00	< 4.0E+00	< 3.0E+00	< 3.0E+00
RU-103	< 5.0E+00	< 4.0E+00	< 3.0E+00	< 4.0E+00
RU-106	< 3.0E+01	< 3.0E+01	< 2.0E+01	< 3.0E+01
CS-134	< 4.0E+00	< 3.0E+00	< 3.0E+00	< 3.0E+00
CS-137	< 3.0E+00	< 3.0E+00	< 3.0E+00	< 4.0E+00
BA/LA-140	< 1.0E+01	< 9.0E+00	< 8.0E+00	< 6.0E+00
CE-141	< 8.0E+00	< 9.0E+00	< 6.0E+00	< 6.0E+00
CE-144	< 2.0E+01	< 3.0E+01	< 2.0E+01	< 2.0E+01
RA-226	< 6.0E+01	< 8.0E+01	< 5.0E+01	< 7.0E+01
TH-228	< 6.0E+00	< 6.0E+00	< 5.0E+00	< 6.0E+00

FERMI 2

SURFACE WATER ANALYSIS

SW-2 (Control)
(pCi/l)

Nuclide	09/29/91	10/29/91	11/24/91	12/30/91 *
SR-89	< 2.0E+00	< 2.0E+00	< 3.0E+00	< 2.0E+00
SR-90	< 5.0E-01	< 5.0E-01	< 6.0E-01	< 5.0E-01
BE-7	< 3.0E+01	< 3.0E+01	< 4.0E+01	< 4.0E+01
K-40	< 9.0E+01	< 4.0E+01	< 5.0E+01	< 5.0E+01
CR-51	< 4.0E+01	< 4.0E+01	< 4.0E+01	< 4.0E+01
MN-54	< 3.0E+00	< 2.0E+00	< 3.0E+00	< 3.0E+00
CO-58	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
FE-59	< 8.0E+00	< 7.0E+00	< 9.0E+00	< 8.0E+00
CO-60	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
ZN-65	< 7.0E+00	< 6.0E+00	< 8.0E+00	< 7.0E+00
ZR/NB-95	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
RU-103	< 5.0E+00	< 4.0E+00	< 5.0E+00	< 5.0E+00
RU-106	< 3.0E+01	< 2.0E+01	< 3.0E+01	< 3.0E+01
CS-134	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
CS-137	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
BA/LA-140	< 1.0E+01	< 9.0E+00	< 1.0E+01	< 1.0E+01
CE-141	< 8.0E+00	< 7.0E+00	< 8.0E+00	< 8.0E+00
CE-144	< 2.0E+01	< 2.0E+01	< 2.0E+01	< 3.0E+01
RA-226	< 6.0E+01	< 6.0E+01	< 7.0E+01	< 7.0E+01
TH-228	< 5.0E+00	< 6.0E+00	< 6.0E+00	< 6.0E+00

* See section 6 (Program Execution) for details of less than fully representative sampling.

FERMI 2

DRINKING AND SURFACE WATER ANALYSIS
FOR TRITIUM

Quarterly Composite of Monthly Samples
(pCi/l)

STATION NUMBER	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
DW-1	< 9.0E+02	< 5.0E+02	< 9.0E+02	< 1.0E+03
DW-2	< 9.0E+02	< 5.0E+02	< 9.0E+02	< 1.0E+03
SW-1	< 9.0E+02	< 5.0E+02	< 9.0E+02	< 1.0E+03
SW-2	< 9.0E+02	< 5.0E+02	< 9.0E+02	< 1.0E+03

FERMI 2

GROUNDWATER ANALYSIS

GW-1 (Indicator)
(pCi/l)

Nuclide	03/15/91	06/14/91	09/13/91	12/13/91
H-3	< 6.0E+02	< 6.0E+02	< 6.0E+02	< 1.0E+03
BE-7	< 3.0E+01	< 6.0E+01	< 6.0E+01	< 3.0E+01
K-40	< 4.0E+01	< 5.0E+01	< 9.0E+01	< 1.0E+02
CR-51	*	< 1.0E+02	< 1.0E+02	< 4.0E+01
MN-54	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
CO-58	< 3.0E+00	< 5.0E+00	< 6.0E+00	< 4.0E+00
FE-59	< 6.0E+00	< 2.0E+01	< 2.0E+01	< 8.0E+00
CO-60	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
ZN-65	< 6.0E+00	< 8.0E+00	< 8.0E+00	< 8.0E+00
ZR/NB-95	< 3.0E+00	< 6.0E+00	< 6.0E+00	< 4.0E+00
RU-103	< 3.0E+00	< 1.0E+01	< 1.0E+01	< 4.0E+00
RU-106	< 3.0E+01	< 3.0E+01	< 4.0E+01	< 3.0E+01
CS-134	< 3.0E+00	< 3.0E+00	< 4.0E+00	< 5.0E+00
CS-137	< 3.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
BA/LA-140	< 5.0E+00	< 6.0E+00	< 5.0E+00	< 6.0E+00
CE-141	< 5.0E+00	< 2.0E+01	< 2.0E+01	< 7.0E+00
CE-144	< 2.0E+01	< 2.0E+01	< 3.0E+01	< 2.0E+01
RA-226	< 6.0E+01	< 6.0E+01	< 8.0E+01	< 8.0E+01
TH-228	< 6.0E+00	< 6.0E+00	< 7.0E+00	< 6.0E+00

* See section 6 (Program Execution) for details of Cr-51 analysis.

FERMI 2

GROUNDWATER ANALYSIS

GW-2 (Indicator)
(pCi/l)

Nuclide	03/15/91	06/14/91	09/13/91	12/13/91
H-3	< 6.0E+02	< 6.0E+02	< 5.0E+02	< 1.0E+03
BE-7	< 3.0E+01	< 9.0E+01	< 6.0E+01	< 4.0E+01
K-40	< 4.0E+01	< 1.0E+02	< 4.0E+01	< 1.0E+02
CR-51	*	< 2.0E+02	< 1.0E+02	< 4.0E+01
MN-54	< 2.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
CO-58	< 2.0E+00	< 7.0E+00	< 5.0E+00	< 4.0E+00
FE-59	< 5.0E+00	< 2.0E+01	< 1.0E+01	< 1.0E+01
CO-60	< 3.0E+00	< 4.0E+00	< 4.0E+00	< 4.0E+00
ZN-65	< 6.0E+00	< 1.0E+01	< 8.0E+00	< 1.0E+01
ZR/NB-95	< 3.0E+00	< 8.0E+00	< 5.0E+00	< 5.0E+00
RU-103	< 3.0E+00	< 1.0E+01	< 9.0E+00	< 6.0E+00
RU-106	< 2.0E+01	< 4.0E+01	< 3.0E+01	< 4.0E+01
CS-134	< 3.0E+00	< 4.0E+00	< 4.0E+00	< 5.0E+00
CS-137	< 3.0E+00	< 5.0E+00	< 4.0E+00	< 5.0E+00
BA/LA-140	< 5.0E+00	< 7.0E+00	< 5.0E+00	< 8.0E+00
CE-141	< 6.0E+00	< 3.0E+01	< 2.0E+01	< 9.0E+00
CE-144	< 2.0E+01	< 4.0E+01	< 3.0E+01	< 3.0E+01
RA-226	< 6.0E+01	< 8.0E+01	< 6.0E+01	< 9.0E+01
TH-228	< 6.0E+00	< 8.0E+00	< 6.0E+00	< 8.0E+00

* See section 6 (Program Execution) for details of Cr-51 analysis.

FERMI 2

GROUNDWATER ANALYSIS

GW–3 (Indicator)
(pCi/l)

Nuclide	03/15/91	06/14/91	09/13/91	12/13/91
H–3	< 6.0E+02	< 6.0E+02	< 6.0E+02	< 1.0E+03
BE–7	< 3.0E+01	< 6.0E+01	< 4.0E+01	< 3.0E+01
K–40	< 1.0E+02	< 5.0E+01	< 1.0E+02	< 1.0E+02
CR–51	*	< 1.0E+02	< 4.0E+01	< 4.0E+01
MN–54	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
CO–58	< 4.0E+00	< 5.0E+00	< 4.0E+00	< 4.0E+00
FE–59	< 8.0E+00	< 2.0E+01	< 8.0E+00	< 8.0E+00
CO–60	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 3.0E+00
ZN–65	< 8.0E+00	< 6.0E+00	< 8.0E+00	< 8.0E+00
ZR/NB–95	< 4.0E+00	< 6.0E+00	< 4.0E+00	< 4.0E+00
RU–103	< 4.0E+00	< 9.0E+00	< 5.0E+00	< 4.0E+00
RU–106	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
CS–134	< 4.0E+00	< 3.0E+00	< 4.0E+	< 4.0E+00
CS–137	< 4.0E+00	< 3.0E+00	< 4.0E+00	< 4.0E+00
BA/LA–140	< 6.0E+00	< 5.0E+00	< 9.0E+00	< 6.0E+00
CE–141	< 9.0E+00	< 2.0E+01	< 7.0E+00	< 7.0E+00
CE–144	< 4.0E+01	< 2.0E+01	< 3.0E+01	< 3.0E+01
RA–226	< 9.0E+01	< 6.0E+01	< 8.0E+01	< 8.0E+0'
TH–228	< 8.0E+00	< 6.0E+00	< 7.0E+00	< 7.0E+00

* See section 6 (Program Execution) for details of Cr–51 analysis.

FERMI 2

GROUNDWATER ANALYSIS

GW-4 (Control)
(pCi/l)

Nuclide	03/15/91	06/14/91	09/13/91	12/13/91
H-3	< 6.0E+02	< 6.0E+02	< 6.0E+02	< 1.0E+03
BE-7	< 3.0E+01	< 8.0E+01	< 3.0E+01	< 4.0E+01
K-40	< 5.0E+01	< 1.0E+02	< 5.0E+01	1.7E+02 ± 4.3E+01
CR-51	*	< 2.0E+02	< 3.0E+01	< 4.0E+01
MN-54	< 3.0E+00	< 4.0E+00	< 3.0E+00	< 4.0E+00
CO-58	< 3.0E+00	< 7.0E+00	< 3.0E+00	< 5.0E+00
FE-59	< 7.0E+00	< 2.0E+01	< 7.0E+00	< 1.0E+01
CO-60	< 4.0E+00	< 4.0E+00	< 3.0E+00	< 5.0E+00
ZN-65	< 7.0E+00	< 1.0E+01	< 6.0E+00	< 1.0E+01
ZR/NB-95	< 3.0E+00	< 8.0E+00	< 4.0E+00	< 5.0E+00
RU-103	< 3.0E+00	< 1.0E+01	< 4.0E+00	< 6.0E+00
RU-106	< 3.0E+01	< 4.0E+01	< 3.0E+01	< 4.0E+01
CS-134	< 3.0E+00	< 4.0E+00	< 3.0E+00	< 5.0E+00
CS-137	< 4.0E+00	< 4.0E+00	< 4.0E+00	< 5.0E+00
BA/LA-140	< 6.0E+00	< 7.0E+00	< 7.0E+00	< 8.0E+00
CE-141	< 7.0E+00	< 3.0E+01	< 7.0E+00	< 8.0E+00
CE-144	< 3.0E+01	< 4.0E+01	< 2.0E+01	< 3.0E+01
RA-226	< 7.0E+01	< 9.0E+01	< 7.0E+01	< 9.0E+01
TH-228	< 6.0E+00	< 8.0E+00	< 6.0E+00	< 8.0E+00

* See section 6 (Program Execution) for details of Cr-51 analysis.

FERMI 2

SEDIMENT ANALYSIS

S-1 (Indicator)
(pCi/kg dry)

Nuclide	05/08/91	10/11/91
SR-89	< 7.0E+01	< 7.0E+01
SR-90	< 2.0E+01	< 2.0E+01
BE-7	< 3.0E+02	< 4.0E+02
K-40	1.1E+04 ± 1.1E+03	1.2E+04 ± 1.2E+03
MN-54	< 2.0E+01	< 3.0E+01
CO-58	< 3.0E+01	< 3.0E+01
FE-59	< 8.0E+01	< 8.0E+01
CO-60	< 3.0E+01	< 3.0E+01
ZN-65	< 7.0E+01	< 8.0E+01
ZR/NB-95	< 3.0E+01	< 4.0E+01
RU-103	< 3.0E+01	< 4.0E+01
RU-106	< 2.0E+02	< 2.0E+02
CS-134	< 2.0E+01	< 3.0E+01
CS-137	< 2.0E+01	6.5E+01 ± 2.7E+01
BA/LA-140	< 1.0E+02	< 1.0E+02
CE-141	< 6.0E+01	< 8.0E+01
CE-144	< 1.0E+02	< 2.0E+02
RA-226	5.9E+02 ± 3.4E+02	< 1.0E+02
TH-228	2.9E+02 ± 2.9E+01	4.1E+02 ± 5.4E+01

FERMI 2

SEDIMENT ANALYSIS

S-2 (Indicator)
(pCi/kg dry)

Nuclide	05/08/91	10/11/91
SR-89	< 8.0E+01	< 2.0E+02
SR-90	2.8E+01 ± 1.4E+01	< 7.0E+01
BE-7	< 3.0E+02	< 3.0E+02
K-40	1.1E+04 ± 1.1E+03	9.9E+03 ± 9.9E+02
MN-54	1.9E+02 ± 2.9E+01	< 2.0E+01
CO-58	8.5E+01 ± 3.1E+01	< 2.0E+01
FE-59	< 9.0E+01	< 6.0E+01
CO-60	1.4E+02 ± 3.8E+01	< 2.0E+01
ZN-65	< 7.0E+01	< 5.0E+01
ZR/NB-95	< 3.0E+01	< 3.0E+01
RU-103	< 4.0E+01	< 3.0E+01
RU-106	< 2.0E+02	< 2.0E+02
CS-134	< 3.0E+01	< 2.0E+01
CS-137	< 3.0E+01	< 2.0E+01
BA/LA-140	< 1.0E+02	< 9.0E+01
CE-141	< 7.0E+01	< 6.0E+01
CE-144	< 2.0E+02	< 2.0E+02
RA-226	< 5.0E+02	9.9E+02 ± 4.1E+02
TH-228	1.5E+02 ± 2.3E+01	3.6E+02 ± 4.4E+01

FERMI 2

SEDIMENT ANALYSIS

S-3 (Indicator)
(pCi/kg dry)

Nuclide	04/08/91	10/10/91
SR-89	< 8.0E+01	< 1.0E+02
SR-90	< 2.0E+01	< 4.0E+01
BE-7	< 2.0E+02	< 3.0E+02
K-40	9.8E+03 ± 9.8E+02	1.2E+04 ± 1.2E+03
MN-54	< 2.0E+01	< 2.0E+01
CO-58	< 2.0E+01	< 3.0E+01
FE-59	< 6.0E+01	< 8.0E+01
CO-60	< 2.0E+01	< 2.0E+01
ZN-65	< 5.0E+01	< 6.0E+01
ZR/NB-95	< 3.0E+01	< 3.0E+01
RU-103	< 3.0E+01	< 3.0E+01
RU-106	< 2.0E+02	< 2.0E+02
CS-134	< 2.0E+01	< 3.0E+01
CS-137	< 2.0E+01	< 2.0E+01
BA/LA-140	< 1.0E+02	< 1.0E+02
CE-141	< 4.0E+01	< 6.0E+01
CE-144	< 1.0E+02	< 2.0E+02
RA-226	< 3.0E+02	< 4.0E+02
TH-228	1.7E+02 ± 1.7E+01	1.9E+02 ± 2.4E+01

FERMI 2

SEDIMENT ANALYSIS

S-4 (Indicator)
(pCi/kg dry)

Nuclide	04/17/91	10/08/91
SR-89	< 7.0E+01	< 4.0E+02
SR-90	< 1.0E+01	< 1.0E+02
BE-7	< 2.0E+02	< 3.0E+02
K-40	1.2E+04 ± 1.2E+03	1.2E+04 ± 1.2E+03
MN-54	< 2.0E+01	< 2.0E+01
CO-58	< 2.0E+01	< 3.0E+01
FE-59	< 6.0E+01	< 8.0E+01
CO-60	< 2.0E+01	< 2.0E+01
ZN-65	< 6.0E+01	< 6.0E+01
ZR/NB-95	< 3.0E+01	< 3.0E+01
RU-103	< 2.0E+01	< 3.0E+01
RU-106	< 2.0E+01	< 2.0E+02
CS-134	< 2.0E+01	< 2.0E+01
CS-137	< 3.0E+01	< 2.0E+01
BA/LA-140	< 3.0E+01	< 1.0E+02
CE-141	< 4.0E+01	< 6.0E+01
CE-144	< 1.0E+02	< 1.0E+02
RA-226	< 5.0E+02	5.4E+02 ± 2.9E+02
TH-228	1.7E+02 ± 2.4E+01	1.6E+02 ± 1.8E+01

FERMI 2

SEDIMENT ANALYSIS

S-5 (Control)
(pCi/kg dry)

Nuclide	05/10/91	10/17/91
SR-89	< 1.0E+02	< 1.0E+02
SR-90	< 3.0E+01	< 3.0E+01
BE-7	< 4.0E+02	< 4.0E+02
K-40	1.2E+04 ± 1.2E+03	1.1E+04 ± 1.0E+03
MN-54	< 3.0E+01	< 3.0E+01
CO-58	< 4.0E+01	< 4.0E+01
FE-59	< 1.0E+02	< 1.0E+02
CO-60	< 3.0E+01	< 3.0E+01
ZN-65	< 8.0E+01	< 8.0E+01
ZR/NB-95	< 4.0E+01	< 5.0E+01
RU-103	< 4.0E+01	< 5.0E+01
RU-106	< 2.0E+02	< 3.0E+02
CS-134	< 3.0E+01	< 4.0E+01
CS-137	1.6E+02 ± 2.3E+01	1.5E+02 ± 4.2E+01
BA/LA-140	< 1.0E+02	< 1.0E+02
CE-141	< 8.0E+01	< 9.0E+01
CE-144	< 2.0E+02	< 3.0E+02
RA-226	7.5E+02 ± 4.3E+02	1.0E+03 ± 6.0E+02
TH-228	3.7E+02 ± 3.7E+01	4.9E+02 ± 4.9E+01

FERMI 2

FISH ANALYSIS

F-1 (Control)
(pCi/kg wet)

Nuclide	WALLEYE 05/08/91	WHITE PERCH 05/08/91	CARP 05/15/91	SUCKER 05/08/91
SR-89	< 2.0E+01	< 4.0E+01	< 2.0E+01	< 3.0E+01
SR-90	1.5E+01 ± 5.0E+00	3.9E+01 ± 9.0E+00	3.4E+01 ± 5.0E+00	5.8E+01 ± 7.0E+00
BE-7	< 3.0E+02	< 3.0E+02	< 2.0E+02	< 5.0E+02
K-40	2.8E+03 ± 5.4E+02	2.5E+03 ± 3.5E+02	2.4E+03 ± 4.4E+02	2.7E+03 ± 4.8E+02
MN-54	< 3.0E+01	< 3.0E+01	< 2.0E+01	< 4.0E+01
CO-58	< 3.0E+01	< 4.0E+01	< 3.0E+01	< 6.0E+01
FE-59	< 8.0E+01	< 9.0E+01	< 6.0E+01	< 1.0E+02
CO-60	< 3.0E+01	< 3.0E+01	< 3.0E+01	< 5.0E+01
ZN-65	< 7.0E+01	< 7.0E+01	< 5.0E+01	< 1.0E+02
ZR/NB-95	< 3.0E+01	< 4.0E+01	< 3.0E+01	< 6.0E+01
RU-103	< 4.0E+01	< 4.0E+01	< 3.0E+01	< 7.0E+01
RU-106	< 3.0E+02	< 3.0E+02	< 2.0E+02	< 4.0E+02
CS-134	< 3.0E+01	< 3.0E+01	< 2.0E+01	< 5.0E+01
CS-137	< 4.0E+0[illegible]	< 4.0E+01	< 3.0E+01	< 5.0E+01
BA/LA-140	< 1.0E+02	< 1.0E+02	< 7.0E+01	< 2.0E+02
CE-141	< 7.0E+01	< 7.0E+01	< 5.0E+01	< 1.0E+02
CE-144	< 2.0E+02	< 2.0E+02	< 1.0E+02	< 4.0E+02
RA-226	< 6.0E+02	< 6.0E+02	< 5.0E+02	< 1.0E+03
TH-228	< 6.0E+01	< 5.[illegible]E+01	< 4.0E+01	< 9.0E+01

FERMI 2

FISH ANALYSIS

F-1 (Control)
(pCi/kg wet)

Nuclide	CRAPPIE 05/15/91	WALLEYE 10/24/91	CARP 10/24/91	SUCKER 10/24/91
SR-89	< 4.0E+01	< 2.0E+01	< 3.0E+01	< 2.0E+01
SR-90	6.4E+01 ± 9.0E+00	1.4E+01 ± 4.0E+00	< 9.0E+00	2.6E+01 ± 5.0E+00
BE-7	< 3.0E+02	< 3.0E+02	< 4.0E+02	< 4.0E+02
K-40	2.7E+03 ± 5.2E+02	3.3E+03 ± 4.2E+02	3.2E+03 ± 5.3E+02	4.0E+03 ± 4.8E+02
MN-54	< 3.0E+01	< 2.0E+01	< 4.0E+01	< 3.0E+01
CO-58	< 3.0E+01	< 3.0E+01	< 4.0E+01	< 4.0E+01
FE-59	< 6.0E+01	< 7.0E+01	< 9.0E+01	< 9.0E+01
CO-60	< 4.0E+01	< 3.0E+01	< 3.0E+01	< 3.0E+01
ZN-65	< 7.0E+01	< 7.0E+01	< 8.0E+01	< 8.0E+01
ZR/NB-95	< 4.0E+01	< 3.0E+01	< 4.0E+01	< 4.0E+01
RU-103	< 4.0E+01	< 3.0E+01	< 5.0E+01	< 5.0E+01
RU-106	< 3.0E+02	< 2.0E+02	< 3.0E+02	< 3.0E+02
CS-134	< 3.0E+01	< 3.0E+01	< 4.0E+01	< 4.0E+01
CS-137	< 4.0E+01	< 3.0E+01	< 4.0E+01	< 4.0E+01
BA/LA-140	< 1.0E+02	< 7.0E+01	< 1.0E+02	< 1.0E+02
CE-141	< 8.0E+01	< 6.0E+01	< 1.0E+02	< 6.0E+01
CE-144	< 2.0E+02	< 2.0E+02	< 3.0E+02	< 2.0E+02
RA-226	< 6.0E+02	< 6.0E+02	< 9.0E+02	< 6.0E+02
TH-228	< 6.0E+01	< 5.0E+01	< 8.0E+01	< 6.0E+01

FERMI 2

FISH ANALYSIS

F-1 (Control)
(pCi/kg wet)

Nuclide	WALLEYE 10/17/91	
SR-89	< 3.0E+01	
SR-90	2.8E+01	± 5.0E+00
BE-7	< 3.0E+02	
K-40	3.1E+03	± 4.9E+02
MN-54	< 3.0E+01	
CO-58	< 3.0E+01	
FE-59	< 9.0E+01	
CO-60	< 3.0E+01	
ZN-65	< 7.0E+01	
ZR/NB-95	< 3.0E+01	
RU-103	< 4.0E+01	
RU-106	< 3.0E+02	
CS-134	< 3.0E+01	
CS-137	< 3.0E+01	
BA/LA-140	< 1.0E+02	
CE-141	< 5.0E+01	
CE-144	< 1.0E+02	
RA-226	< 4.0E+02	
TH-228	< 4.0E+01	

FERMI 2

FISH ANALYSIS

F-2 (Indicator)
(pCi/kg wet)

Nuclide	WALLEYE 05/08/91	DRUM 05/08/91	YELLOW PERCH 05/08/91	WALLEYE 10/11/91
SR-89	< 2.0E+01	< 4.0E+01	< 3.0E+01	< 2.0E+01
SR-90	6.9E+00 ± 4.4E+00	3.0E+01 ± 1.0E+01	2.0E+01 ± 6.0E+00	1.3E+01 ± 3.0E+00
BE-7	< 3.0E+02	< 5.0E+02	< 3.0E+02	< 5.0E+02
K-40	3.0E+03 ± 4.2E+02	1.8E+03 ± 4.0E+02	2.8E+03 ± 4.1E+02	2.3E+03 ± 4.3E+02
MN-54	< 3.0E+01	< 4.0E+01	< 2.0E+01	< 4.0E+01
CO-58	< 4.0E+01	< 5.0E+01	< 3.0E+01	< 5.0E+01
FE-59	< 9.0E+01	< 1.0E+02	< 7.0E+01	< 1.0E+02
CO-60	< 3.0E+01	< 4.0E+01	< 2.0E+01	< 4.0E+01
ZN-65	< 6.0E+01	< 9.0E+01	< 5.0E+01	< 1.0E+02
ZR/NB-95	< 3.0E+01	< 5.0E+01	< 3.0E+01	< 5.0E+01
RU-103	< 5.0E+01	< 7.0E+01	< 3.0E+01	< 7.0E+01
RU-106	< 3.0E+02	< 4.0E+02	< 2.0E+02	< 3.0E+02
CS-134	< 3.0E+01	< 4.0E+01	< 2.0E+01	< 4.0E+01
CS-137	< 3.0E+01	< 4.0E+01	< 2.0E+01	< 4.0E+01
BA/LA-140	< 2.0E+02	< 2.0E+02	< 2.0E+02	< 2.0E+02
CE-141	< 8.0E+01	< 1.0E+02	< 6.0E+01	< 1.0E+02
CE-144	< 2.0E+02	< 2.0E+02	< 1.0E+02	< 3.0E+02
RA-226	< 6.0E+02	< 7.0E+02	< 4.0E+02	< 7.0E+02
TH-228	< 5.0E+01	< 6.0E+01	< 4.0E+01	< 7.0E+01

FERMI 2

FISH ANALYSIS

F–2 (Indicator)
(pCi/kg wet)

Nuclide	CARP 10/11/91	SUCKER 10/11/91	WHITE BASS 10/11/91	WHITE PERCH 10/11/91
SR–89	< 2.0E+01	< 3.0E+01	< 5.0E+01	< 1.0E+01
SR–90	1.3E+01 ± 4.0E+00	2.2E+01 ± 5.0E+00	< 4.6E+01 ± 9.0E+00	3.6E+01 ± 6.0E+00
BE–7	< 1.0E+03	< 4.0E+02	< 6.0E+02	< 5.0E+02
K–40	3.5E+03 ± 1.2E+03	3.0E+03 ± 4.7E+02	3.1E+03 ± 4.9E+02	3.3E+03 ± 6.1E+02
MN–54	< 1.0E+02	< 3.0E+01	< 5.0E+01	< 4.0E+01
CO–58	< 1.0E+02	< 4.0E+01	< 6.0E+01	< 4.0E+01
FE–59	< 2.8E+02 *	< 9.0E+01	< 1.0E+02	< 1.0E+02
CO–60	< 1.0E+02	< 3.0E+01	< 4.0E+01	< 5.0E+01
ZN–65	< 2.0E+02	< 7.0E+01	< 1.0E+02	< 9.0E+01
ZR/NB–95	< 1.0E+02	< 5.0E+01	< 6.0E+01	< 5.0E+01
RU–103	< 2.0E+02	< 6.0E+01	< 8.0E+01	< 7.0E+01
RU–106	< 1.0E+03	< 3.0E+02	< 5.0E+02	< 4.0E+02
CS–134	< 1.0E+02	< 3.0E+01	< 5.0E+01	< 4.0E+01
CS–137	< 1.0E+02	< 3.0E+01	< 6.0E+01	< 5.0E+01
BA/LA–140	< 5.0E+02	< 1.0E+02	< 2.0E+02	< 1.0E+02
CE–141	< 3.0E+02	< 1.0E+02	< 1.0E+02	< 1.0E+02
CE–144	< 7.0E+02	< 2.0E+02	< 4.0E+02	< 3.0E+02
RA–226	< 2.0E+03	< 7.0E+02	< 1.0E+03	< 9.0E+02
TH–228	< 2.0E+02	< 6.0E+01	< 9.0E+01	< 9.0E+01

* See section 6 (Program Execution) for details of MDA greater than LLD.

FERMI 2

FISH ANALYSIS

F–2 (Indicator)
(pCi/kg wet)

Nuclide	DRUM 10/11/91
SR–89	< 1.0E+01
SR–90	5.3E+01 ± 8.0E+00
BE–7	< 8.0E+02
K–40	2.6E+03 ± 8.8E
MN–54	< 6.0E+01
CO–58	< 9.0E+01
FE–59	< 1.0E+02
CO–60	< 7.0E+01
ZN–65	< 1.0E+02
ZR/NB–95	< 8.0E+01
RU–103	< 1.0E+02
RU–106	< 6.0E+02
CS–134	< 7.0E+01
CS–137	< 7.0E+01
BA/LA–140	< 3.0E+02
CE–141	< 2.0E+02
CE–144	< 5.0E+02
RA–226	< 2.0E+03
TH–228	< 1.0E+02

FERMI 2

FISH ANALYSIS

F-3 (Control)
(pCi/kg wet)

Nuclide	WALLEYE 05/10/91	SUCKER 05/10/91	WHITE BASS 05/10/91	WALLEYE 10/10/91
SR-89	< 2.0E+01	< 2.0E+01	< 2.0E+01	< 2.0E+01
SR-90	6.5E+00 ± 3.6E+00	1.5E+01 ± 6.0E+00	1.5E+01 ± 4.0E+00	1.6E+01 ± 5.0E+00
BE-7	< 4.0E+02	< 3.0E+02	< 2.0E+02	< 3.0E+02
K-40	2.6E+03 ± 3.7E+02	3.2E+03 ± 4.0E+02	2.4E+03 ± 3.4E+02	3.0E+03 ± 3.5E+02
MN-54	< 3.0E+01	< 3.0E+01	< 2.0E+01	< 2.0E+01
CO-58	< 4.0E+01	< 3.0E+01	< 2.0E+01	< 2.0E+01
FE-59	< 1.0E+02	< 8.0E+01	< 7.0E+01	< 7.0E+01
CO-60	< 4.0E+01	< 3.0E+01	< 2.0E+01	< 2.0E+01
ZN-65	< 8.0E+01	< 5.0E+01	< 4.0E+01	< 4.0E+01
ZR/NB-95	< 5.0E+01	< 3.0E+01	< 2.0E+01	< 3.0E+01
RU-103	< 6.0E+01	< 4.0E+01	< 3.0E+01	< 3.0E+01
RU-106	< 3.0E+02	< 2.0E+02	< 2.0E+02	< 2.0E+02
CS-134	< 4.0E+01	< 3.0E+01	< 2.0E+01	< 2.0E+01
CS-137	< 4.0E+01	< 3.0E+01	< 2.0E+01	< 2.0E+01
BA/LA-140	< 2.0E+02	< 2.0E+02	< 1.0E+02	< 1.0E+02
CE-141	< 1.0E+02	< 5.0E+01	< 7.0E+01	< 7.0E+01
CE-144	< 3.0E+02	< 1.0E+02	< 2.0E+02	< 2.0E+02
RA-226	< 8.0E+02	< 4.0E+02	< 5.0E+02	< 5.0E+02
TH-228	< 7.0E+01	< 4.0E+01	< 4.0E+01	< 4.0E+01

FERMI 2

FISH ANALYSIS

F–3 (Control)
(pCi/kg wet)

Nuclide	SUCKER 10/10/91	
SR–89	< 2.0E+01	
SR–90	2.6E+01	± 5.0E+00
BE–7	< 4.0E+02	
K–40	3.1E+03	± 4.5E+02
MN–54	< 3.0E+01	
CO–58	< 3.0E+01	
FE–59	< 9.0E+01	
CO–60	< 3.0E+01	
ZN–65	< 7.0E+01	
ZR/NB–95	< 4.0E+01	
RU–103	< 4.0E+01	
RU–106	< 3.0E+02	
CS–134	< 3.0E+01	
CS–137	< 4.0E+01	
BA/LA–140	< 2.0E+02	
CE–141	< 8.0E+01	
CE–144	< 2.0E+02	
RA–226	< 6.0E+02	
TH–228	< 5.0E+01	

APPENDIX A

INTERLABORATORY COMPARISON PROGRAM RESULTS

US EPA INTERLABORATORY COMPARISON PROGRAM FOR 1991

Starting in 1991, Detroit Edison contracted Teledyne Isotopes East Laboratory to provide analytical results of REMP environmental samples. Teledyne Isotopes participates in the Environmental Protection Agency's (EPA) crosscheck program.

In the EPA crosscheck program, participant laboratories receive from the EPA environmental samples of known activity concentration for analysis. After the samples have been analyzed by the laboratory, the EPA reports the known activity concentration of the samples to the laboratory. The laboratory's results are compared to the EPA reported concentrations to determine any deviations. Participation in this program provides assurance that the contract laboratory is capable of meeting accepted criteria for radioactivity analysis.

In 1991, Teledyne Isotopes correctly, with in one standard deviation, analyzed 92% of the EPA crosscheck samples. Of the six samples that did not fall within this range, four were within two standard deviations of the EPA values, and two were within three standard deviations of the EPA values. The results are shown in the following tables and indicate that Teledyne Isotopes is capable of routinely performing high quality analysis on environmental samples.

TELEDYNE ISOTOPES
US EPA INTERLABORATORY COMPARISON PROGRAM FOR 1991

Collection Date	Media	Nuclide	EPA Result (a)		Teledyne Isotopes Result (b)	
01/11/91	Water	Sr-89	5.00 ±	5.00	5.00 ±	0.00
		Sr-90	5.00 ±	5.00	5.00 ±	0.00
01/25/91	Water	Gr-Alpha	5.00 ±	5.00	9.00 ±	1.00
		Gr-Beta	5.00 ±	5.00	7.00 ±	0.00
02/08/91	Water	Co-60	40.00 ±	5.00	39.33 ±	3.06
		Zn-65	149.00 ±	15.00	147.00 ±	1.00
		Ru-106	186.00 ±	19.00	176.67 ±	17.56
		Cs-134	8.00 ±	5.00	7.33 ±	0.58
		Cs-137	8.00 ±	5.00	7.67 ±	3.21
		Ba-133	75.00 ±	8.00	75.67 ±	5.51
02/15/91	Water	I-131	75.00 ±	8.00	80.00 ±	5.29
02/22/91	Water	H-3	4418.00 ±	442.00	4500.00 ±	173.21
03/08/91	Water	Ra-226	31.80 ±	4.80	28.33 ±	4.73
		Ra-228	21.10 ±	5.30	16.67 ±	2.08
03/29/91	Air Filter	Gr-Alpha	25.00 ±	6.00	42.67 ±	0.58 (c)
		Gr-Beta	124.00 ±	6.00	126.67 ±	5.77
		Sr-90	40.00 ±	5.00	37.00 ±	1.00
		Cs-137	40.00 ±	5.00	43.00 ±	5.29
04/16/91	Water	Gr-Alpha	54.00 ±	14.00	59.67 ±	4.04
		Ra-226	8.00 ±	1.20	7.33 ±	0.81
		Ra-228	15.20 ±	3.80	10.00 ±	0.00 (d)
		Gr-Beta	115.00 ±	17.00	110.00 ±	0.00
		Sr-89	28.00 ±	5.00	31.00 ±	1.00
		Sr-90	26.00 ±	5.00	21.00 ±	0.00
		Cs-134	24.00 ±	5.00	25.00 ±	1.00
		Cs-137	25.00 ±	5.00	24.00 ±	1.73
04/26/91	Milk	Sr-89	32.00 ±	5.00	24.00 ±	3.00 (e)
		Sr-90	32.00 ±	5.00	26.33 ±	2.08
		I-131	60.00 ±	6.00	53.33 ±	2.31
		Cs-137	49.00 ±	5.00	52.67 ±	1.53
		K	1650.00 ±	83.00	1590.00 ±	81.85
05/10/91	Water	Sr-89	39.00 ±	5.00	38.67 ±	4.51
		Sr-90	24.00 ±	5.00	22.00 ±	1.73
05/17/91	Water	Gr-Alpha	24.00 ±	6.00	24.33 ±	2.52
		Gr-Beta	46.00 ±	5.00	50.33 ±	1.53
06/07/91	Water	Co-60	10.00 ±	5.00	10.33 ±	0.58
		Zn-65	108.00 ±	11.00	106.00 ±	2.65
		Ru-106	149.00 ±	15.00	136.67 ±	3.79
		Cs-134	15.00 ±	5.00	13.67 ±	1.53
		Cs-137	14.00 ±	5.00	13.67 ±	1.53
		Ba-133	62.00 ±	6.00	56.33 ±	1.53

TELEDYNE ISOTOPES
US EPA INTERLABORATORY COMPARISON PROGRAM FOR 1991

Collection Date	Media	Nuclide	EPA Result (a)		Teledyne Isotopes Result (b)	
06/21/91	Water	H-3	12480.00 ±	1248.00	12833.33 ±	115.50
07/12/91	Water	Ra-226	15.90 ±	2.40	15.00 ±	1.00
		Ra-228	16.70 ±	4.20	14.33 ±	2.31
08/09/91	Water	I-131	20.00 ±	6.00	19.33 ±	0.58
08/30/91	Air Filter	Gr-Alpha	25.00 ±	6.00	27.00 ±	2.00
		Gr-Beta	92.00 ±	10.00	100.00 ±	0.00
		Sr-90	30.00 ±	5.00	27.67 ±	2.89
		Cs-137	30.00 ±	5.00	33.33 ±	3.21
09/13/91	Water	Sr-89	49.00 ±	5.00	50.67 ±	2.89
		Sr-90	25.00 ±	5.00	26.00 ±	1.00
09/20/91	Water	Gr-Alpha	10.00 ±	5.00	11.67 ±	0.58
		Gr-Beta	20.00 ±	5.00	21.00 ±	0.00
09/27/91	Milk	Sr-89	25.00 ±	5.00	21.00 ±	2.65
		Sr-90	25.00 ±	5.00	19.00 ±	0.00 (e)
		I-131	108.00 ±	11.00	113.33 ±	5.77
		Cs-137	30.00 ±	5.00	29.00 ±	3.61
		K	1740.00 ±	87.00	1503.33 ±	75.06 (f)
10/04/91	Water	Co-60	29.00 ±	5.00	30.33 ±	2.08
		Zn-65	73.00 ±	7.00	72.67 ±	7.09
		Ru-106	199.00 ±	20.00	197.67 ±	7.51
		Cs-134	10.00 ±	5.00	10.33 ±	0.58
		Cs-137	10.00 ±	5.00	11.33 ±	0.58
		Ba-133	98.00 ±	10.00	87.00 ±	8.72
10/18/91	Water	H-3	2454.00 ±	353.00	2333.33 ±	57.74
10/22/91	Water	Gr-Alpha	82.00 ±	21.00	55.00 ±	4.36 (f)
		Ra-226	22.00 ±	3.30	21.00 ±	2.65
		Ra-228	22.20 ±	5.60	18.00 ±	1.00
		Gr-Beta	65.00 ±	10.00	56.00 ±	1.00
		Sr-89	10.00 ±	5.00	10.67 ±	2.08
		Sr-90	10.00 ±	5.00	9.33 ±	0.58
		Co-60	20.00 ±	5.00	19.67 ±	0.58
		Cs-134	10.00 ±	5.00	10.33 ±	2.08
		Cs-137	11.00 ±	5.00	13.67 ±	0.58
11/08/91	Water	Ra-226	6.50 ±	1.00	5.37 ±	0.32
		Ra-228	8.10 ±	2.00	7.90 ±	1.20

TELEDYNE ISOTOPES
US EPA INTERLABORATORY COMPARISON PROGRAM FOR 1991

Footnotes:

(a) EPA Results-Expected laboratory precision (1 sigma). Units are pCi/liter for water and milk except K is in mg/liter. Units are total pCi for air particulate filters.

(b) Teledyne Results - Average +/- one sigma. Units are pCi/liter for water and milk except K is in mg/liter. Units are total pCi for air particulate filters.

(c) The sample presents a different counting geometry. The EPA deposits activity in a 3/4 inch diameter circle, on a plastic disk approximately 3/32 inch thick. A special calibration for EPA filters will be performed. The laboratory has obtained blank filters from the EPA Las Vegas facility, and will simulate their deposits.

(d) The lowest three results out of nine analyses were chosen. Other results in the group were close to the given value. The process for accepting data is currently under review.

(e) The cause for the deviation is believed to be erroneous strontium yields, probably caused by incomplete separation of calcium. The laboratory has investigated carrier concentrations and pipeting techniques, and have found them to be correct. Further aspects of analysts' techniques are being tested. The laboratory has received a new strontium extraction material developed at Argonne National Laboratory. Experiments with this method to achieve better separation of calcium were completed and procedure PRO-032-105 was implemented on 02/01/92.

(f) This deviation is greater than one sigma and an investigation is being conducted; the results will be forwarded to the EPA by Teledyne Isotopes.